Purpose and Need

Many transverse cracks in asphalt pavements become depressed. The depressed cracks not only provide a poor ride, but also help to accelerate the further deterioration of the crack. Many sealants have been used to bridge over this depression at the crack with no success. Concrete spall repair has not been effective for any length of time.

Objective

The objective of this experimental project is to level out depressed transverse cracks in asphalt pavement. A Crafco experimental product called “Poly-Patch” is to be used. This polymer based product is said to have a greater load bearing capacity than other typical rubberized sealants. Crafco has two new products to repair small concrete spalls. One is for warm weather regions and the other is for cold weather regions. These two products will be tested in selected spall areas.

Location

The “Poly-Patch” used on seven depressed cracks is located on Airport Road northbound from Lee Avenue to Lovett Avenue. The concrete spall repair material was installed in 25 concrete panels on Bismarck’s Main Street beginning at Washington Street westward about 500 feet.

Scope

The cracks were prepared by sandblasting or high pressure air before the crack leveling material was applied to the depressed crack. Special equipment was needed to melt down the “Poly-Patch and the spall repair material.

Summary

The installation of the “Poly-Patch” material was a slow process. The “Poly-Patch material was difficult to level out at the edges do to the small sized light-weight aggregate in the material. It was applied in two lifts and improved the ride by 90%.

For the most part, both the warm and the cold weather materials are performing satisfactorily with only a few small spalls in the material. Some hairline cracks have developed in the material of some of the repaired joint spalls. Some are considered to be reflective cracks. The cold weather material may be performing a little better than the warm weather material. Another evaluation of these test sections is planned during the summer months.