PROJECT MANAGER: HDR_VDOT_PM: Chris_Eggleston_(757)_925-2689_
SURVEYED BY, DATE Huct&_Profitt_Inc_(800)_242-4906_July_2022_
DESIGN BY Rick_Delong_P.E._Rinker_Design_Associates_P.C._(804)_612-0665_
SUBSURFACE UTILITY BY, DATE Hurt&_Profitt_Inc_(800)_242-4906_July_2022_

FOR INDEX OF SHEETS SEE SHEET 1B

THIS PROJECT WAS DEVELOPED UTILIZING THE DEPARTMENT'S ENGINEERING DESIGN PACKAGE (OpenRoods).
OpenRoods COMPUTER IDENTIFICATION NO. (119562)

CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
CITY,TOWN OR VILLAGE
RIGHT OF WAY LINE
FENCE LINE
UNFENCED PROPERTY LINE
FENCED PROPERTY LINE
WATER LINE
SANITARY SEWER LINE
GAS LINE
ELECTRIC UNDERGROUND CABLE
TRAVELED WAY
GUARD RAIL
RETAINING WALL
RAILROADS
BASE OR SURVEY LINE

LEVEE OR EMBANKMENT
BRIDGES
CULVERTS
DROP INLET
POWER POLES
TELEPHONE OR TELEGRAPH POLES
TELEPHONE OR TELEGRAPH LINES
HEDGE
TREES
HEAVY WOODS
GROUND ELEVATION
GRADE ELEVATION

STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
VA.	STP-5128(469) SEE Tabulation Below For Section Numbers		(NFO) RRGW-129-257 SEE Tabulation Below For Section Numbers	1

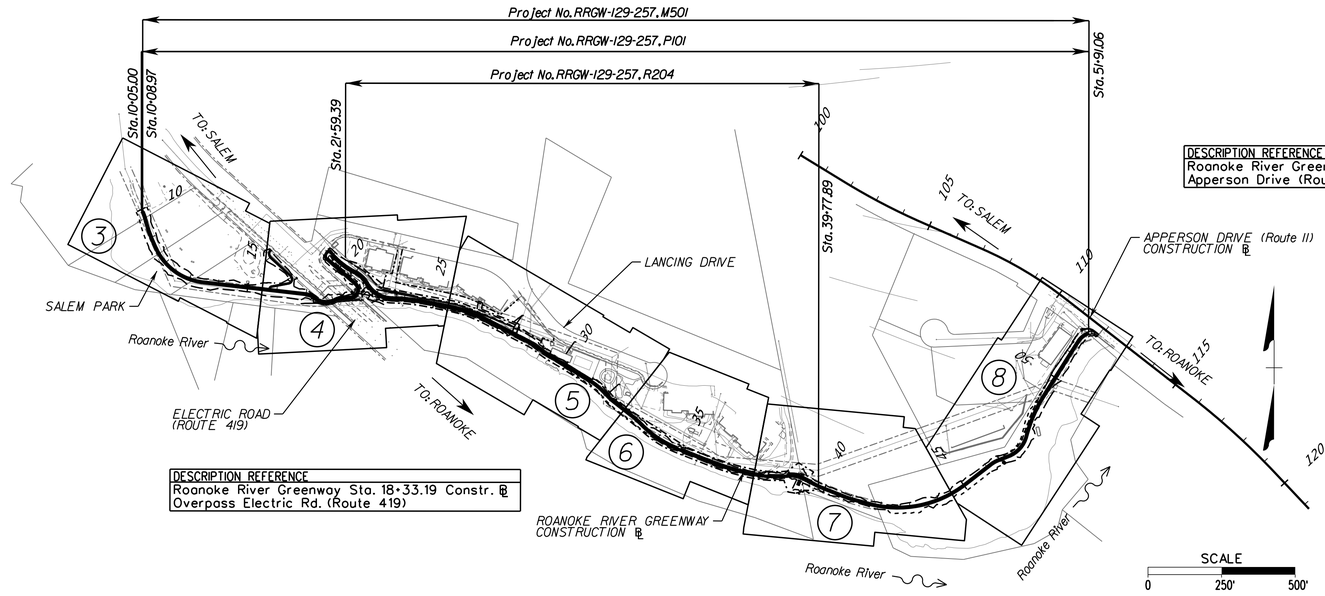
FHWA 534 DATA 23028

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE OF PROPOSED
ROANOKE RIVER GREENWAY TRAIL

City of Salem
From: Salem Park
To: Route 11 (Apperson Drive)



DESCRIPTION REFERENCE
Roanoke River Greenway Sta. 18+33.19 Constr. ℄
Overpass Electric Rd. (Route 419)

DESCRIPTION REFERENCE
Roanoke River Greenway Sta. 51+91.06 Constr. ℄
Apperson Drive (Route 11)

100% PLANS
JUNE 2024

THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY AS AWARDED, HAS BEEN SEALED AND SIGNED USING DIGITAL SIGNATURES AND THE OFFICIAL PLAN ASSEMBLY IN ELECTRONIC FORMAT IS STORED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY, INCLUDING ALL SUBSEQUENT REVISIONS, WILL BE THE OFFICIAL CONSTRUCTION PLANS. FOR INFORMATION RELATIVE TO ELECTRONIC FILES AND LAYERED PLANS, SEE THE GENERAL NOTES.

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT'S 2020 ROAD AND BRIDGE SPECIFICATIONS, 2016 ROAD AND BRIDGE STANDARDS, 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PROTECTION MANUAL AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC .PDF VERSION OF THE PLAN ASSEMBLY.

THE ORIGINAL APPROVED TITLE SHEET(S), INCLUDING ORIGINAL SIGNATURES, IS FILED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY. ANY MISUSE OF ELECTRONIC FILES, INCLUDING SCANNED SIGNATURES, IS ILLEGAL AND ENFORCED TO THE FULL EXTENT OF THE LAW.

City of Salem Population 25,373 (2021 Est. CENSUS)

STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	UPC NO.	LENGTH INCLUDING BRIDGE(S) FEET	LENGTH INCLUDING BRIDGE(S) MILES	LENGTH EXCLUDING BRIDGE(S) FEET	LENGTH EXCLUDING BRIDGE(S) MILES	FEDERAL STRUCTURE NO.	TYPE PROJECT	DESCRIPTION
RRGW-129-257	P101	STP-5128(469)	PENG	119562	4186.06	0.793	4186.06	0.793	N/A	PRELIM. ENGR.	FROM: 0.158 Mi. West of Overpass Electric Road (Route 419) TO: Apperson Drive (Route 11)
	R204	STP-5128(469)	ROWA	119562	1818.50	0.344	1818.50	0.344	N/A	R/W	FROM: 0.062 Mi. East of Overpass Electric Road (Route 419) TO: 0.230 Mi. South of Apperson Drive (Route 11)
	M501	STP-5128(547)	F000	119562	4182.09	0.792	4182.09	0.792	N/A	Construction	FROM: 0.156 Mi. West of Overpass Electric Road (Route 419) TO: Apperson Drive (Route 11)

NOTE: PROJECT LENGTH BASED ON CONSTRUCTION BASELINE

REVISED
06/07/24

TIER 1 PROJECT

RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION	
Anthony Ford, P.E. DISTRICT PLANNING AND INVESTMENT MANAGER	2023.10.26
Thomas W. DiGiulian, P.E. DISTRICT PROJECT DEVELOPMENT ENGINEER	2023.11.06
APPROVED FOR RIGHT OF WAY ACQUISITION	
Kenneth H King DISTRICT ENGINEER/ADMINISTRATOR	2023.11.14

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION
DISTRICT PLANNING AND INVESTMENT MANAGER
DISTRICT PROJECT DEVELOPMENT ENGINEER
APPROVED FOR CONSTRUCTION
DISTRICT ENGINEER/ADMINISTRATOR

Copyright 2023, Commonwealth of Virginia

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Plotted by: jtong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	1A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Location Map



City of Salem Population 25,373 (2021 Est. CENSUS)

SCALE	PROJECT	SHEET NO.
0 500' 1000'	RRGW-129-257	1A

6/24/2024

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Plotted by: swhitehead

PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _ _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt,Inc., (800).242-4906,July, 2022_ _ _ _ _ _ _
DESIGN BY Blck. Delong, P.E.,Rinker_Design. Associates,P.C.,(804) 612-0665_ _ _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc., (800).242-4906,July, 2022

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
	VA.		RRGW-129-257 R204, M501	1B

DESIGN FEATURES RELATING TO CONSTRUCTION
OR TO REGULATION AND CONTROL OF TRAFFIC
MAY BE SUBJECT TO CHANGE AS DEEMED
NECESSARY BY THE DEPARTMENT

Index of Sheets

Sheet Number	Description
1	Title Sheet
1A	Location Map
1B	Index of Sheets
1C	Right of Way Data Sheet & Demolition Summary
1D	Revision Data Sheet
1E	Not Used
1F	Survey Control Data
1F(1)	Existing Utility & Drainage Information
1G - 1G(2)	Construction Alignment Data Sheet
1H	Not Used
1J	TMP/SOC General Notes & Narrative
1K(1) - 1K(3)	Roanoke River Greenway Maintenance of Traffic Plan
1K(4) - 1K(5)	Retaining Wall Construction Phasing
2	General Notes
2A - 2A(1)	Typical Sections
2B	Erosion and Sediment Control Summary
2B(1)	Drainage Summary
2B(2)	Roadside Development
2B(3)	Pavement, Incidental, & Maintenance of Traffic Summary
2B(4)	Grading Summary
2C	Hydrologic Data Sheet
2D	Retaining Wall A Plan and Profile
2D(1)	Retaining Wall A Typical Section
2D(2) - 2D(3)	Retaining Wall A Boring Logs
2D(4)	Gabion Wall Plan, Profile & Typical Section
2D(5)	Gabion Wall Boring Logs
2E	Ditch Lining Typicals
2F	Special Design Drawing: Timber Fence
2F(1)	CG-12 Details & Radial Offset Data
2G - 2G(1)	Erosion & Sediment Control Notes & VESCH Narrative
2H - 2H(3)	Stormwater Pollution Prevention Plan
2I	Not Used
2J	Environmental Commitments Summary
2J(1)-2J(2)	Not Used
2J(3)-2J(8)	Environmental Commitments Plan Sheets
3	Plan Sheet Roanoke River Greenway (Sta. 10+00 to 15+50)
3A	Profile Sheet Roanoke River Greenway (Sta. 10+00 to 15+50)
3B	Erosion & Sediment Control Plan (Sta. 10+00 to 15+50)
4	Plan & Drainage Description Sheet Roanoke River Greenway (Sta. 15+50 to 25+50)
4A	Profile Sheet Roanoke River Greenway (Sta. 15+50 to 25+50)
4A(1)	Profile Sheet Sidewalk Spur A (Sta. 1+00.00 to 3+27.58)
4B	Erosion & Sediment Control Plan (Sta. 15+50 to 25+50)
4RW	Right of Way Plan Sheet
5	Plan & Drainage Description Sheet Roanoke River Greenway (Sta. 25+50 to 32+50)
5A	Profile Sheet Roanoke River Greenway (Sta. 25+50 to 32+50)
5B	Erosion & Sediment Control Plan (Sta. 25+50 to 32+50)
5RW	Right of Way Plan Sheet
6	Plan & Drainage Description Sheet Roanoke River Greenway (Sta. 32+50 to 37+50)
6A	Profile Sheet Roanoke River Greenway (Sta. 32+50 to 37+50)
6B	Erosion & Sediment Control Plan (Sta. 32+50 to 37+50)
6RW	Right of Way Plan Sheet
7	Plan & Drainage Description Sheet Roanoke River Greenway (Sta. 37+50 to 44+50)
7A	Profile Sheet Roanoke River Greenway (Sta. 37+50 to 44+50)
7B	Erosion & Sediment Control Plan (Sta. 37+50 to 44+50)
7RW	Right of Way Plan Sheet
8	Plan & Drainage Description Sheet Roanoke River Greenway (Sta. 44+50 to 52+62.78)
8A	Profile Sheet Roanoke River Greenway (Sta. 44+50 to 52+62.78)
8B	Erosion & Sediment Control Plan (Sta. 44+50 to 52+62.78)
9	Storm Sewer Profiles
10(1)	Signage & Pavement Marking General Notes, Legend, and Index of Sheets
10(2A)	Signage Schedule & Signage & Pavement Marking Summary
10(2B)	Signage Details
10(3) - 10(4)	Signage & Pavement Marking Plans
10(5) - 10(7)	Not Used
10(8) - 10(9)	Signage & Pavement Marking Plans
11(1) - 11(4)	Lighting Plans
X1-X29	Cross Sections - Roanoke River Greenway
X30	Not Used
X31-X32	Cross Sections - Sidewalk Spur A

PROJECT	SHEET NO.
RRGW-129-257	1B

6/26/2024

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Plotted by: jlong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Bibker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
01/11/24 06/07/24	VA.		RRGW-129-257 R204, M501	IC

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Right of Way Data Sheet

Parcel Information					Area: Areas greater than or equal to 1 acre will be shown in acres to 3 decimal places (x.xxx AC). Areas less than 1 acre will be shown in square feet (xx,xxx SF).															
Number	Landowner Name	Sheet Number	Deed Acreage	Remainder	Fee Take Summary			Permanent Easements					Utility Easements					Temporary		Quit Claim	Proffers Yes/NO
					Total	Prescriptive	Non-Prescr.	(Dr)ainage	(T)rail								VDOT	Construction	Entrance		
001	WOODROCK RIVERWALK, LLC	4,5,6,7	20.181 AC	20.181 AC				961 SF	1.353 AC								2892 SF	21930 SF			
002	ROSE MARIE HAGEN, TRUSTEE OF THE KARLA HAGEN WENDELL GST EXEMPT TRUST U/A SONDRA S. HAGEN TRUST DATED SEPTEMBER 21, 2005 , ROSE MARIE HAGEN, TRUSTEE OF THE JOHN W. HAGEN, JR., GST EXEMPT TRUST U/A SONDRA S. HAGEN TRUST DATED SEPTEMBER 21, 2005 , AND DANNY M. ROBERTSON	7	5.889 AC	5.889 AC					1607 SF											
003	Not Used		AC	0 AC																

6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	IC

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Plotted by: jlong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _ _ _ _ _
DESIGN BY Blick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665 _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Revision Data Sheet

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	1D

DESIGN FEATURES RELATING TO CONSTRUCTION
OR TO REGULATION AND CONTROL OF TRAFFIC
MAY BE SUBJECT TO CHANGE AS DEEMED
NECESSARY BY THE DEPARTMENT

State Project: RRGW-129-257, P101, R204, M501
Federal Aid Project: STP-5128(469)
From: Salem Park
To: Route 11 (Apperson Drive)
UPC Number: 119562

(R1) Date: January 11, 2024	Project RRGW-129-257
Sheet 1C:	Updated Parcel 2 property owner information & utility easement information on Parcel 1.
Sheet 4RW:	Updated Right of Way Summary Table.
Sheet 1K(2), 1K(4), 1K(5), 2D, 5, 5B, 5RW:	Updated proposed VDOT Utility Easement on Parcel 1.
Sheet 7, 7B, 7RW, 8, 8B, 8RW:	Updated property owner information on Parcel 2.
Sheet X12, X13	Added proposed VDOT Utility Easement labels.
This revision was made in accordance with a request from Chris Eggleston, VDOT Project Manager, dated 01/08/2024.	
(R2) Date: February 8, 2024	Project RRGW-129-257
Sheet 1C:	Updated temporary easement information on Parcel 1.
Sheet 1K(2), 1K(3), 6, 6B, 6RW, 7, 7B, 7RW:	Removed Proposed Temp. Constr. Easement for Access on Parcel 1.
Sheet X16:	Removed Proposed Temp. Constr. Easement labels.
This revision was made in accordance with a request from Chris Eggleston, VDOT Project Manager, dated 02/06/2024.	
(R3) Date: June 7, 2024	Project RRGW-129-257
Sheet 1:	Updated Right of Way Project labels and lengths.
Sheet 1C:	Removed Proposed Right of Way from Parcel 3.
Sheet 7, 7A:	Added Right of Way Project Flag label.
Sheet 1K(3), 8, 8B, 8RW, 10(8):	Removed Proposed Right of Way from Parcel 3.
Sheet 8A:	Removed Right of Way Project Flag label.
Sheet X30:	Sheet Removed
This revision was made in accordance with a request from Chris Eggleston, VDOT Project Manager, dated 06/07/2024.	

	PROJECT	SHEET NO.
	RRGW-129-257	1D

6/24/2024

PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Proffitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Proffitt, Inc., (800) 242-4906, July 2022

Survey Control Data

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	1F

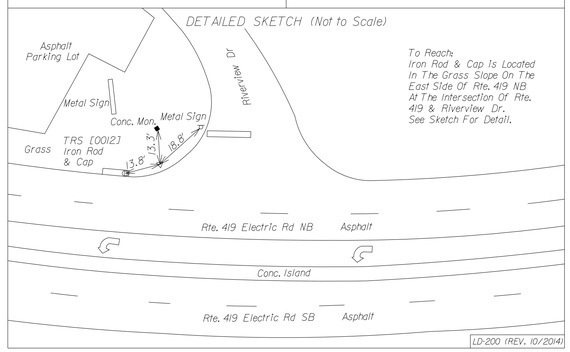
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

LD-200 (REV. 10/2014)

Virginia Department of Transportation Horizontal Control
Control Station I.D. : 129-0012 Date : 04-26-22

VDOT Project Coordinates (2014)	VA State Plane Coordinates : NAD 83- U.S. Survey Feet
East (X) : 11,036,519.520 ft. North (Y) : 3,625,898.619 ft. Elevation : 988.65 ft.	East (X) : 11,035,467.078 ft. North (Y) : 3,625,552.854 ft. Ortho. Elevation (H) : 988.65 ft. Zone : North _ South X (place an 'X' beside one)
Project Specific Combined Scale Factor: 1.000095369 (9 Decimal Places)	Project Information Project Number : RRGW-129-257,M501,P101,R204 Route : ----- City/County : Salem Established By : Hurt & Proffitt,Inc.
Latitude : 80° 01' 17.7856" N (5 Decimal Places) Longitude : 37° 09' 40.4806" W (5 Decimal Places) Geoid Separation (N) : -106.30' Ellipsoid Height (h) : 882.35' Horizontal Datum : NAD83 Year : 2011 Vertical Datum : NAVD88 Geoid : 18 Azimuth to Station : 0013 Is 161° 44' 59" Control Based On: Station (Name/PID) OPUS Solution or Project (Monument No.) : _____	To convert Virginia State Plane Coordinates to VDOT Project Coordinates, use the following formula : • Multiply the Easting And Northing Values (For Both Zones) by the Project Specific Combined Scale Factor. (Located above left) • Reverse this Procedure to convert VDOT Project Coordinates (2014) to NAD 83 - U.S. Survey Feet

DETAILED SKETCH (Not to Scale)



To Reach:
Iron Rod & Cap Is Located In The Grass Slope On The East Side Of Rte. 419 NB At The Intersection Of Rte. 419 & Riverview Dr. See Sketch For Detail.

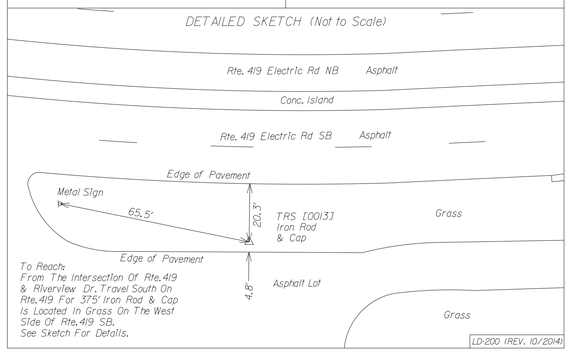
LD-200 (REV. 10/2014)

LD-200 (REV. 10/2014)

Virginia Department of Transportation Horizontal Control
Control Station I.D. : 129-0013 Date : 04-26-22

VDOT Project Coordinates (2014)	VA State Plane Coordinates : NAD 83- U.S. Survey Feet
East (X) : 11,036,659.503 ft. North (Y) : 3,625,474.112 ft. Elevation : 987.61 ft.	East (X) : 11,035,607.048 ft. North (Y) : 3,625,128.387 ft. Ortho. Elevation (H) : 987.61 ft. Zone : North _ South X (place an 'X' beside one)
Project Specific Combined Scale Factor: 1.000095369 (9 Decimal Places)	Project Information Project Number : RRGW-129-257,M501,P101,R204 Route : ----- City/County : Salem Established By : Hurt & Proffitt,Inc.
Latitude : 80° 01' 17.1350" N (5 Decimal Places) Longitude : 37° 09' 38.9784" W (5 Decimal Places) Geoid Separation (N) : -106.30' Ellipsoid Height (h) : 881.31' Horizontal Datum : NAD83 Year : 2011 Vertical Datum : NAVD88 Geoid : 18 Azimuth to Station : 0012 Is 341° 44' 59" Control Based On: Station (Name/PID) OPUS Solution or Project (Monument No.) : _____	To convert Virginia State Plane Coordinates to VDOT Project Coordinates, use the following formula : • Multiply the Easting And Northing Values (For Both Zones) by the Project Specific Combined Scale Factor. (Located above left) • Reverse this Procedure to convert VDOT Project Coordinates (2014) to NAD 83 - U.S. Survey Feet

DETAILED SKETCH (Not to Scale)



To Reach:
From The Intersection Of Rte. 419 & Riverview Dr. Travel South On Rte. 419 For 375' Iron Rod & Cap Is Located In Grass On The West Side Of Rte. 419 SB. See Sketch For Details.

LD-200 (REV. 10/2014)

BM "A" - Chiseled Square
In Conc. Wingwall
Elev - 992.05'

BM "B" Chiseled Square In
Conc. Sidewalk
Elev - 978.15'

BM "C" Chiseled Square
In Backwall of Bridge Structure #1800
Elev - 991.91'

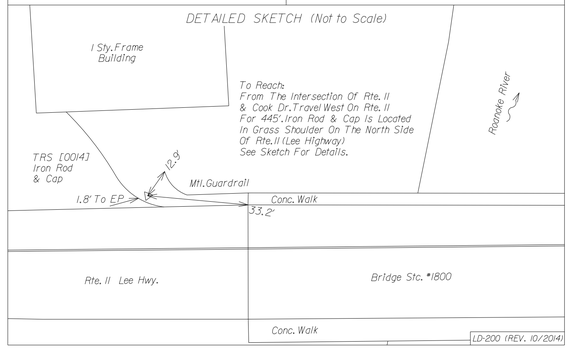
POINT ID	BEARING	PROJECT COORDINATES NORTHING (Y)	EASTING (X)
129-0012		3,625,898.619	11,036,519.520
129-0013	S 18° 15' 01" E	3,625,474.112	11,036,659.503
129-0014	S 81° 13' 15" E	3,624,994.758	11,039,763.360
129-0015	N 56° 26' 19" W	3,625,217.950	11,039,426.939

LD-200 (REV. 10/2014)

Virginia Department of Transportation Horizontal Control
Control Station I.D. : 129-0014 Date : 04-26-22

VDOT Project Coordinates (2014)	VA State Plane Coordinates : NAD 83- U.S. Survey Feet
East (X) : 11,039,763.360 ft. North (Y) : 3,624,994.758 ft. Elevation : 990.69 ft.	East (X) : 11,038,710.609 ft. North (Y) : 3,624,649.079 ft. Ortho. Elevation (H) : 990.69 ft. Zone : North _ South X (place an 'X' beside one)
Project Specific Combined Scale Factor: 1.000095369 (9 Decimal Places)	Project Information Project Number : RRGW-129-257,M501,P101,R204 Route : ----- City/County : Salem Established By : Hurt & Proffitt,Inc.
Latitude : 80° 00' 48.8760" N (5 Decimal Places) Longitude : 37° 09' 37.4588" W (5 Decimal Places) Geoid Separation (N) : -106.30' Ellipsoid Height (h) : 884.39' Horizontal Datum : NAD83 Year : 2011 Vertical Datum : NAVD88 Geoid : 18 Azimuth to Station : 0015 Is 303° 33' 41" Control Based On: Station (Name/PID) OPUS Solution or Project (Monument No.) : _____	To convert Virginia State Plane Coordinates to VDOT Project Coordinates, use the following formula : • Multiply the Easting And Northing Values (For Both Zones) by the Project Specific Combined Scale Factor. (Located above left) • Reverse this Procedure to convert VDOT Project Coordinates (2014) to NAD 83 - U.S. Survey Feet

DETAILED SKETCH (Not to Scale)



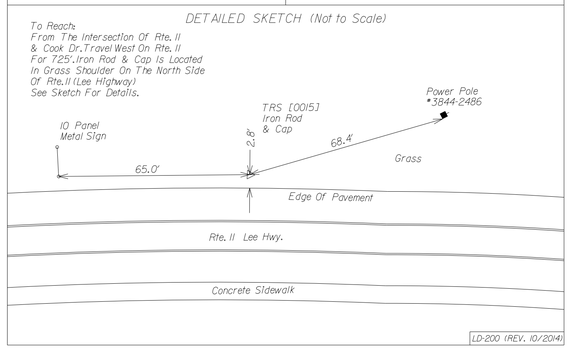
LD-200 (REV. 10/2014)

LD-200 (REV. 10/2014)

Virginia Department of Transportation Horizontal Control
Control Station I.D. : 129-0015 Date : 04-26-22

VDOT Project Coordinates (2014)	VA State Plane Coordinates : NAD 83- U.S. Survey Feet
East (X) : 11,039,426.939 ft. North (Y) : 3,625,217.950 ft. Elevation : 995.07 ft.	East (X) : 11,038,374.220 ft. North (Y) : 3,624,872.249 ft. Ortho. Elevation (H) : 995.07 ft. Zone : North _ South X (place an 'X' beside one)
Project Specific Combined Scale Factor: 1.000095369 (9 Decimal Places)	Project Information Project Number : RRGW-129-257,M501,P101,R204 Route : ----- City/County : Salem Established By : Hurt & Proffitt,Inc.
Latitude : 80° 00' 50.3901" N (5 Decimal Places) Longitude : 37° 09' 38.2267" W (5 Decimal Places) Geoid Separation (N) : -106.30' Ellipsoid Height (h) : 888.77' Horizontal Datum : NAD83 Year : 2011 Vertical Datum : NAVD88 Geoid : 18 Azimuth to Station : 0014 Is 123° 33' 41" Control Based On: Station (Name/PID) OPUS Solution or Project (Monument No.) : _____	To convert Virginia State Plane Coordinates to VDOT Project Coordinates, use the following formula : • Multiply the Easting And Northing Values (For Both Zones) by the Project Specific Combined Scale Factor. (Located above left) • Reverse this Procedure to convert VDOT Project Coordinates (2014) to NAD 83 - U.S. Survey Feet

DETAILED SKETCH (Not to Scale)



LD-200 (REV. 10/2014)

6/24/2024

NTS	PROJECT RRGW-129-257	SHEET NO. 1F

N:\20176-002\00 Design (11956)2\dll956200lf(1).dgn 2:24:00 PM 25.00 ft / In. 35x23 (In.) K:\Design Ald\Printing\Pen Tables\25 Scale.tbl \\estla\Library\Design Ald\Printing\Plot Drivers\RDA LD PDF File Generator.pltcfg
Plotted by: jtong

PROJECT MANAGER_HDR VDOT_PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profflit, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profflit, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	1F(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Existing Utility And Drainage Information

UTILITY LEGEND

- EB Electric Box
- Electric Guy Pole
- Electric Ground Light
- Electric Guy Wire
- E Electric Hand Hole
- Electric Meter
- E Electric Manhole
- Electric Marker Post
- E Electric Pedestal
- Electric Stub
- Electric Power Pole
- Electric Power Riser Pole
- Electric Light Pole
- Electric Luminaire
- End of Information (All Utilities)
- Fire Hydrant
- F Fiber Optic Hand Hole
- Fiber Optic Marker
- FO Fiber Optic Manhole
- FO Fiber Optic Pedestal
- Gas Meter
- G Gas Manhole
- Gas Marker Post
- MW Gas Monitoring Well
- Gas Stub
- Gas Test Station
- Gas Valve
- Gas Vent
- Gas Well
- Sanitary Air Release Valve
- Sanitary Flow Arrow
- Sanitary Stub
- Sewer Clean Out
- Sanitary Force Main Valve
- Sanitary Marker Post
- S Sanitary Manhole
- Sewer Vent Pipe
- Unknown Clean Out
- U Unknown Hand Hole
- UK Unknown Manhole
- TB Telephone Booth
- Telephone Guy Pole
- Telephone Guy Wire
- Test Holes (All Utilities)
- Telephone Cell Tower
- T Telephone Hand Hole
- T Telephone Manhole
- Telephone Marker Post
- Telephone Pole
- T Telephone Pedestal
- Telephone Riser Pole
- Television Satellite Dish
- Tower Anchor
- Traffic Camera Pole
- TC Traffic Control Hand Hole
- TC Traffic Control Manhole
- Traffic Control Guy Wire
- TC Traffic Control Pedestal
- Traffic Signal Guy Pole
- Traffic Signal Pole
- Traffic Signal Pole w/Luminaire
- Telephone Stub
- TV Television Hand Hole
- TV Television Manhole
- Television Marker Post
- TV Television Pedestal
- Television Stub
- Water Blow Off
- W Water Well
- Water Meter
- WM Water Manhole
- Water Marker Post
- Water Spigot
- Water Siamese Connection
- Water Stub
- Water Valve
- Water Post Inspection Valve
- Water Irrigation Valve
- ST Water Steam Manhole
- Water Steam Vent Pipe

- Fiber Optic Cable Television
- Chemical Line (above or below ground)
- Underground Fiber Optic Duct
- Fuel Line (above or below ground)
- Gas Line *
- Gas Line Duct
- Gravity Sewer *
- Sanitary Force Main *
- Traffic Control Fiber Optic
- Telephone Fiber Optic
- Underground Fiber Optic
- Unknown Utility Line
- Underground Power Cable
- Underground Power Cable Duct
- Underground Telephone Cable
- Underground Telephone Cable Duct
- Underground Traffic Control
- Underground Traffic Control Duct
- Underground Television Cable
- Underground Television Cable Duct
- Vacuum Sewer
- Water Line *
- Water Line Duct
- Depicted According To Utility Records **
- Abandoned According To Utility Records **
- According To Miss Utility Information **

* Designate size (Variable from 0.75" to 54")
** Designate type (Unknown line is shown)

(A) In Pl. Sewer Vault (Out Of Limits)
Rim=983.66'
No Pipes Visible From Top
Inv. Measured At Flow Line=967.91'

(B) Approx. Location Of Manhole
Paint Mark On Ground
Per City Of Salem

(C) Approx. Location Of Manhole
Paint Mark On Ground
Per City Of Salem

(D) In Pl. Sewer Manhole
Rim=979.57'
54" RCP Inv. Out=966.97'
54" RCP Inv. In=967.18'

(E) In Pl. Sewer Manhole
Rim=981.07'
54" RCP Inv. Out=966.96'
54" RCP Inv. In=967.04'

(F) In Pl. Sewer Manhole
Rim=979.98'
54" RCP Inv. Out=967.00'
54" RCP Inv. In=967.00'
8" DIP Inv. In=970.89'

(G) In Pl. Sewer Manhole
Rim=980.67'
8" DIP Inv. Out=972.07'
6" TC Pipe Inv. In=973.72'
8" DIP Inv. In=972.71'
8" DIP Inv. In=972.70'

(H) In Pl. Sewer Manhole
Rim=980.13'
54" RCP Inv. Out=966.30'
54" RCP Inv. In=966.31'
8" DIP Inv. In=969.16'

(I) In Pl. Sewer Manhole
Rim=981.08'
8" DIP Inv. Out=971.66'

(J) In Pl. Sewer Manhole
Rim=978.46'
Unknown Pipe Inv. Out=966.31' (At Flow Line)
54" RCP Inv. In=966.31'
8" DIP Inv. In=969.86'

(K) Approx. Location Of Manhole
Paint Mark On Ground
Per City Of Salem

(L) In Pl. Sewer Manhole
Rim=985.31'
54" RCP Inv. Out=965.79'
Inv. In=965.86' (From "K"?)

(M) In Pl. Sewer Manhole
Rim=984.10'
54" RCP Inv. Out=965.75'
54" RCP Inv. In=965.85'
8" DIP Inv. In=968.36'

(N) In Pl. Sewer Manhole
Rim=979.70'
54" RCP Inv. Out=965.24'
54" RCP Inv. In=965.29'

(O) In Pl. Sewer Manhole
Rim=990.26'
No Pipes Visible From Top
Inv. At Flow Line=964.97'

(P) In Pl. Sewer Manhole
Rim=978.98'
No Pipes Visible From Top
Inv. At Flow Line=964.40'

(Q) In Pl. Sewer Manhole
Rim=977.84'
No Pipes Visible From Top
Inv. At Flow Line=963.34'

(R) In Pl. Sewer Manhole
Rim=977.84'
8" DIP Inv. Out=969.28'
8" DIP Inv. In=969.54'

(S) In Pl. Sewer Manhole
Rim=975.48'
8" DIP Inv. Out=969.90'

(T) In Pl. Sewer Manhole
Rim=991.96'
No Pipes/Flow Visible From Top
Inv. At Bottom=968.81'

(U) In Pl. Sewer Manhole
Rim=991.72'
8" PVC Inv. Out=986.27'
4" PVC Inv. In=986.36'
4" PVC Inv. In=986.37'

(V) In Pl. Sewer Manhole (Out Of Limits)
Rim=988.65'
8" PVC Inv. In=983.08'

(01) In Pl. SSMH
Rim=989.71'

(02) In Pl. 12" RCP
Inv. In=987.69'
Inv. Out=987.22'
Conc. Headwall

(03) In Pl. Metal Grate
Rim=991.44'

(04) In Pl. 8" PVC Pipe
Inv. In=986.73'
Inv. Out=986.32'

(05) In Pl. Metal Grate
Rim=989.96'

(06) In Pl. 8" PVC Pipe
Inv. In=986.18'
Inv. Out=982.84'

(07) In Pl. Metal Grate
Rim=989.96'

(08) In Pl. 18" CMP
Inv. In=974.98'
Inv. Out=974.39'

(09) In Pl. SSMH
Rim=989.32'

(10) In Pl. 15" RCP
Inv. In=983.15'
Inv. Out=977.23'

(11) In Pl. SSMH
Rim=974.89'

(12) In Pl. 15" CMP
Inv. In=970.24'
Inv. Out=969.30' (Measured At Flow Line)

(13) In Pl. Metal Grate
Rim=975.01'

(14) In Pl. 15" CMP
Inv. In=969.30' (Measured At Flow Line)
Inv. Out=969.38'
(Inverts Field Verified)

(15) In Pl. Metal Grate
Rim=974.90'

(16) In Pl. 15" CMP
Inv. In=969.17'
Inv. Out=968.84
Conc. Headwall

(17) In Pl. 24" CMP
Inv. In=970.72' (From 22)
Inv. Out=969.19' (To 15)

(18) In Pl. SSMH
Rim=977.89'

(19) In Pl. 15" CMP
Inv. In=972.85'
Inv. Out=971.63'

(20) In Pl. SSMH
Rim=976.54'

(21) In Pl. 15" CMP
Inv. In=971.43'
Inv. Out=970.57'

(22) In Pl. Metal Grate
Rim=976.70'

(23) In Pl. 24" CPP
Inv. In=974.82
Inv. Out=970.99'

(24) In Pl. SSMH
Rim=979.14'

(25) In Pl. 24" CPP
Inv. In=974.82'
Inv. Out=975.95'
(Inverts Field Verified)

(26) In Pl. SSMH
Rim=981.17'

(27) In Pl. 24" CMP
Inv. In=975.17'
Inv. Out=973.88'

(28) In Pl. SSMH
Rim=980.88'

(29) In Pl. 24" CMP
Inv. In=973.76'
Inv. Out=971.68'

(30) In Pl. Metal Grate
Rim=979.30'

(31) In Pl. 24" CMP
Inv. In=971.78'
Inv. Out=Unknown (No Access to Stc. 32)

(32) In Pl. Metal Grate
Rim=988.77'
Note: No Access For Inverts

(33) In Pl. 24" CMP
Inv. In=Unknown (No Access to Stc. 32)
Inv. Out=969.33'

(34) In Pl. 24" CMP
Inv. In=971.75'
Inv. Out=Unknown (No Access to Stc. 32)

(35) In Pl. Metal Grate
Rim=983.59'

(36) In Pl. Unknown Size/Type Pipe
Gate Valve Covering Pipe

(37) In Pl. Unknown Size/Type Pipe
Pipe Recessed

(38) In Pl. 24" CMP
Inv. In=972.75'
Inv. Out=971.72'

(39) In Pl. SSMH
Rim=982.45'

(40) In Pl. 24" CMP
Inv. In=973.00'
Inv. Out=Unknown (No Acccess To Stc. 49)

(41) In Pl. SSMH
Rim=980.91'

(42) In Pl. 15" CMP
Inv. In=975.90'
Inv. Out=975.81'

(43) In Pl. SSMH
Rim=980.76'

(44) In Pl. 18" CMP
Inv. In=975.67'
Inv. Out=975.04'

(45) In Pl. SSMH
Rim=982.64'

(46) In Pl. 18" CMP
Inv. In=975.00'
Inv. Out=974.52'

(47) In Pl. SSMH
Rim=979.57'

(48) In Pl. 18" CMP
Inv. In=974.30'
Inv. Out=974.36'
(Inverts Field Verified)

(49) In Pl. Metal Grate
Rim=987.63'
(Filled With Debris. Approx. Inverts)

(50) In Pl. 18" CMP
Inv. In=Unknown (No Access To Stc. 49)
Inv. Out=974.21'
Conc. Headwall

(51) In Pl. 24" CMP
Inv. In=983.48' w/ F. E. S.
Inv. Out=982.87'

(52) In Pl. SSMH
Rim=988.46'

(53) In Pl. 15" RCP
Inv. In=984.80'
Inv. Out=982.30'

(54) In Pl. SSMH
Rim=988.99'

(55) In Pl. Plastic Yard Grate
Rim=977.30'

(56) In Pl. 4" PVC Pipe
Inv. In=976.37'
Inv. Out=976.25'

(57) In Pl. Sump w/ Pump
Rim=979.89'

(58) In Pl. 4" PVC Pipe
Inv. In=Unknown
Inv. Out=976.38'

6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	1F(1)

N:\20176-002\00 Design (11956)2\dll956200lg(0).dgn 2:24:33 PM 25.00 ft / In. 35x23 (In) K:\Design Ald\Printing\Pen Tables\25 Scale.tbl \\vestla\Library\Design Ald\Printing\Plot Drivers\RDA LD PDF File Generator.pltcfg
Plotted by: jlong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Construction Alignment Data Sheet

COMMONWEALTH OF VIRGINIA
AARON DELONG
Lic. No. 061662
PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.12 08:59:25-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	IG

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Alignment Name: Roanoke River Greenway
Alignment Description:
Alignment Style: Linear\Road Design\Alignments\Horizontal\25 Scale Baselines

		Station	Northing	Easting
Element: Linear				
START		10+00.000 R1	3625360.457	11036512.33
PC	( )	10+12.000 R1	3625349.711	11036517.67
	Tangential Direction:	S26°25'50.765"E		
	Tangential Length:	12		
Element: Circular				
PC	( )	10+12.000 R1	3625349.711	11036517.67
HPI	( )	10+22.990 R1	3625339.87	11036522.57
CC	( )		3625305.2	11036428.13
PRC	( )	10+33.893 R1	3625329.2	11036525.2
	Radius:	100		
	Delta:	12°32'38" Right		
	Degree of Curvature (Arc):	57°17'45"		
	Length:	21.893		
	Tangent:	10.99		
	Chord:	21.849		
	Middle Ordinate:	0.599		
	External:	0.602		
	Back Tangent Direction:	S26°25'50.766"E		
	Back Radial Direction:	S63°34'09.234"W		
	Chord Direction:	S20°09'31.880"E		
	Ahead Radial Direction:	S76°06'47.006"W		
	Ahead Tangent Direction:	S13°53'12.994"E		
Element: Circular				
PRC	( )	10+33.893 R1	3625329.2	11036525.2
HPI	( )	10+92.455 R1	3625272.35	11036539.26
CC	( )		3625449.204	11037010.59
PCC	( )	11+50.486 R1	3625220.286	11036566.07
	Radius:	500		
	Delta:	13°21'38" Left		
	Degree of Curvature (Arc):	11°27'33"		
	Length:	116.593		
	Tangent:	58.562		
	Chord:	116.329		
	Middle Ordinate:	3.395		
	External:	3.418		
	Back Tangent Direction:	S13°53'12.994"E		
	Back Radial Direction:	S76°06'47.006"W		
	Chord Direction:	S20°34'01.932"E		
	Ahead Radial Direction:	S62°45'09.130"W		
	Ahead Tangent Direction:	S27°14'50.870"E		
Element: Circular				
PCC	( )	11+50.486 R1	3625220.286	11036566.07
HPI	( )	12+57.405 R1	3625125.232	11036615.02
CC	( )		3625311.853	11036743.88
PT	( )	13+46.861 R1	3625113.137	11036721.25
	Radius:	200		
	Delta:	56°15'27" Left		
	Degree of Curvature (Arc):	28°38'52"		
	Length:	196.375		
	Tangent:	106.919		
	Chord:	188.582		
	Middle Ordinate:	23.622		
	External:	26.785		
	Back Tangent Direction:	S27°14'50.870"E		
	Back Radial Direction:	S62°45'09.130"W		
	Chord Direction:	S55°22'34.254"E		
	Ahead Radial Direction:	S06°29'42.361"W		
	Ahead Tangent Direction:	S83°30'17.639"E		
Element: Linear				
PT	( )	13+46.861 R1	3625113.137	11036721.25
PC	( )	16+99.018 R1	3625073.302	11037071.15
	Tangential Direction:	S83°30'17.667"E		
	Tangential Length:	352.157		
Element: Circular				
PC	( )	16+99.018 R1	3625073.302	11037071.15
HPI	( )	17+16.700 R1	3625071.302	11037088.72
CC	( )		3625013.687	11037064.36
PRC	( )	17+33.408 R1	3625060.094	11037102.4
	Radius:	60		
	Delta:	32°50'25" Right		
	Degree of Curvature (Arc):	95°29'35"		
	Length:	34.39		
	Tangent:	17.682		
	Chord:	33.921		
	Middle Ordinate:	2.447		
	External:	2.551		
	Back Tangent Direction:	S83°30'17.667"E		
	Back Radial Direction:	S06°29'42.333"W		
	Chord Direction:	S67°05'05.101"E		
	Ahead Radial Direction:	S39°20'07.466"W		
	Ahead Tangent Direction:	S50°39'52.534"E		
Element: Circular				
PRC	( )	17+33.408 R1	3625060.094	11037102.4
HPI	( )	17+73.317 R1	3625034.797	11037133.26
CC	( )		3625106.501	11037140.43
PRC	( )	18+03.842 R1	3625053.486	11037168.52
	Radius:	60		
	Delta:	67°15'32" Left		
	Degree of Curvature (Arc):	95°29'35"		
	Length:	70.433		
	Tangent:	39.908		
	Chord:	66.458		
	Middle Ordinate:	10.042		
	External:	12.06		
	Back Tangent Direction:	S50°39'52.534"E		
	Back Radial Direction:	S39°20'07.466"W		
	Chord Direction:	S84°17'38.645"E		
	Ahead Radial Direction:	S27°55'24.756"E		
	Ahead Tangent Direction:	N62°04'35.244"E		

		Station	Northing	Easting
Element: Circular				
PRC	( )	18+03.842 R1	3625053.486	11037168.52
HPI	( )	18+30.140 R1	3625065.802	11037191.76
CC	( )		3624982.8	11037205.99
PRC	( )	18+54.657 R1	3625061.928	11037217.77
	Radius:	80		
	Delta:	36°23'39" Right		
	Degree of Curvature (Arc):	71°37'11"		
	Length:	50.816		
	Tangent:	26.298		
	Chord:	49.966		
	Middle Ordinate:	4.001		
	External:	4.212		
	Back Tangent Direction:	N62°04'35.244"E		
	Back Radial Direction:	S27°55'24.756"E		
	Chord Direction:	N80°16'24.549"E		
	Ahead Radial Direction:	S08°28'13.853"W		
	Ahead Tangent Direction:	S81°31'46.147"E		
Element: Circular				
PRC	( )	18+54.657 R1	3625061.928	11037217.77
HPI	( )	19+46.992 R1	3625048.327	11037309.1
CC	( )		3625088.633	11037221.75
PT	( )	19+24.118 R1	3625108.989	11037239.49
	Radius:	27		
	Delta:	147°24'03" Left		
	Degree of Curvature (Arc):	212°12'24"		
	Length:	69.461		
	Tangent:	92.335		
	Chord:	51.83		
	Middle Ordinate:	19.422		
	External:	69.202		
	Back Tangent Direction:	S81°31'46.147"E		
	Back Radial Direction:	S08°28'13.853"W		
	Chord Direction:	N24°46'12.457"E		
	Ahead Radial Direction:	N41°04'11.062"E		
	Ahead Tangent Direction:	N48°55'48.938"W		
Element: Linear				
PT	( )	19+24.118 R1	3625108.989	11037239.49
PC	( )	20+49.979 R1	3625191.677	11037144.6
	Tangential Direction:	N48°55'48.938"W		
	Tangential Length:	125.861		
Element: Circular				
PC	( )	20+49.979 R1	3625191.677	11037144.6
HPI	( )	20+68.239 R1	3625203.673	11037130.83
CC	( )		3625202.985	11037154.45
PT	( )	20+76.472 R1	3625214.848	11037145.27
	Radius:	15		
	Delta:	101°11'40" Right		
	Degree of Curvature (Arc):	21°58'19"		
	Length:	26.493		
	Tangent:	18.26		
	Chord:	23.181		
	Middle Ordinate:	5.478		
	External:	8.631		
	Back Tangent Direction:	N48°55'48.938"W		
	Back Radial Direction:	N41°04'11.062"E		
	Chord Direction:	N01°40'01.188"E		
	Ahead Radial Direction:	S37°44'08.687"E		
	Ahead Tangent Direction:	N52°15'51.313"E		
Element: Linear				
PT	( )	20+76.472 R1	3625214.848	11037145.27
PC	( )	20+83.412 R1	3625219.095	11037150.76
	Tangential Direction:	N52°15'51.313"E		
	Tangential Length:	6.94		
Element: Circular				
PC	( )	20+83.412 R1	3625219.095	11037150.76
HPI	( )	21+40.803 R1	3625173.708	11037185.89
CC	( )		3625372.1	11037348.47
PRC	( )	21+96.240 R1	3625148.184	11037237.29
	Radius:	250		
	Delta:	25°51'30" Left		
	Degree of Curvature (Arc):	22°55'06"		
	Length:	112.828		
	Tangent:	57.391		
	Chord:	111.873		
	Middle Ordinate:	6.338		
	External:	6.503		
	Back Tangent Direction:	S37°44'08.687"E		
	Back Radial Direction:	S52°15'51.313"W		
	Chord Direction:	S50°39'53.554"E		
	Ahead Radial Direction:	S26°24'21.579"W		
	Ahead Tangent Direction:	S63°35'38.421"E		
Element: Circular				
PRC	( )	21+96.240 R1	3625148.184	11037237.29
HPI	( )	22+26.369 R1	3625134.785	11037264.28
CC	( )		3625058.617	11037192.82
PT	( )	22+54.768 R1	3625108.707	11037279.37
	Radius:	100		
	Delta:	33°32'04" Right		
	Degree of Curvature (Arc):	57°17'45"		
	Length:	58.529		
	Tangent:	30.129		
	Chord:	57.697		
	Middle Ordinate:	4.252		
	External:	4.44		
	Back Tangent Direction:	S63°35'38.432"E		
	Back Radial Direction:	S26°24'21.568"W		
	Chord Direction:	S46°49'36.372"E		
	Ahead Radial Direction:	S59°56'25.688"W		
	Ahead Tangent Direction:	S30°03'34.312"E		

		Station	Northing	Easting
Element: Linear				
PT	( )	22+54.768 R1	3625108.707	11037279.37
PC	( )	23+11.412 R1	3625059.682	11037307.74
	( )		3625158.797	11037365.92
	( )	23+57.844 R1	3625058.809	11037364.38
	Radius:	100		
	Delta:	59°03'28" Left		
	Degree of Curvature (Arc):	57°17'45"		
	Length:	103.075		
	Tangent:	56.644		
	Chord:	98.573		
	Middle Ordinate:	12.989		
	External:	14.928		
	Back Tangent Direction:	S30°03'34.304"E		
	Back Radial Direction:	S59°56'25.696"W		
	Chord Direction:	S59°35'18.526"E		
	Ahead Radial Direction:	S00°52'57.251"W		
	Ahead Tangent Direction:	S89°07'02.749"E		
Element: Circular				
PT	( )	23+57.844 R1	3625058.809	11037364.38
PC	( )	24+17.730 R1	3625057.887	11037424.26
	( )		3624408.886	11037354.37
	( )	24+77.279 R1	3625046.039	11037482.96
	Radius:	550		
	Delta:	10°31'40" Right		
	Degree of Curvature (Arc):	08°48'53"		
	Length:	119.435		
	Tangent:	59.886		
	Chord:	119.267		
	Middle Ordinate:	2.741		
	External:	2.753		
	Back Tangent Direction:	S89°07'02.749"E		
	Back Radial Direction:	S00°52'57.251"W		
	Chord Direction:	S83°51'12.551"E		
	Ahead Radial Direction:	S11°24'37.646"W		
	Ahead Tangent Direction:	S78°35'22.354"E		
Element: Linear				
PT	( )	24+77.279 R1	3625046.039	11037482.96
PC	( )	25+60.075 R1	3625029.659	11037564.12
	Tangential Direction:	S78°35'22.354"E		
	Tangential Length:	82.796		
Element: Circular				
PC	( )	25+60.075 R1	3625029.659	11037564.12
HPI	( )	26+22.916 R1	3625017.227	11037625.72
CC	( )		3624588.553	11037475.09
PT	( )	26+84.950 R1	3624988.395	11037681.56
	Radius:	450		
	Delta:	15°53'59" Right		
	Degree of Curvature (Arc):	12°43'57"		
	Length:	124.876		
	Tangent:	62.842		
	Chord:	124.475		
	Middle Ordinate:	4.325		
	External:	4.367		
	Back Tangent Direction:	S78°35'22.354"E		
	Back Radial Direction:	S11°24'37.646"W		
	Chord Direction:	S70°38'22.958"E		
	Ahead Radial Direction:	S27°18'36.438"W		
	Ahead Tangent Direction:	S62°41'23.562"E		
Element: Linear				
PT	( )	26+84.950 R1	3624988.395	11037681.56
PC	( )	28+59.213 R1	3624908.442	11037836.39
	Tangential Direction:	S62°41'23.562"E		
	Tangential Length:	174.263		
Element: Circular				
PC	( )	28+59.213 R1	3624908.442	11037836.39
HPI	( )	28+76.169 R1	3624900.662	11037851.46
CC	( )		3624775.161	11037767.57
PT	( )	28+92.982 R1	3624889.716	11037864.41
	Radius:	150		
	Delta:	12°53'55" Right		
	Degree of Curvature (Arc):	38°11'50"		
	Length:	33.769		
	Tangent:	16.956		
	Chord:	33.697		
	Middle Ordinate:	0.949		
	External:	0.955		
	Back Tangent Direction:	S62°41'23.562"E		
	Back Radial Direction:	S27°18'36.438"W		
	Chord Direction:	S56°14'25.963"E		
	Ahead Radial Direction:	S40°12'31.636"W		
	Ahead Tangent Direction:	S49°47'28.364"E		
Element: Circular				
PRC	( )	28+92.982 R1	3624889.716	11037864.41
HPI	( )	29+16.102 R1	3624874.79	11037882.07
CC	( )		3625098.732	11038041.94
PRC	( )	29+39.113 R1	3624863.022	11037901.97
	Radius:	275		
	Delta:	09°36'41" Left		
	Degree of Curvature (Arc):	20°50'05"		
	Length:	46.131		
	Tangent:	23.12		
	Chord:	46.077		
	Middle Ordinate:	0.967		
	External:	0.97		
	Back Tangent Direction:	S49°47'28.364"E		
	Back Radial Direction:	S40°12'31.636"W		
	Chord Direction:	S54°35'48.831"E		
	Ahead Radial Direction:	S30°35'50.702"W		
	Ahead Tangent Direction:	S59°24'09.298"E		

		Station	Northing	Easting
Element: Linear				
PT	( )	29+39.113 R1	3624863.022	11037901.97
PC	( )	29+88.288 R1	3624837.992	11037944.29
	Tangential Direction:	S59°24'09.298"E		
	Tangential Length:	49.175		
Element: Circular				
PC	( )	29+88.288 R1	3624837.992	11037944.29
HPI	( )	29+94.142 R1	3624835.013	11037949.33
CC	( )		3624493.686	11037740.69
PT	( )	29+99.994 R1	3624831.887	11037954.28
	Radius:	400		
	Delta:	01°40'37" Right		
	Degree of Curvature (Arc):	14°19'26"		
	Length:	11.707		
	Tangent:	5.854		
	Chord:	11.706		
	Middle Ordinate:	0.043		
	External:	0.043		
	Back Tangent Direction:	S59°24'09.298"E		
	Back Radial Direction:	S30°35'50.702"W		
	Chord Direction:	S58°33'50.996"E		
	Ahead Radial Direction:	S32°16'27.307"W		
	Ahead Tangent Direction:	S57°43'32.693"E		
Element: Linear				
PT	( )	29+99.994 R1	3624831.887	11037954.28
PC	( )	31+04.635 R1	3624776.011	11038042.76
	Tangential Direction:	S57°43'32.693"E		
	Tangential Length:	104.641		
Element: Circular				
PC	( )	31+04.635 R1	3624776.011	11038042.76
HPI	( )	31+27.909 R1	3624763.584	11038062.43
CC	( )		3624606.911	11037935.96
PT	( )	31+50.974 R1	3624746.97	11038078.73
	Radius:	200		
	Delta:	13°16'30" Right		
	Degree of Curvature (Arc):	28°38'52"		
	Length:	46.338		
	Tangent:	23.273		
	Chord:	46.235		
	Middle Ordinate:	1.341		
	External:	1.35		
	Back Tangent Direction:	S57°43'32.693"E		
	Back Radial Direction:	S32°16'27.307"W		
	Chord Direction:	S51°05'17.831"E		
	Ahead Radial Direction:	S45°32'57.031"W		
	Ahead Tangent Direction:	S44°27'02.969"E		
Element: Linear				
PT	( )	31+50.974 R1	3624746.97	11038078.73
PC	( )	31+88.519 R1	3624720.169	11038105.03
	Tangential Direction:	S44°27'02.969"E		
	Tangential Length:	37.545		
Element: Circular				
PC	( )	31+88.519 R1	3624720.169	11038105.03
HPI	( )	31+95.095 R1	3624715.474	11038109.63
CC	( )		3624790.198	11038176.41
PT	( )	32+01.652 R1	3624711.424	11038114.81
	Radius:	100		
	Delta:	07°31'29" Left		
	Degree of Curvature (Arc):	57°17'45"		
	Length:	13.133		
	Tangent:	6.576		
	Chord:	13.123		
	Middle Ordinate:	0.216		
	External:	0.216		
	Back Tangent Direction:	S44°27'02.969"E		
	Back Radial Direction:	S45°32'57.031"W		
	Chord Direction:	S48°12'47.269"E		
	Ahead Radial Direction:	S38°01'28.432"W		
	Ahead Tangent Direction:	S51°58'31.568"E		
Element: Linear				
PT	( )	32+01.652 R1	3624711.424	11038114.81
PC	( )	32+85.319 R1	3624659.885	11038180.72
	Tangential Direction:	S51°58'31.568"E		
	Tangential Length:	83.667		
Element: Circular				
PC	( )	32+85.319 R1	3624659.885	11038180.72
HPI	( )	33+05.766 R1	3624647.289	11038196.83
CC	( )		3624423.561	11037995.92
PRC	( )	33+26.150 R1	3624632.625	11038211.08
	Radius:	300		
	Delta:	07°47'54" Right		
	Degree of Curvature (Arc):	19°05'55"		
	Length:	40.832		
	Tangent:	20.447		
	Chord:	40.8		
	Middle Ordinate:	0.694		
	External:	0.696		
	Back Tangent Direction:	S51°58'31.568"E		
	Back Radial Direction:	S38°01'28.432"W		
	Chord Direction:	S48°04'34.704"E		
	Ahead Radial Direction:	S45°49'22.160"W		
	Ahead Tangent Direction:	S44°10'37.840"E		

	PROJECT	SHEET NO.
	RRGW-129-257	IG

6/24/2024

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Construction Alignment Data Sheet

COMMONWEALTH OF VIRGINIA
AARON DELONG
Lic. No. 061662
PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.12 09:29:13-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	IG(I)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Element: Circular					
PRC	( )	33+26.150 R1	3624632.625	11038211.08	PC
HPI	( )	34+01.378 R1	3624578.672	11038263.5	HPI
CC	( )		3624876.533	11038462.09	CC
PT	( )	34+74.351 R1	3624551.026	11038333.46	PT
	Radius:	350			
	Delta:	24°15'39" Left			
	Degree of Curvature (Arc):	16°22'13"			
	Length:	148.201			
	Tangent:	75.228			
	Chord:	147.096			
	Middle Ordinate:	7.815			
	External:	7.993			
	Back Tangent Direction:	S44°10'37.840"E			
	Back Radial Direction:	S45°49'22.160"W			
	Chord Direction:	S56°18'27.254"E			
	Ahead Radial Direction:	S21°33'43.332"W			
	Ahead Tangent Direction:	S68°26'16.668"E			

Element: Linear					
PT	( )	34+74.351 R1	3624551.026	11038333.46	PT
PC	( )	35+86.103 R1	3624509.956	11038437.4	PC
	Tangential Direction:	S68°26'16.668"E			
	Tangential Length:	111.752			

Element: Circular					
PC	( )	35+86.103 R1	3624509.956	11038437.4	PC
HPI	( )	36+65.875 R1	3624480.639	11038511.59	HPI
CC	( )		3625346.974	11038768.15	CC
PCC	( )	37+45.232 R1	3624464.828	11038589.78	PT
	Radius:	900			
	Delta:	10°07'50" Left			
	Degree of Curvature (Arc):	06°21'58"			
	Length:	159.129			
	Tangent:	79.772			
	Chord:	158.922			
	Middle Ordinate:	3.515			
	External:	3.528			
	Back Tangent Direction:	S68°26'16.668"E			
	Back Radial Direction:	S21°33'43.332"W			
	Chord Direction:	S73°30'11.501"E			
	Ahead Radial Direction:	S11°25'53.667"W			
	Ahead Tangent Direction:	S78°34'06.333"E			

Element: Circular					
PCC	( )	37+45.232 R1	3624464.828	11038589.78	PT
HPI	( )	38+05.338 R1	3624452.915	11038648.69	PC
CC	( )		3624856.893	11038669.05	
PRC	( )	38+64.552 R1	3624458.843	11038708.5	
	Radius:	400			
	Delta:	17°05'29" Left			
	Degree of Curvature (Arc):	14°19'26"			
	Length:	119.32			
	Tangent:	60.106			
	Chord:	118.878			
	Middle Ordinate:	4.441			
	External:	4.491			
	Back Tangent Direction:	S78°34'06.330"E			
	Back Radial Direction:	S11°25'53.670"W			
	Chord Direction:	S87°06'50.738"E			
	Ahead Radial Direction:	S05°39'35.147"E			
	Ahead Tangent Direction:	N84°20'24.853"E			

Element: Circular				
PRC	( )	38+64.552 R1	3624458.843	11038708.5
HPI	( )	38+94.701 R1	3624481.816	11038738.51
CC	( )		3624359.33	11038718.36
PT	( )	39+23.117 R1	3624447.71	11038765.15
	Radius:	100		
	Delta:	33°33'20" Right		
	Degree of Curvature (Arc):	57°17'45"		
	Length:	58.565		
	Tangent:	30.149		
	Chord:	57.732		
	Middle Ordinate:	4.257		
	External:	4.446		
	Back Tangent Direction:	N84°20'24.853"E		
	Back Radial Direction:	S05°39'35.147"E		
	Chord Direction:	S78°52'55.170"E		
	Ahead Radial Direction:	S27°53'44.806"W		
	Ahead Tangent Direction:	S62°06'15.194"E		

Element: Linear				
PT	( )	39+23.117 R1	3624447.71	11038765.15
PC	( )	39+66.740 R1	3624427.301	11038803.7
	Tangential Direction:	S62°06'15.194"E		
	Tangential Length:	43.623		

Element: Circular				
PC	( )	39+66.740 R1	3624427.301	11038803.7
HPI	( )	39+77.902 R1	3624422.079	11038813.57
CC	( )		3624604.061	11038897.28
PT	( )	39+89.040 R1	3624417.987	11038823.95
	Radius:	200		
	Delta:	06°23'19" Left		
	Degree of Curvature (Arc):	28°38'52"		
	Length:	22.3		
	Tangent:	11.162		
	Chord:	22.289		
	Middle Ordinate:	0.311		
	External:	0.311		
	Back Tangent Direction:	S62°06'15.194"E		
	Back Radial Direction:	S27°53'44.806"W		
	Chord Direction:	S65°17'54.694"E		
	Ahead Radial Direction:	S21°30'25.806"W		
	Ahead Tangent Direction:	S68°29'34.194"E		

Element: Linear				
PT	( )	39+89.040 R1	3624417.987	11038823.95
PC	( )	40+77.987 R1	3624385.377	11038906.71
	Tangential Direction:	S68°29'34.194"E		
	Tangential Length:	88.946		

Element: Linear				
PT	( )	40+77.987 R1	3624385.377	11038906.71
PC	( )	40+89.149 R1	3624381.285	11038917.09
	( )		3624571.452	11038980.03
	( )	41+00.287 R1	3624378.374	11038927.87
	Radius:	200		
	Delta:	06°23'19" Left		
	Degree of Curvature (Arc):	28°38'52"		
	Length:	22.3		
	Tangent:	11.162		
	Chord:	22.289		
	Middle Ordinate:	0.311		
	External:	0.311		
	Back Tangent Direction:	S68°29'34.197"E		
	Back Radial Direction:	S21°30'25.803"W		
	Chord Direction:	S71°41'13.696"E		
	Ahead Radial Direction:	S15°07'06.806"W		
	Ahead Tangent Direction:	S74°52'53.194"E		

Element: Linear				
	( )	41+00.287 R1	3624378.374	11038927.87
	( )	41+58.374 R1	3624363.224	11038983.94
	Tangential Direction:	S74°52'53.194"E		
	Tangential Length:	58.087		

Element: Circular				
	( )	41+58.374 R1	3624363.224	11038983.94
	( )	43+45.372 R1	3624314.452	11039164.47
	( )		3624725.244	11039081.75
	( )	45+05.307 R1	3624429.293	11039312.05
	Radius:	375		
	Delta:	53°00'26" Left		
	Degree of Curvature (Arc):	15°16'44"		
	Length:	346.932		
	Tangent:	186.998		
	Chord:	334.691		
	Middle Ordinate:	39.41		
	External:	44.039		
	Back Tangent Direction:	S74°52'53.194"E		
	Back Radial Direction:	S15°07'06.806"W		
	Chord Direction:	N78°36'53.619"E		
	Ahead Radial Direction:	S37°53'19.568"E		
	Ahead Tangent Direction:	N52°06'40.432"E		

Element: Linear				
	( )	45+05.307 R1	3624429.293	11039312.05
	( )	46+15.770 R1	3624497.132	11039399.23
	Tangential Direction:	N52°06'40.432"E		
	Tangential Length:	110.464		

Element: Circular				
	( )	46+15.770 R1	3624497.132	11039399.23
	( )	46+30.122 R1	3624505.946	11039410.55
	( )		3624618.212	11039460.64
	( )	46+44.279 R1	3624511.218	11039423.9
	Radius:	100		
	Delta:	16°20'04" Right		
	Degree of Curvature (Arc):	57°17'45"		
	Length:	28.509		
	Tangent:	14.352		
	Chord:	28.412		
	Middle Ordinate:	1.014		
	External:	1.025		
	Back Tangent Direction:	N52°06'40.432"E		
	Back Radial Direction:	S37°53'19.568"E		
	Chord Direction:	N60°16'42.312"E		
	Ahead Radial Direction:	S21°33'15.807"E		
	Ahead Tangent Direction:	N68°26'44.193"E		

Element: Linear				
	( )	46+44.279 R1	3624511.218	11039423.9
	( )	46+82.603 R1	3624525.298	11039459.55
	Tangential Direction:	N68°26'44.193"E		
	Tangential Length:	38.324		

Element: Circular				
	( )	46+82.603 R1	3624525.298	11039459.55
	( )	47+33.298 R1	3624543.922	11039506.7
	( )		3624618.305	11039422.81
	( )	47+76.441 R1	3624592.962	11039519.54
	Radius:	100		
	Delta:	53°45'55" Left		
	Degree of Curvature (Arc):	57°17'45"		
	Length:	93.838		
	Tangent:	50.695		
	Chord:	90.433		
	Middle Ordinate:	10.807		
	External:	12.116		
	Back Tangent Direction:	N68°26'44.193"E		
	Back Radial Direction:	S21°33'15.807"E		
	Chord Direction:	N41°33'46.672"E		
	Ahead Radial Direction:	S75°19'10.848"E		
	Ahead Tangent Direction:	N14°40'49.152"E		

Element: Linear				
	( )	47+76.441 R1	3624592.962	11039519.54
	( )	48+53.913 R1	3624667.905	11039539.18
	( )		3624466.249	11040003.22
	( )	49+30.162 R1	3624733.392	11039580.57
	Radius:	500		
	Delta:	17°36'55" Right		
	Degree of Curvature (Arc):	11°27'33"		
	Length:	153.721		
	Tangent:	77.472		
	Chord:	153.116		
	Middle Ordinate:	5.896		
	External:	5.966		
	Back Tangent Direction:	N14°40'49.132"E		
	Back Radial Direction:	S75°19'10.868"E		
	Chord Direction:	N23°29'16.398"E		
	Ahead Radial Direction:	S57°42'16.335"E		
	Ahead Tangent Direction:	N32°17'43.665"E		

Element: Linear				
	( )	49+30.162 R1	3624733.392	11039580.57
	( )	51+44.712 R1	3624914.752	11039695.2
	Tangential Direction:	N32°17'43.665"E		
	Tangential Length:	214.55		

Element: Linear				
START	( )	51+44.712 R1	3624914.752	11039695.2
PC	( )	51+68.773 R1	3624935.091	11039708.05
	( )		3624877.352	11039754.37
	( )	51+91.062 R1	3624943.228	11039730.7

Element: Circular				
PC	Radius:	70		
HPI	Delta:	37.938° Right		
CC	Degree of Curvature (Arc):	81.851°		
PT	Length:	46.35		
	Tangent:	24.061		
	Chord:	45.508		
	Middle Ordinate:	3.801		
	External:	4.02		
	Back Tangent Direction:	N32°17'43.665"E		
	Back Radial Direction:	S57°42'16.335"E		
	Chord Direction:	N51°15'52.421"E		
	Ahead Radial Direction:	S19°45'58.822"E		
	Ahead Tangent Direction:	N70°14'01.178"E		

Alignment Name: Retaining Wall A
Alignment Description:
Alignment Style: Linear\Road Design\Alignments\Horizontal\25 Scale Baselines

	Station	Northing	Easting
	10+00.000 R1	3625090.571	11037310.66
	10+32.432 R1	3625083.264	11037342.26
Tangential Direction:	S76°58'49.359"E		
Tangential Length:	32.432		

Element: Linear				
PT		10+32.432 R1	3625083.264	11037342.26
PC		11+30.771 R1	3625064.89	11037438.87
	Tangential Direction:	S79°13'52.349"E		
	Tangential Length:	98.339		

Element: Circular				
PC		11+30.771 R1	3625064.89	11037438.87
HPI		12+39.907 R1	3625045.59	11037546.29
CC		12+66.943 R1	3625040.474	11037572.83
PT	Tangential Direction:	S79°48'51.297"E		
	Tangential Length:	109.136		

Element: Linear				
		12+39.907 R1	3625045.59	11037546.29
		12+66.943 R1	3625040.474	11037572.83
	Tangential Direction:	S79°05'32.387"E		
	Tangential Length:	27.036		

Element: Linear				
		12+66.943 R1	3625040.474	11037572.83
		12+81.486 R1	3625036.99	11037586.95
	Tangential Direction:	S76°08'07.679"E		
	Tangential Length:	14.543		

Element: Circular				
PT		12+81.486 R1	3625036.99	11037586.95
PC		12+90.766 R1	3625034.211	11037595.81
	Tangential Direction:	S72°34'48.590"E		
	Tangential Length:	9.281		

Element: Linear				
		12+90.766 R1	3625034.211	11037595.81
		13+04.608 R1	3625029.577	11037608.85
	Tangential Direction:	S70°26'18.833"E		
	Tangential Length:	13.841		

Element: Linear				
		13+04.608 R1	3625029.577	11037608.85
		13+46.770 R1	3625014.156	11037648.09
	Tangential Direction:	S68°32'47.000"E		
	Tangential Length:	42.162		

Element: Linear				
		13+46.770 R1	3625014.156	11037648.09
		14+12.123 R1	3624990.224	11037708.9
	Tangential Direction:	S68°31'06.426"E		
	Tangential Length:	65.353		

Element: Linear				
		14+12.123 R1	3624990.224	11037708.9
END		14+80.004 R1	3624964.225	11037771.61
	Tangential Direction:	S67°28'47.157"E		
	Tangential Length:	67.881		

Alignment Name: Sidewalk Spur A
Alignment Description:
Alignment Style: Linear\Road Design\Alignments\Horizontal\25 Scale Baselines

	Station	Northing	Easting
( )	1+00.000 R1	3625087.33	11036947.93
( )	1+05.000 R1	3625092.298	11036948.49
Tangential Direction:	N06°29'42.333"E		
Tangential Length:	5		

Element: Circular				
PC	( )	1+05.000 R1	3625092.298	11036948.49
HPI	( )	1+10.544 R1	3625097.807	11036949.12
CC	( )		3625091.45	11036955.95
PT	( )	1+14.549 R1	3625098.823	11036954.57
	Radius:	7.5		
	Delta:	72°56'49" Right		
	Degree of Curvature (Arc):	43°56'37"		
	Length:	9.549		
	Tangent:	5.544		
	Chord:	8.917		
	Middle Ordinate:	1.469		
	External:	1.827		
	Back Tangent Direction:	N06°29'42.332"E		
	Back Radial Direction:	S83°30'17.668"E		
	Chord Direction:	N42°58'06.929"E		
	Ahead Radial Direction:	S10°33'28.475"E		
	Ahead Tangent Direction:	N79°26'31.525"E		

Element: Linear				
PT	( )	1+14.549 R1	3625098.823	11036954.57
PC	( )	1+73.141 R1	3625109.559	11037012.17
	Tangential Direction:	N79°26'31.525"E		
	Tangential Length:	58.592		

Element: Circular				
PC	( )	1+73.141 R1	3625109.559	11037012.17
HPI	( )	2+03.313 R1	3625115.087	11037041.83
CC	( )		3625124.305	11037009.42
PT	( )	2+06.424 R1	3625135.397	11037019.52
	Radius:	15		
	Delta:	127°07'53" Left		
	Degree of Curvature (Arc):	21°58'19"		
	Length:	33.283		
	Tangent:	30.172		
	Chord:	26.863		
	Middle Ordinate:	8.322		
	External:	18.695		
	Back Tangent Direction:	N79°26'31.525"E		
	Back Radial Direction:	S10°33'28.475"E		
	Chord Direction:	N15°52'34.912"E		
	Ahead Radial Direction:	N42°18'38.299"E		
	Ahead Tangent Direction:	N47°41'21.701"W		

Element: Linear				
PT	( )	2+06.424 R1	3625135.397	11037019.52
PC	( )	2+96.239 R1	3625195.856	11036953.1
	Tangential Direction:	N47°41'21.701"W		
	Tangential Length:	89.815		

Element: Circular				
PC	( )	2+96.239 R1	3625195.856	11036953.1
HPI	( )	3+16.166 R1	3625209.27	11036938.37
CC	( )		3625210.646	11036966.57
PT	( )	3+27.582 R1	3625224.055	11036951.73
	Radius:	20		
	Delta:	89°47'25" Right		
	Degree of Curvature (Arc):	286°28'44"		
	Length:	31.343		
	Tangent:	19.927		
	Chord:	28.232		
	Middle Ordinate:	5.832		
	External:	8.233		
	Back Tangent Direction:	N47°41'21.702"W		
	Back Radial Direction:	N42°18'38.298"E		
	Chord Direction:	N02°47'39.168"W		
	Ahead Radial Direction:	S47°53'56.635"E		
	Ahead Tangent Direction:	N42°06'03.365"E		

PROJECT	SHEET NO.
RRGW-129-257	IG(I)

6/24/2024

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _ _ _ _ _
DESIGN BY Rick DeLong, P.E. Rinker Design Associates, P.C. (804) 612-0665 _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Construction Alignment Data Sheet

AARON DELONG
Lic. No. 061662
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.12 09:29:40-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	IG(2)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Horizontal Alignment Review Report

Report Created: Tuesday, November 14, 2023
Time: 3:24:31 PM

Project: Default
Description:
File Name: N:\20176-002\00 Design (119562)\d119562002d(4).dgn
Last Revised: 11/14/2023 15:23
Note: All units in this report are in feet unless specified otherwise.

Alignment Name: Gabion Wall
Alignment Description:
Alignment Style: Alignment\DES_HOR_CL

		Station	Northing	Easting
Element: Linear				
START		( ) 100.000 R1	3625044.36	11037097.45
PC		( ) 108.232 R1	3625044.67	11037105.68
	Tangential Direction:	N87.841°E		
	Tangential Length:	8.232		
Element: Circular				
PC		( ) 108.232 R1	3625044.67	11037105.68
HPI		( ) 114.629 R1	3625044.911	11037112.07
CC		( )	3625010.944	11037106.95
PRC		( ) 120.876 R1	3625042.796	11037118.11
	Radius:	33.75		
	Delta:	21.465° Right		
	Degree of Curvature (Arc):	169.765°		
	Length:	12.644		
	Tangent:	6.397		
	Chord:	12.57		
	Middle Ordinate:	0.59		
	External:	0.601		
	Back Tangent Direction:	N87.841°E		
	Back Radial Direction:	S2.159°E		
	Chord Direction:	S81.427°E		
	Ahead Radial Direction:	S19.306°W		
	Ahead Tangent Direction:	S70.694°E		
Element: Circular				
PRC		( ) 120.876 R1	3625042.796	11037118.11
HPI		( ) 120.876 R1	3625042.796	11037118.11
CC		( )	3625106.501	11037140.43
PCC		( ) 120.876 R1	3625042.796	11037118.11
	Radius:	67.5		
	Delta:	0.000° Left		
	Degree of Curvature (Arc):	84.883°		
	Length:	0		
	Tangent:	0		
	Chord:	0		
	Middle Ordinate:	0		
	External:	0		
	Back Tangent Direction:	S70.694°E		
	Back Radial Direction:	S19.306°W		
	Chord Direction:	S70.695°E		
	Ahead Radial Direction:	S19.305°W		
	Ahead Tangent Direction:	S70.695°E		
Element: Circular				
PCC		( ) 120.876 R1	3625042.796	11037118.11
HPI		( ) 149.715 R1	3625033.262	11037145.33
CC		( )	3625106.5	11037140.43
PRC		( ) 175.384 R1	3625046.337	11037171.03
	Radius:	67.5		
	Delta:	46.268° Left		
	Degree of Curvature (Arc):	84.883°		
	Length:	54.508		
	Tangent:	28.838		
	Chord:	53.039		
	Middle Ordinate:	5.428		
	External:	5.902		
	Back Tangent Direction:	S70.694°E		
	Back Radial Direction:	S19.306°W		
	Chord Direction:	N86.172°E		
	Ahead Radial Direction:	S26.962°E		
	Ahead Tangent Direction:	N63.038°E		
Element: Circular				
PRC		( ) 175.384 R1	3625046.337	11037171.03
HPI		( ) 182.260 R1	3625049.401	11037177.19
CC		( )	3625015.005	11037186.63
PT		( ) 188.964 R1	3625049.909	11037184.04
	Radius:	35		
	Delta:	22.230° Right		
	Degree of Curvature (Arc):	163.702°		
	Length:	13.58		
	Tangent:	6.876		
	Chord:	13.494		
	Middle Ordinate:	0.657		
	External:	0.669		
	Back Tangent Direction:	N63.534°E		
	Back Radial Direction:	S26.466°E		
	Chord Direction:	N74.649°E		
	Ahead Radial Direction:	S4.236°E		
	Ahead Tangent Direction:	N85.764°E		
Element: Linear				
PT		( ) 188.964 R1	3625049.909	11037184.04
HPI		( ) 259.394 R1	3625055.111	11037254.28
	Tangential Direction:	N85.764°E		
	Tangential Length:	70.43		
Element: Linear				
HPI		( ) 259.394 R1	3625055.111	11037254.28
END		( ) 259.757 R1	3625055.138	11037254.64
	Tangential Direction:	N85.764°E		
	Tangential Length:	0.363		

Alignment Name: Apperson Drive
Alignment Description:
Alignment Style: Linear\Road Design\Alignments\Horizontal\25 Scale Baselines

		Station	Northing	Easting
Element: Linear				
START		( ) 100+00.000 R1	3625547.12	11038751.2
PC		( ) 101+80.403 R1	3625453.387	11038905.34
	Tangential Direction:	S58°41'46.100"E		
	Tangential Length:	180.403		
Element: Circular				
PC		( ) 101+80.403 R1	3625453.387	11038905.34
HPI		( ) 103+26.234 R1	3625377.617	11039029.94
CC		( )	3627316.031	11040038.02
PT		( ) 104+71.631 R1	3625319.118	11039163.53
	Radius:	2180		
	Delta:	7.654° Left		
	Degree of Curvature (Arc):	2.628°		
	Length:	291.228		
	Tangent:	145.831		
	Chord:	291.011		
	Middle Ordinate:	4.861		
	External:	4.872		
	Back Tangent Direction:	S58°41'46.100"E		
	Back Radial Direction:	S31°18'13.900"W		
	Chord Direction:	S62°31'23.634"E		
	Ahead Radial Direction:	S23°38'58.833"W		
	Ahead Tangent Direction:	S66°21'01.167"E		
Element: Linear				
PT		( ) 104+71.631 R1	3625319.118	11039163.53
PC		( ) 106+94.819 R1	3625229.587	11039367.97
	Tangential Direction:	S66°21'01.167"E		
	Tangential Length:	223.188		
Element: Circular				
PC		( ) 106+94.819 R1	3625229.587	11039367.97
HPI		( ) 108+60.795 R1	3625163.007	11039520.01
CC		( )	3624011.287	11038834.45
PT		( ) 110+25.064 R1	3625061.104	11039651.02
	Radius:	1330		
	Delta:	14.227° Right		
	Degree of Curvature (Arc):	4.308°		
	Length:	330.245		
	Tangent:	165.976		
	Chord:	329.397		
	Middle Ordinate:	10.237		
	External:	10.316		
	Back Tangent Direction:	S66°21'01.167"E		
	Back Radial Direction:	S23°38'58.833"W		
	Chord Direction:	S59°14'12.951"E		
	Ahead Radial Direction:	S37°52'35.264"W		
	Ahead Tangent Direction:	S52°07'24.736"E		
Element: Linear				
PT		( ) 110+25.064 R1	3625061.104	11039651.02
PC		( ) 115+73.584 R1	3624724.334	11040083.99
	Tangential Direction:	S52°07'24.736"E		
	Tangential Length:	548.52		
Element: Circular				
PC		( ) 115+73.584 R1	3624724.334	11040083.99
HPI		( ) 117+63.187 R1	3624607.926	11040233.65
CC		( )	3622766.78	11038561.36
PT		( ) 119+52.053 R1	3624470.119	11040363.87
	Radius:	2480		
	Delta:	8.744° Right		
	Degree of Curvature (Arc):	2.310°		
	Length:	378.469		
	Tangent:	189.602		
	Chord:	378.101		
	Middle Ordinate:	7.216		
	External:	7.237		
	Back Tangent Direction:	S52°07'24.736"E		
	Back Radial Direction:	S37°52'35.264"W		
	Chord Direction:	S47°45'05.876"E		
	Ahead Radial Direction:	S46°37'12.984"W		
	Ahead Tangent Direction:	S43°22'47.016"E		
Element: Linear				
PT		( ) 119+52.053 R1	3624470.119	11040363.87
END		( ) 121+21.085 R1	3624347.263	11040479.97
	Tangential Direction:	S43°22'47.016"E		
	Tangential Length:	169.032		

6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	IG(2)

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Plotted by: adelong

PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405 _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _ _ _ _ _
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

TMP/SOC General Notes and Narrative

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	1J

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

General Notes

1. This project is a Type A Category 1 Project.

2. All work on this project shall conform to the 2009 Manual on Uniform Traffic Control Devices (MUTCD), The 2020 Road and Bridge Specifications, The 2011 Virginia Supplement to the MUTCD, and the 2011 VDOT Work Area Protection Manual Revision 2.1.

3. Unless otherwise approved or directed by the Engineer, the contractor shall plan and prosecute the work in accordance with the following Sequence of Construction and temporary traffic control plans.

4. It is not the intent of the SOC Plan to enumerate every detail which must be considered in the construction of each stage, but only to describe the general handling of traffic and pedestrians.

5. Any contract items not specifically noted in the transportation management plan (TMP) may be constructed at the contractor's option, as approved by the Engineer.

6. At no time shall the contractor be permitted to work on both sides of traffic concurrently.

7. All driveways shall have access during all phases of construction.

8. All areas excavated below the existing pavement surface and within the clear zone, at the conclusion of each work day, shall be backfilled to form an appropriate 6:1 wedge against the existing pavement surface for the safety and protection of vehicular traffic. All cost for placing, maintaining, and removing the 6:1 wedge shall be included in the price bid for other items in the contract and no additional compensation will be allowed.

9. Traffic shall not be detained for longer than 5 minutes at any time, unless directed by the Engineer.

10. Should it become necessary to facilitate construction, lanes may be closed using TTC 23.2 as follows:
All Routes: Single lanes 9:00 AM to 3:00 PM
Extension of closure hours may be approved by the Engineer after a traffic study is performed at the contractor's cost. One-lane closures will be restricted to the hours of 9:00 AM to 2:00 PM, Monday through Friday. No lane closures will be allowed from noon on the day before a holiday until noon on the workday following the holiday. Holidays include all State and Federal holidays.

11. Contractor shall contact Salem Traffic Operations Center 2 weeks before lanes are to be closed.

12. Two-Way, One-Lane traffic with flaggers will be permitted to facilitate specific isolated construction activities that require a lane closure as directed by the Engineer.

13. Contractor shall maintain all roadway signage throughout the project area.

14. All construction signs shall be the responsibility of the contractor, including furnishing, installing, adjusting, maintaining, and removing posts per the specifications and standard details. The contractor shall determine the actual sign locations based upon geometry and roadside conditions to ensure proper visibility by drivers.

15. The contractor shall designate an individual responsible for the maintenance and protection of traffic who can be contacted at all times, 24 hours a day, 7 days a week in case of emergencies.

16. If needed, the contractor shall submit a detailed MOT and SOC plan for review. The contractor shall allow a minimum of two weeks for review. Any major changes will require approval by the Engineer.

17. Upon completion of construction, the contractor shall remove temporary signage.

18. Any existing pavement markings that conflict with temporary striping are to be eradiacted.

19. Contractor shall seed all disturbed areas and shall meet VDOT standards.

20. Signs no longer applicable and/or in conflict with other traffic control devices shall be removed and/or covered when no longer necessary. All other signs shall be properly aligned/oriented and maintained.

21. All temporary traffic control (signs and pavement markings) shown in the plans are approximate. Adjustments may be made based on field conditions with prior approval and/or discretion of the Engineer.

22. The contractor shall provide positive drainage, grade all areas to drain and provide temporary drainage as required and/or as shown on the plans to prevent ponding of water on the roadway, and runoff of water off site, and onto adjacent properties. The cost shall be included in other pay items.

23. The contractor shall coordinate all construction activities with any utility relocations within this project. Contractor shall perform test pit excavations in advance to verify the exact locations and elevations of the existing utilities and also to determine if any of these utilities will be in conflict with the proposed work in accordance with the applicable Miss Utility law or as directed by the Engineer.

24. Any equipment or materials actively being utilized for a particular construction activity must be placed so as not to create a fixed-object hazard to the traveling public.

25. Any temporary pavement markings that conflict from one phase of construction to another shall be eradicated as required or directed by the Engineer.

26. Contractor shall be aware of overhead utility lines throughout the project area.

Transportation Management Plan

General:
The construction consists of shared-use path, retaining wall, pipe culverts, lighting, and parking lot.

Traffic consists of commuters, residents, pedestrians, and trucks.

Temporary Traffic Control (TTC)/Maintenance of Traffic (MOT):
There will be no long term road closures for construction of this project. Pedestrian access on the existing trail will not be maintained during construction. Type III barricades and fencing will be used to keep pedestrians away from the work zone. As necessary, traffic shall be maintained using temporary traffic shifts and temporary lane closures in accordance with the latest edition of the Virginia Work Area Protection Manual.

Contractor shall follow typical traffic control plans per the VDOT Work Area Protection Manual (WAPM), 2011 Edition, Rev 2.1, November 1, 2020.
TTC-5.2 Shoulder Operation with Minor Encroachment
TTC-23.2 Lane Closure on a Two-Lane Roadway Using Flaggers
TTC-53.0 Signing for Project Limits

Access to adjacent residential and commercial properties will be maintained at all times.

See all detailed information for the TTC/MOT under "Sequence of Construction" in these plans.

Public Commmunication Plan:
When any major traffic changes are to take place the contractor will ensure that the newspapers and radio stations are informed 72 hours in advance of the change.

Transportation Operation Plan:
The contractor shall notify the "Regional Transportation Operation Center" when a lane closure is installed and again when it is removed. The "Regional Transportation Operation Center" will in turn place the information into the 511 system in the "Virginia Traffic System".

The following is a list of local emergency numbers:
City of Salem Police Department: 540-375-3078
City of Salem Fire Department: 540-375-3080
City of Salem Rescue Squad: 540-375-3001
Virginia State Police (Area 40): 540-375-9518
Salem City Manager - Christopher Dorsey: 540-375-3017

Project Personnel:
Any traffic incident that occurs during the life of this project will be discussed by the Contractor, VDOT personnel, and the city project personnel to determine whether any changes need to be made to the traffic control of the project.

The Contractor shall coordinate with the City of Salem Police Department, City of Salem Fire & Rescue, and Virginia State Police for any lane closures at no additional cost to the project.

Sequence of Construction

- Install signing for project limits utilizing TTC-53.0.
- Install Type III Barricades at trail ends, as shown on plan sheets.
- Install erosion and sediment control measures (See Sheet 2G(1) for E&S Sequence).
- Abandon existing scuppers along Electric Road utilizing short term lane or shoulder closures.
- Demo and construct sidewalk along Apperson Drive utilizing appropriate temporary traffic control devices in accordance with TTC-5.2 & 23.2. Remove traffic control devices, including signs and group II channelizing devices, at the completion of work along the road.
- Install safety fence, as shown on plans.
- Construct retaining wall between Station 22+91.31 and Station 27+76.03 using phasing shown on Sheet 1K(4) and Sheet 1K(5).
- Construct shared-use path and sidewalk.
- Install permanant signage and pavement markings.

