



Editor's Note: The Maryland Asphalt Association recently revisited the site of an asphalt vs. concrete pavement comparison trial constructed in 1994. The initial results of the trial were widely reported and appeared in the Sept. 29, 2000 edition of Ohio Hot-Mix Asphalt Current News, page 5, "The Maryland Asphalt Versus Concrete Intersection Shootout Leaves Only One Gunfighter Still Standing." This newsletter is archived on the FPO website at http://www.flexiblepavements.org/sites/www.flexiblepavements.org/files/ohio-asphalt-pdf/newsletter_12.pdf.

This reprinted article appeared in the Maryland Asphalt Association's Asphalt Pavements newsletter, Issue 16, October 2012. The article recounts the original results and updates that the original asphalt sections are still performing well after 18 years in service.

Asphalt is really the long-lived pavement.

Durability by Design – Superior Performance by Superpave

The intersection of U.S. 40 and MD 213 topped the list of "trouble spots" for the Maryland State Highway Administration (SHA) network as early as 1993. The high daily traffic count and the large percentage of truck traffic resulted in excessive pavement deformation which needed to be addressed once or twice a year at a great expense. The Asphalt Industry was challenged to come up with a solution for the eastbound travel, passing and right-turn lanes of U.S. 40 at MD 213. A team comprised of a local contractor, the Maryland Asphalt Association, National Asphalt Pavement Association (NAPA), and Asphalt Institute (AI) tackled the problem. The answer was the then-new design system known as

Superpave. A 25-mm base and a 19-mm surface featuring a PG 76-22 asphalt cement was the solution. Fifteen thousand sq. yds. of old pavement were milled down to the original Portland cement concrete (PCC) and replaced with about 5,000 tons of Superpave of varying depths up to eight inches in only eight nights with traffic through the intersection and to all businesses being maintained at all times.

featuring PG 76-22 asphalt. That operation was completed very quickly and with minimal user delays.

The U.S. 40 and MD 213 intersection is showing its age 18 years later (pictured on page 16), but the asphalt still functions well.



Simultaneously the same challenge that was given to the asphalt industry was given to the concrete industry at the U.S. 40 and Landing Road intersection just south of the MD 213 intersection. Their project was 1,800 sq. yds. Six inches of PCC replaced the asphalt roadway. The PCC industry worked for 12 days with round-the-clock lane closures to repair the intersection. The PCC operations took twice the time to complete even though only one-eighth of the area was included in the project.

Six years later, more than 75 percent of the concrete slabs were heavily cracked and the SHA had them removed. This fractured PCC pavement was replaced with a 12.5 mm Superpave blend


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