Full-Depth Reclamation With Portland Cement Upgrades County Road 148 in Greene County, Alabama

County Road 148 in Greene County, Alabama is a two-lane undivided road with severe pavement settlement issues, major rutting, and alligator cracking. Due to high volumes of logging trucks as well as agricultural equipment, a 2.665 mile section of County Road 148 became worn out. Greene County Engineer Willie Branch and Assistant Engineer Calvin Culliver contacted the Alabama Department of Transportation (ALDOT) about the possibility of using full-depth reclamation (FDR) with Portland Cement to create a new durable base. ALDOT concurred FDR with Portland Cement would be a good solution due to the road's poor condition.

Branch and Culliver previously attended a FDR Open House in Perry County where they were able to view the FDR process being performed by The Miller Group. Both men realized that roads with a large amount of ordinary repairs needed to prepare a road for a conventional mill-and-fill overlay was impractical. FDR is not only done for less than the cost of patching, but also provides a new strong and uniform base. The County Road 148 project was let to S.T. Bunn. Pozzolanic Contracting was selected as the full-depth reclamation subcontractor. Premixing (pulverization) of the existing pavement commenced on April 18, 2016. The FDR portion began on April 19 and was completed on April 27, 2016. The FDR work was 10 inches deep and 20 feet wide with Lehigh Cement providing 782 tons of cement. A FDR Open House was held at the site on April 27. Nearly a dozen ALDOT staff, six neighboring county engineers and assistants, two cement company representatives, along with Greene County officials and staff attended the momentous event.

Traffic was maintained via a pilot car with a single lane closure during reclamation. The project was completed with S.T. Bunn applying a triple surface treatment. This treatment consisted of the bottom layer #6 stone, middle layer #78 stone, and the top layer a W-10 stone (very similar to sand). “This project provided a much needed upgrade to County Road 148. We feel that FDR has provided not only a great value but a superior final product as well,” said Culliver. Branch was equally pleased with the result of the FDR process and stated, “Greene County currently has two roads, County Road 191 and County Road 72, which are being designed with FDR with cement for their bases.”

Becky Keith with ALDOT’s Materials and Tests Division attended the FDR Open House and stated, “ALDOT has been extremely pleased with the FDR process with respect to the Greene County Road 148 project. The Department (ALDOT) was impressed with the contractors and how quickly they were able to complete the process. The fact that the FDR contractor pre-pulverized the existing pavement enabled the project to go smoother and faster than anticipated. The Department is very willing to assist counties and municipalities in any aspects of the FDR process.” FDR with Portland Cement is a fast, economical, sustainable, and proven solution for worn out pavements. County Road 148 will serve Greene County for years to come.