PROJECT	SHEET NO.
RRGW-129-257	1J

9/30/2024

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Plotted by: adelong

PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profflit, Inc., (800) 242-4906, July 2022 _____
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ____
SUBSURFACE UTILITY BY, DATE Hurt & Profflit, Inc., (800) 242-4906, July 2022

Roanoke River Greenway Maintenance of Traffic Plan

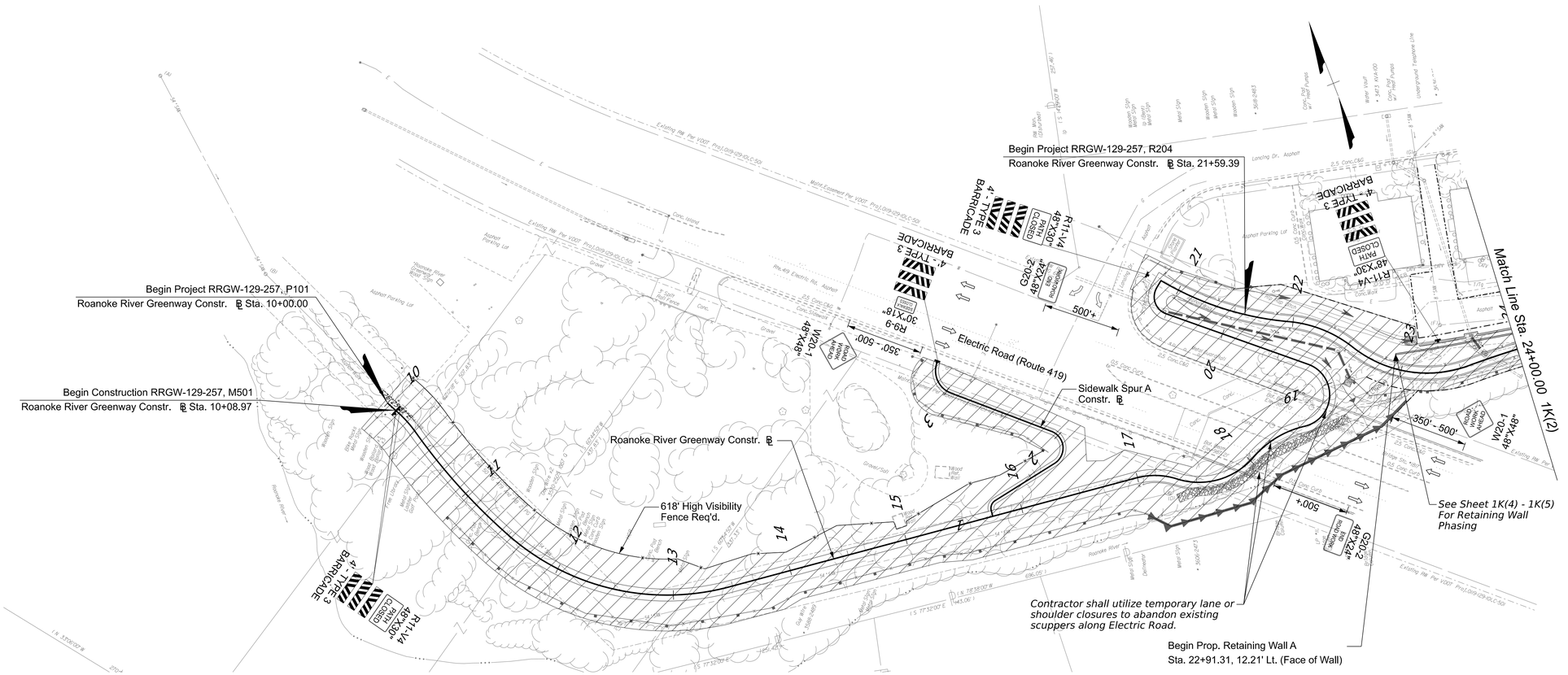
COMMONWEALTH OF VIRGINIA
WILLIAM T. WENTZIEN, II
Lic. No. 038162
PROFESSIONAL ENGINEER

William T Wentzien
2024.09.30 11:18:22-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
01/11/24	VA.		RRGW-129-257 R204, M501	1K(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- Denotes Construction Work Area
- Denotes Temporary Construction Easement
- Denotes Permanent Easement
- Denotes Proposed Right of Way
- Denotes High Visibility Fence, 4'
- Denotes Temporary Silt Fence, Refer to ESC Plan Sheets

SCALE	PROJECT	SHEET NO.
0 50' 100'	RRGW-129-257	1K(1)

9/30/2024

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Plotted by: jtong

PROJECT MANAGER _HDR_VDOT_PM:Chris_Eggleston_(540) 278-2405_____
SURVEYED BY, DATE Hurt & _Profitt,Inc._(800) 242-4906,July, 2022_____
DESIGN BY Rick Delong,P.E. Rinker Design Associates,P.C.(804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & _Profitt,Inc._(800) 242-4906,July, 2022

Roanoke River Greenway Maintenance of Traffic Plan

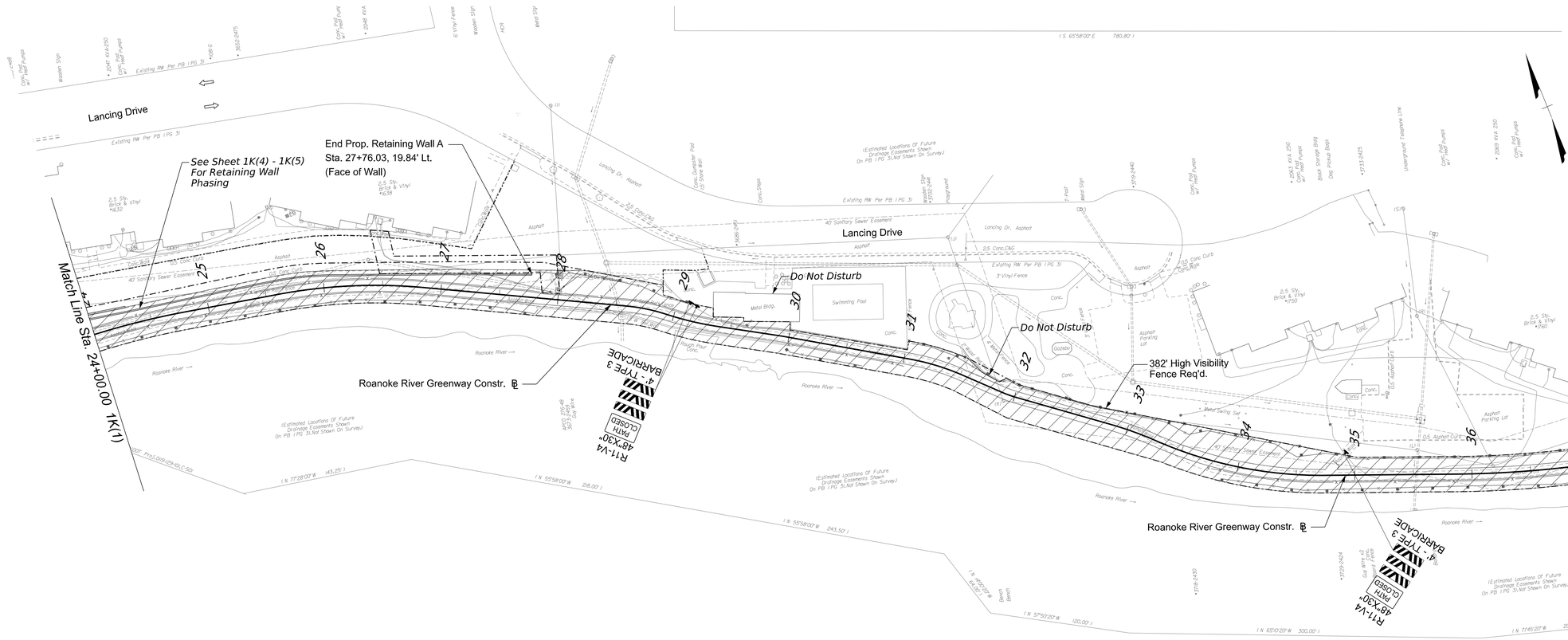
COMMONWEALTH OF VIRGINIA
WILLIAM T. WENTZIEN, II
Lic. No. 038162
PROFESSIONAL ENGINEER

William T Wentzien
2024.07.12 08:38:34-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
02/08/24	VA.		RRGW-129-257 R204, M501	1K(2)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- Denotes Construction Work Area
- Denotes Temporary Construction Easement
- Denotes Permanent Easement
- Denotes Proposed Right of Way
- Denotes High Visibility Fence, 4'
- Denotes Temporary Silt Fence, Refer to ESC Plan Sheets

SCALE	PROJECT	SHEET NO.
0 50' 100'	RRGW-129-257	1K(2)

6/24/2024

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Plotted by: wdelong

PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Roanoke River Greenway Maintenance of Traffic Plan

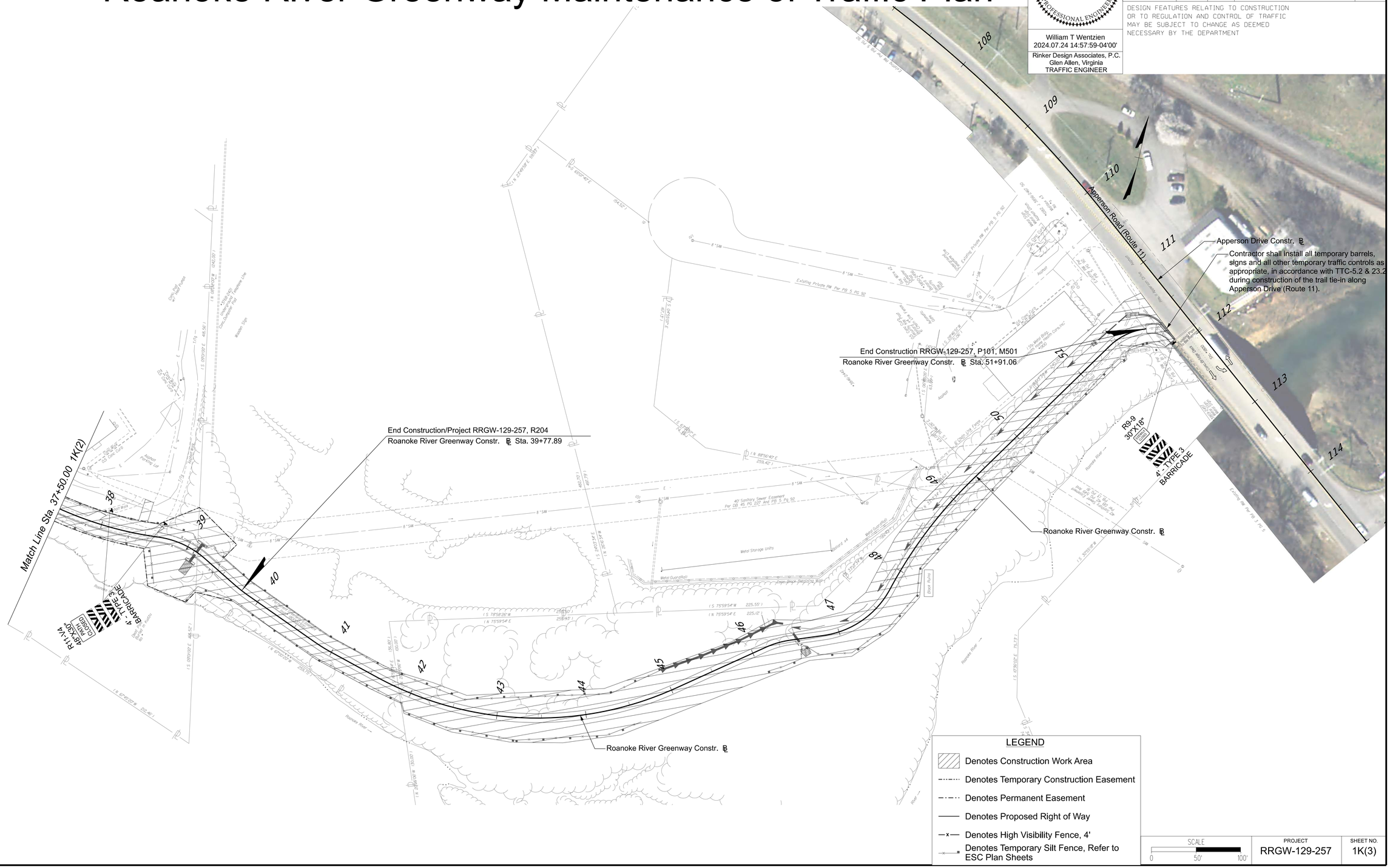
COMMONWEALTH OF VIRGINIA
WILLIAM T. WENTZIEN, II
Lic. No. 038162
PROFESSIONAL ENGINEER

William T Wentzien
2024.07.24 14:57:59-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
02/08/24 06/07/24	VA.		RRGW-129-257 R204, M501	1K(3)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- Denotes Construction Work Area
- Denotes Temporary Construction Easement
- Denotes Permanent Easement
- Denotes Proposed Right of Way
- Denotes High Visibility Fence, 4'
- Denotes Temporary Silt Fence, Refer to ESC Plan Sheets

SCALE	PROJECT	SHEET NO.
0 50' 100'	RRGW-129-257	1K(3)

7/22/2024

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Retaining Wall Construction Phasing

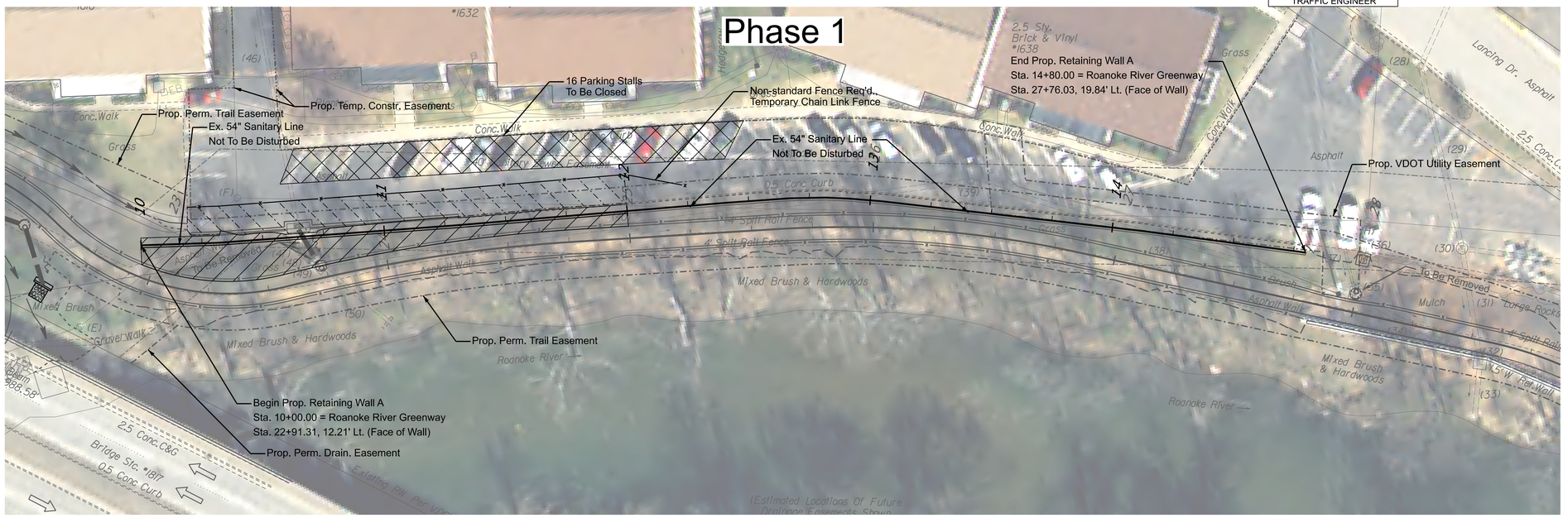
COMMONWEALTH OF VIRGINIA
WILLIAM T. WENTZIEN, II
Lic. No. 038162
PROFESSIONAL ENGINEER

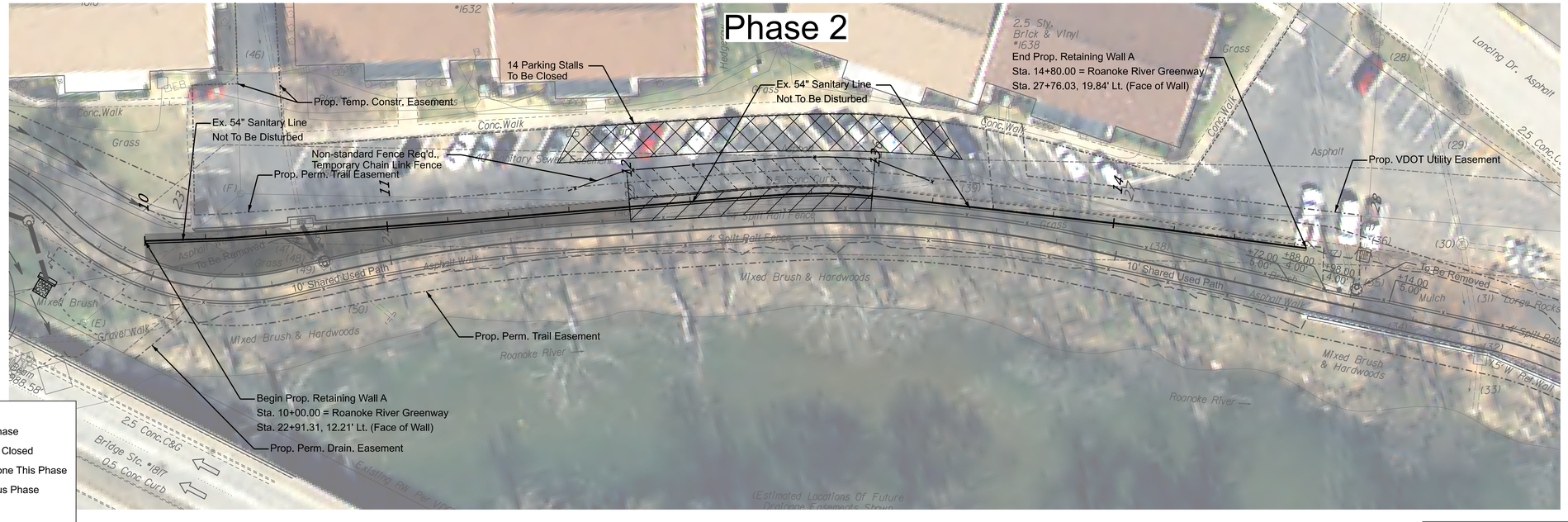
William T Wentzien
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Rinker Design Associates, P.C.
Glen Allen, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24	VA.		RRGW-129-257 R204, M501	1K(4)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT





LEGEND
- Denotes Construction This Phase
- Denotes Parking Stalls To Be Closed
- Denotes Construction Workzone This Phase
- Denotes Construction Previous Phase
- Denotes Proposed R/W
- Denotes Prop. Perm. Drain. Easement

6/24/2024

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	1K(4)

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Plotted by: swhitehead

PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _ _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt,Inc., (800).242-4906,July. 2022 _ _ _ _ _ _ _
DESIGN BY Blick, Delong, P.E.,Rinker_Design. Associates,P.C.(804) 612-0665_ _ _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc., (800).242-4906,July. 2022

Retaining Wall Construction Phasing

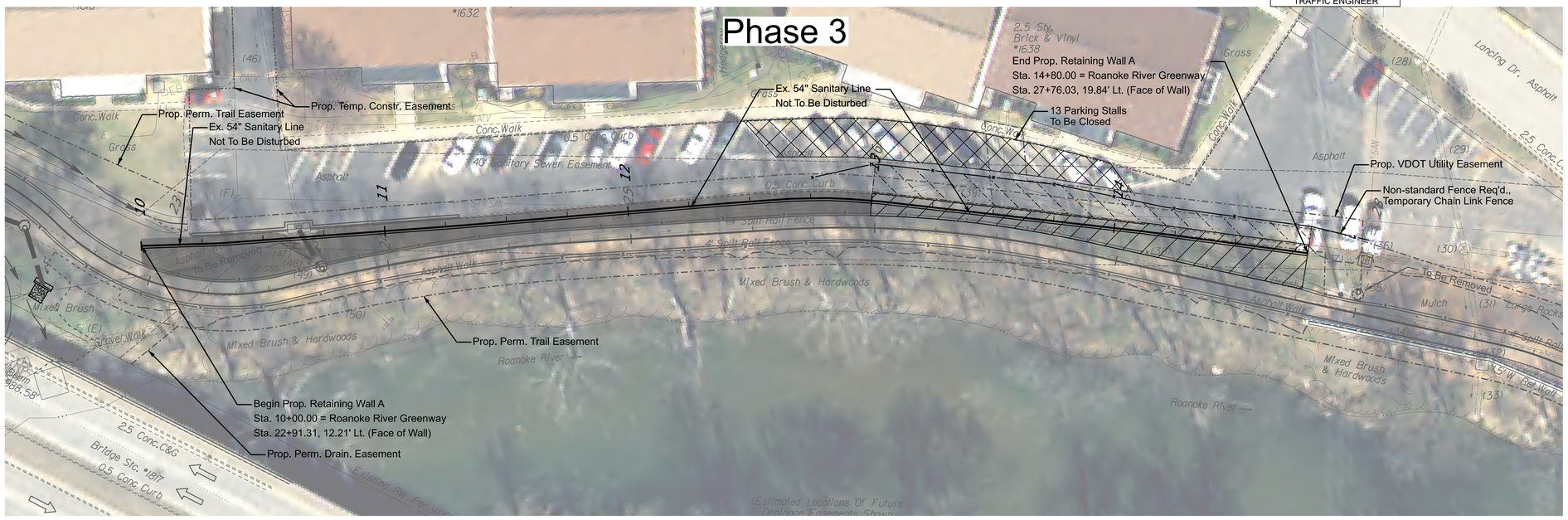
COMMONWEALTH OF VIRGINIA
WILLIAM T. WENTZIEN, II
Lic. No. 038162
PROFESSIONAL ENGINEER

William T Wentzien
2024.07.12 08:38:23-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24	VA.		RRGW-129-257 R204, M501	1K(5)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- Denotes Construction This Phase
- Denotes Parking Stalls To Be Closed
- Denotes Construction Workzone This Phase
- Denotes Construction Previous Phase

6/24/2024

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	1K(5)

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Plotted by: swhitehead

PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Proffitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Proffitt, Inc., (800) 242-4906, July 2022

GENERAL NOTES

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

GRADING

G-1 The grade line denotes top of finished pavement unless shown otherwise on typical sections or plans.

G-5 The excavation of unsuitable material as specified on these plans is based on previously conducted subsurface soil investigation. If, during construction, it is deemed necessary to change the depth more than one foot, or the limits of such excavation, such change is to be made at the direction of the Engineer and measurement and payment shall be made in accordance with Section 303 of the applicable VDOT Road and Bridge Specifications.

G-6 The borrow material for this project shall be a minimum CBR-5 or as approved by the Materials Engineer.

INCIDENTALS

I-7 Where Standard slope roundoffs would damage trees, bushes or other desirable vegetation, they shall be omitted when so ordered by the Engineer.

I-16 The "underground utilities" survey data on this project has been provided by consultant and copies are available from the Department.

I-18 All pavement markings and traffic flow arrows shown on the roadway construction plans are schematic only. The actual location and application of pavement markings shall be in accordance with Section 704 of the applicable VDOT Road and Bridge Specifications, MUTCD, sequence of construction/ traffic control plans, pavement marking plan sheets 10(1) thru 10(8) and as directed by the Engineer.

I-19 The following outside sources, under contract with VDOT, have provided information on this project.

Hydraulic Design	-	Rinker Design Associates, P.C.
Roadway Design	-	Rinker Design Associates, P.C.
Utility Design	-	Rinker Design Associates, P.C.
Utility Designation	-	Hurt & Proffitt, Inc.
Utility Location	-	Hurt & Proffitt, Inc.
Survey	-	Rinker Design Associates, P.C.
Bridge Design	-	Rinker Design Associates, P.C.
Traffic Design	-	Rinker Design Associates, P.C.
Landscape Design	-	N/A

If questions or problems arise during construction, please contact the Area Construction Engineer. DO NOT CONTACT THE OUTSIDE SOURCES.

I-20 The Official Electronic PDF Version of the plans will override the paper copies or prints of specific layers.

Portions of this plan assembly have been CADD generated. To assist in the preparation of the bid and construction of the project, Microstation format (.dgn) files will be made available to the prime contractor during bids and after award of the contract.

I-21 All electronic plan assemblies will include the construction plans in two formats: PDF files and MicroStation format (.dgn) files. Only the PDF files will be considered as part of the official plan assembly.

The MicroStation format (.dgn) files are furnished only as information for the contractor. These plans are developed in layers (levels) to aid in readability. (See the VDOT CADD Manual for CADD Level Structure). However, the construction items may or may not be in the proper layering scheme as described in the VDOT CADD Manual. The Microstation files will only match the scanned files if all required levels are turned on. A Microstation Software license is required to be able to read these files.

I-22 The Contractor's attention is called to the presence of a critical 54" diameter sanitary sewer adjacent to and crossing the retaining wall alignment in multiple locations. The contractor shall take all necessary precautions to protect the existing sewer, including the selection of appropriate construction means and methods and provision of any necessary temporary supports, bracing, or sheeting and shoring. Any damage resulting from the actions or lack of actions by the contractor shall be repaired immediately by the contractor at their expense. All repairs shall be approved by the City. Work in the vicinity of Riverwalk Apartments Complex and the City of Salem 54" sanitary sewer line shall be in accordance with the Special Provision Inspection Of and Construction Over Existing Sanitary Sewer Line which includes, but is not limited to Pre and Post CCTV Inspection and notices made.

I-23 Retaining Wall A shall be constructed in accordance with these drawings and the Special Provision for Precast Modular Concrete Block Gravity Walls.

PAVEMENT

P-2 The pavement materials on this project will be paid for on a tonnage basis. The weight will vary in accordance with the specific gravity of the aggregates and the asphaltic content of the mix actually used to secure the design depth. The weight of the asphalt concrete is based on 95% of the theoretical maximum density.

DRAINAGE

D-1 The horizontal location of all drainage structures shown on these plans is approximate only, with the exception of structures showing specific stations, special design bridges and storm sewer systems.

D-2 The horizontal location and invert elevations shown for proposed culverts and storm sewer outfall pipes are based on existing survey data and required design criteria. If during construction, it is found that the horizontal location or invert elevations shown on the plans differ significantly from the horizontal location or elevations of the stream or swale in which the culvert or storm sewer outfall pipe is to be placed, the Engineer shall confer with, and get approval from, the applicable District Drainage Engineer before installing the culvert or storm sewer outfall pipe.

D-3 The "H" dimensions shown on plans for drop inlets and junction boxes and the "L.F." dimensions shown for manholes are for estimating purposes and are based on the proposed invert elevations shown for the structure and the anticipated top (rim) elevation based on existing or proposed finished grade. The actual "H" or "L.F." dimensions are to be determined by the contractor from field conditions.

D-5 At locations where Structural Plate Steel Pipe or Pipe Arch with a concrete invert is required or is allowable as an option to Corrugated Steel Pipe or Pipe Arch, the concrete invert is to be field applied and shall cover, at a minimum, the bottom 25% of the circumference of a circular shape structure or the bottom and corner plates of an arch shape structure. As an option to providing the concrete invert, the plates along the bottom 25% (minimum) of the circumference of the Structural Plate Steel Pipe or the bottom and corner plates (minimum) of the Structural Plate Steel Pipe Arch shall be a minimum of two sheet thickness (gages) heavier than the sheet thickness (gage) indicated in the applicable VDOT Road and Bridge Standard PC-1 for the specified height of cover for the structure. Example: For a pipe with height of cover requiring 0.109" sheet thickness (12 gage) plates, the bottom plates shall be 0.168" sheet thickness (8 gage). The sheet thickness (gage) of the remainder of the pipe plates shall either conform to those specified in Standard PC-1 for the applicable height of cover or to the heavier plates used in the bottom of the pipe.

D-6 Pipes shall conform to any of the allowable types shown on sheet number 9, within the applicable height of cover limitations.
For strength, sheet thickness, or class designation; available sizes; height of cover limitations; and other restrictions for a particular pipe type or height of cover, see the VDOT Road and Bridge Standard PC-1. Structural plate pipe may be substituted for corrugated pipe of the same size, provided the substitution complies with the applicable sections of the VDOT Road and Bridge Standards PC-1.

D-10 The proposed riprap may be omitted by the Engineer if the slope designated for placement of riprap is found to be comprised of solid rock or closely consolidated boulders with soundness, size and weight equal to, or exceeding, the specifications for the proposed riprap.

D-12 All existing drainage facilities labeled "To Be Abandoned" shall be left in place, backfilled and plugged in accordance with the VDOT Road and Bridge Standard PP-1. Basis of Payment will be C.Y. of Flowable Backfill.

D-13 Existing drainage facilities being utilized as a part of the drainage system, and designated on the plans "To Be Cleaned Out" shall be cleaned as directed by the Engineer. The cost incidental to this shall be included in the contract price for other items.

EROSION AND SEDIMENT CONTROL (ESC)

E-1 If the removal of Brush Silt Barrier is specified by the plans or required by the Engineer, the cost of removal and disposal of brush shall be in accordance with Section 109 of the applicable VDOT Road and Bridge Specifications.

E-2 Rock for Check Dams, Inlet Protection, Erosion Control Stone and Riprap shall be in accordance with Section 203 and Section 414 of the applicable VDOT Road and Bridge Specifications.

E-3 The following symbols are used to depict Erosion Control items in the plan assembly:

EC-2, Ty. 1 / EC-2, Ty. 2 / EC-2, Ty. 3 / EC-2, Ty. 4	Denotes Rolled Erosion Control Product, Temporary, St'd. EC-2 Type 1, 2, 3 or 4
EC-3, Ty. 1 / EC-3, Ty. 2 / EC-3, Ty. 3	Denotes Rolled Erosion Control Product, Permanent, St'd. EC-3 Type 1, 2 or 3
TSF-A / TSF-B	Denotes Temporary Silt Fence, St'd EC-5 Type A or B
TCD	Denotes Temporary Check Dam, St'd EC-16
TDC	Denotes Temporary Diversion Channel, St'd EC-12
DD	Denotes Temporary Diversion Dike, St'd EC-9
TC-I	Denotes Turbidity Curtain, Type - Impervious
TC-P	Denotes Turbidity Curtain, Type - Pervious
RCD-1	Denotes Rock Check Dam, Type I; St'd EC-4
RCD-2	Denotes Rock Check Dam, Type II; St'd EC-4
IP-A	Denotes Inlet Protection, Type A; St'd EC-6
IP-B	Denotes Inlet Protection, Type B; St'd EC-6
TS	Denotes Slope Interrupter; St'd EC-15
LOD	Denotes Limits of Disturbance

E-4 Permanent vegetation shall be established on all denuded areas not otherwise stabilized with non-erodible materials. See the Roadside Development sheet for details on permanent vegetation establishment.

7/15/2024

	PROJECT	SHEET NO.
	RRGW-129-257	2

PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt,Inc., (800).242-4906,July. 2022_____
DESIGN BY Blck. Delong,P.E.,Rinker_Design. Associates,P.C.(804) 612-0665_____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc., (800).242-4906,July. 2022

Typical Sections

Notes:
1. See plan and profile sheets for limits of superelevation (SE) and transitions.
2. See profile sheets for ditch invert profiles. See Sheet 2E and Cross Sections for addition ditch details.
3. Embankments shall be constructed in accordance with VDOT Road and Bridge Specification 303.04(h).
4. Slope rounding to be excluded when the grading along the existing berm adjacent to Roanoke River would cause a decrease in the resultant berm elevation.

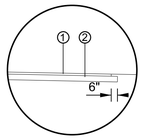
COMMONWEALTH OF VIRGINIA — JEFFREY S. BASFORD Lic. No. 043143 — PROFESSIONAL ENGINEER
Jeffrey Basford 2024.07.13 09:51:02 -04'00'
Whitman, Requardt & Associates, L.L.P. LOCATION GEOTECHNICAL ENGINEER

COMMONWEALTH OF VIRGINIA — AARON DELONG Lic. No. 061662 — PROFESSIONAL ENGINEER
Aaron L DeLong 2024.07.12 09:30:35-04'00'
Rinker Design Associates, P.C. Glen Allen, Virginia ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2A

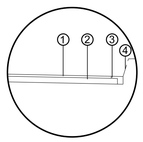
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Inset A



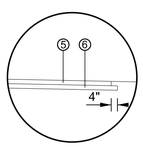
① 2.0" Asphalt Concrete, Type SM-9.5A/SM-9.5AL @ 220 lbs./Sq. Yds
② 6.0" Aggregate Base Material, Type I, or II, Size No. 21A or 21B

Inset B



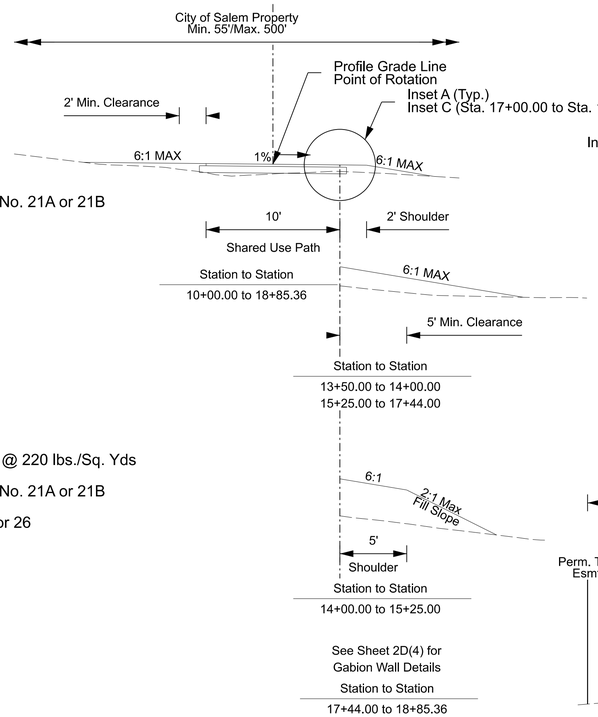
① 2.0" Asphalt Concrete, Type SM-9.5A/SM-9.5AL @ 220 lbs./Sq. Yds
② 6.0" Aggregate Base Material, Type I, or II, Size No. 21A or 21B
③ Variable Thickness Crusher Run, Aggregate 25 or 26 (Placed Up to the Face of Ex. Retaining Wall)
④ Ex. Retaining Wall

Inset C

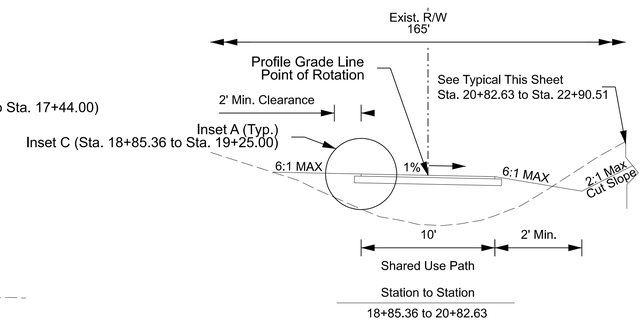


⑤ 4.0" Hydraulic Cement Concrete
⑥ 4.0" Aggregate Base Material, Type I, or II, Size No. 21A or 21B

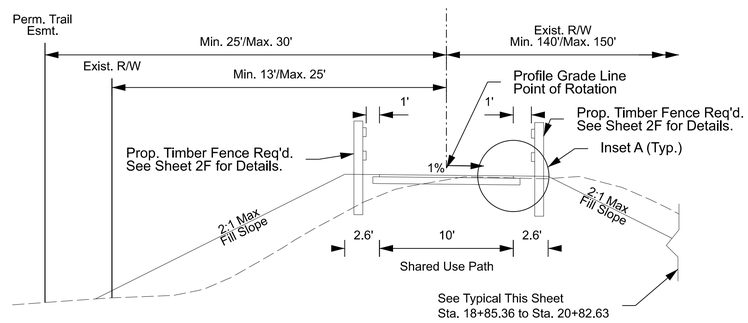
Roanoke River Greenway



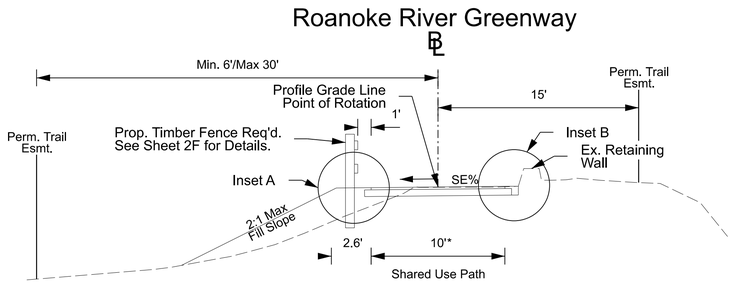
Roanoke River Greenway



Roanoke River Greenway

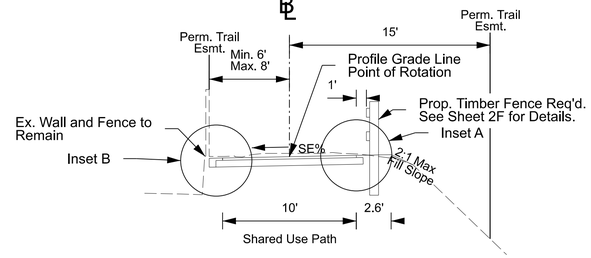


Roanoke River Greenway

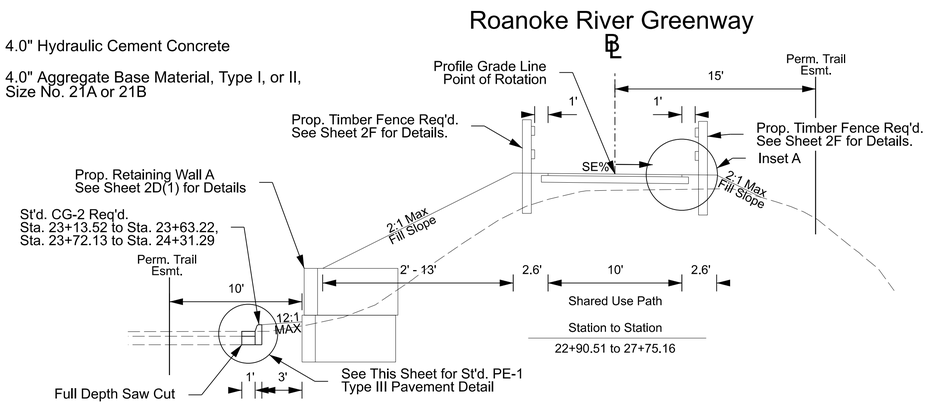


*Station to Station	*Width
27+72.00 to 27+88.00	10' - 9'
27+88.00 to 27+98.00	9'
27+98.00 to 28+14.00	9' - 10'
29+39.11 to 29+60.24	10' - 8'
29+60.24 to 29+65.42	9'
29+65.42 to 29+88.29	8' - 10'

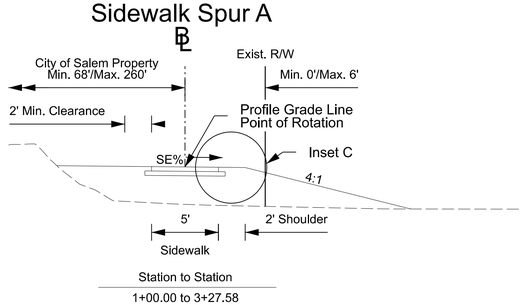
Roanoke River Greenway



Roanoke River Greenway



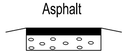
Sidewalk Spur A



PRIVATE ENTRANCE

NOT TO SCALE

TYPE III
Asphalt



Asphalt Conc. Type
SM-9.5A or SM-9.5D @ 220 Lbs. per S. Y.
4" Aggr. Base Mat'l. Ty. I
No. 21A or 21B

Not To Scale	PROJECT RRGW-129-257	SHEET NO. 2A

6/24/2024

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Plotted by: wdelong

PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _ _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _ _ _ _ _ _ _
DESIGN BY Blick, Delong, P.E., Rinker, Design, Associates, P.C., (804) 612-0665 _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

Typical Sections

Notes:
1. See plan and profile sheets for limits of superelevation (SE) and transitions.
2. See profile sheets for ditch invert profiles. See Sheet 2E and Cross Sections for addition ditch details.
3. Embankments shall be constructed in accordance with VDOT Road and Bridge Specification 303.04(h).
4. Slope rounding to be excluded when the grading along the existing berm adjacent to Roanoke River would cause a decrease in the resultant berm elevation.
5. Loose material encountered at ground surface between Sta. 39+00 and Sta. 52+00 shall be compacted to 95% of the maximum density within 2% of optimum moisture content per VTM-1 to a depth of one foot below proposed subgrade elevation prior to subbase placement.

COMMONWEALTH OF VIRGINIA
JEFFREY S. BASFORD
Lic. No. 043143
PROFESSIONAL ENGINEER

Jeffrey Basford
2024.07.25 11:29:16 -04'00'

Whitman, Requardt & Associates, L.L.P.
LOCATION
GEOTECHNICAL ENGINEER

COMMONWEALTH OF VIRGINIA
AARON DELONG
Lic. No. 061662
PROFESSIONAL ENGINEER

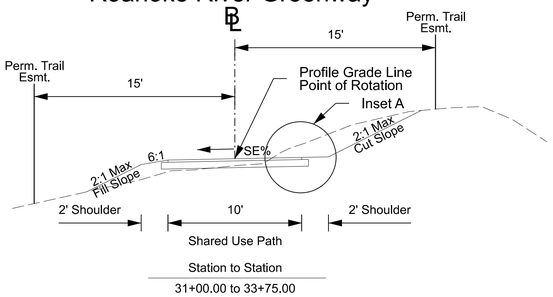
Aaron L DeLong
2024.07.25 09:47:57-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2A(1)

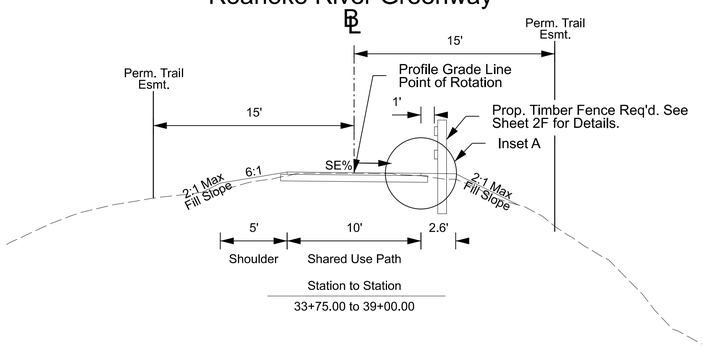
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Roanoke River Greenway



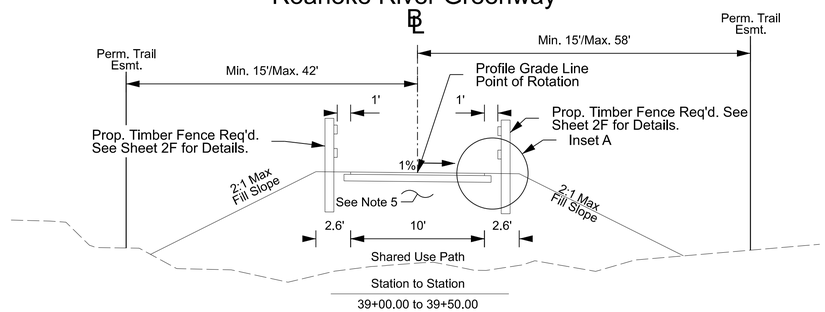
Station to Station
31+00.00 to 33+75.00

Roanoke River Greenway



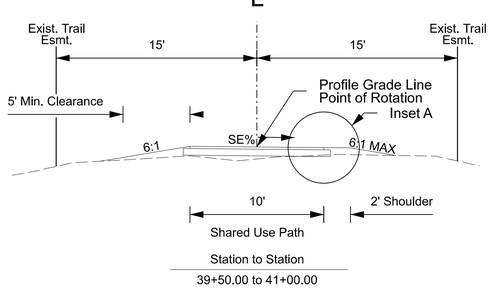
Station to Station
33+75.00 to 39+00.00

Roanoke River Greenway



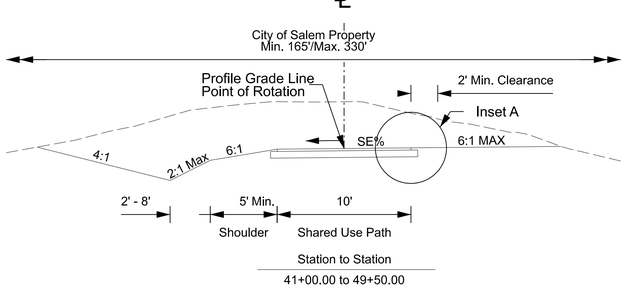
Station to Station
39+00.00 to 39+50.00

Roanoke River Greenway



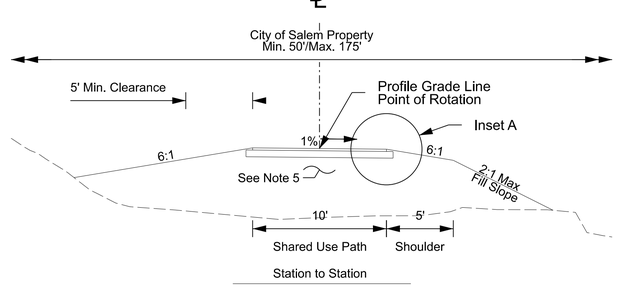
Station to Station
39+50.00 to 41+00.00

Roanoke River Greenway



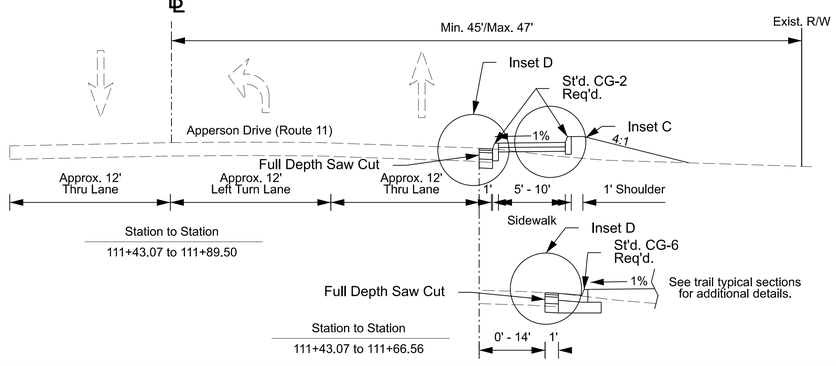
Station to Station
41+00.00 to 49+50.00

Roanoke River Greenway



Station to Station
49+50.00 to 51+91.06

Apperson Drive



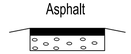
Station to Station
111+43.07 to 111+89.50

Station to Station
111+43.07 to 111+66.56

PRIVATE ENTRANCE

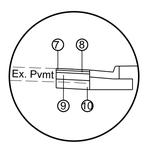
NOT TO SCALE

TYPE III
Asphalt

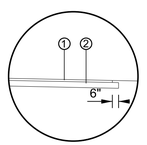


Asphalt Conc. Type
SM-9.5A or SM-9.5D @ 220 Lbs. per S. Y.
4" Aggr. Base Mat'l. Ty. I
No. 21A or 21B

*Inset D



Inset A



⑦ 1.5" Asphalt Concrete, Type SM-9.5D @ 175 lbs./Sq. Yds
⑧ 2.0" Asphalt Concrete, Type IM-19.0D @ 235 lbs./Sq. Yds
⑨ 6" Asphalt Concrete, Type BM-25.0A
⑩ 8.0" Aggregate Base Material, Type I, Size No. 21B
*Contractor shall notify the Engineer of the existing pavement depths along Apperson Drive prior to placement of proposed pavement.

① 2.0" Asphalt Concrete, Type SM-9.5A/SM-9.5AL @ 220 lbs./Sq. Yds
② 6.0" Aggregate Base Material, Type I, or II, Size No. 21A or 21B

Not To Scale	PROJECT RRGW-129-257	SHEET NO. 2A(1)

7/22/2024

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Plotted by: jlong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Bibber Design Associates, P.C. (804) 612-0665___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2B

DESIGN FEATURES RELATING TO CONSTRUCTION
OR TO REGULATION AND CONTROL OF TRAFFIC
MAY BE SUBJECT TO CHANGE AS DEEMED
NECESSARY BY THE DEPARTMENT

Erosion and Sediment Control Summary

Sheet Number	Rolled Erosion Control Porduct, Temporary, Ty. 1 (St'd. EC-2)	Rolled Erosion Control Product, Permanent, Ty. 1 (St'd. EC-3)	Rock Check Dams St'd. EC-4		Temp. Silt Fence, Ty. A (St'd. EC-5)	Inlet Protection St'd. EC-6			Dewatering Basin (St'd. EC-8)	Temporary Diversion Dike (St'd. EC-9)	Stabilized Construction Entrance (St'd. EC-11) *	Turbidity Curtain, Pervious	Siltation Control Excavation
			Check Dam, Rock Ty. I	Check Dam, Rock Ty. II		Inlet Protection, Type A	Inlet Protection, Type B	Inlet Protection, Type C *					
	SY	SY	EA	EA	LF	EA	EA	EA	EA	Foot	EA	LF	CY
3B	790	70			524						1		90
4B				1	648		1						115
5B					589	1					1		116
6B					855						1		146
7B			3		1408			1	1		1	45	257
8B	997		5		689	1		1		148	1		154
Total	1787	70	8	1	4713	2	1	2	1	148	5	45	878

* Not a Pay Item

6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	2B

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Plotted by: jlong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Binker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Drainage Summary

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2B(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

PROJECT	LOCATION	COVER	STORM SEWER PIPE 15"	STORM SEWER PIPE 24"	CONCRETE PIPE 30"	PIPE 36"	END SECTIONS ES-1 30"	END WALL EW-1* 15"	END WALL EW-1* 24"	END WALL EW-1* 36"	CONCRETE CLASS A3 MISC. - EW-1	DROP INLET DI-1	DROP INLET DI-5	DROP INLET DI-7	DROP INLET DI-2C, L=8'	DROP INLET HEIGHT	MANHOLE MANHOLE MH-1 OR 2	MANHOLE MH-1 FRAME & COVER	EROSION CONTROL STONE EC-1, CLASS A1	EROSION CONTROL STONE EC-1, CLASS 1	NS MANHOLE	REMARKS
			LF	LF	LF	LF	EA	EA	EA	EA	CY	EA	EA	EA	EA	LF	LF	EA	SY	SY	EA	
RRGW-129-257	4-1																4.1	1				St'd. IS-1 Req'd., Connect to Ex. Pipe
	4-1~4-2	5		143																		Silt-Tight Joint Req'd.
	4-2																6.1	1				St'd. IS-1 Req'd.
	4-2~4-5	5		24																		Silt-Tight Joint Req'd.
	4-3														1	4.7						St'd. IS-1 Req'd., Connect to Ex. Pipe, Type B Nose Req'd.
	4-3~4-4	2		18																		Silt-Tight Joint Req'd.
	4-4																14.4	1			1	Mod. MH-1 or 2, Connect to Existing Pipe, St'd. SL-1 Req'd, St'd IS-1 Req'd.
	4-5								1		1.32									4		
	5-1													1		5.9						Type III Grate B, Connect to Existing Pipe, St'd. IS-1 Req'd
	5-2																14.9	1			1	Mod. MH-1 or 2, Connect to Existing Pipes, St'd. SL-1 Req'd, St'd IS-1 Req'd.
	7-1	2				25				2	5.89									15		Mod. EW-1, Silt-Tight Joint Req'd.
	8-1	1			16		2												6.3			Silt-Tight Joint Req'd., Anchor Blocks Req'd.
	8-3												1			3.2						St'd. PG-3 Type 1 Class A1 Req'd., Type III Grate, St'd. IS-1 Req'd.
	8-3~8-4	2	46																			Silt-Tight Joint Req'd.
	8-4							1			0.49								1.6			
	TOTAL		46	185	16	25	2	1	1	2	7.71	0	1	1	1	13.8	39.5	4	7.9	19.0	2	

*Not a Pay Item

SHEET	EXISTING PIPES TO BE REMOVED 12"	EXISTING PIPES TO BE REMOVED 18"	EXISTING STRUCTURES TO BE REMOVED EXISTING INLET	FLOWABLE BACKFILL FOR SCUPPER ABANDONMENT
	LF	LF	EA	CY
4		14	1	2.3
5			1	

6/24/2024

PROJECT	SHEET NO.
RRGW-129-257	2B(1)

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Plotted by: jtong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Bibber Design Associates, P.C. (804) 612-0665___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Roadside Development

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2B(2)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

CORE MIX

MIX	LBS./ ACRES	DESCRIPTION
1	▲	✳ 100% CERTIFIED FINE FESCUE
2	▲	100% CERTIFIED TALL FESCUE
3	▲ 400	50% CERTIFIED TALL FESCUE ✳ 50% CERTIFIED FINE FESCUE
4	▲	50% ORCHARDGRASS 50% CERTIFIED KENTUCKY BLUEGRASS
5	▲	100% BERMUDAGRASS
C 1, 2 & 3	▲	CUSTOM MIX
T1	▲ 100	50% CERTIFIED TALL FESCUE 50% BARLEY, WINTER RYE OR WINTER WHEAT
T2	▲ 100	50% FOXTAIL MILLET 50% CERTIFIED TALL FESCUE

ADDITIVES

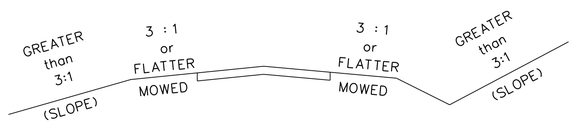
TYPE	LBS./ ACRES	DESCRIPTION
A	▲	100% LOVEGRASS
B	▲ 200	100% BARLEY, WINTER RYE OR WINTER WHEAT
C	▲	100% FOXTAIL MILLET
D	▲	100% ANNUAL RYEGRASS
E	▲	100% BLUE GRAMA
F	▲	100% ALFALFA
G	▲ 40	100% WHITE CLOVER
H	▲ 40	✳✳ 100% CROWN VETCH (LEGUME)
I	▲	100% SEPICEA LESPEDEZA (LEGUME)
J	▲	100% BIRDSFOOT TREFOIL (LEGUME)
K	▲	POLLINATOR SEED MIX

✳ FINE FESCUES INCLUDE CHEWINGS, CREEPING RED, HARD, SHEEP. SEE SEEDING SCHEDULE FOR TYPE(S) SPECIFIED FOR THIS PROJECT.

▲ ALL RATES TO BE SPECIFIED BY THE DISTRICT ROADSIDE MANAGER

✳✳ THESE ADDITIVES ARE NOT TO BE USED IN AREAS THAT WILL BE MOWED. (SLOPES 3:1 OR FLATTER)

SECTION OF SEED LOCATIONS



SEEDING SCHEDULE

CODES LISTED IN THISTABLE REFER TO THE LISTS OF CORE MIXES & ADDITIVES, WHICH SHOW SEED NAMES & APPLICATION RATES FOR THIS PROJECT	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE
	SPRING MONTH & DATE		SUMMER MONTH & DATE		FALL MONTH & DATE		WINTER/DORMANT MONTH & DATE	
PROJECT NUMBERS AND/OR LOCATION	3/16 to 5/31		6/1 to 9/15		9/16 to 10/31		11/1 to 3/15	
Roanoke River Greenway	(3✳)G	(3✳)G	(3✳)H	(3✳)G	(3✳)BG	(3✳)BG	(3✳)BG	(3✳)BG
Temporary Seed	(T2)	(T2)	(T2)	(T2)	(T2)	(T2)	(T1)	(T1)
✳ SPECIFIED TYPE(S) OF FINE FESCUE								

NOTES:

1. RECOMMENDATIONS FOR THE APPLICATION OF SEED MIXTURES (CORE MIX AND ADDITIVES), FERTILIZER, LIME, ETC. SHALL BE OBTAINED FROM THE DISTRICT ROADSIDE MANAGER.
2. ALL SEED, FERTILIZER, LIME, MULCH, ETC. MUST BE IN CONFORMANCE WITH VDOT ROAD AND BRIDGE SPECIFICATIONS AND ANY APPLICABLE INFORMATIONAL & INSTRUCTIONAL MEMORANDA.
3. APPROXIMATELY 3.86 ACRES WILL BE DISTURBED ON THIS PROJECT AND WILL REQUIRE THE ESTABLISHMENT OF GRASSES AND/OR LEGUMES.
4. REGULAR SEED SHALL BE APPLIED AT THE RATES SHOWN IN THE CORE MIX, ADDITIVES, AND WHERE APPLICABLE, CUSTOM SEED MIX TABLES. SEEDING QUANTITIES SHOWN IN THE ROADSIDE DEVELOPMENT SUMMARY TABLE ARE BASED ON THE HIGHEST "NORMAL" SEEDING RATE FOR EACH CORE MIX (BY SEASON FOR BOTH MOWED AREAS AND NON-MOWED SLOPES), WITH A 25% INCREMENTAL ADJUSTMENT TO ACCOUNT FOR SEEDING PROGRESSION, SEEDING AFTER SIGN OR GUARDRAIL INSTALLATION, AND OTHER MINOR UNPLANNED DISTURBANCES.
5. REGULAR SEED SHALL BE FERTILIZED AT THE RATES SHOWN IN THE FERTILIZER SUMMARY TABLE. THE TOTAL FERTILIZER QUANTITIES SHOWN IN THE TABLES INCLUDES THE 25% INCREMENTAL ADJUSTMENT DESCRIBED ABOVE.
6. OVERSEEDING RATES SHALL BE 100% OF THE REGULAR SEED RATE WITHOUT THE INCREMENTAL ADJUSTMENT.
7. OVERSEEDING SHALL ONLY INCLUDE FERTILIZER ONCE, AT THE RATE SHOWN IN THE FERTILIZER SUMMARY TABLE. ADDITIONAL OVERSEEDING MAY BE DONE WITH NO FERTILIZER APPLIED, OR A SOIL TEST MAY BE PERFORMED TO DETERMINE THE SPECIFIC NUTRIENTS NECESSARY TO ESTABLISH THE GRASSES AND/OR LEGUMES.
8. THE ENGINEER WILL REQUIRE THE CONTRACTOR TO PERFORM SUPPLEMENTAL SEEDING WHEN LESS THAN 75% UNIFORM STAND OF THE PERMANENT GRASS (AND LEGUMES) SPECIFIED IN THE MIXTURES IS OBTAINED. (ANNUAL SPECIES SUCH AS RYE AND MILLET ARE TEMPORARY VARIETIES AND REQUIRE SUPPLEMENTAL SEEDING.)
9. LEGUME SEED SHALL BE INOCULATED WITH THE APPROPRIATE STRAIN AND RATE OF BACTERIA. FOR HYDROSEEDING, USE FIVE TIMES (5X) THE AMOUNT OF INOCULANT RECOMMENDED BY THE MANUFACTURER.
10. THE DATE SEED IS APPLIED SHALL BE USED TO DETERMINE WHETHER TO USE HULLED OR UNHULLED SEED FOR BERMUDAGRASS. SPRING & SUMMER (3/16 TO 9/15): USE HULLED SEED; FALL & WINTER (9/16 TO 3/15): USE UNHULLED SEED
11. EROSION CONTROL MULCH, AS DIRECTED BY THE ENGINEER, IS TO BE USED ON AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN 14 DAYS DURING THE DORMANT PERIOD (11/1 TO 3/15).
12. WHEN EROSION CONTROL MULCH IS USED, IT SHALL PROVIDE 100% COVERAGE OF ALL DENUDED AREAS.
13. HECP SHALL BE APPLIED ACCORDING TO THE MANUFACTERUER'S SPECIFICATIONS (OR RECOMMENDATIONS).

ROADSIDE DEVELOPMENT SUMMARY

PROJECT NUMBERS	REGULAR SEED	OVER SEEDING	LEGUME SEED	LEGUME OVER SEEDING	TEMPORARY SEED	⊗ TOPSOIL (CLASS B & 4" DEPTH)	LIME	FERTILIZER N NITROGEN	FERTILIZER P PHOSPHORUS	FERTILIZER K POTASSIUM	HECP (TYPE 1)	HECP (TYPE 2)	HECP (TYPE 3)	HECP (TYPE 4)
	LBS.	LBS.	LBS.	LBS.	LBS.	C.Y.	TONS	LBS.	LBS.	LBS.	S. Y.	S. Y.	S. Y.	S. Y.
RRGW-129-257	1,350	1,080	90	72	180	969	10	180	126	126	0	8,591	11,011	0
TOTAL	1,350	1,080	90	72	180	969	10	180	126	126	0	8,591	11,011	0

⊗ DENOTES ITEM(S) TO BE PAID FOR ON THE BASIS OF PLAN QUANTITIES IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE CURRENT ROAD AND BRIDGE SPECIFICATIONS.

6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	2B(2)

PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2B(3)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Pavement Summary

Location	Station to Station		Pavement Area	Surface	Intermediate	Base	Subbase	
				Asphalt Conc. Ty. SM-9.5A/SM-9.5AL/ 9.5D	Asphalt Conc. Ty. IM-19.0D	Asphalt Conc. Ty. BM-25.0A	Aggregate Base Material Ty. I or II, No. 21A or 21B	Crusher Run Aggregate No. 25 or 26
	From	To	S.Y.	TON	TON	TON	TON	TON
Roanoke River Greenway	10+08.97	51+91.06	4673	488			1920	28
Apperson Drive	111+43.07	111+89.50	6	1	1	1	3	
Sidewalk Spur A	1+05.00	3+27.58	124				37	
Total			4803	489	1	1	1960	28

Incidental Summary

Sheet No.	Mobilization	Construction Surveying	NS Saw Cut Asph. Conc. (SUP)	NS Saw Cut Asph. Conc. (Parking Lot)	⊗ Std. Curb CG-2	⊗ Hydraulic Cement Conc. Sidewalk 4"	NS Partial Depth PCC Patching (Asphalt Patch Mix Type & Depth)	NS Barricade - Lockable Bollard	⊗ Demolition of Pavement	Handrail HR-1 Type III	NS Pedestrian Fence -** Timber Fence	NS Sanitary Sewer Pipe (Pre Inspection)	NS Sanitary Sewer Pipe (Post Inspection)	NS Adjust Exist. Manhole	Reconstruct Exist. Sanitary Manhole	NS Retaining Wall	NS Geoweb Cellular Confinement	Retaining Wall Excavation	Aggr. Material No. 1*	Bedding Material Aggr. No. 57	Gabions	Geotextile Embankment Stab.	Cofferdam	⊗ Clearing & Grubbing	CG-12 Detectable Warning Surface	Remove Existing Guardrail
	L.S.	L.S.	L.F.	L.F.	L.F.	S.Y.	S.Y.	EA	S.Y.	L.F.	L.F.	L.F.	L.F.	EA	EA	S.F.	S.F.	CY	TON	TON	C.Y.	S.Y.	EA	Acre	S.Y.	L.F.
3			11				1		1																	
4			6	116	101	374			400	193	1109	473	473										1			
5									553		781	252	252		3											
6			8						397		377			1												
7			16						99		260															
8				55	115	31		1	41																2	34
2D																3383	4800	1152		312						
2D(4)																		151	519	322	374	463				
TOTAL	L.S.	L.S.	41	171	216	405	1	1	1491	193	2527	725	725	1	3	3383	4800	1303	519	634	374	463	1	2	2	34

Maintenance of Traffic Summary

Sheet No.	High Visibility Fence, 4'	NS Fence - Temporary Chain Link Fence	Type III Barricade 4'	Temporary (Construction) Sign	Group 2 Channelizing Devices	Field Office Ty. III	Flagger Service
	L.F.	L.F.	EA	S.F.	Day	Month	HR
1K(1)	618		5	92			
1K(2)	382		3	30			
1K(3)			3	40	21		80
TOTAL	1000	590	11	162	21	10	80

*Aggr. Material No. 1 quantity has been increased by 100 TON for discretionary use.

**See Sheet 2F for Timber Fence Details

⊗ Denotes item(s) to be paid for on the basis of plan quantities in accordance with the applicable provisions of the current VDOT Road and Bridge Specifications.

	PROJECT	SHEET NO.
	RRGW-129-257	2B(3)

7/25/2024

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Plotted by: jlong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Bibber Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Grading Summary

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2B(4)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Location	⊗ Roadway Cut (1) (8)	Root Mat in Cut Sections	Root Mat in Fill Sections	⊗ (9) Cut - Ditches	(9) Fill - Ditches	Unsuitable Material: Below Subgrade	Unsuitable Material: Above Subgrade	(10) Roadway Fill (8)	Entrances: Cut	Entrances: Fill	Total Regular Excavation (6)	Total Fill	(2) Demolition of Pavement	(2) Minor Structure Excavation	(2) Retaining Wall Excavation	(5) (2) Stormwater Management Basins: Cut	(5) (2) Stormwater Management Basins: Fill	(6) Borrow (Embankment)
	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.
Roanoke River Greenway	1,922	262	474					3,053			2,395	3,575	80		1303			(613)
Sidewalk Spur A	7	7	90					162			97	252						(252)
FORMULAS	C	D	E	F	G	H	I	J	K	L	M	N	O	P	T	Q	R	S
TOTALS	(3) 1,929	(4) 269	(3) (7) 564	(3)	(7)	(3) (7)	(4)	(7) 3,215	(3)	(7)	2,492	3,827	80		1,303		(7)	(865)

The embankment quantity shown has not been adjusted for shrinkage or swell factors. The contractor will be responsible for determining the effect of the shrinkage or swell factor of the embankment material, and no adjustment will be made in pay quantities for this factor. The contractor shall determine the actual quantity of embankment material needed to complete this project.

⊗ Denotes item(s) to be paid for on the basis of plan quantities in accordance with the applicable provisions of the current VDOT Road and Bridge Specifications.

(1) Cut quantity shown does not include the material removed as Demolition of Pavement.

(2) Quantity shown for use in Grading Diagram only. See other Summaries for pay item(s).

(3) Included in Total Regular Excavation.

(4) Included in Roadway Cut quantity.

(5) Quantities for Temporary Sediment Basins and Temporary Sediment Traps are included with the Stormwater Management Basin quantities.

(6) Denotes pay item.

(7) Included in total fill quantity.

(8) This quantity comes from the computer listings and/or manual cross-sections and may be adjusted for other quantities.

(9) Volumes obtained for Cut Ditches and Fill Ditches not included in computer listings.

(10) Includes settlement of in-place soil.

FORMULAS

Roadway Cut (C) = Unadjusted Cut from Computer Listings or Manual Cross-Sections minus (-) Demolition of Pavement.

Roadway Fill (J) = Fill Required plus (+) Material for Backfill of Demolition of Pavement Areas in Fill (for heights of fill < 3 feet below subgrade)

Total Reg. Excav. (M) = C + E + F + H +K

Total Fill (N) = J + E + G + H + L + R

Borrow (S) = [N - ([C + F + K + P + Q - D - I] x Compaction Factor)] ÷ Compaction Factor for Borrow Site

(Embankment) (S) = N - (C + F +K + P +Q + T - D - I) (Embankment = Total Fill - Usable Cut) Estimated Material to be obtained off-site.

6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	2B(4)

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Plotted by: jlong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _ _ _ _ _
DESIGN BY Blick Delong, P.E. Binker Design Associates, P.C. (804) 612-0665 _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Hydrologic Data Sheet

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2C

DESIGN FEATURES RELATING TO CONSTRUCTION
OR TO REGULATION AND CONTROL OF TRAFFIC
MAY BE SUBJECT TO CHANGE AS DEEMED
NECESSARY BY THE DEPARTMENT

HYDROLOGIC DATA

The data presented herein was statistically derived by empirical methods and from field observations. It is presented as an estimate of the hydraulic performance of these facilities during the passage of actual flood events.

1. Estimated 100 year frequency flood data (unless otherwise noted.) This magnitude of flooding may pass through the proposed facility or it may obtain the necessary hydraulic conveyance by partial inundation of roadways and/or partial by pass of the facility.

2. Specified frequency flood data. It is anticipated that this magnitude of flooding will be conveyed through the proposed hydraulic facility under estimated conditions which satisfy the design criteria applicable to the site.

3. This data was obtained from observations by persons familiar with the area and/or official records combined with an evaluation by empirical methods. The reliability of this data is relative to the accuracy of the source. A future flood of the same magnitude may achieve a significantly different stage elevation from that shown due to changes in the physical characteristics of the watershed.

FIELD INSPECTION STAGE [X] FINAL DESIGN STAGE [ ]

					BASE FLOOD 1.		DESIGN FLOOD 2.			OVERTOPPING FLOOD		HISTORICAL DATA 3.		
Sheet No.	Station	Stream Name	Drainage Area	Structure Size	Discharge (C.F.S.)	Stage Elevation (Ft.)	Discharge (C.F.S.)	Estimated Exceedance Probability %	Stage Elevation (Ft.)	Stage Elevation (Ft.)	Estimated Exceedance Probability %	Date	Stage Elevation (Ft.)	Estimated Exceedance Probability %
3-8	10+00 ~ 52+00	Roanoke River	202,880 AC	N/A	33,350	991.86	15,450	10%	981.38	973.63	~100%	06/21/72	989.00	2%-4%

REMARKS

Source of information and Other Related Data:

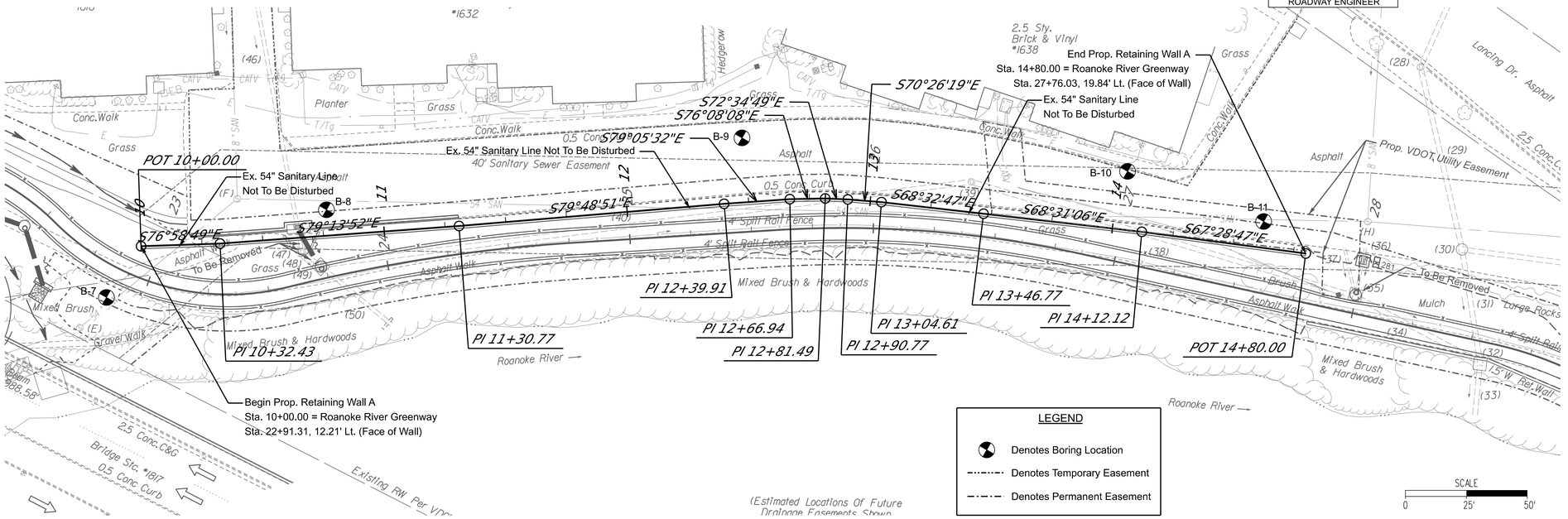
Base flood, design flood, and overtopping flood are based off of a HEC-RAS flood model at the path's lowest point. Historic flood elevation was recorded on Electric Road bridge plans. Exceedence probability for this flood was determined by comparing the 06/21/72 flood discharge with the exceedance probabilities at USGS Gage 02055000 (Roanoke River at Roanoke, VA).

	PROJECT	SHEET NO.
	RRGW-129-257	2C

6/24/2024

PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt,Inc., (800) 242-4906, July, 2022 _ _ _ _ _
DESIGN BY Blick, Delong, P.E.,Rinker_Design. Associates, P.C.,(804) 612-0665 _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc., (800) 242-4906, July, 2022

Retaining Wall A Plan

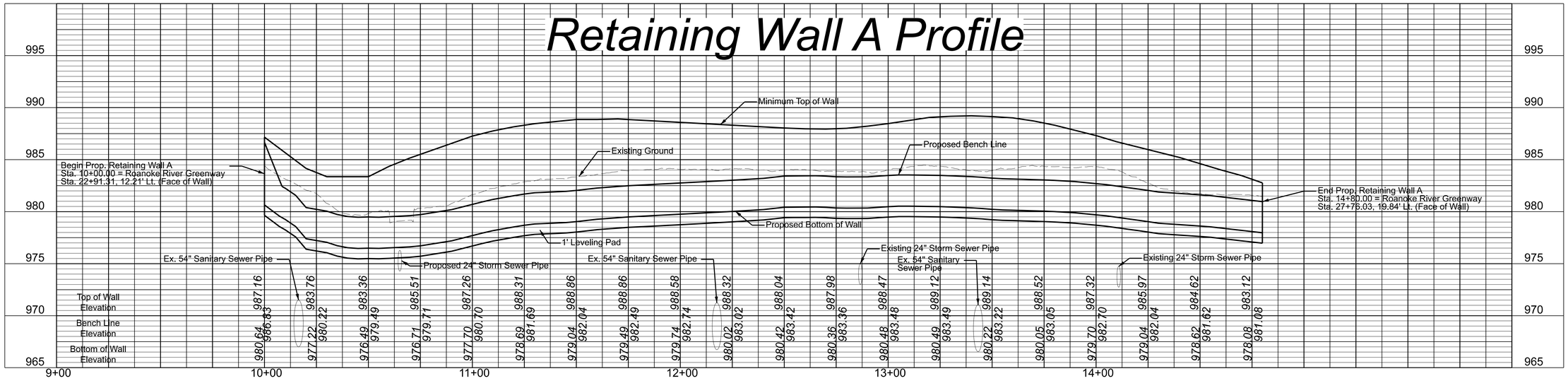


LEGEND

- Denotes Boring Location
- Denotes Temporary Easement
- Denotes Permanent Easement

SCALE
0 25' 50'

Retaining Wall A Profile



REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
01/11/24	VA.		RRGW-129-257 R204, M501	2D

COMMONWEALTH OF VIRGINIA
AARON DELONG
Lic. No. 061662
PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.12 09:40:34-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

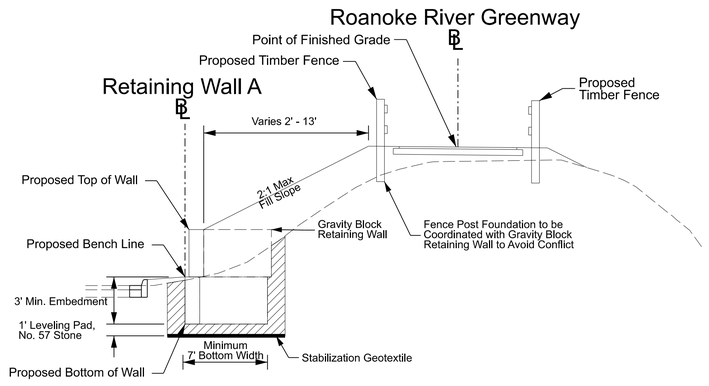
7/12/2024

1" = 25' (HOR.), 1" = 5' (VERT.)	PROJECT RRGW-129-257	SHEET NO. 2D

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Plotted by: swhitehead

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _ _ _ _ _
DESIGN BY Blick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Retaining Wall A Typical Section



Notes:
1. Leveling pad to consist of a geotextile for use in stabilization extending 18 inches in front and behind the bottom segmental block.
2. Subgrade materials to be compacted with a sheep's foot trench roller until subgrade materials are confirmed to be firm by the owner's geotechnical engineer.
3. Wall A shall be a Segmental "Big Block" Retaining Wall designed and constructed in accordance with the Special Provisions for Precast Modular Concrete Block Gravity Wall submitted for Department review and approval. Shop drawings and design calculations shall be submitted for approval prior to construction.
4. The wall shall have a minimum bottom block dimension perpendicular to the wall (base width) of 7 feet for its full length. The wall shall be designed with a maximum applied factored bearing pressure of 3100 psf.
5. Portions of Wall A are situated above the City of Salem's 54-inch sanitary sewer. All work shall be performed in a manner to protect this pipeline. Work shall be in accordance with the Special Provisions Inspection Of and Construction Over Existing Sanitary Sewer Line which includes, but is not limited to Pre and Post CCTV Inspection and notices made.

COMMONWEALTH OF VIRGINIA
JEFFREY S. BASFORD
Lic. No. 043143
PROFESSIONAL ENGINEER

Jeffrey Basford
2024.07.15 15:27:15 -04'00'

Whitman, Requardt, & Associates
Baltimore, Maryland
GEOTECHNICAL ENGINEER

COMMONWEALTH OF VIRGINIA
AARON DELONG
Lic. No. 061662
PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.15 09:49:04-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2D(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

NOT TO SCALE	PROJECT RRGW-129-257	SHEET NO. 2D(1)

7/15/2024

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _ _ _ _ _
DESIGN BY Bick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665 _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2D(2)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Retaining Wall A Boring Logs

VDOT Virginia Department of Transportation

PROJECT #: 45898.016
LOCATION: Roanoke, VA
STRUCTURE: RETAINING WALL

B-07 PAGE 1 OF 2

STATION: OFFSET:
LATITUDE: 37.267943° N LONGITUDE: 80.035099° W
SURFACE ELEVATION: 988.83 ft COORD. DATUM: NAD 83

Date(s) Drilled: 1/10/23 - 1/10/23
Drilling Method(s): HST
SPT Method: SS
Other Test(s):
Driller: SEQ
Logger: JMB

GROUND WATER
FIRST ENCOUNTERED AT 18.0 ft DEPTH

DEPTH (ft)	ELEVATION (ft)	STANDARD PENETRATION TEST HAMMER BLOWS	SOIL RECOVERY (%)	SAMPLE LEGEND	SAMPLE INTERVAL	CORE RECOVERY (%)	ROCK QUALITY DESIGNATION	DIP ° STRATA	DIP ° JOINTS	STRATA LEGEND	LIQUID LIMIT LL	PLASTICITY INDEX PI	MOISTURE CONTENT (%)
2	985	3 4 4	0		2								14.0
4	985	3 2 5	54		4								
4	985	9 6 6	38		6								
6	985	7 27 50/7"	20		6.92								
8	980	4 5 6	59		8								12.1
10	980	7			10								
12	975	4 4 5	63		13								
14	975	6			15								
16													
18	970	1 1 1	9		18								
20		2											

0.0 / 988.83
FILL, Reddish Brown, Sandy Lean CLAY with Gravel, Medium Stiff, Moist **CL**

4.0 / 984.83
FILL, Reddish Brown, Silty SAND with Gravel, Loose to Medium Dense, Moist **SM**

17.0 / 971.83
FILL, Gray, Poorly-Graded GRAVEL, Very Loose, Wet **GP**

REMARKS: Rig Type: CME-550X.

PAGE 1 OF 2
B-07

SPT_LOG BORINGS.GPJ SPT7.GDT gINT_version 10.03.00.09 4/17/23 VMRA

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VDOT Virginia Department of Transportation

PROJECT #: 45898.016
LOCATION: Roanoke, VA
STRUCTURE: RETAINING WALL

B-08 PAGE 1 OF 1

STATION: OFFSET:
LATITUDE: 37.267930° N LONGITUDE: 80.034768° W
SURFACE ELEVATION: 981.0 ft COORD. DATUM: NAD 83

Date(s) Drilled: 1/12/23 - 1/12/23
Drilling Method(s): HST
SPT Method: SS
Other Test(s):
Driller: SEQ
Logger: JMB

GROUND WATER
N/A

DEPTH (ft)	ELEVATION (ft)	STANDARD PENETRATION TEST HAMMER BLOWS	SOIL RECOVERY (%)	SAMPLE LEGEND	SAMPLE INTERVAL	CORE RECOVERY (%)	ROCK QUALITY DESIGNATION	DIP ° STRATA	DIP ° JOINTS	STRATA LEGEND	LIQUID LIMIT LL	PLASTICITY INDEX PI	MOISTURE CONTENT (%)
2	980	29 16 9	67		2								
4	980	6 3 3	46		4								28.7
4	980	4 1 1	33		6								
6	975	1 0 0	46		8						41	14	34.5
8	975	1 0 2	17		10						25	11	27.8
10	970	2 2 2	80		12 12.1								
12	970	50/1"											

0.0 / 981.0
2" Asphalt, 10" Gravel Subbase **ASPHALT**

1.0 / 980.0
FILL, Reddish Brown, SILT with Sand, Very Soft to Medium Stiff, Moist
Undisturbed sample taken from 6'-8' **ML**

12.0 / 969.0
BEDROCK, Assumed Limestone

Auger Refusal at 12.1' **LST**

REMARKS: Rig Type: CME-550X.

PAGE 1 OF 1
B-08

SPT_LOG BORINGS.GPJ SPT7.GDT gINT_version 10.03.00.09 4/17/23 VMRA

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VDOT Virginia Department of Transportation

PROJECT #: 45898.016
LOCATION: Roanoke, VA
STRUCTURE: RETAINING WALL

B-09 PAGE 1 OF 1

STATION: OFFSET:
LATITUDE: 37.267895° N LONGITUDE: 80.034175° W
SURFACE ELEVATION: 983.0 ft COORD. DATUM: NAD 83

Date(s) Drilled: 1/12/23 - 1/12/23
Drilling Method(s): HST
SPT Method: SS
Other Test(s):
Driller: SEQ
Logger: JMB

GROUND WATER
N/A

DEPTH (ft)	ELEVATION (ft)	STANDARD PENETRATION TEST HAMMER BLOWS	SOIL RECOVERY (%)	SAMPLE LEGEND	SAMPLE INTERVAL	CORE RECOVERY (%)	ROCK QUALITY DESIGNATION	DIP ° STRATA	DIP ° JOINTS	STRATA LEGEND	LIQUID LIMIT LL	PLASTICITY INDEX PI	MOISTURE CONTENT (%)
0.5		15											
1.0	982	16	54		2								
1.5		10											
2.0		10											
2.5		7											
3.0	980	5	75		4								13.2
3.5		7											
4.0		8											
4.5		4											
5.0	978	4	59		6								
5.5		6											
6.0		12											
6.5		8											
7.0	976	9	33		8								
7.5		11											
8.0		15											
8.5		50/5"	0		8 8.5								

0.0 / 983.0
2" Asphalt, 5" Gravel Subbase **ASPHALT**

0.6 / 982.4
FILL, Dark Gray & Brown, Silty SAND with Gravel, Medium Dense, Moist **SM**

2.0 / 981.0
ALLUVIAL, Pale Reddish Brown, Silty SAND, Medium Dense, Moist **SM**

6.0 / 977.0
ALLUVIAL, Light Brown, Silty GRAVEL with Sand, Medium Dense, Moist

Auger refual at 8' on boulder, offset 5 ft, Auger refusal at 6' on boulder **GM**

REMARKS: Rig Type: CME-550X.

PAGE 1 OF 1
B-09

SPT_LOG BORINGS.GPJ SPT7.GDT gINT_version 10.03.00.09 4/17/23 VMRA

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6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	2D(2)

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Plotted by: jlong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _ _ _ _ _
DESIGN BY Blick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665 _ _ _.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2D(3)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Retaining Wall A Boring Logs

VDOT Virginia Department of Transportation

PROJECT #: 45898.016
LOCATION: Roanoke, VA
STRUCTURE: RETAINING WALL

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PAGE 1 OF 1

STATION: OFFSET:
LATITUDE: 37.267752° N LONGITUDE: 80.033659° W
SURFACE ELEVATION: 982.0 ft COORD. DATUM: NAD 83

Date(s) Drilled: 1/12/23 - 1/12/23
Drilling Method(s): HST
SPT Method: SS
Other Test(s):
Driller: SEQ
Logger: JMB

GROUND WATER
N/A

DEPTH (ft)	ELEVATION (ft)	SOIL: STANDARD PENETRATION TEST HAMMER BLOWS	SOIL: SOIL RECOVERY (%)	SOIL: SAMPLE LEGEND	SOIL: SAMPLE INTERVAL	ROCK: CORE RECOVERY (%)	ROCK: ROCK QUALITY DESIGNATION	ROCK: DIP ° STRATA	ROCK: DIP ° JOINTS	STRATA LEGEND	FIELD DESCRIPTION OF STRATA	LAB: LIQUID LIMIT LL	LAB: PLASTICITY INDEX PI	LAB: MOISTURE CONTENT (%)
0.5		14									0.0 / 982.0 2" Asphalt, 2" Gravel Subbase **ASPHALT**			
1.0		8									0.33 / 981.67 FILL, Light Brown, Silty SAND with Gravel, Medium Dense, Moist **SM**			
1.5		9	17											
2.0	980	4			2						2.0 / 980.0 ALLUVIAL, Light Brown Sandy Lean CLAY, Medium Stiff to Very Stiff, Moist **CL**	25	11	14.5
2.5		4												
3.0		4	38											
3.5		5												
4.0	978	3			4									
4.5		4												
5.0		6	54											
5.5		6												
6.0	976	5			6						6.0 / 976.0 ALLUVIAL, Brown, Silty GRAVEL with Sand, Dense to Very Dense, Moist Auger Refusal at 9' on Boulder **GM**			
6.5		11												
7.0		23	42											
7.5		13												
8.0	974	9			8									
8.5		18	40											
9.0		50/4"			8.83									

REMARKS: Rig Type: CME-550X.

PAGE 1 OF 1
B-10

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SPT_LOG BORINGS.GPJ.SPT7.GDT.gINT • version 10.03.00.09 4/17/23 WRA

VDOT Virginia Department of Transportation

PROJECT #: 45898.016
LOCATION: Roanoke, VA
STRUCTURE: RETAINING WALL

B-11
PAGE 1 OF 1

STATION: OFFSET:
LATITUDE: 37.267661° N LONGITUDE: 80.033490° W
SURFACE ELEVATION: 982.0 ft COORD. DATUM: NAD 83

Date(s) Drilled: 1/12/23 - 1/12/23
Drilling Method(s): HST
SPT Method: SS
Other Test(s):
Driller: SEQ
Logger: JMB

GROUND WATER
▼ FIRST ENCOUNTERED AT 13.0 ft DEPTH

DEPTH (ft)	ELEVATION (ft)	SOIL: STANDARD PENETRATION TEST HAMMER BLOWS	SOIL: SOIL RECOVERY (%)	SOIL: SAMPLE LEGEND	SOIL: SAMPLE INTERVAL	ROCK: CORE RECOVERY (%)	ROCK: ROCK QUALITY DESIGNATION	ROCK: DIP ° STRATA	ROCK: DIP ° JOINTS	STRATA LEGEND	FIELD DESCRIPTION OF STRATA	LAB: LIQUID LIMIT LL	LAB: PLASTICITY INDEX PI	LAB: MOISTURE CONTENT (%)
2	980	23									0.0 / 982.0 FILL, Light Brown, Silty SAND with Gravel, Medium Dense, Moist **SM**			
		11												
		18	21											
		22												
		8			2									
		16												
		11	0											
4		5			4						4.0 / 978.0 FILL, Light Brown, Sandy Lean CLAY with Gravel, Soft to Medium Stiff, Moist **CL**			14.1
		2												
		2	13											
		2												
6		2			6									
	975	12												
		0	6											
		2												
		3												
8		4	4		8						8.0 / 974.0 ALLUVIAL, Light Brown, Silty SAND, Loose, Moist **SM**			19.1
		2												
		1	2											
		2												
10		2	50		10									
		4												
12	970													
		50/2"	80		13 13.1						13.0 / 969.0 RESIDUAL, Rock Fragments in tip of spoon Auger refusal at 13.5'			

REMARKS: Rig Type: CME-550X.

