



Gravel resurfaces

N.D. county removes pothole-infested bituminous road

Richland County decided to return the roadway to gravel without reclaiming the existing bituminous roadway.

The bituminous pavement on Richland County, N.D., Highway No. 3 was in very poor condition, and because of budget constraints, the potholes were being repaired using aggregate.

The road has rolling terrain with several areas of wetland basins on both sides. The wetland areas required numerous grade raises and remained as gravel sections once raised out of the water. The estimated average daily traffic in 2003 was 97 vehicles with a mix of cars, trucks and agricultural vehicles, according to Tim Schulte, Richland County engineer.

"Typical pavement distresses included transverse, longitudinal and alligator cracking," said Schulte. "Numerous potholes and severe rutting were evident throughout most of the project."

Richland County decided to return the roadway to gravel without reclaiming the existing bituminous roadway. This construction alternative called for placing 4 in. of North Dakota Class 13 aggregate surfacing on the entire 3 miles of roadway and stabilizing this material with Team Laboratory Chemical Corp.'s Base One Aggregate Base Stabilizer.

"This alternative was the least costly, but the most politically controversial. A public hearing was held to get feedback prior to selecting this alternative. The biggest concern by the public was the loss of a hard-surfaced roadway and the potential for dust problems," stated

Schulte. "In preparation for the public hearing, I put together a document showing the costs of maintaining pavement versus gravel, and when it makes sense to pave or de-pave a roadway."

Some of the concerns identified at the public hearing were how the gravel surface would hold up when placed directly over the bituminous. Another concern was whether the moisture would get trapped between the aggregate layer and the old bituminous surface.

The County Road No. 3 project was completed on a trial basis. If the project did not go well, the material would already be in place to reclaim the aggregate and bituminous surface and blend it into a gravel-bituminous mixture for the road surface.

"This project has been holding up extremely well since its construction in the summer of 2006. In four years, we have not placed any additional aggregate surfacing with the exception of the areas which have required grade raises due to the ever-expanding wetland basins along this roadway," said Schulte.

He continued, "Surprisingly, the public has accepted this roadway and the technique in this area. A few residents have expressed to the county commissioners that they would rather have a good gravel road, like we created, than dodge the potholes on a poor bituminous roadway."

The county plans to expand this project to other roadways with similar characteristics. **R&B**