

# RVRA Uncoupling the Rail Car

**Jeffrey Murray** | PE, BCEE, HDR Landfill Practice Lead

**Jeremy Garrett** | RVRA, Director of Operations, Technical Services

Thursday, August 26, 2021 1:30 – 2:00 pm



## AGENDA

**01** RVRA Background

**02** Conversion to Truck Haul

**03** Existing Rail Spur

**04** Roadway Details

**05** Challenges

**06** Questions

# Background

- RVRA Established in 1992
- County of Roanoke, City of Roanoke, and the Town of Vinton
- PPP with Norfolk Southern forming Waste Line Express
- Salem Added in July 1, 2016
- Facilities
  - Tinker Creek TS
  - Salem TS
  - Smith Gap LF









# Conversion to Truck Haul

- Long Term Evaluation of Total Costs of Transportation Options
  - Status Quo
  - Shipping Containers
  - Truck Haul
- Long Term Business Opportunity
  - Offer Service to Surrounding Area
- Operational Efficiency



# Decoupling

- Rail Spur Properties Conveyed from NS to RVRA in 2018
  - Maintenance Responsibilities
  - Easements
- Acquired Connector Road Properties from I-81 in 2016-2017
- Permitted and Constructed Connector Road from in 2017-2018
- Modifying Tinker Creek TS



# RVRA Connector Road

Montgomery County, Virginia



# Rail Spur

- Rail Spur Conversion
  - 4.5 Miles
  - Narrow Section
  - Schedule
    - >\$35,000/day for alternate disposal
    - \$15,000/day for transportation
  - How Quickly Can This Be Done?
    - Estimated 3.5 Months for Usable Road



