



Application of Replay® Agricultural Oil Seal and Preservation Agent

Project Number 2010-15

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Problem Sealing asphalt pavements typically requires the application of petroleum-based products, which can be harmful and inconvenient in areas with high volumes of pedestrian traffic.

Solution The City of Hutchinson used Replay®, an agricultural oil seal and preservation agent that contains no petroleum. It penetrates over 1 inch into the pavement surface, and polymers bond the top layer of asphalt together to seal the surface. It takes about 30 minutes to dry before traffic can resume use of the pavement.

Procedure The city applied the material with a truck-mounted sprayer after removing debris from the pavement surface. The city chose two test sections with different pavement conditions: an old trail with raveling and cracking and a relatively new driveway with only minor deterioration. The pavement was dry to the touch within 30 minutes after the application, and the material did not track onto other surfaces or stick to shoes or clothing. To evaluate the effectiveness of the material, the city poured water onto each asphalt surface before and after Replay® was applied.

Results After the application of Replay®, there was a significant difference in the way water behaved on the trail and driveway surfaces. Prior to the application, water tended to wick into the upper surface of the pavements, particularly on the older trail pavement. After the application, water ran off the paved surfaces at a higher rate of speed without wicking into the surface. Visual inspections also indicated that Replay® had sealed the top layer of asphalt. The cost of applying the material was generally comparable to the cost of applying a chip seal.

This was a highly successful application for both areas because they experience significant foot traffic during the summer. Unlike other sealants, Replay® did not become soft and sticky during hot weather periods.

Approximate Cost \$5,800

OPERA Funding \$5,800

Implementation Overall results indicate that it would be cost-effective for an agency to apply Replay® using its own equipment and staff, particularly if a long-term strategy of treating pavements with the material every five years were implemented.

Status Complete

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