## High Altitude Mountain Roads in New Mexico Full Depth Reclamation with EMC SQUARED Stabilizer

Tith a proven track record of converting moisture susceptible and frost aggregate and gravel materials into moisture resistant base and surface course layers, the EMC SQUARED Stabilizer is the ideal treatment for Full-Depth Reclamation (FDR) of distressed asphalt pavements, especially for FDR projects located in northern regions or high-altitude locations subject to extreme cold temperatures. The frequent freezethaw cycles typical of these cold regions prematurely fail pavements constructed on base course materials prone to saturation. The FDR process recycles distressed asphalt pavements by pulverizing existing pavement and blending it with a portion of the underlying aggregate base material. Traditional FDR treatments apply a combination of cement and asphalt emulsion products. The cost for the cement and asphalt emulsion treatment is more than ten times that of the EMC SQUARED Stabilizer treatment, so great economies can be realized when this more affordable alternative can be utilized.

The Mescalero Apache Reservation is situated in the heavily forested Sacramento Mountains midway between the cities of Tularosa and Ruidoso, New Mexico. The Mescalero Apache Tribe (MAT) has an extensive network of paved roads accessing

Penn Scott Drive — Full Depth Reclamation mixture stabilized to six-inch (6") depth using EMC SQUARED System treatment for stabilized base course application

rural residential developments and other facilities. Engineering services and construction for the road system are federally funded through the USDI Bureau of Indian Affairs (BIA). Based upon impressive results for road and street projects at other high-altitude locations in New Mexico, the EMC SQUARED Stabilizer treatment was selected by the road design engineers for the reconstruction of failed asphalt roads and streets within a rural subdivision on the Reservation in 2010. At an elevation of approximately 7,500 feet, the existing asphalt pavements had been deteriorated by frequent freeze-thaw cycles that are typical during the spring and fall seasons at this altitude. The FDR mixture of pulverized asphalt pavement and aggregate base material was treated with the EMC SQUARED Stabilizer solution and compacted to construct a base layer of sixinch depth, which was then surfaced with two-inches (2") of Hot Mix Asphalt (HMA) pavement. Thirteen years later, the pavements constructed on this stabilized base layer are in excellent condition and remain maintenance-free. EMC SQUARED Stabilizer treatments have since been used for other FDR applications on the Reservation including reconstruction of large parking lots as well as roads and streets.





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