PROJECT TITLE

RVRA SPECIAL USE PERMIT

SHEET TITLE

OVERALL SYSTEM / ROAD CONVERSION CONCEPT PLAN

DATE

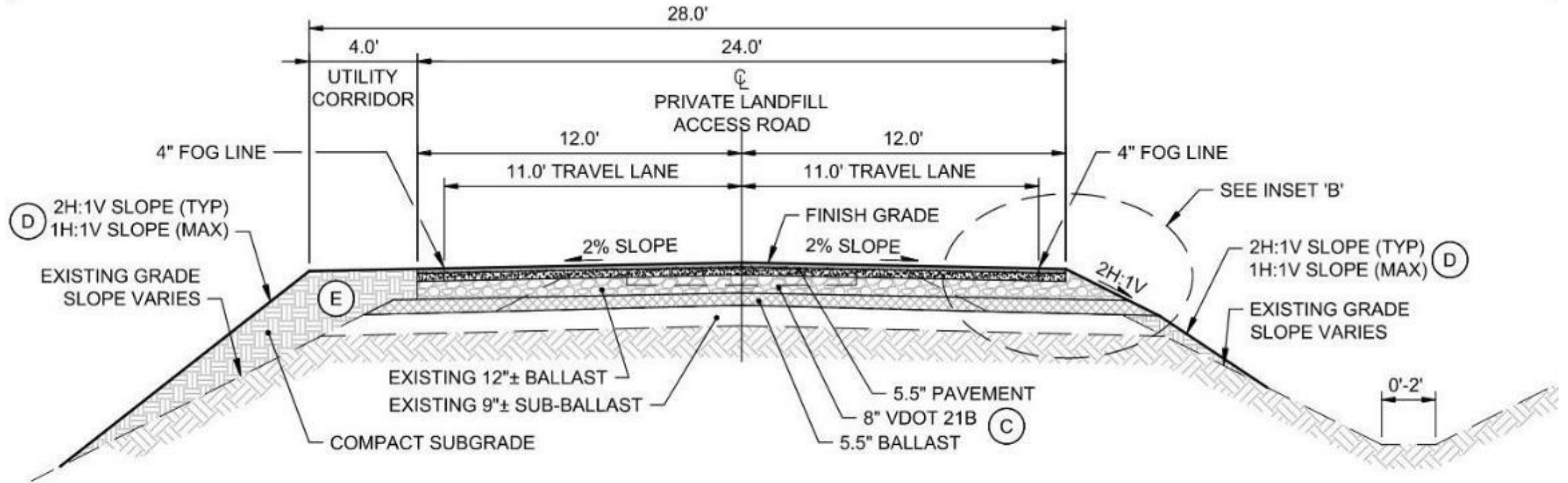
03/13/2019





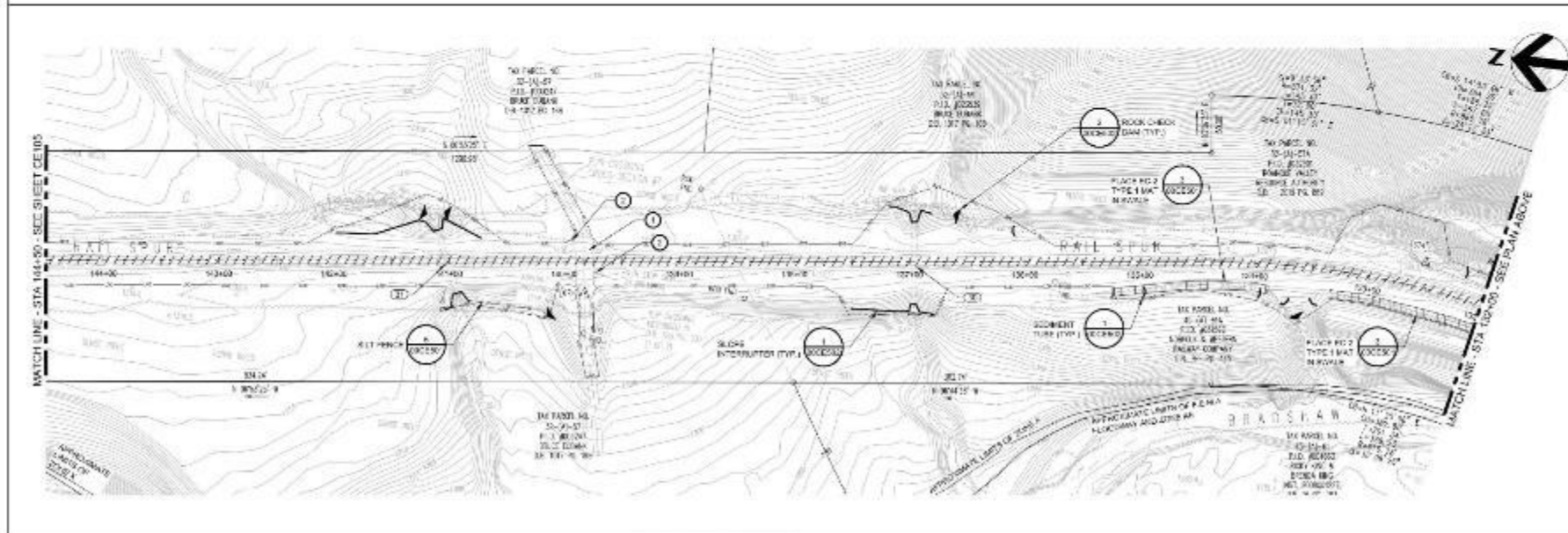
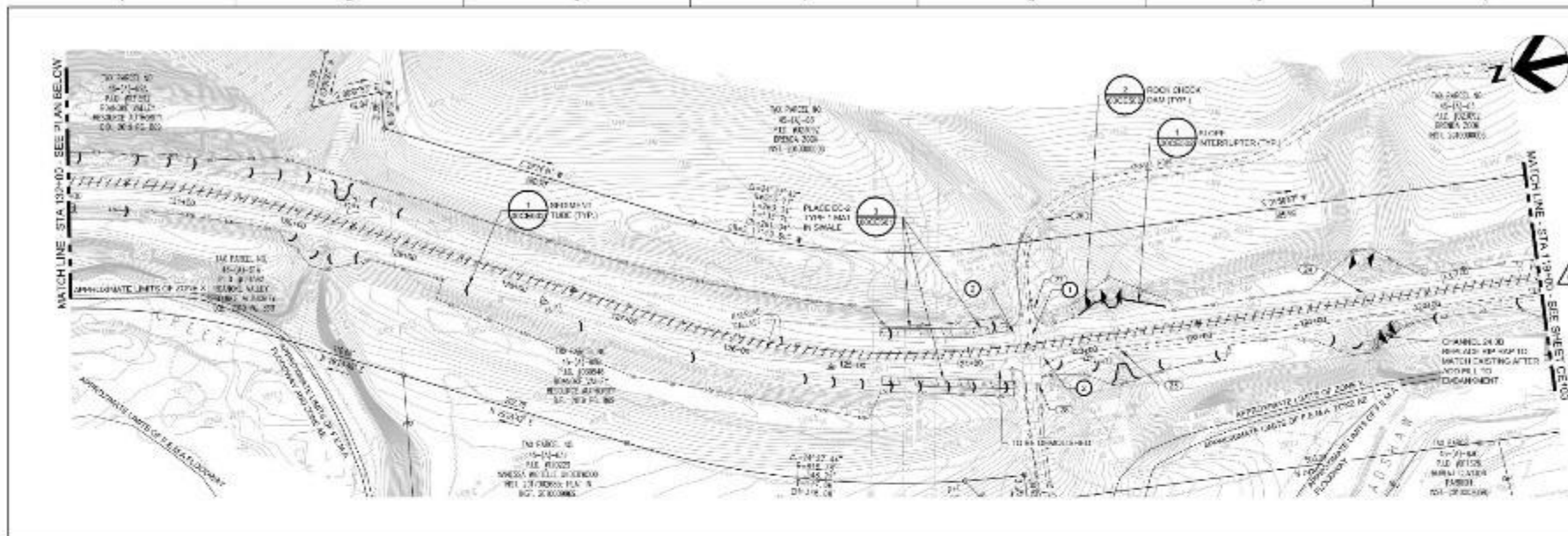






