

Dirt Gravel and Low
Volume Road Program

WEBINAR

12/12/24

Starts 9am

Ridge Road

Mount Holly Springs Borough & DCNR BOF

CDGRS

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Background

- BOF Road through Mount Holly Springs Borough, South Middleton and Dickinson Townships then enters Michaux State Forest.
- Road not maintained for many years, causing stormwater runoff to channel within the roadway & caused multiple issues within the Borough.
- Multiple residents of Borough live on the road.
- Sediment impacts to Mountain Creek.
- Flooded SR 34 & impacted properties along Hill Street.
- Borough took over right-of-way from BOF within borough boundary & completed a DGR Project with assistance from the CD, SCC & BOF.
- BOF completed DGR Project from Borough line west



Background

- CDGRS assisted Cumberland Conservation District, BOF & the Borough with project layout.
- Borough installed all drainage and improvement.
- Shale placement within Borough was contracted.
- BOF assisted Borough with obtaining Right-of-way.
- BOF provided funds to install 2A over the project area within the Borough, as well as the shale from the Borough line west through South Middleton & Dickinson Townships.
- Shale placement funded by BOF was contracted.
- BOF Staff installed all the 2A (grading & compaction).



- **Mount Holly Springs Borough**
 - Right-Of-Way / Legal Process
 - Personnel & Equipment
- **Cumberland County Conservation District**
 - DGR Grant
 - Coordinating between entities
 - Project oversight & Inspections
- **DCNR Bureau of Forestry – Michaux State Forest**
 - Personnel, equipment, \$
- **State Conservation Commission**
 - Policy guidance and assistance with coordinating between entities.

Ridge Road: Project Timeline



2012:DCNR stopped maintenance (State Forest is 4 miles from where road begins).

2021:Tech assistance meetings, meetings with Representatives, DCNR, Borough & District.

Spring 2023:Borough applied for Dirt and Gravel funding but was denied due to DCNR having the ROW, making the Borough an ineligible applicant. SCC was contacted at this time.

Late Spring 2023:Collaboration began between the District, Mt. Holly Borough, DCNR, & the Center to develop grant application plan.

Winter 2024:Borough agreed to take ROW of the road. Landowners had to sign ROW Agreement.

February 2024:Borough applied for Dirt and Gravel funding again. Application was approved contingent upon getting the ROW agreements signed.

April 8, 2024:Pre-construction meeting.

May 8, 2024:Borough began project (shale, drainage, riprap, berm removal, etc.).

July 5, 2024:Borough completed their portion of work

September 2024:DCNR completed 2A fill on Mt. Holly Borough, South Middleton, & Dickinson Townships.

Road Maintenance is vital!!!!

- There were 14 existing cross pipes and **none** were receiving runoff.
- All of the driving surface aggregate was eroded/washed away.
- Scour holes resulted in mud and water deposition onto SR 34.

Stormwater Issues within Borough resulted from Ridge Road

- Homes along High Street impacted by excessive flow
- SR 34 flooded with water & mud/sediment
- Borough water infrastructure impacted.
- Large area of ponded water occurred within the Borough.
 - Low area had to be filled in to eliminate standing water hazard.

