

NAILED IT!

Sam Kraus, District 4

When unstable natural soil slopes go untreated, major damage to a roadway is often the result. The preferred fix for these slopes involved digging, which takes time and money. But a District 4 project to fix the unstable soil on Porter Road over Interstate 76 this past October used something new: soil nailing. It was the first of four district projects to undergo this new method.

The technique calls for slender bars of metal (“nails”) to be installed at an angle into the slope using pre-drilled holes which are then grouted. The insertion of these nails provides stability to the surrounding soil. Using nails is faster and easier than the usual method of digging. On average, the process also saves money: a stabilization project costing over \$2 million using the conventional digging method can be accomplished for \$700,000 using soil nails.



PHOTOS BY SAM KRAUS, DISTRICT 4

District 4 Special Projects personnel work with contractor GeoStabilization International to reinforce the slope on I-77 in Summit County near Lauby Road.

“It’s exciting to see how this new process is able to save us both time and money,” Transportation Engineer Tom Powell said.

The three other projects: I-76 at New Milford Road, Interstate-77 at

the White Pond exit ramp, and I-77 at Lauby Road, are using this technique. It is estimated they can be completed in the same time as it would to finish using conventional means.



The soil nailing operation can be completed while closing only one lane of traffic.