## TYPICAL SECTION (ALTERNATIVE) RAIL SPUR CONVERSION

1" = 5'



- GENERAL NOTES:**
1. PROVIDE EROSION CONTROL MEASURES PRIOR TO EARTHWORK ACTIVITIES.
  2. SEE GRADE PLANS FOR PERMANENT SLOPE AND STABLE EROSION CONTROL PROTECTION.
  3. CONTRACTOR MAY ELECT TO INSTALL TEMPORARY SEPARATION BARRIERS TO NEAR CLEAN STORMWATER AWAY FROM PROJECT.
  4. CONTRACTOR SHALL STAKE OUT LIMITS OF DISTURBANCE (DSD) AT EACH WORK AREA THAT IS AT-RISK OF THE SPECIAL FLOOD HAZARDOUS AREA (SFLHA) ZONE. AND AT EACH LOCATION WHERE A NEW CLEARWATER STRUCTURE IS TO BE INSTALLED.
  5. OWNER AND CONTRACTOR ARE REQUESTED TO REPORT ANY FUTURE CHANGES FOR WORK WITHIN THE FLOOD CONTROL DISTRICT FOR FUTURE ACTION BY THE MONTGOMERY COUNTY PLANNING & DEVELOPMENT DEPARTMENT.

- CONSTRUCTION NOTES:**
1. DEMOLISH AND RECONSTRUCT EXISTING GRADE AS PROCEEDING TO MATCH PROPOSED ROAD GRADES.
  2. RESET EXISTING STOP SIGNS FOR MUTED ROADWAYS. REMOVE OR DISMOUNT AND EMERGENCY CONTACT SIGNS.



ISSUE	DATE	DESCRIPTION
0	09/24/2021	ISSUED FOR CONSTRUCTION

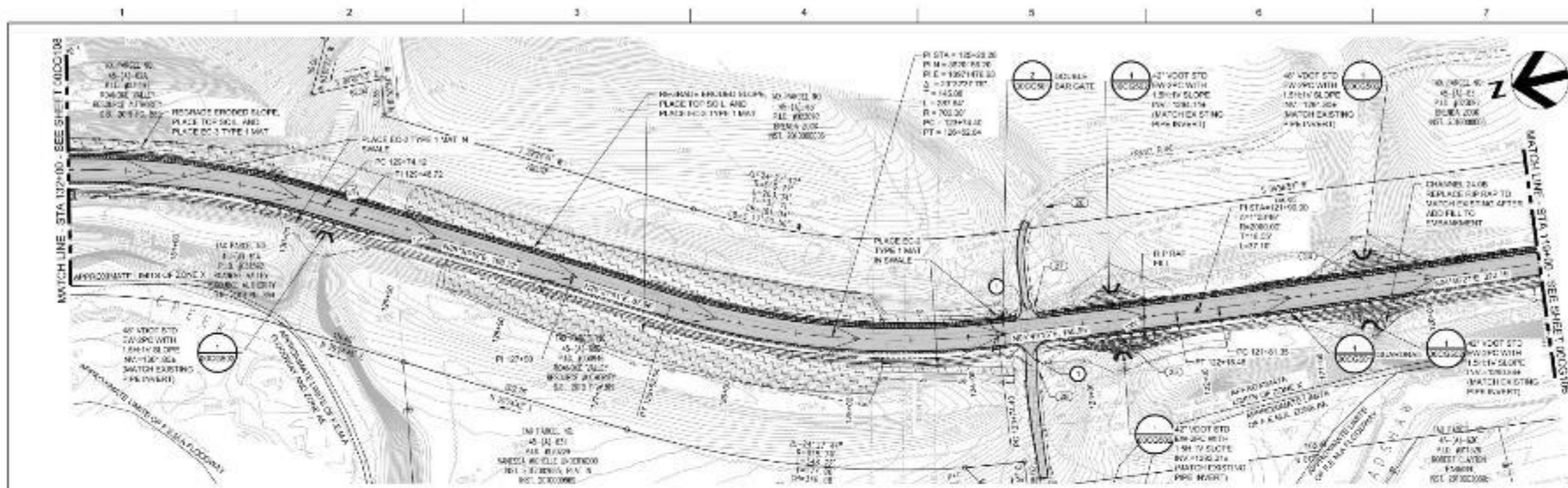
PROJECT MANAGER	J. MURPHY, P.E.
PROJECT ENGINEER	
DRAWN BY	D. DODD
PROJECT NUMBER	1425007