**Ponded water
in field**

**Homes impacted
along High St.**

**Mount Holly
Springs Borough**

**Flooding @ SR 34 /
Deer Lodge**

BOF Project

**Borough
DGR Project**

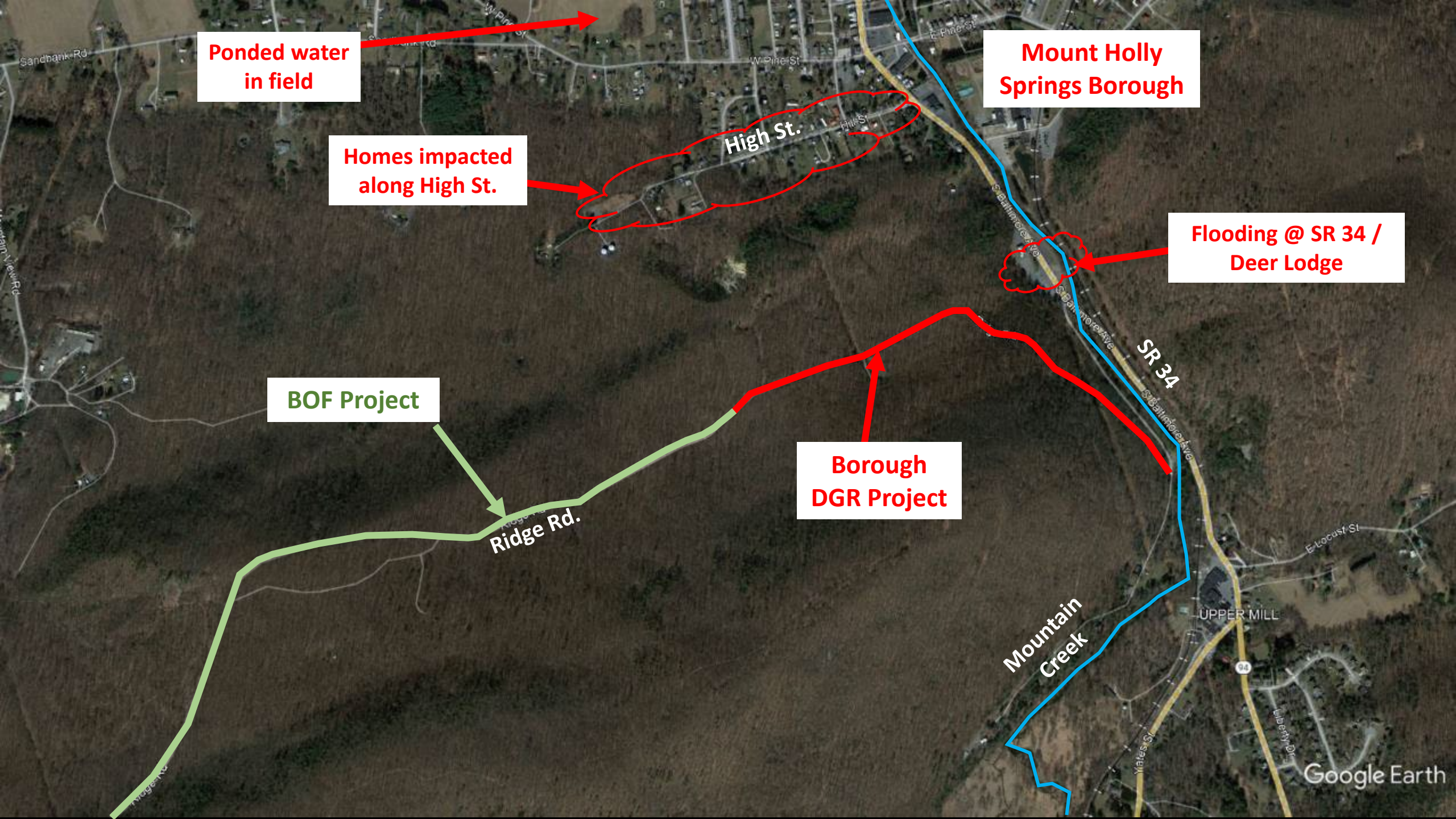
Ridge Rd.

High St.

SR 34

**Mountain
Creek**

UPPER MILL



- **Yards along High Street impacted by runoff**



- **Ponded water within Borough resulted from excessive runoff from Ridge Rd.**





- **Entrenched Road**
- **Disconnected Pipes**
- **Disconnected Turnouts**
- **Exposed Bedrock**



- Large puddles & standing water
- Poor road base (mud/silt)



- Concentrated flow w/in cartway
- Flow cannot reach pipes or turnouts
- Washed away aggregate and exposed soils.



- Concentrated flow within cartway
- Flow cannot reach pipes or turnouts
- Washed away aggregate and exposed soils.

**Exposed
Cross Pipe**



- Concentrated flow exited road at 2 locations.



