



Scott County's first concrete overlay project An interview with Greg Felt, Scott County engineer

What was the problem?

A 5.2-mile stretch of Trunk Highway 66 from Highway 169 through Jordan, Minn., had become a very rough ride for cars and even snow plows by 2011. Over the years, Scott County had placed four inches of asphalt over the original 1920s concrete pavement. As that asphalt cracked and tented at the joints, the county added another two inches of asphalt. Moisture continued to get down underneath and the tenting occurred year round.

"The tenting was very severe and about an inch high" said Greg Felt, the Scott County project engineer and designer. "This section of road gets a lot of traffic, and we had many complaints. The snow plows had to drive at five to seven miles per hour or the plows would bump off the pavement."

TH 66 was the original Highway 169, which has since been re-routed by MnDOT. About 1.5 miles of this project runs through a residential area and the rest through a rural setting. The original concrete pavement was only 18' wide and 8" thick on the outside and 7" thick at the middle. Over time, the county widened it with asphalt.

What was the solution?

The county chose to place an unbonded concrete overlay in September 2011 on the original 80-plus years concrete because it provided durability and eliminated tenting for only \$150,000 - \$200,000 more than another four-inch asphalt mill overlay. The county had looked at tearing out the old concrete, but the project cost would have jumped by almost \$2 million.

In milling off the asphalt, the county discovered spots where the original concrete had deteriorated and so it replaced those areas. Also, it placed a geotextile fabric between the layers of concrete to prevent moisture from accumulating and didn't seal the joints. Finally, the county widened the road with a two-foot concrete shoulder.

"In 2013, we noticed four weak areas where a half slab had to be pulled out and replaced, but since that time there have been no other issues," said Felt. "We're very satisfied with it."

Key facts about the project

- ▶ Project ID: CP# 66-03 & CP# 66-04
- ▶ First concrete pavement project in Scott County
- ▶ Used 18,736 cubic yards of concrete, 88,000 square yards of pavement surface
- ▶ 6" of new concrete (5.2 miles) over 7" of old concrete (8" at edge and 7" in center of the old 18'-wide slab)

Final comments

"This went from being the roughest road to the smoothest road in the county," said Felt. "The road is very stable, it drives nice, and people love it."

▶ Owner: Scott County

▶ Project and Design Engineers:
Greg Felt, Dan Jobe

▶ Contractor: Shafer Contracting Co., Inc.

▶ For more information, contact Greg Felt
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