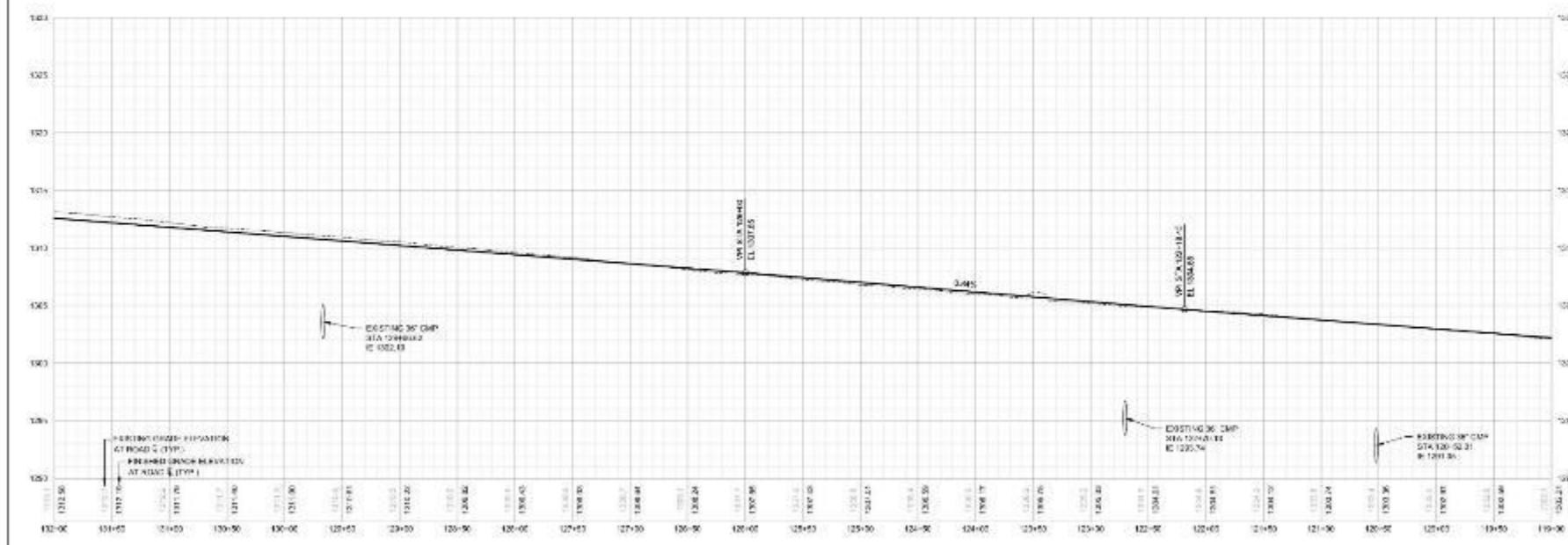
**Roanoke Valley Resource Authority**  
 Construction Drawings for  
 Rail Spur Conversion  
 MONTGOMERY COUNTY VIRGINIA

