

Concrete Overlay Provides Longer Service Life on Route 210 Near Washington DC Beltway in Maryland



1 Concrete overlay under construction



2 1.43 miles project length



3 A diamond ground surface provides a quality ride

Maryland Route 210 is a busy corridor that feeds the Washington D.C. beltway. With heavy commercial and private traffic on this 1.43 mile long, 3-lane roadway between Farmington Road and Maryland Route 373, a durable pavement solution was needed that did not require constant, delay-causing repair and maintenance. To minimize construction delays and maximize project life, the Maryland State Highway Administration (SHA) chose a concrete overlay (whitotopping) to address the corridor's current and future needs.

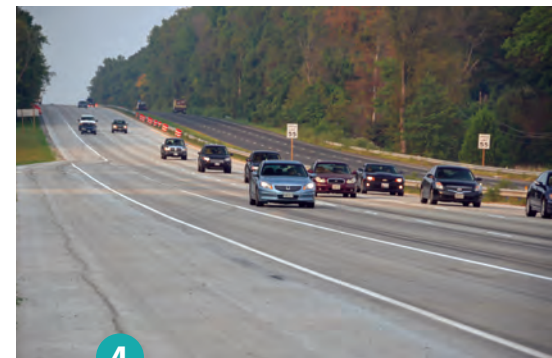
According to SHA's press release prior to construction, "Whitotopping is a concrete overlay that will address recurring rutting issues caused by heavy volumes of traffic. It can provide a longer service life and reduce traffic impacts for maintenance." One of the most significant benefits of using whitotopping is that it actually extends the lifespan of the pavement by 20-30 years while virtually eliminating the need for resurfacing and other maintenance.

Maryland had already worked with concrete overlays on Maryland Route 3, Cronson Boulevard Intersection in Anne Arundel County, Maryland Route 355 and Route 27 in Montgomery County, and a truck climbing lane on I-68 in Garrett County. With Route 210's completion in summer 2015, it is the largest of the 10 whitetoppings (1.43 miles or 40,269 square yards) completed so far with an even larger one planned for 2016.

The American Concrete Pavement Association (ACPA) Mid-Atlantic Chapter worked closely with SHA, especially District 3, in the selection, design, and construction of the concrete overlay. The project presented the most significant traffic management and constructability issues to date in Maryland.

The pavement was designed as a bonded overlay 6 inches thick. Four inches of the existing asphalt pavement was milled off to accommodate the overlay. The concrete overlay was sawcut into 6-by-6 foot panels.

To ensure that at least two lanes of traffic remained open throughout the process, the SHA made use of the shoulders for daily traffic. Cones, barrels, concrete barrier walls, and portable variable message signs guided motorists through the work zone. All three lanes and both shoulders were overlaid in one month. For a smooth surface and a quiet ride, the finished product was then diamond ground.



4 27,000 ADT on Route 210

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