PAGE 1 OF 1
B-11

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6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	2D(3)

N:\20176-002\00 Design (11)9562\dll9562002d(4).dgn 9:32:10 AM 10.00 ft / in. 35x23 (in.) K:\Design Aid\Printing\Pen Tables\25 Scale.tbl \\hestia\Library\Design Aid\Printing\Plot Drivers\RDA LD PDF File Generator.pltcfg
Plotted by: wdelong

PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

COMMONWEALTH OF VIRGINIA
JEFFREY S. BASFORD
Lic. No. 043143
PROFESSIONAL ENGINEER

Jeffrey Basford
2024.07.25 11:33:23 -04'00'

Whitman, Requardt, & Associates
Baltimore, Maryland
GEOTECHNICAL ENGINEER

COMMONWEALTH OF VIRGINIA
AARON DELONG
Lic. No. 061662
PROFESSIONAL ENGINEER

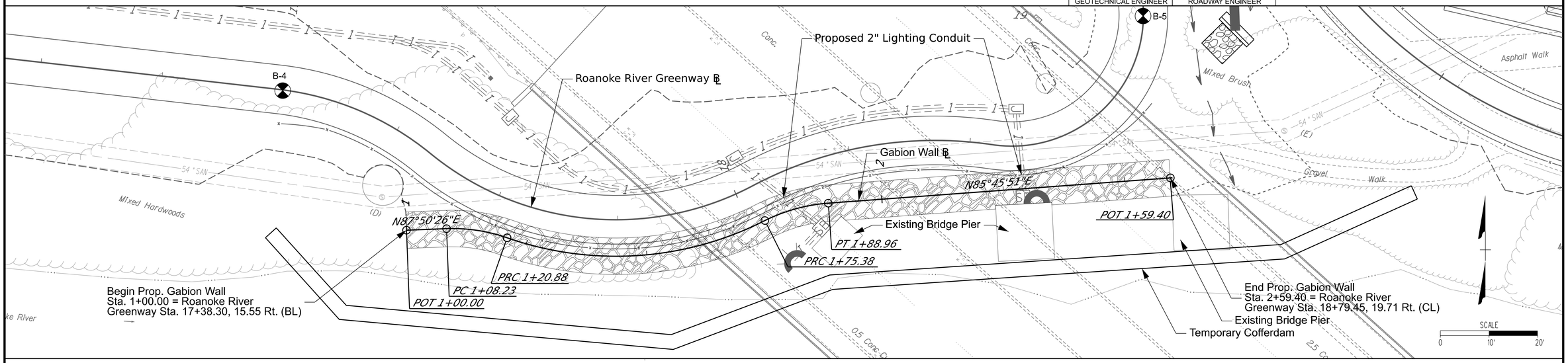
Aaron L DeLong
2024.07.25 09:48:48-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

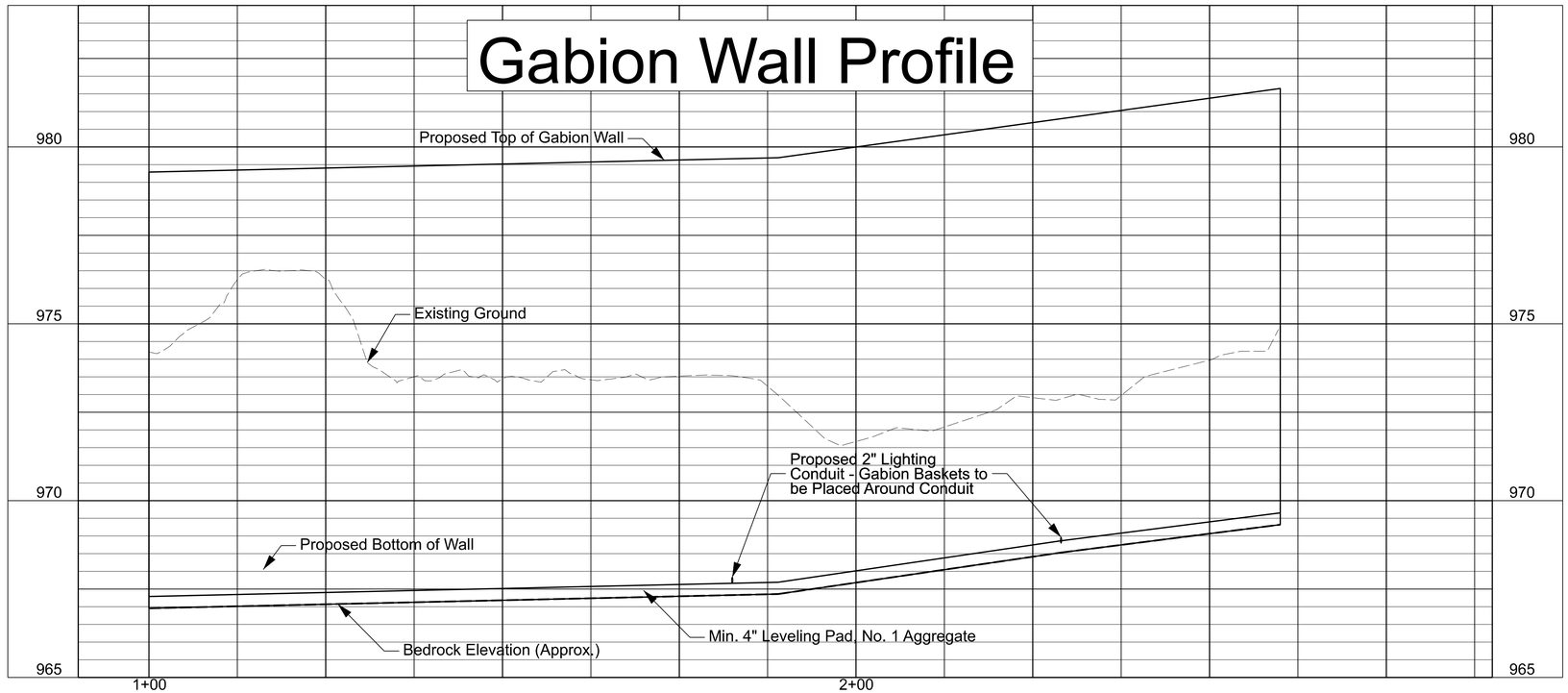
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2D(4)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Gabion Wall Plan

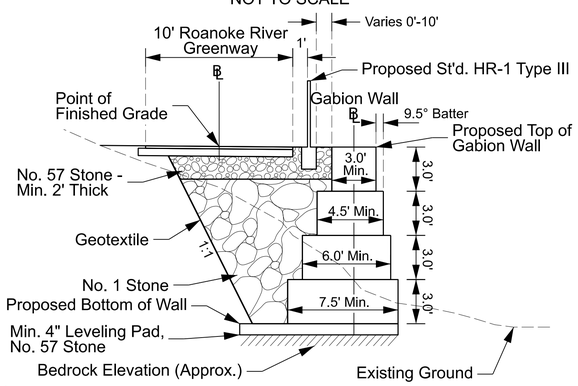


Gabion Wall Profile



Gabion Wall Typical

NOT TO SCALE



Notes:
1. See VDOT R&B Specifications Section 610 for additional information.
2. Gabion basket to be adjusted to avoid bridge piers.
3. Leveling pad thickness to vary to achieve the indicated bottom wall elevation.
4. Gabion basket wire to be galvanized and PVC coated.
5. Handrail footing depths to be coordinated to ensure there is no conflict with gabion baskets.
6. No. 1 stone to be placed in 12" lifts and compacted with four passes of a vibratory trench roller, when compacting within 3 feet of the inside face of the wall compaction should be performed with vibratory compaction equipment weighing no more than 1000 lbs.

1"=10' (HOR.) 1"=2' (VERT.)	PROJECT RRGW-129-257	SHEET NO. 2D(4)

7/25/2024

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Plotted by: jlong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2D(5)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Gabion Wall Boring Logs

VDOT Virginia Department of Transportation

PROJECT #: 45898.016
LOCATION: Roanoke, VA
STRUCTURE: TRAIL

B-04
PAGE 1 OF 1

STATION: OFFSET:
LATITUDE: 37.267882° N LONGITUDE: 80.035853° W
SURFACE ELEVATION: 979.09 ft COORD. DATUM: NAD 83

Date(s) Drilled: 1/10/23 - 1/10/23
Drilling Method(s): HST
SPT Method: SS
Other Test(s):
Driller: SEQ
Logger: JMB

GROUND WATER
▽ FIRST ENCOUNTERED AT 8.0 ft DEPTH

DEPTH (ft)	ELEVATION (ft)	SOIL: STANDARD PENETRATION TEST HAMMER BLOWS	SOIL: SOIL RECOVERY (%)	SOIL: SAMPLE LEGEND	SOIL: SAMPLE INTERVAL	ROCK: CORE RECOVERY (%)	ROCK: ROCK QUALITY DESIGNATION	ROCK: DIP ° STRATA	ROCK: DIP ° JOINTS	STRATA LEGEND	FIELD DESCRIPTION OF STRATA	LAB: LIQUID LIMIT LL	LAB: PLASTICITY INDEX PI	LAB: MOISTURE CONTENT (%)
0		3	59		2						0.0 / 979.09 FILL, Light Brown, Silty SAND with Gravel, Medium Dense, Moist **SM**			10.0
2		4 8 10												
4	975	7 9 8	59		4									
		2 1 2	71		6						4.0 / 975.09 ALLUVIAL, Light Brown, Silty SAND with varying amounts of Gravel, Very Loose to Very Dense, Moist to Wet **SM**	NP	NP	12.6
6		2 2 2 3	63		8									19.6
8	970	5 36 20 12	9		10									
10														
12		50/4"	0		13.5 13.83						13.5 / 965.59 Auger refusal at 13.5'			

REMARKS: Rig Type: CME-550X.

PAGE 1 OF 1
B-04

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SPT_LOG:BORINGS.GPJ.SPT7.GDT.gINT_version 10.03.00.09:4/17/23:WRA

VDOT Virginia Department of Transportation

PROJECT #: 45898.016
LOCATION: Roanoke, VA
STRUCTURE: UNDER BRIDGE

B-05
PAGE 1 OF 2

STATION: OFFSET:
LATITUDE: 37.267932° N LONGITUDE: 80.035247° W
SURFACE ELEVATION: 982.22 ft COORD. DATUM: NAD 83

Date(s) Drilled: 1/10/23 - 1/10/23
Drilling Method(s): HST
SPT Method: SS
Other Test(s):
Driller: SEQ
Logger: JMB

GROUND WATER
▽ FIRST ENCOUNTERED AT 8.0 ft DEPTH

DEPTH (ft)	ELEVATION (ft)	SOIL: STANDARD PENETRATION TEST HAMMER BLOWS	SOIL: SOIL RECOVERY (%)	SOIL: SAMPLE LEGEND	SOIL: SAMPLE INTERVAL	ROCK: CORE RECOVERY (%)	ROCK: ROCK QUALITY DESIGNATION	ROCK: DIP ° STRATA	ROCK: DIP ° JOINTS	STRATA LEGEND	FIELD DESCRIPTION OF STRATA	LAB: LIQUID LIMIT LL	LAB: PLASTICITY INDEX PI	LAB: MOISTURE CONTENT (%)
0		2	63		2						0.0 / 982.22 FILL, Brown to Yellowish Brown, Silty SAND with varying amounts of Gravel, Very Loose to Medium Dense, Moist **SC**			
2	980	1 2 3												
4		4 9 11 10	59		4						4.0 / 978.22 ALLUVIAL, Brown, Clayey SAND, Loose, Moist **SC**			17.9
6	975	2 2 4 4	50		6									
8		2 2 4 2	38		8						8.0 / 974.22 ALLUVIAL, Brown, Silty Clayey SAND with Gravel, Loose, Moist **SC-SM**	12	5	12.7
10		3 4 4 3	42		10									
12	970										13.0 / 969.22 RESIDUAL, Gray, Weathered ROCK, Friable to Sandy Gravel, Moist Auger Refusal at 15' **GP**			
14		2 27 50/3"	46		13 14.25 15									
16											15.0 / 967.22 BEDROCK, Light Gray Limestone, Fine Grained, Massive, Moderately Weathered, Soft **LST**			
18	965						30	0						
20														

REMARKS: Rig Type: CME-550X.

PAGE 1 OF 2
B-05

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SPT_LOG:BORINGS.GPJ.SPT7.GDT.gINT_version 10.03.00.09:4/17/23:WRA

6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	2D(5)

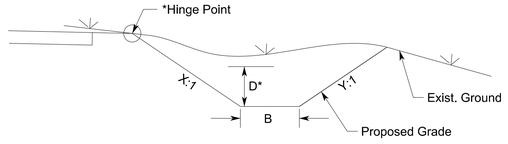
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Plotted by: jlong

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _ _ _ _ _
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Ditch Lining Typicals

Typical Ditch									
Ditch #	Roanoke River Greenway	Station	to	Station	D* (ft)	B (ft)	X (ft)	Y (ft)	Lining
	Left								
Ditch 2	Roanoke River Greenway LT - 21+55 to 23+10	21+55	to	23+10	0.4	0	2	10	EC-2 Type 1
Ditch 7	Roanoke River Greenway LT - 51+25 to 47+30	51+25	to	50+25	0.5	0	6	2	EC-2 Type 1
		50+25	to	48+00	1.7	0	2	2	EC-2 Type 1
		48+00	to	46+45	1.1	0	2	4	EC-2 Type 1
Ditch 8	Roanoke River Greenway LT - 51+90 to 51+80	51+90	to	51+80	0.3	0	2	4	PG-3 Type I Class A1
	Right								
Ditch 1	Roanoke River Greenway RT -20+50 to 18+75	20+50	to	18+95	0.5	0	2	2	EC-2 Type 1
		18+95	to	18+75	0.8	0	2	2	EC-3 Type 1

Typical Ditch Section
NTS



Notes:
1. Dimension "D*" denotes minimum depth of ditch lining.
2. Installation of Linings Should Follow VDOT EC-2 and EC-3 Standards.

*EC-3 lining to be installed to hinge point elevation per VDOT R&B Standards.

COMMONWEALTH OF VIRGINIA
ANDREW KNOWLTON
Lic. No. 056378
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:44:45-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2E

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

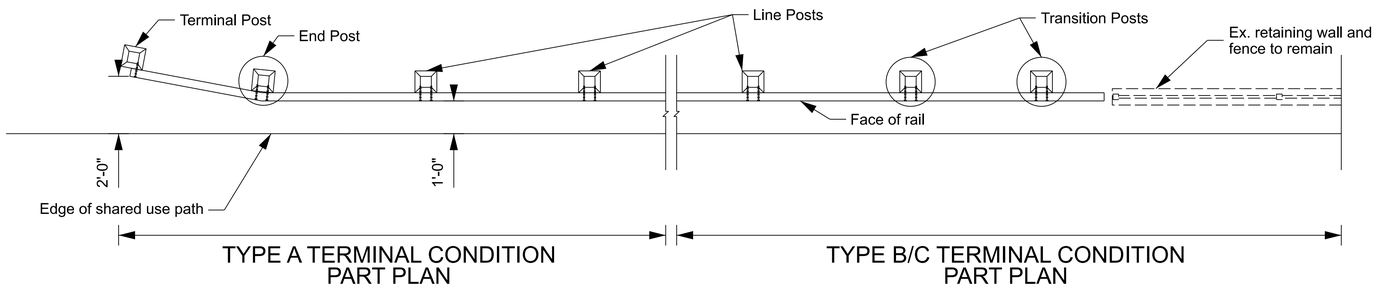
6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	2E

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Plotted by: jlong

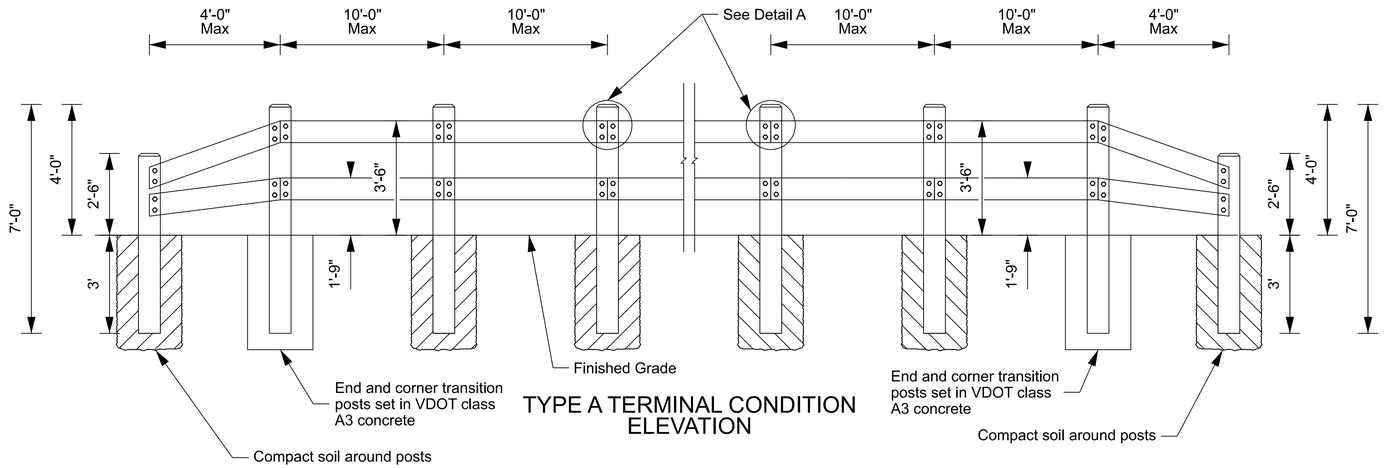
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Special Design Drawing: Timber Fence



TYPE A TERMINAL CONDITION PART PLAN

TYPE B/C TERMINAL CONDITION PART PLAN



TYPE A TERMINAL CONDITION ELEVATION

Timber Notes:

Timber design shall be in accordance with ANSI/NFoPA National Design Specification for Wood Construction, 2024 Edition.

All members for the timber railing shall be Southern Pine, Graded No. 1 or better and surfaced four sides (S4S).

All members for the timber lagging shall be Southern Pine, Graded No. 2 or better.

All timber shall be graded and marked to show conformance with the Southern Pine Inspection Bureau (SPIB) grading rules and standards.

All timber shall be pressure treated with Alkaline Copper Quaternary (ACQ) conforming to AWPA Standard P5 to a minimum retention rate of 0.4 pounds per cubic foot.

All members shall be dried to a moisture content of 19 percent or less after treatment.

All ends shall be cut square. Bolt holes to be 1/16" larger in diameter than the bolt size.

Cut ends shall not be placed in contact with ground or concrete.

All cuts and holes shall be field treated in accordance with AWPA standards and shall be field treated a second time no sooner than four hours after completion of the first field treatment.

Timber Railing Notes:

Timber railing shall be designed and detailed according to the details presented on the plans herein.

For plan location of timber railing, see plan sheets 3 through 8.

Posts shall be precision end trimmed, and 2" chamfered around top four edges, leaving approximately 4" square on top.

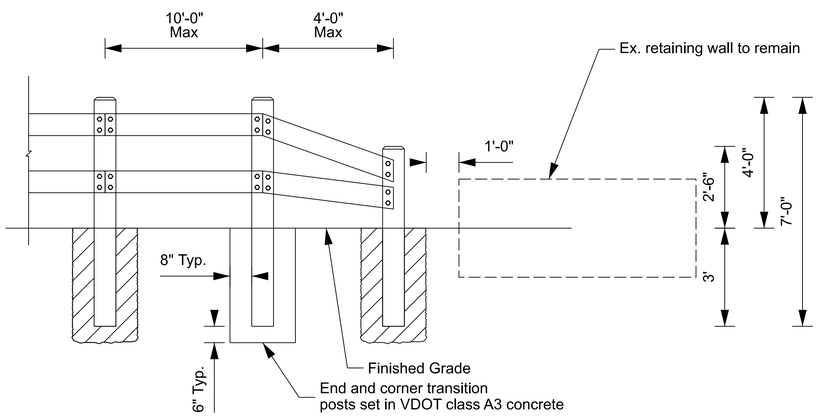
All horizontal rails shall be designed to resist the maximum force effects of the following loads acting simultaneously:
- 50 pounds per linear foot of railing horizontal
- 50 pounds per linear foot of railing vertical

All posts and post foundation attachments shall be designed to resist the maximum force effect of a horizontal load of 50 pounds per linear foot times the distance between posts, acting at the center of gravity of the upper rail.

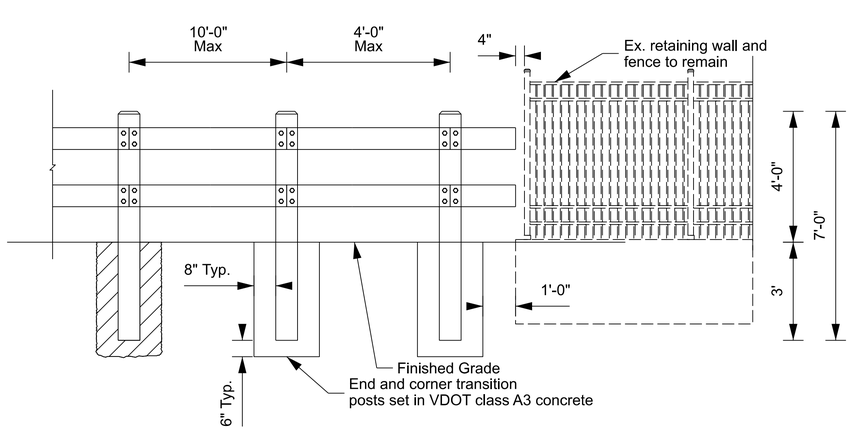
The railing system shall additionally be design to resist the maximum force effect of an infill loading of 200 pounds, applied horizontally at right angles, to a one square foot area at any point in the railing system.

All posts and pickets shall be installed vertical. Rails shall be set to follow the grade of trail or contour of finished ground. Rails shall be installed parallel to each other unless otherwise shown in the plans. No stairstepping of rail panels will be permitted.

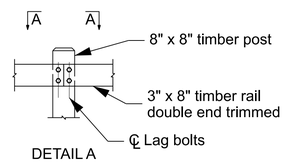
Fence post and foundation locations shall be coordinated with the gravity block wall shown on Sheets 2D & 2D(1).



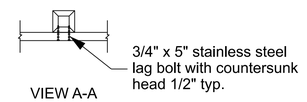
TYPE B TERMINAL CONDITION PART ELEVATION



TYPE C TERMINAL CONDITION PART ELEVATION



DETAIL A



VIEW A-A

COMMONWEALTH OF VIRGINIA
Christopher C. Adams
Lic. No. 033017
PROFESSIONAL ENGINEER

Christopher Adams
2024.07.12 10:11:29-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
STRUCTURAL ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2F

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

6/24/2024

Not To Scale	PROJECT RRGW-129-257	SHEET NO. 2F

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Plotted by: jlong

PROJECT MANAGER HDR, VDOT, PM: Chris. Eggleston. (757) 925-2689
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022
DESIGN BY Rick. Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

CG-12 Details & Radial Offset Data

COMMONWEALTH OF VIRGINIA
AARON DELONG
Lic. No. 061662
PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.12 09:37:49-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2F(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

112

Apperson Drive Constr. ℄

Apperson Drive (Rte. 11)

Rte. 11 Apperson Drive Asphalt

990.91'

990.74'

990.90'

+66.56

27.45'

990.78'

990.89'

Contractor to match existing pavement elevations

R = 30'

14.9' @ 4.5%

9-1

Full Depth Saw Cut Req'd.

991.56'

Curve Length = 28'

Asphalt

Chord Length 26.99'

+43.07

40.75'

990.94'

991.61'

10' @ 1.0%

Metal GuardRail

989.15'

990.76'

990.86'

9.5' @ 4.7%

990.31'

990.41'

6/24/2024

SCALE 0 3' 6'

PROJECT RRGW-129-257

SHEET NO. 2F(1)

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Plotted by: jtong

PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _ _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt,Inc., (800).242-4906,July, 2022_ _ _ _ _ _ _
DESIGN BY Blick, Delong, P.E.,Rinker, Design, Associates, P.C.,(804) 612-0665_ _ _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc., (800).242-4906,July, 2022

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
	VA.		RRGW-129-257 R204, M501	2G

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Erosion and Sediment Control Notes

EROSION AND SEDIMENT CONTROL MINIMUM STANDARDS:

X 1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

X 2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

X 3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.

X 4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

X 5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

X 6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.

X a. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.

N/A b. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.

X 7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

X 8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.

X 9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

X 10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

X 11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

X 12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.

X 13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.

X 14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

X 15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

X 16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

X a. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.

X b. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.

X c. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.

X d. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.

X e. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.

X f. APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.

X 17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

X 18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

X 19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:

X a. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.

X b. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:

X (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS 100 TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION;

X (2) (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.

(b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND

(c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.

X c. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:

X (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A 10-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE BANKS;

X (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE 10-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;

X (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A 10-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR

X (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION.

X d. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.

X e. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.

N/A f. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.

N/A g. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.

X h. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.

X i. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.

X j. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.

X k. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.

N/A l. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO §62.1-44.15:54 OR 62.1-44.15:65 OF THE ACT.

X m. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF §62.1-44.15:52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 62.1-44.15:24 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES (I) ARE IN ACCORDANCE WITH PROVISIONS FOR TIME LIMITS ON APPLICABILITY OF APPROVED DESIGN CRITERIA IN 9VAC25-870-47 OR GRANDFATHERING IN 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION, IN WHICH CASE THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF §62.1-44.15:52 A OF THE ACT SHALL APPLY, OR (II) ARE EXEMPT PURSUANT TO §62.1-44.15:34 C 7 OF THE ACT.

X n. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF THIS SUBDIVISION 19.

X = Applicable to This Project
N/A = Not Applicable to This Project

6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	2G

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PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _ _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt,Inc., (800).242-4906,July. 2022_ _ _ _ _ _ _
DESIGN BY Blick. Delong, P.E.,Rinker. Design. Associates, P.C.,(804) 612-0665_ _ _ _ _.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc., (800).242-4906,July. 2022

Erosion & Sediment Control VESCH Narrative

COMMONWEALTH OF VIRGINIA
ANDREW KNOWLTON
Lic. No. 056378
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:46:31-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2G(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE CONSTRUCTION OF A TRAIL ALONG ROANOKE RIVER. THE PROJECT BEGINS AT SALEM PARK AND ENDS AT APPERSON DRIVE (ROUTE 11). THE TOTAL DISTURBED AREA IS 4.35 ACRES.

EXISTING SITE CONDITIONS

TOPOGRAPHY FOR THE MAJORITY OF THE PROJECT AREA IS ROLLING WITH LIGHT FOREST COVER, EXCEPT ALONG THE EXISTING ROADWAYS. THE PROJECT IS WITHIN THE LIMITS OF ONE WATERSHED - RU09, HUC12 #030101010301, ROANOKE RIVER - SAWMILL HOLLOW.

ADJACENT AREAS:

AREAS ADJACENT TO THE PROJECT LIMITS ARE COMMERCIAL AND RESIDENTIAL USES.

OFFSITE AREAS:

BORROW MATERIAL WILL BE NECESSARY FOR THIS PROJECT. THIS EROSION CONTROL PLAN DOES NOT ADDRESS AREAS FOR OFFSITE BORROW MATERIAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING INDEPENDENT EROSION AND SEDIMENT CONTROL PLANS TO COVER OFFSITE. ANY OFFSITE BORROW OR SPOIL AREA MUST BE PERMITTED AND THE ENVIRONMENTAL ENGINEERING INSPECTOR MUST BE NOTIFIED PRIOR TO HAULING TO OR FROM.

SOILS:

THE SOILS ON THE SITE ARE A COMBINATION OF SANDY LOAM AND LOAM SOILS.

CRITICAL AREAS:

THERE ARE STEEP SLOPES LOCATED ALONG THE RIGHT OF WAY AND RIVER WITHIN THE PROJECT AREA. THE CONTRACTOR IS TO BE EXTRA DILIGENT WITH EROSION AND SEDIMENT CONTROL MEASURES AROUND STOCKPILES, HAZMAT SOILS, STRUCTURES, AND ADJACENT PROPERTIES. THE CONTRACTOR IS TO INSPECT AFTER EVERY RAIN AND RESTORE TO PROPOSED CONDITIONS.

WORK WILL BE PERFORMED IN THE CHANNEL AND THE CONTRACTOR WILL NEED TO PROTECT THE STREAM'S DOWNSTREAM AREAS FROM SEDIMENTATION.

EROSION AND SEDIMENT CONTROL MEASURES:

UNLESS OTHERWISE DIRECTED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MOST CURRENT MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION. DIVERSION DIKES, FILTER BARRIER, AND SILT FENCE FOR EXISTING STORM DRAINAGE STRUCTURES SHALL BE PLACED PRIOR TO EARTH MOVING OPERATIONS. THE MINIMUM STANDARDS OF THE VESCH SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE. FLEXIBILITY IS ALLOWED SO THESE MEASURES CAN BE ADJUSTED AS NEEDED DURING THE CONSTRUCTION PHASE.

MAINTENANCE PROGRAM:

THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREAS (IE. SEEDED, MULCHED, OR SODDED AREAS) ON A DAILY BASIS AND AFTER EACH RAINFALL EVENT TO ENSURE THAT ALL CONTROLS ARE FUNCTIONING PROPERLY. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR; INLET PROTECTION, SEDIMENT TRAPS, SILT FENCE AND CHECK DAMS WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE, AND IF THE GRAVEL IS CLOGGED BY SEDIMENT, IT SHALL BE REMOVED AND CLEANED OR REPLACED. THE SILT FENCE BARRIER WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC, AND SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALFWAY TO THE TOP OF THE BARRIER, AND THE SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED, AND AREAS SHALL BE FERTILIZED AND RESEEDED AS NEEDED. ANY DAMAGED CONTROLS SHALL BE REPAIRED BY THE END OF THE WORK DAY, INCLUDING RESEEDING AND MULCHING IF NECESSARY AT THE INSPECTOR'S APPROVAL.

TEMPORARY AND PERMANENT STABILIZATION:

TEMPORARY AND PERMANENT STABILIZATION SHALL BE APPLIED TO ALL DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADING IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS LEFT DORMANT FOR MORE THAN ONE YEAR. DISTURBED AREAS WITHIN 100 FEET OF DELINEATED WETLANDS SHALL BE CONTINUOUSLY PROSECUTED UNTIL COMPLETED AND STABILIZED IMMEDIATELY UPON COMPLETION OF THE WORK IN EACH IMPACTED AREA.

CALCULATIONS

NO PERMANENT FACILITIES ARE PROPOSED FOR THIS PROJECT. ALL OUTFALL AND RUNOFF CALCULATIONS HAVE BEEN PROVIDED IN THE DRAINAGE REPORT.

SINGLE PHASE LAND DISTURBING/CONSTRUCTION SEQUENCE:

1. THE CONTRACTOR MUST GIVE THE INSPECTOR 48 HOURS NOTIFICATION TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING FOR THE ISSUANCE OF A LAND DISTURBANCE PERMIT. THE CERTIFIED RESPONSIBLE LAND DISTURBER (CLRD) AND THE STORMWATER QUALIFIED PERSON MUST ATTEND THE PRE-CONSTRUCTION MEETING.
2. FLAG LIMITS OF CLEARING AND CONSTRUCT CONSTRUCTION ENTRANCES.
3. INSTALL TEMPORARY CONTROLS INCLUDING SILT FENCE, DIVERSION, SEDIMENT TRAP, INLET PROTECTION , ROCK CHECK DAMS, AND TURBIDITY CURTAINS.
4. OBTAIN SITE INSPECTOR'S APPROVAL OF PERIMIETER EROSION AND SEDIMENT CONTROLS.
5. CLEAR AND GRUB REMAINDER OF THE SITE AS NECESSARY. CLEARING AND EXCAVATION OF ANY EXISTING STREAM OR SWALE BED AND BANKS SHALL BE KEPT TO A MINIMUM.
6. STABILIZE ALL DENUDED AREAS ACCORDING TO THE SECTION TEMPORARY AND PERMANENT STABILIZATION.
7. CONSTRUCT PROPOSED STORM SEWER SYSTEMS AND PROPOSED CULVERTS. INSTALL INLET PROTECTIONS AT ALL APPLICABLE LOCATIONS. CONSTRUCT DITCH AND LINING AT ALL APPLICABLE LOCATIONS.
8. ROUGH GRADE THE RAMAINDER OF THE SITE.
9. FINE GRADE SITE AND INSTALL ALL PERMANENT SEEDING AND FERTILIZE ALL GRASSED AREAS.
10. REMOVE ALL EROSION CONTROL MEASURES.
11. CLEAN SITE OF ALL TRASH AND DEBRIS. ALL CONTROLS ARE TO BE MAINTAINED IN PLACE UNTIL ALL DISTURBED AREAS HAVE RECEIVED FINAL RESTORATION AND ARE STABILIZED TO THE SATISFACTION OF THE INSPECTOR.

STORAGE YARD/LAY DOWN YARD

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF THE EQUIPMENT STORAGE AREA. THIS AREA MUST STAY WITHIN THE PROJECTS LIMITS OF DISTURBANCE, UNLESS AN OFF-SITE AREA IS COORDINATED AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING INDEPENDENT E&S CONTROL PERMITS TO COVER ANY OFF-SITE IMPACTS.

EROSION AND SEDIMENT CONTROL STRUCTURES

- SAFETY FENCE (3.01):
A protective barrier installed to prevent access to an erosion control measure.

- TEMPORARY STONE CONSTRUCTION ENTRANCE (3.02):
A stabilized stone pad with a filter fabric underliner located at points of vehicular ingress and egress on a construction site. (Per VDOT Standard EC-11)

- CONSTRUCTION ROAD STABILIZATION (3.03):
The temporary stabilization of access roads, subdivision roads, parking areas, and other on-site vehicle transportation routes with stone immediately after grading. (Per VDOT Standard EC-11)

- TEMPORARY SILT FENCE (3.05):
A temporary sediment barrier consisting of a synthetic filter fabric stretched across and attached to supporting posts and entrenched. (Per VDOT Standard EC-5)

- STORM DRAIN INLET PROTECTION (3.07):
A sediment filter or an excavated impounding area around a storm drain drop inlet or curb inlet. (Per VDOT Standard EC-6 Type A and B)

- CULVERT INLET PROTECTION (3.08):
A sediment filter located at the inlet to storm sewer culverts. (Per VDOT Standard EC-6 Type C)

- TEMPORARY DIVERSION DIKE (3.09):
A temporary ridge of compacted soil constructed at the top or base of a sloping disturbed area. (Per VDOT Standard EC-9)

- DIVERSION (3.12):
A channel constructed across a slope with a supporting earthen ridge on the lower side. (Per VDOT Standard EC-12)

- TEMPORARY SEDIMENT TRAP (3.13):
A temporary ponding area formed by constructing an earthen embankment with a stone outlet. (Per VDOT Standard EC-7)

- STORMWATER CONVEYANCE CHANNEL (3.17):
A permanent, designed waterway, shaped, sized and lined with appropriate vegetation or structrual material used to safely convey stormwater runoff within or away from a developing area.

- OUTLET PROTECTION (3.18):
Structurally lined aprons or other acceptable energy dissipating devices placed at the outlets of pipes or paved channel sections. (Per VDOT Standard EC-1)

- ROCK CHECK DAMS (3.20):
Small temporary stone dams constructed across a swale or drainage ditch. (Per VDOT Standard EC-4)

- TEMPORARY SEEDING (3.31):
The establishment of a temporary vegetative cover on disturbed areas by seeding with appropriate rapidly growing annual plants. Temporary seeding shall be done in accordance with Virginia Erosion and Sediment Control Handbook standard and specification 3.31.

- PERMANENT SEEDING (3.32):
All areas disturbed by construction shall be stabilized with permanent seeding immediately following finished grading. Seeding shall be done according to Virginia Erosion and Sediment Control Handbook standard and specification 3.32, PERMANENT SEEDING.

- DUST CONTROL (3.39):
Reducing surface and air movement of dust during land disturbing, demolition and construction activities. Dust control shall be done according to Virginia Erosion and Sediment Control Handbook standard and specification 3.39, DUST CONTROL.

6/24/2024

PROJECT	SHEET NO.
RRGW-129-257	2G(1)

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PROJECT MANAGER _HDR VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt Inc., (800) 242-4906, July. 2022 _____
DESIGN BY Blick. Delong, P.E. Rinker. Design. Associates, P.C. (804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt Inc., (800) 242-4906, July. 2022

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET (1)

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2H

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the General VPDES Permit For Discharges Of Stormwater From Construction Activities (VAR10) (the CGP) issued July 1, 2024 and VDOT's approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance activities that disturb an area equal to or greater than 10,000 square feet outside the Chesapeake Bay Preservation Area, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The VDOT RLD (as defined in the latest IIM-LD-242) will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents)for the land disturbance (construction) activity.

I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that this document and all other documents related to the SWPPP, as identified on the SWPPP General Information Sheets, are maintained at the activity site, or at a location convenient to the activity site where no on-site facilities are available, and such documents will be made available for review upon request in accordance with the provisions of the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10) when applicable. Where the SWPPP documents are not stored on-site, a copy of such documents shall be in the possession of those with day to day operational control over the implementation of the SWPPP whenever they are on site.

* or ** Duly Authorized Representative Signature"

Signature: _____
Printed Name: _____
Date:_____

(1) See Section 1, Item 12 relating to delegation of authority, and form LD-445H (Delegation of Authority).

ACRONYMS

ACE - Area Construction Engineer
AS&S - Annual Standards and Specifications
BMP - Best Management Practice
CBPA - Chesapeake Bay Preservation Act
CGP - General VPDES Permit For Discharges of Stormwater from Construction Activities (VAR10)
DEQ - Department of Environmental Quality
DHE - District Hydraulic Engineer
EPA - U.S. Environmental Protection Agency
ESC - Erosion and Sediment Control
IIM - Instructional and Informational Memorandum
NPDES - National Pollutant Discharge Elimination System
R&B - Road and Bridge
RLD - Responsible Land Disturber
SWM - Stormwater Management
SWPPP - Stormwater Pollution Prevention Plan
TMDL - Total Maximum Daily Load
VDOT - Virginia Department of Transportation
VESMP - Virginia Erosion and Stormwater Management Program
VPDES - Virginia Pollutant Discharge Elimination System
WLA - Waste Load Allocation

SECTION I GENERAL INFORMATION

1. Activity Description - The project is for the design and construction of a trail along Roanoke River, starting at Salem Park and ending on Apperson Drive (Route 11).

2. This land disturbance (construction) activity site is located in Salem City and approximately 4.35 acres will be disturbed by excavation, grading or other construction activities.

3. This proposed activity disturbs one acre or greater and requires coverage under the CGP as issued by the DEQ. A copy of the CGP (VAR10), the registration information (Registration Statement, LD-445 & LD-445C forms) and the permit coverage letterreceived from DEQ shall be maintained with other SWPPP documents for this land disturbing activity.

** 4. The location of support facilities that will be covered under the CGP coverage for this land disturbance (construction) activity shall be provided by the contractor and identified on a legible map. Support facilities shall include, but not be limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle washing, maintenance, storage and fueling areas, storage areas for fertilizers, fuels or chemicals, concrete wash out areas, sanitary waste facilities and any other areas that may involve land disturbance or pollutant-generating activities of its own. Must also include areas where polymers, flocculants, or other stormwater treatment chemicals will be used or stored. Only support facilities within the VDOT ROW and easements are covered under this CGP.

** 5. Written Evidence of permit coverage shall be provided by the contractor for all support activities located outside of VDOT right of way or easement in the form of the CGP coverage letter: (List VPDES Permit * or Letter from VESMP Authority stating coverage not needed)

Turbidity Monitoring

6. Does stormwater from this land disturbing activity discharge into surface waters that have been identified as impaired in the DEQ 2022 305(b)/303(d) Water Quality Assessment Integrated Report for Benthic Macroinvertebrates Bioassessments? (See latest DEQ Environmental Mapper)
   - ☐ No
   - ☒ Yes (See Note 9.)
     i. List impaired water(s) here: Roanoke River - Impaired aquatic life due to benthic macroinvertebrates bioassessments and temperature.

7. Does stormwater from this land disturbing activity discharge into a watershed with a TMDL waste load allocation established prior to July 1, 2024 for sediment, total suspended solids, turbidity, nitrogen or phosphorus, including all surface waters within the Chesapeake Bay Watershed?
   - ☒ No
   - ☐ Yes (See Note 9.)
     i. List TMDL(s) and pollutant(s) here:

8. Does stormwater from this land-disturbing activity discharge stormwater to surface waters that have been identified as Exceptional in Section 9VAC25-260-30 of the Virginia Administrative Code?
   - ☒ No
   - ☐ Yes (See Note 9.)
     i. List name of surface waters:

9. If "yes"was answered in note 6, 7, and/or 8, then the requirements of Part I B.4.a. of the Construction General Permit shall be implemented and the operator shall ensure the following SWPPP requirements are adhered to for this land-disturbing activity:
   a. Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the construction site.
   b. Temporary and permanent stabilization will be applied as noted and in accordance with ESC Minimum Standards 1 and 3.
   c. Nutrients (e.g., fertilizers) shall be applied in accordance with manufacturers recommendations or an approved nutrient management plan and shall not be applied during rainfall events; Nutrients are being applied per the projects Roadside Development sheet.
   d. Inspections shall be conducted at a frequency of (i) at least once every four (4) business days or (ii) at least once every (5) business days and no later than 24 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 24 hours between business days, the inspection shall be conducted on the next business day; and Inspections are being completed at least every four (4) business days (C-107s are completed on Mondays and Thursdays) Representative inspections used by utility line installation, pipeline construction, or other similar linear construction activities shall inspect all outfalls.
   e. Turbidity Monitoring Requirement - Undertake one of the methods identified in Part II B.8. of the CGP for controlling and documenting construction dewatering discharges.

10. Locations of surface waters and locations where concentrated stormwater is discharged from this land disturbance (construction) activity are identified in the construction plan set (or other such site maps) for this land disturbance(construction) activity. (List name of surface waters and locations here if not shown in construction plan or other such documents).

11. The ESC and SWM plans (where applicable) for this land disturbance (construction) activity have been developed in accordance with VDOT's Annual Erosion and Sediment Control and Stormwater Management Standards and Specifications as approved by the DEQ.

12. List the RLD and other responsible parties for the land disturbance activity: (required for erosion and sediment control). The following individual(s) are "duly authorized" to sign all reports required by the CGP including the SWPPP General Information Sheets and Inspection Reports (C-107). Reference form LD-445H for Duly Authorized Representatives (form LD-445H for the project is hereby incorporated by reference into this SWPPP). These individual(s) has/have overall responsibility or the environmental matters for the project: (required only for permitted projects):

Name	Position	Qualifications (if required)	Responsibility
	RLD		Certify the SWPPP (with date & sig.)
Tony Handy, P.E.	Certified Contractor		Sign (C-107) Inspection Form Part 1
	Certified Inspector		Sign (C-107) Inspection Form Part 1
	Certified Inspector		Sign (C-107) Inspection Form Part 2

* 13. The name of the VDOT individual(s) responsible for the oversight inspection in accordance with IIM-LD-256 on these land disturbance construction activities as identified on these SWPPP General Information Sheets. The following individual(s) are "duly authorized' to sign all reports required by the CGP including the SWPPP General Information Sheets and Inspection Reports (C-107). Reference for LD-445H for Duly Authorized Representatives (form LD-445H for the project is hereby incorporated by reference into this SWPPP). The names will be updated and maintained with the other SWPPP documents for this land disturbance activity.

VDOT Individuals	Position	Qualifications (if required)	Responsibility
Jeffrey Ferguson	NPDES		NPDES coordinator or designee(s) responsible for the oversight inspection in accordance with IIM-LD-256
Jay Crumpacker, P.E.	Dist. Hyd. Engineer		District Hydraulic Engineer or designee(s)responsible for the review & the coordination approval of ESC SWM plan modification(s).
	ACE		Project Manager during Construction

* 14. The ESC and P2 inspections for this land disturbing (construction) activity shall follow (Select Schedule 1 or 2, if schedule "2 is used, void note "15) as defined in R&B Specifications identified on the title sheet except for Section 107 an Inspection Requirements Rain gauge notes apply only to Inspection Schedule 1.

If the operator must make the same repairs more than two times to the same control at the same location, even if the fix can be completed by the close of the next business day, the operator shall either:

- Complete work to fix any subsequent repeat occurrences of this same problem under the corrective action procedures in Part II H, including keeping any records of the condition and how it was corrected under Part II C: or

- Document in the inspection report under Part II G why the specific reoccurrence of this same problem should still be addressed as a routine maintenance fix.

** 15. The location of the on-site rain gage that will be used to determine the occurrence of a measurable storm event for the purposes of ESC and Pollution Prevention inspections will be provided by the contractor and identified on the record set of plans or in other appropriate SWPPP documents for this land disturbance activity: (List location of rain gage).

The rain gage shall be observed daily at "9:00 AM" to determine the occurrence of a measurable storm event (i.e., 0.25 inches of rainfall or greater in a 24 hour period). A log book shall be maintained to record observation information which shall include (1) the date, (2) the time, (3) whether or not rainfall is occurring at the time of the observation, (4) the amount of accumulated rainfall in the gage, if any, and (5) whether or not an inspection is required based on the amount of accumulated rainfall in the gage.

A discharge caused by snow melt (from a snow event producing 3.25 inches or more of snow within a 24-hour period). The operator is required to conduct one inspection once the discharge of snow melt occurs. Additional inspections are only required if, following the discharge from the first snow melt, there is a discharge from a separate storm event.

If there is no rainfall occurring at the time of the observation, the observation information shall be noted in the log book and the rain gage emptied and replaced. An inspection is required if there is 0.25 inches or more accumulation noted in the rain gage. If there is rainfall occurring at the time of the observation, the observation information is to be noted in the log book. The rain gage is not to be emptied but left to accumulate additional rainfall until the conclusion of the rainfall event. At the conclusion of the rainfall event, an observation of the rain gage shall be made and the observation information shall be noted in the log book and the rain gage emptied and replaced. An inspection is required if there is 0.25 inches or more accumulation noted in the rain gage.

16. The following VDOT documents are applicable to a) permitted projects b) non-permitted projects in Chesapeake Bay Preservation Areas (CBPA) with 2,500 S.F. to 1.0 acre of land disturbance c) non-permitted projects requiring a SWPPP and d) Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP:

VDOT LD-445: Permitted projects, CBPA projects and Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP and ESC projects > 10,000 s.f. but <1 acre.
VDOT LD-445A: Permitted projects only.
VDOT LD-445C: Projects that require a permit, ESC Plan, SWM, or SWPPP.
VDOT LD-445D: Permitted projects, CBPA projects and Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP.
VDOT LD-445F: Emergency work projects (when applicable)
VDOT LD-445H: Permitted projects only.
VDOT C-107 Part I (All projects that require a SWPPP).
VDOT C-107 Part II (Only for Permitted Projects).
VDOT LD-445I: AS&S Approval Form (when applicable)
VDOT LD-445J: Off-site Support/ Material Disposal Area Activities Tracking Form

* Denotes information that is to be provided/completed by the RLD.

** Denotes information that is to be provided/completed by the contractor.

Revised 7/12/24
SWPPP Sheet 1 of 4

	PROJECT	SHEET NO.
	RRGW-129-257	2H

7/22/2024

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PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _____
DESIGN BY Blick, Delong, P.E., Rinker, Design, Associates, P.C., (804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET (2)

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2H(I)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

SECTION II EROSION AND SEDIMENT CONTROL

XX 1. The intended sequence and timing of activities that disturb soils at the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation, etc.) shall be provided by the contractor in accordance with the current edition of Section 108 of the VDOT R&B Specifications identified on the title sheet and shall be included with the other SWPPP documents for this land disturbance (construction) activity.

2. Existing and proposed drainage patterns on the construction site and approximate slopes anticipated before and after major grading activities are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

3. Areas of soil disturbance and areas of the site which will not be disturbed are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

4. Locations of major structural and nonstructural ESC measures intended to filter, settle or similarly remove sediment are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

5. Locations where stabilization practices are expected to occur are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

6. A description of interim and permanent stabilization practices for the site are identified in the applicable sections of the documents identified in the Note 1 of Section IV.

XX 7. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the construction site, and when stabilization measures are initiated will be provided by the contractor and maintained with the record set of plans or other SWPPP documents for this land disturbance (construction) activity: (List how this will be tracked and the location)

8. A description and schedule of procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good and effective operating conditions are identified in the current edition of Sections 107 and 303 of the VDOT R&B Specifications identified on the title sheet.

9. Nutrients shall be applied in accordance with the current edition of Sections 603, 604 and 605 of the VDOT Road and Bridge Specifications identified on the title sheet. Nutrients shall not be applied during rainfall events. Top soil shall be applied in accordance with the current edition of section 602 of the Road and Bridge Specifications identified on the title sheet.

10. All engineering calculations supporting the design of erosion and sediment control measures proposed for this land disturbance (construction) activity are contained in the project drainage file located in the (insert appropriate location, i.e., VDOT Central Office Hydraulics Section or the VDOT (specify) District Hydraulics Section or the VDOT (specify) Residency Office) and will be made available for review upon request during normal business hours.

11. The temporary erosion and siltation control items shown on the ESC Plan for this land disturbing (construction) activity are intended to provide a general plan for controlling erosion and sediment within the project limits. The ESC Plan is based on field conditions at the time of plan development and an assumed sequence of construction for the project. The contractor, in conjunction with the VDOT Project Engineer and/or ESC Inspector, shall adjust the location, quantity and type of erosion and sediment control items required based on the actual field conditions encountered at the time of construction and the actual scheduling and sequencing of the construction activities. Significant changes to the proposed ESC Plan (e.g., those that require an engineering analysis, elimination of a perimeter control, change to ESC concept that would affect the quantity or direction of flow of water) shall be submitted to the applicable District Hydraulics Engineer for review and approval. Any changes to the proposed ESC Plan must be noted on the designated record set of plans which shall be retained on the project site and made available upon request during normal business hours. Changes noted on the designated record set of plans must address certification language with initial and date by duly authorized personnel.

12. The areas beyond the project's construction limits are to be protected from siltation. Perimeter controls such as silt fence, diversion dikes, turbidity curtains, etc. shall be installed prior to any grubbing operations or other earth moving activities.

13. Temporary earthen structures such as dikes and berms are to be stabilized immediately upon installation. Stabilization may include temporary or permanent seeding, riprap, aggregate, sod, mulching, and/or soil stabilization blankets and matting in conjunction with seeding.

14. All channel relocations are to be constructed during the earliest stage of construction and shall be constructed in accordance with all applicable permit requirements and shall be constructed in the dry wherever possible. Stabilization or vegetation shall be established before flow is redirected through the constructed area as directed by the Engineer.

15. The contractor shall plan and implement his land disturbance operations in order to:
   a. Control the volume and velocity of stormwater runoff within the site to minimize erosion.
   b. Control the peak flow rates, volume and velocity of stormwater discharges to minimize erosion at outlets and in downstream channels.
   c. Minimize the amount of soil exposed.
   d. Minimize the disturbance of steep slopes.
   e. Minimize sediment discharge from the site.
   f. Provide and maintain natural buffers around surface waters, direct stormwater runoff to vegetated areas and maximize stormwater infiltration, unless infeasible.
   g. Minimize soil compaction (except ~~in~~ those areas where compaction is required by the contract documents) and preserve topsoil where feasible.

XX 16. The name of the individual(s) or contractor(s) responsible for the installation and maintenance of the erosion and sediment control measures shall be supplied by the contractor and maintained with the other SWPPP documents for this land disturbance (construction) activity.

17. Soil stockpiles temporarily placed within the project area or on VDOT right of way or easement shall be identified, stabilized, and protected with sediment trapping measures.

18. A construction entrance or other approved measure shall be installed at all locations where construction vehicular traffic access routes intersect a paved or a public road in order to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or a public road surface, the road shall be cleaned thoroughly at the end of each work day by shoveling or sweeping. Removed sediment shall be disposed of in accordance with Section 106.04 of the R&B Specifications identified on the title sheet. Construction entrances shall be maintained as necessary, including the addition of additional rock, as part of routine maintenance.

19. Any variance, exception or deviation approved by DEQ must be listed below and supporting documentation (exception/variance/deviation request and DEQ approval) must be maintained with the SWPPP.

The following exceptions to the Water Quantity criteria of the VESMP Regulation have been approved by the DEQ for this land disturbance (construction) activity: (list all approved variances, exceptions, deviations and include a brief description of the variance, the date approved and the approving DEQ Office).

Type(1)	Regulation Modified(2)	Approval Date(3)	Description

(1) Type of modification (Variance from ESC regulations, or Deviation from published guidance)
(2) Section of Regulation or Guidance Document Modified (e.g. ESC Min. Std. 15)
(3) Date that variance/exception/deviation was approved by DEQ.
(4) Description and request

SECTION III POST CONSTRUCTION STORMWATER MANAGEMENT

Choose the appropriate note 1A or 1B that is applicable to the proposed post construction SWM Plan for this land disturbance (construction) activity. (Delete, strike through or mark as NA those notes not applicable.)

1. (Include one of the following notes as appropriate)

X ~~A. This land disturbance activity is grandfathered under Section 9VAC25-875-490 of the VESMP Regulations and utilizes the technical criteria (Formerly Part IIC of the technical criteria) contained in Artcle 4 (9VAC25-875-670, et seq.) of the VESMP Regulations.~~

X B. This land disturbance activity utilizes the technical criteria contained in Article 3 (9VAC25-875-570, et seq.) of the VESMP Regulations (Formerly Part IIB of the technical criteria).

2. An exception for (number) pounds of phosphorus removal has been granted for this land disturbance activity by the DEQ in its letter dated (date).

3. Any variance, exception or deviation approved by DEQ must be listed below and supporting documentation (exception/variance/deviation request and DEQ approval) must be maintained with the SWPPP.

The following exceptions to the Water Quantity criteria of the VESMP Regulation have been approved by the DEQ for this land disturbance activity: (list all approved variances, exceptions/deviations and include a brief description, the date approved and the approving DEQ Office)

Type(1)	Regulation Modified(2)	Approval Date(3)	Description

(1) Type of modification (Variance, or Exception from SWM Regulations or Deviation from published guidance)
(2) Section of Regulation or Guidance Document Modified (e.g. ESC Min. Std. 15)
(3) Date that variance/exception/deviation was approved by DEQ.
(4) Description of request

4. The permanent on-site SWM facilities or off-site strategies proposed to meet the water quality/quantity requirements for this land disturbance (construction) activity are listed in Section VI.

5. A description of all post-construction stormwater management measures that will be installed during the construction process to control pollutants in stormwater discharges after construction operations have been completed is included in the construction plan set (or other such documents) for this land disturbance (construction) activity.

6. All engineering calculations supporting the design of the post-construction stormwater management measures for this land disturbance (construction) activity, including an explanation of the technical basis used to select the practices, are contained in the project drainage file located in the (insert appropriate location, i.e., VDOT Central Office Hydraulics Section or the VDOT (specify) District Hydraulics Section or the VDOT (specify) Residency Office) and will be made available for review upon request during normal working business hours.

X Denotes information that is to be provided/ completed by the RLD.

XX Denotes information that is to be provided/completed by the contractor.

Revised 7/12/24
SWPPP Sheet 2 of 4

	PROJECT	SHEET NO.
	RRGW-129-257	2H(I)

7/22/2024

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PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
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SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET (3)

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2H(2)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the General VPDES Permit For Discharges Of Stormwater From Construction Activities (the CGP) issued July 1, 2024 and VDOT's approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet outside the Chesapeake Bay Preservation Area, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The VDOT RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents) for the land disturbance (construction) activity.

SECTION IV SWPPP

1. All documents related to the SWPPP for this land disturbance (construction) activity shall be maintained at the activity site and shall be readily available for review upon request during normal business hours. Such documents include, but are not limited to, the construction plans (or other such documents), the ESC Plan, the Pollution Prevention Plan, the post construction SWM Plan (if applicable), the VDOT R&B Standards and Specifications, Supplemental Specifications, Special Provisions and Special Provision Copied Notes. Documents related to stormwater pollution prevention which are not a part of those documents referenced above, such as copies of the CGP coverage letter (when applicable) and the CGP (when applicable) and those required to be developed by the contractor for pollution prevention associated with any support facilities being included in the CGP coverage for this land disturbance (construction) activity are to be maintained at the activity site with the other SWPPP documents for this land disturbance (construction) activity. Where no facilities are available at the activity site to maintain the SWPPP documents, they are to be kept by or with the designated RLD at a location convenient to the activity site where they would be made available for review upon request during normal business hours.

2. The SWPPP and any subsequent amendments, modifications and updates shall be signed and certified as necessary to comply with the CGP, and shall be implemented from commencement of land disturbance until termination of CGP coverage or completion of land disturbance (construction) activities where no CGP coverage is required.

✱✱ 3. For all support facilities that will be included in the CGP coverage for this land disturbance (construction) activity, the contractor shall develop a SWPPP in accordance with, but not limited to, Section 106 and 107 of the VDOT Road and Bridge Specifications identified on the title sheet. The SWPPP for the support facilities shall be maintained with and become a component of the SWPPP for this land disturbance (construction) activity. Support facilities shall include, but not be limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle washing, maintenance, storage and fueling areas, storage areas for fertilizers, fuels or chemicals, concrete wash out areas, sanitary waste facilities and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction site.

4. For those land disturbing (construction) activities requiring coverage under the CGP, the SWPPP shall be made available for review upon the request of the DEQ, the EPA, the VESMP Authority, the VESCP Authority, local government officials or the operator of a municipal separate storm sewer system (MS4) receiving discharge from the construction site.

✱ 5. For those land disturbing (construction) activities requiring coverage under the CGP, the VDOT RLD shall post, or have posted, a copy of the CGP coverage letter and a copy of a completed LD-445A form, noting the name and contact information for the VDOT person responsible for the land disturbing (construction) activity and its SWPPP, outside the project's construction office along with other Federal and State mandated information. The copy of the notice of coverage letter shall be visible such that it can be readily viewed from a public right-of-way. Where there is no construction office (e.g., a maintenance activity), the permit coverage letter and the LD-445A form are to be maintained with the other SWPPP documents for the land disturbing (construction) activity.

6. The SWPPP shall be made available for review by the public upon request. Such reviews shall be at a time and publicly accessible location convenient to the public and shall be scheduled during normal business hours and no less than once per month.

SECTION V - POLLUTION PREVENTION PLAN

1. The following non-stormwater discharges from this land disturbing (construction) activity and any support facilities covered by this permit are prohibited:
   a. Wastewater from concrete washouts.
   b. Wastewater from the washout or clean out of stucco, paint, from release oils, curing compounds and other construction materials.
   c. Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance.
   d. Oils, toxic substances or hazardous substances from spills or other releases.
   e. Soaps, solvents or detergents used in equipment and vehicle washing.
   f. There shall be no discharge of floating solids or visible foam in other than trace amounts.

2. The following non-stormwater discharges from this land disturbing (construction) activity and any support facilities are allowed when discharged in compliance with this CGP:
   a. Discharges from emergency fire fighting activities.
   b. Fire hydrant flushings managed to avoid an instream impact.
   c. Waters used to wash vehicles or equipment, provided no soaps, solvents or detergents are used and the wash water is filtered, settled or similarly treated prior to discharge.
   d. Water used to control dust that is filtered, settled or similarly treated prior to discharge.
   e. Potable water including uncontaminated waterline flushings managed in a manner to avoid stream impacts.
   f. Routine external building wash down, provided no soaps, solvents or detergents are used, external building surfaces do not contain hazardous substances, and the wash water is filtered, settled or similarly treated prior to discharge.
   g. Pavement wash waters, provided spills or leaks of toxic or hazardous materials have not occurred (unless all spilled or leaked material is removed prior to washing), soaps, solvents or detergents are not used and the wash water is filtered, settled or similarly treated prior to discharge.
   h. Uncontaminated air conditioning or compressor condensate.
   i. Uncontaminated ground water or spring water.
   j. Foundation or footing drains, provided flows are not contaminated with process materials such as solvents or contaminated groundwater.
   k. Uncontaminated excavation dewatering, including dewatering trenches and excavations that are filtered, settled or similarly treated prior to discharge.
   l. Landscape irrigation.

✱✱ 3. The contractor shall develop a Pollution Prevention Plan to address any operations that have a potential to generate a pollutant that may reasonably be expected to affect the quality of stormwater discharges from this land disturbance (construction) activity. The Pollution Prevention Plan shall be developed in accordance with, but not limited to, Sections 106 and 107 of the VDOT Road and Bridge Specifications identified on the title sheet and shall include a narrative with appropriate plan detail and shall:
   a. Identify the potential pollutant-generating activities and the pollutant that is expected to be exposed to stormwater.
   b. Describe the location where the potential pollutant-generating activities will occur, or if identified on the record set of plans, reference the record set of plans.
   c. Identify all non-stormwater discharges, as described in note two of this section, that are or will be commingled with stormwater discharges from the construction activity, including any on-site support activities.
   d. Identify the person(s) or contractor(s) responsible for implementing and maintaining the pollution prevention practices for each pollutant-generating activity.
   e. Describe the pollution prevention practices and procedures that will be implemented to:
      1) Prevent and respond to leaks, spills, and other releases, including procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases, and procedures for reporting leaks, spills, and other releases in accordance with Section 107 of the VDOT Road and Bridge Specifications identified on the title sheet and the requirements within the CGP.
      2) Prevent the discharge of spilled and leaked fuels and chemicals from vehicle fueling and maintenance activities.
      3) Prevent the discharge of soaps, solvents, detergents, and wash water from construction materials, including procedures for the clean-up of stucco, paint, form release oils, and curing compounds.
      4) Minimize the discharge of pollutants from vehicle and equipment washing, wheel wash water, and other types of washing.
      5) Direct concrete wash water into a leakproof container or leakproof settling basin designed so that no overflows can occur due to inadequate sizing or precipitation. Hardened concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wastes. Liquid concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wash waters and shall not be discharged to surface waters, disposed of through infiltration, or otherwise disposed of on the ground.
      6) Minimize the discharge of pollutants from storage, handling, and disposal of construction products, materials, and wastes including building products (such as asphalt sealants, copper flashing, roofing materials, adhesives, and concrete admixtures), pesticides, herbicides, insecticides, fertilizers, landscape materials, construction and domestic wastes (such as packaging materials), scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, and other trash or building materials.
      7) Prevent the discharge of fuels, oils, and other petroleum products, hazardous or toxic wastes, waste concrete and sanitary wastes.
      8) Address any other discharge from any potential pollutant-generating activity not listed herein.
      9) Minimize the exposure of waste materials to precipitation by closing or covering waste containers during precipitation events and at the end of the business day, or implementing other similarly effective practices. Minimization of exposure is not required in case where the exposure to precipitation will not result in a discharge of pollutants.
      10) Describe and implement procedures for providing pollution prevention awareness (including but not limited to prevention practices, disposal practices and appropriate disposal locations) for all applicable wastes (including any wash water), to appropriate personnel.

✱ Denotes information that is to be provided/completed by the RLD.

✱✱ Denotes information that is to be provided/completed by the contractor.

7/22/2024

Revised 7/12/24
SWPPP Sheet 3 of 4

PROJECT	SHEET NO.
RRGW-129-257	2H(2)

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STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET (4)

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2H(3)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

SECTION VI - PERMANENT BMP INFORMATION △

✱ Denotes information that is to be completed by the RLD.
( ) See note referenced by number in parentheses.

INSTALLED BMP INFORMATION
(VDOT Owned/Operated)

Plan Sheet(s)	✱ Date BMP Made Functional	Type of BMP Installed (See Table A, C, or D)	Geographic Location (County or City)	Latitude/Longitude (1) LAT	Latitude/Longitude (1) LONG	VA 6th Order HUC (7)	Receiving Water (2)	Name of Impaired Water (9)	Acres Treated Per BMP (3) Impervious	Acres Treated Per BMP (3) Pervious	Acres Treated Per BMP (3) TOTAL	✱ BMP Maintenance ID Number (10)	BMP Maintenance and Inspection Manual (11) SECTION

ALTERNATIVE BMP INFORMATION

Plan Sheet(s)	Date	Type of BMP Installed (See Table B)	Geographic Location (County or City) (5)	Latitude/Longitude (1) (5) LAT	Latitude/Longitude (1) (5) LONG	VA 6th Order HUC (5) (7)	Receiving Water (2)	Name of Impaired Water (9)

Perpetual Nutrient Credits Acquired for Project

Name of Nutrient Credit Generating Entity (6)	Nutrient Credits (lbs./TP./year) Acquired (6) (12)
TBD	2.11 lbs./year

△ Any changes to the proposed SWM Plan or BMPs necessitated during the construction phase of the project that affects the proposed construction details or potentially affects the information shown in the BMP Tables A and/or B shall be coordinated by the VDOT RLD with the appropriate VDOT District Hydraulics Engineer. The construction plans and the BMP Tables A and/or B are to be formally revised to reflect any authorized/ approved changes to the proposed SWM Plan and/or the proposed BMP construction details. All plan revisions shall be completed in accordance with the Road Design Manual and the Construction Division IIM-CD-2013-12.01, signed and sealed in accordance with Department's sealing and signing policy IIM-LD-243 and filed with the construction record drawings maintained in the VDOT Central Office Plan File Room (ProjectWise). Prior to submitting for termination of coverage under the CGP, the RLD shall have the District Maintenance Division (Infrastructure Manager or Designee) along with the ACE, DHE, and the NPDES coordinator review the BMPs installed with the project for acceptance of maintenance responsibility and to obtain a Maintenance ID number for each BMP listed in BMP Table A. The RLD shall use the information in BMP Tables A and B along with the assigned Maintenance ID number and the date that the BMP became functional as a permanent control measure (for BMPs in Table A only) to complete the LD-445D form when certifying the construction of the BMPs and submitting for termination of coverage under the CGP.

Table A: Permanent BMP Types
(1999 Va. SWM Handbook)
Bio-retention Basin
Bio-retention Filter
Constructed Stormwater Wetlands
Extended Detention Basin
Extended Detention Basin Enhanced
Grassed Swale
Infiltration Basin
Infiltration Trench
Manufactured Treatment Device (MTD) (8)
Retention Basin I
Retention Basin II
Retention Basin III
Sand Filter
Vegetated Filter Strip
Other Approved Types (List Type)
Detention Basin

Table B: Alternative BMP Types
Comprehensive SWM Plan (Regional) Facility
Pollutant Loading Pro Rata Share Program
Other Approved Options (List Type) (4)

Table C: Permanent BMP Types
(BMP Clearing House)
Sheet Flow to Vegetated Filter Strip (Level Spreader)
Grass Channel
Soil Compost Amendment
Permeable Pavement (Level 1)
Permeable Pavement (Level 2)
Infiltration Practice (Level 1)
Infiltration Practice (Level 2)
Bioretention (Level 1)
Bioretention (Level 2)
Dry Swale (Level 1)
Dry Swale (Level 2)
Wet Swale (Level 1)
Wet Swale (Level 2)
Filtering Practice (Level 1)
Filtering Practice (Level 2)
Constructed Wetlands (Level 1)
Constructed Wetlands (Level 2)
Extended Detention Pond (Level 1)
Extended Detention Pond (Level 2)
Wet Pond (Level 1)
Wet Pond (Level 2)
Manufactured Treatment Device (MTD)(8)
Other Approved Types (List Type)

▪Table D: Permanent Post-Construction BMP Types
(Virginia Stormwater Management Handbook, Ver. 1.0)
Constructed Wetland
Wet Pond
Extended Detention Pond
Rainwater Harvesting
Grass Channel
Dry Swale
Wet Swale
Regenerative Stormwater Conveyance
Rooftop/Impervious Surface Disconnection
Vegetated Roof
Permeable Pavement
Infiltration Practices
Bioretention
Filtering Practices
Sheet Flow to Vegetated Filter Strip/ Conserved Open Space
Soil Compost Amendment
Tree Planting
Earthen Embankment
Principal Spillway
Vegetated Emergency Spillway
Pretreatment
Quantity-Only Approach to BMPs
MTD-H Hydrodynamic Devices
MTD-F Filtering Devices
MTD-B Biofilter Devices

▪Designer may not mix methods from Tables A, B and C with methods from Table D.

NOTES:
(1) In decimal degrees to the nearest one ten-thousandth of a degree.
(2) For streams with no names, list "(Unnamed Tributary to downstream name)".
(3) Show acres treated to the nearest one hundredths acre.
(4) Include agreements with off-site BMP owners.
(5) Information pertains to the alternative BMP option location, where applicable.
Exception - Not required for nutrient credit purchase option.
(6) Applies to the purchase of nutrient credits only.
(7) Virginia 6th Order HUC (VAHU6) Example - YO30.
(8) Final approved shop drawings of Manufactured Treatment Devices (MTDs) are to be included with the BMP information submitted with the LD-445D form.
(9) List the name of any impaired water to which the BMP discharges. The determination of impaired water shall be based on those surface waters identified as impaired in the 2022 305(b)/303(d) Water Quality Assessment Integrated Report for Benthic Macroinvertebrates Bioassessments and shall be the first named waterbody to which the BMP discharges.
(10) BMP Maintenance ID Number is to be assigned by the District Maintenance Division at permit termination or project completion. This ID number shall be assigned prior to the permit close out process and entered by the area construction engineer under this column, per IIM-LD-195.
(11) Provide the section of the manual that pertains to the type of BMP. The manual can be found at https://www.vdot.virginia.gov/media/vdotvirginiagov/doing-business/technical-guidance-and-support/technical-guidance-documents/maintenance/VDOT_-BMP_-Manual_acc.pdf in the Maintenance selections. Example: Section 4 would be noted for the maintenance and inspection manual for a Bioretention I infiltration BMP.
(12) Nutrient credits purchased to the nearest one hundredth pound.
(13) If level spreader is utilized as part of sheet flow to vegetative filter strip, report under that BMP type Table C.
(14) If several level spreaders are in close proximity, they may be combined for recording purposes; however each level spreader shall have individual lat/longs reported.

7/22/2024

Revised 7/12/24
SWPPP Sheet 4 of 4

	PROJECT	SHEET NO.
	RRGW-129-257	2H(3)

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Plotted by: jlong

PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _ _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt,Inc., (800).242-4906,July, 2022_ _ _ _ _ _ _
DESIGN BY Blick, Delong, P.E.,Rinker, Design, Associates,P.C.,(804) 612-0665_ _ _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc., (800).242-4906,July, 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2J

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Environmental Commitments Summary

Project Number: RRGW-129-257
UPC:119562 **119562**
AssocProjects(UPC): 00000-129-26289908

Environmental Commitments

PRE-CONSTRUCTION

General Environmental

Commitment Name: Special Provision and Copied Note for inclusion in proposal/contract
Description: The following Special Provisions and Special Provision Copied Notes shall be included in the proposal/contract: Protection of Bat Species, Protection of Nesting Birds, Tree Removal TOYR for Roosting Bat Habitat, Cofferdam Placement and Dewatering (Protection/Relocation of Fish). These documents were provided to the project manager on 6/12/24 for inclusion in the proposal/contract.

Commitment Name: Authorized permit packages for inclusion in proposal and contract
Description: The Notice of Authorization permit document package shall be included in the proposal/contract. The permit documents were provided to the project manager on 6/12/24 for inclusion in the proposal/contract.

Commitment Name: Environmental Commitments Plan for Plan Set
Description: Environmental Commitments Plan Sheet shall be included in the plan set. The DRAFT plan sheet was provided to the PM on 03/19/24. Impact 3 being removed, consultant adjusting the ECPS

Natural Resources

Commitment Name: Preconstruction notification to Virginia Department of Wildlife Resources
Description: Notification to the Virginia Department of Wildlife Resources (VDWR) is required prior to commencement of construction so that VDWR can plan trout stocking events to avoid conflicts between anglers and construction activities. The Permittee (Area Construction Engineer) shall notify the District Environmental Section two weeks in advance of construction so that the Environmental Section can make the notification to VDWR.

Water Quality Permits

Commitment Name: Flagging of Waters of the US (WOTUS)
Description: The Area Construction Engineer in coordination with the District Environmental Manager or Env Commitments Inspector shall ensure that flagging of surface waters within 50' of any authorized activities, that are located within VDOT ROW or easements and are not permitted to be impacted occurs prior to commencement of construction.
Refer to Page: 2J(3) - 2J(8)

CONSTRUCTION

Water Quality Permits

Commitment Name: Compliance with Water Quality Permits WQ-1
Description: All personnel involved in construction activities shall read and understand the NW#23 permit requirements; and all permit conditions (project specific, regional and general) shall be complied with during construction. If there are any proposed revisions in the permitted activities or plan of operations affecting the stream then the Environmental Section shall be contacted to determine if a permit modification is necessary prior to the revised instream activities taking place.
Refer to Page: 2J(3) - 2J(8)

Commitment Name: Disposal of Stream Bed Material WQ-2
Description: In compliance with USACE permit requirements, all stream bed material excavated from the Roanoke River shall be removed from the site in a lined dump truck or other device that is impermeable to water, and placed in upland disposal area

Threatened and Endangered Species

Commitment Name: Protection of endangered Roanoke logperch - Relocation of fish from cofferdams TE-1
Description: The Contractor shall notify the District Environmental Manager (DEM) or the Commitments Inspector (ECI) at least 45 days prior to the installation of cofferdams. Cofferdams shall not be dewatered until notified by the DEM or ECI that all fish have been removed from the cofferdam area. Cofferdam overtopping requires additional fish relocation.
Refer to Page: 2J(3) - 2J(8)

Commitment Name: Protection of endangered Roanoke logperch and threatened orangefin madtom - Instream work time-of-year restriction TE-2
Description: A time-of-year restriction (TOYR) protective of the endangered Roanoke logperch and threatened orangefin madtom prohibits all instream work from March 15 to June 30 of any year. Construction activities taking place in the dry within temporary cofferdams may be conducted during the TOYR as long as the cofferdams are installed and subsequently removed outside of the TOYR.
Refer to Page: 2J(3) - 2J(8)

Commitment Name: Protection of bat species - Tree trimming and removal bat pup season time of year restriction TE-3
Description: In accordance with the Special Provision for Tree Removal Time of Year Restriction for Roosting Bat Habitat, 1.4 acres of trees greater than or equal to 3 inch DBH and located within the project limits (Limits of disturbance or easements) shall be trimmed or removed outside of the bat pup season time of year restriction of 5/1 - 7/31
Refer to Page: 2J(3) - 2J(8)

POST CONSTRUCTION

Water Quality Permits

Commitment Name: Submittal of Certificate of Compliance (COC) to U.S. Army Corp of Engineers (USCOE) for NW 23 permit upon completion of permit authorized activities
Description: The Permittee [Area Construction Engineer (ACE)] shall advise the Environmental Section upon completion of the permit authorized activities. The Environmental Section shall complete the following activities: review the project; prompt the ACE to sign the COC; and subsequently submit the COC to USCOE on behalf of the ACE within 30 days of completion of the permit authorized activities.

LIFE OF PROJECT

Documents

Commitment Name: Avoidance of 4(f) property ENV-2
Description: The Contractor will avoid any project related activities (staging, field office, borrow/disposal, etc.) outside of the project limits and on the publicly-owned recreation area known as Rotary Park including the discontiguous City of Salem-owned parcels (parcels #258-4-1, 258-4-2, 277-1-2, and 278-1-5), unless specifically allowed by the Engineer in coord. with Env. Mgr.

Abbreviations

ACM - Asbestos Containing Materials
BMP - Best Management Practice
DEM - District Environmental Manager
ECI - Environmental Commitment Inspector
VDGIF - Department of Game and Inland Fisheries
FHWA - Federal Highway Administration
MOA - Memorandum of Agreement
MOU - Memorandum of Understating
NEPA - National Environmental Policy Act
NOI - Notice of Intent
NWP - Nationwide permit
TOYR - Time of Year Restriction
T&E - Threatened and Endangered Species
PCN - Pre-Construction Notification
VDEQ - Virginia Department of Environmental Quality
VMRC - Virginia Marine Resources Commission
USACE/COE - U.S. Army Corps of Engineers
USFWS - U.S. Fish and Wildlife Service
WOTUS - Waters of the United States
WQ - Water Quality
CR - Cultural Resources

Notes:

Information on this sheet is a reference document related to the Environmental Commitments, Conditions and Clearances applicable to this project. Refer to the controlling documents (Bid/Proposal/Contract,Special Provisions, final Construction Plans, etc.).

Environmental shall be contacted regarding any field adjustments, construction Plan revisions, etc. prior to work proceeding to allow review to verify environmental compliance.

6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	2J

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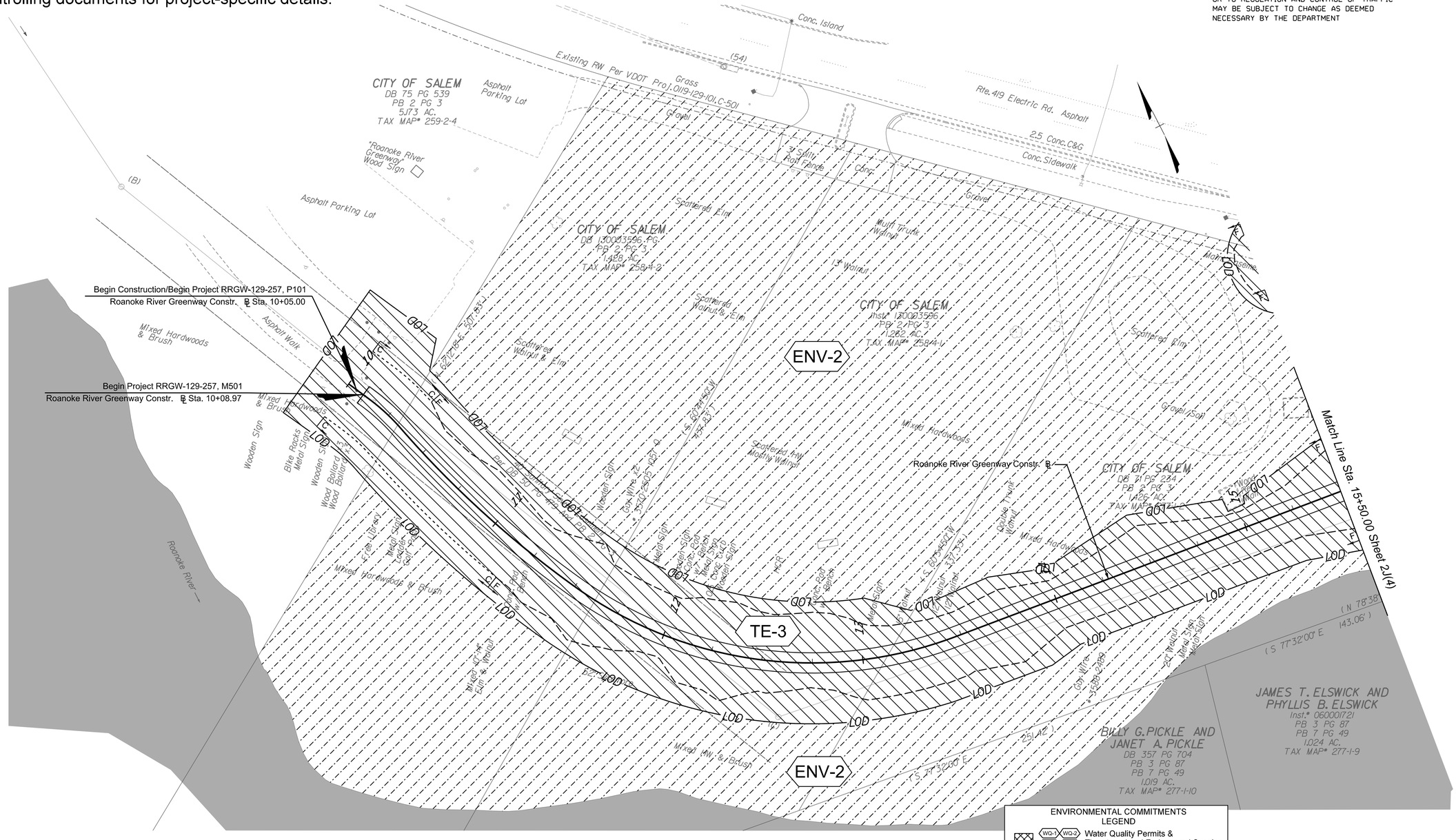
PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Bick Delong, P.E., Bibler Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Environmental Commitments Plan Sheet

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2J(3)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Note:
The Environmental information on this sheet is a reference; refer to the controlling documents for project-specific details.



