

Crosby Leads the State's Innovation Efforts

Scrub Seal –New Pavement Preservation Technique

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Crosby, North Dakota set the perfect stage to unveil a new pavement preservation technology for our region. In July, 2017 Interstate Engineering and Bituminous Paving used a scrub seal as part of their Crosby street improvement project. A scrub seal is a chip seal that uses a 'scrub' broom system behind the distributor. The broom system serves to fill in the pavement cracks/voids, sealing the pavement surface and reducing chip loss. In essence, it combines the crack seal and seal coat treatment processes into one operation. By adding a rejuvenating agent to the seal oil they were able to combine yet another proven preventative maintenance effort into a single operation. The Crosby project also included a 'non-traditional' seal oil, a PASS-CR emulsion. The final surface was fogged with CSS-1H to help hold the chips and to give the street surface that 'new asphalt' appearance.

A scrub seal is good option for pavements that are in fairly good condition, with some cracking and without rutting or pavement failures. The addition of the broom system on the distributor provides a scrubbing action that serves to enhance surface coverage and fill in the pavement cracks/voids. The scrub seal project is expected to extend the pavement life by 4-8 years.

The process is simple: clean out the pavement cracks, sweep the street, cover the manhole covers, shoot the oil, broom (i.e., the 'scrub' portion of the seal coat) the oil immediately behind the distributor, apply chips and roll the chips into place. After the 24-48 hour cure period, the excess chips are removed and the surface receives a fog seal.

Key project personnel included: Troy Kelsey and Lonni Fleck, Interstate Engineering; Brad Lokken and Bill Bajari, Bituminous Paving, Inc; Mo Henman, Western Emulsions; and Bryan Haugenoe, Divide County and City of Crosby.

Curt Glasoe, NDLTAP Western Technical Support Representative, was on site for the scrub seal start up. He was very impressed by the quality of work that Zimmerman Contracting performed on crack preparation cleaning efforts and Bituminous Paving's attention to quality for all aspects of the construction efforts. The combination of scrub seal, special oil selection and fog seal provided a great opportunity to save time and money while at the same time utilizing cost-effective pavement preservation methods that will help to preserve Crosby's surfacing investment. Curt summed it up well when he said, "Bituminous Paving, Inc. and Zimmerman Contracting did a great job. Interstate Engineering helped Crosby save time and money. I'm anxious to watch this new technology spread across North Dakota."

Interstate Engineering plans to publish an article on the project this fall. NDLTAP will be sure to pass it on. With luck, we'll highlight this project at the April 10-11, 2018 North Dakota Asphalt Conference in Bismarck. Stay tuned.

Crosby is North Dakota's innovation superstar!!!