Scour

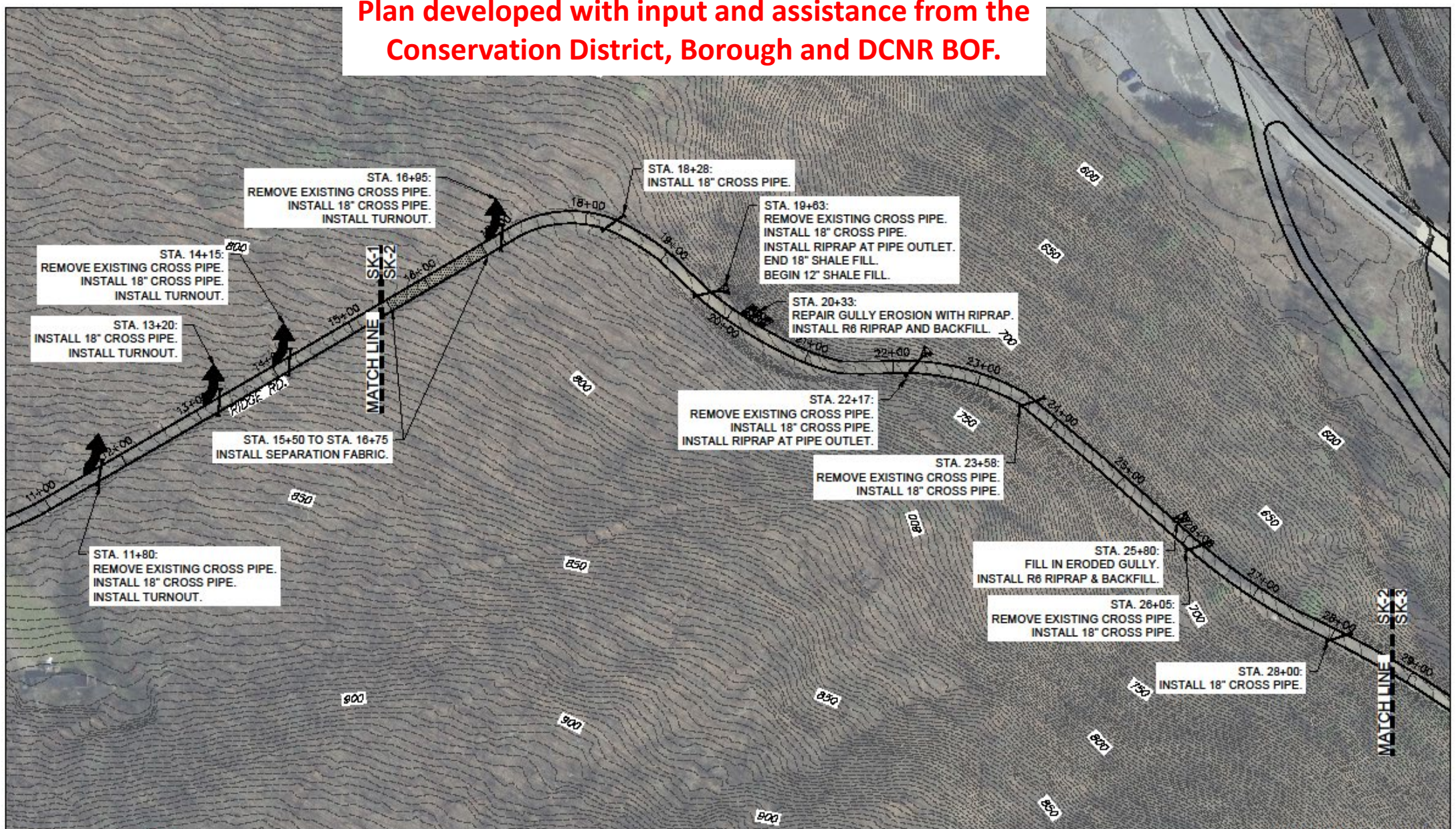
- Concentrated flow exited road at 2 locations.



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Plan developed with input and assistance from the Conservation District, Borough and DCNR BOF.



RIDGE ROAD
MOUNT HOLLY SPRINGS BOROUGH
CUMBERLAND COUNTY, PA

North
0 100' 200'
1" = 100'

SKETCH PLAN
2.0
2 OF 4
JANUARY 22, 2024

Mount Holly Springs Borough DGR Project:

- 3,775 ft. of road improved

Drainage Improvements

- (11) New Cross Pipes
- (14) Cross Pipe Replacements
- Berm removal
- Scoured bank filled with R6 riprap

Road Base Improvements

- 576 tons of millings by Borough (in-kind)
- 3,950 tons of Shale
- 1,540 tons of 2A

Fill Policy: 12" of base + 6" of 2A

DSA not used to allow for settlement of fill & to make sure drainage is correct.

Mount Holly Springs Borough DGR Project

Funding

\$100,000	Cumberland CD Dirt & Gravel Roads Grant
\$33,671.43	In-Kind Mount Holly Springs Borough
\$99,573.25	<u>DCNR Contribution to Mount Holly Springs Borough</u>
\$233,244.68	Total Project Value - Mount Holly Springs Borough

- \$180,000
- DCNR Contribution to South Middleton & Dickinson Townships.
 - Shale and 2A for base improvements.
 - On-going talks & collaboration to complete the rest of the road.
 - Drainage and base improvements to forest boundary.