ENVIRONMENTAL COMMITMENTS LEGEND

- WQ-1 / WQ-2 / TE-1 / TE-2 — Water Quality Permits & Threatened and Endangered Species
- TE-3 — Threatened and Endangered Species
- ENV-2 — 4(f) Property Avoidance Area
- Non-Permitted Avoidance Area
- Water Feature
- Ordinary High Water Line
- LOD — Limits of Disturbance

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	2J(3)

6/24/2024

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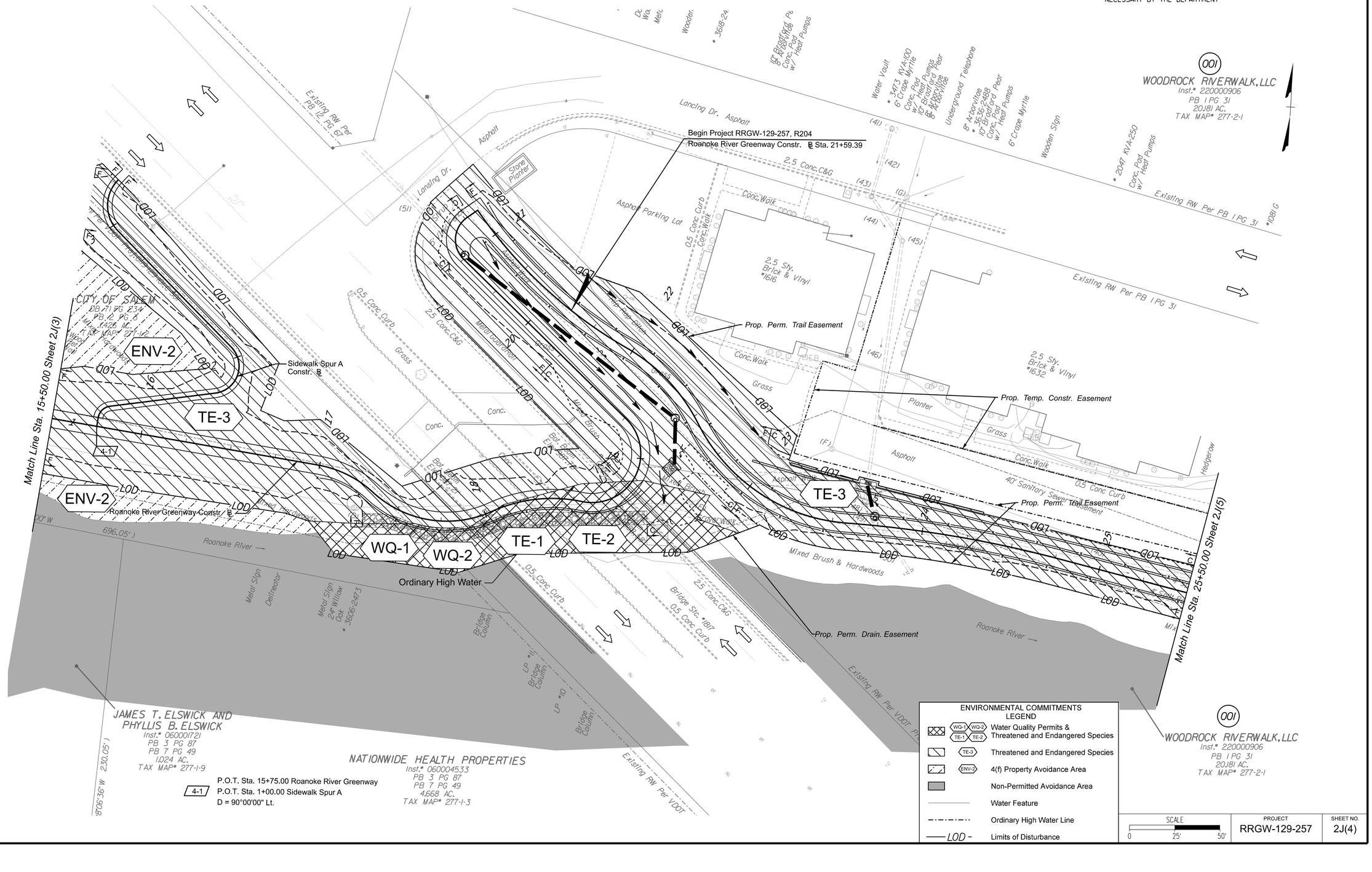
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Environmental Commitments Plan Sheet

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2J(4)

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PROJECT	SHEET NO.
RRGW-129-257	2J(4)

6/24/2024

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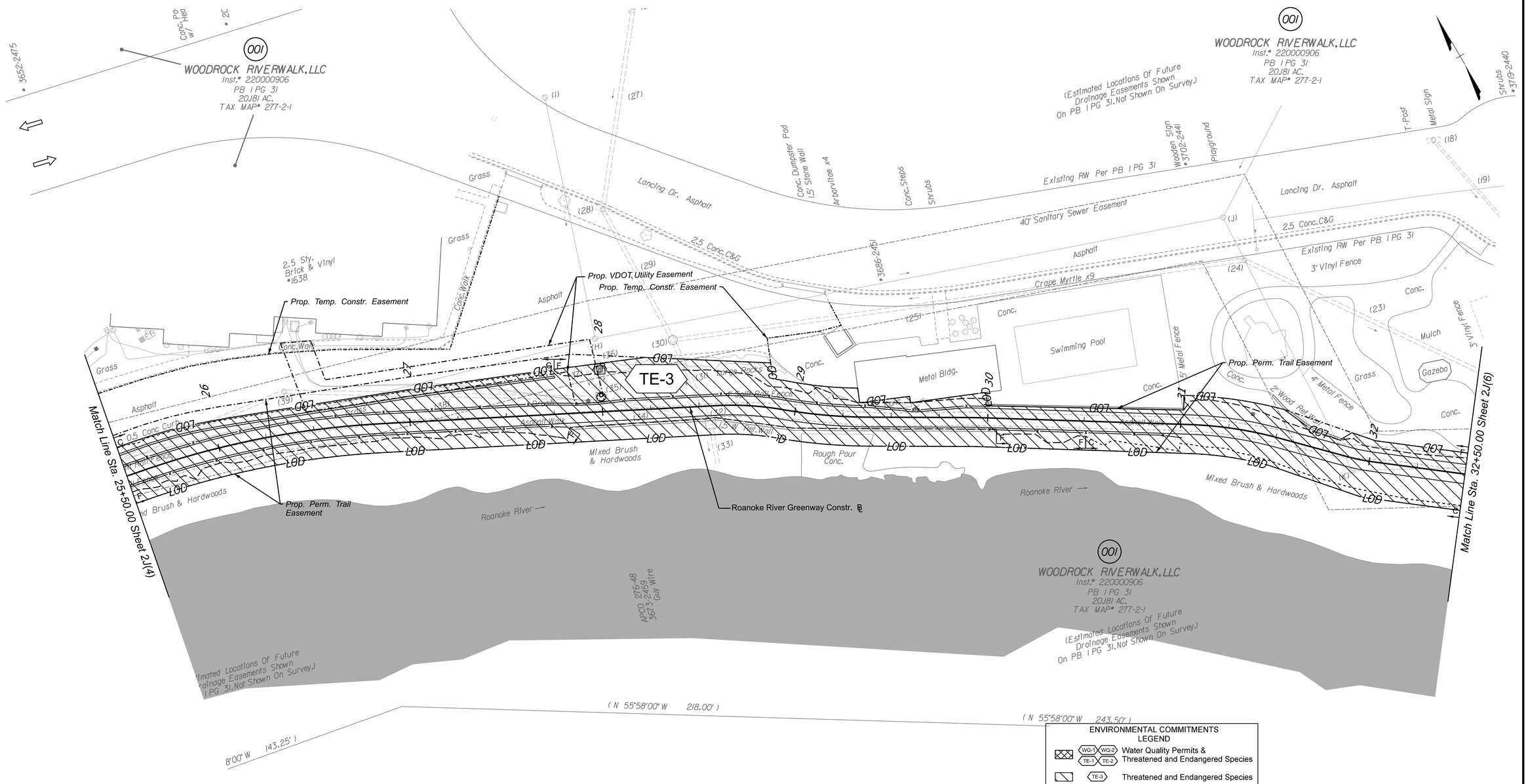
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Environmental Commitments Plan Sheet

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2J(5)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

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ENVIRONMENTAL COMMITMENTS LEGEND

- WQ-1, WQ-2, TE-1, TE-2: Water Quality Permits & Threatened and Endangered Species
- TE-3: Threatened and Endangered Species
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- Non-Permitted Avoidance Area
- Water Feature
- Ordinary High Water Line
- LOD – Limits of Disturbance

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	2J(5)

6/24/2024

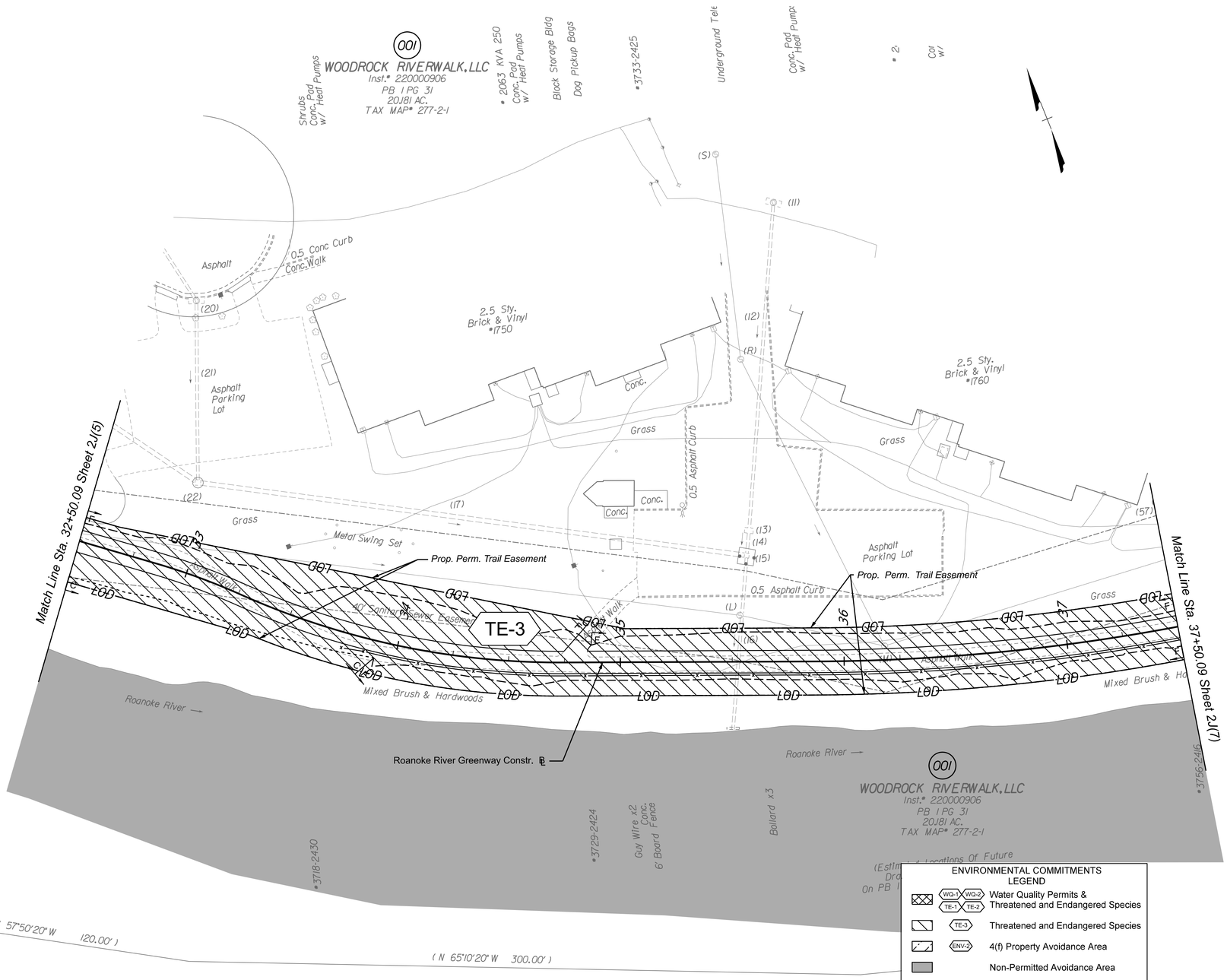
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Environmental Commitments Plan Sheet

Note:
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REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2J(6)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



ENVIRONMENTAL COMMITMENTS LEGEND

- WQ-1 / WQ-2 / TE-1 / TE-2 — Water Quality Permits & Threatened and Endangered Species
- TE-3 — Threatened and Endangered Species
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- Non-Permitted Avoidance Area
- Water Feature
- Ordinary High Water Line
- LOD — Limits of Disturbance

SCALE 0 25' 50'

PROJECT	SHEET NO.
RRGW-129-257	2J(6)

6/24/2024

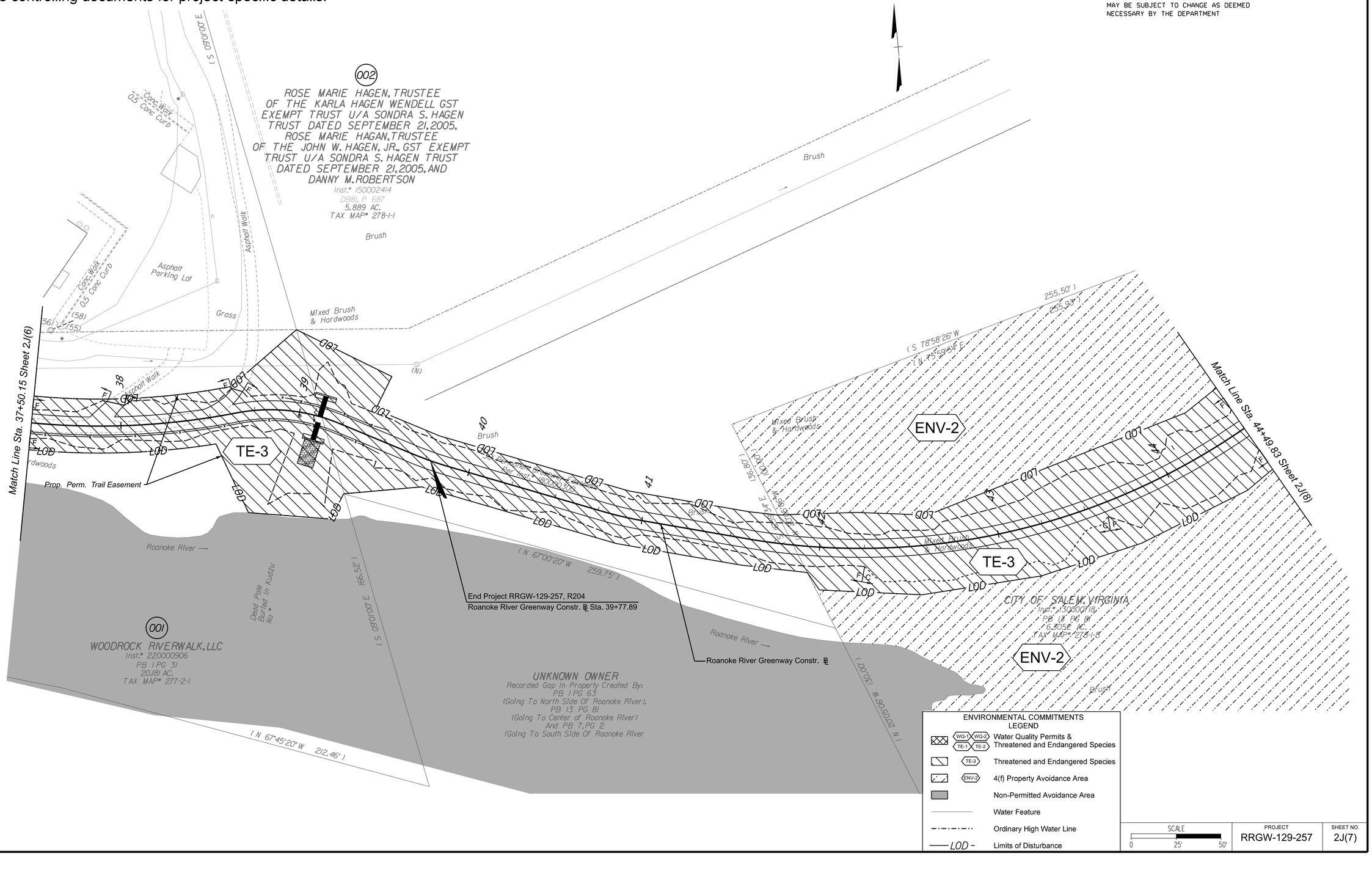
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Environmental Commitments Plan Sheet

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2J(7)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

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6/24/2024

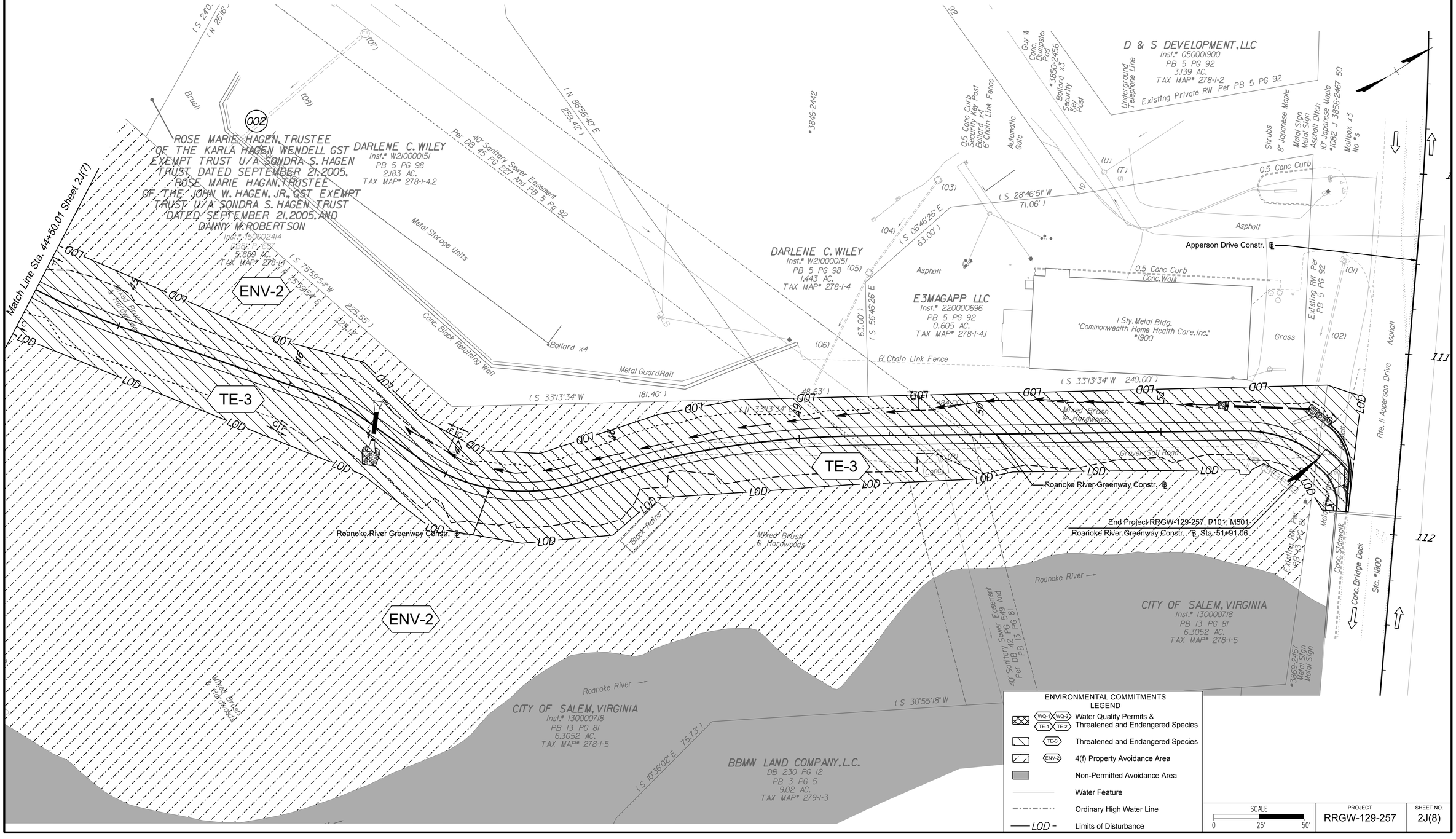
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Environmental Commitments Plan Sheet

Note:
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refer to the controlling documents for project-specific details.

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	2J(8)

DESIGN FEATURES RELATING TO CONSTRUCTION
OR TO REGULATION AND CONTROL OF TRAFFIC
MAY BE SUBJECT TO CHANGE AS DEEMED
NECESSARY BY THE DEPARTMENT



6/24/2024

PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _____
DESIGN BY Blick, Delong, P.E., Rinker, Design, Associates, P.C. (804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

Utility Owners

City of Salem Electric Department
730 W. Main St.
Salem, Va 24153
Director: AK Brlele
(540) 375-3030
electric@salemva.gov

City of Salem Water & Sewer Department
1300 Tidewater St.
Salem, Va 24153
Director: Larado Robinson
(540) 375-3029
water@salemva.gov

Comcast
11101 University Blvd
Manassas, VA 20110
Amy Goad
(301)625-3407
NED-BLT_BeltwayRegionDesignRequest@cable.comcast

Cox Communications
6205-B Peachtree Dunwoody Road NE,
Atlanta, Georgia 30328
Nycole Hale
(404) 843-5000
https://facilitymaprequest.cox.com

Roanoke Gas
519 Kimball Ave.
Roanoke, Va 24016
Jason Riddle
(540) 777-4427
Jason_Riddle@RoanokeGas.com

Roanoke Broadband
601 Jefferson St.
Roanoke, VA 24011
(540) 904-4739
Info@highspeedroanoke.net

Shentel
94 Ewing Dr.
Rustburg, VA 24588
Allen Clay
Allen.Clay@emp.shentel.com

Verizon
Jeff Draper
(540) 265-7501
Jeffery.b.draper@verizon.com

Western VA Water & Sewer
Chris Kerry
(540) 283-2936
www.westernvawater.org

ANDREW KNOWLTON
Lic. No. 056378
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Andrew G Knowlton
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Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

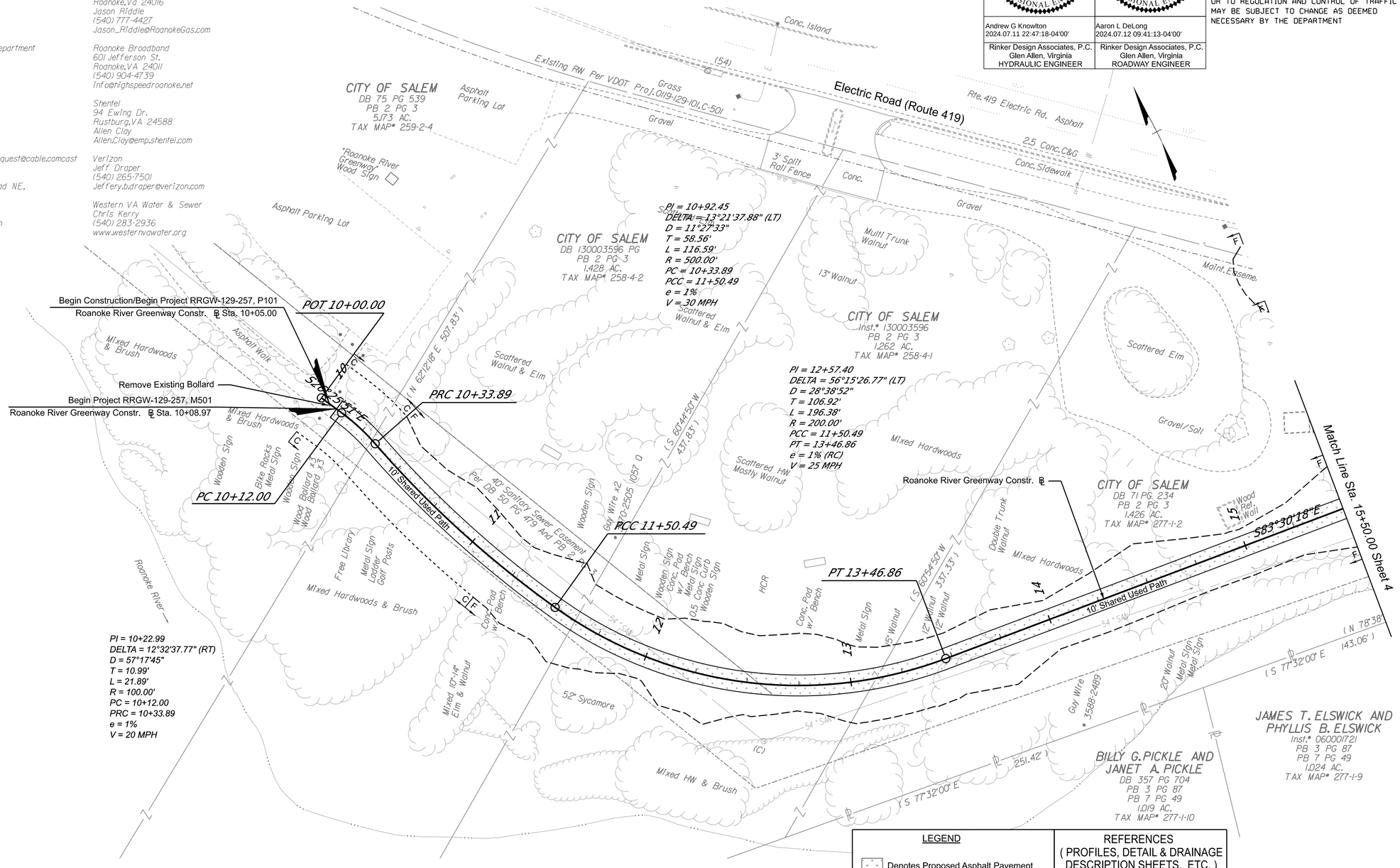
AARON DELONG
Lic. No. 061662
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Aaron L DeLong
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Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	3

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- Denotes Proposed Asphalt Pavement
- Denotes Proposed Concrete
- Denotes Demolition of Pavement
- Denotes Temporary Easement
- Denotes Permanent Easement
- C — Denotes Construction Limits in Cuts
- F — Denotes Construction Limits in Fills

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Existing Utility and Drainage Information	1F(1)
Typical Sections	2A
Greenway Profile	3A
E&S Control Plan	3B

SCALE 0 25' 50'

PROJECT	SHEET NO.
RRGW-129-257	3

6/24/2024

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PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _ _ _ _ _ _
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Roanoke River Greenway

COMMONWEALTH OF VIRGINIA
ANDREW KNOWLTON
Lic. No. 056378
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:47:51-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

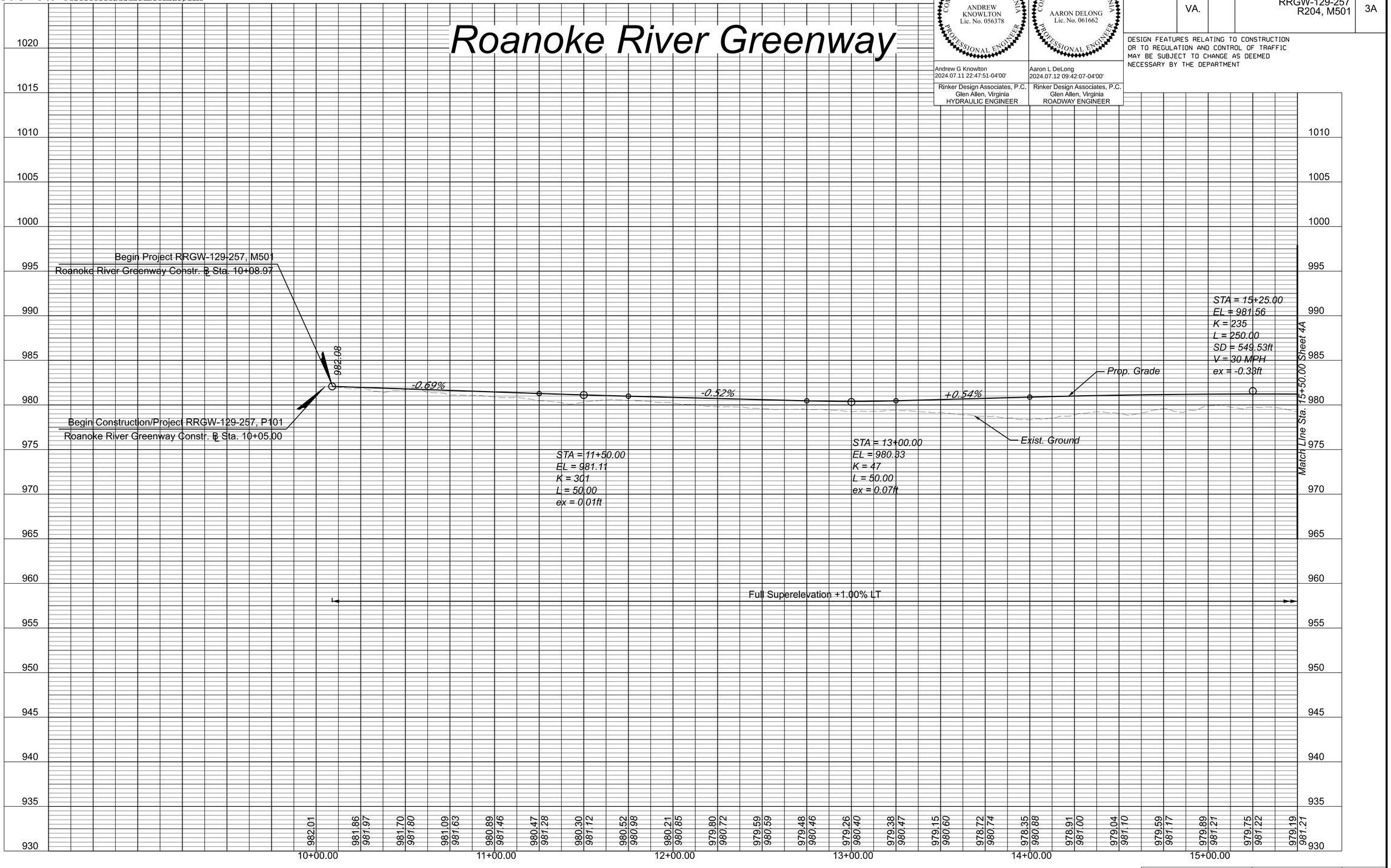
COMMONWEALTH OF VIRGINIA
AARON DELONG
Lic. No. 061662
PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.12 09:42:07-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	3A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



1" = 25' (HOR.), 1" = 5' (VERT.)	PROJECT RRGW-129-257	SHEET NO. 3A

6/24/2024

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PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _ _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt,Inc., (800).242-4906,July. 2022_ _ _ _ _ _ _
DESIGN BY Blick. Delong, P.E.,Rinker_Design. Associates,P.C.,(804) 612-0665_ _ _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & _Profitt,Inc., (800).242-4906.,July. 2022

Erosion and Sediment Control Plans

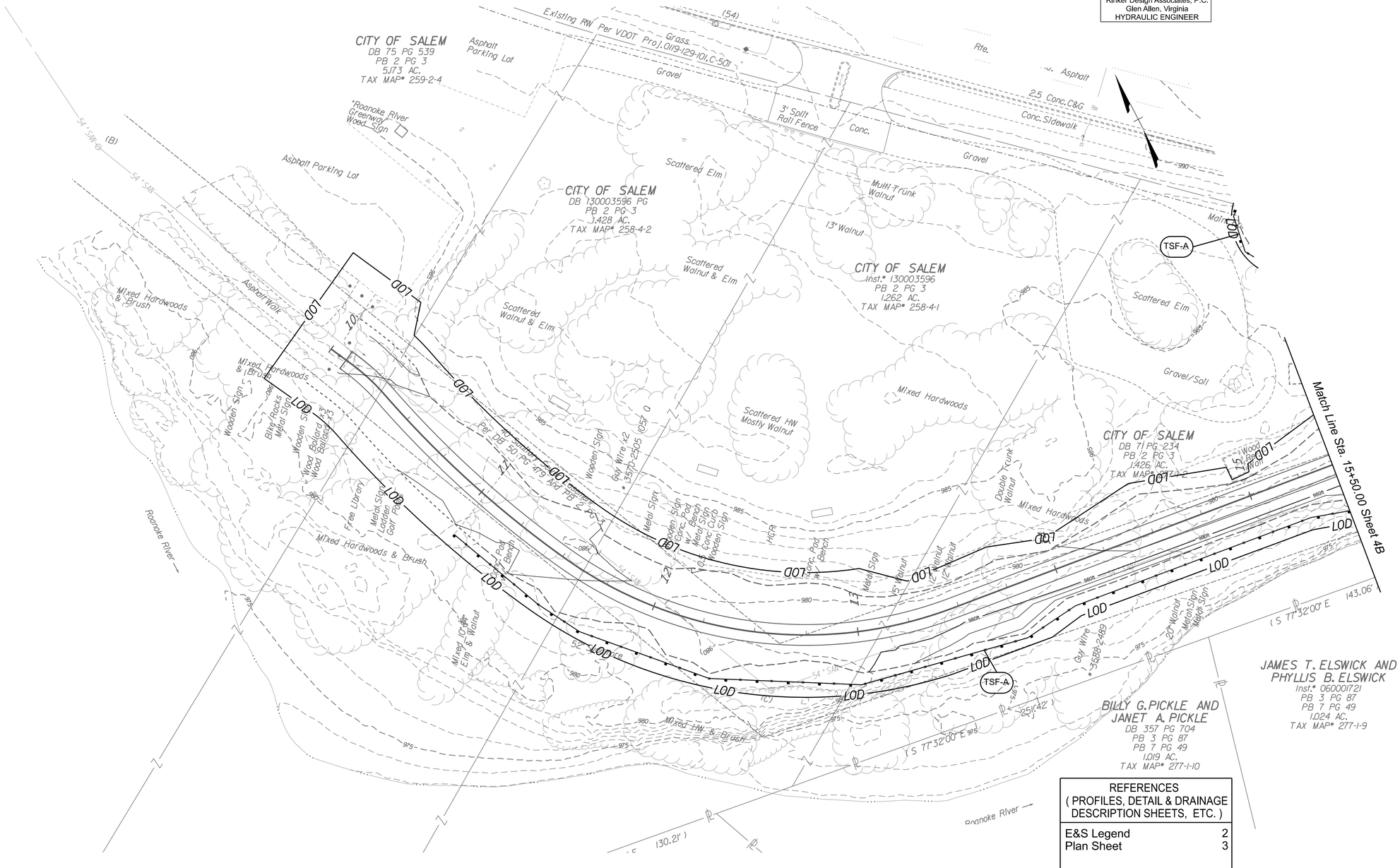
COMMONWEALTH OF VIRGINIA
ANDREW KNOWLTON
Lic. No. 056378
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:48:25-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	3B

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
E&S Legend	2
Plan Sheet	3

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	3B

6/24/2024

PROJECT MANAGER _HDR VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt Inc., (800) 242-4906, July, 2022 _____
DESIGN BY Blck. Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt Inc., (800) 242-4906, July, 2022

4-1 4.1 LF St'd. MH- 1 or 2 Req'd.
1 St.d' MH-1 Frame & Cover Req'd.
ADA Compliant - See VDOT R&B St'd. 106.04
Inv. = 982.70
St'd. IS-1 Req'd.
Connect to Existing Pipe

4-1 4-2 143' - 24" Storm Sewer Pipe Req'd. (5' Cover)
Silt-Tight Joint Req'd.
Inv.(in)= 982.70 Inv.(out)= 980.80

4-2 6.1 LF St'd. MH-1 or 2 Req'd.
1 St'd. MH-1 Frame & Cover Req'd.
Inv. = 980.70
St'd. IS-1 Req'd.

4-2 4-5 24' - 24" Storm Sewer Pipe Req'd. (5' Cover)
Silt-Tight Joint Req'd.
Inv.(in)= 980.70 Inv.(out)= 980.20

4-3 1 St'd. DI-2C Req'd.
L=8', H= 4.7', Inv.= 974.54
Type B Nose Req'd.
Connect to Existing Pipe
St'd. IS-1 Req'd.

4-3 4-4 18' - 24" Storm Sewer PIpe Req'd. (2' Cover)
Silt-Tight Joint Req'd.
Inv.(in)= 974.54 Inv.(out)= 974.35

4-4 14.4 LF Mod. MH-1 or 2
1 St'd. MH-1 Frame & Cover Req'd.
ADA Compliant - See VDOT R&B St'd. 106.04
Proposed Rim Elev.= 989.33
Inv.= 974.28 (Match Ex. Invert)
Connect to Existing Pipe
St'd. IS-1 Req'd.
St'd. SL-1 Req'd.
Existing Gate Valves and Lock to be Furnished
Proposed Extended Valve Control to be Internal to Structure
Contractor to Provide Shop Drawings

4-5 1 St'd. EW-1 (24") Req'd. (45 Skew)
Inv. = 980.20
4.0 SY St'd. EC-1 Class 1 Req'd. Type A Installation

ANDREW KNOWLTON
Lic. No. 056378
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER
Andrew G Knowlton
2024.07.11 22:49:01-04'00'
Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

AARON DELONG
Lic. No. 061662
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER
Aaron L DeLong
2024.07.12 09:42:35-04'00'
Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	4

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

PI = 3+16.17
DELTA = 89°47'25.07" (RT)
D = 286°28'44"
T = 19.93'
L = 31.34'
R = 20.00'
PC = 2+96.24
PT = 3+27.58
e = 1.5%

End Construction Sidewalk Spur A Sta. 3+27.58
PCC 3+27.58
PC 2+96.24
Electric Road (Route 419)
PT 2+06.42
PC 1+73.14
PT 1+14.55
Sidewalk Spur A Constr. ℄
PC 1+05.00
N09°33'42"E
N79°26'32"E
Match Line Sta. 15+50.00 Sheet 3
5' Sidewalk
10' Shared Used Path
Begin Construction Sidewalk Spur A Sta. 1+05.00
Roanoke River Greenway Constr. ℄
Begin HR-1 Type III Sta. 17+00.00, 2' Rt.
10:1 Flare Rate
Ordinary High Water
Prop. HR-1 Type III Req'd.
Prop. Gabion Wall Req'd. (See Sheet 2D(2))
Abandon Scupper
Full Depth Saw Cut Req'd.
Clean Out
Start Prop. Timber Fence Sta. 21+00.00 (Type A, See Sheet 2F)
Start Prop. Timber Fence Sta. 20+83.41 (Type A, See Sheet 2F)
PC 20+83.41
PC 20+49.98
PT 20+76.47
Ditch 1
PRC 21+96.24
Rip Rap Ditch
Begin Project RRGW-129-257, R204
Roanoke River Greenway Constr. ℄ Sta. 21+59.39
PI = 3+41.22
DELTA = 72°56'49.19" (RT)
D = 43°56'37"
T = 5.54'
L = 9.55'
R = 7.50'
PC = 1+05.00
PT = 1+14.55
e = 1.5%
PI = 2+03.31
DELTA = 127°07'53.23" (LT)
D = 21°58'19"
T = 30.17'
L = 33.28'
R = 15.00'
PC = 1+73.14
PT = 2+06.42
e = 1.5%
PI = 17+16.70
DELTA = 32°50'25.13" (RT)
D = 95°29'35"
T = 17.68'
L = 34.39'
R = 60.00'
PC = 16+99.02
PRC = 17+33.41
e = 1%
V = 18 MPH
PI = 17+73.32
DELTA = 67°15'32.22" (LT)
D = 95°29'35"
T = 39.91'
L = 70.43'
R = 60.00'
PRC = 17+33.41
PRC = 18+03.84
e = 1% (RC)
V = 18 MPH
PI = 18+30.14
DELTA = 36°23'38.61" (RT)
D = 71°37'11"
T = 26.30'
L = 50.82'
R = 80.00'
PRC = 18+03.84
PRC = 18+54.66
e = 1%
V = 20 MPH
PI = 19+46.99
DELTA = 147°24'02.79" (LT)
D = 212°12'24"
T = 92.34'
L = 69.46'
R = 27.00'
PRC = 18+54.66
PT = 19+24.12
e = 1% (RC)
V = 10 MPH
PI = 21+40.80
DELTA = 25°51'29.73" (LT)
D = 22°55'06"
T = 57.39'
L = 112.83'
R = 250.00'
PC = 20+83.41
PRC = 21+96.24
e = 1% (RC)
V = 30 MPH
PI = 22+26.37
DELTA = 33°32'04.12" (RT)
D = 57°17'45"
T = 30.13'
L = 58.53'
R = 100.00'
PRC = 21+96.24
PRC = 22+54.77
e = 1%
V = 20 MPH
PRC 22+54.77
Prop. Perm. Trail Easement
Ditch 2
Ex. 54" Sanitary Line Not To Be Disturbed
St'd. CG-2 Req'd.
Full Depth Saw Cut Req'd.
Prop. Temp. Constr. Easement
Ex. 54" Sanitary Line Not To Be Disturbed
St'd. CG-2 Req'd.
Prop. Perm. Trail Easement
PI = 23+11.41
DELTA = 59°03'28.45" (LT)
D = 57°17'45"
T = 56.64'
L = 103.08'
R = 100.00'
PRC = 22+54.77
PRC = 23+57.84
e = 1% (RC)
V = 20 MPH
PRC 23+57.84
PT 24+77.28
Begin Prop. Retaining Wall A Sta. 22+91.31, 12.21' Lt. (Face of Wall)
Ordinary High Water
Prop. Perm. Drain. Easement
Do Not Disturb Existing Sanitary Sewer Manhole
End HR-1 Type III Sta. 18+85.36, 2' Rt.
PI = 24+17.73
DELTA = 10°31'40.40" (RT)
D = 08°48'53"
T = 59.89'
L = 119.44'
R = 650.00'
PRC = 23+57.84
PT = 24+77.28
e = 1%
V = 30 MPH
Match Line Sta. 25+50.00 Sheet 5
S78°35'27"W
PRC 18+54.66
PT 19+24.12
PRC 18+03.84
PC 16+99.02
PRC 17+33.41
Lancing Dr. Asphalt
Existing RW Per PB 12 PG 67
Existing RW Per PB 1 PG 31
Lancing Drive
Asphalt Parking Lot
Conc. Walk
0.5 Conc. Curb
2.5 Conc. C&G
Grass
Mixed Hardwoods
Mixed Brush & Hardwoods
Metal Guardrail
Rip Rap Ditch
Gravel Walk
Roanoke River
Existing RW Per VDOT P...
Bridge Sta. #187
Bridge Columns
LP #10
Metal Sign
Deltineator
Metal Sign 24" Willow Oak 36.06-24.73
Water Vault
3-#73 KVA-1000 Conc. Pad w/ Tied Pumps
6" Crape Myrtle
10" Bradford Pear
6" Arborvitae
Underground Telephone
3635-2488
Wooden Sign
2-#47 KVA-250 Conc. Pad w/ Tied Pumps
#1081 G
#1632
2.5 Sty. Brick & Vinyl
Hedgerow
Utility Pole
Asphalt Walk
To Be Removed
4" Sanitary Sewer Easement
Bot. Basin Elev. = 1.21'
Top Basin Elev. = 2.71'
Abandon Scupper
Bridge Sta. #187
Existing RW Per PB 1 PG 31

001
WOODROCK RIVERWALK, LLC
Inst.# 220000906
PB 1 PG 31
20.081 AC.
TAX MAP# 277-2-1

JAMES T. ELSWICK AND PHYLLIS B. ELSWICK
Inst.# 060001721
PB 3 PG 87
PB 7 PG 49
1.026 AC.
TAX MAP# 277-1-9

NATIONWIDE HEALTH PROPERTIES
Inst.# 060004533
PB 3 PG 87
PB 7 PG 49
4.668 AC.
TAX MAP# 277-1-3

CITY OF SALEM
DB 71 PG 234
PB 2 PG 3
1.426 AC.
TAX MAP# 277-1-2

4-1 P.O.T. Sta. 15+75.00 Roanoke River Greenway
P.O.T. Sta. 1+00.00 Sidewalk Spur A
D = 90°00'00" Lt.

LEGEND
- Denotes Proposed Asphalt Pavement
- Denotes Proposed Concrete
- Denotes Demolition of Pavement
- Denotes Temporary Easement
- Denotes Permanent Easement
- C Denotes Construction Limits in Cuts
- F Denotes Construction Limits in Fills

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Existing Utility and Drainage Information	1F(1)
Typical Sections	2A
Retaining Wall Plan	2D
Gabion Wall Plan	2D(2)
Timber Fence Detail	2F
Greenway Profile	4A
Sidewalk Spur A Profile	4A(1)
E&S Control Plan	4B

SCALE 0 25' 50'

PROJECT	SHEET NO.
RRGW-129-257	4

6/24/2024

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PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _____
DESIGN BY Blick, Delong, P.E., Rinker, Design, Associates, P.C. (804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

ANDREW KNOWLTON
Lic. No. 056378
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:49:26-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

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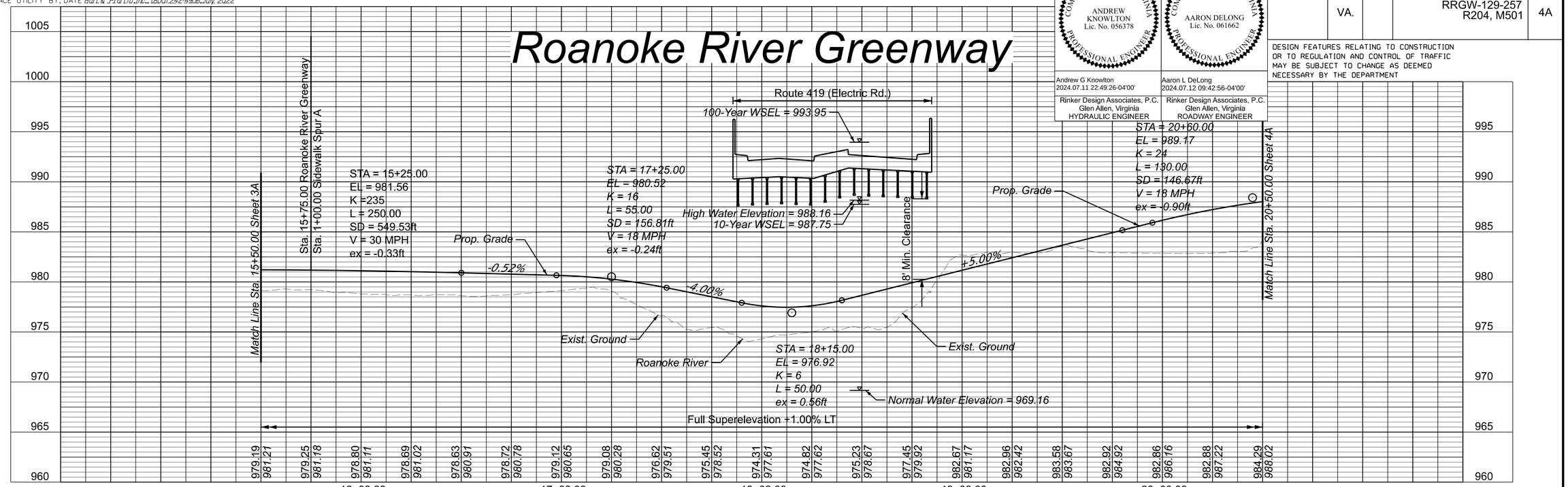
Aaron L DeLong
2024.07.12 09:42:56-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

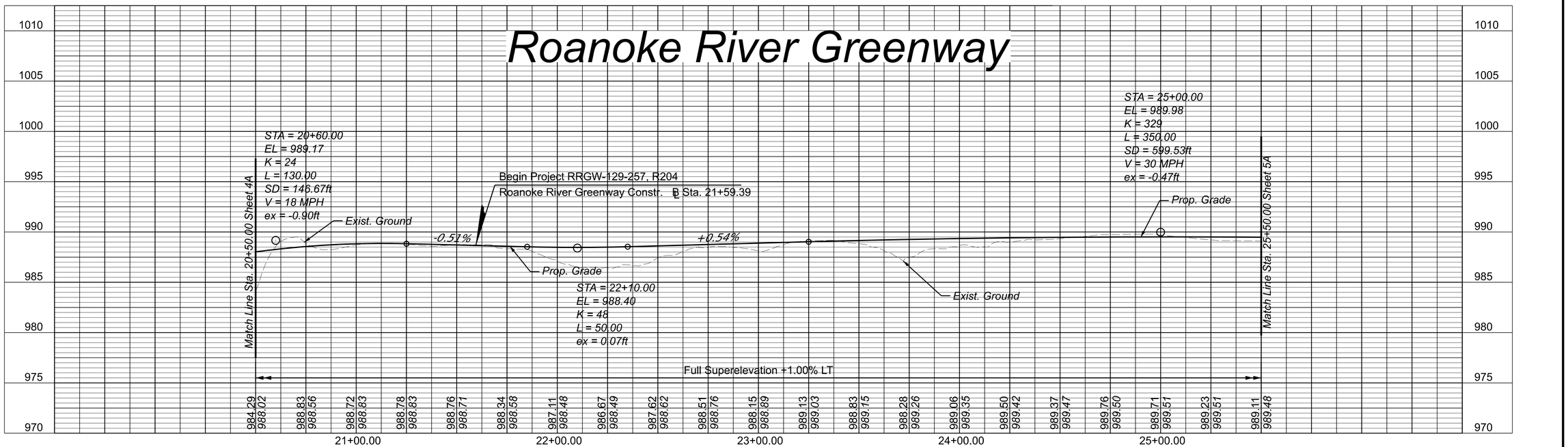
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	4A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Roanoke River Greenway



Roanoke River Greenway



1" = 25' (HOR.), 1" = 5' (VERT.)	PROJECT RRGW-129-257	SHEET NO. 4A

6/24/2024

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Plotted by: swhitehead

PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _ _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _ _ _ _ _ _ _
DESIGN BY Blick, Delong, P.E., Rinker, Design, Associates, P.C., (804) 612-0665 _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

COMMONWEALTH OF VIRGINIA
ANDREW KNOWLTON
Lic. No. 056378
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:49:51-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

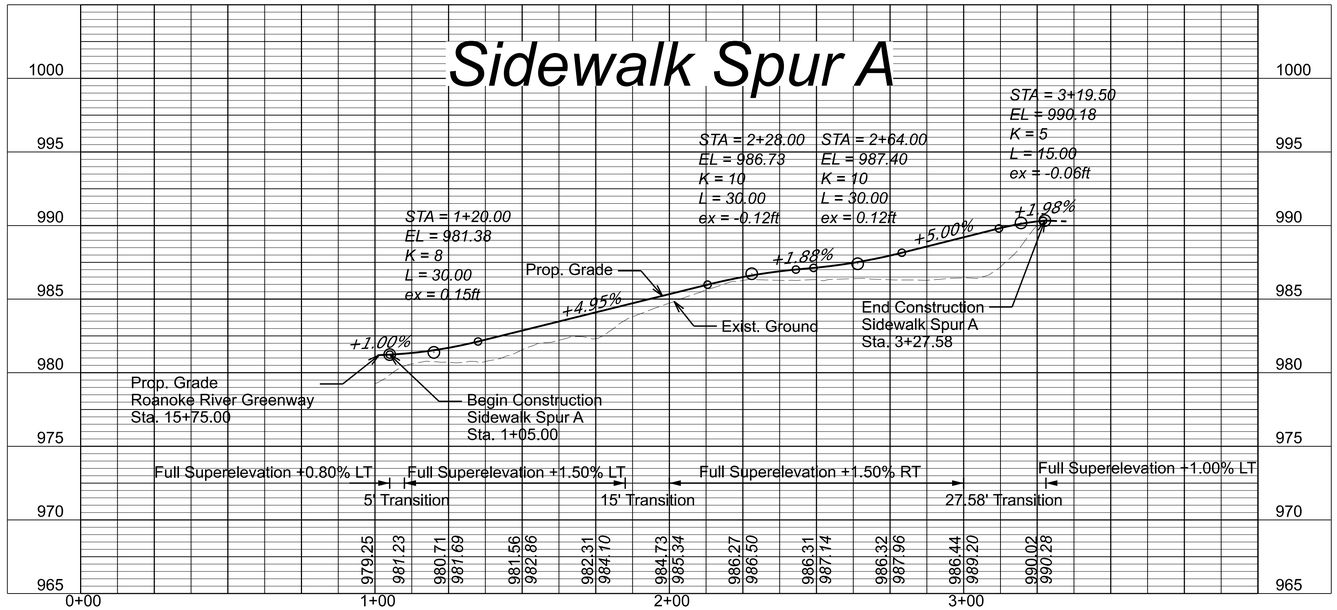
COMMONWEALTH OF VIRGINIA
AARON DELONG
Lic. No. 061662
PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.12 09:43:12-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	4A(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



6/24/2024

1" = 25' (HOR.), 1" = 5' (VERT.)	PROJECT RRGW-129-257	SHEET NO. 4A(1)

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PROJECT MANAGER HDR, VDOT PM: Chris Eggleston (757) 925-2689
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022
DESIGN BY Blick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Erosion and Sediment Control Plan

COMMONWEALTH OF VIRGINIA
ANDREW KNOWLTON
Lic. No. 056378
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:50:22-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	4B

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

001
WOODROCK RIVERWALK, LLC
Inst.# 220000906
PB 1 PG 31
20.181 AC.
TAX MAP# 277-2-1

CITY OF SALEM
DB 71 PG 234
PB 2 PG 3
1.426 AC.
TAX MAP# 277-1-2

JAMES T. ELSWICK AND PHYLLIS B. ELSWICK
Inst.# 060001721
PB 3 PG 87
PB 7 PG 49
1.024 AC.
TAX MAP# 277-1-9

NATIONWIDE HEALTH PROPERTIES
Inst.# 060004533
PB 3 PG 87
PB 7 PG 49
4.668 AC.
TAX MAP# 277-1-3

Match Line Sta. 15+50.00 Sheet 3B

Match Line Sta. 25+50.00 Sheet 5B

Existing RW Per PB 12 Pg. 61

Existing RW Per PB 1 PG 31

Existing RW Per VDOT Proj. 0129-129-101, C-501

Lansing Dr. Asphalt

Clean Out

Stone Planter

Asphalt Parking Lot

0.5 Conc. Curb

Conc. Walk

2.5 Conc. C&G

2.5 SN. Brick & Vinyl #1616

2.5 SN. Brick & Vinyl #1632

Prop. Perm. Trail Easement

Prop. Temp. Constr. Easement

Prop. Perm. Drain. Easement

Ex. 54" Sanitary Line Not To Be Disturbed

40' Sanitary Sewer Trail Easement

Ditch 1

Ditch 2

PG-3 Class A1 Riprap

Abandon Scupper

Temporary Cofferdam

Ordinary High Water

Roanoke River

Mixed Brush & Hardwoods

Mixed Hardwoods

Bridge Sta. #817

Bridge Column

Metal Sign

Deflector

Metal Sign 24" Willow Oak 3606-2473

Water Vault

6" Crape Myrtle

Conc. Pad w/ Heaf Pumps

Underground Telephone

8" Arborvitae 3636-2488

10" Bradford Pear

Wooden Sign

2047 KVA-250

Wooden Fence

Storm Sewer Manhole

Existing Tree

Shrub

Hedgerow

Grass

Gas

Wood Post

Wire Fence

Bit. Drive

Edge of Pavement

Top of Bank

Toe of Slope

Limit of Clearing

Proposed Tree Protection Fence

TSF-A

RCD-2

IP-B

EC-2, Ty.1

EC-3, Ty.1

4-1

4-2

4-3

4-4

4-5

LOD

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
E&S Legend	2
Plan Sheet	4

SCALE 0 25' 50'

PROJECT	SHEET NO.
RRGW-129-257	4B

6/24/2024

PROJECT MANAGER_HDR_VDOT_PM:Chris_Eggleston_(540)_278-2405_____
SURVEYED BY, DATE Hurt & Proffitt, Inc., (800) 242-4906, July, 2022_____
DESIGN BY Bick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665____
SUBSURFACE UTILITY BY, DATE Hurt & Proffitt, Inc., (800) 242-4906, July, 2022

[00.00] '00.00	PROP. PERM. EASEMENT	Figures In Brackets And Dot - Dashed Lines Denote Perm. Easement
(00.00) '00.00	PROP. TEMP. EASEMENT	Figures In Parenthesis And Dot - Dot - Dashed Lines Denote Temp.Constr.Easement & Temp. Utility Easement
(N=400000.000) (E=2000000.000)		VDOT Project Coordinate
N=3000000.000 E=10000000.000		VA State Plane, South Zone Coordinate

Temp.	Temporary	R/W	Right Of Way
Ip	Property Corner	Prop.	Proposed
Constr.	Construction	Perm.	Permanent
Esmt.	Easement		
BL	Baseline		

COMMONWEALTH OF VIRGINIA
CHRISTOPHER B. KAKNIS
Lic. No. 2359
LAND SURVEYOR

Christopher B Kaknis
2024.02.09 13:22:31-05'00'

HURT AND PROFFITT
Blacksburg, Virginia
LICENSED SURVEYOR

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24 02/08/24	VA.		RRGW-129-257 RW-204, C-501	4RW

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

	Proposed Right-Of-Way	Temporary Constr. Esmt.	Proposed Permanent Trail Esmt.	Proposed Drainage Esmt.	Proposed VDOT Utility Esmt.
001	---------	21,930 SF	1.353 AC	961 SF	2,892 SF

(001)
WOODROCK RIVERWALK, LLC
Inst.# 220000906
PB 1 PG 31
20.181 AC.
TAX MAP# 277-2-1

Main Easement Per VDOT Proj.0129-129-101,C-501
Existing RW Per PB 12 PG 67
Ip (Bent) (N=3,625,224.07') (E=11,037,159.88')
Existing RW Per PB 1 PG 31
PI = 21+40.80
DELTA = 25°51'29.73" (LT)
D = 22°55'06"
T = 57.39'
L = 112.83'
R = 250.00'
PC = 20+83.41
PRC = 21+96.24
PI = 22+26.37
DELTA = 33°32'04.12" (RT)
D = 57°17'45"
T = 30.13'
L = 58.53'
R = 100.00'
PRC = 21+96.24
PRC = 22+54.77
(N=3,625,219.095')
(E=11,037,150.761')
N=3,624,873.395'
E=11,036,098.260'
PC 20+83.41
21
[23.72' / 59.38]
PRC 21+96.24
[30.21' / 86.06]
22
(156.44' / 34.57)
(165.27' / 39.12)
Existing RW Per PB 1 PG 31
PI = 23+11.41
DELTA = 59°03'28.45" (LT)
D = 57°17'45"
T = 56.64'
L = 103.08'
R = 100.00'
PRC = 22+54.77
PRC = 23+57.84
PI = 24+17.73
DELTA = 10°31'40.40" (RT)
D = 08°48'53"
T = 59.89'
L = 119.44'
R = 650.00'
PRC = 23+57.84
PT = 24+77.28
Prop. Perm. Trail Easement
(84.31' / 48.64)
(77.15' / 54.73)
PRC 22+54.77
Prop. Temp. Constr. Easement
(37.71' / 08.18)
[37.71' / 08.18]
(55.08' / 67.69)
23
[30.80' / 27.65]
[15.00' / 76.05]
[28.85' / 11.58]
Roanoke River Greenway Constr. ℄
[26.08' / 84.52]
(45.37' / 39.78)
Prop. Perm. Trail Easement
[21.41' / 31.63]
24
[22.09' / 39.29]
25
[15.00' / 51.30]
[15.00' / 57.84]
[34.69' / 03.23]
[15.00' / 15.06]
S78°35'22"E
PRC 23+57.84
PT 24+77.28
[15.00' / 77.28]
Existing RW Per VDOT Proj.0129-129-101,C-501
Prop. Perm. Drain. Easement
(N=3,625,031.652')
(E=11,037,554.243')
N=3,624,685.970'
E=11,036,501.703'
Match Line Sta. 25+50.00 Sheet 5RW
00°W
℄
696.05'±)
Existing RW Per VDOT Proj.0129-129-101,C-501

(001)
WOODROCK RIVERWALK, LLC
Inst.# 220000906
PB 1 PG 31
20.181 AC.
TAX MAP# 277-2-1

General Notes:
1. This Right Of Way Sheet Represents A Field Run Perimeter Survey Of The Proposed Limits. All Other Adjoining/Departing Boundary Lines Shown Are Compiled From Various Sources, Found Field Monumentation, Metes And Bounds Descriptions, And Recorded Plats. The Adjoining Lines Do Not Represent A Field Run Survey of The Adjoining Properties And Are A Best Fit Based On Compiled Data. All Areas Shown For Easements Are Approximate Only.
2. The Property Line Information Shown On This Plan Sheet Is Compiled From Record Data And Limited Field Measurements. This Compiled Map Of Record Parcels Does Not Represent A Boundary Survey.
3. This Compiled Plan Sheet Was Assembled Without The Benefit Of Title Reports Which May Affect The Properties Shown Hereon.
4. Proposed Easements Are Derived From Design Files Provided By RDA.
5. Survey Datum Based On VDOT Project RRGW-129-257, PW-204, C-501.
6. No Cemetery Sites Were Observed On The Subject Property Shown On This Plan Sheet. This Does Not Preclude Their Existence.
7. This Plan Sheet (4RW) Represents The Proposed Easement Computations for Parcels 001 Only.
8. All Proposed Proposed Easement Offset/Stations & Existing Monumentation Station/Offsets Are Based Off Of The Construction Baseline Shown Hereon.

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	4RW

PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _ _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt,Inc., (800).242-4906,July. 2022_ _ _ _ _ _ _
DESIGN BY Blck. Delong, P.E.,Rinker_Design. Associates,P.C.(804) 612-0665_ _ _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc., (800).242-4906,July. 2022

5-1 1 St'd. DI-7 Req'd. Type III Grate B Req'd.
H=5.9', Inv.=974.80
St'd. IS-1 Req'd.
Connect to Existing Pipe

5-2 14.9 LF Mod. MH-1 or 2
1 St'd. MH-1 Frame & Cover Req'd.
Proposed Rim Elev.= 987.33
Inv.=971.75 (Match Ex. Invert)
St'd. SL-1 Req'd.
St'd. IS-1 Req'd.
Connect to Existing Pipes
Existing Gate Valves and Lock to be Replaced in Kind
Contractor to Provide Shop Drawings

COMMONWEALTH OF VIRGINIA — ANDREW KNOWLTON Lic. No. 056378 — PROFESSIONAL ENGINEER
Andrew G Knowlton 2024.07.11 22:50:48-04'00'
Rinker Design Associates, P.C. Glen Allen, Virginia HYDRAULIC ENGINEER

COMMONWEALTH OF VIRGINIA — AARON DELONG Lic. No. 061662 — PROFESSIONAL ENGINEER
Aaron L DeLong 2024.07.12 09:43:38-04'00'
Rinker Design Associates, P.C. Glen Allen, Virginia ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24	VA.		RRGW-129-257 R204, M501	5

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

001 WOODROCK RIVERWALK,LLC Inst.# 220000906 PB 1 PG 31 20.081 AC. TAX MAP# 277-2-1

PI = 29+16.10
DELTA = 09°36'40.93" (LT)
D = 20°50'05"
T = 23.12'
L = 46.13'
R = 275.00'
PRC = 28+92.98
PT = 29+39.11
e = 2%
V = 30 MPH

PI = 31+95.09
DELTA = 07°31'28.60" (LT)
D = 57°17'45"
T = 6.58'
L = 13.13'
R = 100.00'
PC = 31+88.52
PT = 32+01.65
e = 2%
V = 20 MPH

Lancing Drive
Lancing Dr. Asphalt
Existing RW Per PB 1 PG 31
40' Sanitary Sewer Easement
2.5 Conc.C&G
54" SAN
Asphalt
Grass
Conc.Walk
Conc. Dumpster Pad
1.5' Stone Wall
Arborvitae x4
Conc. Steps
Shrubs
Wooden Sign
Playground
T-Post
Metal Sign
Shrubs
Crape Myrtle x9
3' Vinyl Fence
Swimming Pool
Ex. Fence Not to be Impacted
Do Not Disturb
Mulch
Gazebo
4' Metal Fence
2' Wood Ret.Wall
1.5' W. Ret.Wall
Rough Pour Conc.
Mixed Brush & Hardwoods
Roanoke River
Large Rocks
4' Split Rail Fence
10' Shared Used Path
Asphalt Walk
Conc. Curb
Ex. 54" Sanitary Line Not To Be Disturbed
Prop. Perm. Trail Easement
Prop. Temp. Constr. Easement
Prop. VDOT Utility Easement
Prop. Temp. Constr. Easement
To Be Removed
End Prop. Retaining Wall A Sta. 27+76.03, 19.84' Lt. (Face of Wall)
End Prop. Timber Fence Sta. 27+81.03 (Type B, See Sheet 2F)
End Prop. Timber Fence Sta. 31+01.03 (Type C, See Sheet 2F)
End Prop. Timber Fence Sta. 31+01.03 (Type A, See Sheet 2F)
Start Prop. Timber Fence Sta. 30+01.03 (Type B, See Sheet 2F)
Reconstruct Ex. Sanitary Sewer Manhole. Lower 3.0' to Match Proposed Grade.
2.5 Sty. Brick & Vinyl #1638
Shed
Gazebo
Bench
Fire Pit
Metal Fence
Utility Pole
Guy Wire
APCO 276-48 367.3-2459
(Estimated Locations Of Future Drainage Easements Shown On PB 1 PG 31.Not Shown On Survey.)

PC 25+60.07
PT 26+84.95
PC 28+59.21
PRC 28+92.98
PT 29+39.11
PC 29+88.29
PT 29+99.99
PC 31+04.64
PT 31+50.97
PT 31+88.52
PT 32+01.65

Match Line Sta. 25+50.00 Sheet 4
Match Line Sta. 32+50.00 Sheet 6

S78°35'22"E
S62°41'24"E
S59°24'09"E
S57°43'33"E
S44°27'05"E
S51°58'32"E

PI = 26+22.92
DELTA = 15°53'58.79" (RT)
D = 12°43'57"
T = 62.84'
L = 124.88'
R = 450.00'
PC = 25+60.07
PT = 26+84.95
e = 1%
V = 30 MPH

(N 55°58'00" W 218.00')

PI = 28+76.17
DELTA = 12°53'55.20" (RT)
D = 38°11'50"
T = 16.96'
L = 33.77'
R = 150.00'
PC = 28+59.21
PRC = 28+92.98
e = 2% (RC)
V = 25 MPH

PI = 29+94.14
DELTA = 01°40'36.60" (RT)
D = 14°19'26"
T = 5.85'
L = 11.71'
R = 400.00'
PC = 29+88.29
PT = 29+99.99
e = 1%
V = 30 MPH

PI = 31+27.91
DELTA = 13°16'29.72" (RT)
D = 28°38'52"
T = 23.27'
L = 46.34'
R = 200.00'
PC = 31+04.64
PT = 31+50.97
e = 2% (RC)
V = 30 MPH

LEGEND
- Denotes Proposed Asphalt Pavement
- Denotes Proposed Concrete
- Denotes Demolition of Pavement
- Denotes Temporary Easement
- Denotes Permanent Easement
- C Denotes Construction Limits in Cuts
- F Denotes Construction Limits in Fills

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Existing Utility and Drainage Information	1F(1)
Typical Sections	2A-2A(1)
Retaining Wall Details	2D
Timber Fence Detail	2F
Greenway Profile	5A
E&S Control Plan	5B

SCALE 0 25' 50'

PROJECT	SHEET NO.
RRGW-129-257	5

6/24/2024

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Plotted by: swhitehead

PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt,Inc., (800).242-4906,July 2022 _____
DESIGN BY Blick, Delong, P.E.,Rinker, Design, Associates,P.C.(804) 612-0665 _____
SUBSURFACE UTILITIES BY, DATE Hurt & Profitt,Inc., (800).242-4906,July 2022

Roanoke River Greenway

COMMONWEALTH OF VIRGINIA — ANDREW KNOWLTON — Lic. No. 056378 — PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:51:14-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

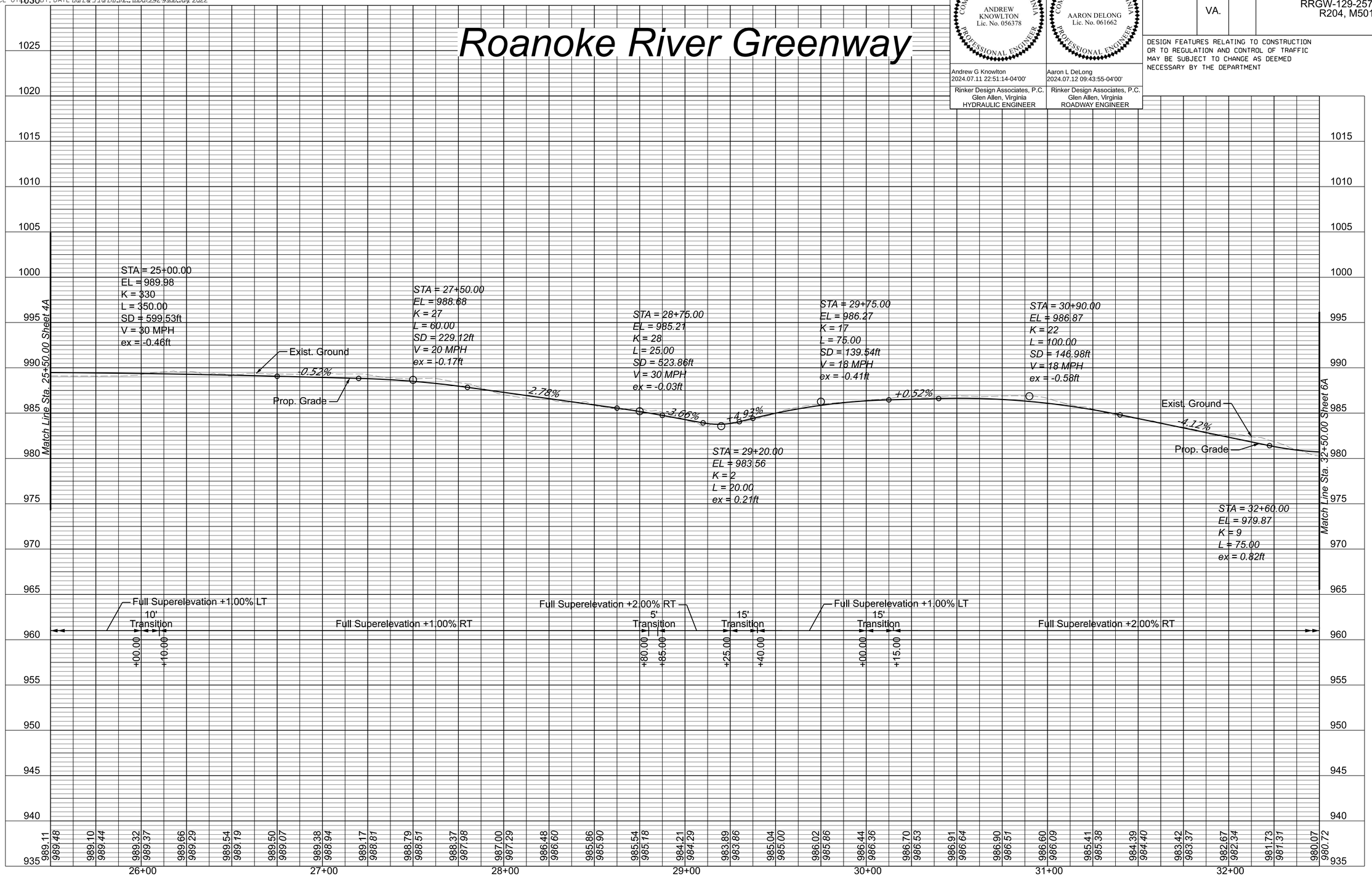
COMMONWEALTH OF VIRGINIA — AARON DELONG — Lic. No. 061662 — PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.12 09:43:55-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	5A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



1" = 25' (HOR.), 1" = 5' (VERT.)	PROJECT RRGW-129-257	SHEET NO. 5A

6/24/2024

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Plotted by: swhitehead

PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _____
DESIGN BY Blick, Delong, P.E., Rinker, Design, Associates, P.C. (804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

Erosion and Sediment Control Plan

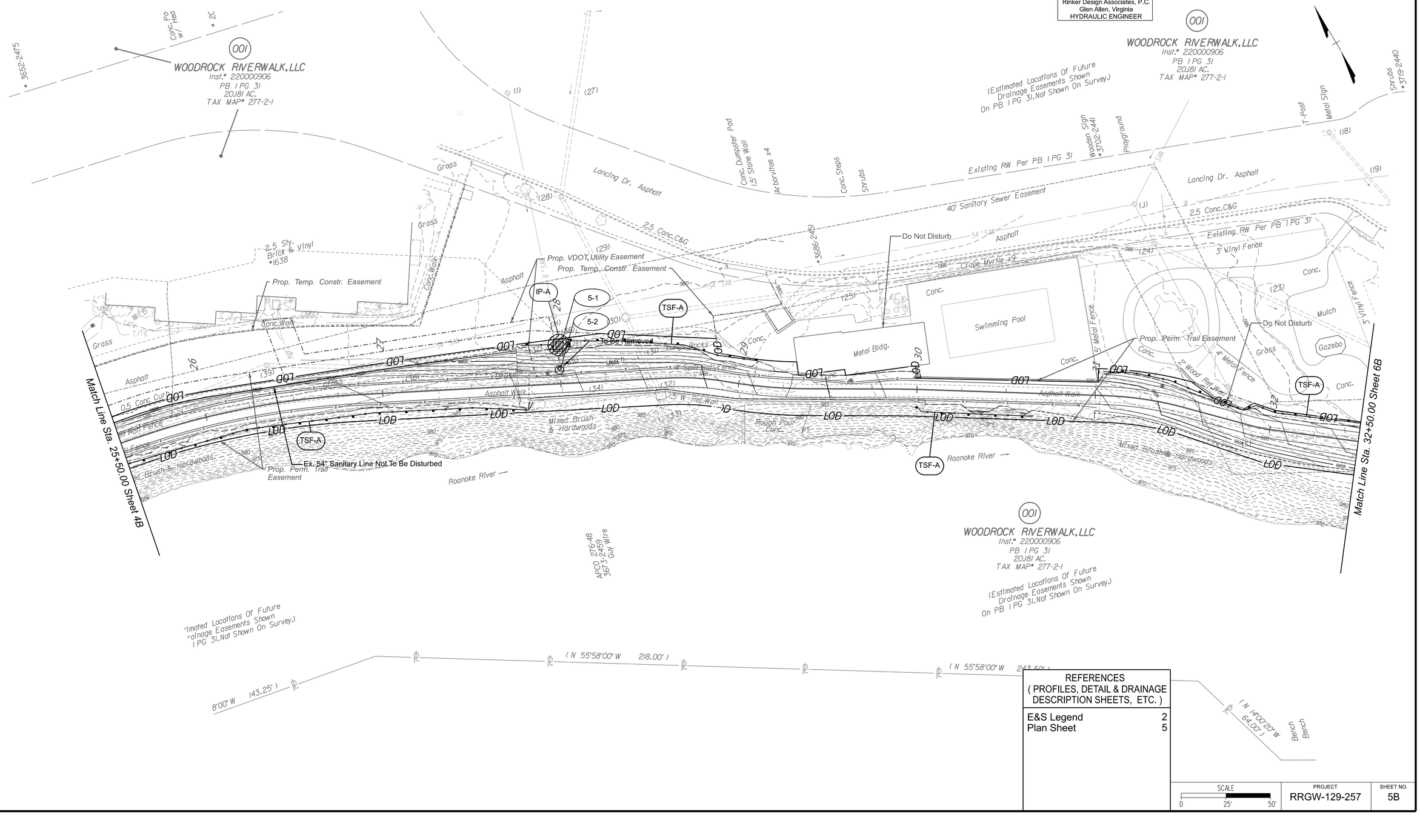
COMMONWEALTH OF VIRGINIA
ANDREW KNOWLTON
Lic. No. 056378
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:51:44-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24	VA.		RRGW-129-257 R204, M501	5B

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
E&S Legend	2
Plan Sheet	5

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	5B

6/24/2024

PROJECT MANAGER_HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Proffitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Binker Design Associates, P.C. (804) 612-0665____
SUBSURFACE UTILITY BY, DATE Hurt & Proffitt, Inc., (800) 242-4906, July 2022

COMMONWEALTH OF VIRGINIA
CHRISTOPHER B. KAKNIS
Lic. No. 2359
LAND SURVEYOR

Christopher B Kaknis
2024.02.09 13:22:58-05'00'

HURT AND PROFFITT
Blacksburg, Virginia
LICENSED SURVEYOR

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24 02/08/24	VA.		RRGW-129-257 RW-204, C-501	5RW

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

001
WOODROCK RIVERWALK, LLC
Inst.# 220000906
PB 1 PG 31
20.181 AC.
TAX MAP# 277-2-1

PI = 26+22.92
DELTA = 15°53'58.79" (RT)
D = 12°43'57"
T = 62.84'
L = 124.88'
R = 450.00'
PC = 25+60.07
PT = 26+84.95

PI = 28+76.17
DELTA = 12°53'55.20" (RT)
D = 38°11'50"
T = 16.96'
L = 33.77'
R = 150.00'
PC = 28+59.21
PRC = 28+92.98

PI = 29+16.10
DELTA = 09°36'40.93" (LT)
D = 20°50'05"
T = 23.12'
L = 46.13'
R = 275.00'
PRC = 28+92.98
PT = 29+39.11

PI = 29+94.14
DELTA = 01°40'36.60" (RT)
D = 14°19'26"
T = 5.85'
L = 11.71'
R = 400.00'
PC = 29+88.29
PT = 29+99.99

PI = 31+27.91
DELTA = 13°16'29.72" (RT)
D = 28°38'52"
T = 23.27'
L = 46.34'
R = 200.00'
PC = 31+04.64
PT = 31+50.97

PI = 31+95.09
DELTA = 01°31'28.60" (LT)
D = 57°11'45"
T = 6.58'
L = 13.13'
R = 100.00'
PC = 31+88.52
PT = 32+01.65

	Proposed Right-Of-Way	Temporary Constr. Esmt.	Proposed Permanent Trail Esmt.	Proposed Drainage Esmt.	Proposed VDOT Utility Esmt.
001	--------	21,930 SF	1.353 AC	961 SF	2,892 SF

Existing RW Per PB 1 PG 31

Prop. VDOT Utility Easement
Prop. Temp. Constr. Easement
Prop. Perm. Trail Easement
Prop. Temp. Constr. Easement
Roanoke River Greenway Constr. @
Match Line Sta. 25+50.00 Sheet 4RW
Match Line Sta. 35+50.00 Sheet 6RW

S78°35'22"E
S62°41'24"E
S59°24'09"E
S57°43'33"E
S44°27'05"E
S51°58'32"E

PC 25+60.07
PT 26+84.95
PC 28+59.21
PRC 28+92.98
PT 29+39.11
PC 29+88.29
PT 29+99.99
PC 31+04.64
PT 31+50.97
PC 31+88.52
PT 32+01.65

(N=3,625,031.652')
(E=11,037,554.243')
N=3,624,685.970'
E=11,036,501.703'

(N=3,624,681.641')
(E=11,038,152.896')
N=3,624,335.992'
E=11,037,100.299'

001
WOODROCK RIVERWALK, LLC
Inst.# 220000906
PB 1 PG 31
20.181 AC.
TAX MAP# 277-2-1

[43.90' -05.74] PROP. UTILITY EASEMENT — Figures In Double Brackets And Dot - Dashed Lines Denote Perm. Easement

[00.00' -00.00] PROP. PERM. EASEMENT — Figures In Brackets And Dot - Dashed Lines Denote Perm. Easement

(00.00' -00.00) PROP. TEMP. EASEMENT — Figures In Parenthesis And Dot - Dot - Dashed Lines Denote Temp.Constr.Easement & Temp. Utility Easement

(N=400000.000)
(E=2000000.000) VDOT Project Coordinate

N=3000000.000
E=10000000.000 VA State Plane, South Zone Coordinate

Temp.	Temporary	R/W	Right Of Way
Ir	Property Corner	Prop.	Proposed
Constr.	Construction	Perm.	Permanent
Esmt.	Easement		
BL	Baseline		

General Notes:
1. This Right Of Way Sheet Represents A Field Run Perimeter Survey Of The Proposed Limits. All Other Adjoining/Departing Boundary Lines Shown Are Compiled From Various Sources, Found Field Monumentation, Metes And Bounds Descriptions, And Recorded Plats. The Adjoining Lines Do Not Represent A Field Run Survey of The Adjoining Properties And Are A Best Fit Based On Compiled Data. All Areas Shown For Easements Are Approximate Only.
2. The Property Line Information Shown On This Plan Sheet Is Compiled From Record Data And Limited Field Measurements. This Compiled Map Of Record Parcels Does Not Represent A Boundary Survey.
3. This Compiled Plan Sheet Was Assembled Without The Benefit Of Title Reports Which May Affect The Properties Shown Hereon.
4. Proposed Easements Are Derived From Design Files Provided By RDA.
5. Survey Datum Based On VDOT Project RRGW-129-257, PW-204, C-501.
6. No Cemetery Sites Were Observed On The Subject Property Shown On This Plan Sheet. This Does Not Preclude Their Existence.
7. This Plan Sheet (5RW) Represents The Proposed Easement Computations for Parcel 001 Only.
8. All Proposed Proposed Easement Offset/Stations & Existing Monumentation Station/Offsets Are Based Off Of The Construction Baseline Shown Hereon.

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	5RW

PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _____
DESIGN BY Blick, Delong, P.E., Rinker, Design, Associates, P.C. (804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

ANDREW KNOWLTON
Lic. No. 056378
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:52:08-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

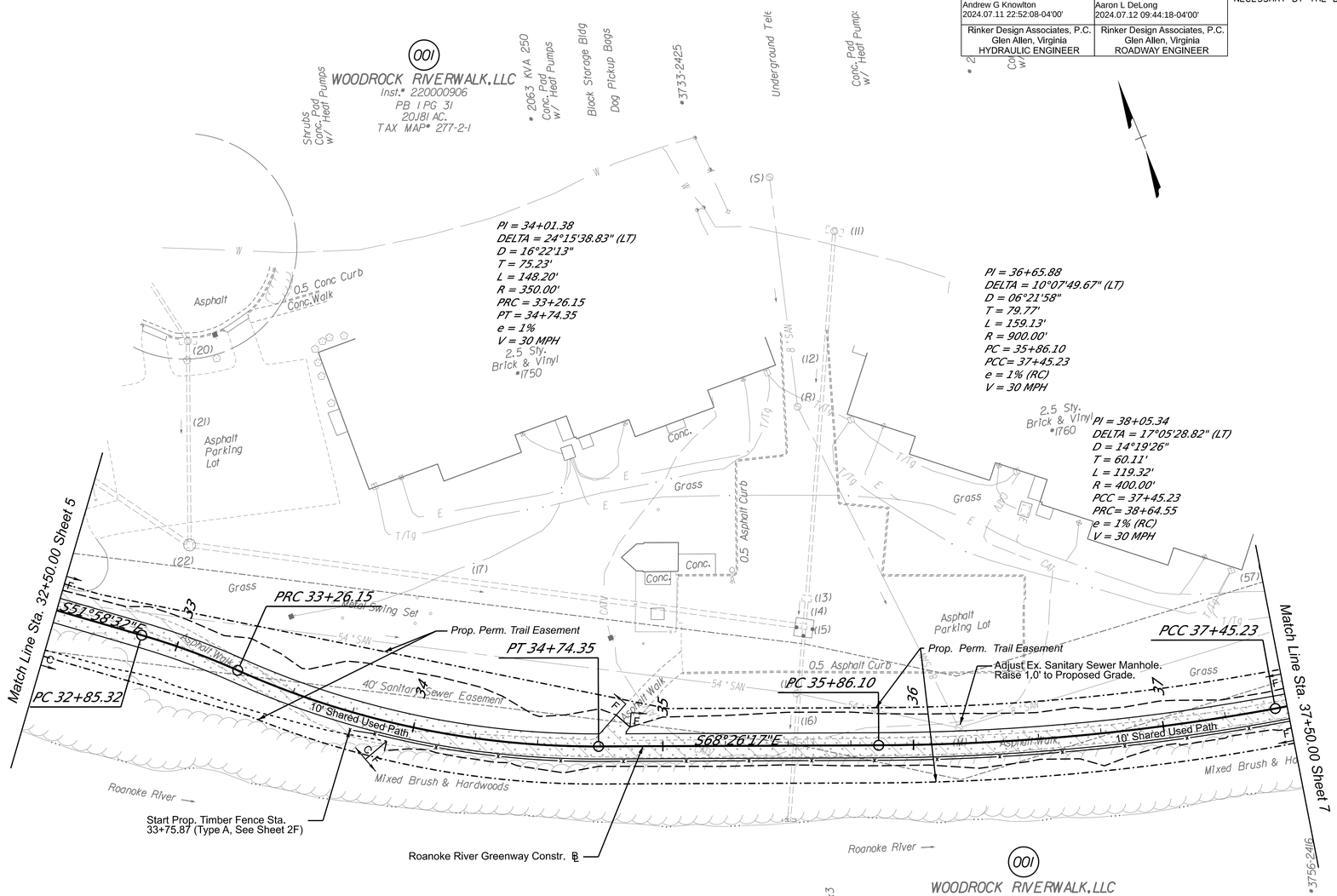
AARON DELONG
Lic. No. 061662
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.12 09:44:18-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
02/08/24	VA.		RRGW-129-257 R204, M501	6

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- Denotes Proposed Asphalt Pavement
- Denotes Proposed Concrete
- Denotes Demolition of Pavement
- Denotes Temporary Easement
- Denotes Permanent Easement
- C — Denotes Construction Limits in Cuts
- F — Denotes Construction Limits in Fills

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Existing Utility and Drainage Information	1F(1)
Typical Sections	2A(1)
Timber Fence Detail	2F
Greenway Profile	6A
E&S Control Plan	6B

SCALE 0 25' 50'

PROJECT	SHEET NO.
RRGW-129-257	6

6/24/2024

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Plotted by: swhitehead

PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt,Inc., (800).242-4906,July 2022 _ _ _ _ _ _
DESIGN BY Blick, Delong, P.E.,Rinker, Design, Associates,P.C.,(804) 612-0665 _ _ _ _ .
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc., (800).242-4906,July 2022

ANDREW KNOWLTON
Lic. No. 056378
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:52:32-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

AARON DELONG
Lic. No. 061662
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

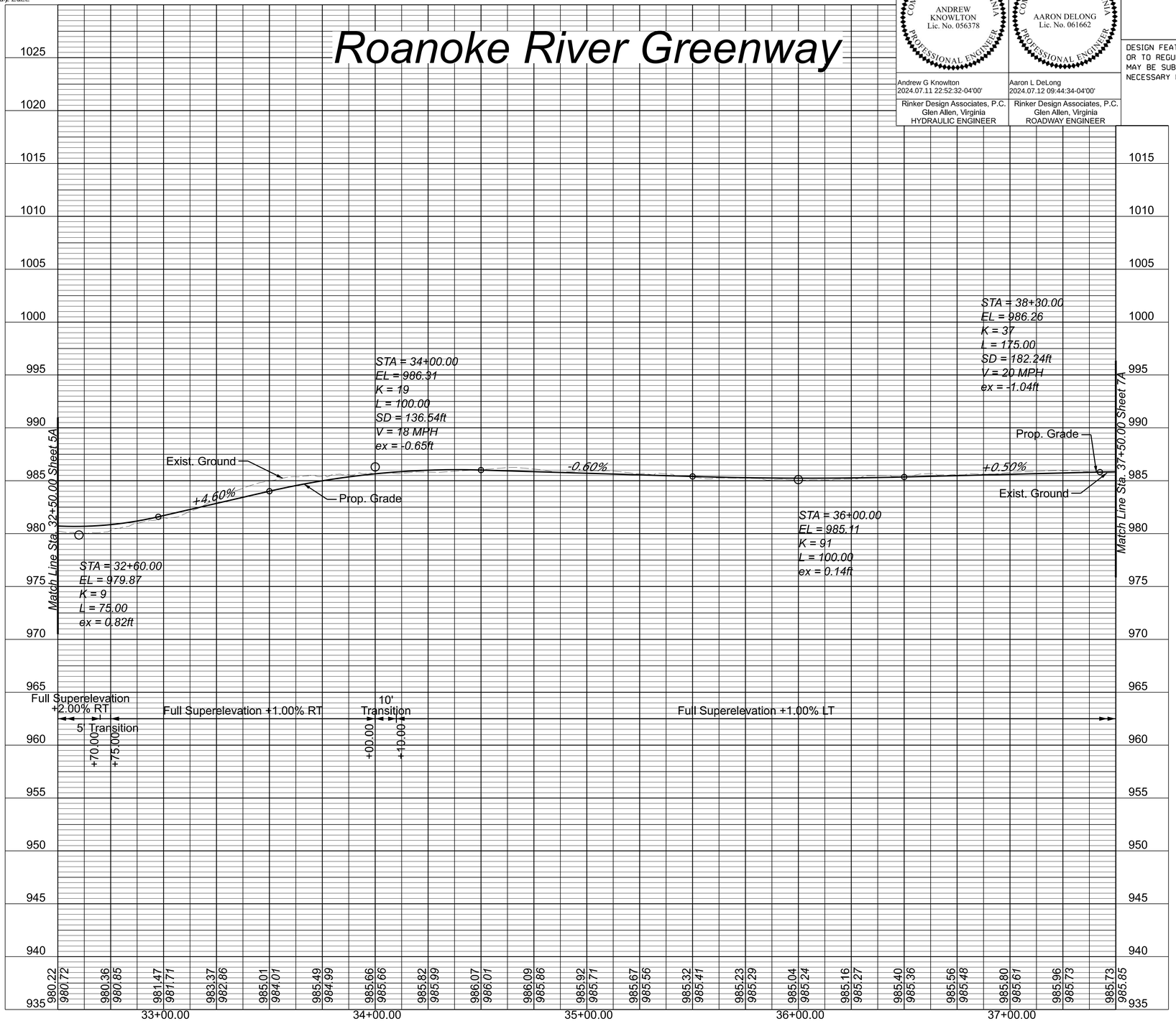
Aaron L DeLong
2024.07.12 09:44:34-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	6A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Roanoke River Greenway



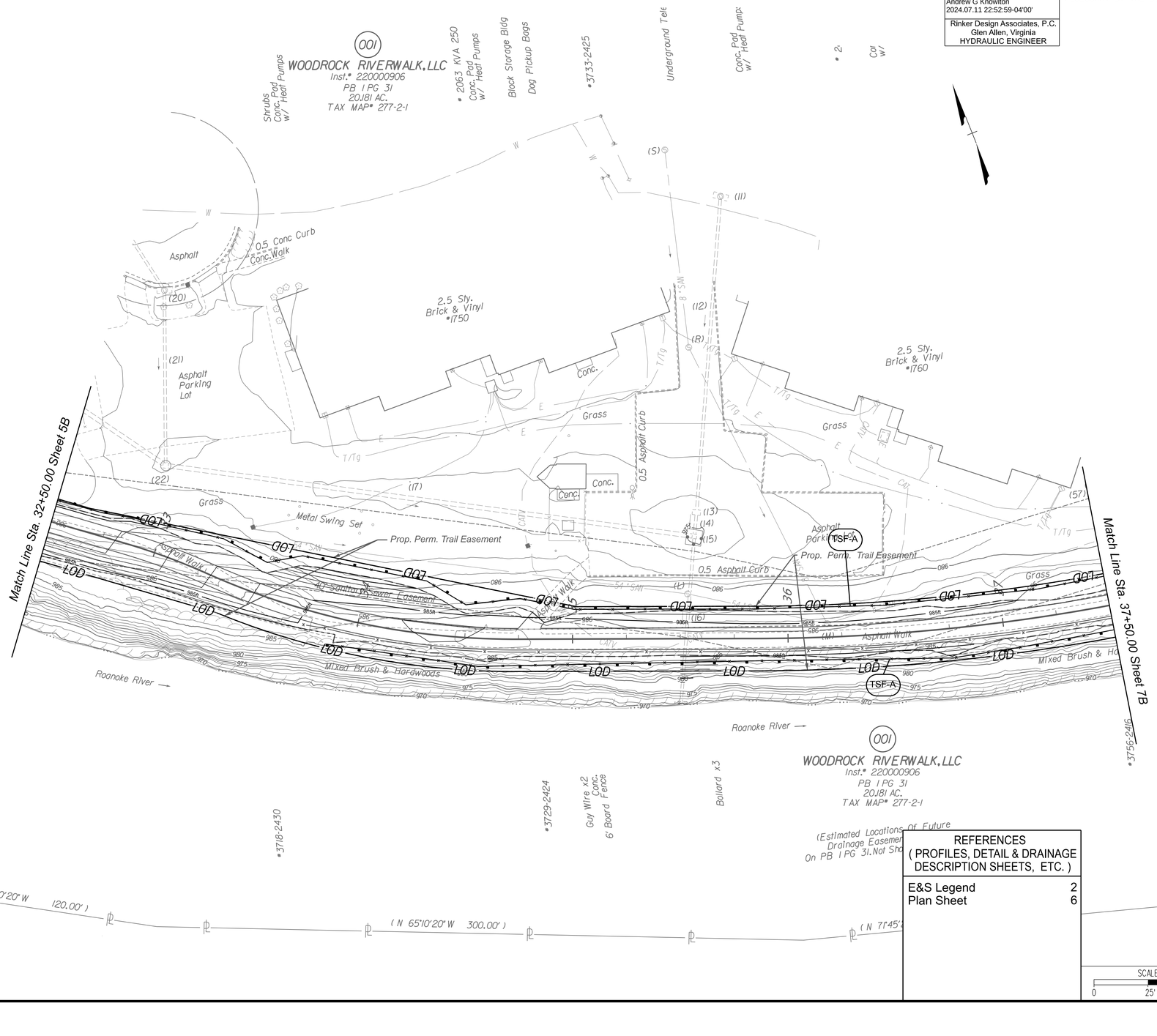
1" = 25' (HOR.), 1" = 5' (VERT.)	PROJECT RRGW-129-257	SHEET NO. 6A

6/24/2024

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Plotted by: swhitehead

PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt,Inc., (800) 242-4906, July, 2022 _____
DESIGN BY Blck. Delong, P.E.,Rinker Design Associates,P.C.,(804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc., (800) 242-4906, July, 2022

Erosion and Sediment Control Plan



REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
02/08/24	VA.		RRGW-129-257 R204, M501	6B

COMMONWEALTH OF VIRGINIA
ANDREW KNOWLTON
Lic. No. 056378
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:52:59-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
E&S Legend	2
Plan Sheet	6

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	6B

6/24/2024

PROJECT MANAGER_HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Proffitt,Inc.,(800) 242-4906,July 2022_____
DESIGN BY Bick Delong,P.E. Binker Design Associates,P.C.(804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Proffitt,Inc.,(800) 242-4906,July 2022

COMMONWEALTH OF VIRGINIA
CHRISTOPHER B. KAKNIS
Lic. No. 2359
LAND SURVEYOR

Christopher B Kaknis
2024.02.09 13:23:26-05'00'

HURT AND PROFFITT
Blacksburg, Virginia
LICENSED SURVEYOR

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
01/11/24 02/08/24	VA.		RRGW-129-257 RW-204, C-501	6RW

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

001

WOODROCK RIVERWALK,LLC
Inst.# 220000906
PB 1 PG 31
20.181 AC.
TAX MAP# 277-2-1

Existing RW
Per PB 1 PG 31

	Proposed Right-Of-Way	Temporary Constr. Esmt.	Proposed Permanent Trail Esmt.	Proposed Drainage Esmt.	Proposed VDOT Utility Esmt.
001	--------	21,930 SF	1.353 AC	961 SF	2,892 SF

[11.00'
·65.35]

(N=3,624,681.641')
(E=11,038,152.896')
N=3,624,335.992'
E=11,037,100.299'

Match Line Sta. 32+50.00 Sheet 5RW

S51°58'32"E

PC 32+85.32

PRC 33+26.15

Prop. Perm. Trail Easement

PT 34+74.35

PC 35+86.10

Prop. Perm. Trail Easement

PCC 37+45.23

Match Line Sta. 37+50.00 Sheet 7RW

S68°26'17"E

[15.00'
·37.03]

[15.00'
·02.05]

[15.00'
·74.35]

[15.00'
·86.10]

[15.00'
·45.23]

(N=3,624,463.911')
(E=11,038,594.454')
N=3,624,118.282'
E=11,037,541.814'

Roanoke River Greenway Constr. ℄

PI = 38+05.34
DELTA = 17°05'28.82" (LT)
D = 14°19'26"
T = 60.11'
L = 119.32'
R = 400.00'
PCC = 37+45.23
PRC= 38+64.55

PI = 33+05.77
DELTA = 07°47'53.73" (RT)
D = 19°05'55"
T = 20.45'
L = 40.83'
R = 300.00'
PC = 32+85.32
PRC = 33+26.15

PI = 34+01.38
DELTA = 24°15'38.83" (LT)
D = 16°22'13"
T = 75.23'
L = 148.20'
R = 350.00'
PRC = 33+26.15
PT = 34+74.35

001

WOODROCK RIVERWALK,LLC
Inst.# 220000906
PB 1 PG 31
20.181 AC.
TAX MAP# 277-2-1

PI = 36+65.88
DELTA = 10°07'49.67" (LT)
D = 06°21'58"
T = 79.77'
L = 159.13'
R = 900.00'
PC = 35+86.10
PCC = 37+45.23

(N 57°50'20" W 120.00')

(N 65°10'20" W 300.00')

[00.00]
·00.00] PROP. PERM. EASEMENT — Figures In Brackets And Dot - Dashed Lines Denote Perm. Easement

(00.00)
·00.00) PROP. TEMP. EASEMENT — Figures In Parenthesis And Dot - Dot - Dashed Lines Denote Temp.Constr.Easement & Temp. Utility Easement

(N=400000.000)
(E=2000000.000) VDOT Project Coordinate

N=3000000.000
E=10000000.000 VA State Plane, South Zone Coordinate

Temp.	Temporary	R/W	Right Of Way
Ip	Property Corner	Prop.	Proposed
Constr.	Construction	Perm.	Permanent
Esmt.	Easement		
BL	Baseline		

General Notes:
1. This Right Of Way Sheet Represents A Field Run Perimeter Survey Of The Proposed Limits. All Other Adjoining/Departing Boundary Lines Shown Are Compiled From Various Sources, Found Field Monumentation, Metes And Bounds Descriptions, And Recorded Plats. The Adjoining Lines Do Not Represent A Field Run Survey of The Adjoining Properties And Are A Best Fit Based On Compiled Data. All Areas Shown For Easements Are Approximate Only.
2. The Property Line Information Shown On This Plan Sheet Is Compiled From Record Data And Limited Field Measurements. This Compiled Map Of Record Parcels Does Not Represent A Boundary Survey.
3. This Compiled Plan Sheet Was Assembled Without The Benefit Of Title Reports Which May Affect The Properties Shown Hereon.
4. Proposed Easements Are Derived From Design Files Provided By RDA.
5. Survey Datum Based On VDOT Project RRGW-129-257, PW-204, C-501.
6. No Cemetery Sites Were Observed On The Subject Property Shown On This Plan Sheet. This Does Not Preclude Their Existence.
7. This Plan Sheet (6RW) Represents The Proposed Easement Computations for Parcel 001 Only.
8. All Proposed Proposed Easement Offset/Stations & Existing Monumentation Station/Offsets Are Based Off Of The Construction Baseline Shown Hereon.