**EXISTING CONDITIONS, DEMOLITION, AND PHASE 1 EROSION SEDIMENT CONTROL PLAN STA 119+00 TO STA 144+50**

FILENAME: 0921-05-112.dwg  
 SCALE: 1" = 30'  
 SHEET: 00CE104



- CONSTRUCTION NOTES:**
- 1 PLACE 2" PAVEMENT MARKING TYPE B CLASS 1 STOP BAR CROSS APPROXIMATE 10' ON E. END
  - 2 PROVIDE MUTED RD-1 SPEED LIMIT 20'
  - 3 INSTALL VDOT 1308 10 GALE POST MARKING 50' BY 2' 2" SLAB ON GRADE AWAY CHANNEL POSTS ON BOTH S DE OF ROADWAY. (PLAN ONLY) STA 119+33.4 AT STA 49+32.4



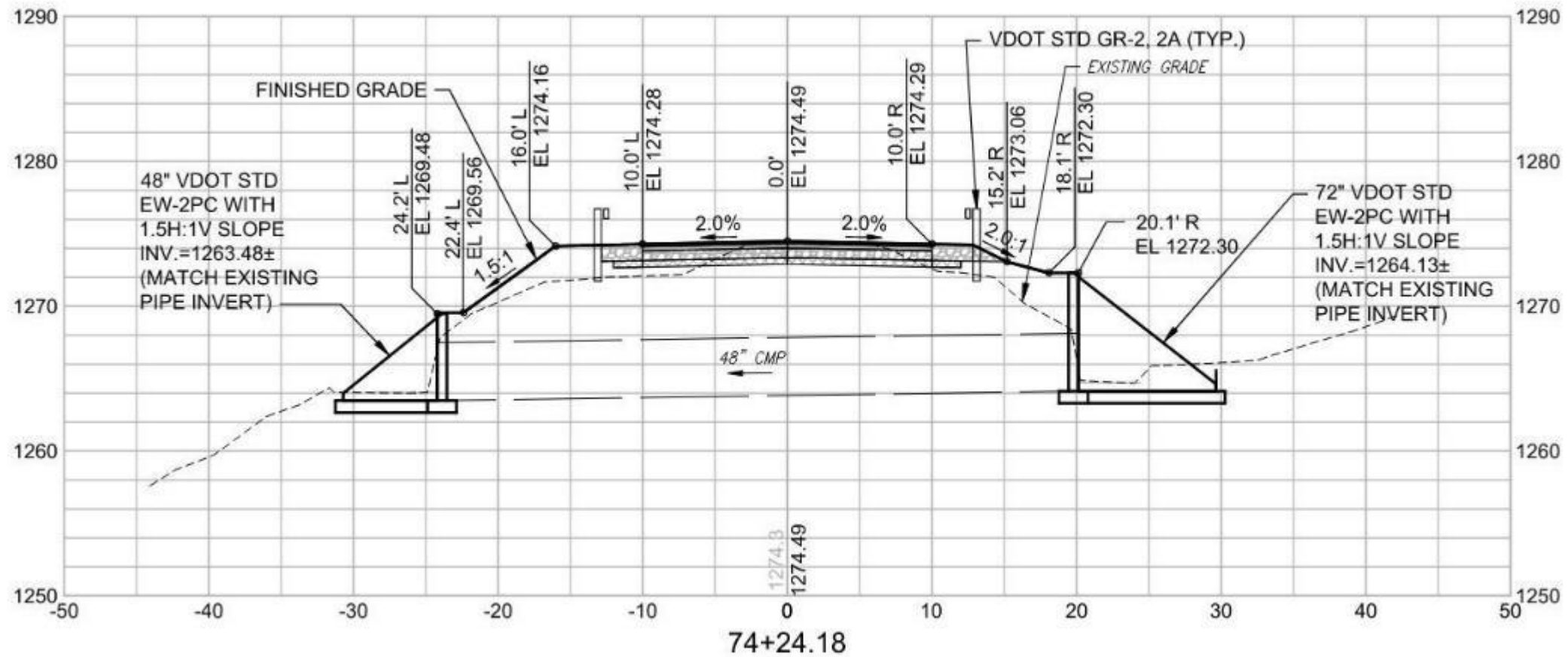
PROJECT MANAGER: J. MURPHY, P.E.		
PROJECT ENGINEER:		
DRAWN BY: D. DODD		
PROJECT NUMBER: 162597		
0	03/24/2017	ISSUED FOR CONSTRUCTION
1	03/24/2017	ISSUED FOR CONSTRUCTION