**12" avg. shale
placement**



**12" avg. shale
placement**



**Shale placed with a 4%-6%
crown, after compaction,**



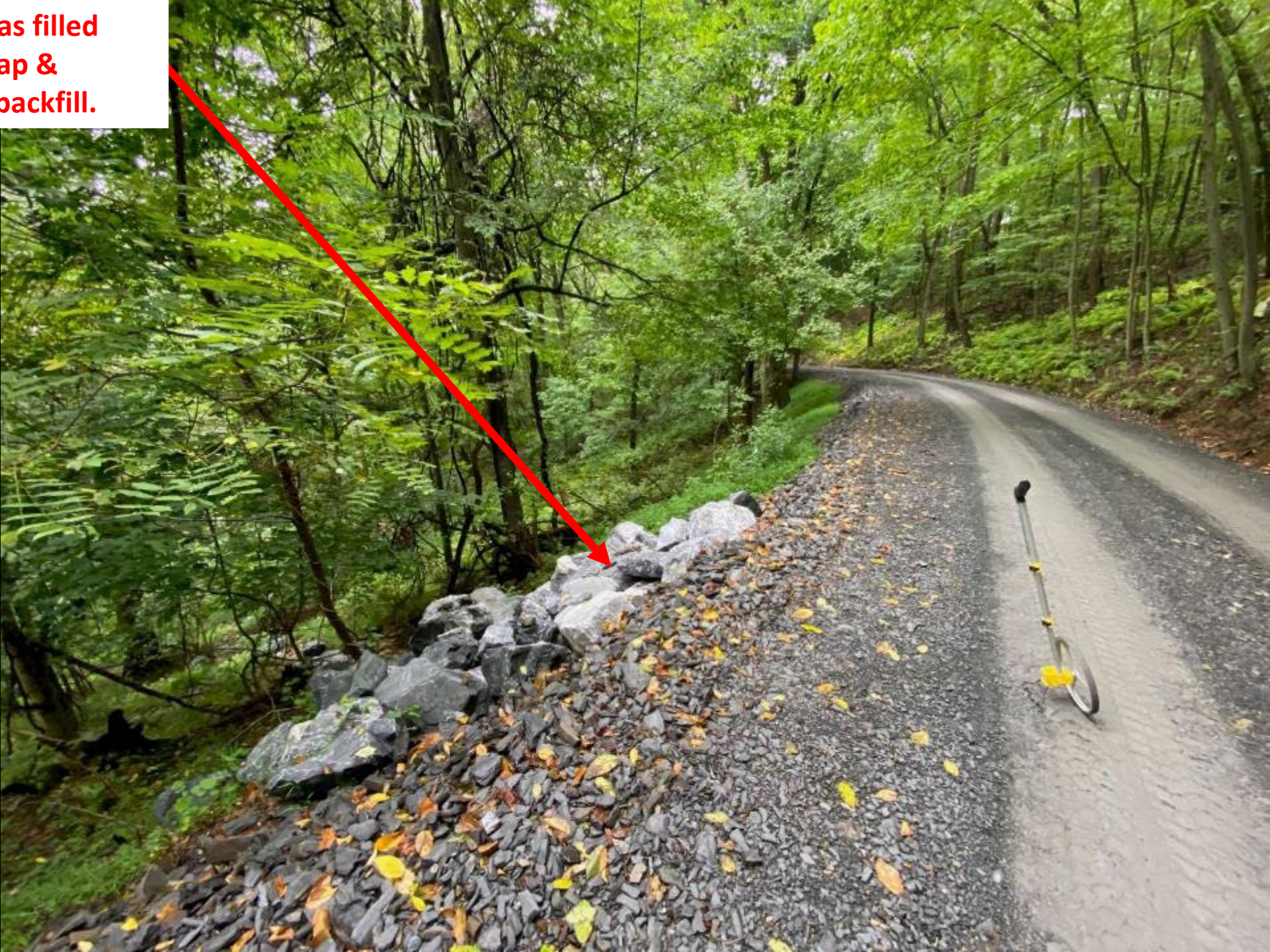
- Shale placed higher than low side of road (sheet flow)
- Shale placed to create a ditch line.



- **Borough removed roadside berms.**
- **Berms were 3-4 ft. high in some areas!**
- **Reduced depth of shale fill to obtain sheet flow.**
- **Provided multiple areas for turn outs.**



- Scoured areas filled with R6 riprap & compacted backfill.





- 6" of 2A aggregate was placed over the shale.
- 2A was tail-gated, shaped with a grader, then compacted.
- 2A was placed with a 4%-6% crown, after compaction.
- 2A issues....

Finished driving surface



Location where shale & 2A began.