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	6RW

PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _____
DESIGN BY Blick, Delong, P.E., Rinker, Design, Associates, P.C. (804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

7-1

25'-36" Culvert Pipe Req'd. (0° Skew) (2' Cover)
Silt-Tight Joint Type
Inv.(in)=977.60, Inv.(out)=977.00
1 Mod. EW-1 (36") with Cutoff Wall 3' Below Bottom of Culvert Req'd.
Contractor to Provide Shop Drawing for Mod. EW-1
1 St'd. EW-1 (36") Req'd.
15.0 SY St'd. EC-1 Class 1 Req'd. Type B Installation
12" Bedding Material to be Placed Beneath Pipe

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24 02/08/24 06/07/24	VA.		RRGW-129-257 R204, M501	7

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

COMMONWEALTH OF VIRGINIA — ANDREW KNOWLTON — Lic. No. 056378 — PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:53:28-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

COMMONWEALTH OF VIRGINIA — AARON DELONG — Lic. No. 061662 — PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.12 09:45:00-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

PI = 38+05.34
DELTA = 17°05'28.82" (LT)
D = 14°19'26"
T = 60.11'
L = 119.32'
R = 400.00'
PCC = 37+45.23
PRC = 38+64.55
e = 1% (RC)
V = 30 MPH

002
ROSE MARIE HAGEN, TRUSTEE OF THE KARLA HAGEN WENDELL GST EXEMPT TRUST U/A SONDRA S. HAGEN TRUST DATED SEPTEMBER 21, 2005, ROSE MARIE HAGAN, TRUSTEE OF THE JOHN W. HAGEN, JR., GST EXEMPT TRUST U/A SONDRA S. HAGEN TRUST DATED SEPTEMBER 21, 2005, AND DANNY M. ROBERTSON
Inst.# 150002414
DB81, P. 687
5.889 AC.
TAX MAP# 278-1-1

PI = 39+77.90
DELTA = 06°23'19.00" (LT)
D = 28°38'52"
T = 11.16'
L = 22.30'
R = 200.00'
PC = 39+66.74
PT = 39+89.04
e = 1%
V = 30 MPH

PI = 40+89.15
DELTA = 06°23'19.00" (LT)
D = 28°38'52"
T = 11.16'
L = 22.30'
R = 200.00'
PC = 40+77.99
PT = 41+00.29
e = 1%
V = 30 MPH

PI = 43+45.37
DELTA = 53°00'26.37" (LT)
D = 15°16'44"
T = 187.00'
L = 346.93'
R = 375.00'
PC = 41+58.37
PT = 45+05.31
e = 1%
V = 30 MPH

Match Line Sta. 37+50.00 Sheet 6

Match Line Sta. 44+50.00 Sheet 8

Tie into Existing Path

Asphalt Walk

Conc. Walk
0.5 Conc Curb

Asphalt Parking Lot

Grass

Mixed Brush & Hardwoods

Brush

8" SAN

PRC 38+64.55

Start Prop. Timber Fence Sta. 38+90.00 (Type A, See Sheet 2F)

PT 39+23.12

End Prop. Timber Fence Sta. 39+50.00 (Type A, See Sheet 2F)

PC 39+66.74

PT 39+89.04

PC 40+77.99

PT 41+00.29

PC 41+58.37

S 62°06'15" E

S 68°29'34" E

S 74°52'53" E

7-1

Prop. Perm. Trail Easement

10' Shared Used Path

36" Permanent Drainage Easement Per Inst.# 180000300

Ordinary High Water

End Prop. Timber Fence Sta. 39+50.00 (Type A, See Sheet 2F)

End Project RRGW-129-257, R204
Roanoke River Greenway Constr. ℄ Sta. 39+77.89

Roanoke River Greenway Constr. ℄

Roanoke River

Dead Pole Buried in Kudzu No.#

(N 67°00'20" W 259.75')

(S 78°58'26" W 255.50')

(N 75°59'54" E 255.93')

(S 16°00'00" E 166.52')

(N 67°45'20" W 212.46')

(S 16°34'34" E 136.80')

(N 90°00'00" W 130.00')

001
WOODROCK RIVERWALK, LLC
Inst.# 220000906
PB 1 PG 31
20.181 AC.
TAX MAP# 277-2-1

PI = 38+94.70
DELTA = 33°33'19.95" (RT)
D = 57°17'45"
T = 30.15'
L = 58.57'
R = 100.00'
PRC = 38+64.55
PT = 39+23.12
e = 1%
V = 20 MPH

UNKNOWN OWNER
Recorded Gap In Property Created By:
PB 1 PG 63
(Going To North Side Of Roanoke River),
PB 13 PG 81
(Going To Center of Roanoke River)
And PB 7, PG 2
(Going To South Side Of Roanoke River

CITY OF SALEM, VIRGINIA
Inst.# 130000718
PB 13 PG 81
6.3052 AC.
TAX MAP# 278-1-5

LEGEND

- Denotes Proposed Asphalt Pavement
- Denotes Proposed Concrete
- Denotes Demolition of Pavement
- Denotes Temporary Easement
- Denotes Permanent Easement
- C — Denotes Construction Limits in Cuts
- F — Denotes Construction Limits in Fills

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Existing Utility and Drainage Information	1F(1)
Typical Sections	2A(1)
Timber Fence Detail	2F
Greenway Profile	7A
E&S Control Plan	7B

SCALE 0 25' 50'

PROJECT	SHEET NO.
RRGW-129-257	7

6/24/2024

N:\20176-002\00 Design (11)9562\dll9562007a.dgn 2:46:43 PM 0.08333333 ft / In. 35x23 (In.) K:\Design Ald\Printing\Pen Tables\25 Scale.tbl \\estla\library\Design Ald\Printing\Plot Drivers\RDA LD PDF File Generator.pltcfg
Plotted by: swhitehead

PROJECT MANAGER HDR, VDOT, PM: Chris. Eggleston, (757) 925-2689
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022
DESIGN BY Blick, Delong, P.E., Rinker, Design, Associates, P.C., (804) 612-0665
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

ANDREW KNOWLTON
Lic. No. 056378
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:54:07-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

AARON DELONG
Lic. No. 061662
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

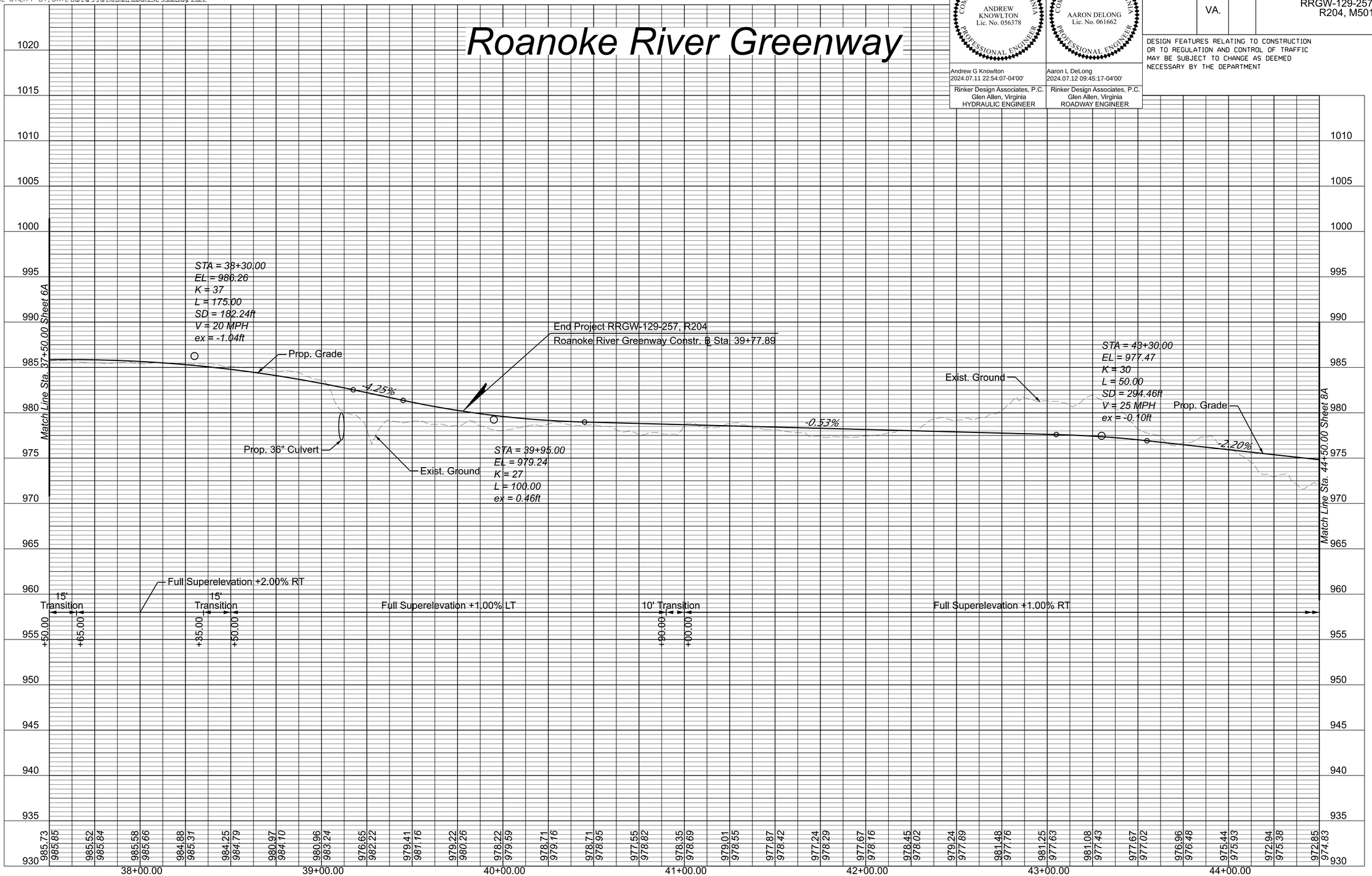
Aaron L DeLong
2024.07.12 09:45:17-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
06/07/24	VA.		RRGW-129-257 R204, M501	7A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Roanoke River Greenway



1" = 25' (HOR.), 1" = 5' (VERT.)	PROJECT RRGW-129-257	SHEET NO. 7A

6/24/2024

PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _____
DESIGN BY Blck. Delong, P.E., Rinker Design Associates, P.C., (804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

Erosion and Sediment Control Plan

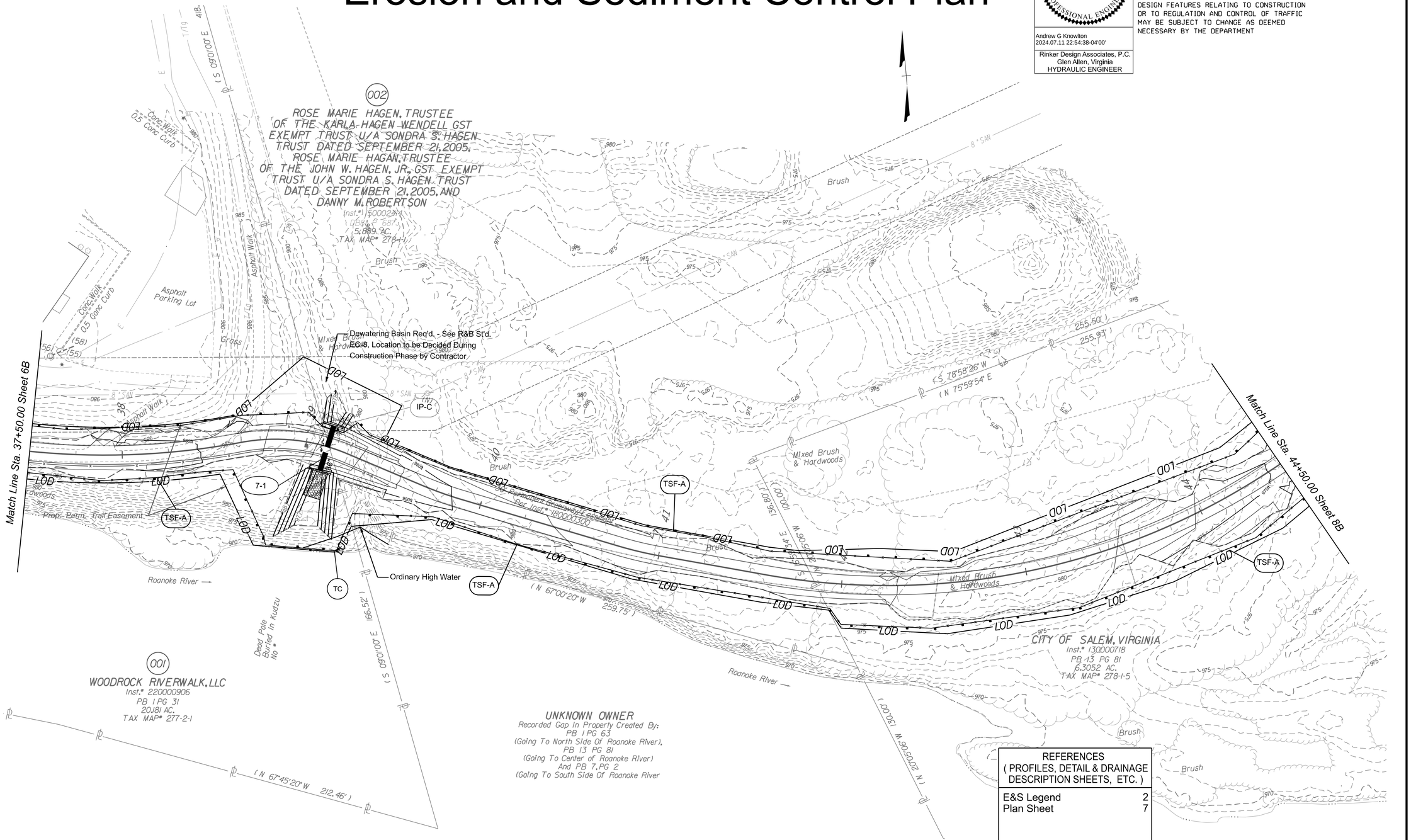
COMMONWEALTH OF VIRGINIA
ANDREW KNOWLTON
Lic. No. 056378
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:54:38-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
01/11/24 02/08/24	VA.		RRGW-129-257 R204, M501	7B

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
E&S Legend	2
Plan Sheet	7

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	7B

6/24/2024

PROJECT MANAGER_HDR VDOT PM:Chris Eggleston (540) 278-2405
SURVEYED BY, DATE Hurt & Proffitt, Inc., (800) 242-4906, July 2022
DESIGN BY Blick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665
SUBSURFACE UTILITY BY, DATE Hurt & Proffitt, Inc., (800) 242-4906, July 2022

[00.00'] PROP. PERM. EASEMENT — Figures In Brackets And Dot - Dashed Lines Denote Perm. Easement

(00.00') PROP. TEMP. EASEMENT — Figures In Parenthesis And Dot - Dot - Dashed Lines Denote Temp. Constr. Easement & Temp. Utility Easement

(N=400000.000) (E=2000000.000) VDOT Project Coordinate

N=3000000.000 E=10000000.000 VA State Plane, South Zone Coordinate

Temp.	Temporary	R/W	Right Of Way
Ip	Property Corner	Prop.	Proposed
Constr.	Construction	Perm.	Permanent
Esmt.	Easement		
BL	Baseline		

ROSE MARIE HAGEN, TRUSTEE
OF THE KARLA HAGEN WENDELL GST
EXEMPT TRUST U/A SONDRA S. HAGEN
TRUST DATED SEPTEMBER 21, 2005,
ROSE MARIE HAGAN, TRUSTEE
(002) OF THE JOHN W. HAGEN, JR., GST EXEMPT
TRUST U/A SONDRA S. HAGEN TRUST
DATED SEPTEMBER 21, 2005, AND
DANNY M. ROBERTSON
Inst.# 150002414
DB81, P 687
5.889 AC.
TAX MAP# 278-1-1

	Proposed Right-Of-Way	Temporary Constr. Esmt.	Proposed Permanent Trail Esmt.	Proposed Drainage Esmt.	Proposed VDOT Utility Esmt.
001	---------	21,930 SF	1.353 AC	961 SF	2,892 SF
002	---------	---------	1,607 SF	---------	---------

(S 09°01'00" E 418.56') 1242.00' (N 08°32'00" W)

[45.23'] [-93.66]

PRC 38+64.55

PT 39+23.12

[35.30'] [-39.92]

[15.00'] [-64.55]

[15.00'] [-38.65]

PC 39+66.74

PT 39+89.04

[15.00'] [-50.73]

S62°06'15"E

Prop. Perm. Trail Easement

[35.23'] [-40.22]

[15.33'] [-77.89]

30' Permanent Greenway Easement Per Inst.# 180000300

S68°29'34"E

PC 40+77.99

PT 41+00.29

PC 41+58.37

S74°52'53"E

[55.71'] [-61.18]

[50.86'] [-39.26]

Match Line Sta. 37+50.00 Sheet 6RW

(N=3,624,463.911') (E=11,038,594.454') N=3,624,118.282' E=11,037,541.814'

PI = 38+05.34
DELTA = 17°05'28.82" (LT)
D = 14°19'26"
T = 60.11'
L = 119.32'
R = 400.00'
PCC = 37+45.23
PRC= 38+64.55

PI = 38+94.70
DELTA = 33°33'19.95" (RT)
D = 57°17'45"
T = 30.15'
L = 58.57'
R = 100.00'
PRC = 38+64.55
PT = 39+23.12

PI = 39+77.90
DELTA = 06°23'19.00" (LT)
D = 28°38'52"
T = 11.16'
L = 22.30'
R = 200.00'
PC = 39+66.74
PT = 39+89.04

(001)

WOODROCK RIVERWALK, LLC
Inst.# 220000906
PB 1 PG 31
20.181 AC.
TAX MAP# 277-2-1

(N 67°45'20" W 212.46')

(S 26°14'40" E 100.00')

UNKNOWN OWNER
Recorded Gap In Property Created By:
PB 1 PG 63
(Going To North Side Of Roanoke River),
PB 13 PG 81
(Going To Center of Roanoke River)
And PB 7, PG 2
(Going To South Side Of Roanoke River

Roanoke River Greenway Constr. ℄

(N 67°00'20" W 259.75')

(S 20°05'06" E 150.00')

(S 78°58'26" W 255.50') (N 75°59'54" E 255.93')

(S 16°59'34" E 56.80') (S 20°05'06" W 100.00') (N 20°05'06" W 150.00')

PI = 40+89.15
DELTA = 06°23'19.00" (LT)
D = 28°38'52"
T = 11.16'
L = 22.30'
R = 200.00'
PC = 40+77.99
PT = 41+00.29

PI = 43+45.37
DELTA = 53°00'26.37" (LT)
D = 15°16'44"
T = 187.00'
L = 346.93'
R = 375.00'
PC = 41+58.37
PT = 45+05.31

(N=3,624,398.663') (E=11,039,266.059') N=3,624,053.041' E=11,038,213.355'

Match Line Sta. 44+50.00 Sheet 8RW

CITY OF SALEM, VIRGINIA
Inst.# 130000718
PB 13 PG 81
6.3052 AC.
TAX MAP# 278-1-5

COMMONWEALTH OF VIRGINIA
CHRISTOPHER B. KAKNIS
Lic. No. 2359
LAND SURVEYOR

Christopher B Kaknis
2024.02.09 13:23:55-05'00'

HURT AND PROFFITT
Blacksburg, Virginia
LICENSED SURVEYOR

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24 02/08/24	VA.		RRGW-129-257 RW-204, C-501	7RW

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

General Notes:
1. This Right Of Way Sheet Represents A Field Run Perimeter Survey Of The Proposed Limits. All Other Adjoining/Departing Boundary Lines Shown Are Compiled From Various Sources, Found Field Monumentation, Metes And Bounds Descriptions, And Recorded Plats. The Adjoining Lines Do Not Represent A Field Run Survey of The Adjoining Properties And Are A Best Fit Based On Compiled Data. All Areas Shown For Easements Are Approximate Only.
2. The Property Line Information Shown On This Plan Sheet Is Compiled From Record Data And Limited Field Measurements. This Compiled Map Of Record Parcels Does Not Represent A Boundary Survey.
3. This Compiled Plan Sheet Was Assembled Without The Benefit Of Title Reports Which May Affect The Properties Shown Hereon.
4. Proposed Easements Are Derived From Design Files Provided By RDA.
5. Survey Datum Based On VDOT Project RRGW-129-257, PW-204, C-501.
6. No Cemetery Sites Were Observed On The Subject Shown On This Plan Sheet. This Does Not Preclude Their Existence.
7. This Plan Sheet (7RW) Represents The Proposed Easement Computations for Parcels 001 And 002 Only.
8. All Proposed Proposed Easement Offset/Stations & Existing Monumentation Station/Offsets Are Based Off Of The Construction Baseline Shown Hereon.

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	7RW

PROJECT MANAGER _HDR, VDOT- PM: Chris. Eggleston. (757) 925-2689 _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _ _ _ _ _ _
DESIGN BY Blick, Delong, P.E., Rinker Design Associates, P.C. (804) 612-0665 _ _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

8-1 16' - 30" Class IV Concrete Pipe Req'd. (1' Cover) (30° Skew)
Silt-Tight Joint Type
Inv.(in)= 971.20 Inv.(out)= 971.05
2 St'd. ES-1 (30") with Anchor Blocks Req'd.
6.3 SY St'd. EC-1 Class I Req'd. Type A Installation

8-3 1 St'd DI-5 Grate Req'd. Type III Grate Req'd.
St'd. PG-3 Type 1 Class A1 Req'd.
H=3.0', Inv.=986.20, Top = 989.20
St'd. IS-1 Req'd.
Connect to Existing Pipe

8-3 8-4 46' - 15" Storm Sewer PIpe Req'd. (2' Cover)
Silt-Tight Joint Req'd.
Inv.(in)= 986.20 Inv.(out)= 986.00

8-4 1 St'd. EW-1 (15") Req'd.
Inv. = 986.00
1.6 SY St'd. EC-1 Class A1 Req'd. Type A Installation

ANDREW KNOWLTON Lic. No. 056378 COMMONWEALTH OF VIRGINIA PROFESSIONAL ENGINEER
Andrew G Knowlton 2024.07.11 22:55:07-04'00'
Rinker Design Associates, P.C. Glen Allen, Virginia HYDRAULIC ENGINEER

AARON DELONG Lic. No. 061662 COMMONWEALTH OF VIRGINIA PROFESSIONAL ENGINEER
Aaron L DeLong 2024.07.12 09:45:43-04'00'
Rinker Design Associates, P.C. Glen Allen, Virginia ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24 06/07/24	VA.		RRGW-129-257 R204, M501	8

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Match Line Sta. 44+50.00 Sheet 7

ROSE MARIE HAGEN, TRUSTEE OF THE KARLA HAGEN WENDELL GST EXEMPT TRUST U/A SONDRA S. HAGEN TRUST DATED SEPTEMBER 21, 2005, ROSE MARIE HAGAN, TRUSTEE OF THE JOHN W. HAGEN, JR. GST EXEMPT TRUST U/A SONDRA S. HAGEN TRUST DATED SEPTEMBER 21, 2005, AND DANNY M. ROBERTSON
Inst.# 150002414
DB81, P 651
5.889 AC.
TAX MAP# 278-1-1

DARLENE C. WILEY
Inst.# W2100001511
PB 5 PG 98
2.183 AC.
TAX MAP# 278-1-4.2

DARLENE C. WILEY
Inst.# W2100001511
PB 5 PG 98
1.443 AC.
TAX MAP# 278-1-4

D & S DEVELOPMENT, LLC
Inst.# 050001900
PB 5 PG 92
3.139 AC.
TAX MAP# 278-1-2

E3MAGAPP LLC
Inst.# 220000696
PB 5 PG 92
0.605 AC.
TAX MAP# 278-1-4J

CITY OF SALEM, VIRGINIA
Inst.# 130000718
PB 13 PG 81
6.3052 AC.
TAX MAP# 278-1-5

BBMW LAND COMPANY, L.C.
DB 230 PG 12
PB 3 PG 5
9.02 AC.
TAX MAP# 279-1-3

PT 45+05.31
PC 46+15.77
PT 46+44.28
PC 46+82.60
PRC 47+76.44
PT 49+30.16
PC 51+44.71
PT 51+91.06
PT 110+25.06

PI = 46+30.12
DELTA = 16°20'03.76" (RT)
D = 57°17'45"
T = 14.35'
L = 28.51'
R = 100.00'
PC = 46+15.77
PT = 46+44.28
e = 1% (RC)
V = 20 MPH

PI = 47+33.30
DELTA = 53°45'55.04" (LT)
D = 57°17'45"
T = 50.69'
L = 93.84'
R = 100.00'
PC = 46+82.60
PRC = 47+76.44
e = 1%
V = 20 MPH

PI = 108+60.80
DELTA = 14°13'36.43" (RT)
D = 04°18'29"
T = 165.98'
L = 330.24'
R = 1,330.00'
PC = 106+94.82
PT = 110+25.06
V = 35 MPH

PI = 48+53.91
DELTA = 17°36'54.53" (RT)
D = 11°27'33"
T = 77.47'
L = 153.72'
R = 500.00'
PRC = 47+76.44
PT = 49+30.16
e = 1% (RC)
V = 30 MPH

PI = 51+68.77
DELTA = 37°56'17.51" (RT)
D = 81°51'04"
T = 24.06'
L = 46.35'
R = 70.00'
PC = 51+44.71
PT = 51+91.06
e = 1% (RC)
V = 16 MPH

Apperson Drive Constr. ℄
Apperson Drive (Route 11)
Roanoke River Greenway Constr. ℄
Roanoke River Greenway Constr. ℄ Sta. 51+91.06
End Project RRGW-129-257, P101, M501
Prop. Lockable Bollard Req'd.
Do Not Disturb Existing Sanitary Sewer Manhole
Existing Guardrail To Be Removed
Existing Pipe To Be Removed
St'd. PG-3 Type I Class A1
St'd. CG-2 Req'd.
St'd. CG-12, Ty. B Req'd.
Full Depth Saw Cut Req'd.
R=30'
8-1
Ditch 7
Ditch 8
Bollard x4
Metal GuardRail
Concr. Block Retaining Wall
Metal Storage Units
Black Ruins
Roanoke River
Conc. Bridge Deck
Sta. ±1800
S52°07'25"E
10' Shared Used Path
Gravel/Soil Road
Mixed Brush & Hardwoods
Asphalt
Grass
0.5 Conc Curb
Conc. Walk
1 Sty. Metal Bldg. "Commonwealth Home Health Care, Inc." ±1900
40' Sanitary Sewer Easement Per DB 45 PG 227 And PB 5 PG 92
40' Sanitary Sewer Easement Per DB 42 PG 549 And PB 13 PG 81
Existing RW Per PB 5 PG 92
Existing RW Per PB 13 PG 81
Undergroud Telephone Line
Guy Wire
Conc. Dumpster Pad
±3850-2456
Bollard x3
Security Key Post
0.5 Conc Curb
Automatic Gate
Shrubs
8" Japanese Maple
Metal Sign
Asphalt Ditch
10" Japanese Maple
±1082
J 3856-2467 50
Mailbox x3
No ±s
±3869-2457
Metal Sign
Metal Sign
6' Chain Link Fence
Conc.
Utility Pole
Brush
Tree & Hardwoods
(S 24°0...
(N 26°16'...
(N 88°56'40" E 259.42')
(S 75°59'54" W 225.55')
(N 75°59'54" E 225.12')
N52°06'40"E
(S 33°13'34" W 181.40')
(S 33°13'34" W 48.63')
(N 33°13'34" E 484.00')
(S 33°13'34" W 240.00')
N32°17'44"E
(S 28°46'51" W 71.06')
(S 06°46'26" E 63.00')
(S 56°46'26" E 63.00')
(S 10°36'08" E 75.73')
±3846-2492
±3846-2495
±3856-2467
±3869-2457
48
49
50
51
111
112

LEGEND
- Denotes Proposed Asphalt Pavement
- Denotes Proposed Concrete
- Denotes Demolition of Pavement
- Denotes Temporary Easement
- Denotes Permanent Easement
- C Denotes Construction Limits in Cuts
- F Denotes Construction Limits in Fills

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Demolition Summary	1C
Existing Utility and Drainage Information	1F(1)
Typical Sections	2A(1)
Parking Lot Layout Plan	2F(1)
Greenway Profile	8A
E&S Control Plan	8B

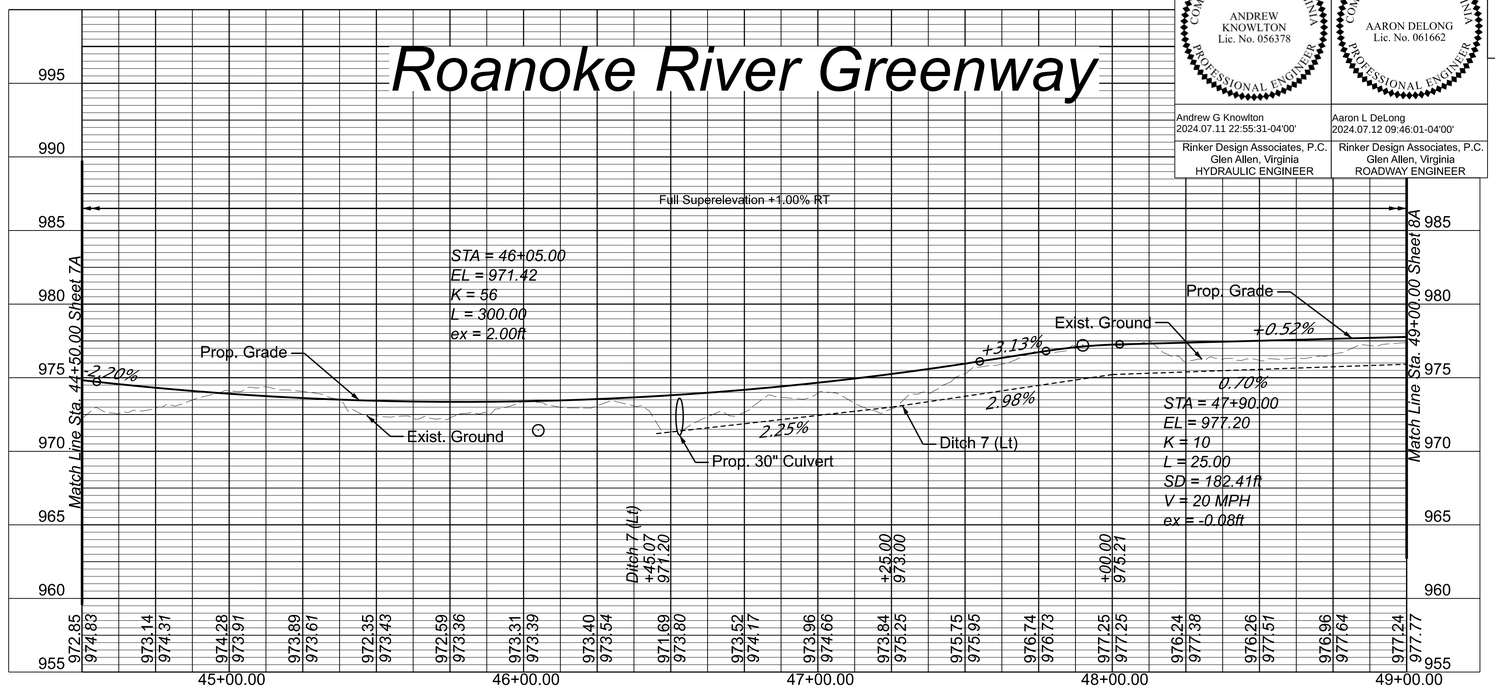
SCALE 0 25' 50'

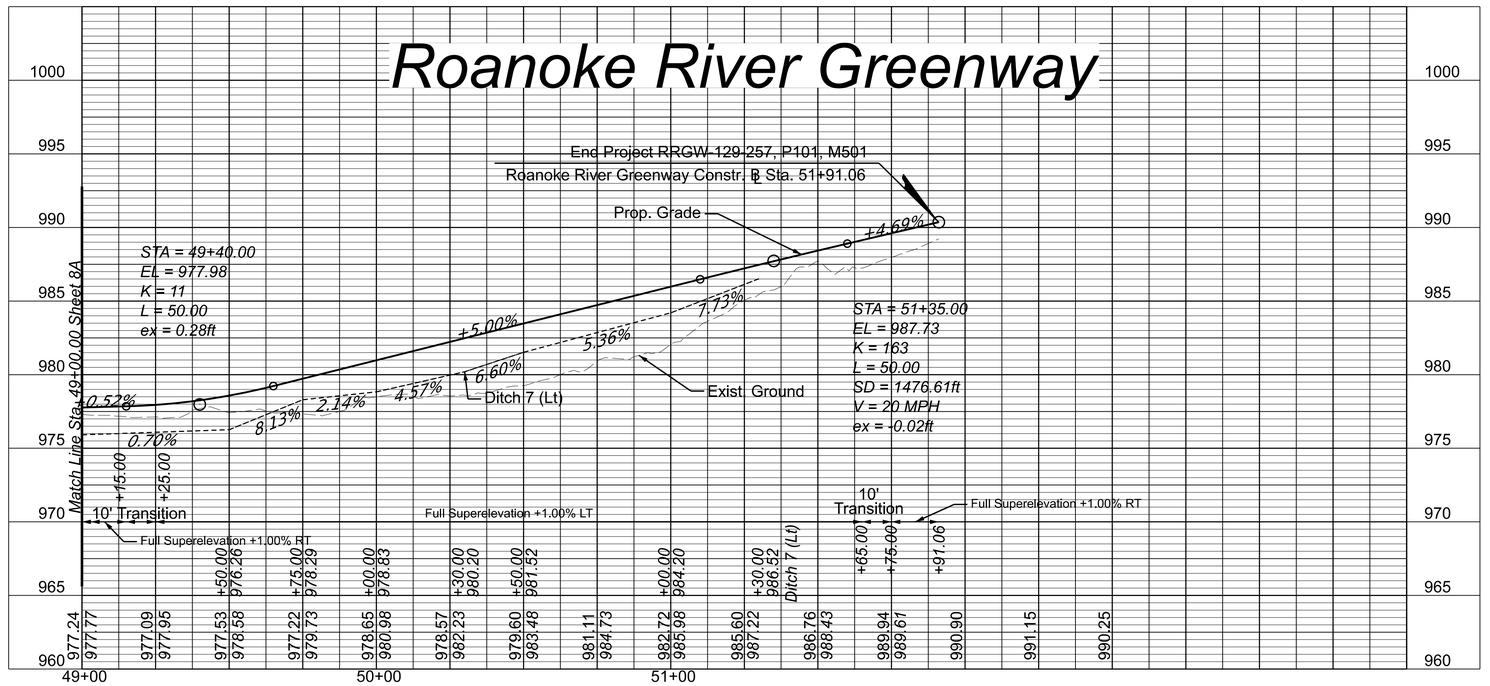
PROJECT	SHEET NO.
RRGW-129-257	8

6/24/2024

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Plotted by: swhitehead

PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022 _____
DESIGN BY Blick, Delong, P.E., Rinker, Design, Associates, P.C. (804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022





ANDREW KNOWLTON
Lic. No. 056378
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:55:31-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

AARON DELONG
Lic. No. 061662
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Aaron L DeLong
2024.07.12 09:46:01-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
06/07/24	VA.		RRGW-129-257 R204, M501	8A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

1" = 25' (HOR.), 1" = 5' (VERT.)	PROJECT	SHEET NO.
	RRGW-129-257	8A

6/24/2024

PROJECT MANAGER _HDR, VDOT_ PM: Chris. Eggleston. (757) 925-2689 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _____
DESIGN BY Blick, Delong, P.E., Rinker, Design, Associates, P.C. (804) 612-0665 _____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Erosion and Sediment Control Plan

COMMONWEALTH OF VIRGINIA
ANDREW KNOWLTON
Lic. No. 056378
PROFESSIONAL ENGINEER

Andrew G Knowlton
2024.07.11 22:56:01-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24 06/07/24	VA.		RRGW-129-257 R204, M501	8B

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Match Line Sta. 44+50.00 Sheet 7B

ROSE MARIE HAGEN, TRUSTEE OF THE KARLA HAGEN WENDELL GST EXEMPT TRUST U/A SONDRA S. HAGEN TRUST DATED SEPTEMBER 21, 2005, ROSE MARIE HAGEN, TRUSTEE OF THE JOHN W. HAGEN, JR. GST EXEMPT TRUST U/A SONDRA S. HAGEN TRUST DATED SEPTEMBER 21, 2005, AND DANNY M. ROBERTSON
(Inst.* 150002414)
5.889 AC.
TAX MAP* 278-1-1

DARLENE C. WILEY
Inst.* W21000015I
PB 5 PG 98
2.183 AC.
TAX MAP* 278-1-4.2

DARLENE C. WILEY
Inst.* W21000015I
PB 5 PG 98
1.443 AC.
TAX MAP* 278-1-4

D & S DEVELOPMENT, LLC
Inst.* 050001900
PB 5 PG 92
3.139 AC.
TAX MAP* 278-1-2

E3MAGAPP LLC
Inst.* 220000696
PB 5 PG 92
0.605 AC.
TAX MAP* 278-1-4J

CITY OF SALEM, VIRGINIA
Inst.* 130000718
PB 13 PG 81
6.3052 AC.
TAX MAP* 278-1-5

BBMW LAND COMPANY, L.C.
DB 230 PG 12
PB 3 PG 5
9.02 AC.
TAX MAP* 279-1-3

40' Sanitary Sewer Easement Per DB 45 PG 221 And PB 5 Pg 92

40' Sanitary Sewer Easement Per DB 549 And PG 42 PB 13 PG 81

Existing Private RW Per PB 5 PG 92

Existing RW Per PB 5 PG 92

Existing RW Per PB 13 PG 81

Roanoke River

1 Sty. Metal Bldg. "Commonwealth Home Health Care, Inc." #1900

Conc. Bridge Deck

Std. PG-3 Type I Class A1

Existing Pipe To Be Removed

Ditch 7

Ditch 8

Metal Storage Units

Metal Guardrail

Gravel/Soil Road

Asphalt

Conc. Walk

Conc. Sidewalk

Mixed Brush & Hardwoods

Block Ruins

Grass/

Shrubs

Automatic Gate

Guy W

Underground Telephone Line

Metal Sign

Asphalt Ditch

Mailbox x3

Bollard x4

Bollard x3

Security Key Post

0.5 Conc Curb

6' Chain Link Fence

Utility Pole

Inlet

Conc.

Sic. #1800

(S 33°13'34" W 240.00')

(N 33°13'34" E 240.00')

(S 88°46'51" W 71.06')

(S 06°46'26" E 63.00')

(N 88°56'40" E 259.42')

(S 30°55'18" W

(S 10°36'02" E 75.73')

(N 75°59'54" E 225.12')

(S 75°59'54" W

(S 23°40'00" W 26.16')

(08)

(07)

(03)

(04)

(05)

(06)

(01)

(02)

(U)

(T)

(P)

*3846-2442

*3850-2456

*1082 / 3856-2467

*3869-2457

*1800

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

E&S Legend	2
Plan Sheet	8

SCALE 0 25' 50'

PROJECT	SHEET NO.
RRGW-129-257	8B

6/24/2024

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Plotted by: swhitehead

PROJECT MANAGER _HDR, VDOT_ PM:Chris. Eggleston. (757) 925-2689 _ _ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt,Inc., (800).242-4906,July. 2022_ _ _ _ _ _ _
DESIGN BY Blick, Delong, P.E.,Rinker_Design. Associates,P.C.(804) 612-0665_ _ _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc., (800).242-4906,July. 2022

Storm Sewer Profiles

COMMONWEALTH OF VIRGINIA
ANDREW KNOWLTON
Lic. No. 056378
PROFESSIONAL ENGINEER

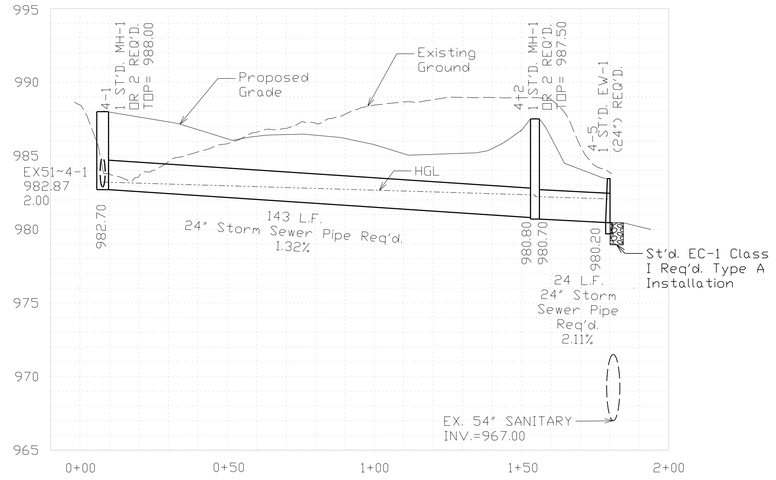
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Rinker Design Associates, P.C.
Glen Allen, Virginia
HYDRAULIC ENGINEER

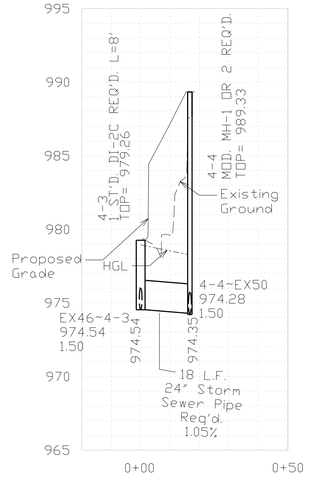
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	9

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

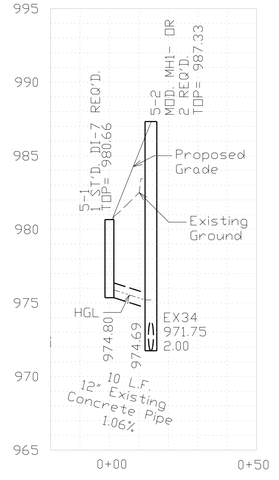
Storm Sewer Profile 4-1 to 4-2



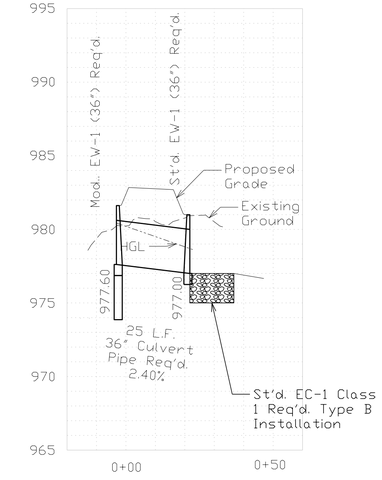
Storm Sewer Profile 4-3 to 4-4



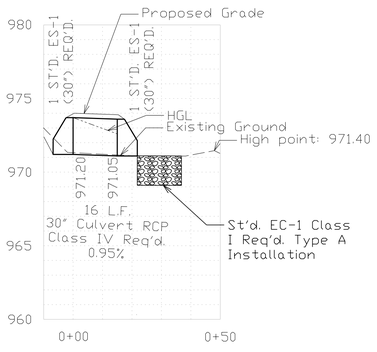
Storm Sewer Profile 5-1 to 5-2



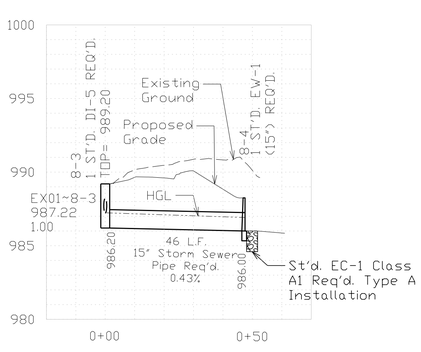
Culvert 7-1 Profile



Culvert 8-1 Profile



Storm Sewer Profile 8-3 to 8-4



ALLOWABLE TYPE OF STORM SEWER PIPE (UNLESS OTHERWISE SHOWN IN DRAINAGE DESCRIPTIONS) (SEE ROAD AND BRIDGE STANDARD PC-1 FOR HEIGHT OF COVER LIMITATIONS FOR EACH TYPE)

LOCATION	CONCRETE	ALUMINUM COATED TYPE 2 STEEL SPIRAL RIB	POLYMER COATED (10/10) CORRUGATED STEEL SPIRAL RIB	POLYMER COATED (10/10) CORRUGATED STEEL DOUBLE WALL (SMOOTH INTERIOR)	ALUMINUM SPIRAL RIB	POLYVINYLCHLORIDE (PVC) RIBBED PIPE (SMOOTH INTERIOR)	POLYETHYLENE (PE) CORRUGATED TYPE S	POLYPROPYLENE (PP) TYPE D OR S
ROANOKE RIVER GREENWAY	X			X		X	X	X

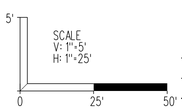
ALLOWABLE TYPE OF PIPE CULVERT (UNLESS OTHERWISE SHOWN IN DRAINAGE DESCRIPTIONS) (SEE ROAD AND BRIDGE STANDARD PC-1 FOR HEIGHT OF COVER LIMITATIONS FOR EACH TYPE)

LOCATION	CONCRETE	ALUMINUM COATED TYPE 2 CORRUGATED STEEL	POLYMER COATED (10/10) CORRUGATED STEEL	UNCOATED GALVANIZED CORRUGATED STEEL	GALVANIZED STEEL STRUCTURAL PLATE	GALVANIZED STEEL STRUCTURAL PLATE WITH THICKENED INVERT	CORRUGATED ALUMINUM ALLOY	CORRUGATED ALUMINUM ALLOY STRUCTURAL PLATE	POLYVINYLCHLORIDE (PVC) RIBBED PIPE (SMOOTH INTERIOR)	POLYETHYLENE (PE) CORRUGATED TYPE C	POLYETHYLENE (PE) CORRUGATED TYPE S	POLYPROPYLENE (PP) TYPE D OR S
ROANOKE RIVER GREENWAY	X	X	X			X	X	X	X	X	X	X

Outlet Protection Dimensions
(Per VDOT R&B Standard EC-1)

Structure Number	Length	Width	Thickness	Slope
4-2	6.00'	6.00'	2.0'	0%
7-1	15.00'	9.00'	2.0'	0%
8-1	7.50'	7.50'	1.5'	0%
8-4	3.75'	3.75'	1.5'	0%

A lining of engineering filter fabric to be placed between riprap and underlying soil surface.



Legend
- DENOTES PROP. GRADE
- DENOTES EXIST. GROUND
- DENOTES HGL
- DENOTES EX. STR. OR PIPE

	PROJECT	SHEET NO.
	RRGW-129-257	9

6/24/2024

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Plotted by: swhitehead

PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	10(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Signage and Pavement Marking General Notes, Legend, and Index of Sheets

PLAN ITEM	PLAN SYMBOL	
	PROPOSED	EXISTING
Single Post Sign Support	●	○

SIGN CALL-OUTS

Existing Sign to Remain

Existing Sign to be Reset or Relocated

Existing Sign to be Removed

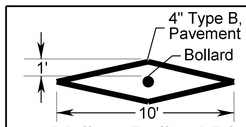
Proposed Sign Panel

Line Indicating Existing Sign Location

Line Indicating Proposed/Relocated Sign Location

PAVEMENT MARKING LEGEND

- Ⓐ Denotes Type B Class I - Yellow, 4" Width, Double Line, 4" Spacing
- Ⓑ Denotes Type B Class I - White, 24" Width
- Ⓒ Denotes Type B Class I - White, 4" Width
- Ⓓ Denotes Type B Class I - Yellow, 4" Width
- Yellow Bollard Diamond Pavement Marking



Yellow Bollard Diamond Pavement Marking Detail

Index of Sheets

Sheet No.	Sheet Description
10(1)	Index of Sheets
10(2A)	Sign Schedule & Signing & Pavement Marking Summary
10(2B)	Sign Details
10(3)	Signage & Pavement Marking Plans
10(4)	Signage & Pavement Marking Plans
10(5)	Not Used
10(6)	Not Used
10(7)	Not Used
10(8)	Signage & Pavement Marking Plans
10(9)	Signage & Pavement Marking Plans

SIGN LABELS

Proposed Sign Assemblies

Denotes Sign Assembly No. — 2808 / 3 — Denotes Text No.

Relocated Sign Assemblies

Denotes Sign Assembly No. — 2808 / 3 — Denotes Text No.

Sign Relocation or Payable Sign Disposal/Salvage

Denotes Existing Sign Structure and/or Sign Panel Type — GM / A — Denotes Action and Measurement & Payment Item

STRUCTURE & SIGN PANEL	SIGN PANEL
GM - Ground Mounted	SP-GM - Ground Mounted Sign Panel
OM - Overhead Mounted	SP-OH - Overhead Mounted Sign Panel
CM - Cantilever Mounted	

	STRUCTURE ONLY
A - Remove & Dispose	ST-GM - Ground Mounted
B - Remove & Salvage	
C - Relocate	
D - Overlay Sign Panel	

General Notes - Signing

1. All existing signs are to remain unless otherwise noted.
2. Signs are to be installed within R/W or easement.
3. All underground and overhead utilities and locations shown on these plans are approximate only and may not be accurate. At least 72 hours prior to beginning signing work, the Contractor shall contact "Miss Utility of Virginia" at 1-800-552-7001 in order to determine the extent and location of all underground utilities within the project limits.

   If the Contractor perceives a conflict between utilities and the proposed traffic signing equipment, the Contractor shall notify the Engineer immediately so that the conflict may be reviewed.
4. Sign locations are to be staked by the Contractor and approved by the Engineer prior to installation.
5. Unless otherwise approved by the Engineer, existing traffic signs which are to be removed shall remain in place until the new sign post and critical sign message are in place.
6. Existing signs within the project limits that contain Advance Warning information for a condition that is outside of the project limits are to be evaluated and updated as needed for the current condition as directed by the Engineer.
7. Existing signs that are impacted during construction (removed, damaged, etc.) that are outside of the design area or not specifically accounted for, shall be reinstalled or replaced by the Contractor and shall be considered incidental.

General Notes - Pavement Marking

1. All existing pavement markings that conflict with proposed markings shall be eradicated as directed by the Engineer.
2. All proposed pavement markings shall tie into the existing markings at the limit of the proposed pavement markings.
3. Pavement markings on existing pavement are to remain unless noted on the plans. Existing pavement markings shown outside the limits of new markings are approximate and are shown for reference only.
4. All message markings shall be preformed thermoplastic unless otherwise indicated on the plans.

PROJECT	SHEET NO.
RRGW-129-257	10(1)

6/24/2024

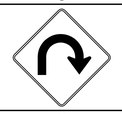
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Plotted by: wdelong

PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _____
DESIGN BY Blck Delong, P.E. Bibker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	10(2A)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Signage Schedule

TEXT NO.	SIGN ASSEMBLY NO(s).	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD ST'D.	PANEL SIZE W	PANEL SIZE H	QTY.	SIGN PANEL AREA (s.f.): per ASSEMBLY	SIGN PANEL AREA (s.f.): ALL ASSEM-BLIES	PROP. SIGN STRUCTURE ST'D.	REMARKS
1	401, 403		W1-5R	18"	18"	2	2.25	4.5	STP-1 TYPE E 2 1/2" 12 GA	
2	402, 406		W12-2	18"	18"	2	2.25	4.5	STP-1 TYPE E 2 1/2" 12 GA	
3	404		W1-11R	18"	18"	1	2.25	2.25	STP-1 TYPE E 2 1/2" 12 GA	
4	405		W1-11L	18"	18"	1	2.25	2.25	STP-1 TYPE E 2 1/2" 12 GA	
5	801		N.S.	18"	24"	1	3	3	STP-1 TYPE E 2 1/2" 12 GA	SEE SHEET 10(2B) FOR SIGN FIGURE DETAILS
6	802		R1-1	18"	18"	1	2.25	2.25	STP-1 TYPE E 2 1/2" 12 GA	

TEXT NO.	SIGN ASSEMBLY NO(s).	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD ST'D.	PANEL SIZE W	PANEL SIZE H	QTY.	SIGN PANEL AREA (s.f.): per ASSEMBLY	SIGN PANEL AREA (s.f.): ALL ASSEM-BLIES	PROP. SIGN STRUCTURE ST'D.	REMARKS
7	803		OM3-R	12"	36"	1	3	3	STP-1 TYPE E 2 1/2" 12 GA	
8	804		R5-3	24"	24"	1	4	4	STP-1 TYPE E 2 1/2" 12 GA	
9	805		I-V9	-	-	-	-	-	STP-1 TYPE E 2 1/2" 12 GA	
10	806		N.S.	-	-	-	-	-	STP-1 TYPE E 2 1/2" 12 GA	
11	901, 902		W11-1 W11-VP2	30" 30"	30" 12"	2 2	6.25 2.5	12.5 5	STP-1 TYPE E 2 1/2" 12 GA	W11-1 SIGN AND RELATED SUPPLEMENTAL PLAQUE SHALL HAVE A FLUORESCENT YELLOW-GREEN BACKGROUND WITH A BLACK LEGEND AND BORDER.

Signage and Pavement Marking Summary

TCD Discipline																	
Summary Notes																	
Item Description	Sign Panel	Remove Existing 1 Post Sign Structure	Sign Post STP-1, 2 1/2", 12 Gauge	Concrete Sign Foundation STP-1, Type E	Type B Class I Pavement Line Marking 4"	Type B Class I Pavement Line Marking 24"	Relocate Existing 1 Post Ground Mounted Sign Panel	Remove Existing Bollard									
ITEM NO.	701SD20-0001	700SD20-0003	700SD20-0037	700SD20-0042	704SD20-0006	704SD20-0010	700SD20-0012	510SX20-0040									
UNIT	SF	EA	LF	EA	LF	LF	EA	EA									
SHEET NO.																	
10(3)		1						1									
10(4)	13		50	6	753												
10(8)	13		59	6	20	5	2										
10(9)	18		23	2													
TOTAL	44	1	132	14	773	5	2	1									

7/22/2024

	PROJECT	SHEET NO.
	RRGW-129-257	10(2A)

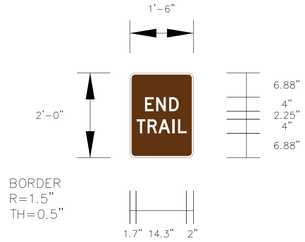
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_ _ _ _ _
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _ _ _ _ _
DESIGN BY Bick Delong, P.E. Bibber Design Associates, P.C. (804) 612-0665 _ _ _
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	10(2B)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Signage Details

SIGN DETAIL
1:75



SIGN NUMBER	name
WIDTH x HGHT.	1'-6" x 2'-0"
BORDER WIDTH	0.5"
CORNER RADIUS	1.5"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Brown
LEGEND&BORDER	TYPE: Reflective
	COLOR: White&White

SYMBOL	ROT	X	Y	WID	HT

Panel Style: guide_con_recreational.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																				LENGTH	SERIES-SIZE
E	N	D																			D 2000
4.44	7.6	11.28																		10.56	4
T	R	A	I	L																	D 2000
1.9	4.98	8.02	12.02	13.62																15.1	4

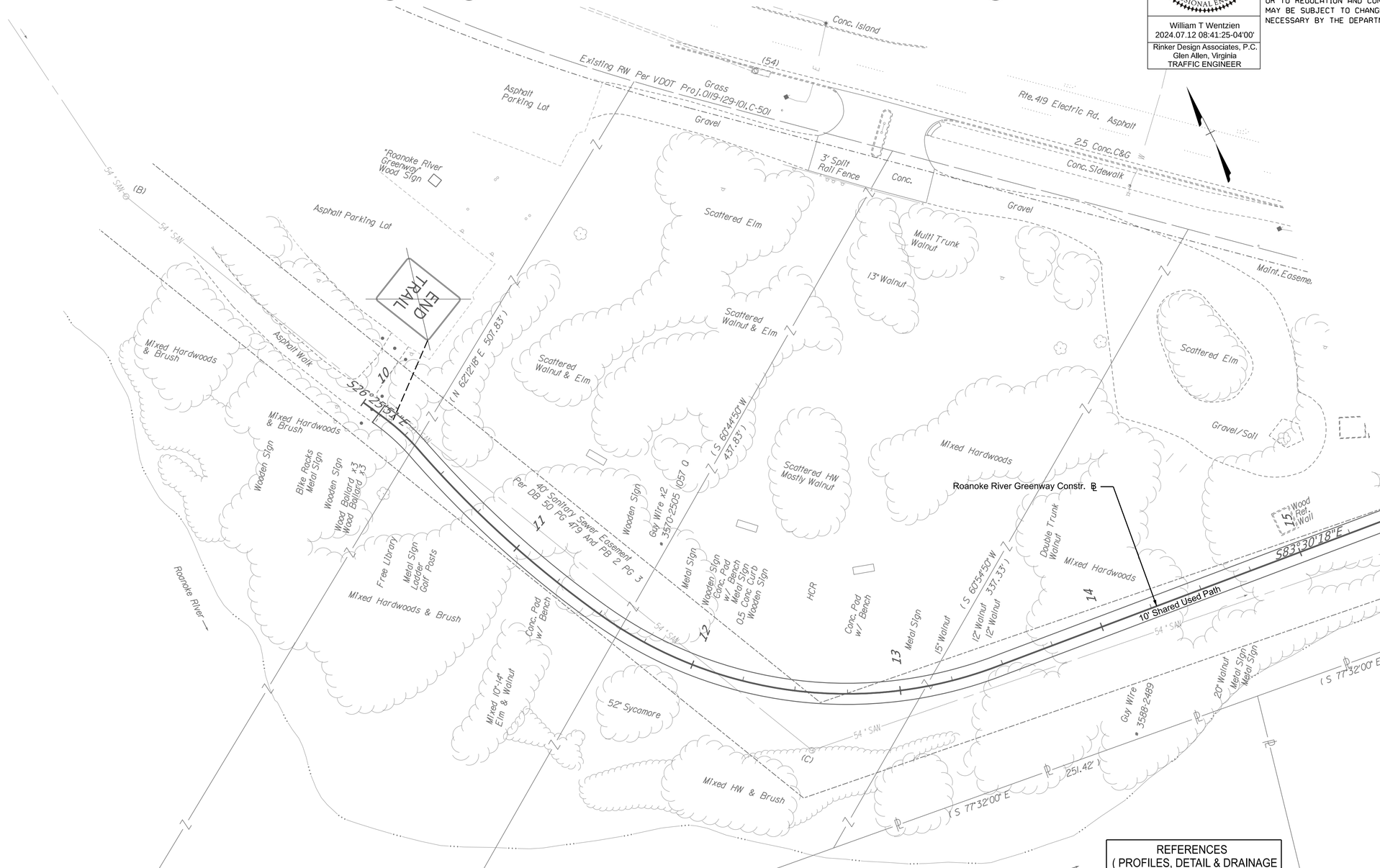
6/24/2024

Not to Scale	PROJECT RRGW-129-257	SHEET NO. 10(2B)

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Plotted by: swhitehead

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Signage and Pavement Marking Plan



WILLIAM T. WENTZIEN, II
Lic. No. 038162
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

William T Wentzien
2024.07.12 08:41:25-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	10(3)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Greenway Plan Sheet	3

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	10(3)

6/24/2024

PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _____
DESIGN BY Blick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Signage and Pavement Marking Plan

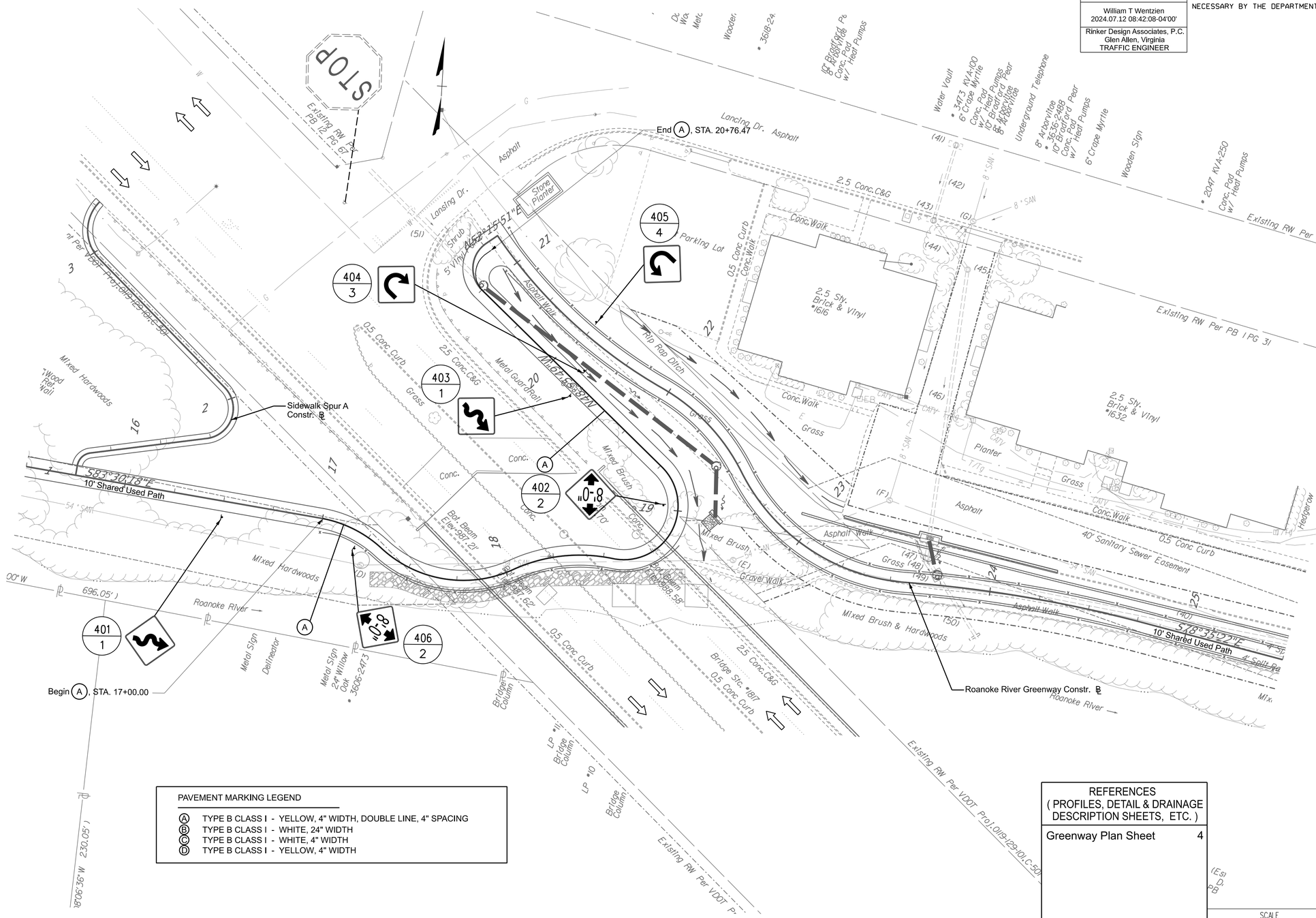
COMMONWEALTH OF VIRGINIA
WILLIAM T. WENTZIEN, II
Lic. No. 038162
PROFESSIONAL ENGINEER

William T Wentzien
2024.07.12 08:42:08-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	10(4)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



PAVEMENT MARKING LEGEND

- (A) TYPE B CLASS I - YELLOW, 4" WIDTH, DOUBLE LINE, 4" SPACING
- (B) TYPE B CLASS I - WHITE, 24" WIDTH
- (C) TYPE B CLASS I - WHITE, 4" WIDTH
- (D) TYPE B CLASS I - YELLOW, 4" WIDTH

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Greenway Plan Sheet	4

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	10(4)

6/24/2024

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Plotted by: wdelong

PROJECT MANAGER_HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Signage and Pavement Marking Plan

COMMONWEALTH OF VIRGINIA
WILLIAM T. WENTZIEN, II
Lic. No. 038162
PROFESSIONAL ENGINEER

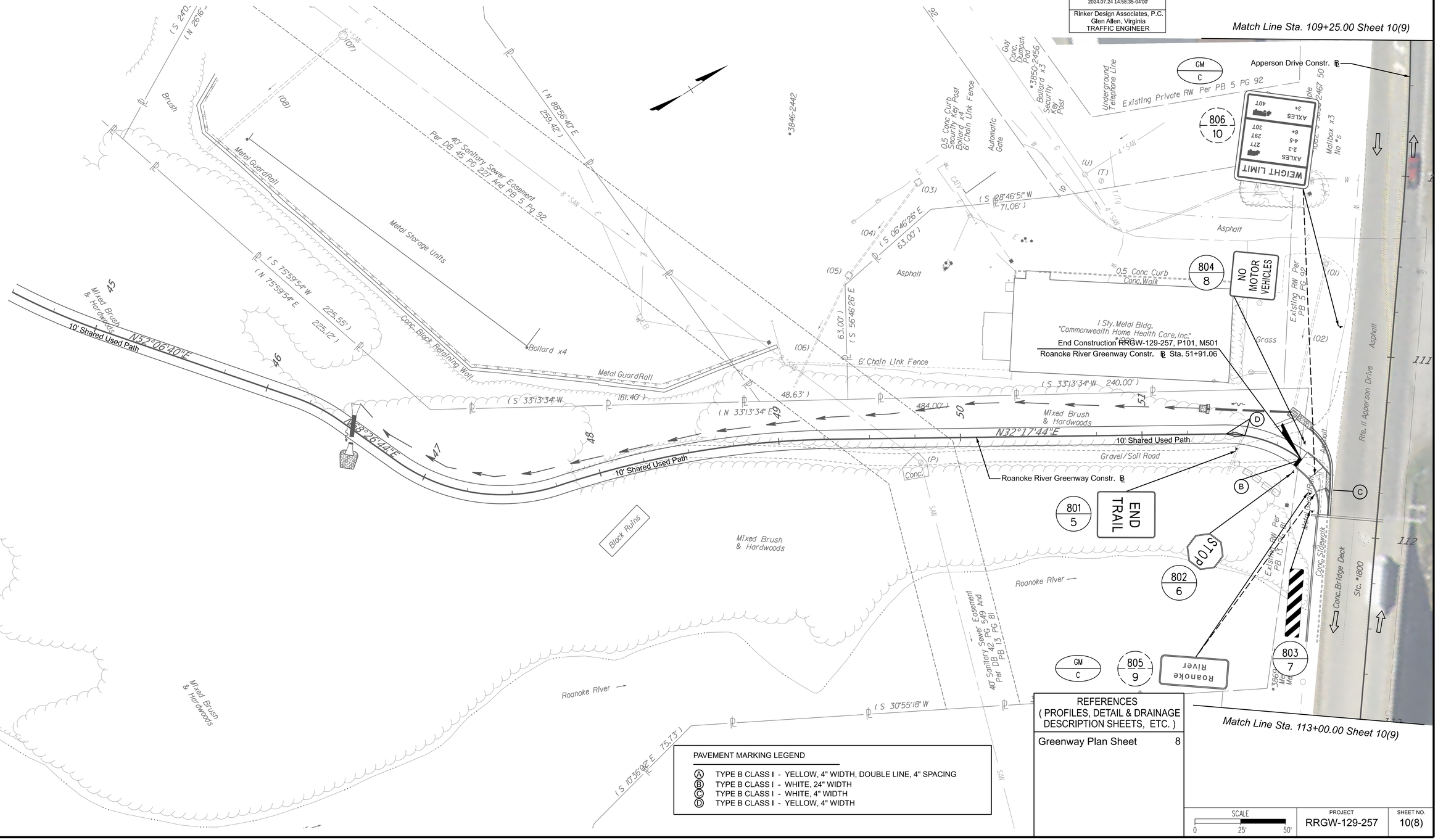
William T Wentzien
2024.07.24 14:58:35-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
06/07/24	VA.		RRGW-129-257 R204, M501	10(8)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Match Line Sta. 109+25.00 Sheet 10(9)



PAVEMENT MARKING LEGEND

- (A) TYPE B CLASS I - YELLOW, 4" WIDTH, DOUBLE LINE, 4" SPACING
- (B) TYPE B CLASS I - WHITE, 24" WIDTH
- (C) TYPE B CLASS I - WHITE, 4" WIDTH
- (D) TYPE B CLASS I - YELLOW, 4" WIDTH

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Greenway Plan Sheet	8

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	10(8)

7/22/2024

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PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Signage and Pavement Marking Plan

COMMONWEALTH OF VIRGINIA
WILLIAM T. WENTZIEN, II
Lic. No. 038162
PROFESSIONAL ENGINEER

William T Wentzien
2024.07.12 08:41:37-04'00'

Rinker Design Associates, P.C.
Glen Allen, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	10(9)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



PAVEMENT MARKING LEGEND

- (A) TYPE B CLASS I - YELLOW, 4" WIDTH, DOUBLE LINE, 4" SPACING
- (B) TYPE B CLASS I - WHITE, 24" WIDTH
- (C) TYPE B CLASS I - WHITE, 4" WIDTH
- (D) TYPE B CLASS I - YELLOW, 4" WIDTH

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

SCALE	PROJECT	SHEET NO.
0 25' 50'	RRGW-129-257	10(9)

6/24/2024

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Plotted by: swhitehead

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Rick Delong, P.E. Binker Design Associates, P.C. (804) 612-0665___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

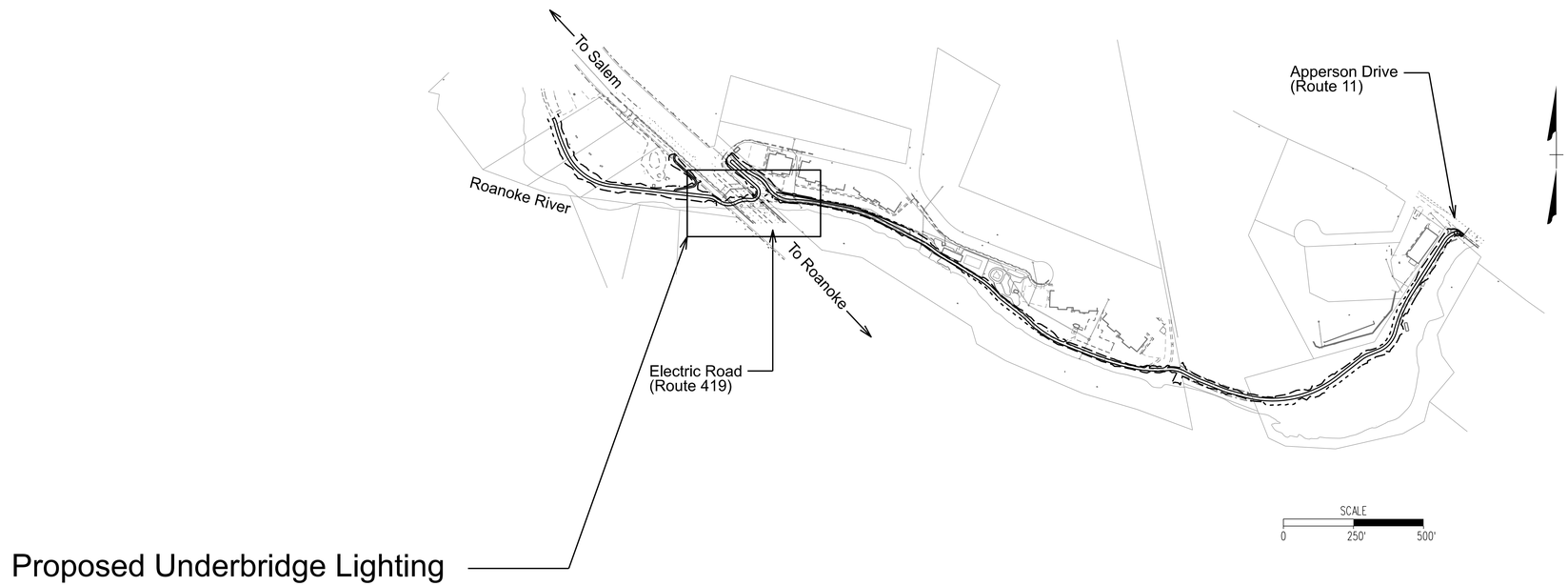
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	11(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Lighting Plans

Index of Sheets

Sheet No.	Sheet Description
11(1)	Index of Sheets
11(2A)	Underbridge Luminaire Specifications
11(2B)	Underbridge Lighting Levels and Luminaire Schedule
11(2C)	Panelboard Details/Lighting Summary
11(2D)	Lighting Details
11(2E)	Lighting Details
11(3)	Not Used
11(4)	Lighting Plan



6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	11(1)

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PROJECT MANAGER _HDR_VDOT_PM:Chris_Eggleston_(540) 278-2405_____
SURVEYED BY, DATE Hurt & _Profitt,Inc._(800) 242-4906_July, 2022_____
DESIGN BY Bick_Delong,P.E._Binker_Design_Associates_P.C.(804) 612-0665 ____
SUBSURFACE UTILITY BY, DATE Hurt & _Profitt,Inc._(800) 242-4906_July, 2022

Underbridge Luminaire Specifications

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	11(2A)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

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Photometric Report (Type C)

Filename: W4GLED_20C1000_40K_T3M.ies
[TEST] LTL28591HP2
[TESTLAB] SCALED PHOTOMETRY
[ISSUEDATE] 1/20/2021
[MANUFAC] Holophane
[LUMCAT] W4GLED 20C1000 40K T3M
[LUMINAIRE] W4GLED, 20 LED, 20C PERFORMANCE PACKAGE, 4000K CCT, TYPE 3 OPTICS

Maximum Candela = 4116.99936571884 at 77.5 H 70 V

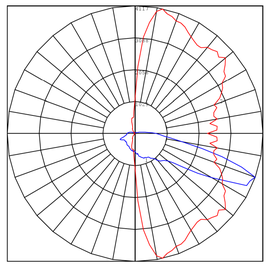
Classification:

Road Classification: Type IV, Medium, N.A. (deprecated)
Upward Wast Light Ratio: 0.08
Luminaire Efficacy Rating (LER): 97
Maximum UGR: 38.2
Indoor Classification: Direct
BUG Rating : B1-U3-G4

Polar Candela Curves:

Vertical Plane Through:
1) 77.5 - 257.5 Horizontal

Horizontal Cone Through:
2) 70 Vertical



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Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

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sample banner copyright 2013 Lighting Analysts, Inc.

Photometric Report (Type C)

Filename: W4GLED_20C1000_40K_T3M.ies
[TEST] LTL28591HP2
[TESTLAB] SCALED PHOTOMETRY
[ISSUEDATE] 1/20/2021
[MANUFAC] Holophane
[LUMCAT] W4GLED 20C1000 40K T3M
[LUMINAIRE] W4GLED, 20 LED, 20C PERFORMANCE PACKAGE, 4000K CCT, TYPE 3 OPTICS

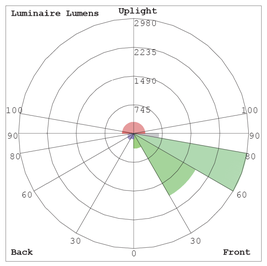
Maximum Candela = 4116.99936571884 at 77.5 H 70 V

Classification:

Road Classification: Type IV, Medium, N.A. (deprecated)
Upward Waste Light Ratio: 0.08
Luminaire Efficacy Rating (LER): 97
Maximum UGR: 38.2
Indoor Classification: Direct
BUG Rating : B1-U3-G4

LCS Summary:

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	381.7	N.A.	5.5
FM (30-60)	1850.5	N.A.	26.5
FH (60-80)	2979.8	N.A.	42.7
FVH (80-90)	648.0	N.A.	9.3
BL (0-30)	136.5	N.A.	2.0
BM (30-60)	179.9	N.A.	2.6
BH (60-80)	150.9	N.A.	2.2
BVH (80-90)	76.5	N.A.	1.1
UL (90-100)	288.9	N.A.	4.1
UH (100-180)	289.2	N.A.	4.1
Total	6981.9	N.A.	100.0
BUG Rating	B1-U3-G4		

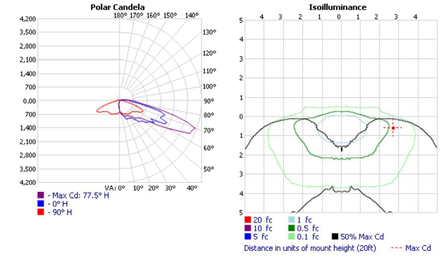


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Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

OUTDOOR PHOTOMETRIC REPORT
CATALOG: W4GLED 20C1000 40K T3M

Test #:	LTL28591HP2
Test Lab:	SCALED PHOTOMETRY
Catalog:	W4GLED 20C1000 40K T3M
Description:	W4GLED, 20 LED, 20C PERFORMANCE PACKAGE, 4000K CCT, TYPE 3 OPTICS
Series:	W4GLED & W4PLED
Lamp Output:	Total luminaire Lumens: 6983.1, absolute photometry *
Input Wattage:	72
Luminous Opening:	Rectangle w/Luminous Sides (L: 4.56", W: 13.56", H: 6.24")
Max Cd:	4,117.0 at Horizontal: 77.5°, Vertical: 70°
Roadway Class:	MEDIUM, TYPE IV

AcuityBrands. HOLOPHANE



*Test based on absolute photometry where lamp lumens=lumens total.
*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

Visual Photometric Tool 1.2.46 copyright 2021, Acuity Brands Lighting.
This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.

6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	11(2A)

PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Bick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	11(2B)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Underbridge Lighting Levels and Luminaire Schedule

Roadway Lighting RP-8-18: Table 16-2, Recommended Values for Medium Pedestrian Activity Areas

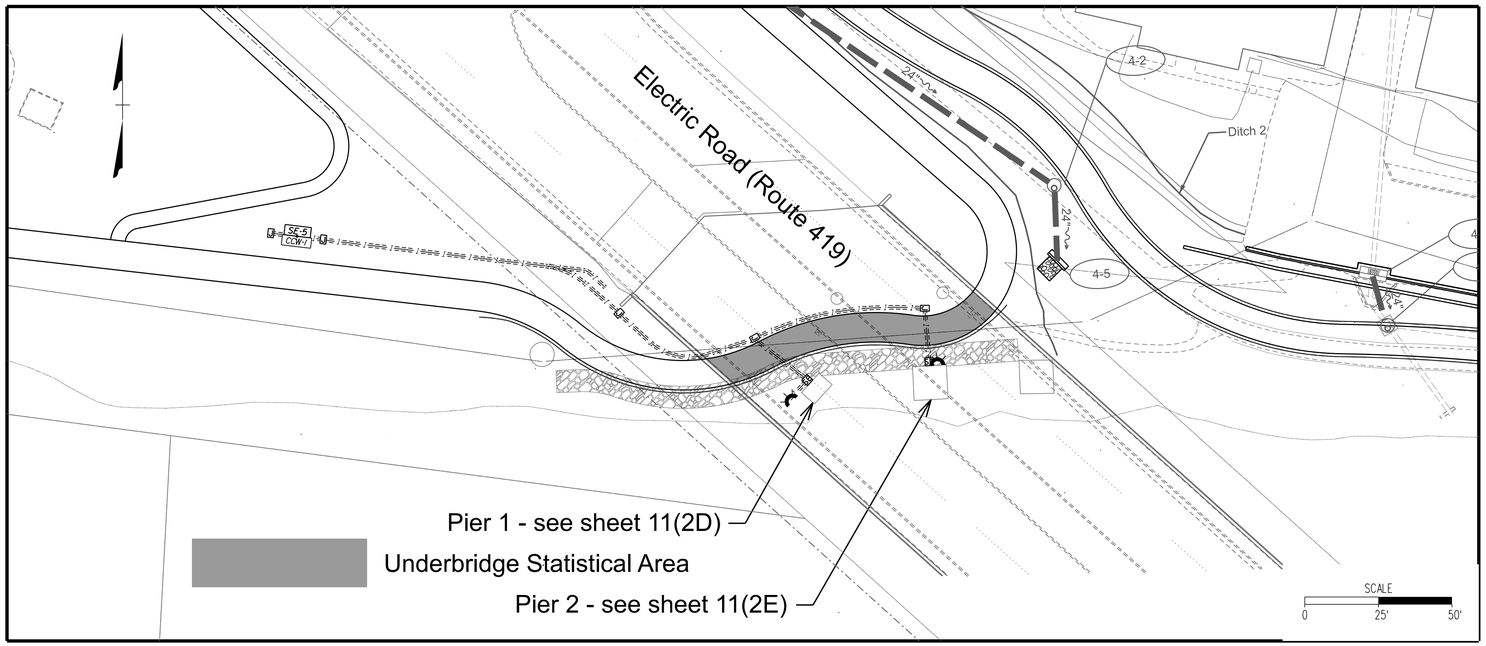
Roadway	Calc Type	Units	Avg	Min	Avg/Min
Pedestrian Only	Illuminance	Fc	0.5	0.2	4.0

Photometric Calculation Summary - Illuminance

Roadway	Calc Type	Units	Avg	Max	Min	Avg/Min
UNDERBRIDGE	Illuminance	Fc	2.4	4.7	0.9	2.6

Luminaire Schedule

Luminaire	Station	Offset	Baseline
Underbridge Luminaire 1	18+04.3	18.4' RT	Roanoke River Greenway Constr.@
Underbridge Luminaire 2	18+62.2	12.0' RT	Roanoke River Greenway Constr.@



6/24/2024

PROJECT	SHEET NO.
RRGW-129-257	11(2B)

N:\20176-002\00 Design (11956211\dll956211(2C).dgn 2:58:43 PM 25.00 ft / in. 35x23 (in.) K:\Design Ald\Printing\Pen Tables\25 Scale.tbl \\nestla\Library\Design Ald\Printing\Plot Drivers\RDA LD PDF File Generator.pltcfg
Plotted by: swhitehead

PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405 _____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022 _____
DESIGN BY Blick Delong, P.E. Bibber Design Associates, P.C. (804) 612-0665 ____.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	11(2C)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Panelboard Details/Lighting Summary

PANEL BOARD SCHEDULE (CCWI)

LIGHTING CONTROL CENTER I

LOAD DESCRIPTION	WIRE SIZE	PHASE(S)	VOLTAGE	AMPERAGE BRKR. AMPS	AMPERAGE LOAD AMPS	CIRCUIT NUMBER	A B	CIRCUIT NUMBER	AMPERAGE LOAD AMPS	AMPERAGE BRKR. AMPS	VOLTAGE	PHASE(S)	WIRE SIZE	LOAD DESCRIPTION
UNDERBRIDGE LUMINAIRE	#8	A	120	15	1.2	1		2						SPARE
UNDERBRIDGE LUMINAIRE	#8	B	120	15	1.2	3		4						SPARE
SPARE						5		6						SPARE
SPARE						7		8						SPARE
SPARE						9		10						SPARE
SPARE						11		12						SPARE
SPARE						13		14						SPARE

BREAKER MINIMUM INTERRUPTING CAPACITY 14,000 AMPS SYMM.
TOTAL LOAD: 3 AMPS
200 AMP MAN CIRCUIT BREAKER
120/240V, SINGLE PHASE, 3 WIRE
VDOT STD: SE-5 TYPE B, CCW-1 TYPE D

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH ALL APPLICABLE VDOT STANDARDS AND THE NATIONAL ELECTRIC CODE.

2. SERVICE EQUIPMENT IN OTHER THAN DWELLING UNITS SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. THE FIELD MARKING/'S SHALL INCLUDE THE DATE THE FAULT CURRENT CALCULATION WAS PERFORMED AND BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.