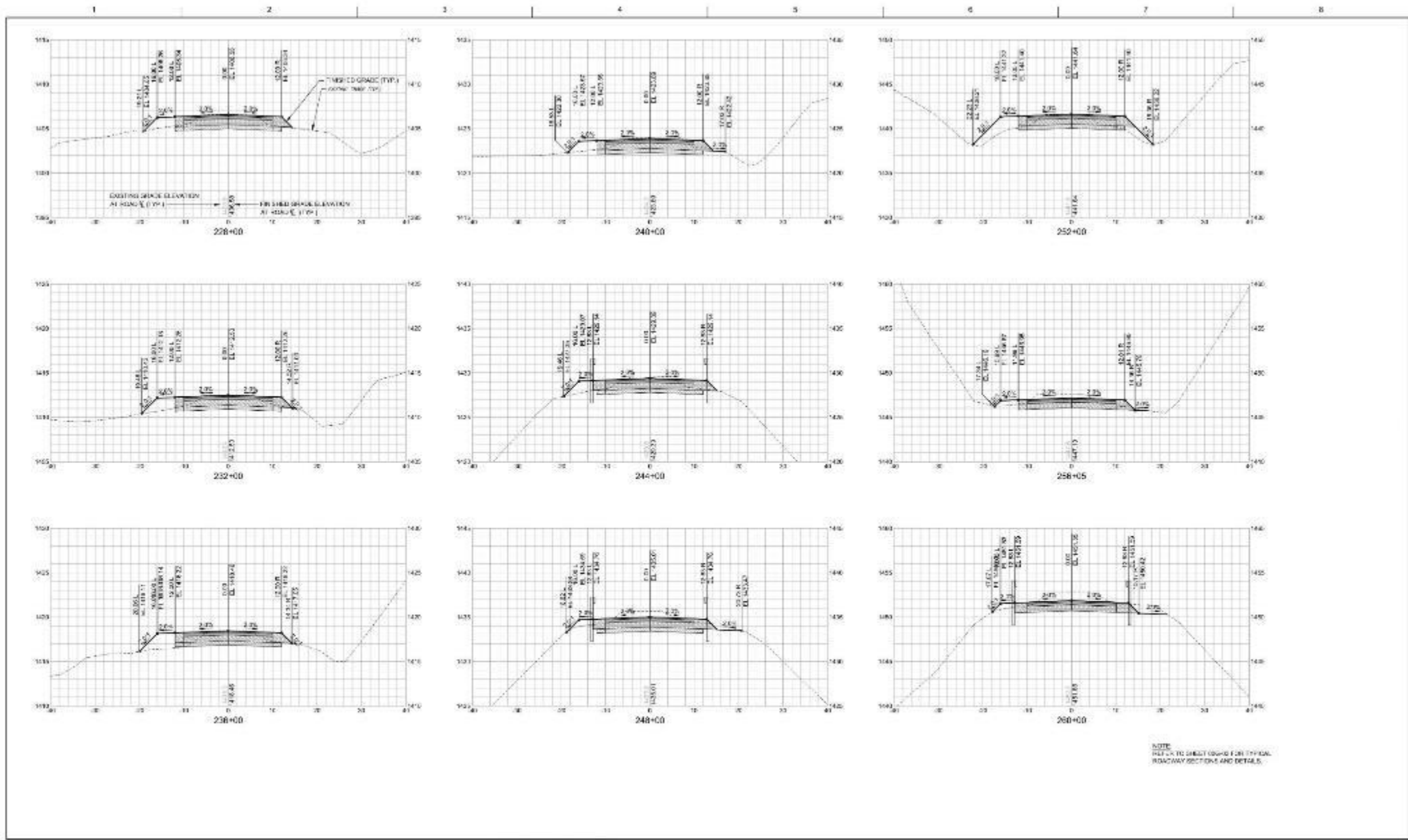


**Roanoke Valley Resource Authority**  
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**GRADING, PAVING, AND PHASE 2 EROSION AND SEDIMENT CONTROL PLAN**  
 STA 119+00 TO STA 132+00  
 SCALE: HORIZONTAL = 1" = 30'; VERTICAL = 1" = 5'  
 FILE NAME: 09C2101-110.dwg  
 SHEET NUMBER: 00CG107







NOTE:  
 REFER TO SHEET 00CG308 FOR TYPICAL  
 ROADWAY SECTIONS AND DETAILS.



