

PROJECT PROFILE



In-Place Pavement Recycling

Full-Depth Rehabilitation (FDR) is an in-place recycling method for reconstruction of fatigued pavements. Pavements showing distresses such as base failure, rutting, transverse cracking, flushing and bleeding are candidates for reconstruction using FDR instead of simply overlaying with additional asphalt concrete. Poor or wet subgrade is often the most critical contributing factor for many pavement distress situations. FDR increases the load-carrying capacity of the base course, thereby allowing the asphalt section to be constructed more thinly and without the reflecting cracking from the old pavement layers. FDR can increase the Traffic Index of an existing roadway by increasing the recycling depth. The recycling of the existing base and old asphalt section into the new base course means that the only material brought to the job is the new asphalt wearing course. In addition, since the road can be opened for traffic at the end of each day and in most cases open during the entire process, it requires less traffic control, resulting in less inconvenience to the driving public.

In terms of construction, FDR is quite versatile. The project engineer does not normally have to deal with issues relating to poor subgrade. FDR "bridges" over most problem areas, thus avoiding cost overruns and project delays. Options available to the engineer include increasing the reagent content, thus increasing the strength or increasing the depth of the section to accommodate any problem areas.

Description of the Process

The existing surface is pulverized full depth, usually twice the thickness of the existing asphalt layer. The pulverized material is then graded to allow for the new asphalt section. Following the re-grading operation, a spreader truck lays down a small amount of stabilizing agent such as Cement, Quicklime, or a combination of both to the pulverized base and old surfacing material. Stabilizing agent is processed by mixing and hydrating to a specified depth, then compacted to the project specifications. From a quality control point of view, all phases of the FDR process can be monitored to provide consistent results. Once all engineers specifications are met, a curing seal is placed and the road opened up to limited travel. This can all be achieved on the same day when Portland cement is used and two day processing if quicklime is required as the stabilizing agent.



Project Scope

Conditions

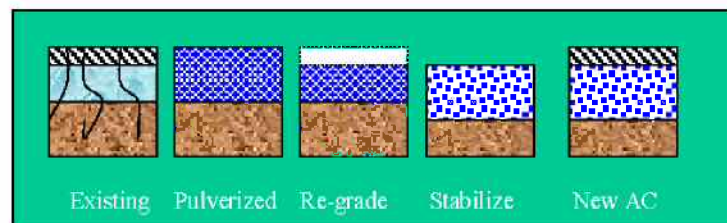
- Pavement distress caused by subgrade or base failure, cracking, oxidation, or flushing
- Under-designed pavement section
- Pavement that has reached its life span

Solutions

- Recycling of existing pavement section eliminates the need to off-haul old pavement materials
- Eliminates the need to import new baserock and reduces the amount of asphalt required
- Eliminates having to expose soft, saturated subgrade soils

Conclusions

- Full-Depth Rehabilitation provides a long-term solution to base failure, which is a contributing factor to many pavement distress situations.
- The benefits of using this method to stabilize and improve the performance of the base include increasing the load-carrying capacity of the pavement structure, which increases the pavement life.
- FDR utilizes the existing pavement, eliminating the need and cost of transport and disposal of the material. It is a cost effective, versatile construction method that utilizes existing material and equipment.



CORPORATE OFFICE:
7020 Koll Center Parkway,
Ste. 142 Pleasanton, CA
94566

Soil Stabilization and Pavement Rehabilitation



Contractor Lic. CA 791232 NV 0074577

Phone (925) 862-2260
Fax (925) 862-2264
(800) 308-8998

www.GriffinSoil.com