



**SOUTHEAST CEMENT
PROMOTION ASSOCIATION**



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Full-Depth Reclamation (FDR) with Portland Cement Rejuvenates “America’s Favorite Drive”



1 Prior to rehabilitation, the pavement was in poor condition.



2 The reclaimer mixes water and cement into the pulverized pavement.



3 Verifying compaction of the reclaimed base with a nuclear density gauge.

The Blue Ridge Parkway is called “America’s Favorite Drive” by the National Park Service (NPS). However, in the course of four decades since its last pavement rehabilitation, “America’s Favorite Drive” was showing its age. By using Full-Depth Reclamation (FDR) with Portland Cement, the NPS, in conjunction with the Federal Highway Administration’s (FHWA) Office of Federal Lands Highway, has given this historic roadway a new lease on life into its second century and beyond.

The Parkway is designed with an artist’s eye to showcase the beauty of its surroundings. Consequently, it has many sharp turns and steep grades along a meandering route that offers beautiful vistas and provides a sense of the terrain. The NPS goes to great lengths to keep the environment surrounding the highway pristine and undisturbed. No exceptions are made for construction along this exceptional and unique highway.

The pavement on this section of the Blue Ridge Parkway had not been comprehensively rehabilitated for more than forty years. Given its constant use and advanced age, both environmental and load-related distresses were widespread and of high severity. Accordingly, simply patching and overlaying the existing pavement would have been a poor use of limited pavement dollars. The FHWA’s engineers selected Full-Depth Reclamation (FDR) with Portland Cement to bring the pavement back to fine condition for the decades ahead.

Special Roadway, Special Challenges...

Compared to typical projects, the sensitive roadside environment brought unusual

requirements. The shoulders have an approximately two-foot wide strip of native grass leading to an asphalt-lined ditch. The grass had to be protected during construction through careful practice. No cement or other sediment was allowed in the ditch. To ensure that the process did not contaminate the watershed, the ditch was lined with plastic sheeting during construction to catch any stray material. Modern reclaiming equipment provides the precision control to needed to deliver accurate control of line and grade while protecting the roadside.

In a normal FDR with Portland Cement project, staging areas are arranged along the project to transfer cement from tanker trucks to spreaders. Because of the special nature of the land surrounding the Blue Ridge Parkway, the spreaders had to be filled miles away from the work and then driven back along steep and curving roads. Additionally, the nearest water source was located 23 miles away. Consequently, logistical expertise was needed to make sure the process was consistently supplied with cement and great care was taken to ensure that virtually no cement escaped the roadway.

Project Consisted of Two Contracts

The process of rejuvenation began with a contract near Staunton, VA, stretching from Milepost 0 to Milepost 15.6. That contract was awarded to Estes Brothers Construction, Inc. of Jonesville, VA in June 2012. Slurry Pavers, Inc. of Richmond, VA was the subcontractor for the FDR process. Reclamation work was initiated in August 2012 and completed in late 2013. A second contract from Milepost 15.6 to Milepost 28.5 was let in June 2013. Joint



4 Traffic was reduced to one lane using a pilot car while reclamation was underway.



5 After reclamation and resurfacing, the sturdy pavement is ready for decades to come.



6 FDR with Portland Cement is a solution for all seasons.

Forces Construction, LLC of Yorktown, VA was awarded the contract and Slurry Pavers was again the subcontractor for the FDR process.

“Both projects went smoothly and were completed on time. Work time restrictions were established to minimize inconvenience to the road users. Reclaiming operations began on Monday mornings and were completed by Thursday afternoons. The first lift of asphalt paving followed the day after reclamation, running from Tuesday to early Friday afternoons. By Friday afternoons, the project was clear of construction activity. Even during the week, delays were minimized by the use of a pilot car and flaggers,” said David Stowell, sales manager of business development, Slurry Pavers.

FDR Project Performing Well

The National Park Service is pleased with the initial performance of its newly reclaimed pavement and anticipates many years of maintenance-free performance. James Frazier, head ranger of maintenance for this section of the Parkway, likes what he sees so far.

“The projects are looking good and have endured several harsh winters,” Frazier said. He noted that temperatures on this segment of the Parkway drop below 0° F twelve to fifteen times each year and two years ago had 22 such events. Additionally, temperatures dip below freezing forty to fifty times per year. Since these projects were completed, two additional FDR projects have been let; one near Blowing Rock, NC and the other near Roanoke, VA.

FDR with Portland Cement is a Solution for All Seasons

From sub-zero cold to broiling heat, FDR with Portland Cement is a proven solution for restoration of worn out pavement. Projects of all sizes, from parking lots to scenic highways can be made ready for future traffic in an economical, sustainable manner. The Blue Ridge Parkway has been restored and is ready to carry visitors to the scenic beauty of the Appalachian Mountains for decades to come, while saving taxpayers millions of dollars over other paving options. If you have pavement needing repair, FDR with Portland Cement should be on your list of paving options.

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