3. CONTRACTOR SHALL COORDINATE ALL PANEL AND CABINET REQUIREMENTS WITH DEVELOPER PRIOR TO ANY INSTALLATION.

Lighting Summary

Sheet No.	2" PVC Conduit	1" Metal Conduit	#8 Conductor Cable	Conductor Cable - #8 EGC	Junction Box JB-S2	Electrical Service Grounding Electrode	Electrical Service SE-5	Control Center CCW-1 Type A	Luminaire 150W Underbridge Wall Mount	Trench Excavation ECI-1	NS Bridge Mounted 6"X6" Splice Box
	L.F.	L.F.	L.F.	L.F.	EA	EA	EA	EA	EA	L.F.	EA
11(4)	276	38	895	314	5	1	1	1	2	290	2

6/24/2024

	PROJECT	SHEET NO.
	RRGW-129-257	11(2C)

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PROJECT MANAGER _HDR_VDOT_PM:Chris_Eggleston_(540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022_____
DESIGN BY Blick, Delong, P.E., Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

COMMONWEALTH OF VIRGINIA
WILLIAM T. WENTZIEN, II
Lic. No. 038162
PROFESSIONAL ENGINEER

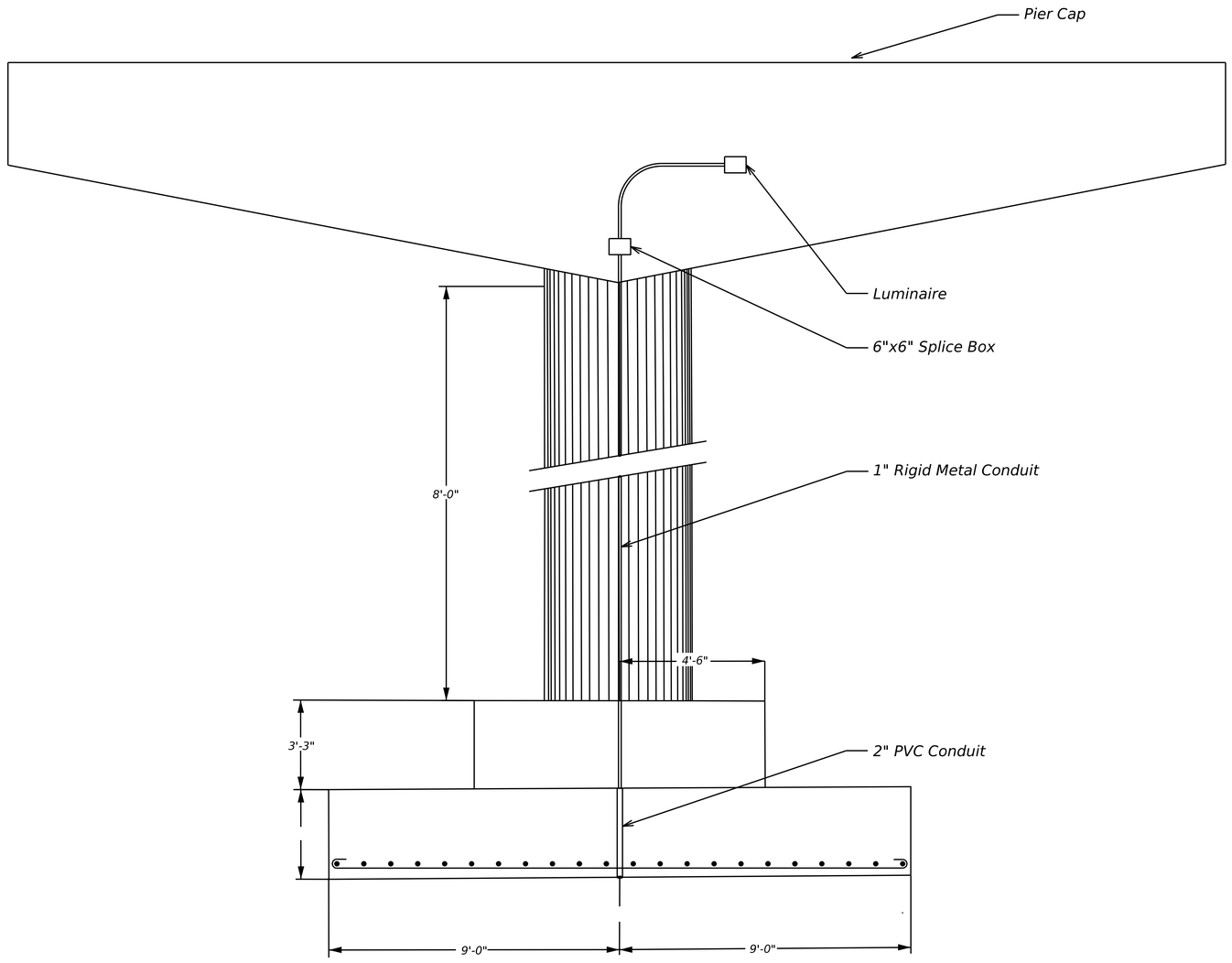
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Rinker Design Associates, P.C.
Manassas, Virginia
TRAFFIC ENGINEER

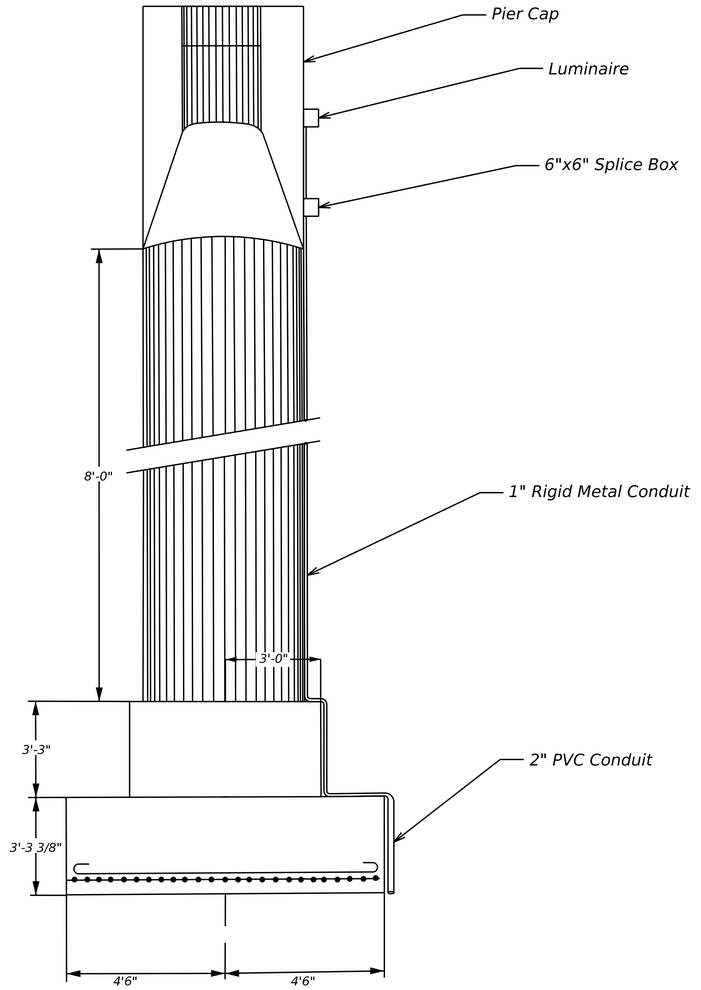
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Lighting Details



S.B. Bridge, Pier 1
Front Elevation



S.B. Bridge, Pier 1
Side Elevation

NTS	PROJECT	SHEET NO.
	RRGW-129-257	11(2D)

6/24/2024

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SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022_____
DESIGN BY Blick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ___.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

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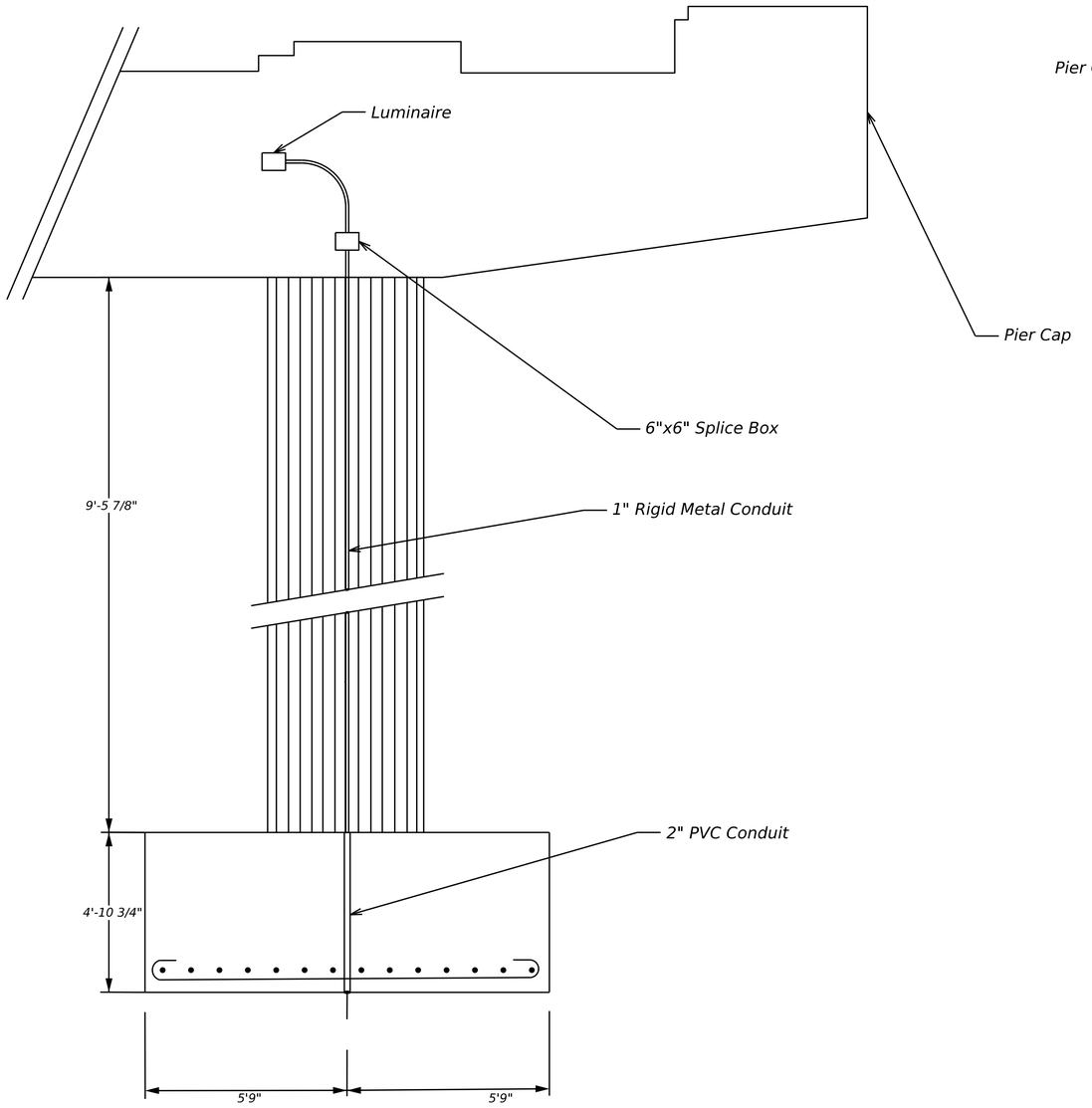
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Rinker Design Associates, P.C.
Manassas, Virginia
TRAFFIC ENGINEER

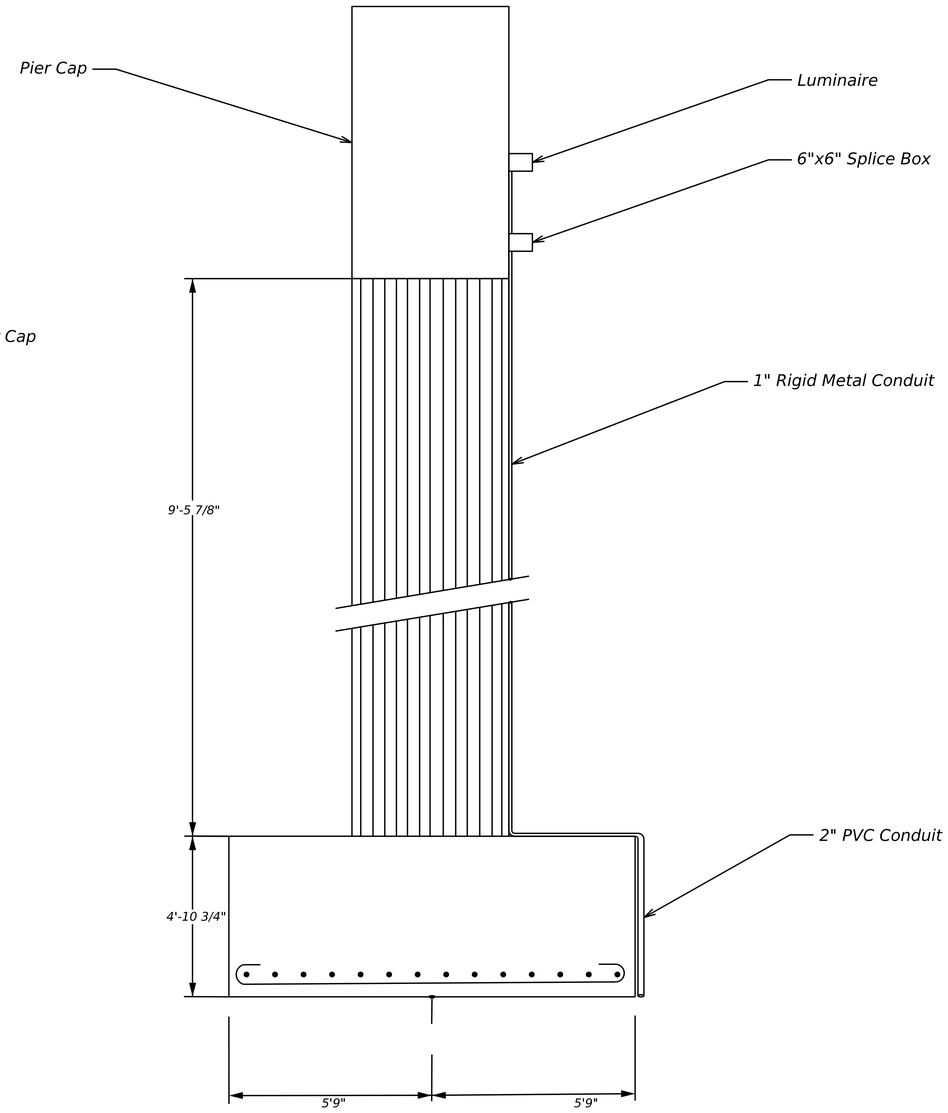
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	VA.		RRGW-129-257 R204, M501	11(2E)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Lighting Details



N.B. Bridge, Pier 2
Front Elevation



N.B. Bridge, Pier 2
Side Elevation

6/24/2024

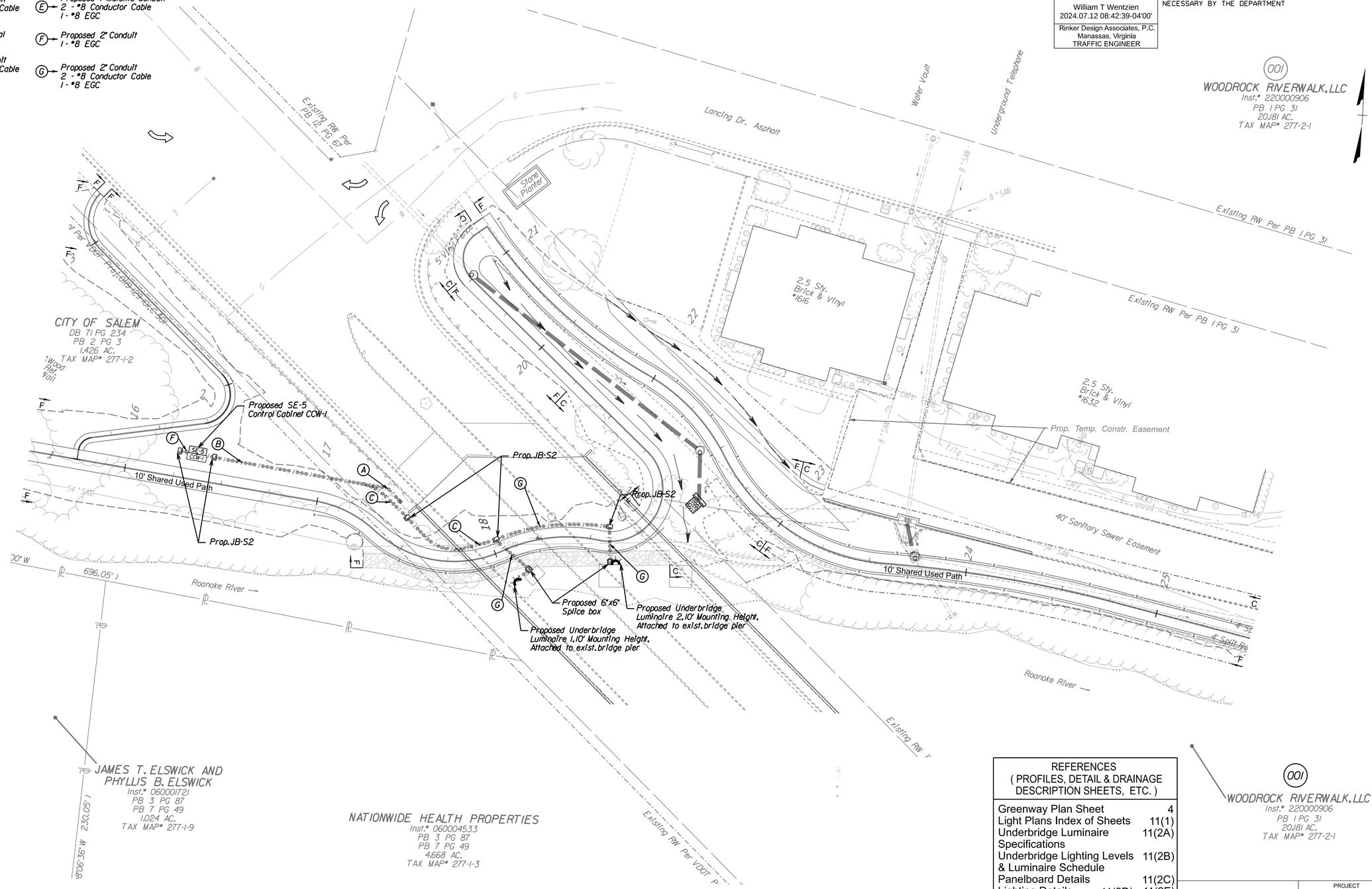
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	RRGW-129-257	11(2E)

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DESIGN BY Bick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665 ____.
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July 2022

Lighting Plan

Conduit Design Legend

- (A) Proposed Electrical Service Conduit
- (B) Proposed 2" Conduit 4 - #8 Conductor Cable 1 - #8 EGC
- Proposed Electrical Service Conduit
- (C) Proposed 2" Conduit 4 - #8 Conductor Cable 1 - #8 EGC
- (D) Proposed 1" Metallic Conduit 4 - #8 Conductor Cable 1 - #8 EGC
- (E) Proposed 1" Metallic Conduit 2 - #8 Conductor Cable 1 - #8 EGC
- (F) Proposed 2" Conduit 1 - #8 EGC
- (G) Proposed 2" Conduit 2 - #8 Conductor Cable 1 - #8 EGC



COMMONWEALTH OF VIRGINIA
WILLIAM T. WENTZIEN, II
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PROFESSIONAL ENGINEER

William T Wentzien
2024.07.12 08:42:39-04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	11(4)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Greenway Plan Sheet	4
Light Plans Index of Sheets	11(1)
Underbridge Luminaire Specifications	11(2A)
Underbridge Lighting Levels & Luminaire Schedule	11(2B)
Panelboard Details	11(2C)
Lighting Details	11(2D) - 11(2E)

PROJECT	SHEET NO.
RRGW-129-257	11(4)

6/24/2024

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PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405
SURVEYED BY, DATE Hurt & Profitt Inc. (800) 242-4906 July 2022
DESIGN BY Blck Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665
SUBSURFACE UTILITY BY, DATE Hurt & Profitt Inc. (800) 242-4906 July 2022

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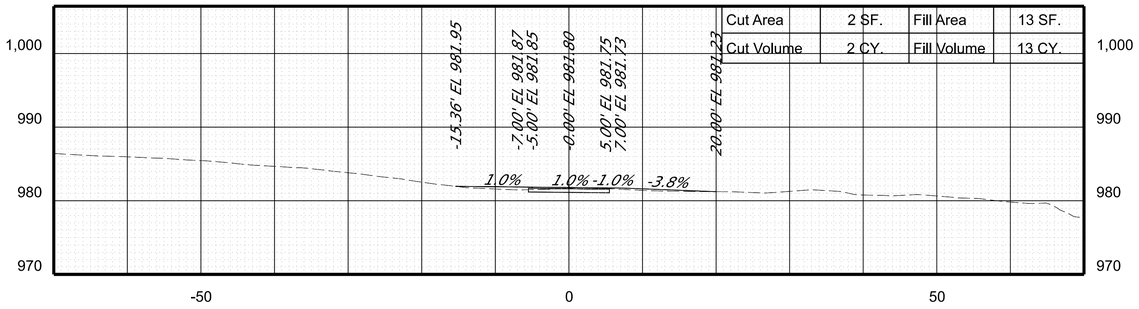
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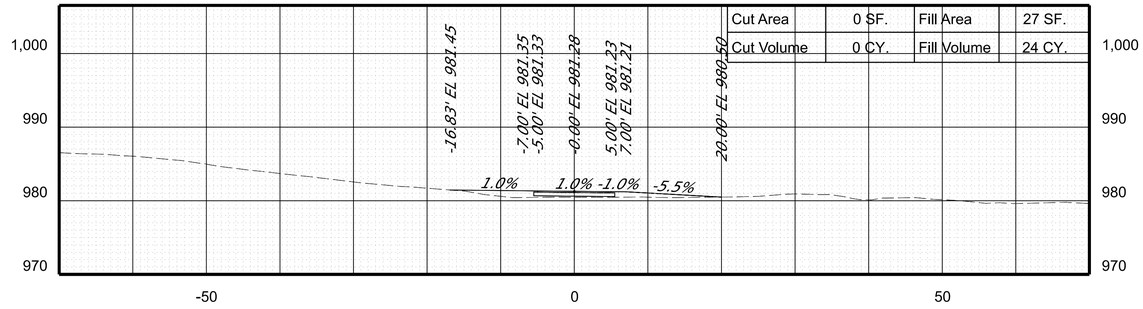
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Cross Section Sheet Index

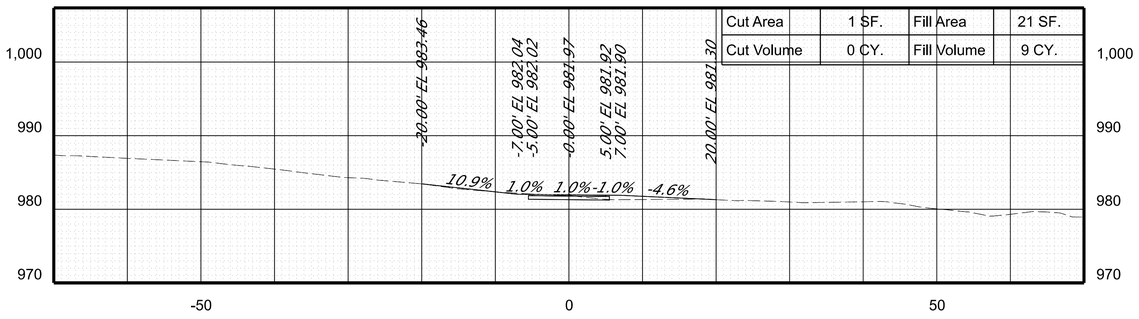
Roanoke River Greenway	X1-X29
Sidewalk Spur A	X31-X32



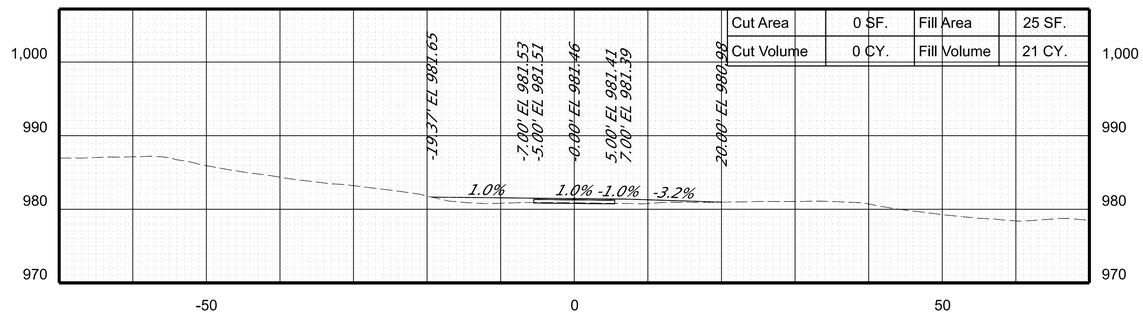
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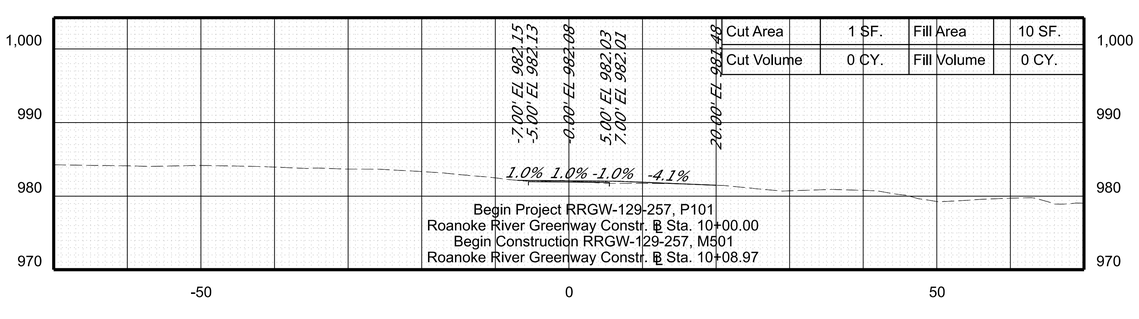
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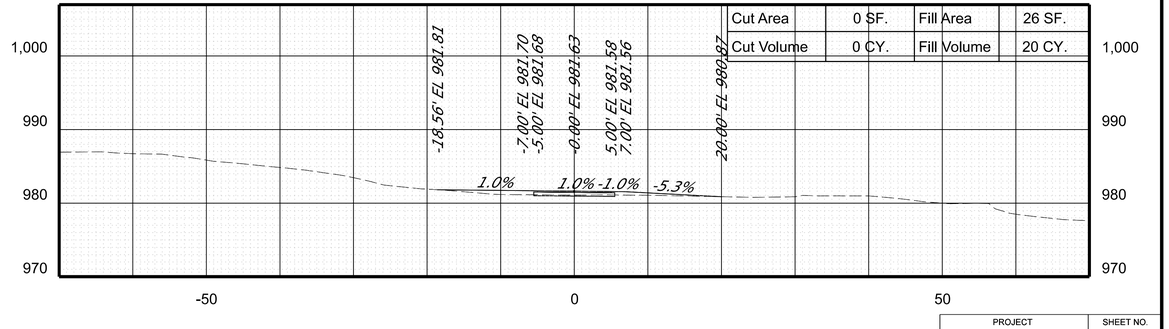
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6/24/2024

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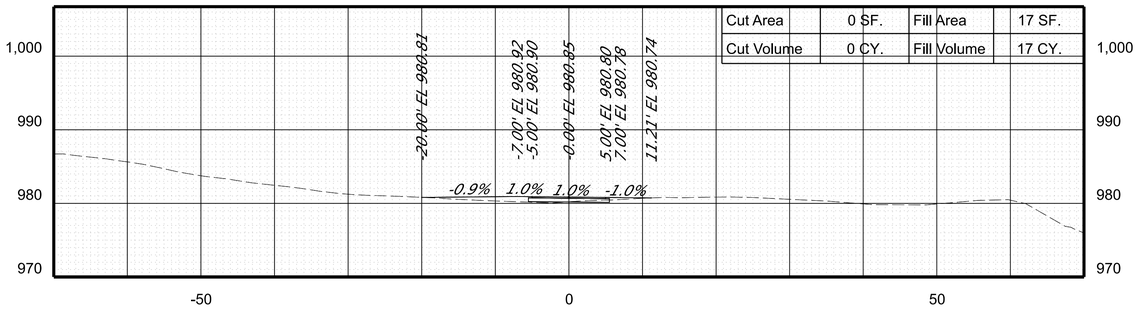
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____
DESIGN BY Blick Delong,P.E. Bleker Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022.___

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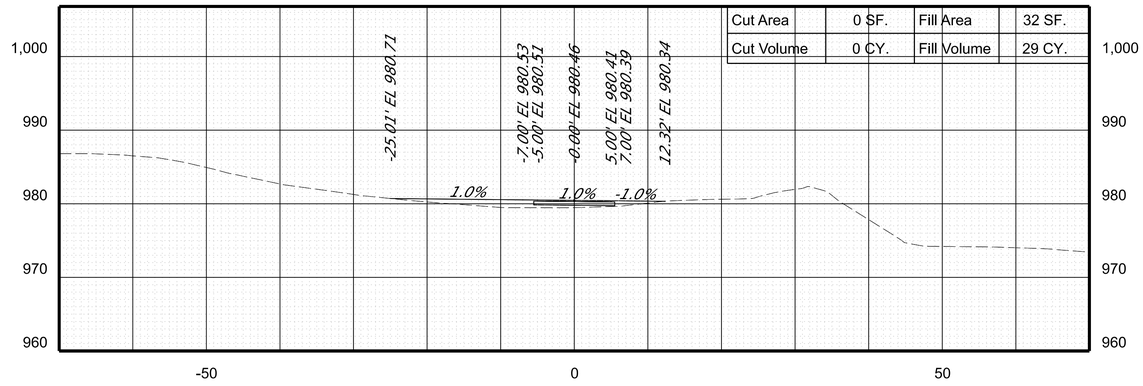
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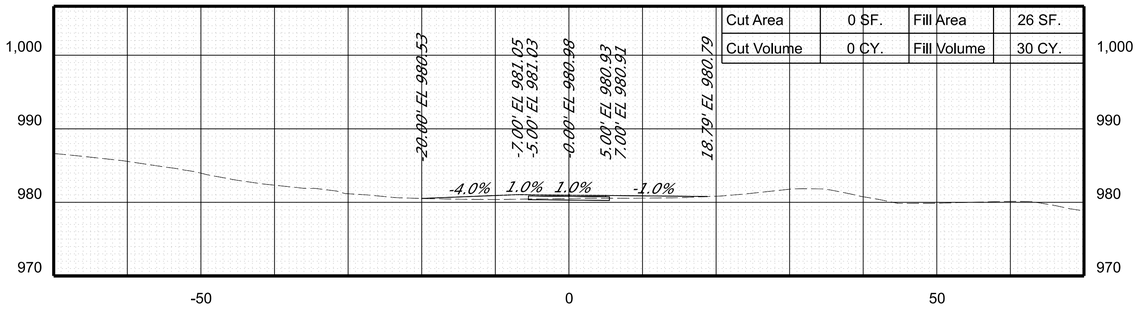
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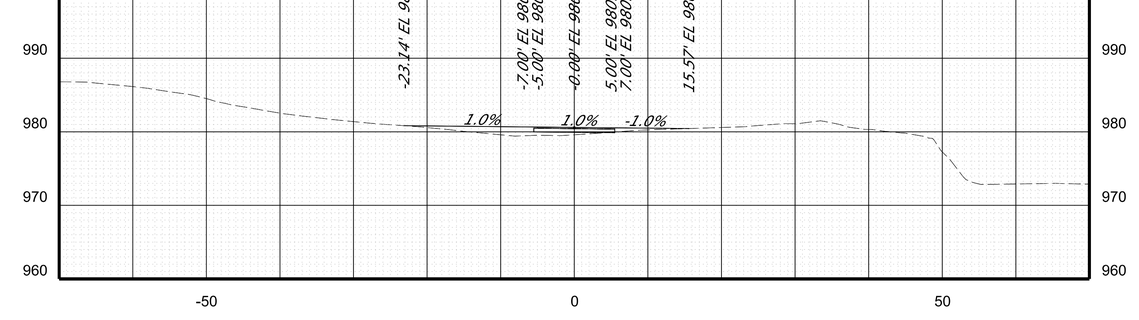
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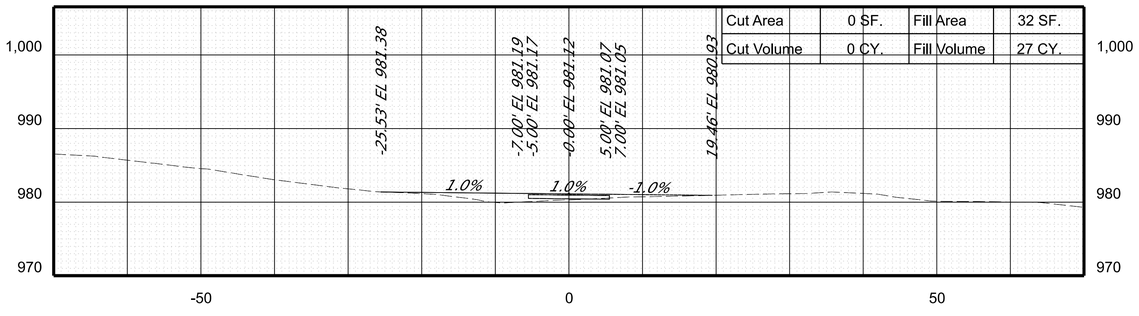
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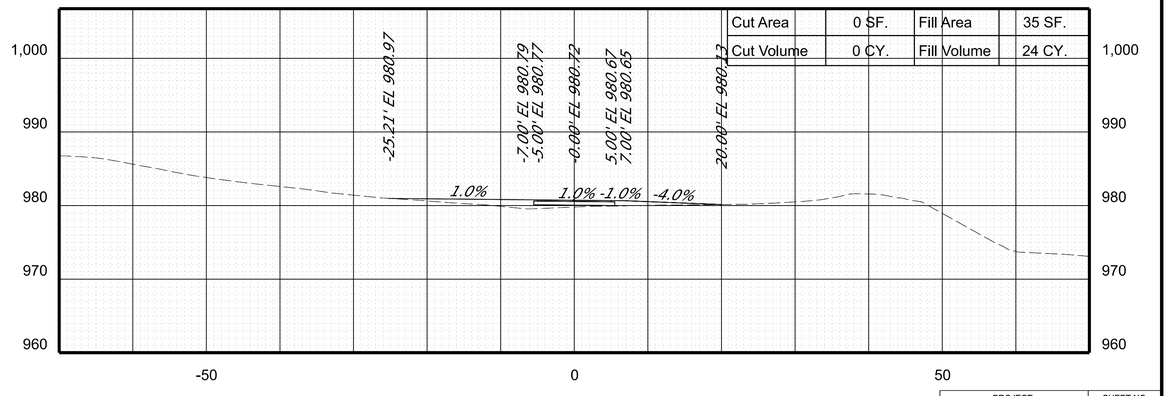
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6/24/2024

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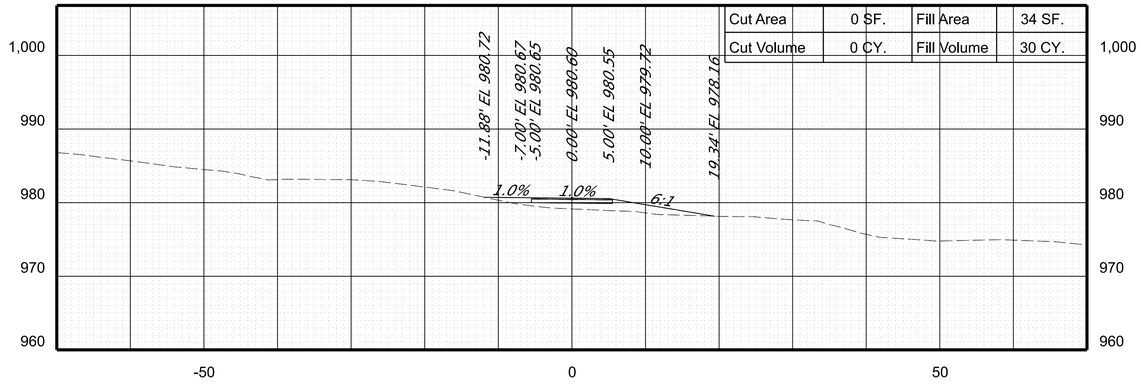
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SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022
DESIGN BY Blick Delong, P.E., Bibler Design Associates, P.C. (804) 612-0665
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

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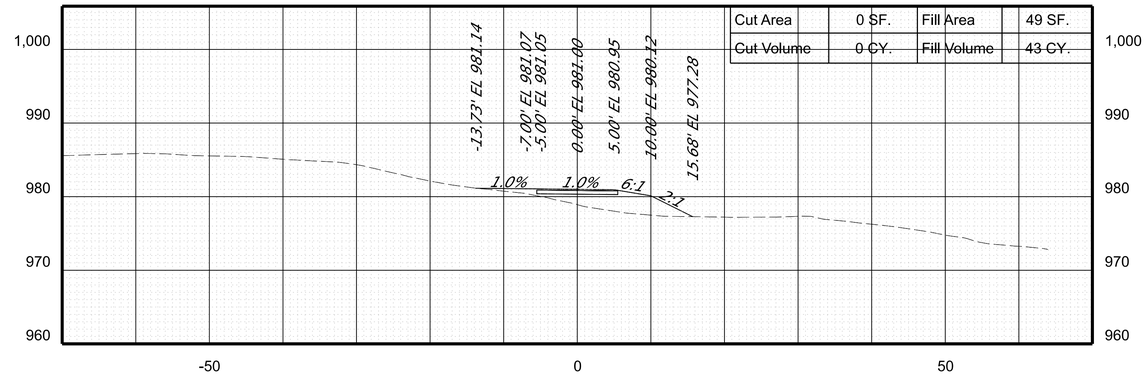
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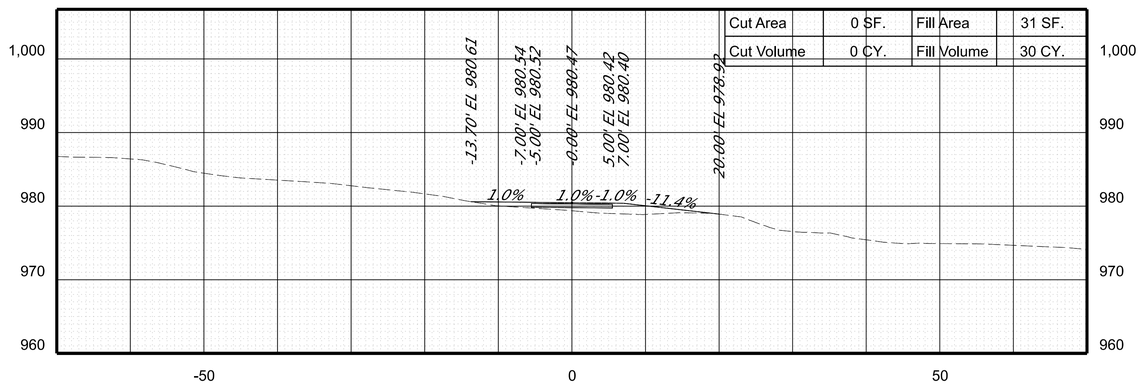
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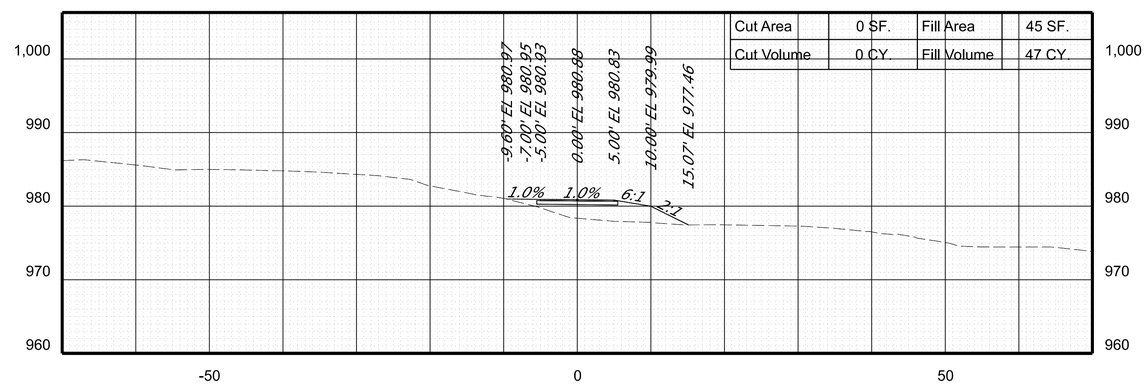
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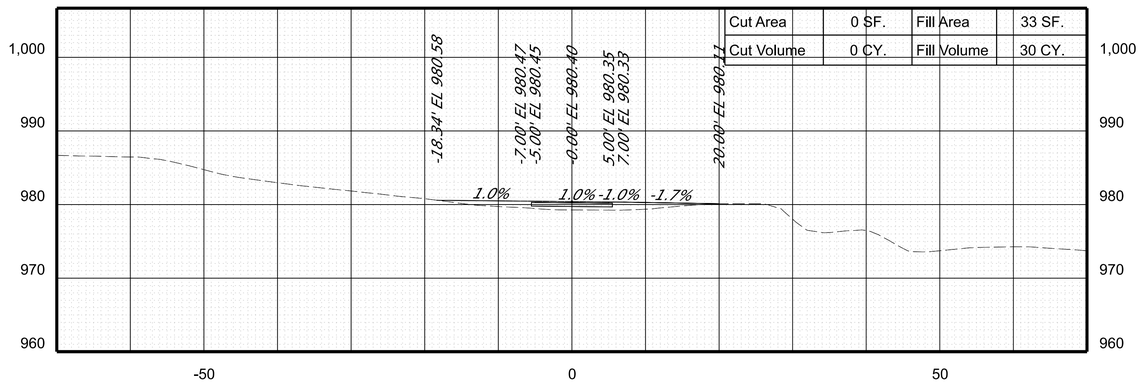
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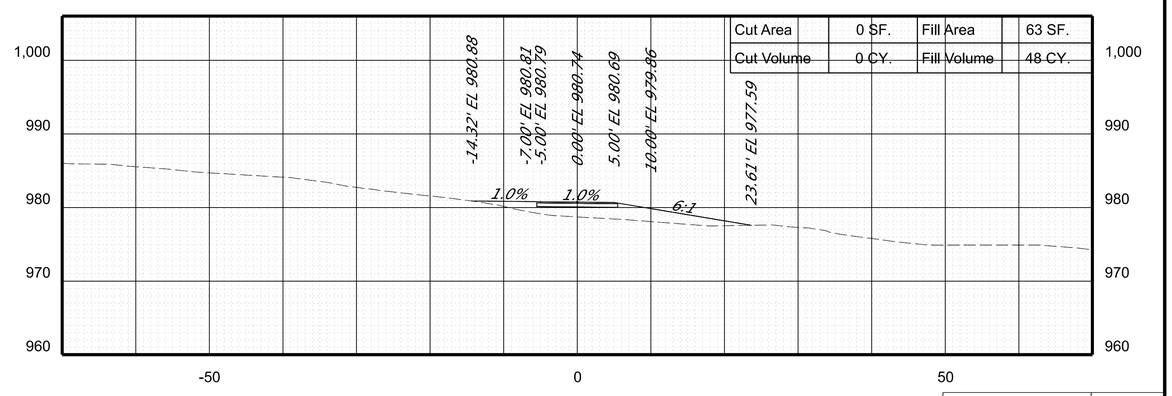
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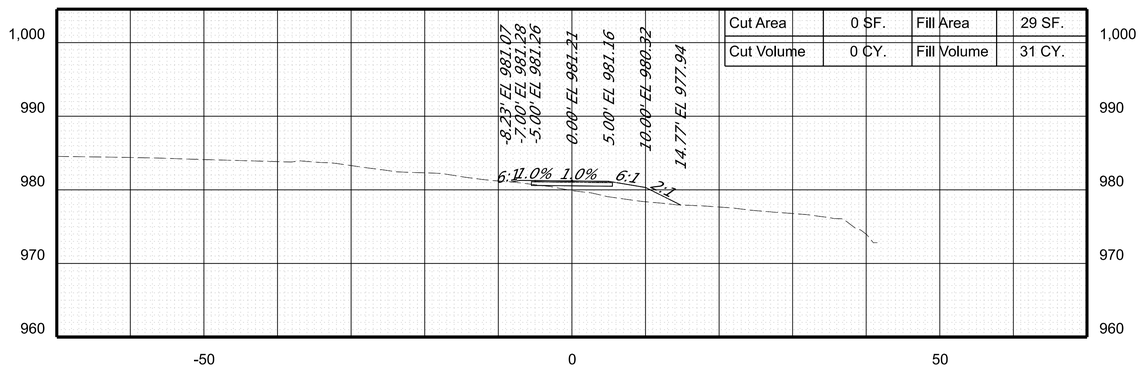
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DESIGN BY Rick Delong, P.E. Rinker Design Associates, P.C. (804) 612-0665_____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt Inc. (800) 242-4906 July 2022_____

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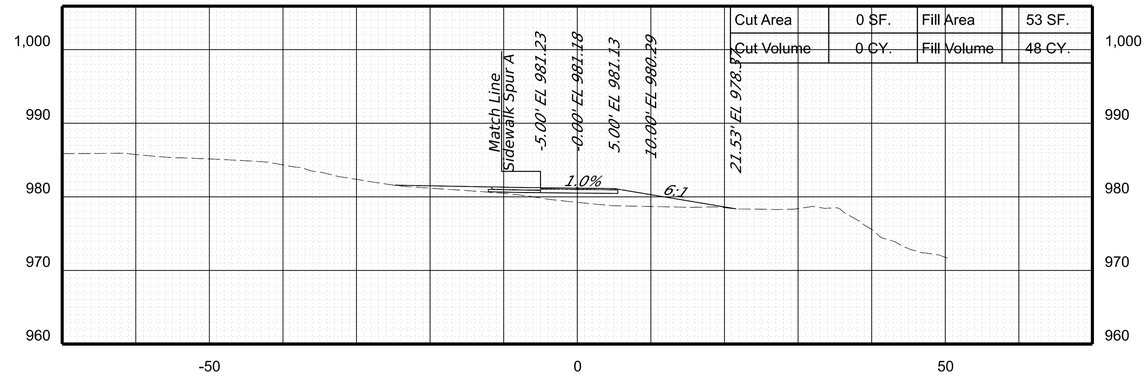
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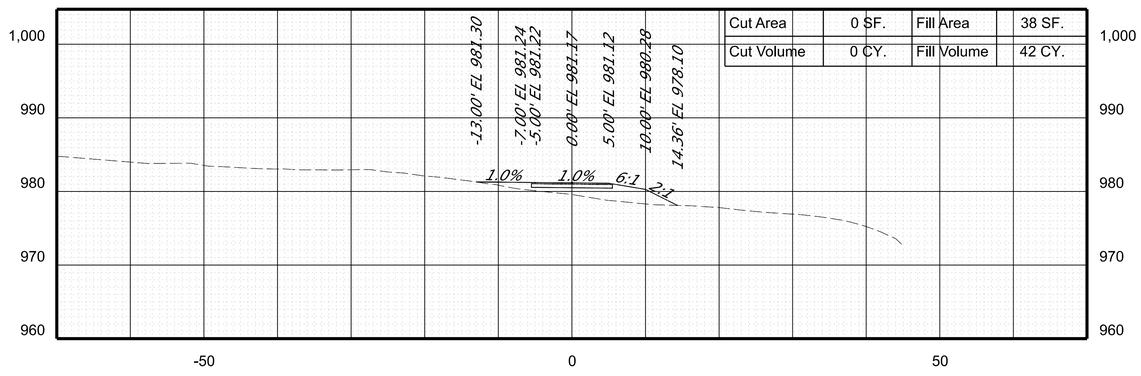
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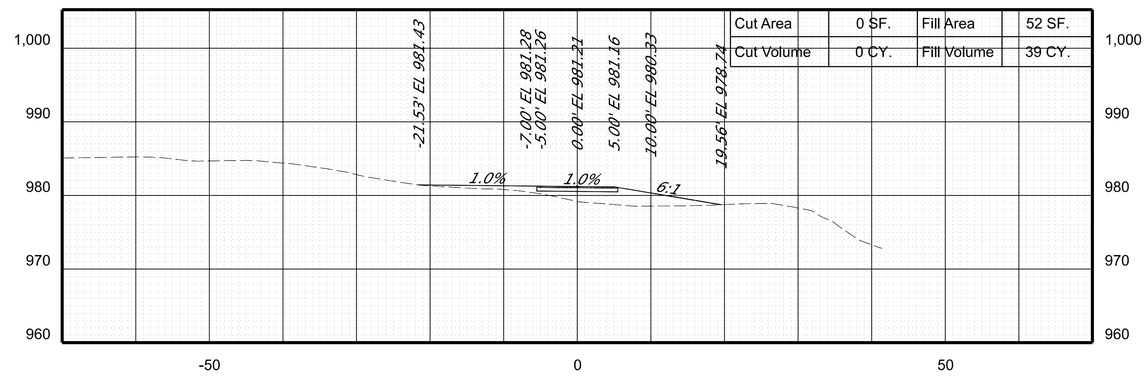
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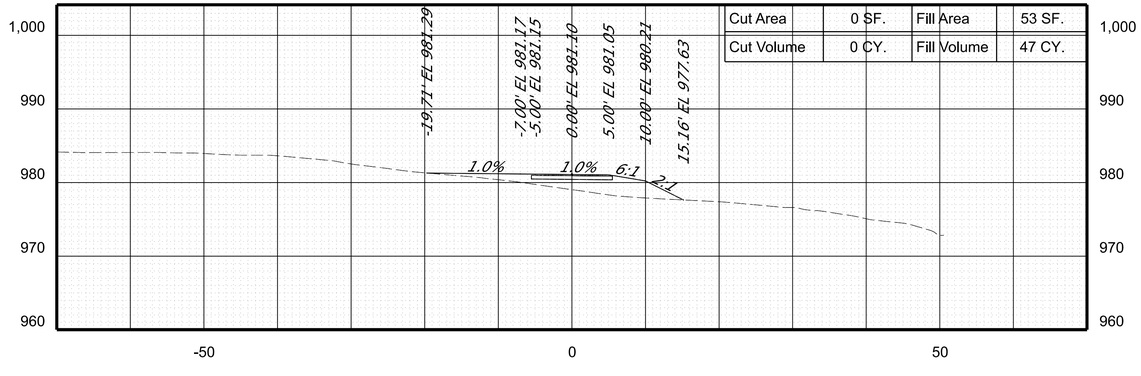
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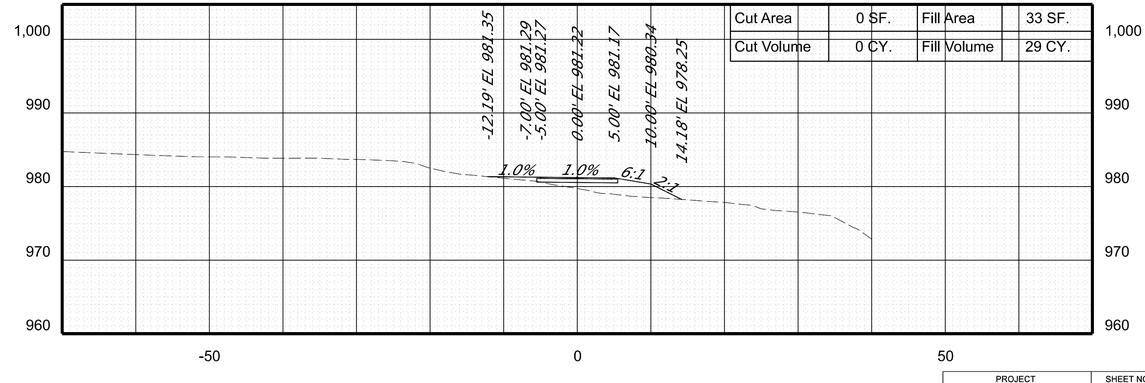
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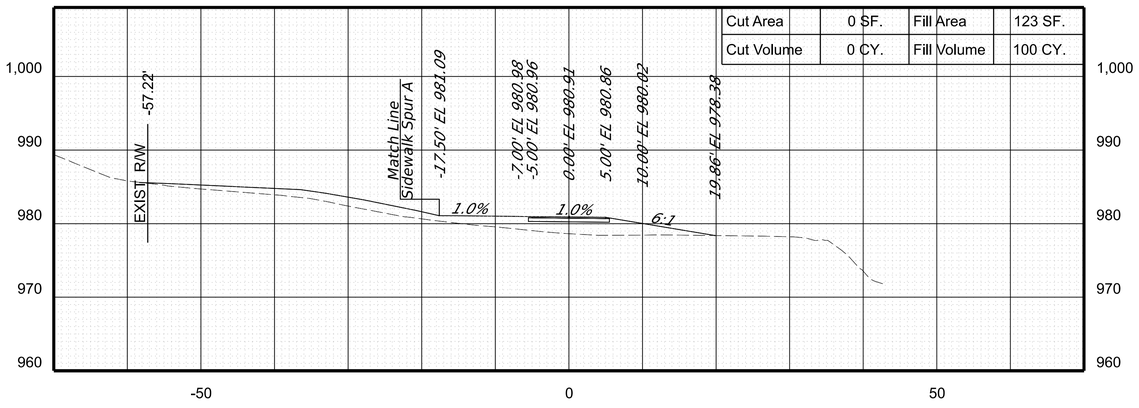
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DESIGN BY Blick Delong, P.E. Bibber Design Associates, P.C. (804) 612-0665
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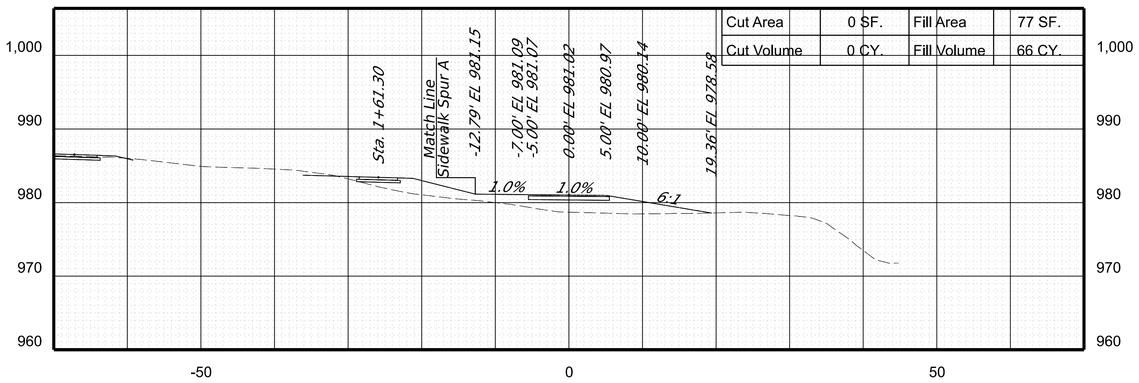
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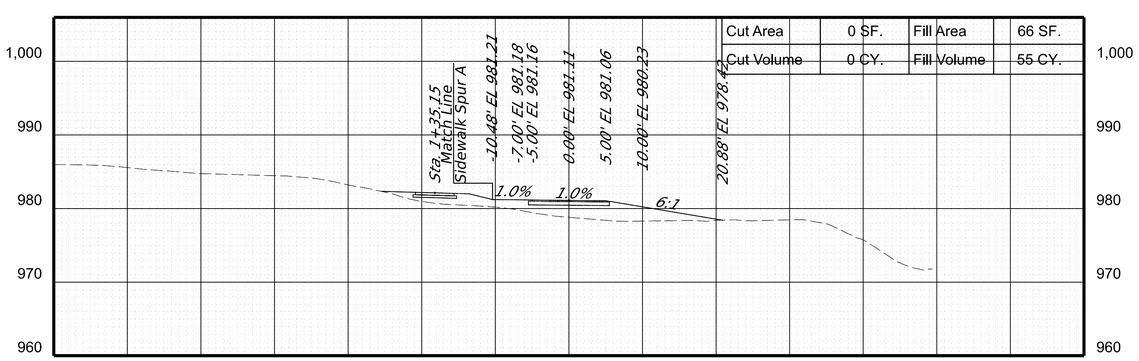
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X5



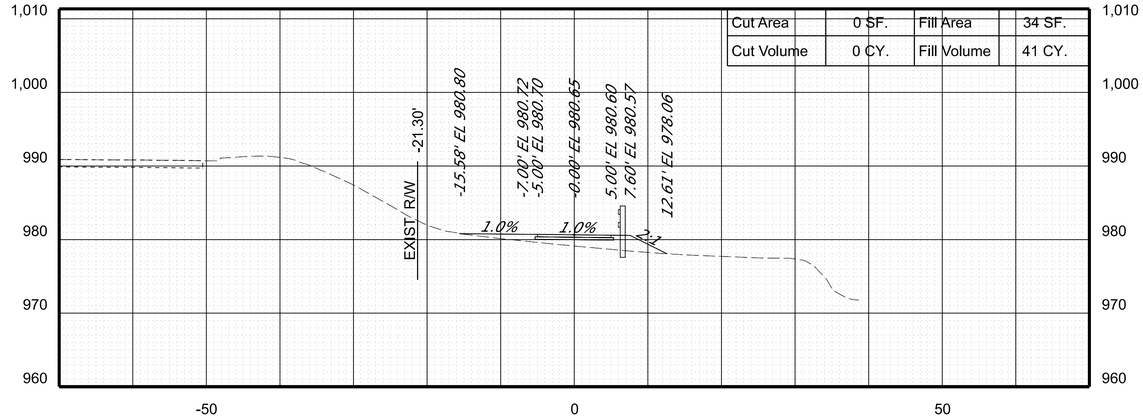
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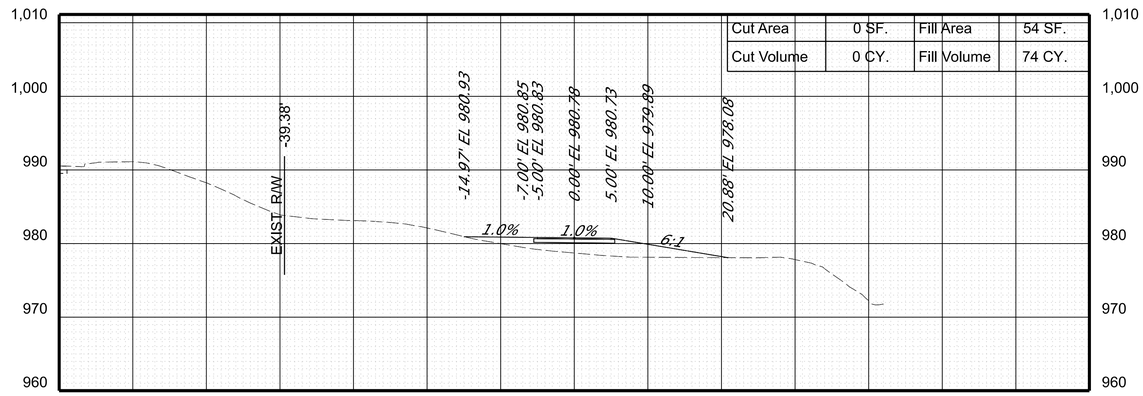
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STA 16+00.00



STA 17+00.00



STA 16+75.00

PROJECT	SHEET NO.
RRGW-120-257	X5

6/24/2024

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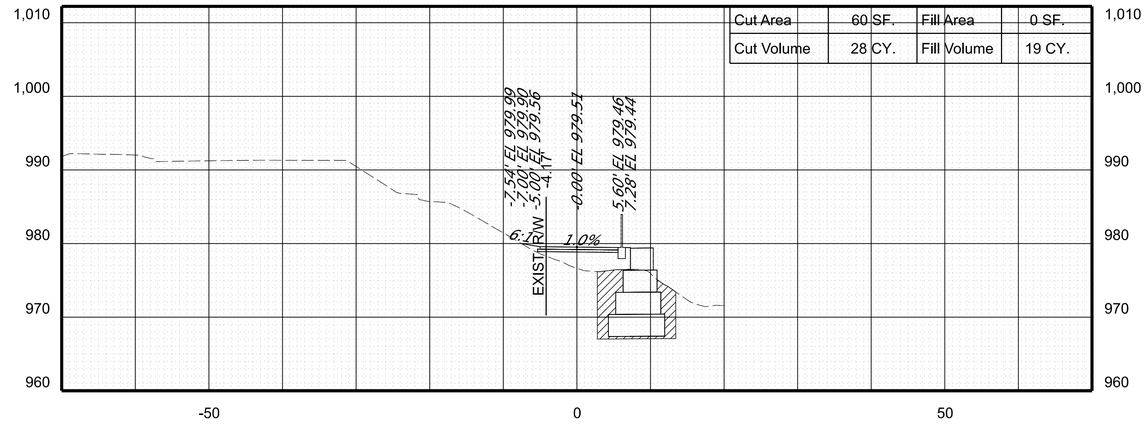
PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022_____
DESIGN BY Blick, Delong, P.E., Bibler Design Associates, P.C. (804) 612-0665_____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022_____

CROSS SECTIONS

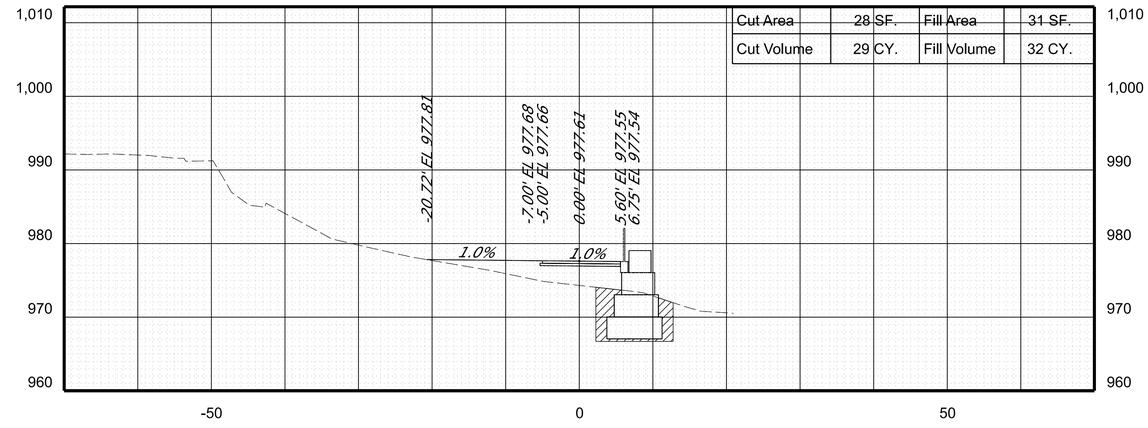
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

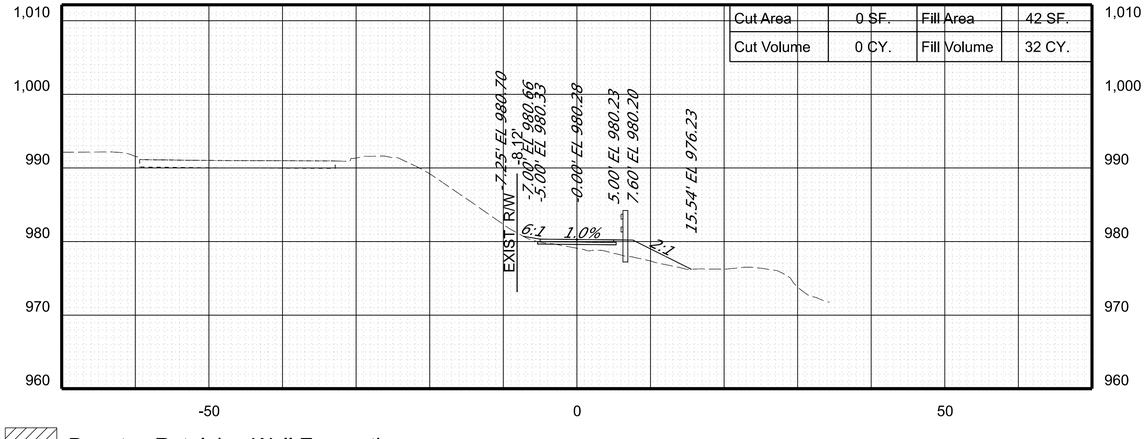
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X6



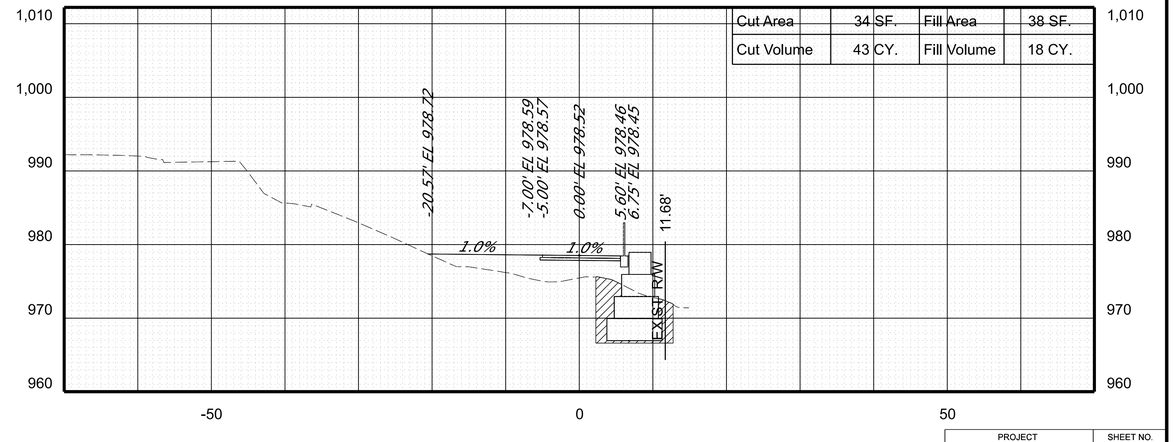
STA 17+50.00



STA 18+00.00



STA 17+25.00



STA 17+75.00

Denotes Retaining Wall Excavation

PROJECT	SHEET NO.
RRGW-120-257	X6

6/24/2024

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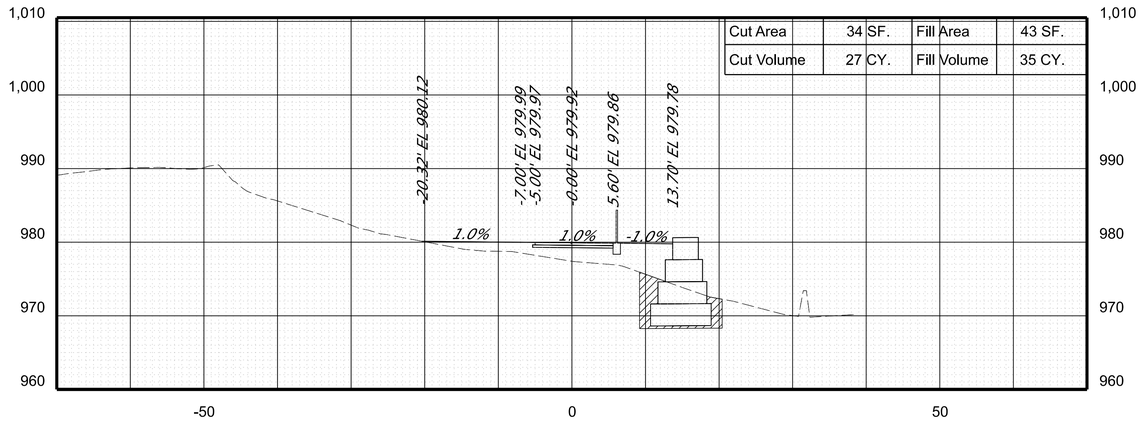
PROJECT MANAGER HDR VDOT PM: Chris Eggleston (540) 278-2405
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022
DESIGN BY Blick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

CROSS SECTIONS

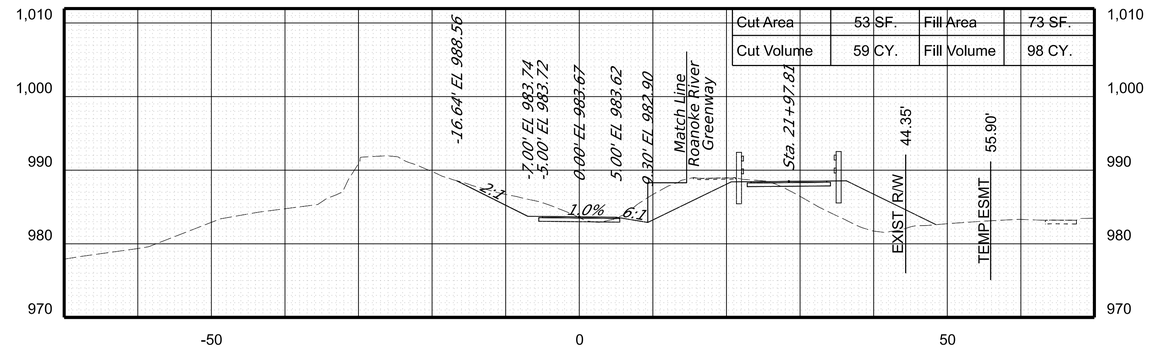
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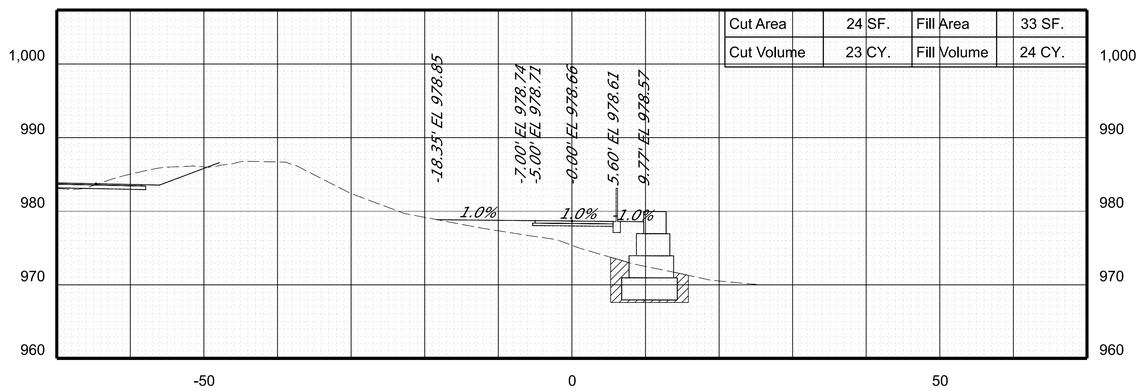
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X7



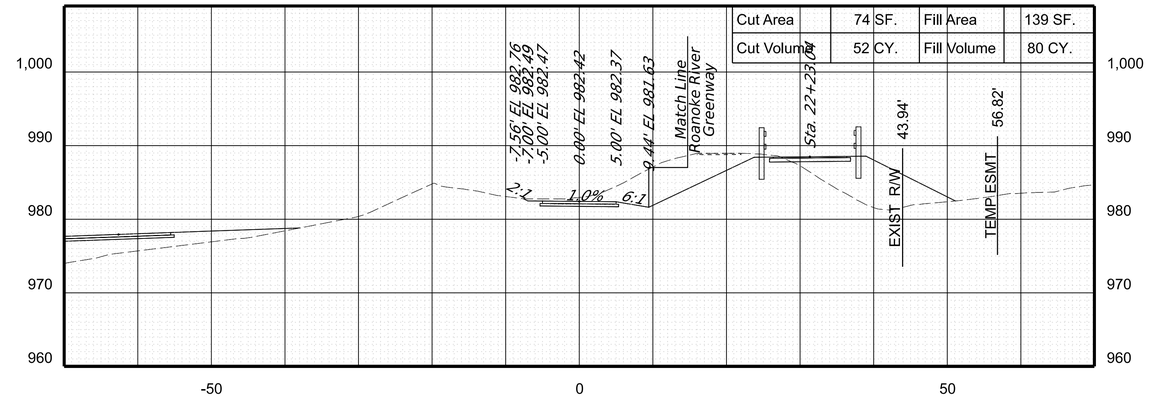
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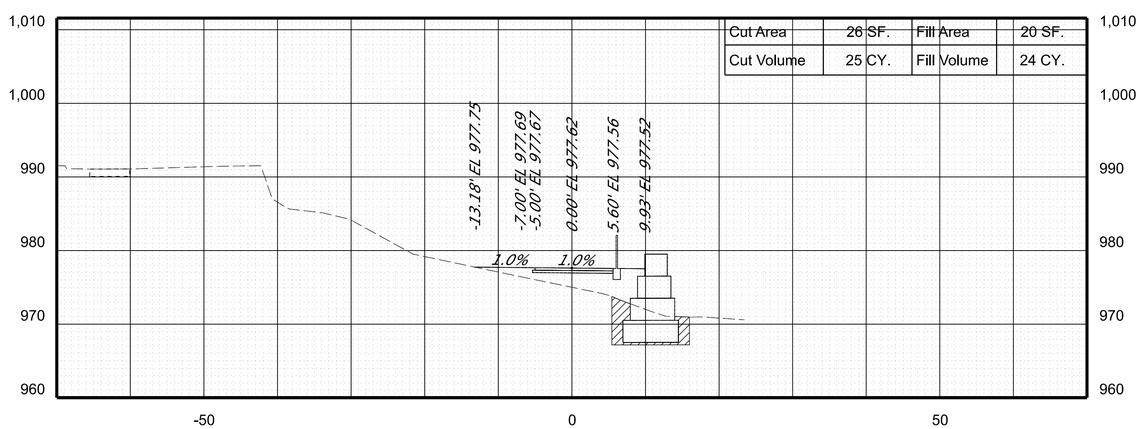
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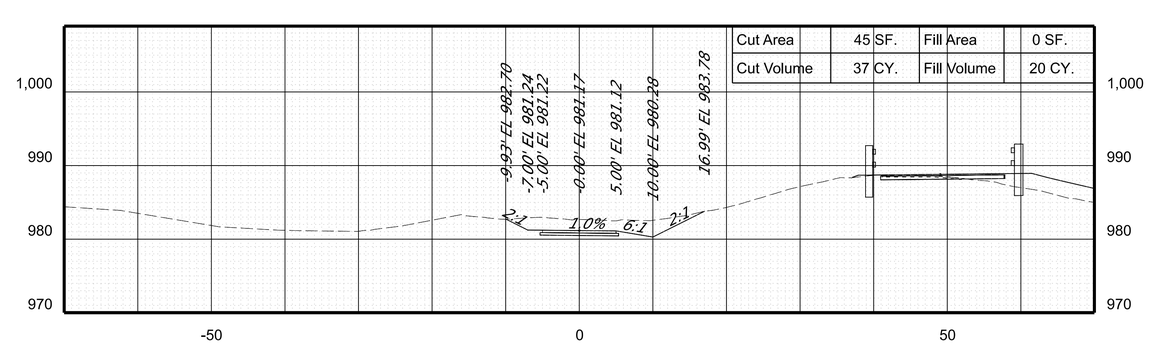
STA 18+50.00



STA 19+25.00



STA 18+25.00



STA 19+00.00

Denotes Retaining Wall Excavation

PROJECT	SHEET NO.
RRGW-120-257	X7

6/24/2024

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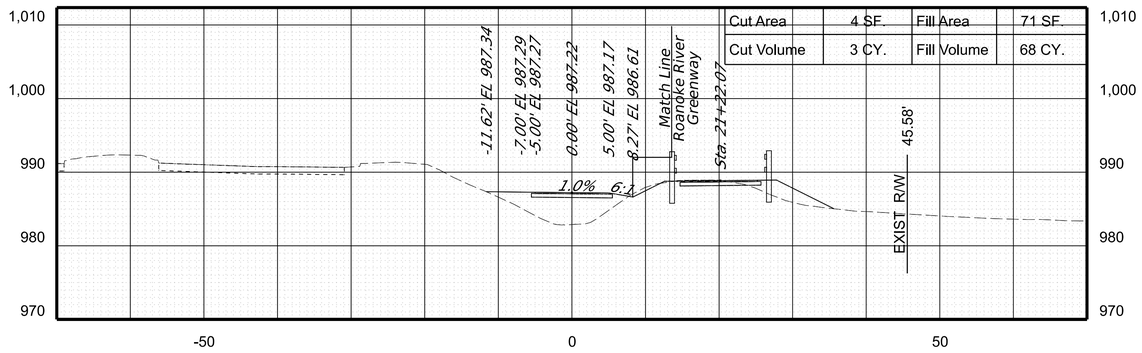
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____
DESIGN BY Blick Delong,P.E. Bleker Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022.___

CROSS SECTIONS

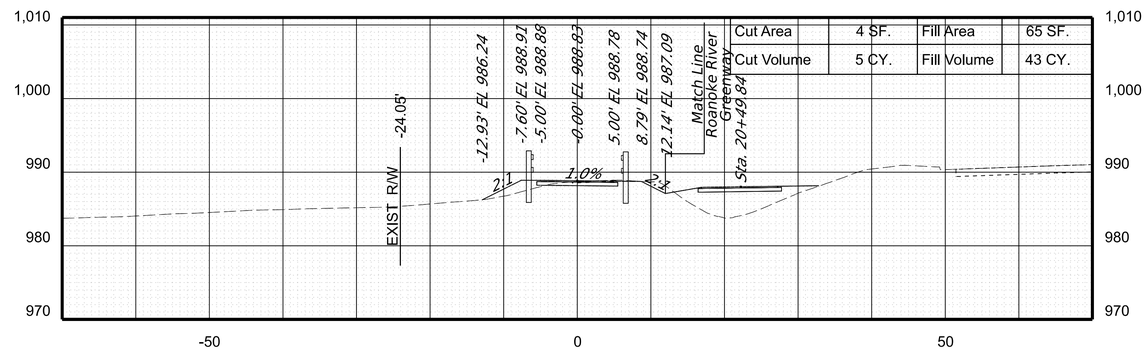
SCALE 1 IN. = 10 FT

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

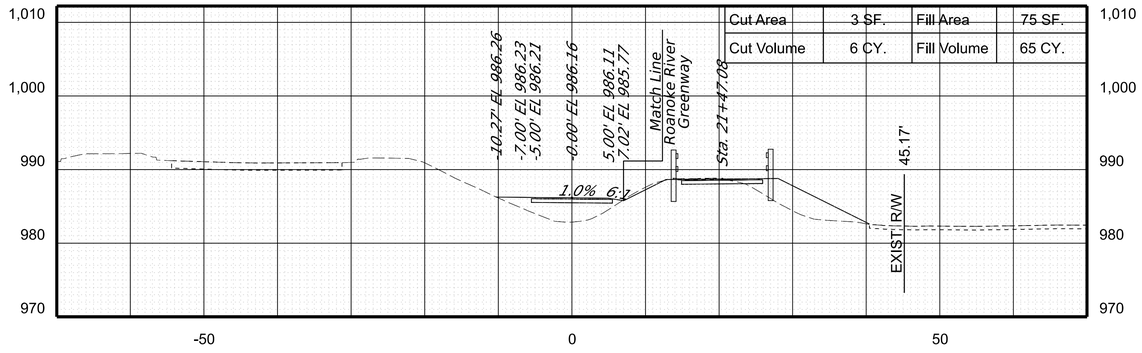
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X8



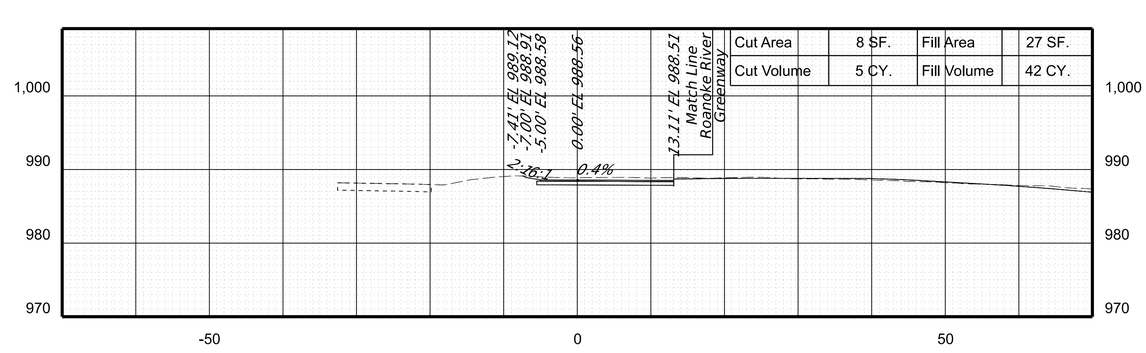
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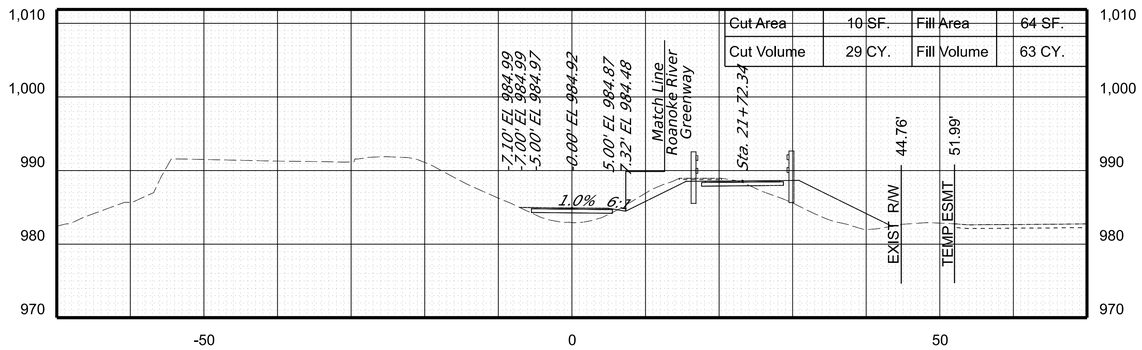
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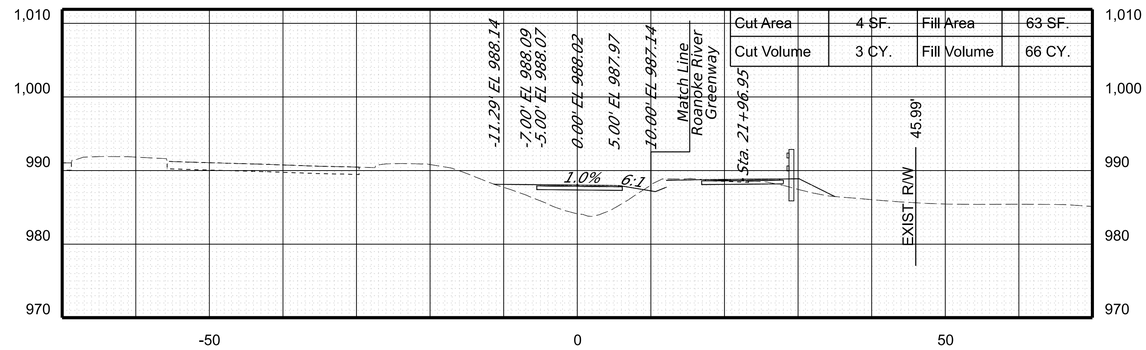
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STA 20+75.00



STA 19+75.00



STA 20+50.00

PROJECT	SHEET NO.
RRGW-120-257	X8

6/24/2024

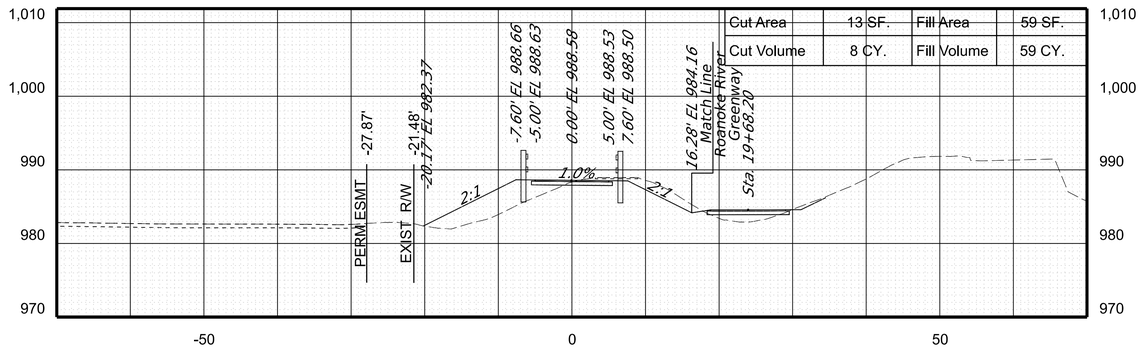
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____
DESIGN BY Blck Delong,P.E.,Bloker Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022.___

CROSS SECTIONS

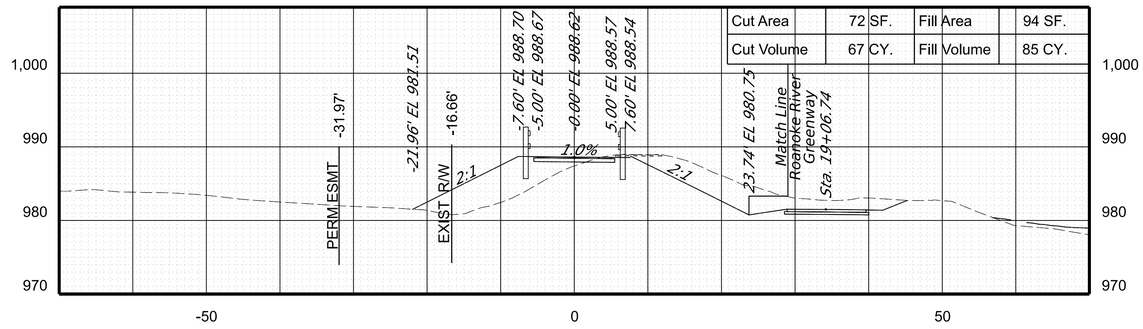
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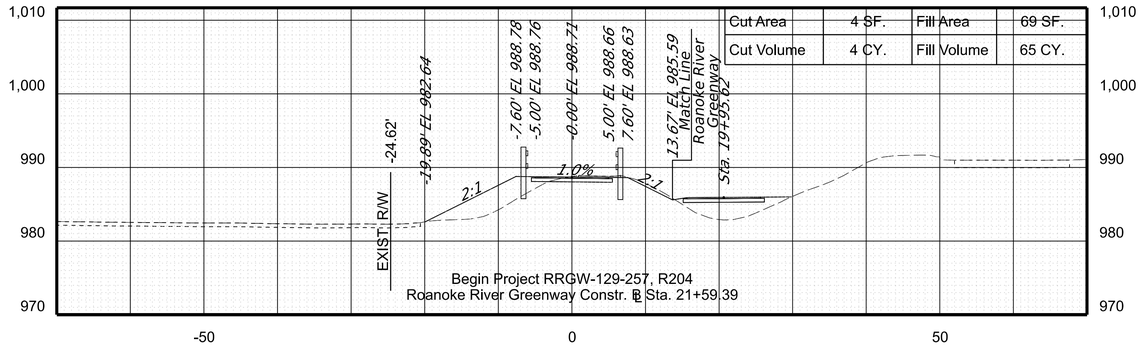
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X9



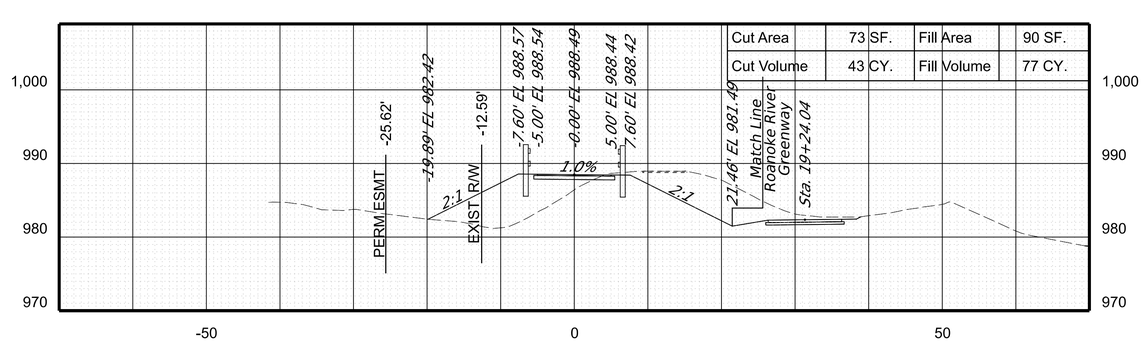
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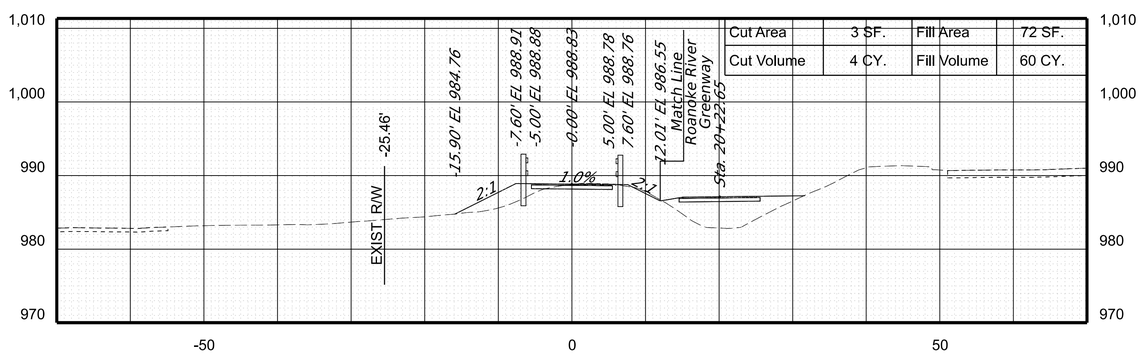
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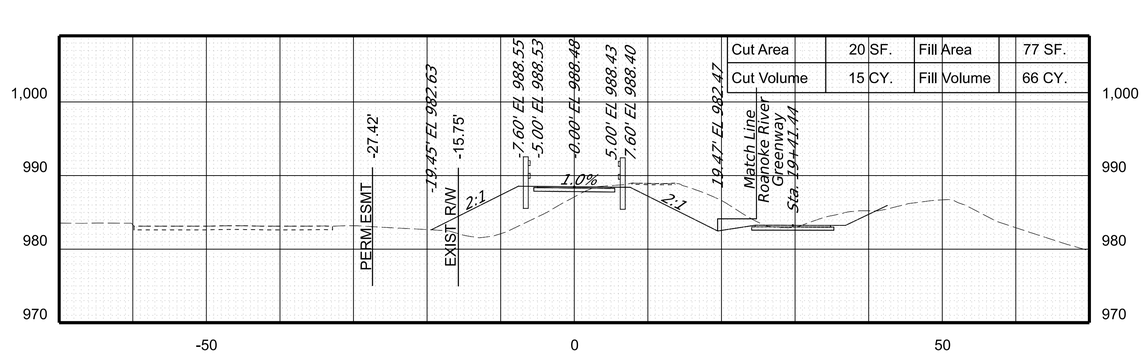
STA 21+50.00



STA 22+25.00



STA 21+25.00



STA 22+00.00

PROJECT	SHEET NO.
RRGW-120-257	X9

6/24/2024

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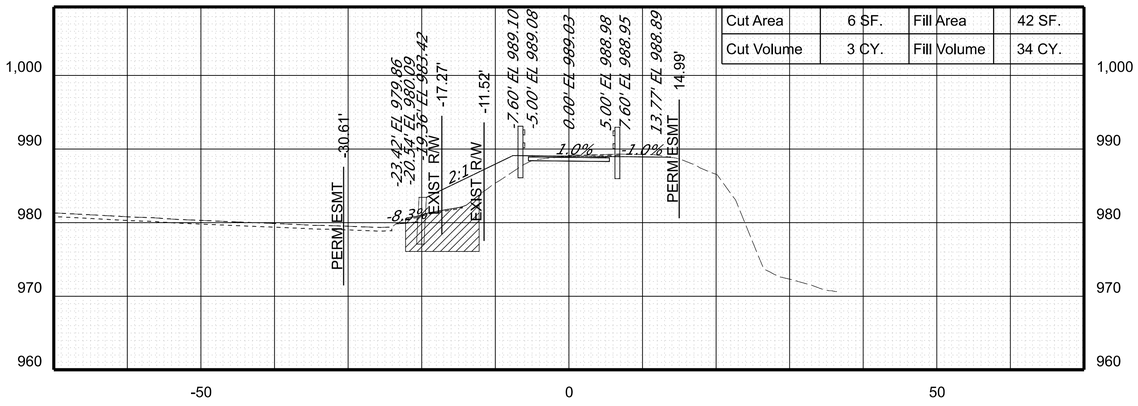
PROJECT MANAGER HDR VDOT PM: Chris Eggleston (540) 278-2405
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022
DESIGN BY Blick, Delong, P.E., Bibber Design Associates, P.C. (804) 612-0665
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