PROJECT MANAGER		J. MURPHY, P.E.
PROJECT ENGINEER		
DRAWN BY		D. DODD
PROJECT NUMBER		K22597
0	03/24/2017	ISSUED FOR CONSTRUCTION
ISSUE	DATE	DESCRIPTION

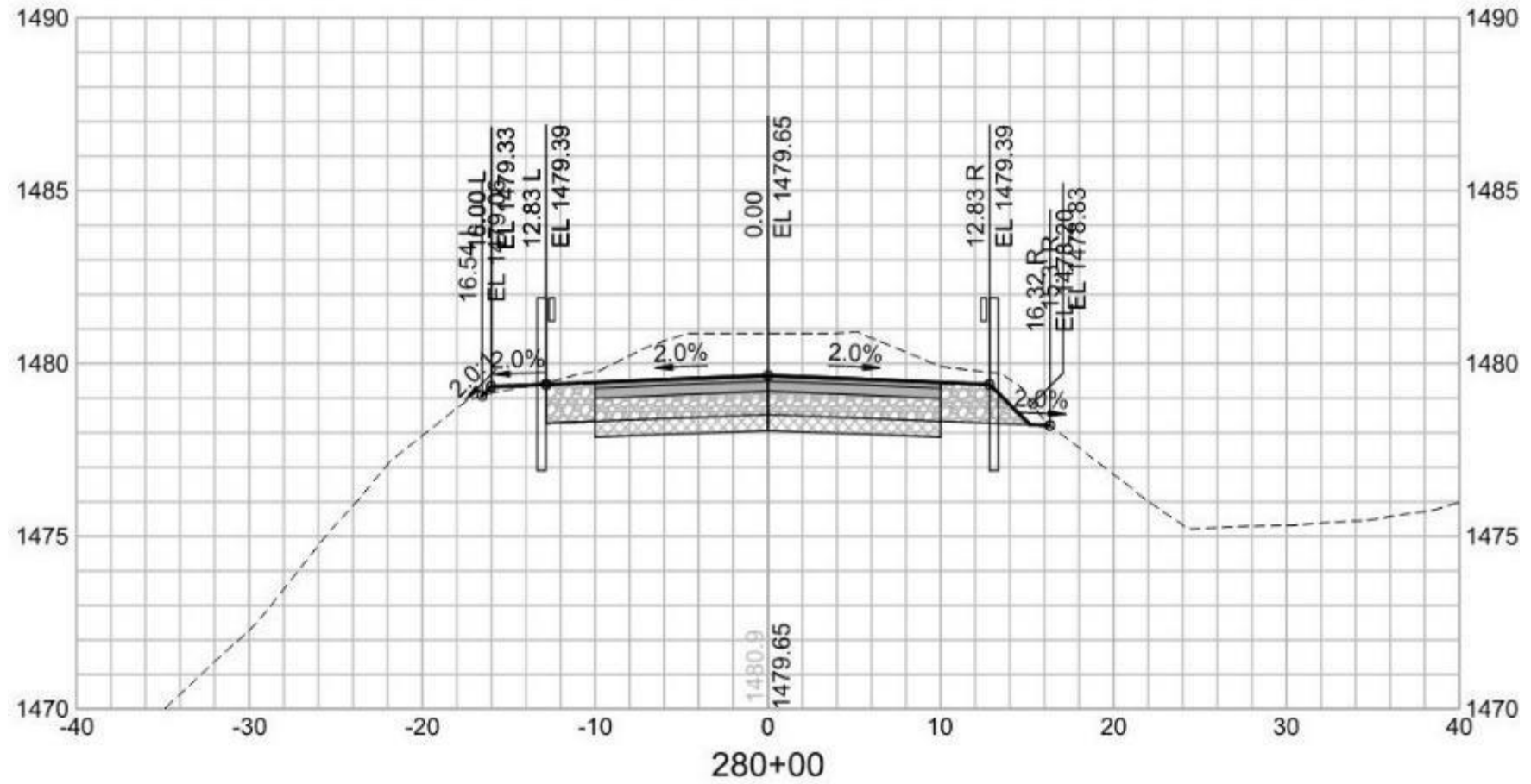


**Roanoke Valley Resource Authority**  
 Construction Drawings for  
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**MONTGOMERY COUNTY**      **VIRGINIA**

