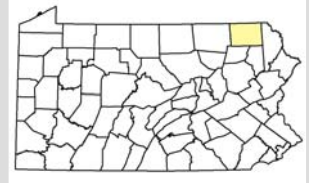


# Worksite in Focus

## Susquehanna County Jane's Road

Version 2.0 2/02/04



### Problem Identification

Years of grading and traffic wear had significantly reduced the road's elevation. The resulting "depressed" road was lower than the surrounding terrain on both sides, and acted as a collector for all nearby water. This concentrated drainage eroded valuable road material and carried sediment in bare ditches directly to a tributary of high-quality Tunkhannock Creek. Snow removal was also a problem due to the high banks on both sides of the road.

### Project Objectives

1. Prevent direct drainage discharge to stream.
2. Reduce the parallel drainage from the road profile.
3. Utilize natural vegetation to filter road runoff.

### Project Considerations

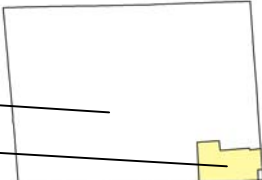
Additional crosspipes were necessary to reduce the volume of water transported in the road ditches. High ground water levels, property owner concerns about outletting, and proximity to the stream made good pipe locations hard to find.

### Project Solutions

**Adding crosspipes:** Installing new crosspipes on the road provides more drainage outlets. This prevents erosion caused by the concentration of large volumes of water in road ditches.

**Filling the road:** Raising the elevation of the road may eliminate the need for ditches by allowing water on the road's surface to drain to the lower surrounding terrain.

### Project Vital Stats



Susquehanna County  
Clifford Township

Road:	Jane's Road
Road Owner:	Clifford Township
Length:	1,650 ft
Cost:	\$29,652
Date Completed:	November 2002



Figure 1. **BEFORE:** Depressed road without crosspipes, road collects and carries water.



Figure 2. **AFTER Filling:** Shallow crosspipe installation with minimal disturbance.

In the frequently wet ditch (below left) a 6" perforated pipe was placed as a French Drain, while the road profile was raised to eliminate the need for a surface ditch.



Figure 3. **BEFORE** filling: Note ditch on the left and high bank to the right of road.



Figure 4. **AFTER** filling: Filling the road achieves proper drainage without collecting water.

Susquehanna County is rich in high quality blue and gray sandstone. "Quarry Rubble," a waste product of the Bluestone industry, was readily available to this worksite as clean, low cost, free-draining fill material. Filling the road profile allowed for the installation of additional crosspipes without traditional deep outlet trenches that potentially drain streamside wetlands.

**Underdrainage:** In one location, property owner permission to outlet water was not readily available. Therefore, a 6 inch perforated pipe was placed in the existing, frequently flowing ditch, and the road profile was raised to cover the pipe and eliminating the surface ditch.

### Cost Summary

This project was completed almost entirely by a contractor. Clifford Township contributed labor for brush cutting, traffic control (signs), and some headwall construction. The Township purchased all of the materials and the contractor simply provided equipment and operators. The total cost of this project was \$29,652. The Township contributed \$2500 in cash in addition to their labor efforts. Approximately 2500 cubic yards of rubble were donated to the project by a local quarry.

Total Project Value:	\$29,652
District Funding:	\$25,758
In-Kind from twp:	\$3,894

### PROJECT LOCATION



### What People are Saying

**Lillian Theophanis**, Susquehanna County District Manager  
 "The project was originally submitted as rip-rap... Working together, we developed a project that truly addressed sediment pollution coming from the road. By raising the road bed, we were able to eliminate the ditches, give the township more room for snow removal, and shift the pressure to widen the road away from the stream."

**Randy Decker**, BMS Supervisor PENNDOT District 4-0  
 "The (D&G) Program is truly making progress in my district. I am pleased to say that townships are using the ideas from the D&G Program on all of their roads."

**Adam Barron**, Clifford Township Supervisor  
 "The project is great. I wish we could do it to all of our roads. Snow removal is so much easier!"

For more information: [www.dirtandgravelroads.org](http://www.dirtandgravelroads.org)  
 Center for Dirt and Gravel Road Studies: 886-668-6683  
 Susquehanna Conservation District: 570-278-4600