Existing Road

New Road



BEFORE



AFTER



BEFORE



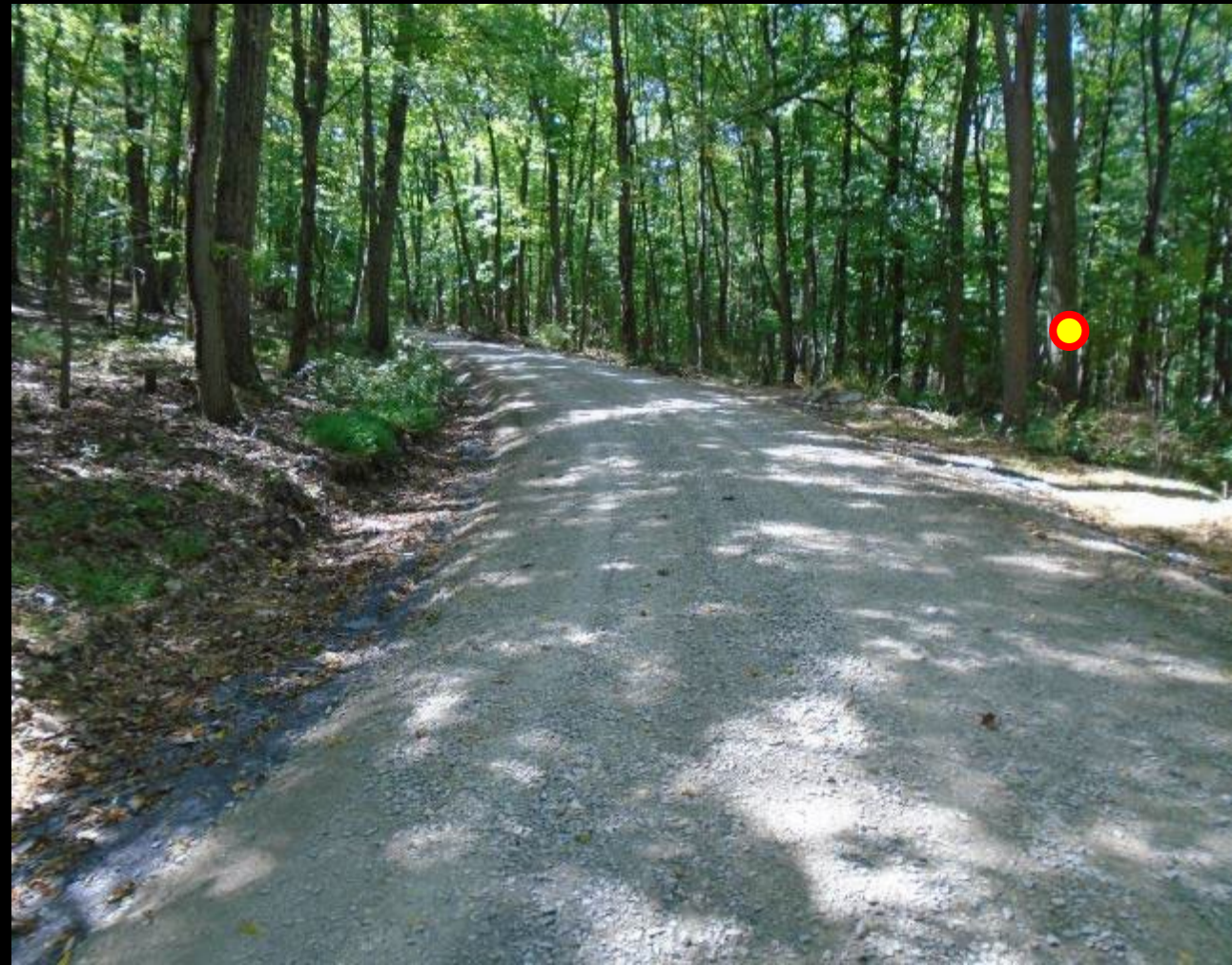
AFTER



BEFORE



AFTER



BEFORE



AFTER



BEFORE



AFTER



Total Improvement w/in Borough, South Middleton & Dickinson Township

- 2.1 miles of total road improvement
- Shale, 2A & Drainage completed within Borough
- Shale & 2A placed to prep road for future projects within Dickinson & South Middleton Townships.
 - BOF pursuing projects with Dickinson & South Middleton Townships
 - Plan is to complete shale, 2A and Drainage within these Townships.

Total Road Base Improvements

- 576 tons of millings by Borough
- ~12,100 tons of Shale
- ~4,485 tons of 2A

TEAMWORK!!!



COUNTY OF CUMBERLAND
DATE: Oct 1, 2024
PAY TO THE ORDER OF: Mount Holly Springs Borough \$ 100,000
One Hundred Thousand Dollars DOLLARS
Ridge Road D&G Project CUMBERLAND COUNTY COMMISSION

QUESTIONS? COMMENTS?

CDGRS

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