

HR-312 Low Cost Techniques of Base Stabilization

Key Words: Base stabilization, Soil stabilization, Soil treatment, Soil additives

Research project HR-312, "Low Cost Techniques of Base Stabilization", was initiated in 1988 to study the effectiveness of four different construction techniques for establishing a stable base on a granular surfaced roadway. After base stabilization, the roadway was then seal coated, eliminating dust problems associated with granular surfaced roads. When monies become available, the roadway can be surfaced with a more permanent structure. A 2.8 mi (4.5 km) section of the Horseshoe Road in Dubuque County was divided into four divisions for this study.

This report discusses the procedures used during construction of these different divisions. Problems and possible solutions have been analyzed to better understand the capabilities of the materials and construction techniques used on the project.

The project had the following results:

1. High structural ratings and Soil K factors for the 610 CAT and Consotid bases did not translate to good roadway performance.
2. The Macadam base had the best overall performance.
3. The Tensar fabric had no noticeable effect on the Macadam base.
4. The HFE-300 performed acceptably.