**ROADWAY CROSS SECTIONS  
 (6 OF 8)**

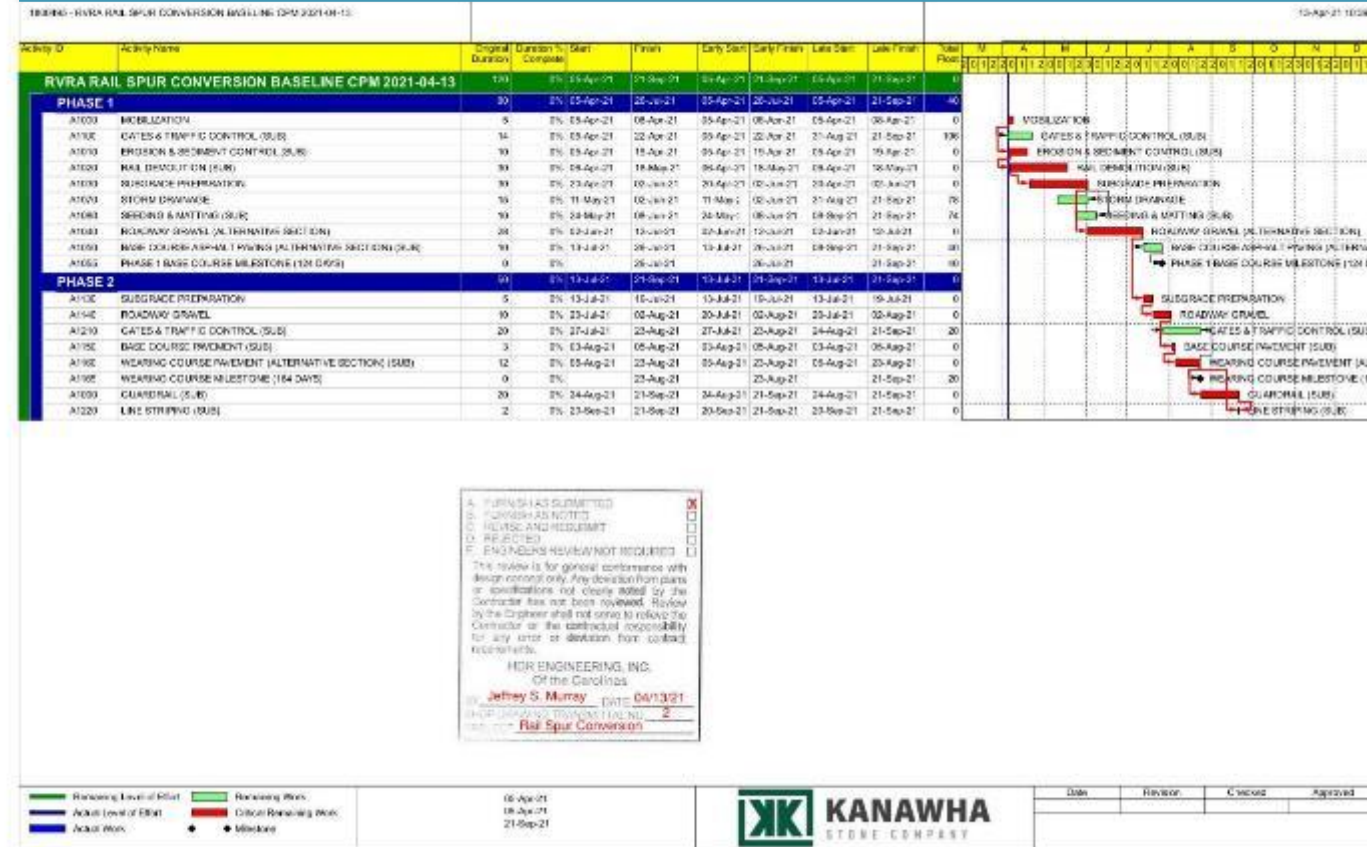
FILENAME: 03C2017-010.dwg  
 SCALE: 1" = 40' V, 1" = 40'

DATE: 03/24/2017  
**00CG308**



# Project Progress

- Bids Received Jan 2021
  - Based Bid (20' Pave)
  - Alternate Section (24' Pave)
- Awarded to Kanawha Stone Co. for \$4.85M
- Additional Work to be Contracted
  - Landfill Roadway
  - Scale Facility
- Schedule
  - NTP April 5, 2021
  - 124 Days for Base Pavement



# Challenges

- Poor Subgrade in Existing Fill Areas
- Truck Access
- Coordination with Neighbors
  - Frequent Communication
  - Progress Updates on Website



# Subgrade Repair

- Proof Roll
- Over Excavate Soft Areas
- Install Stone Ballast
- Geogrid
- VDOT 21B Aggregate



# Subgrade Repair

- 4500 LF of Re-work
- Identified Additional Areas During Pavement Truck Traffic