CROSS SECTIONS

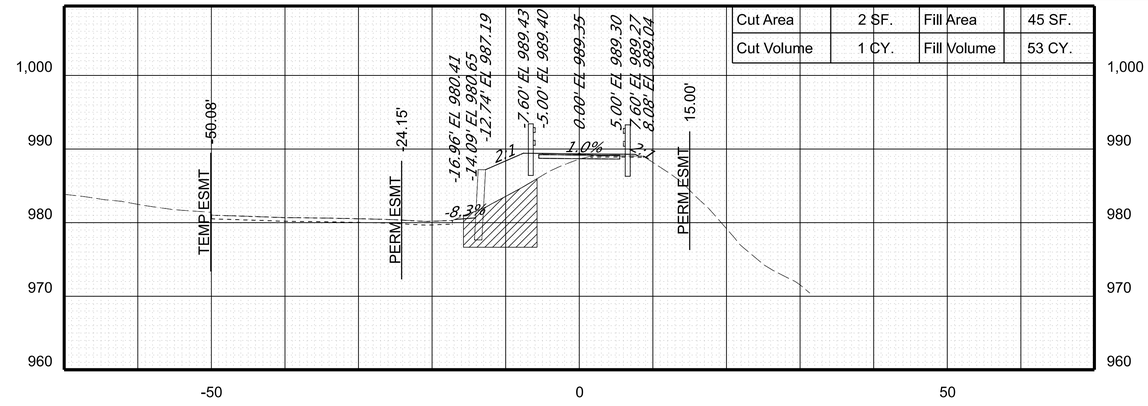
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

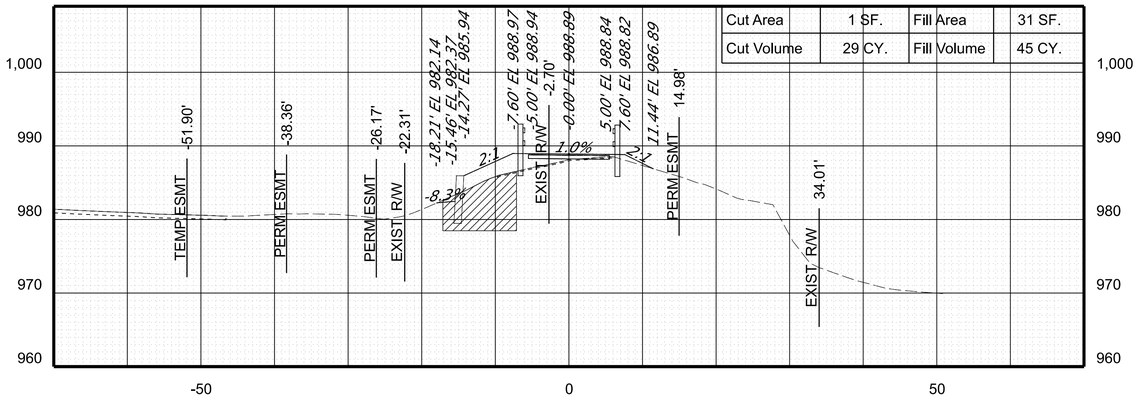
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X10



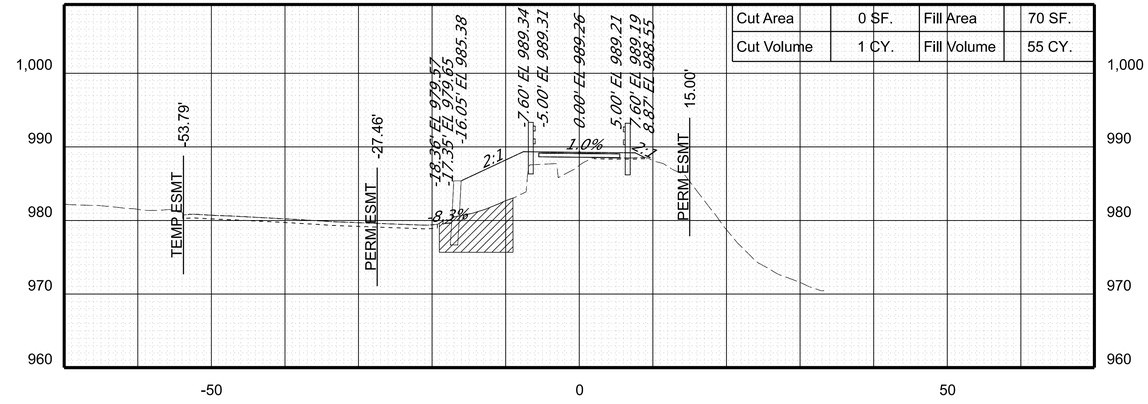
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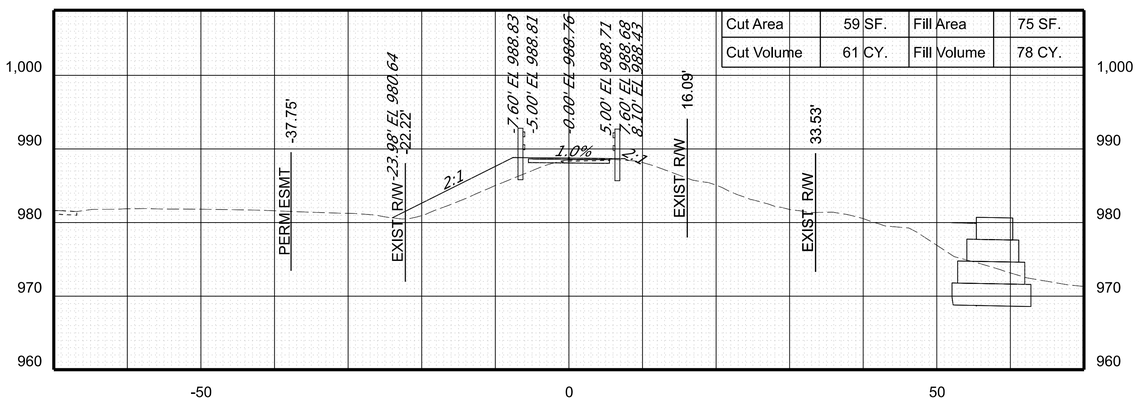
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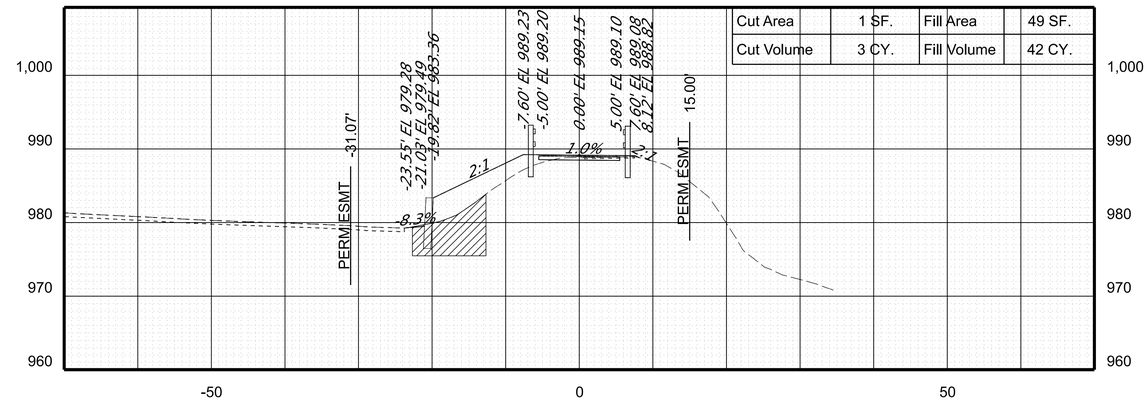
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STA 23+75.00



STA 22+75.00



STA 23+50.00

Denotes Retaining Wall Excavation

PROJECT	SHEET NO.
RRGW-120-257	X10

6/24/2024

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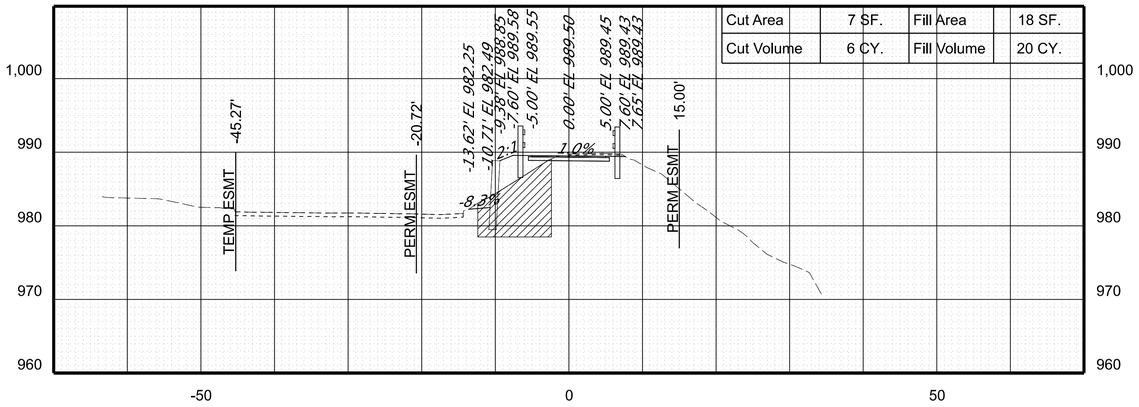
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022_____
DESIGN BY Blck Delong,P.E. Bibler Design Associates,P.C.(804) 612-0665_____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022_____

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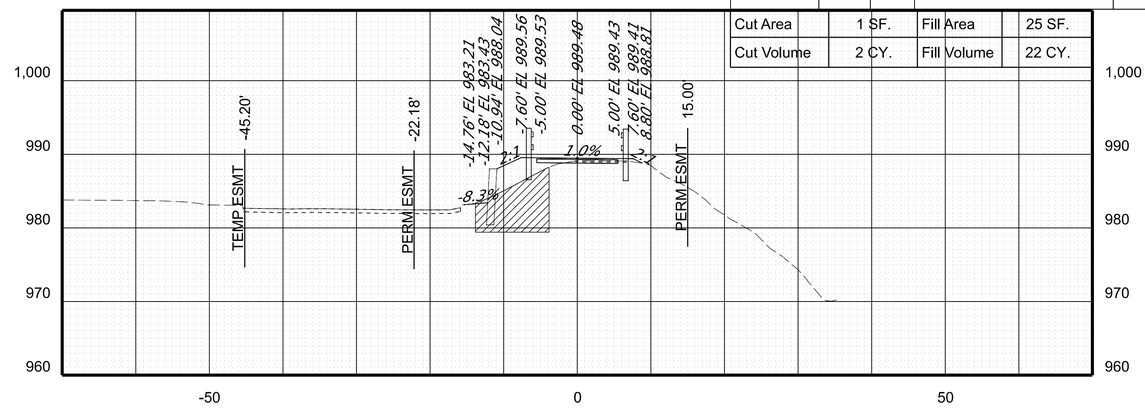
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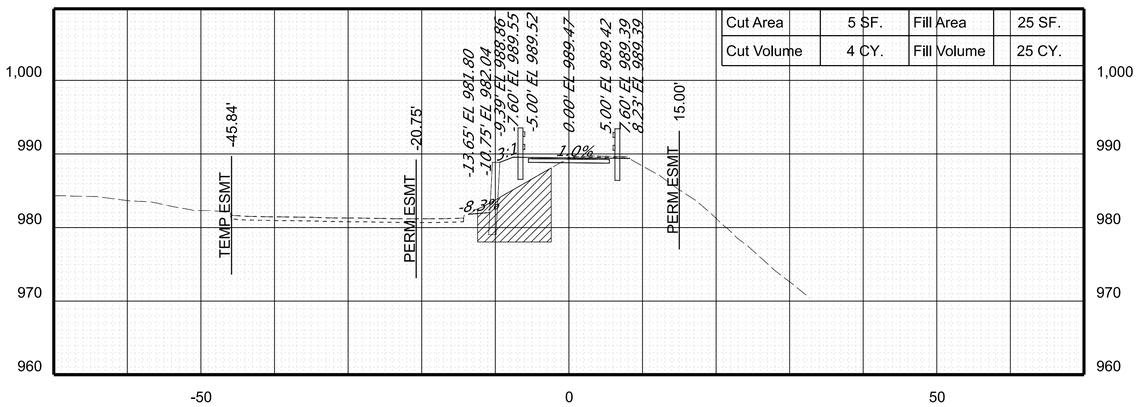
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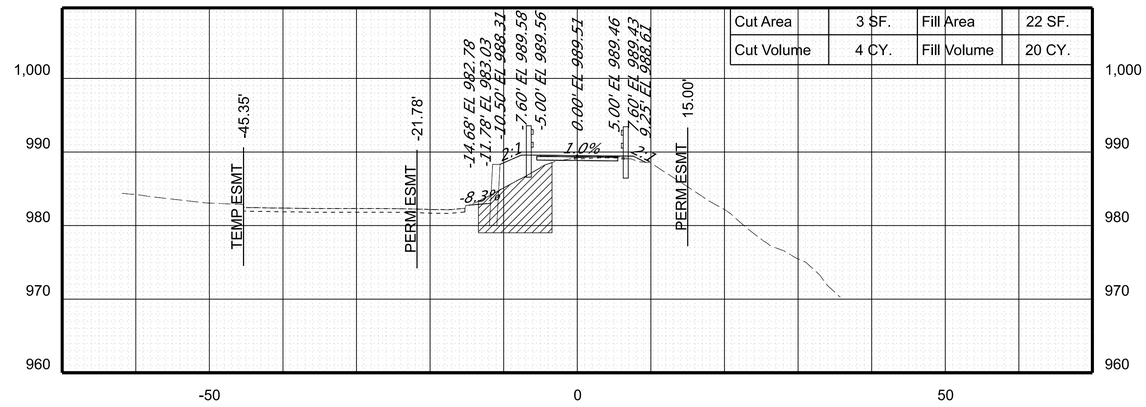
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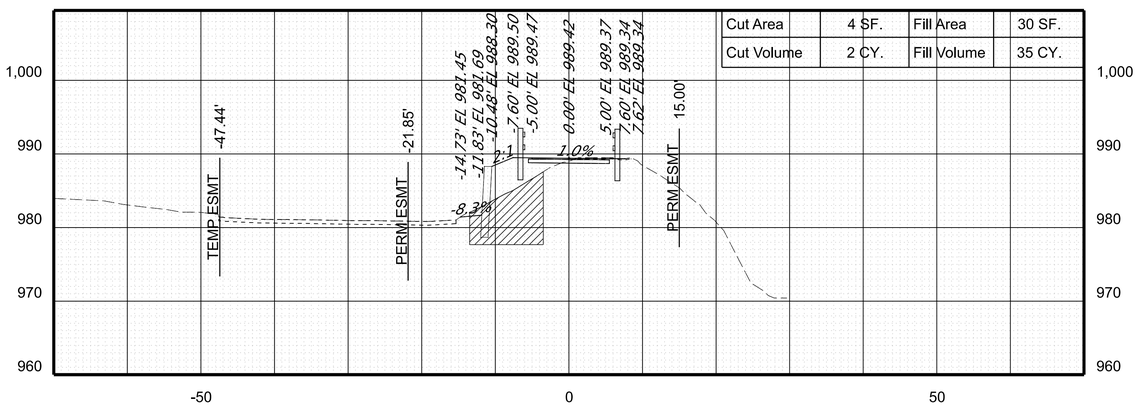
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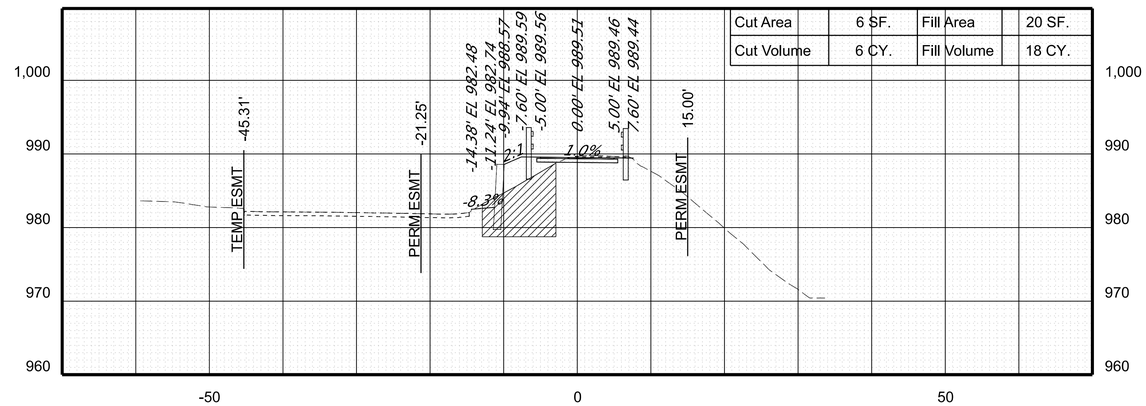
STA 24+50.00



STA 25+25.00



STA 24+25.00



STA 25+00.00

Denotes Retaining Wall Excavation

PROJECT	SHEET NO.
RRGW-120-257	X11

6/24/2024

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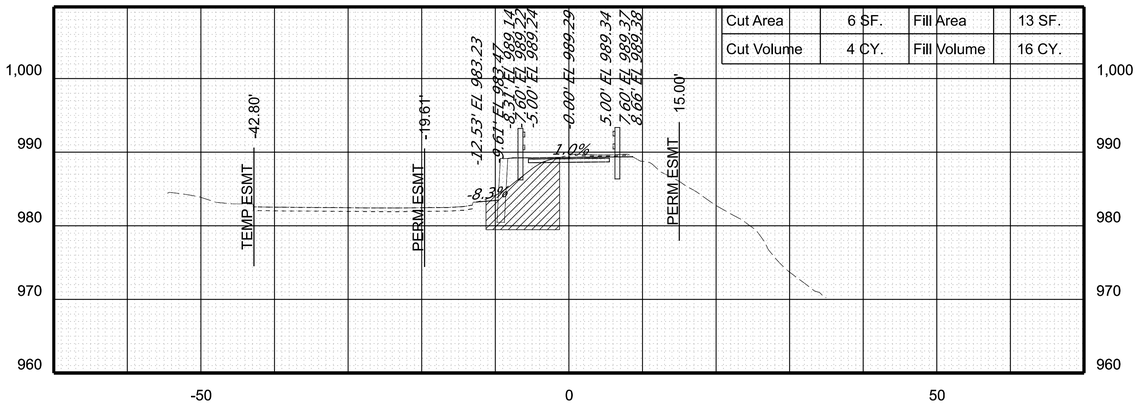
PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022_____
DESIGN BY Blick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665_____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022_____

CROSS SECTIONS

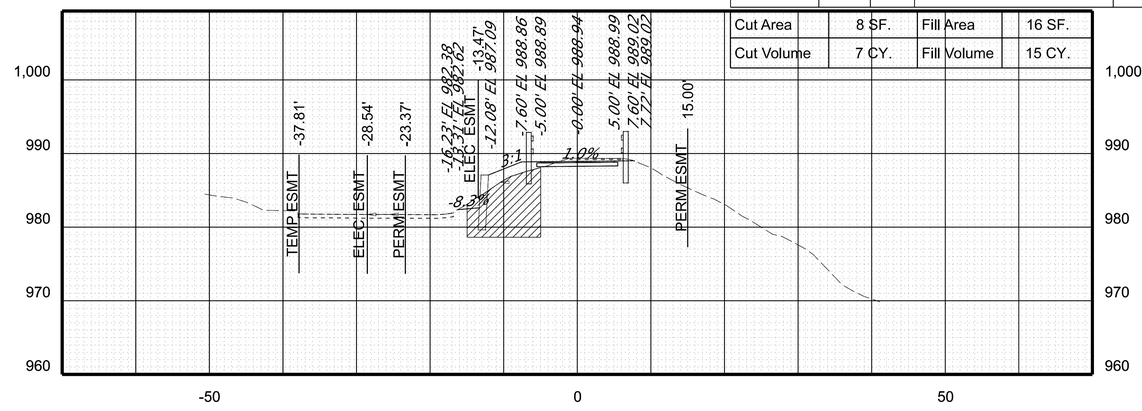
SCALE 1 IN. = 10 FT

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

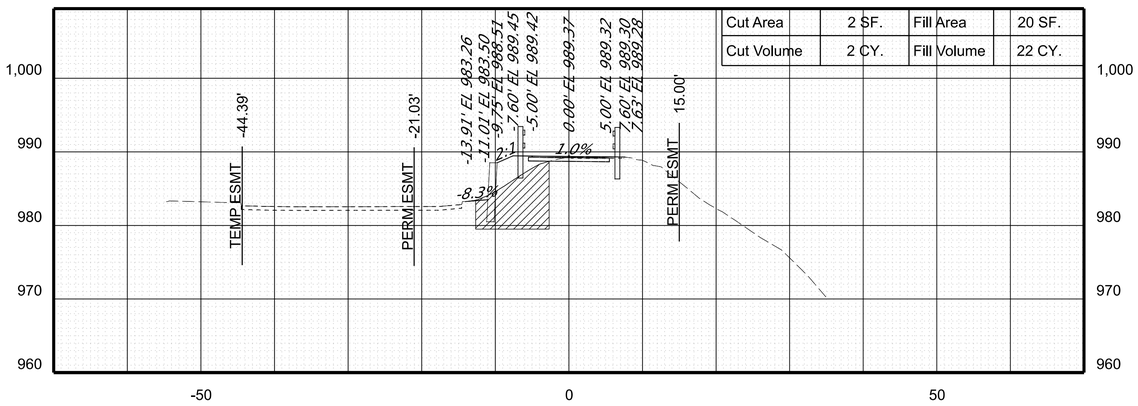
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24	VA.		RRGW-129-257 R204, M501	X12



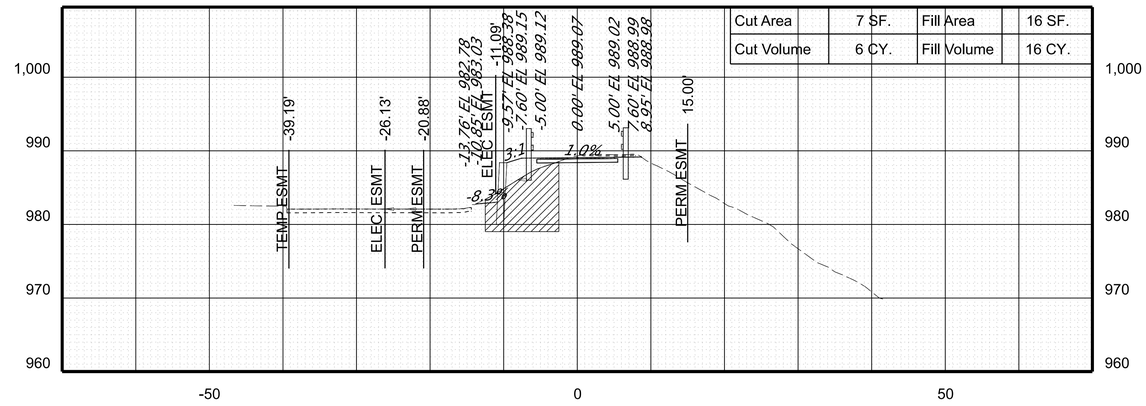
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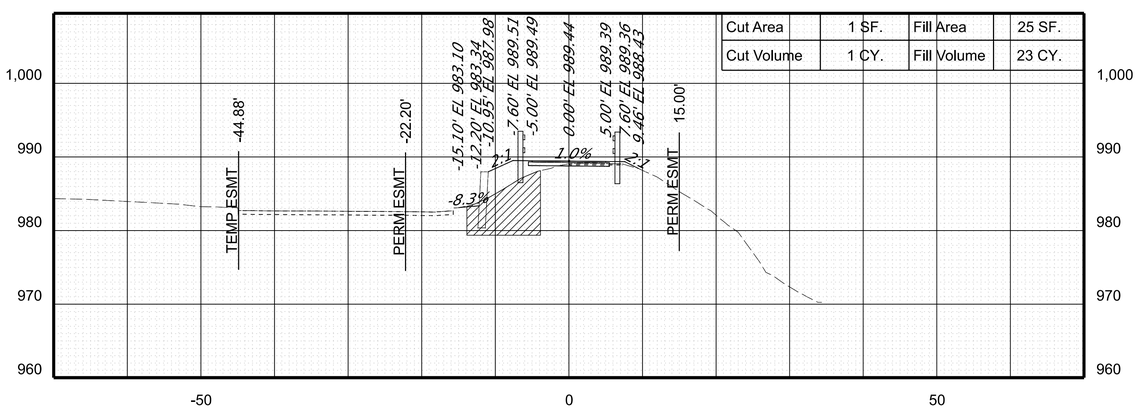
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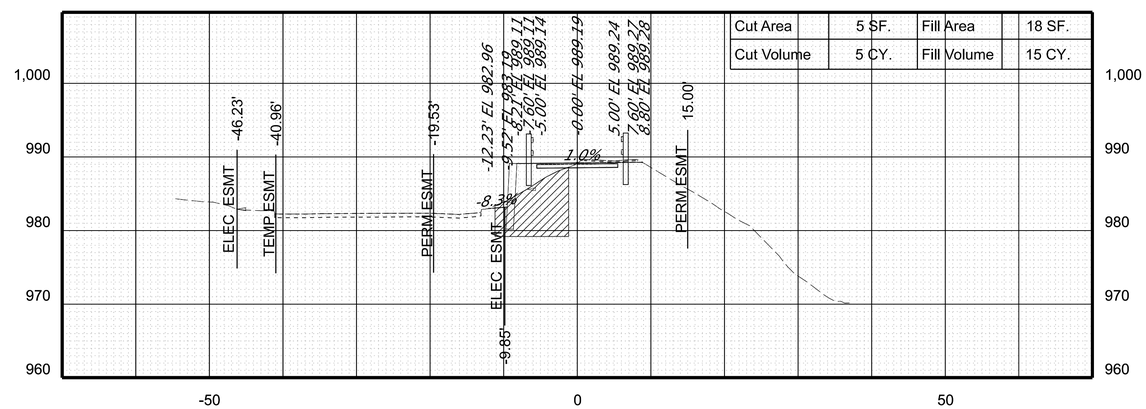
STA 26+00.00



STA 26+75.00



STA 25+75.00



STA 26+50.00

Denotes Retaining Wall Excavation

PROJECT	SHEET NO.
RRGW-120-257	X12

6/24/2024

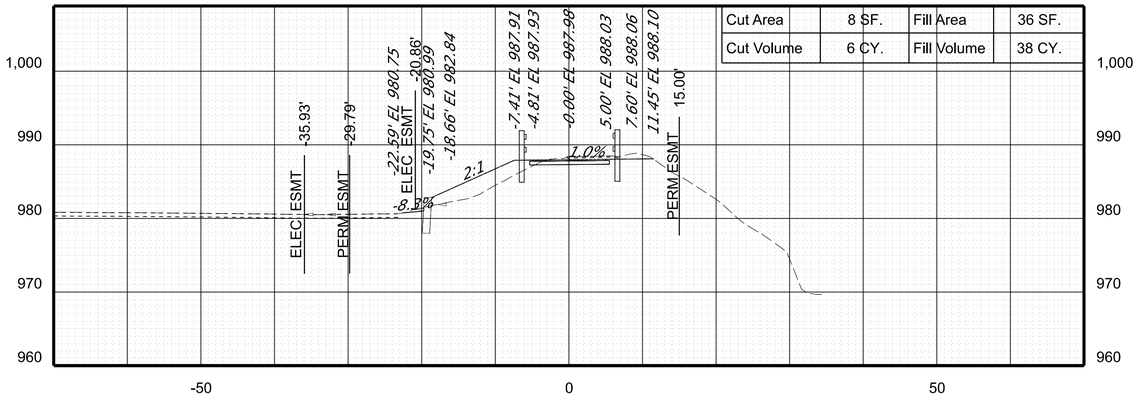
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022_____
DESIGN BY Blck Delong,P.E. Bloker Design Associates,P.C.(804) 612-0665_____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022_____

CROSS SECTIONS

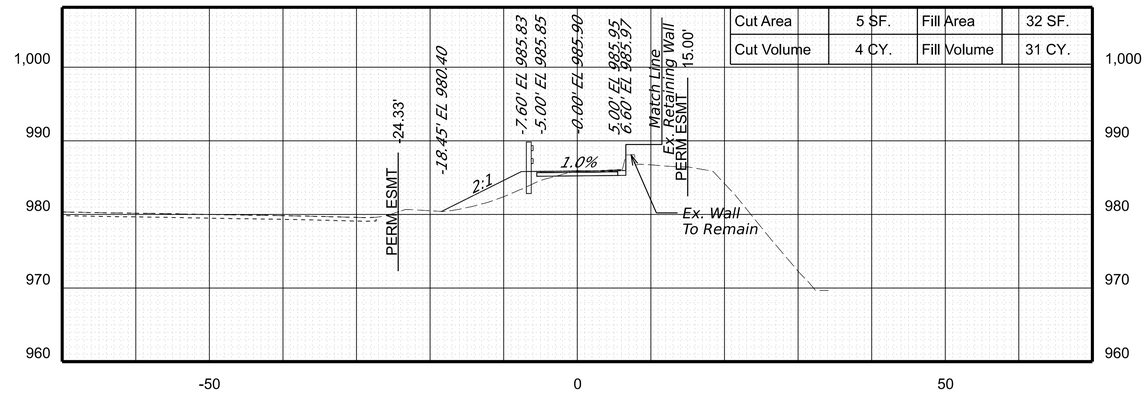
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

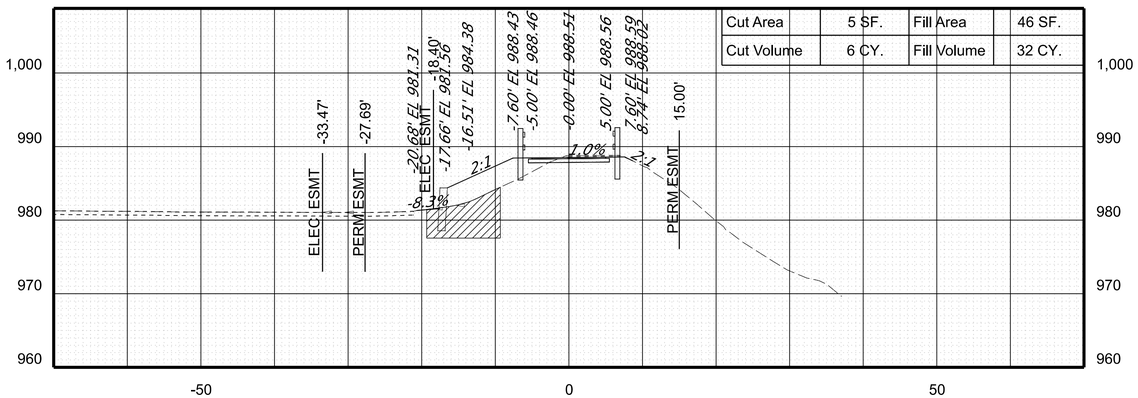
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/11/24	VA.		RRGW-129-257 R204, M501	X13



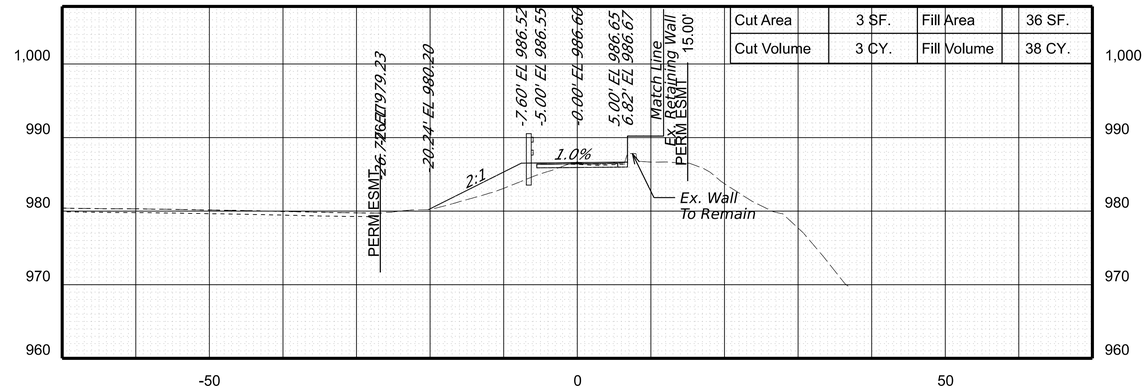
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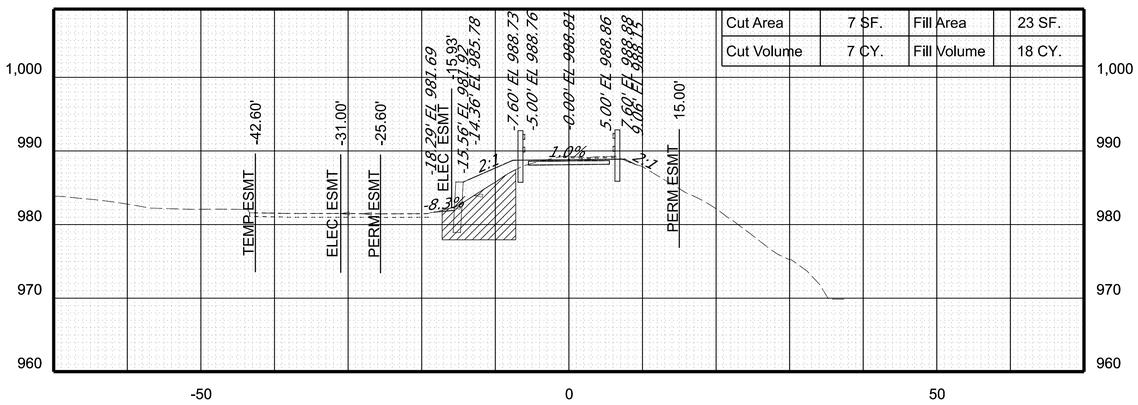
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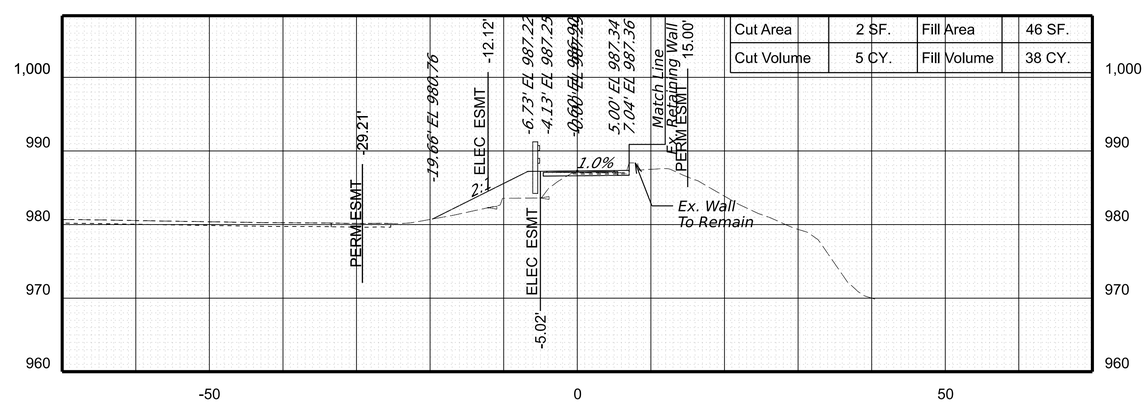
STA 27+50.00



STA 28+25.00



STA 27+25.00



STA 28+00.00

Denotes Retaining Wall Excavation

PROJECT	SHEET NO.
RRGW-120-257	X13

6/24/2024

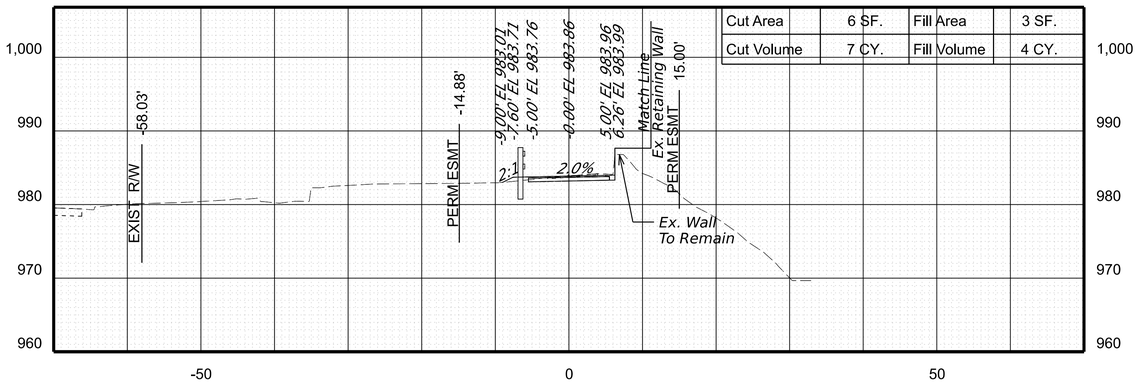
PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022_____
DESIGN BY Blick, Delong, P.E., Bibber Design Associates, P.C. (804) 612-0665_____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022_____

CROSS SECTIONS

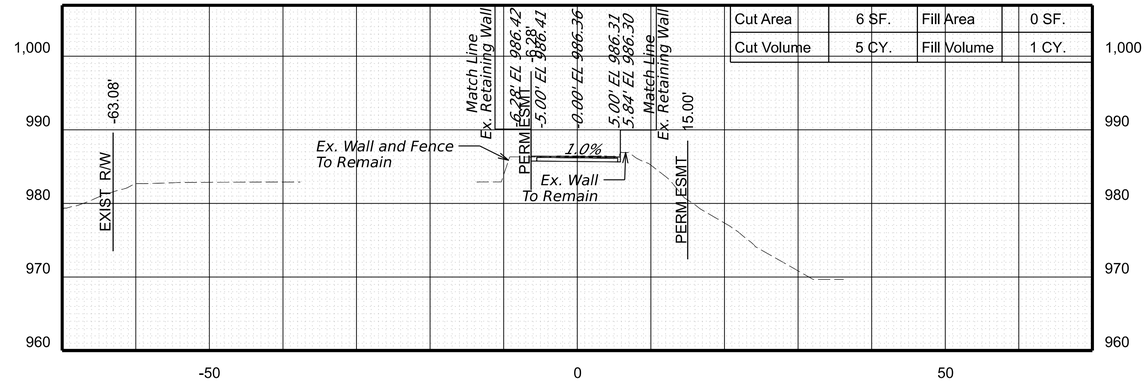
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

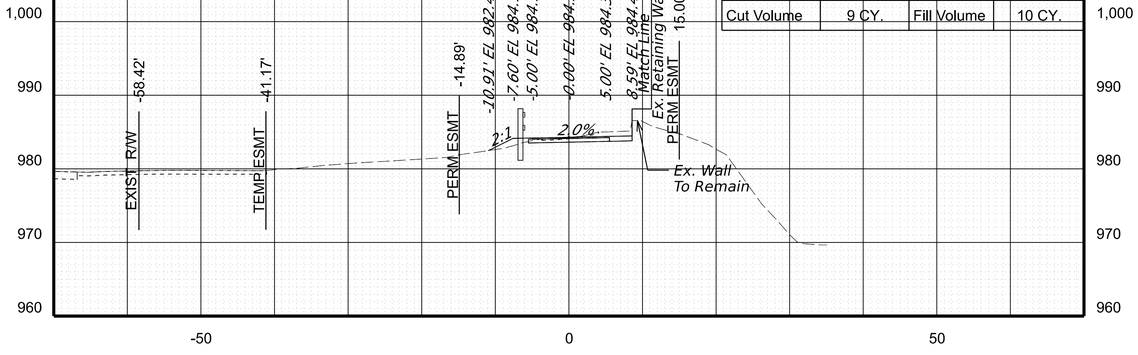
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X14



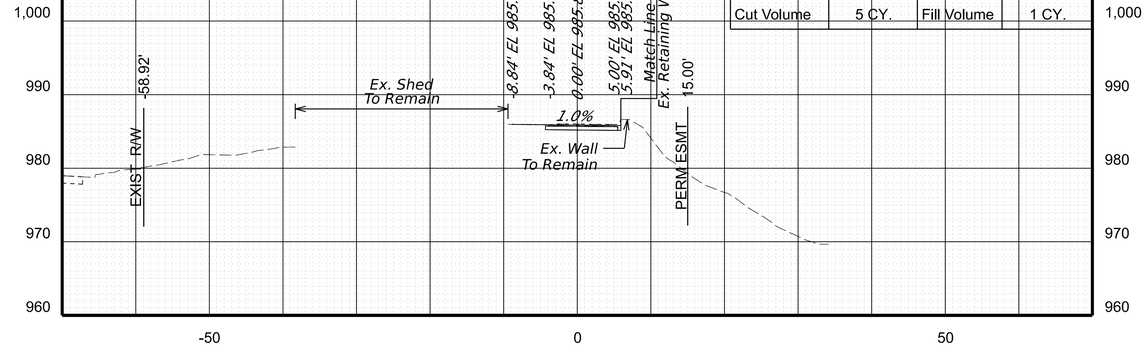
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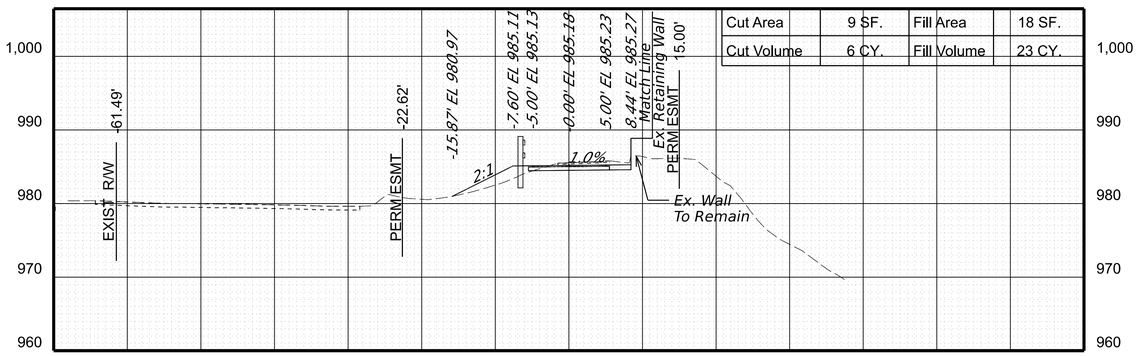
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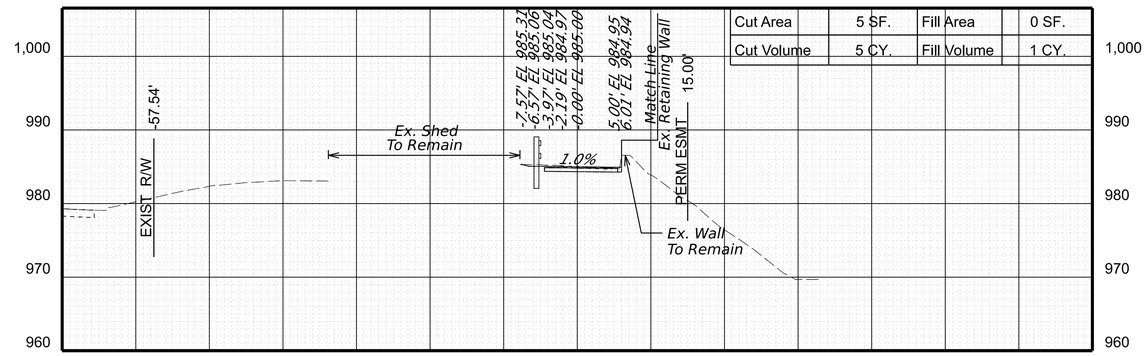
STA 29+00.00



STA 29+75.00



STA 28+75.00



STA 29+50.00

PROJECT	SHEET NO.
RRGW-120-257	X14

6/24/2024

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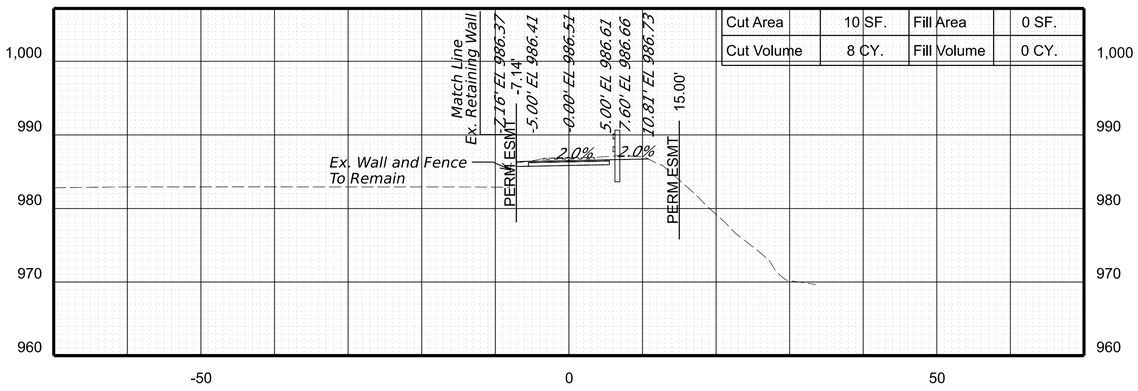
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022_____
DESIGN BY Blick, Delong,P.E.,Bloker Design Associates,P.C.(804) 612-0665_____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022_____

CROSS SECTIONS

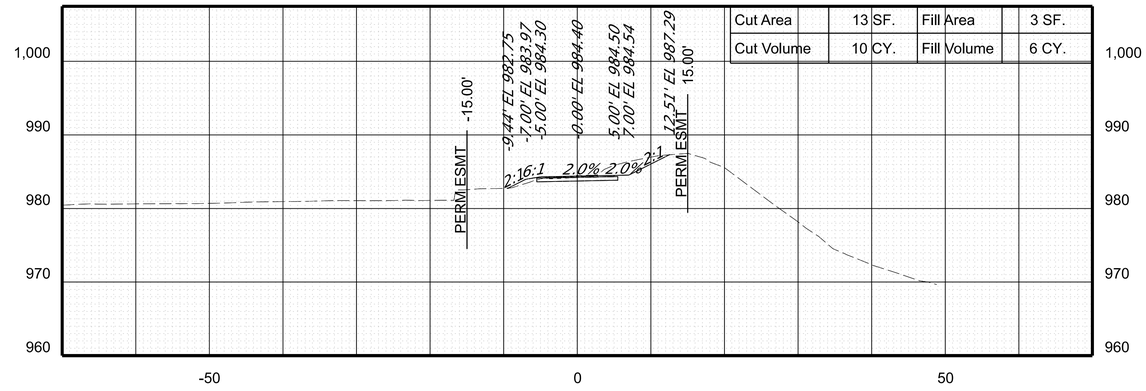
SCALE 1 IN. = 10 FT

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

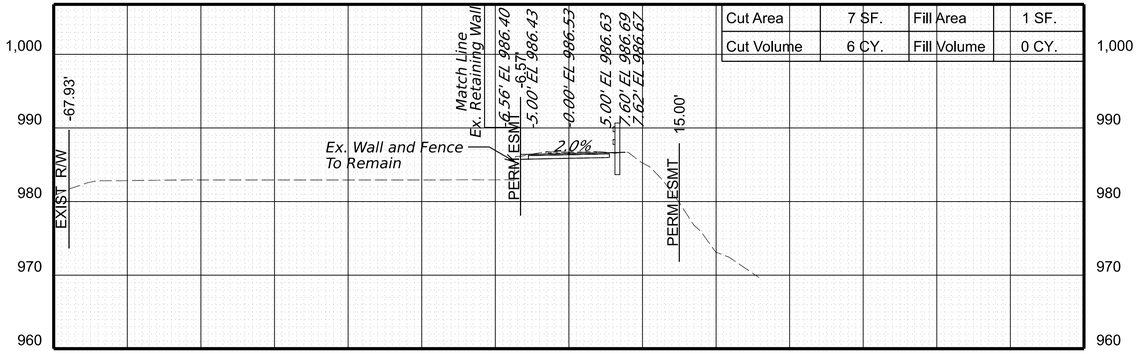
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X15



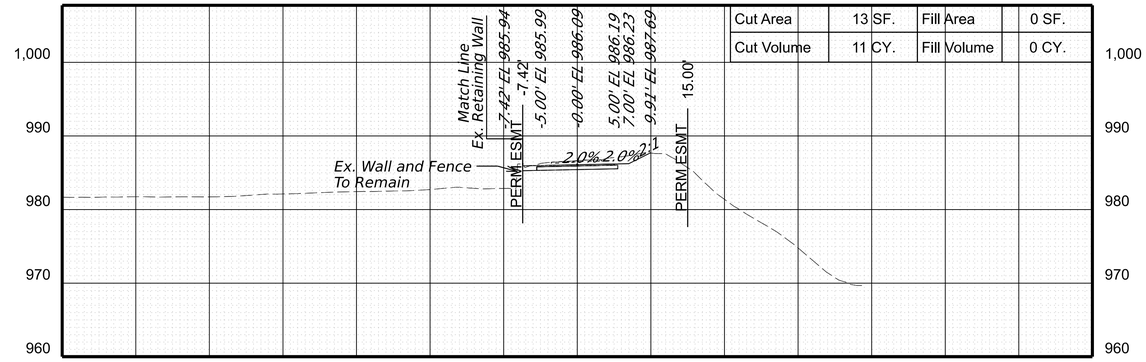
STA 30+75.00



STA 31+50.00



STA 30+50.00



STA 31+25.00

STA 30+25.00

STA 31+00.00

PROJECT	SHEET NO.
RRGW-120-257	X15

6/24/2024

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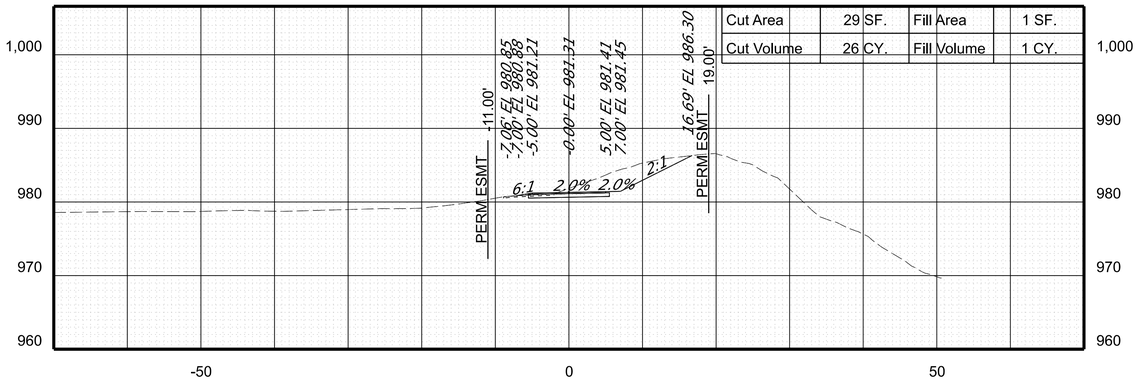
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____
DESIGN BY Blick, Delong,P.E.,Bloker Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022.___

CROSS SECTIONS

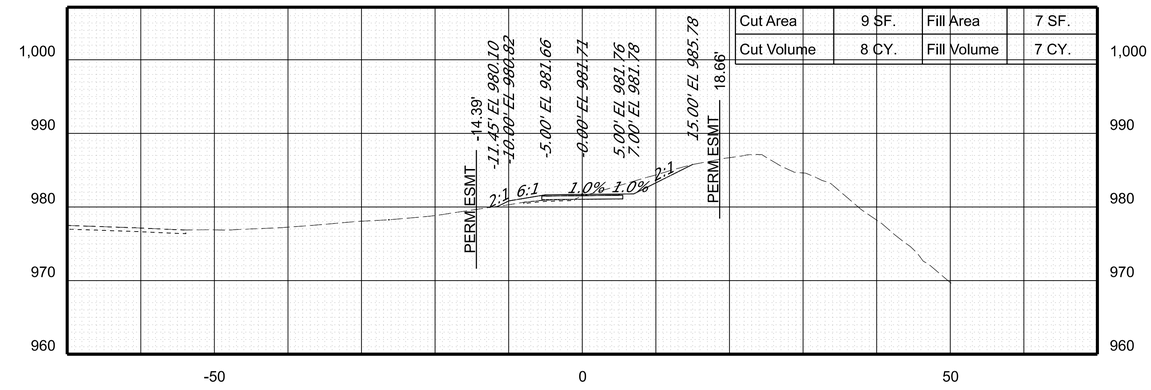
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

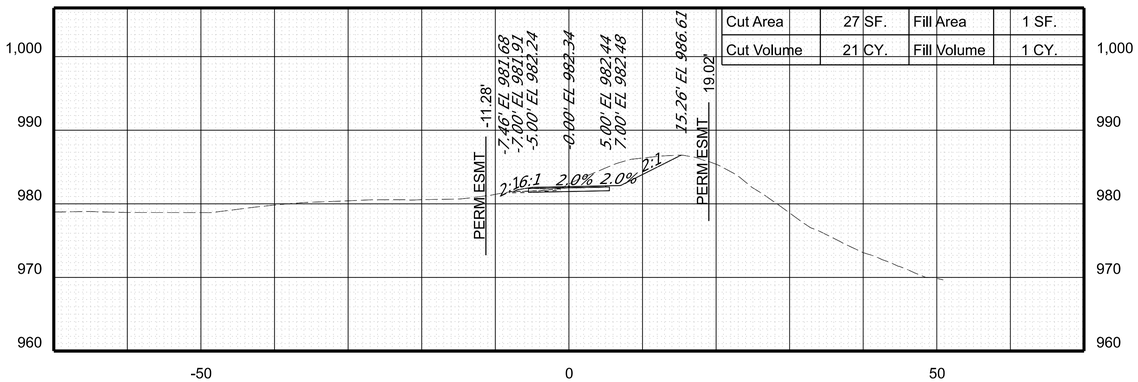
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
02/08/24	VA.		RRGW-129-257 R204, M501	X16



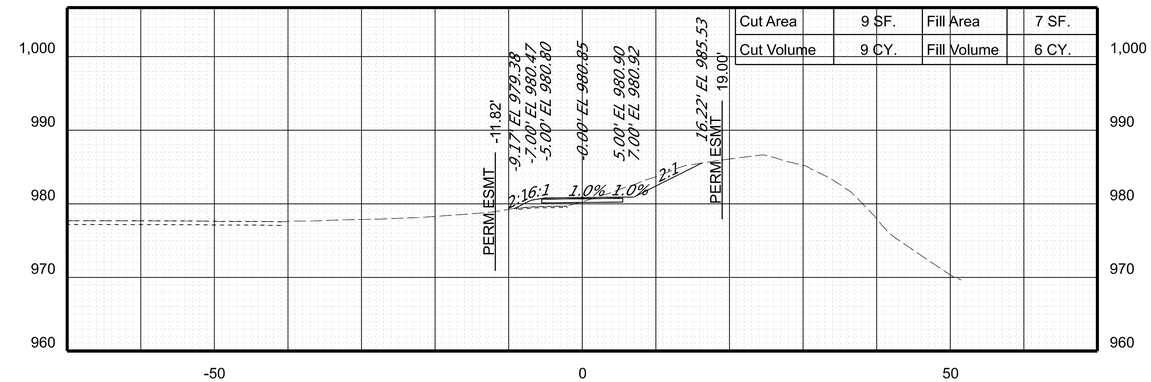
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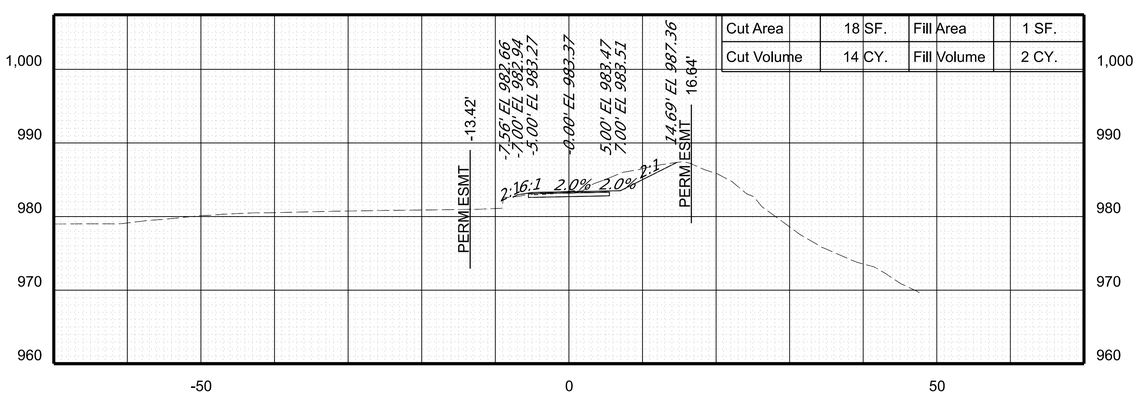
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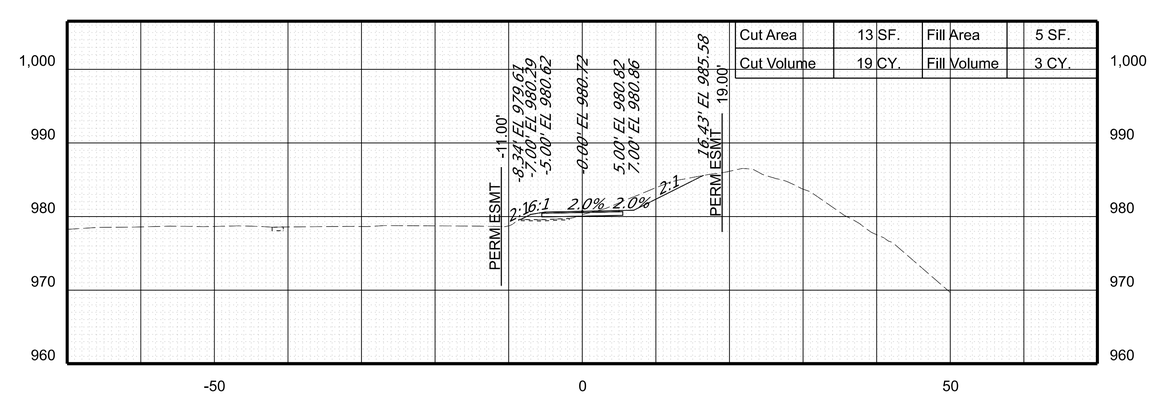
STA 32+00.00



STA 32+75.00



STA 31+75.00



STA 32+50.00

PROJECT	SHEET NO.
RRGW-120-257	X16

6/24/2024

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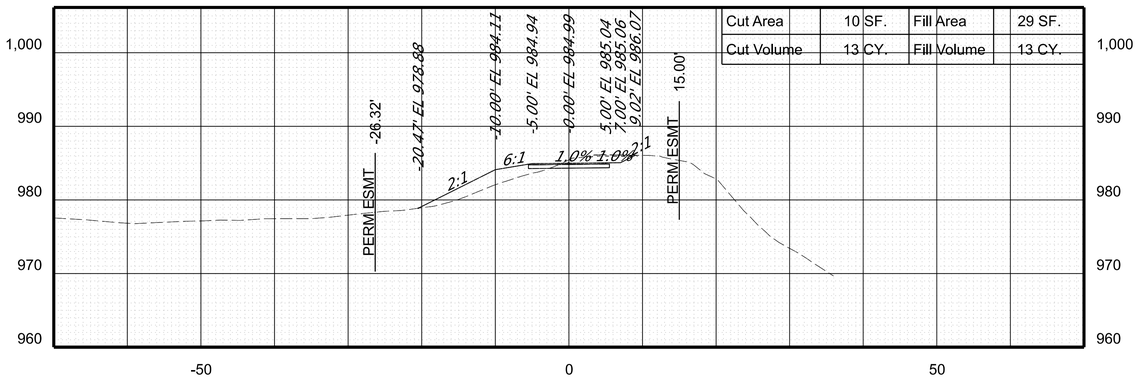
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022_____
DESIGN BY Blck Delong,P.E. Bloker Design Associates,P.C.(804) 612-0665_____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022_____

CROSS SECTIONS

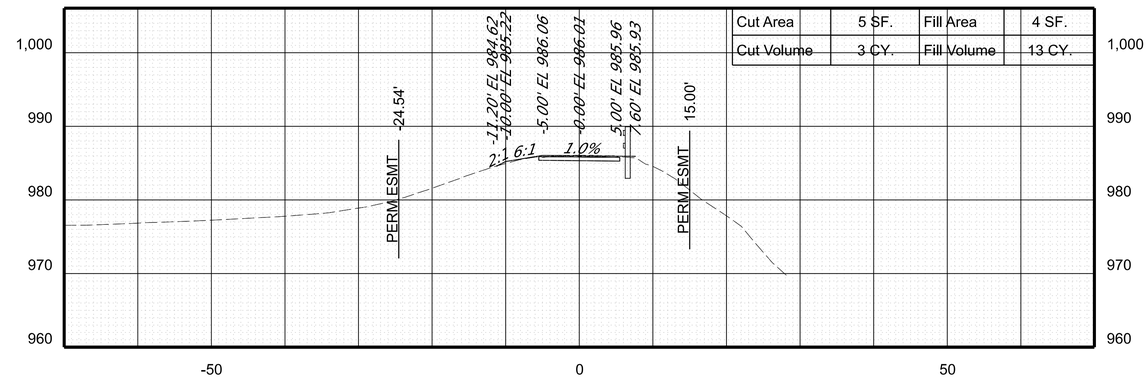
SCALE 1 IN. = 10 FT

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

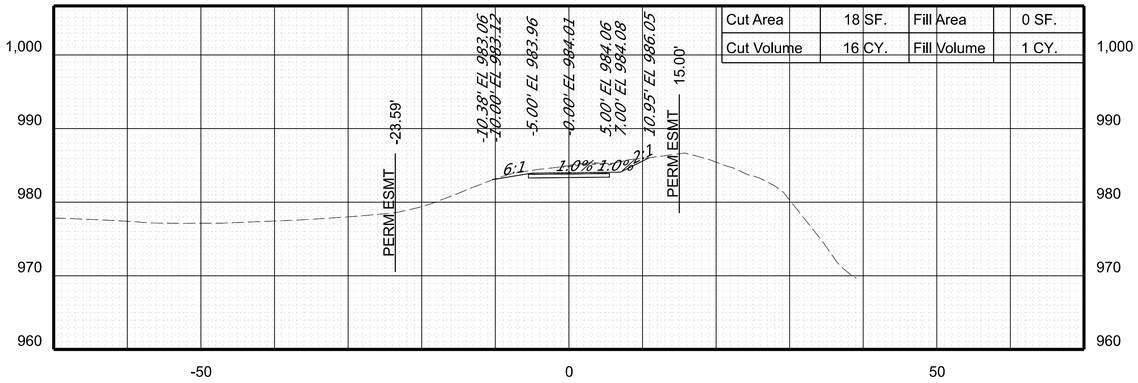
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X17



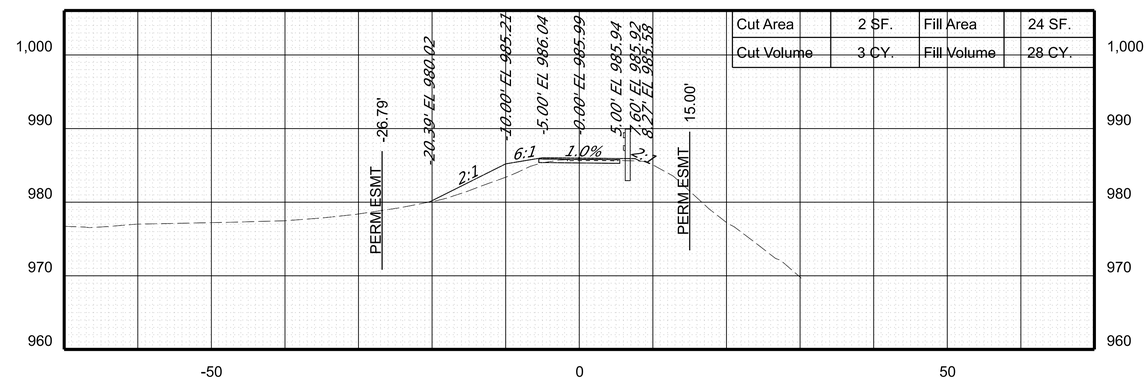
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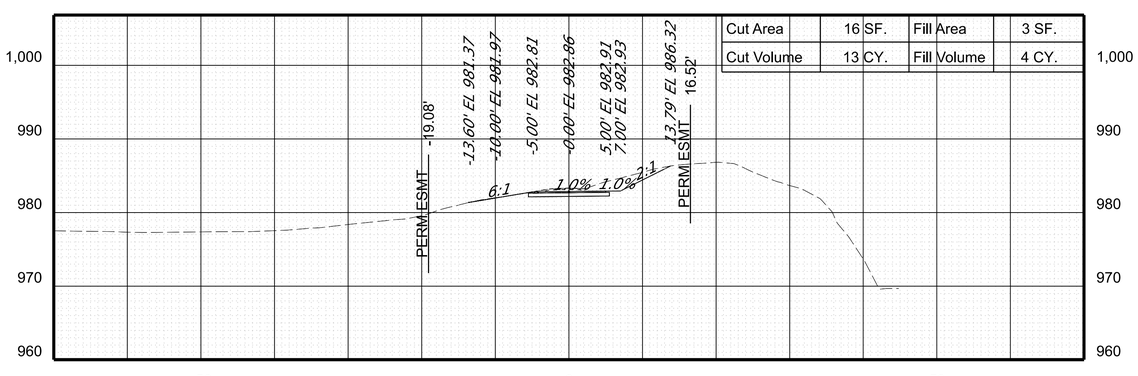
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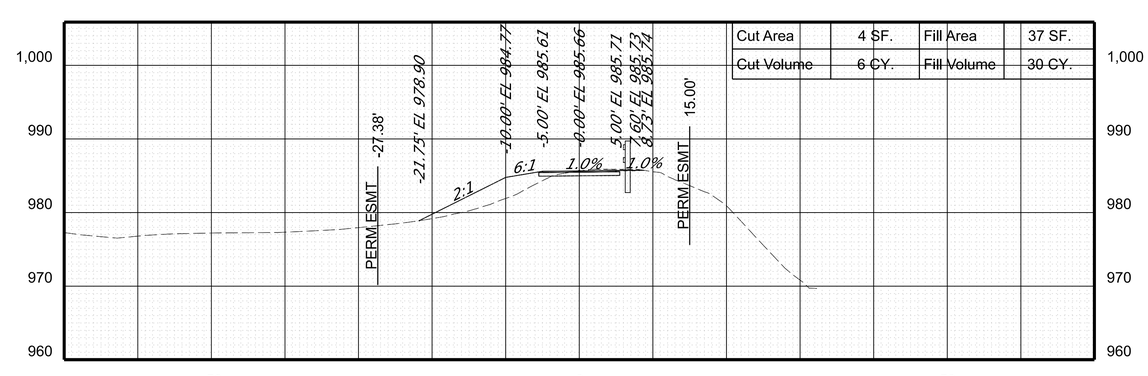
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STA 34+25.00



STA 33+25.00



STA 34+00.00

PROJECT	SHEET NO.
RRGW-120-257	X17

6/24/2024

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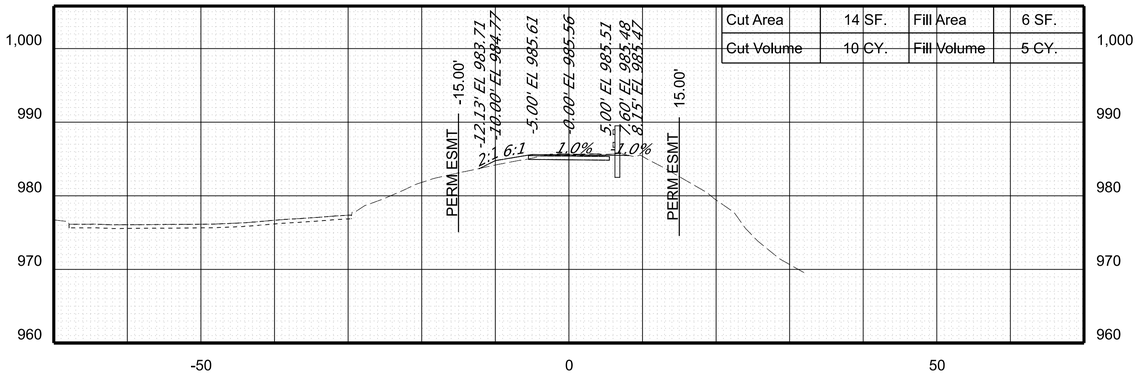
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____
DESIGN BY Blick Delong,P.E. Bibler Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022.___

CROSS SECTIONS

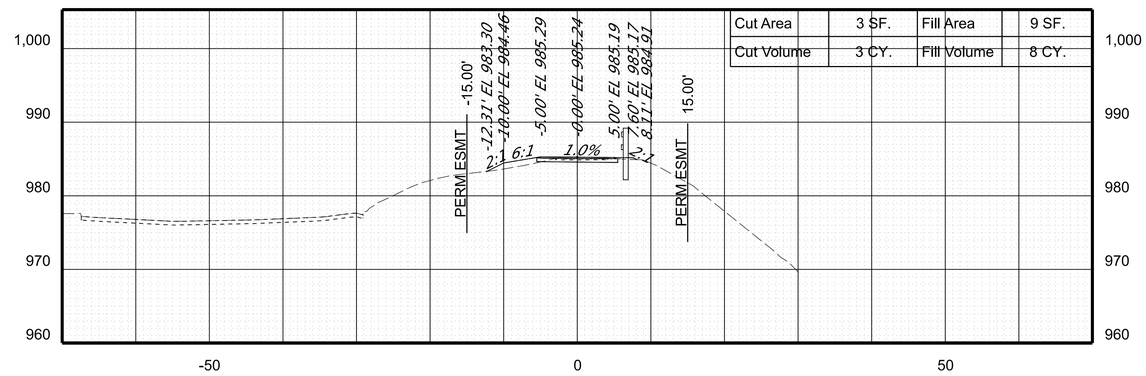
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

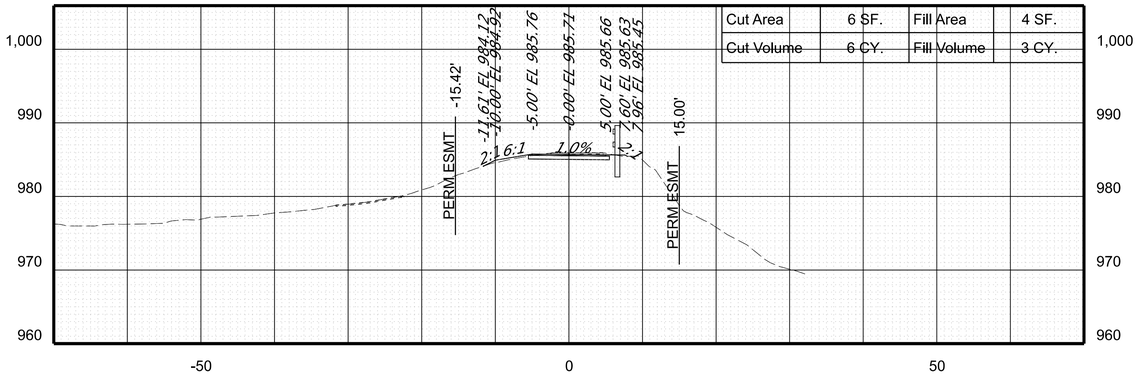
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X18



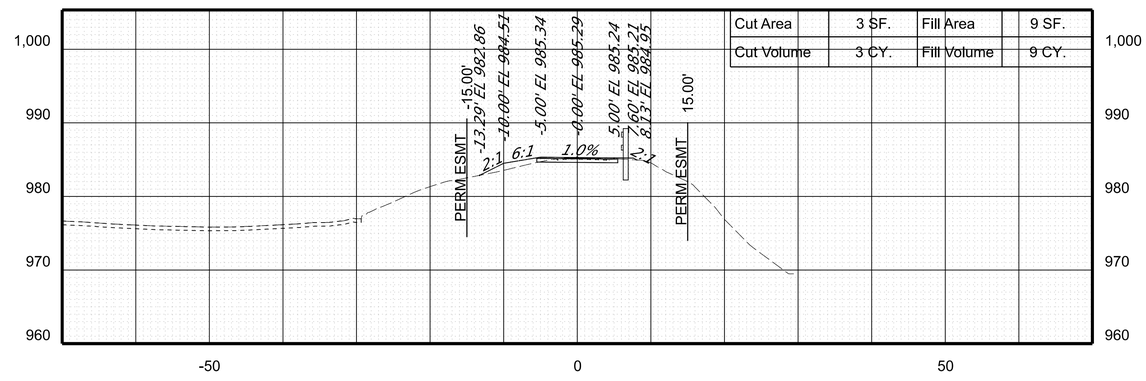
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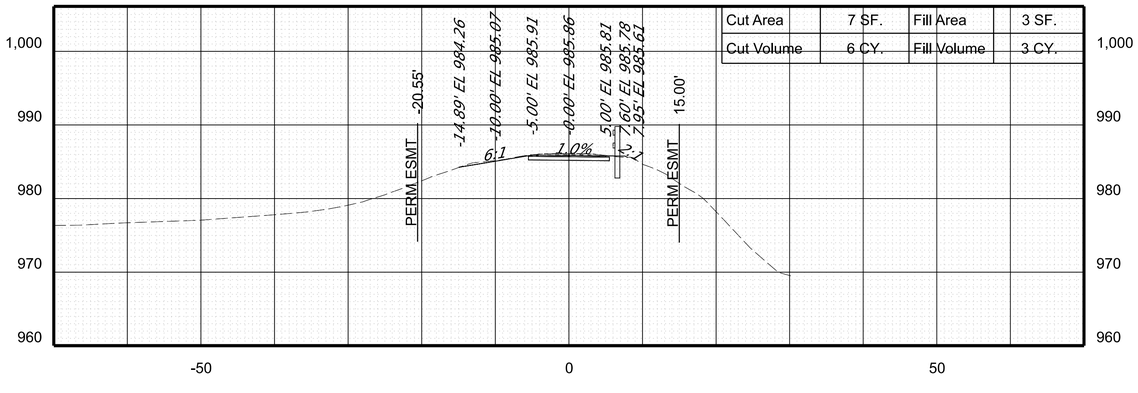
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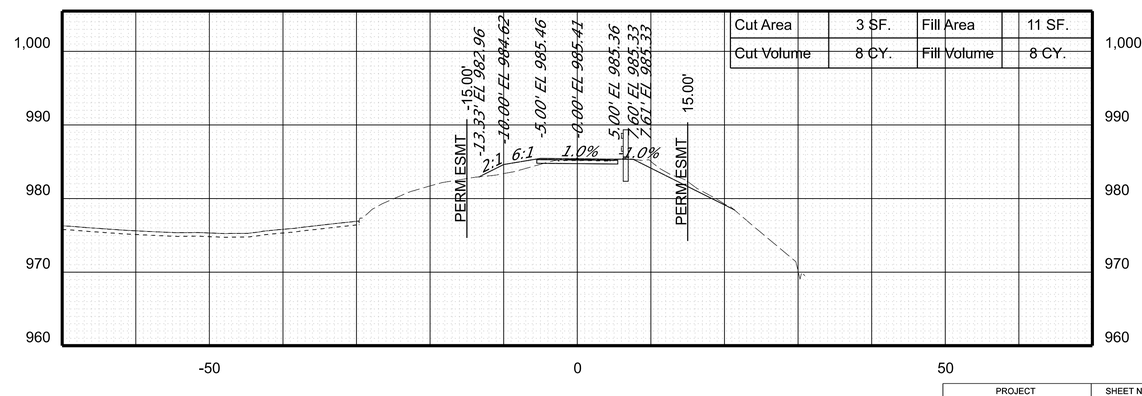
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STA 34+75.00



STA 35+50.00

PROJECT	SHEET NO.
RRGW-120-257	X18

6/24/2024

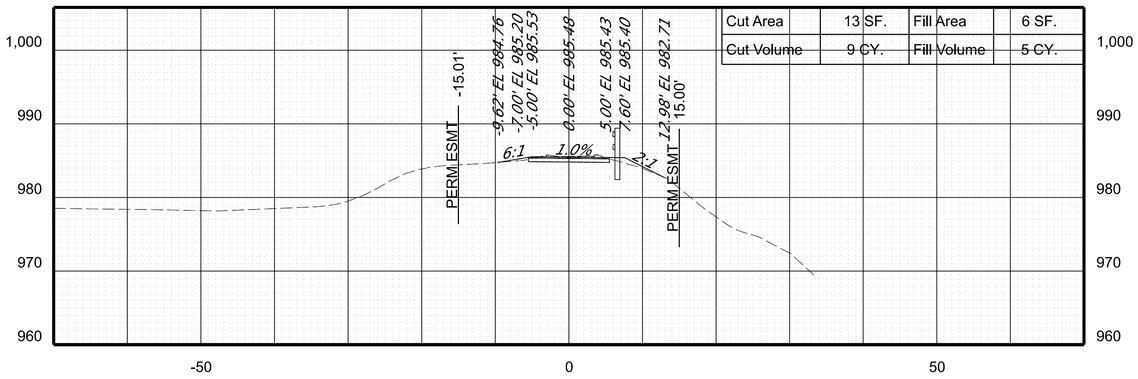
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____
DESIGN BY Blick Delong,P.E. Bibler Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____

CROSS SECTIONS

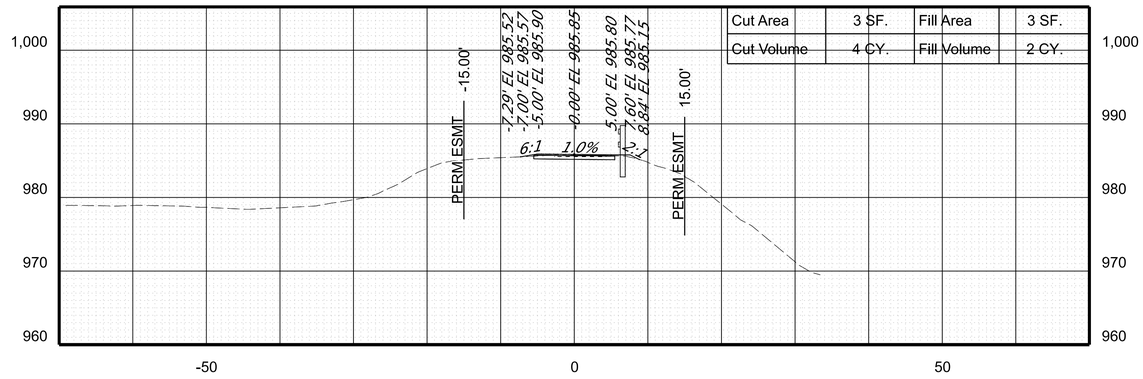
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

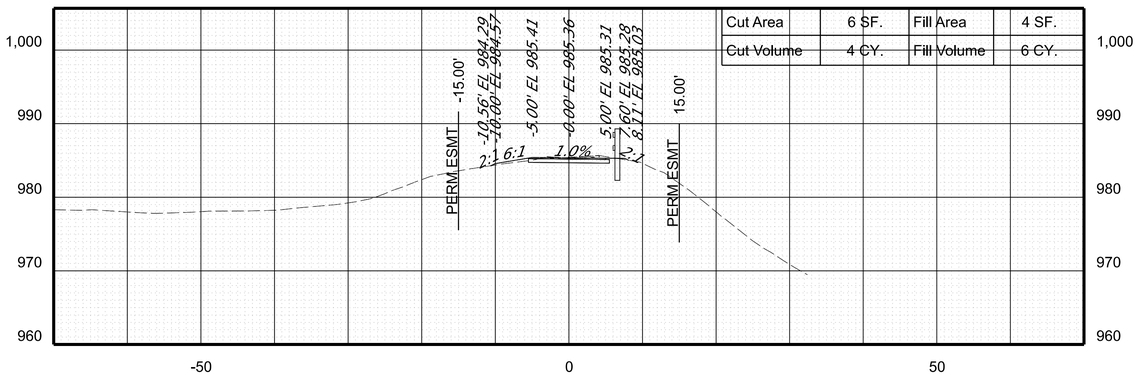
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X19



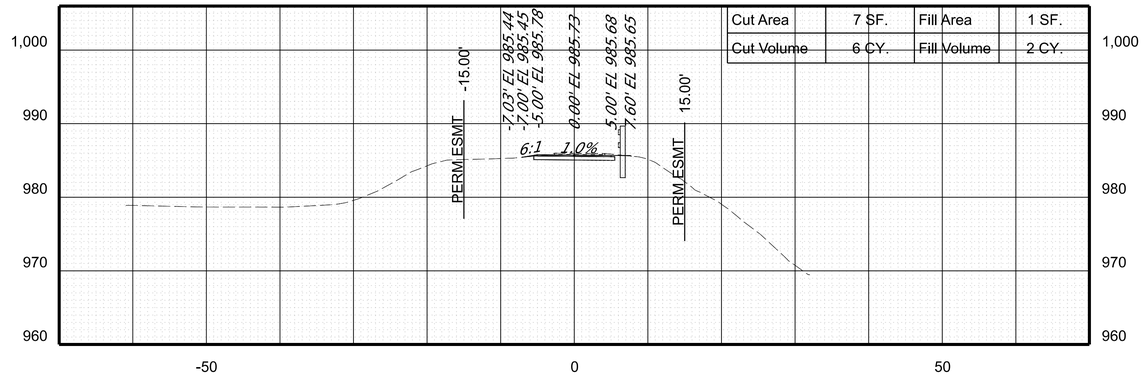
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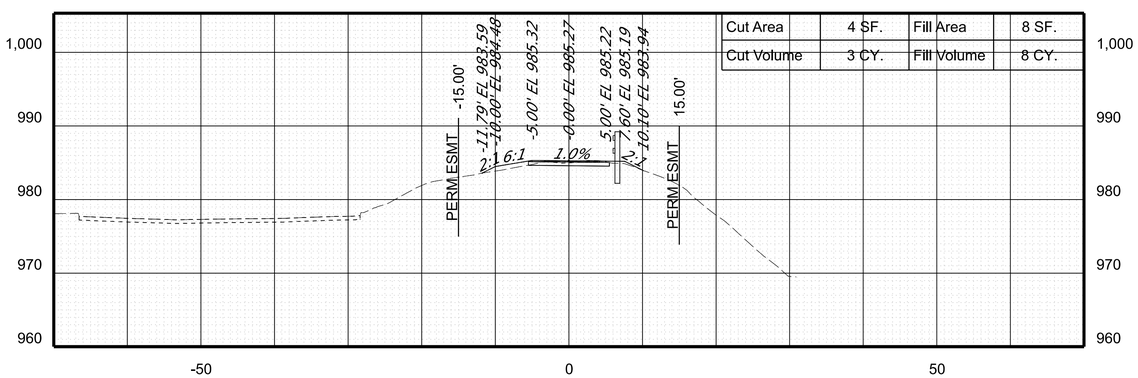
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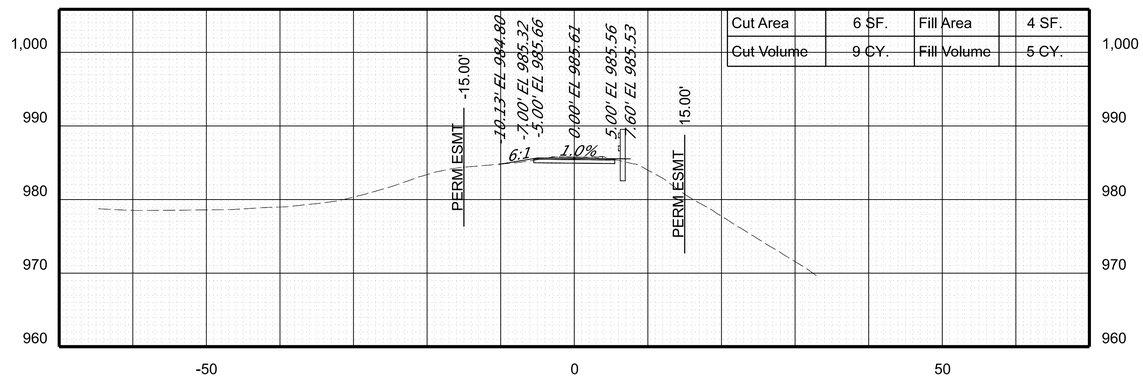
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STA 37+25.00



STA 36+25.00



STA 37+00.00

PROJECT	SHEET NO.
RRGW-120-257	X19

6/24/2024

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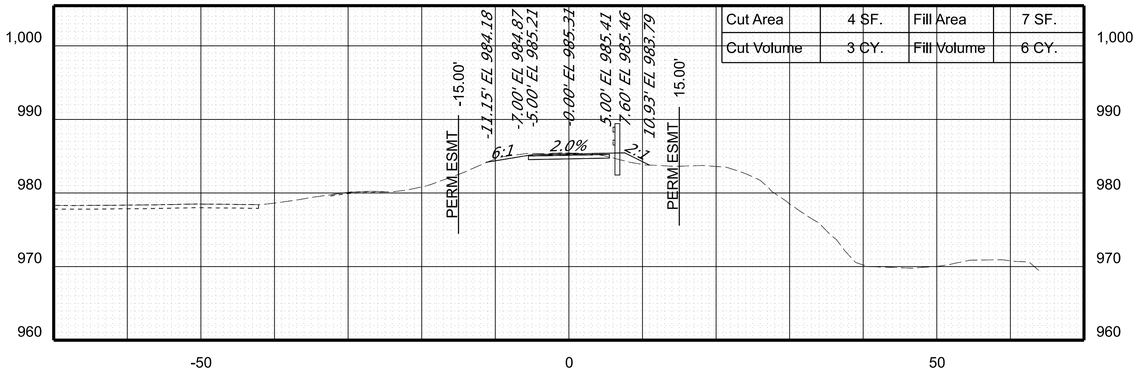
PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022_____
DESIGN BY Blick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665_____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022_____

CROSS SECTIONS

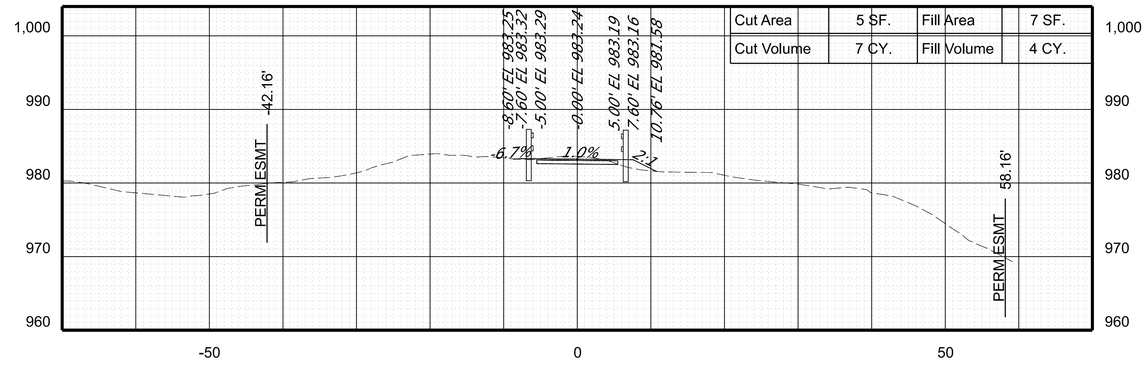
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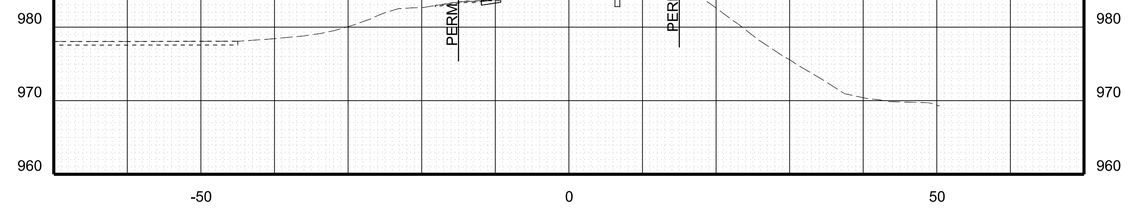
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	VA.		RRGW-129-257 R204, M501	X20



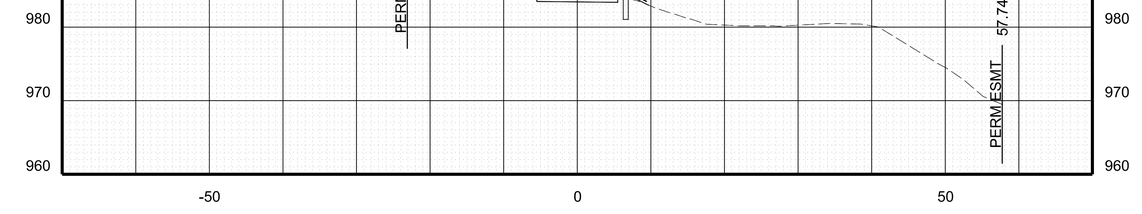
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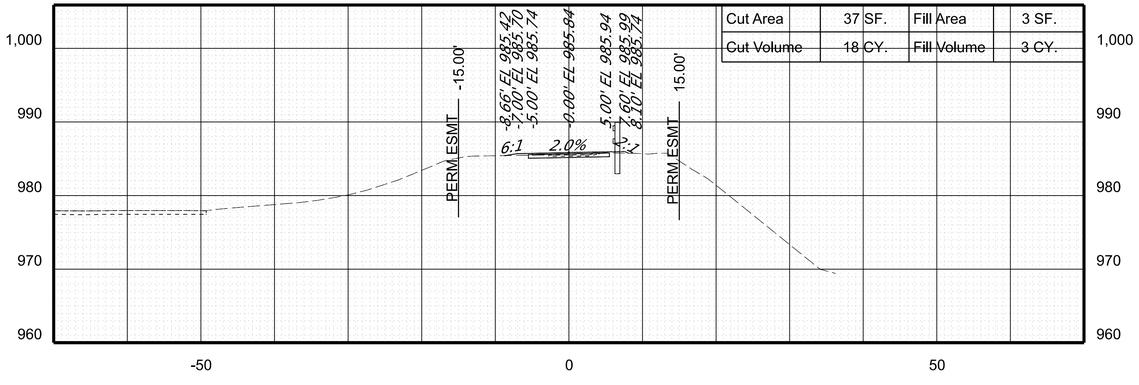
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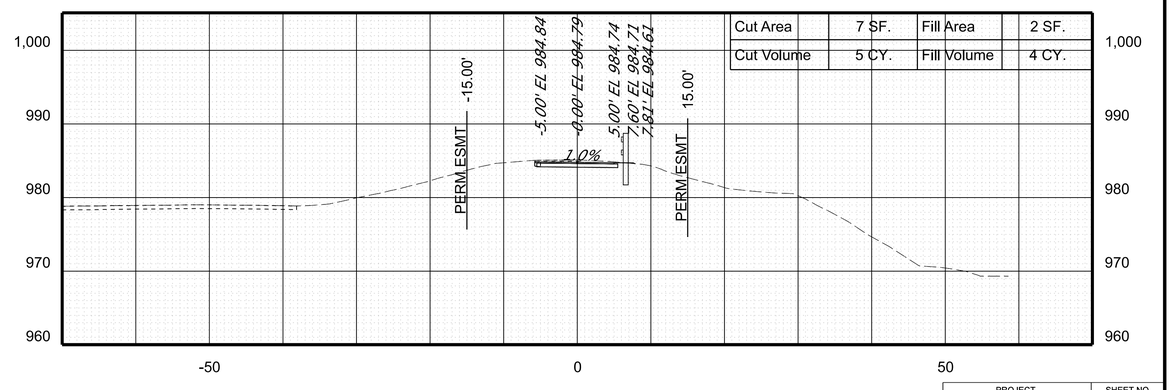
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STA 38+75.00



STA 37+75.00



STA 38+50.00

PROJECT	SHEET NO.
RRGW-120-257	X20

6/24/2024

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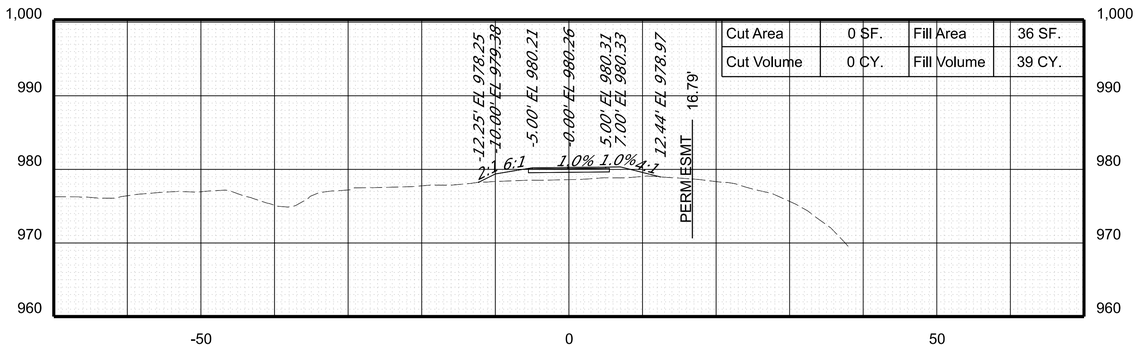
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____
DESIGN BY Blck Delong,P.E. Bloker Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____

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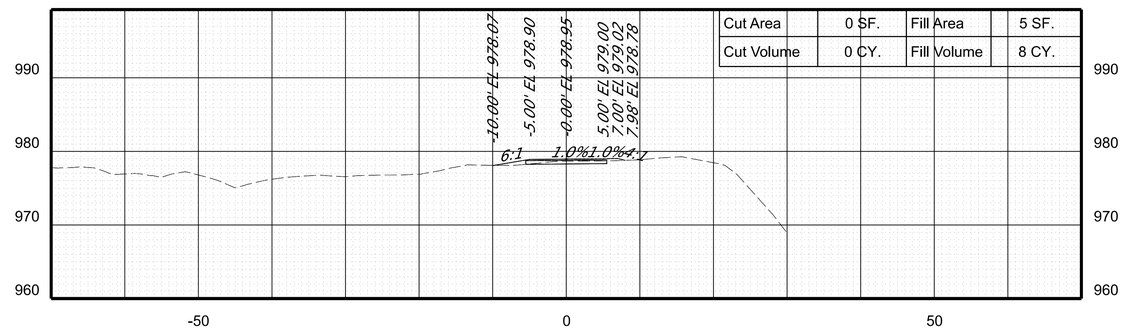
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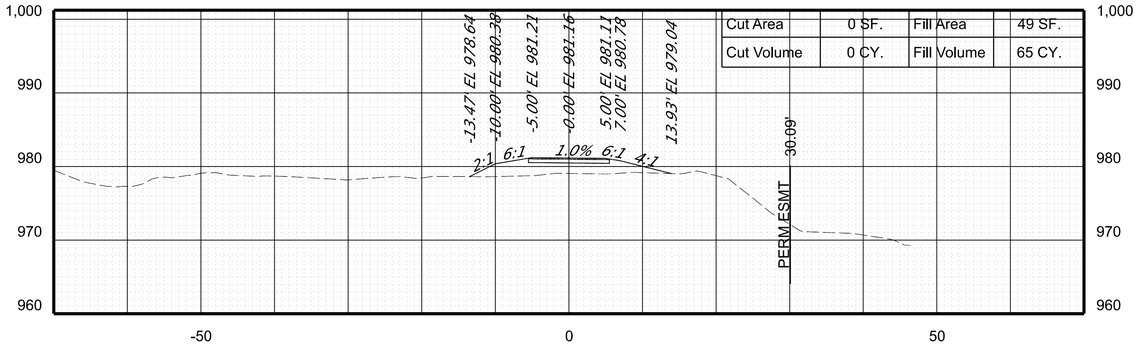
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	VA.		RRGW-129-257 R204, M501	X21



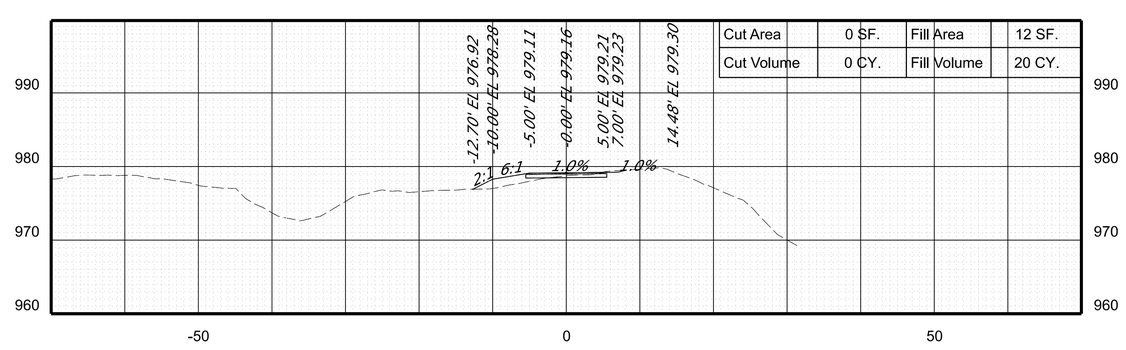
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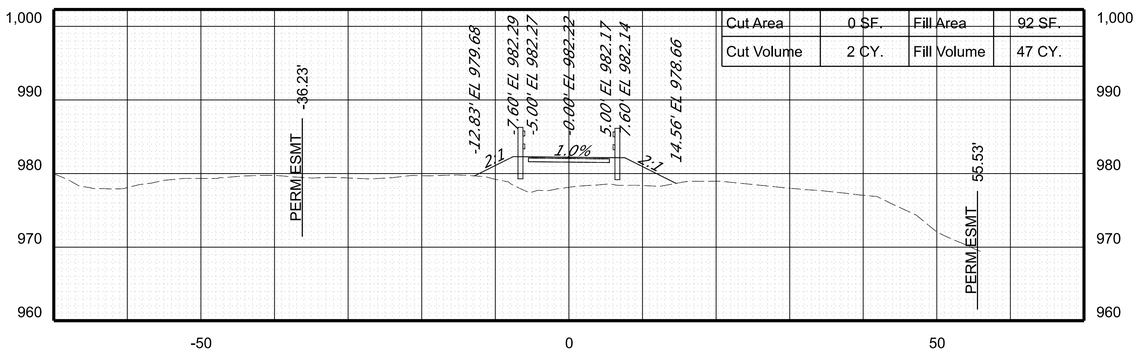
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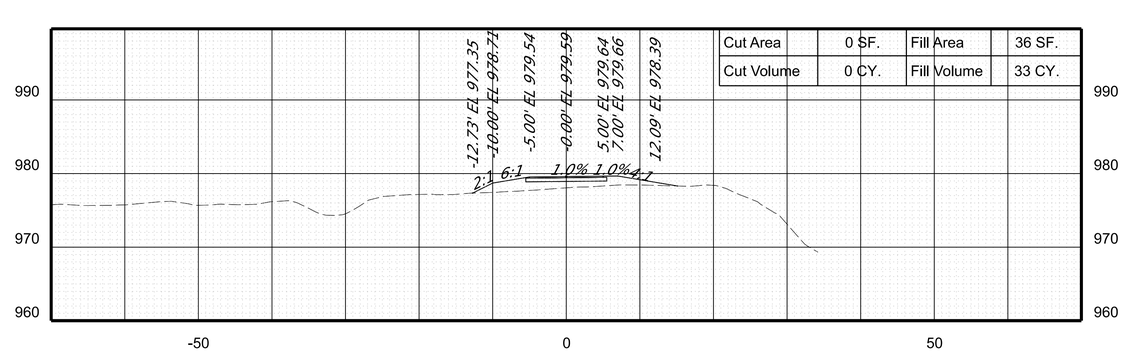
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STA 40+25.00



STA 39+25.00



STA 40+00.00

PROJECT	SHEET NO.
RRGW-120-257	X21

6/24/2024

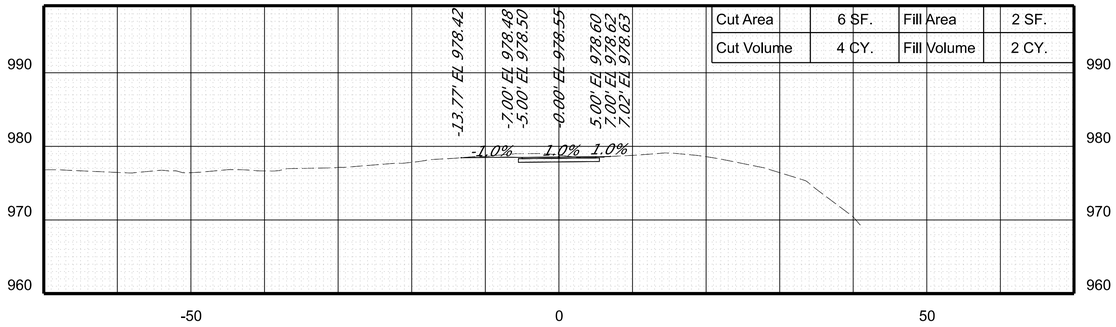
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____
DESIGN BY Blick Delong,P.E. Bleker Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____

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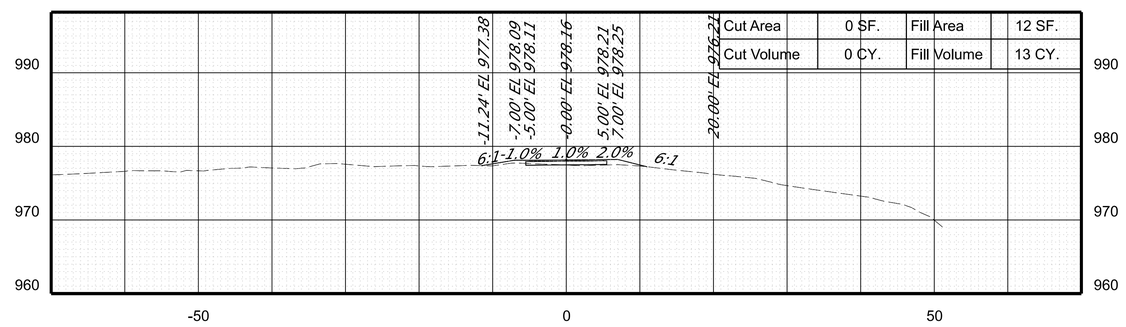
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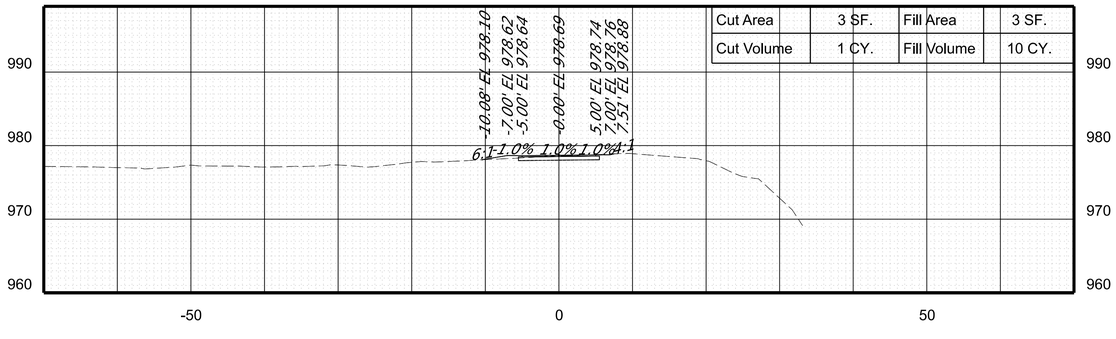
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X22



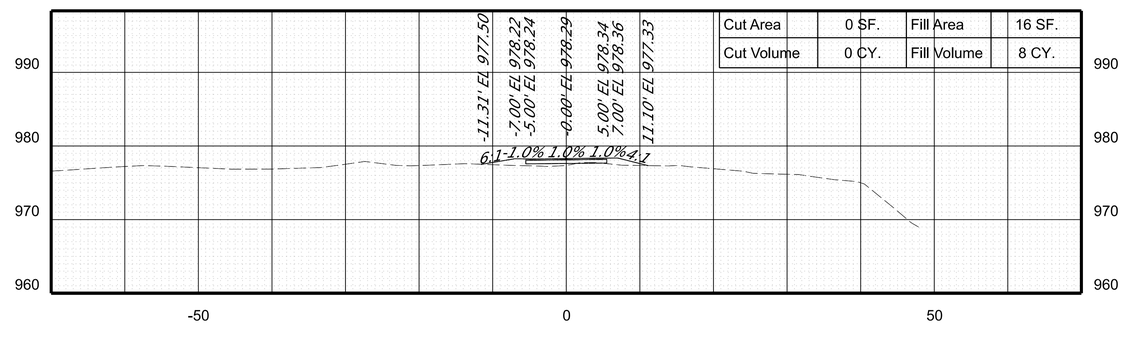
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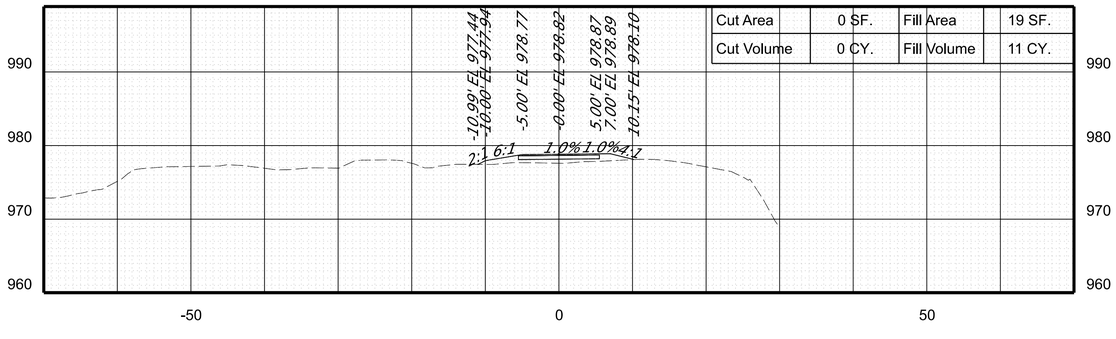
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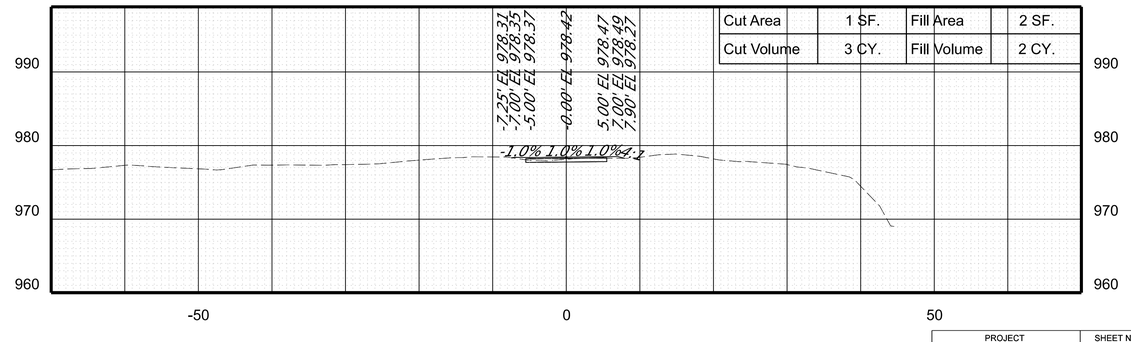
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STA 41+75.00



STA 40+75.00



STA 41+50.00

6/24/2024

PROJECT	SHEET NO.
RRGW-120-257	X22

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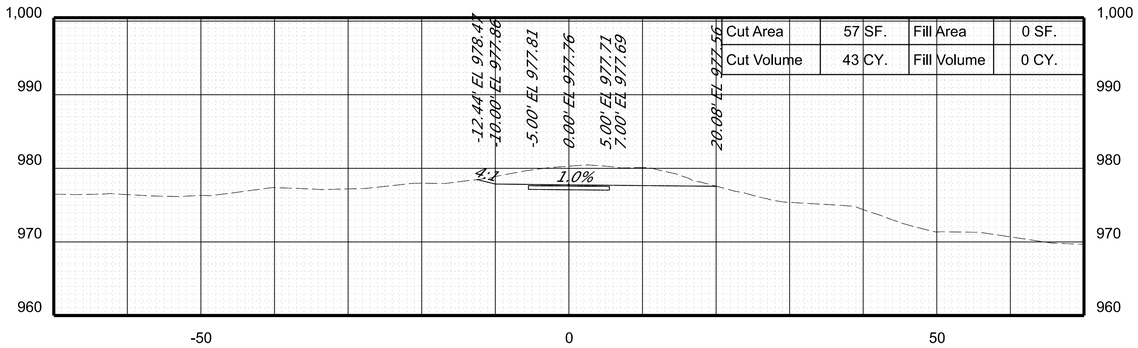
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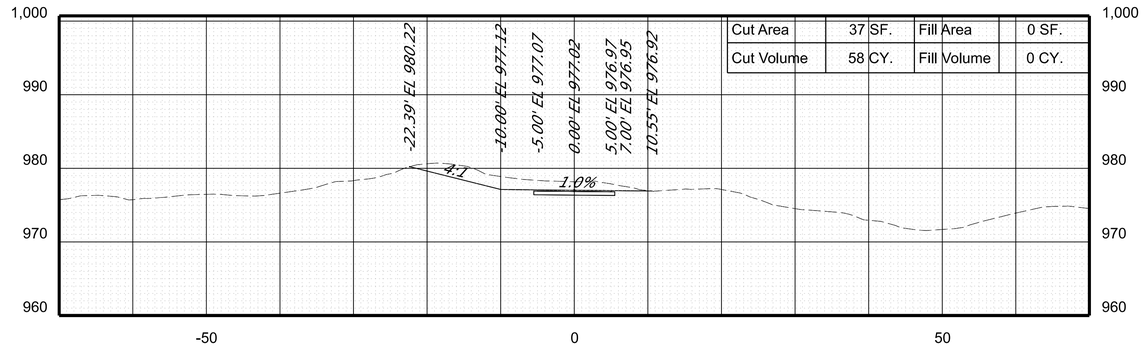
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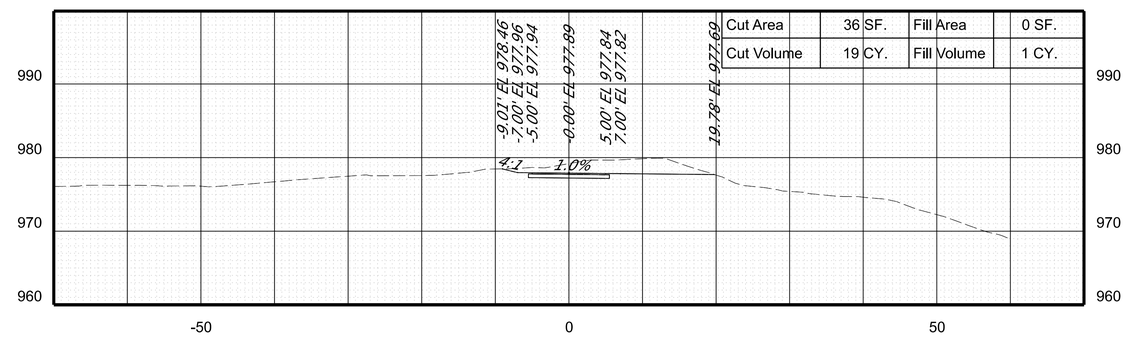
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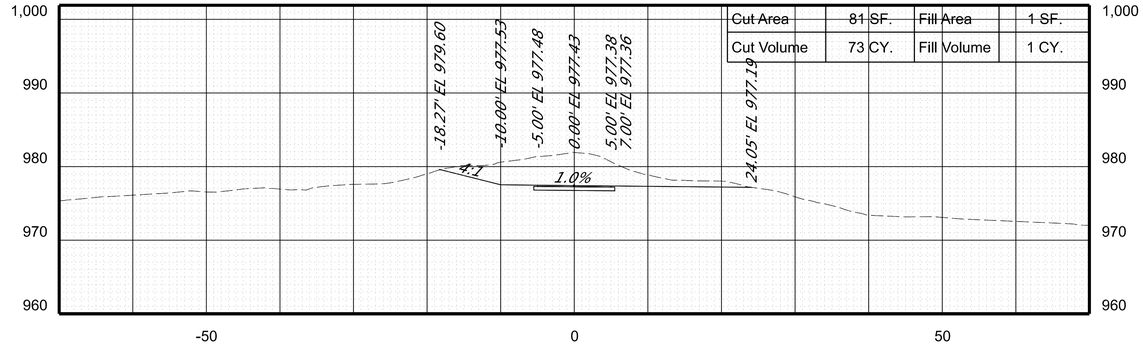
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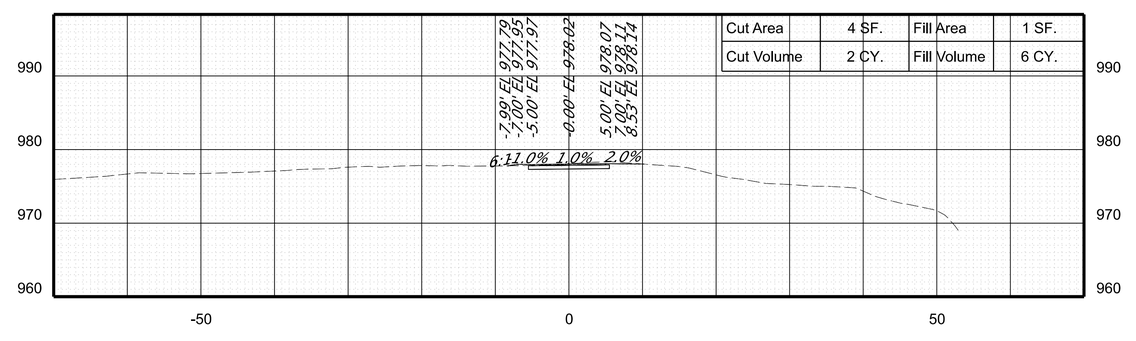
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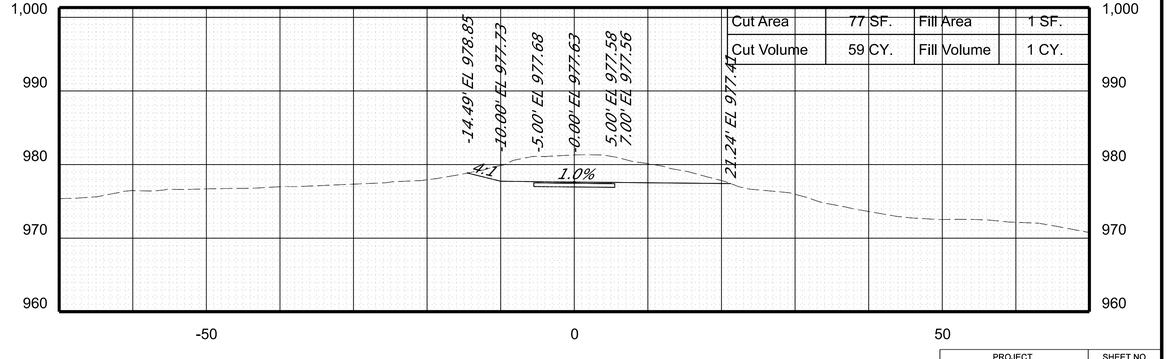
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STA 43+25.00



STA 42+25.00



STA 43+00.00

PROJECT	SHEET NO.
RRGW-120-257	X23

6/24/2024

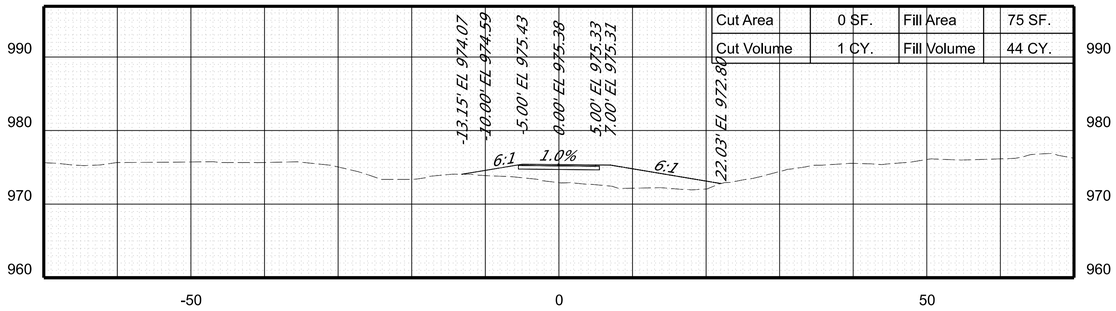
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July 2022._____
DESIGN BY Blck Delang,P.E. Bleker Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July 2022.___

CROSS SECTIONS

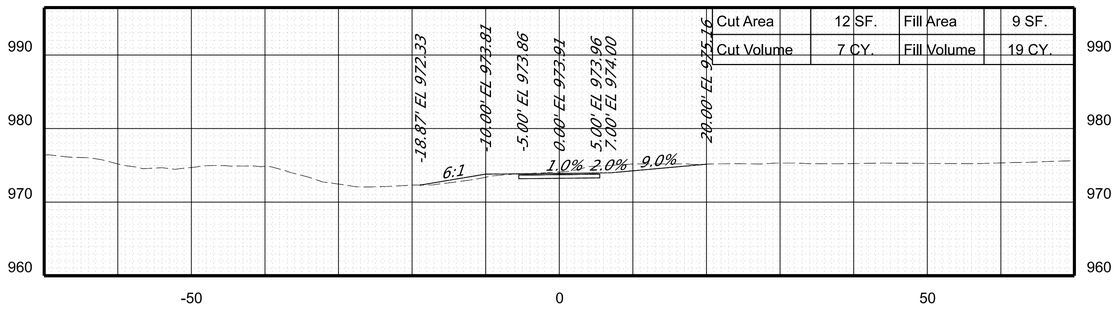
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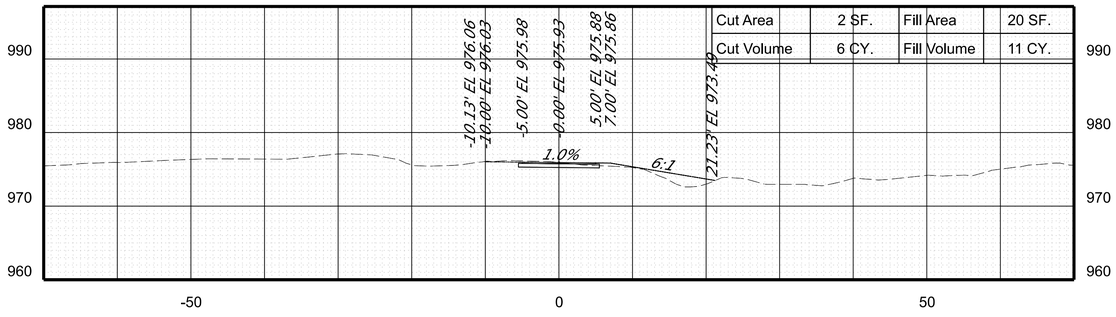
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X24



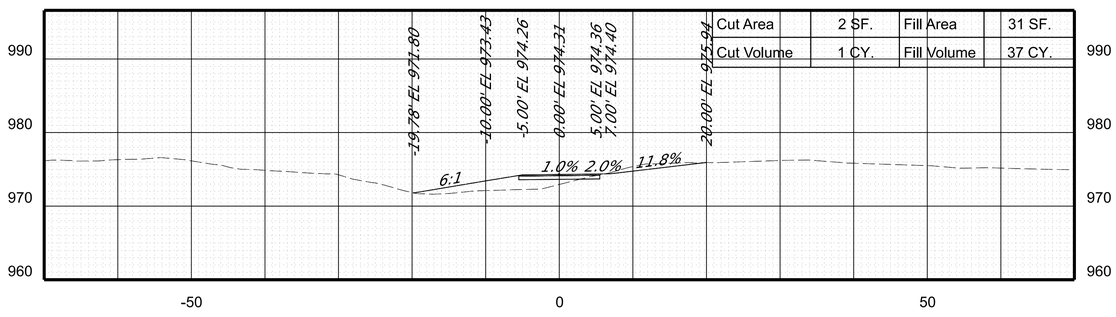
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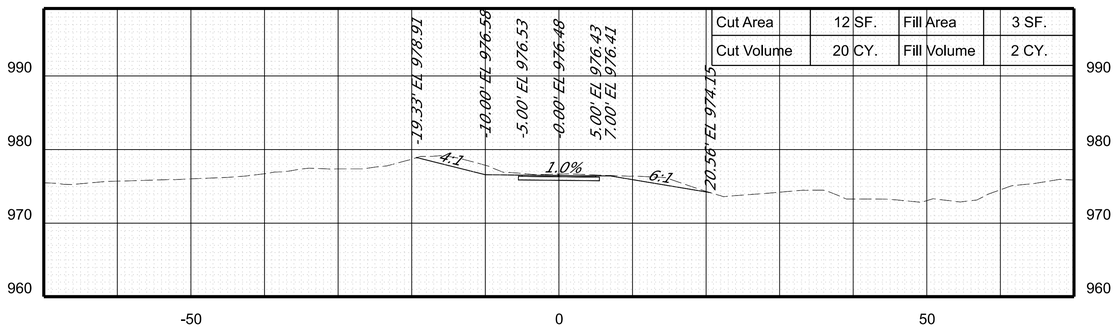
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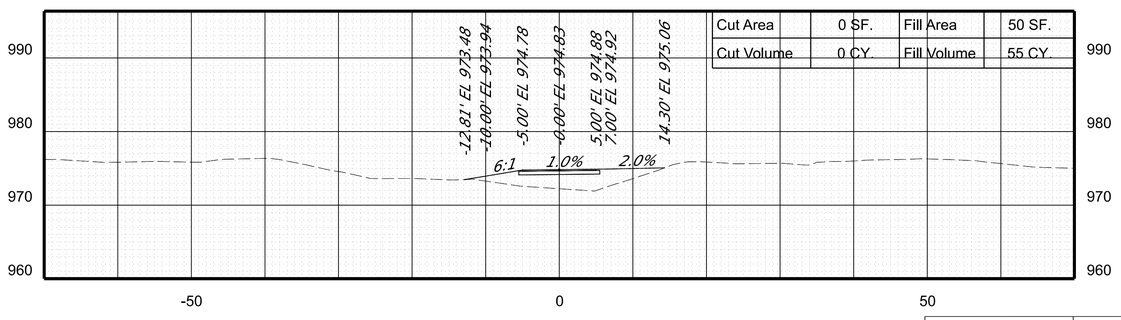
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STA 44+75.00



STA 43+75.00



STA 44+50.00

PROJECT	SHEET NO.
RRGW-120-257	X24

6/24/2024

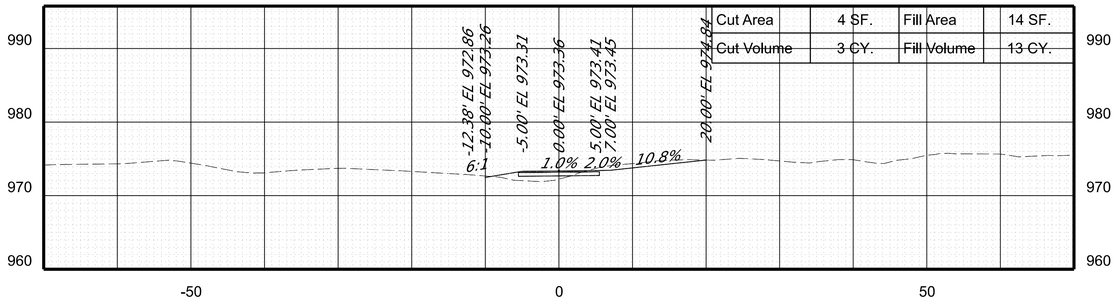
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SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022.___

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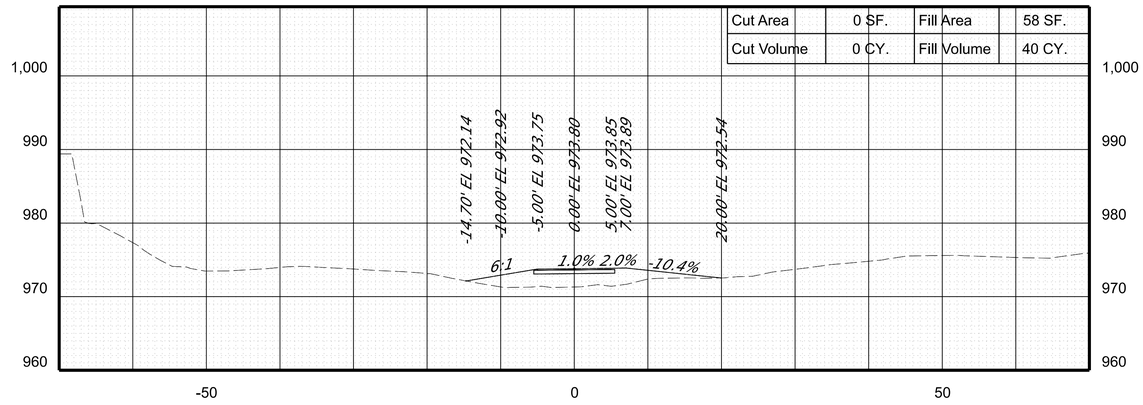
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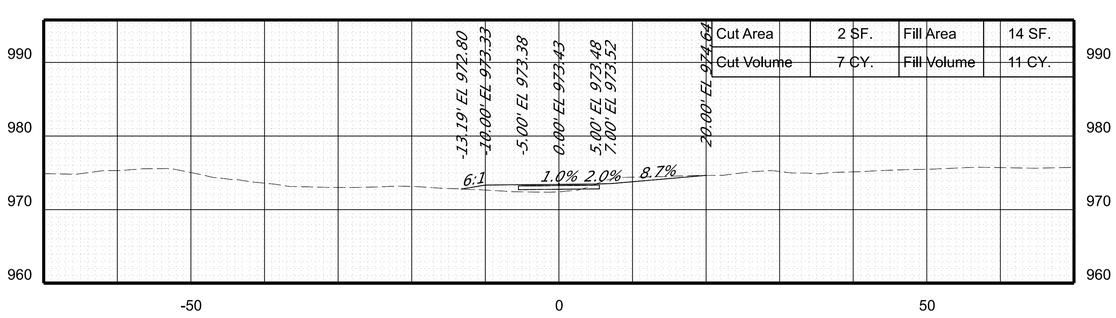
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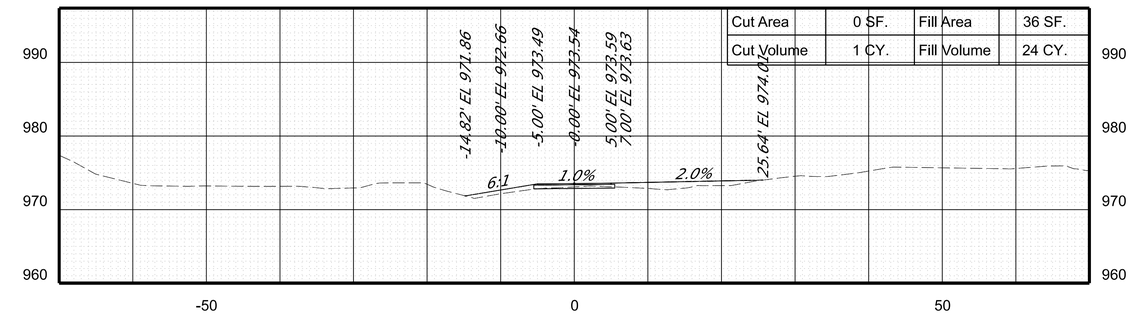
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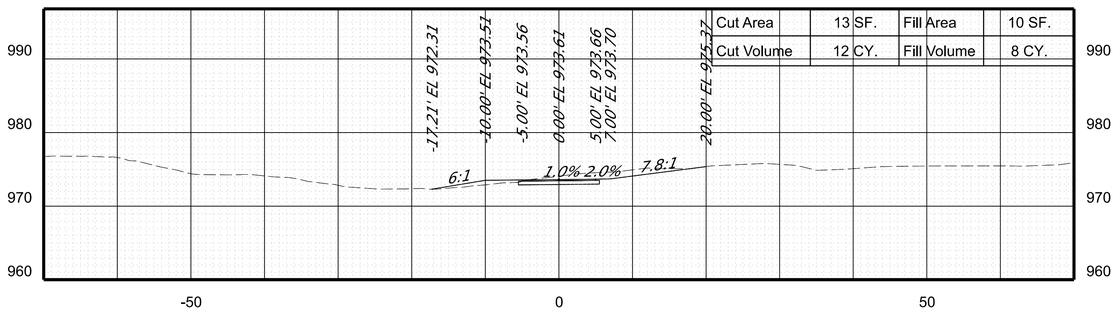
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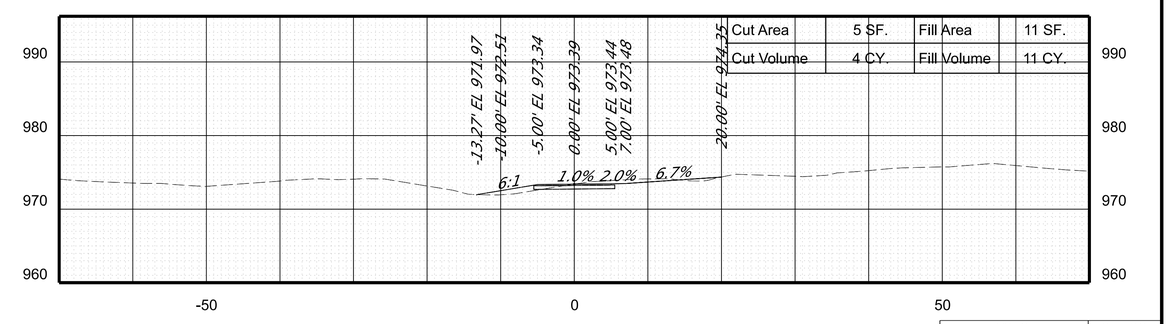
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PROJECT	SHEET NO.
RRGW-120-257	X25

6/24/2024

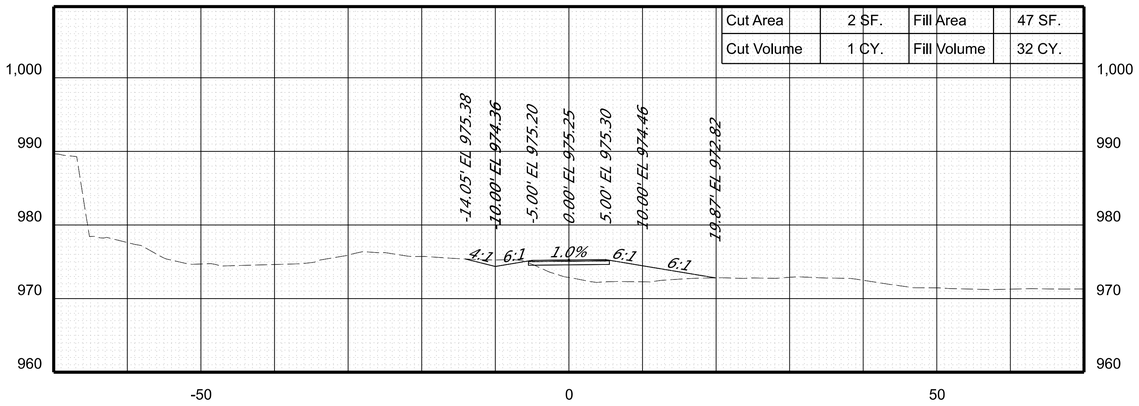
PROJECT MANAGER _HDR VDOT PM: Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022_____
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SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022_____

CROSS SECTIONS

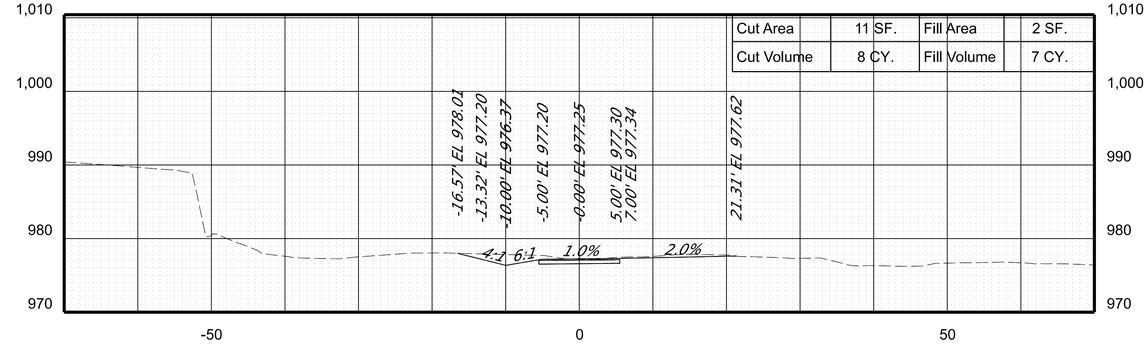
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

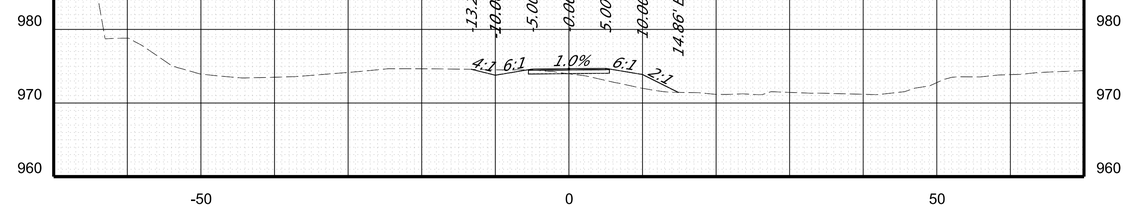
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X26



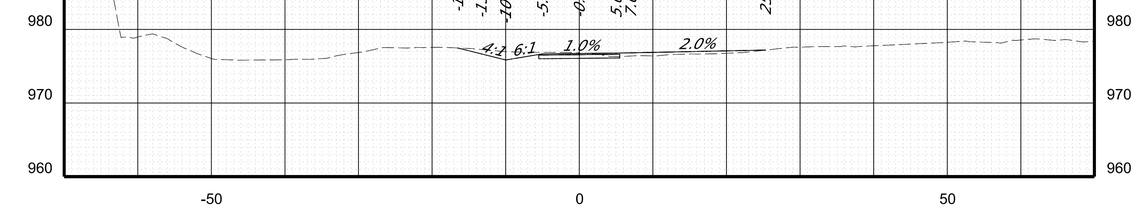
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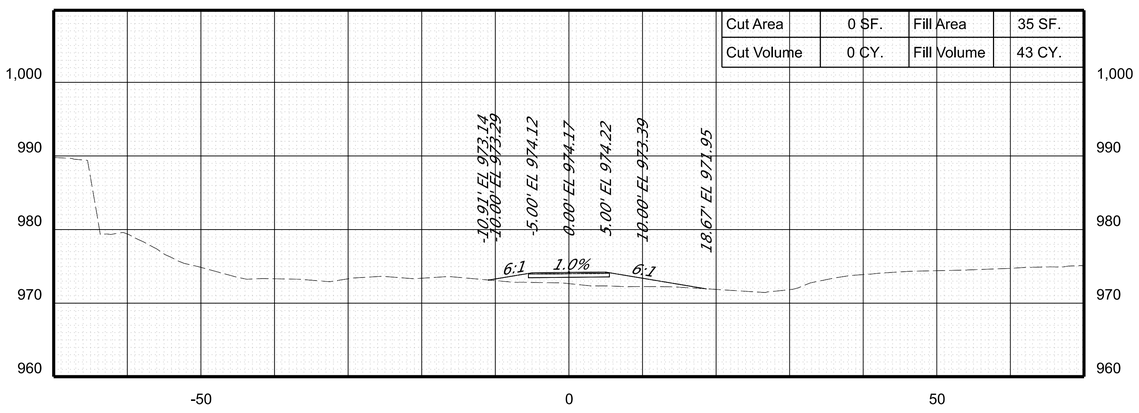
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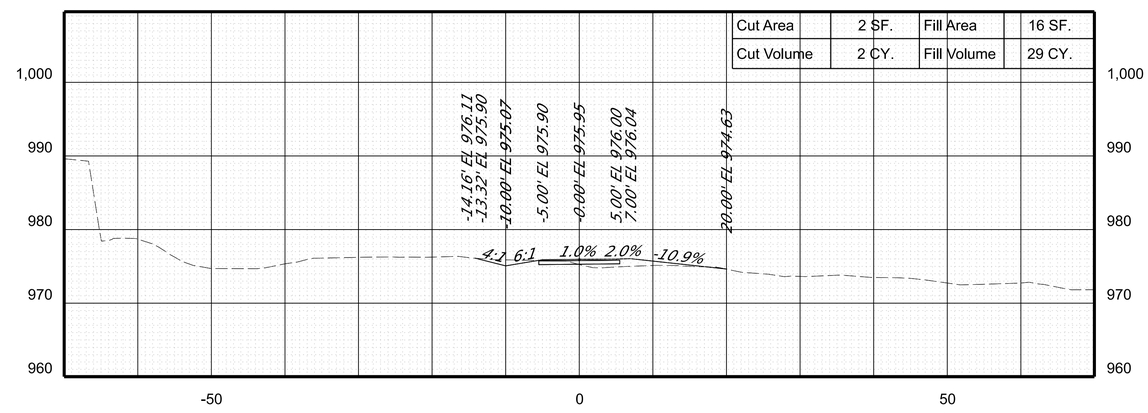
STA 47+00.00



STA 47+75.00



STA 46+75.00



STA 47+50.00

PROJECT	SHEET NO.
RRGW-120-257	X26

6/24/2024

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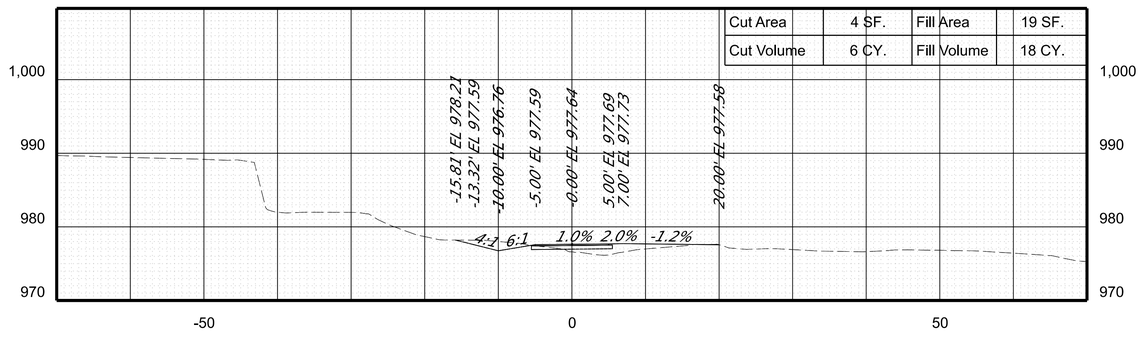
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____
DESIGN BY Blck Delong,P.E. Bloker Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____

CROSS SECTIONS

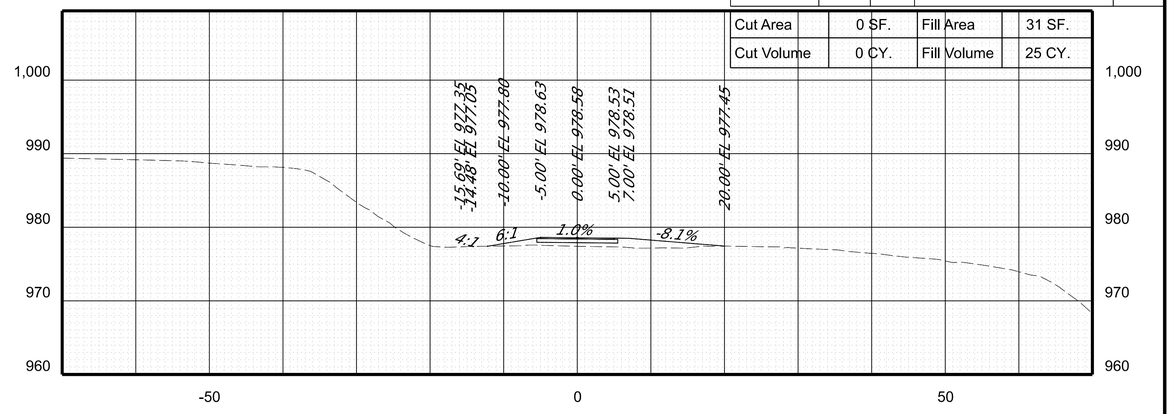
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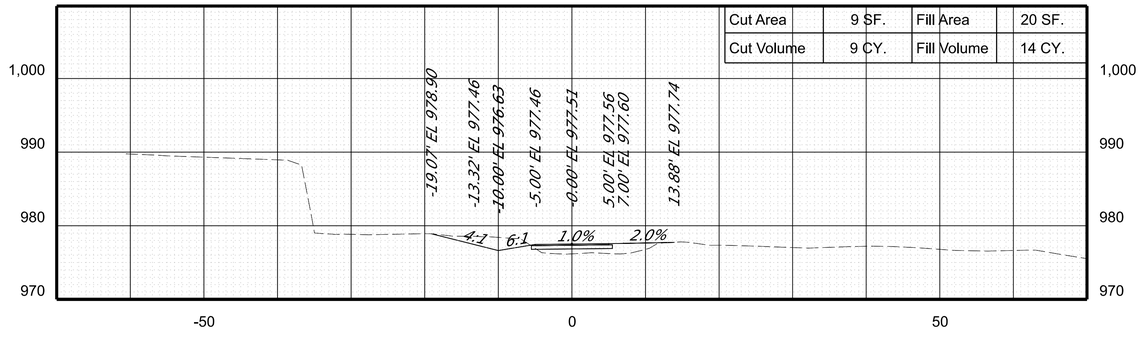
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X27



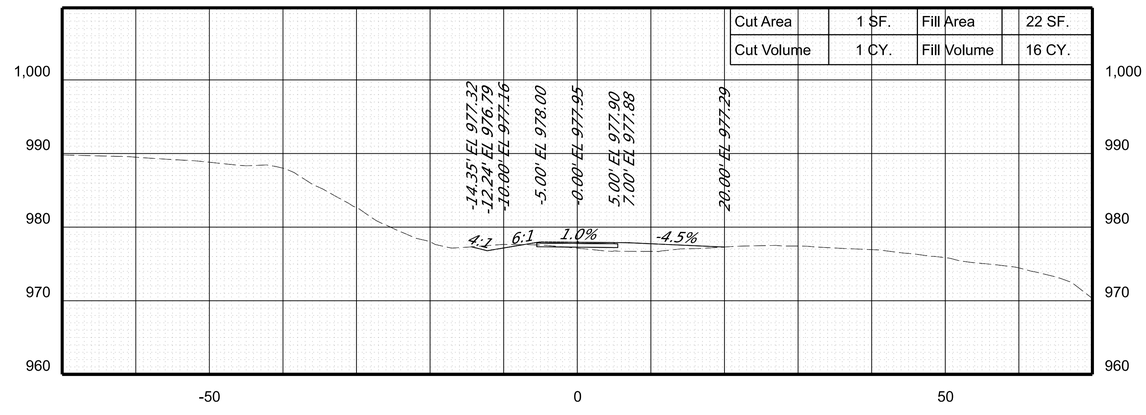
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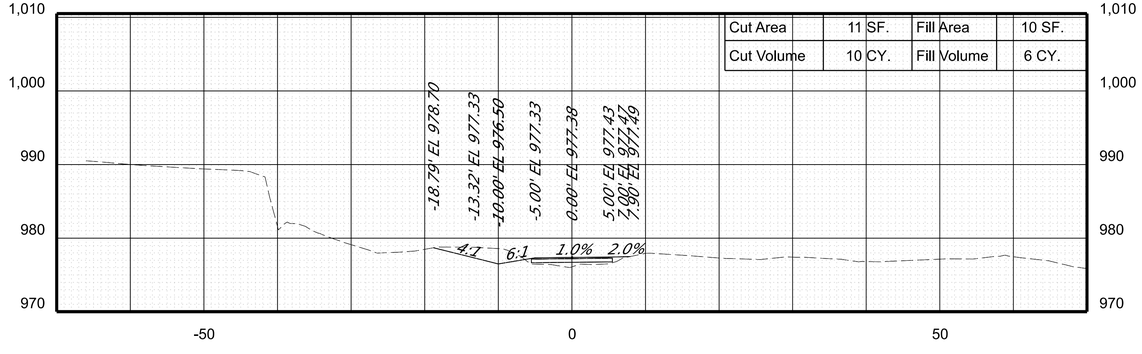
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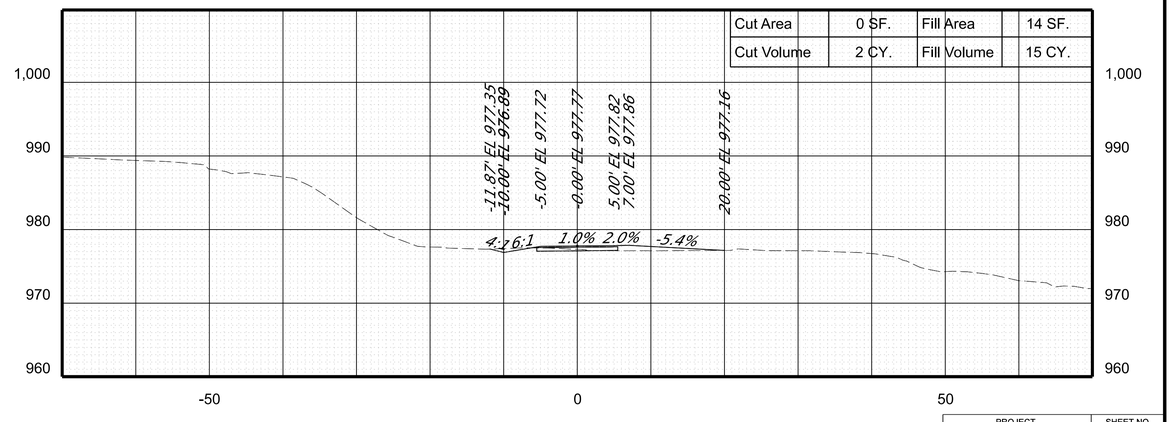
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STA 49+25.00



STA 48+25.00



STA 49+00.00

PROJECT	SHEET NO.
RRGW-120-257	X27

6/24/2024

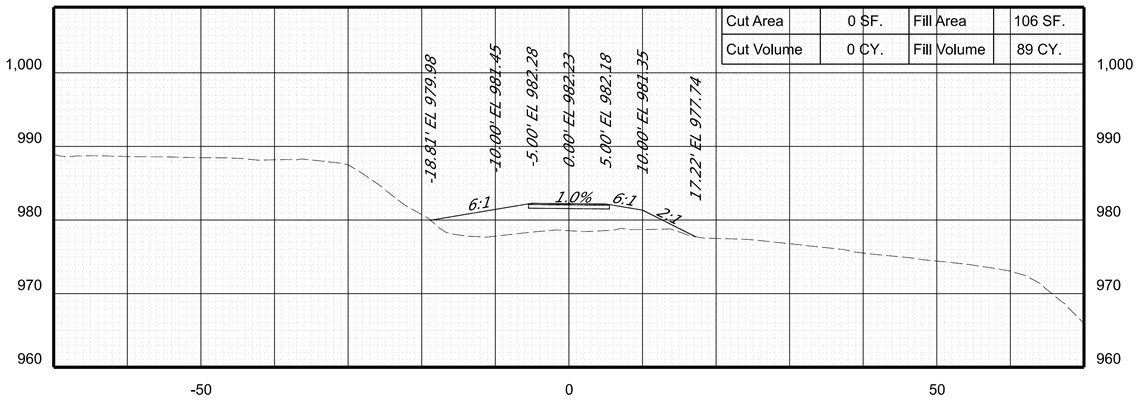
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____
DESIGN BY Blick Delong,P.E.,Bloker Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022.___

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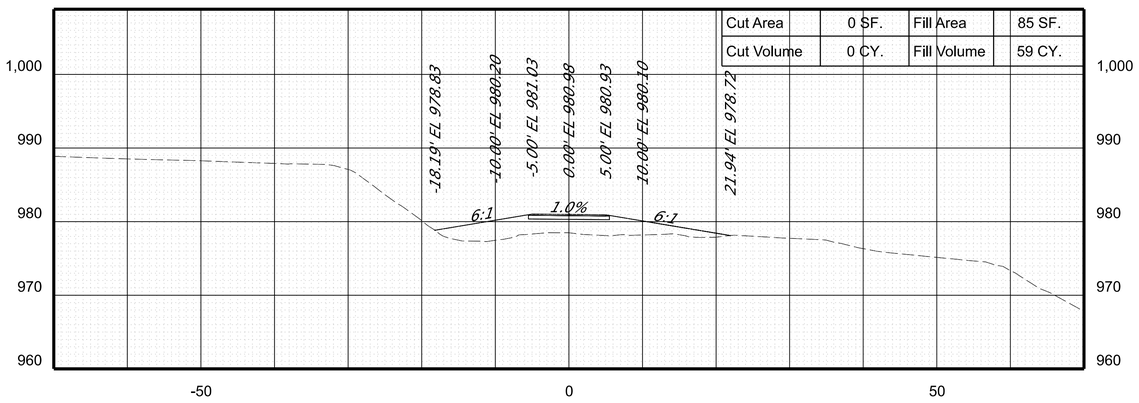
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

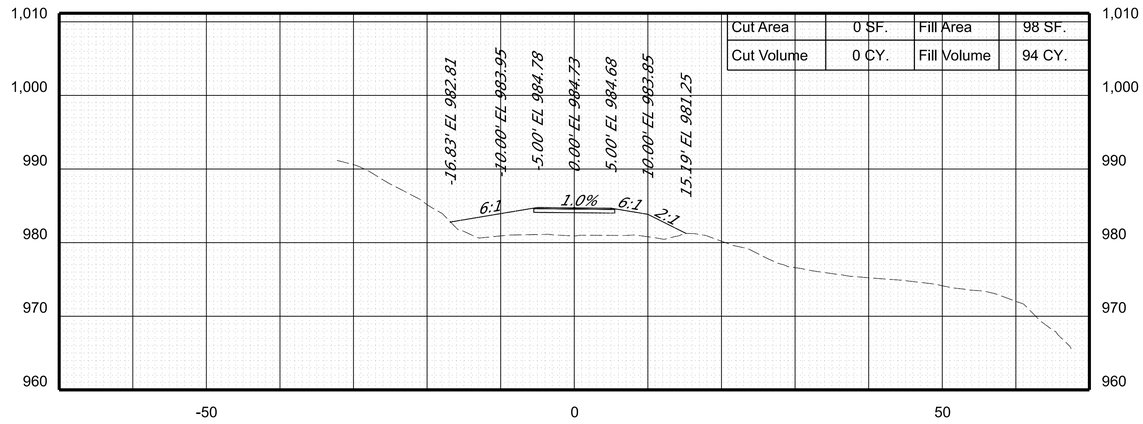
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X28



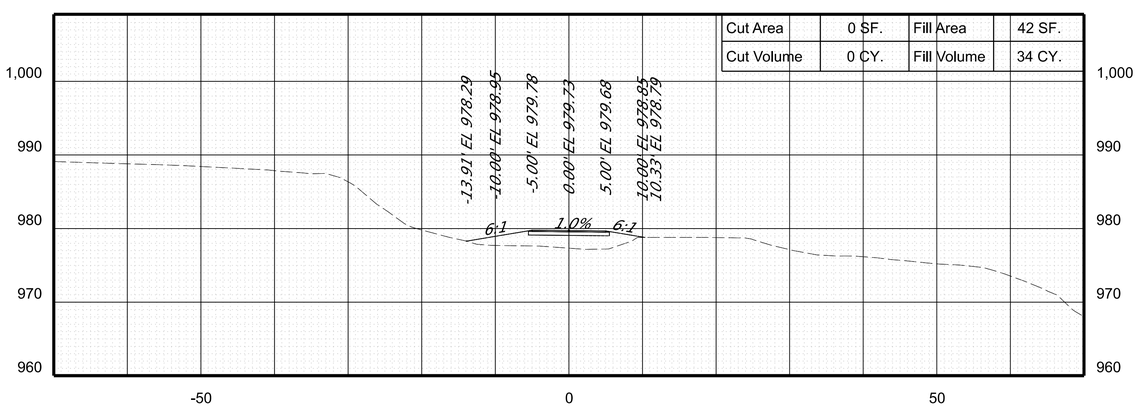
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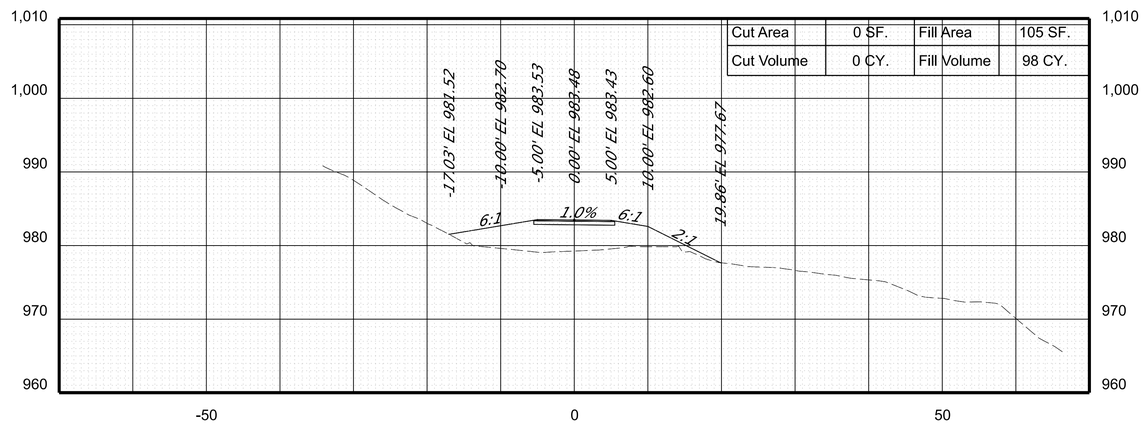
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STA 50+75.00



STA 49+75.00



STA 50+50.00

PROJECT	SHEET NO.
RRGW-120-257	X28

6/24/2024

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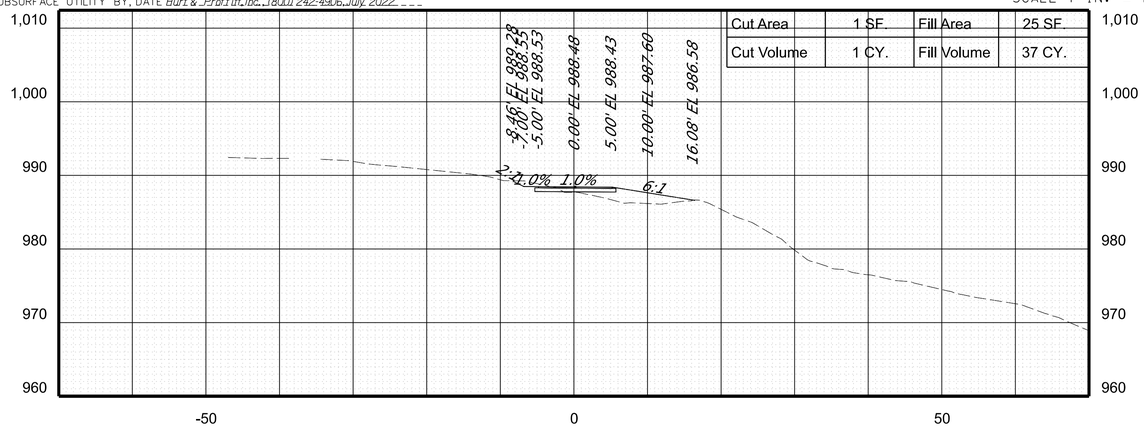
PROJECT MANAGER HDR VDOT PM: Chris Eggleston (540) 278-2405
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022
DESIGN BY Blick, Delong, P.E., Bibler Design Associates, P.C. (804) 612-0665
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

CROSS SECTIONS

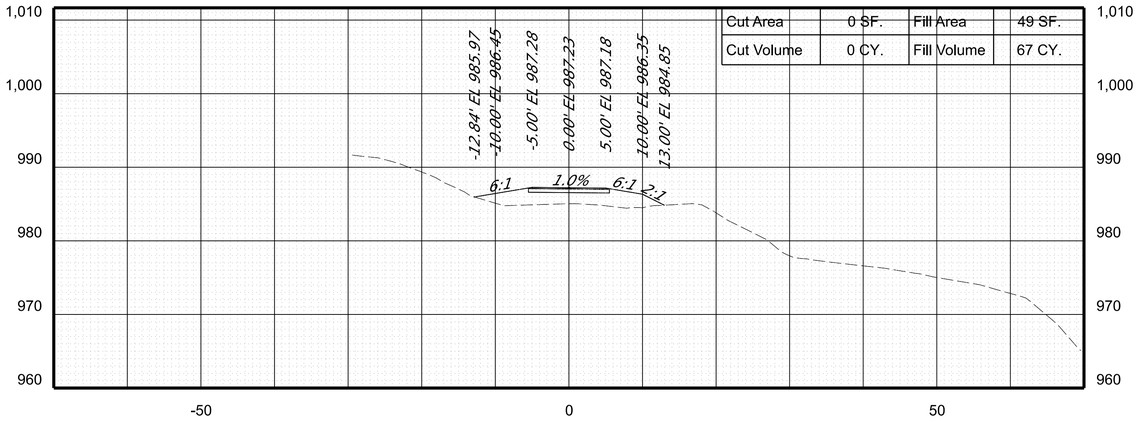
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

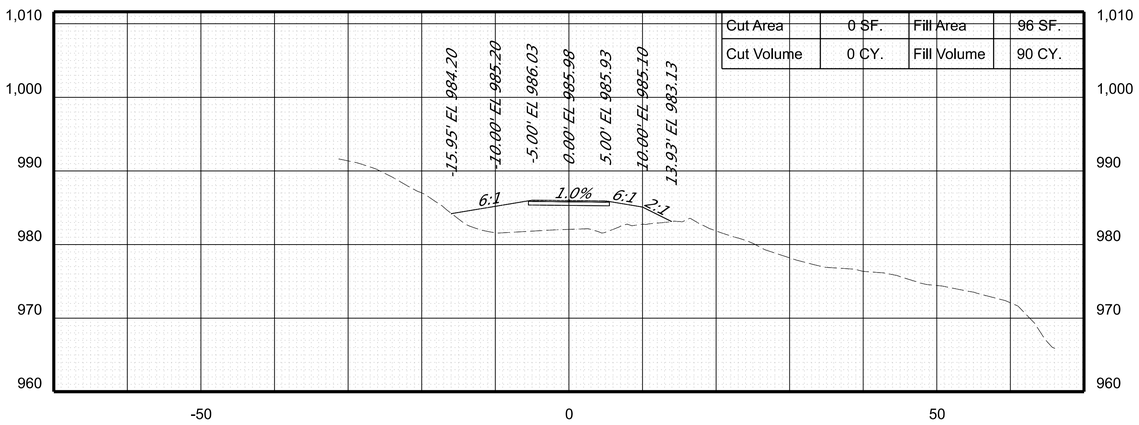
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X29



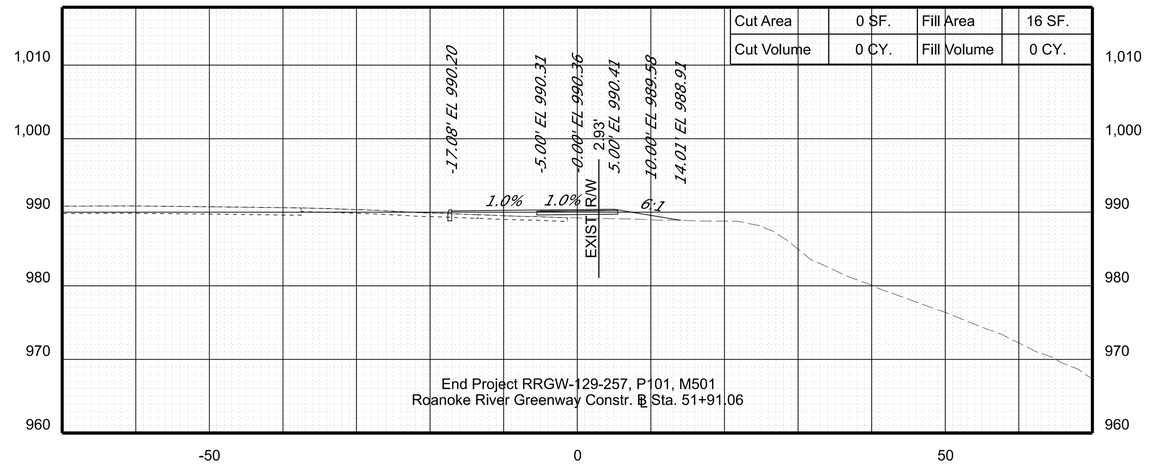
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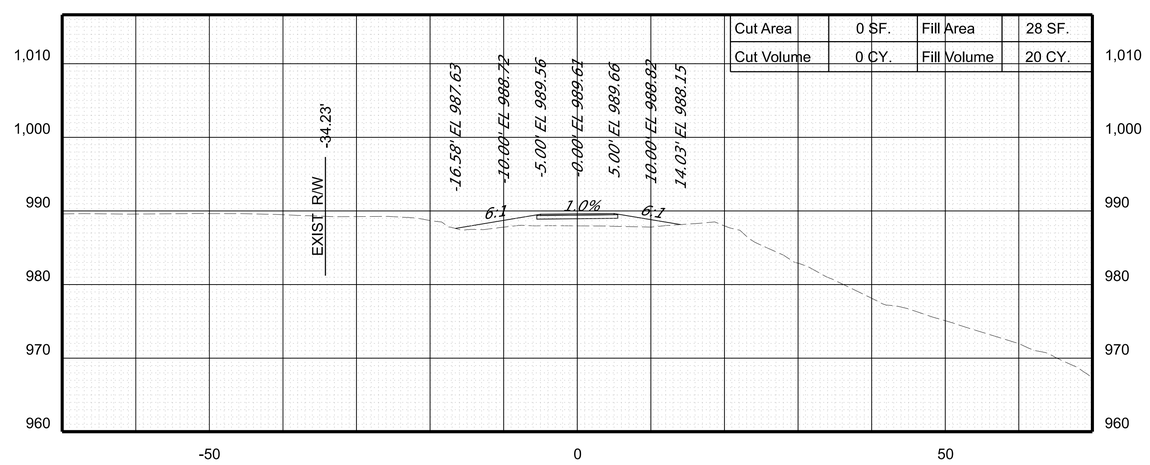
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STA 51+00.00



STA 51+91.06



STA 51+75.00

PROJECT	SHEET NO.
RRGW-120-257	X29

6/24/2024

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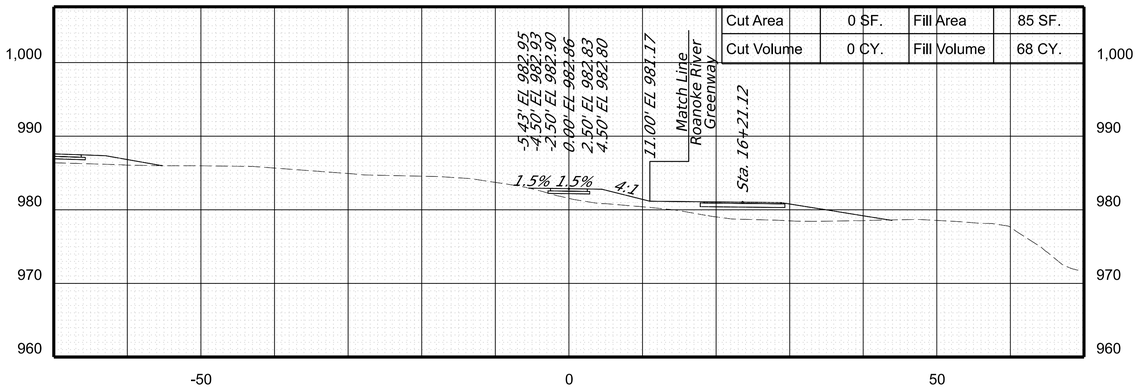
PROJECT MANAGER HDR VDOT PM: Chris Eggleston (540) 278-2405
SURVEYED BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022
DESIGN BY Blick Delong, P.E. Bibler Design Associates, P.C. (804) 612-0665
SUBSURFACE UTILITY BY, DATE Hurt & Profitt, Inc., (800) 242-4906, July, 2022

CROSS SECTIONS

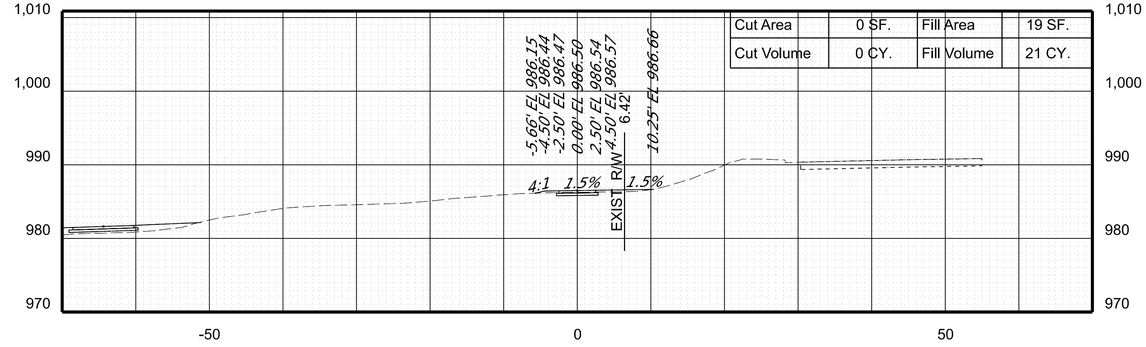
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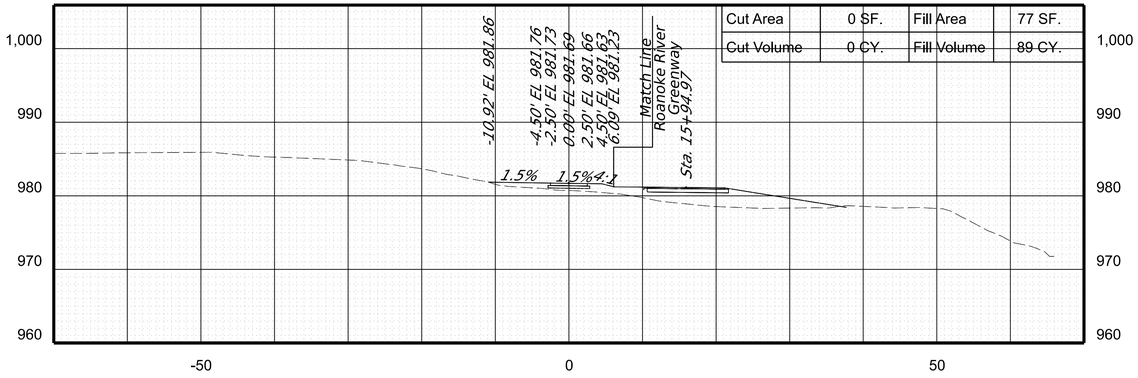
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X31



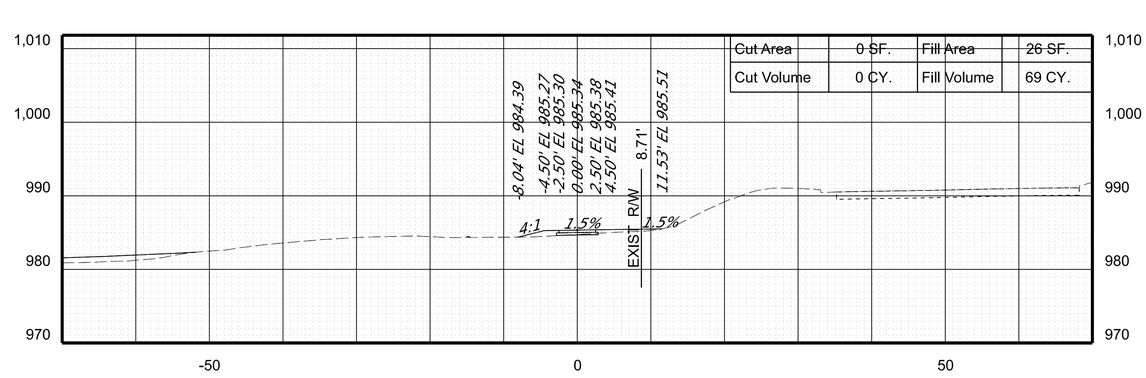
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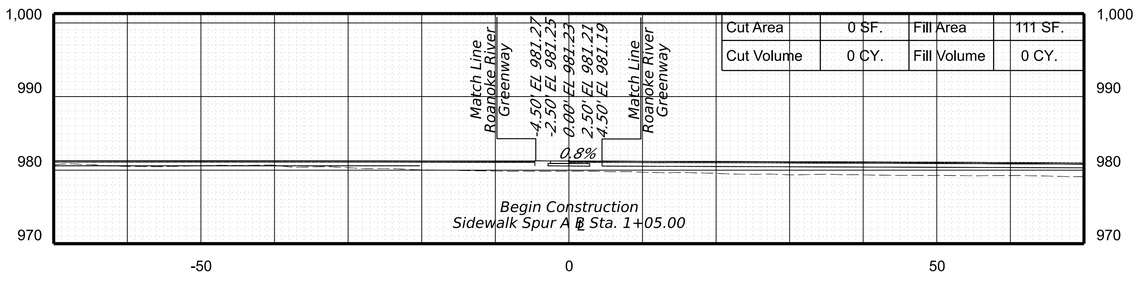
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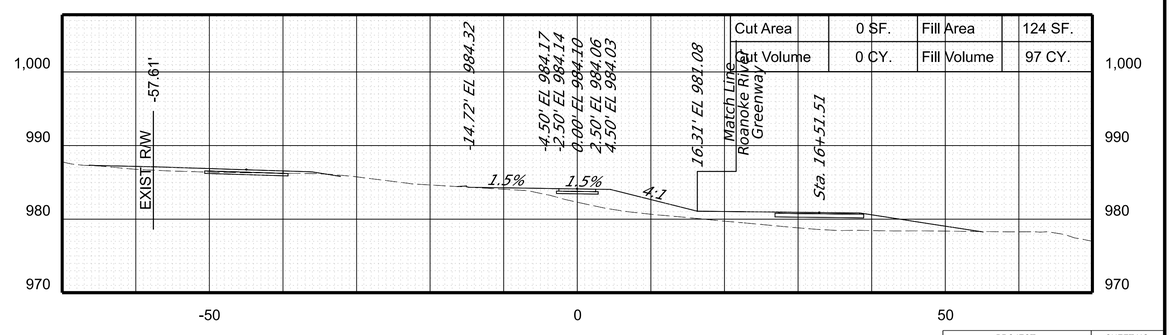
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STA 2+00.00



STA 1+05.00



STA 1+75.00

6/24/2024

PROJECT	SHEET NO.
RRGW-120-257	X31

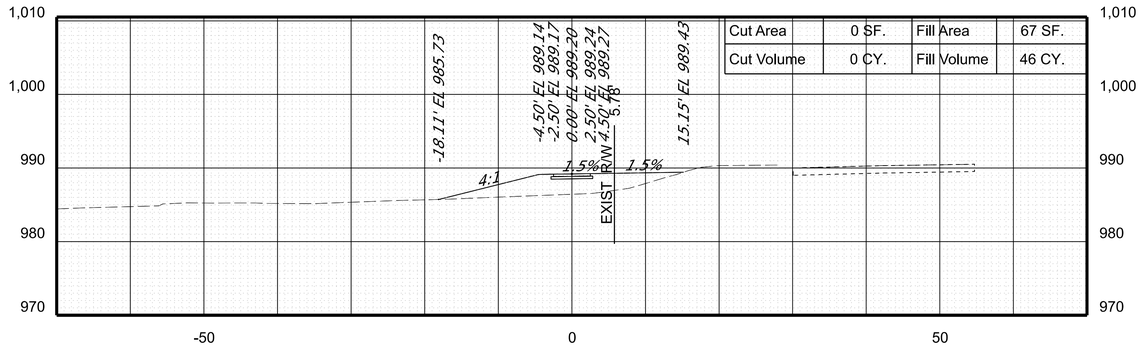
PROJECT MANAGER _HDR VDOT PM:Chris Eggleston (540) 278-2405_____
SURVEYED BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____
DESIGN BY Blick, Delong,P.E.,Bloker Design Associates,P.C.(804) 612-0665._____
SUBSURFACE UTILITY BY, DATE Hurt & Profitt,Inc.,(800) 242-4906,July, 2022._____

CROSS SECTIONS

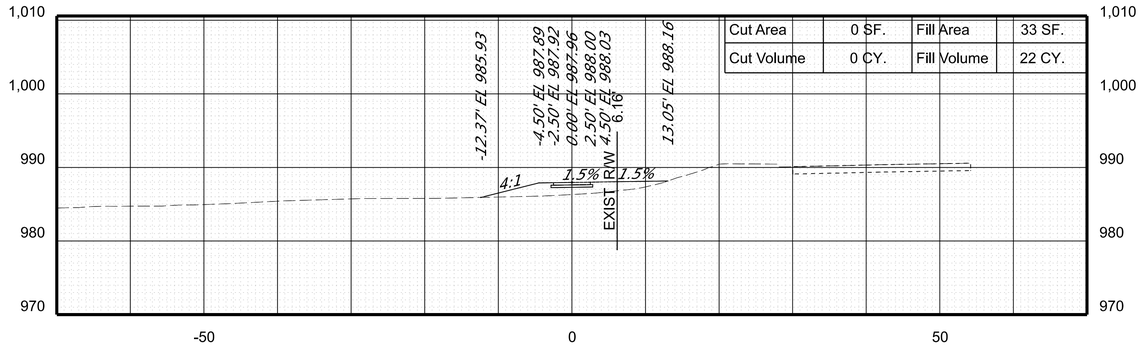
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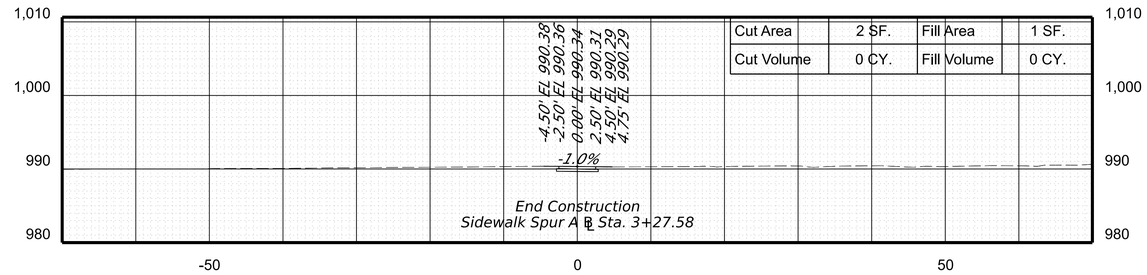
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		RRGW-129-257 R204, M501	X32



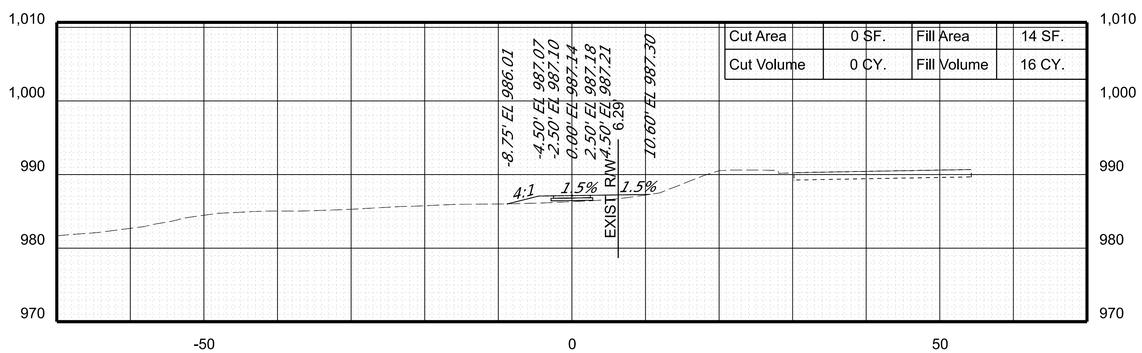
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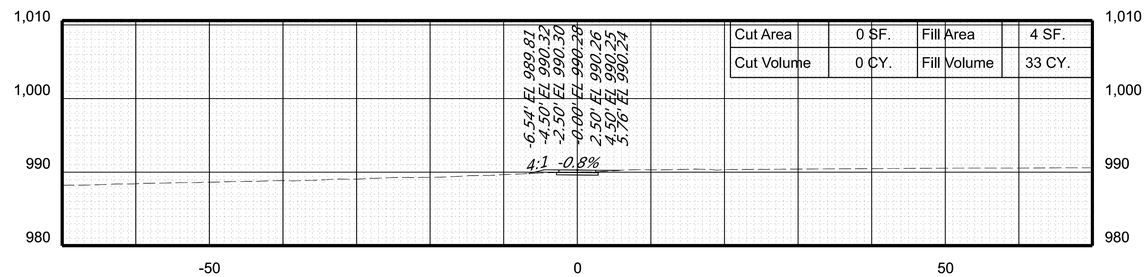
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STA 3+27.58



STA 2+50.00



STA 3+25.00

6/24/2024

PROJECT	SHEET NO.
RRGW-120-257	X32