



Traffic Range:

No limitations on traffic volumes for base stabilization applications.

Life Expectancy:

Typically 8 to 12 years when covered by thin surface treatment. 15 to 20 years or longer when covered by HACP.

Unit Price:

Material and installation costs vary from \$2.00 to \$8.50/m² (\$1.70 to \$7.20/yd²).

Appearance:

Appearance is generally dark brown/dark gray/black depending on the stabilization additives used.

Advantages:

Cost-effective; In situ process; Reuses existing asphalt concrete and base materials; Removes existing HACP distresses.

Limitations:

Not used as a roadway surfacing, except as a temporary surfacing; Specialized equipment required; Existing aggregate base must be of sufficient thickness.

Product Description: Full depth reclamation (FDR) is a rehabilitation technique in which the full thickness of the asphalt pavement and predetermined portion of the underlying materials (base, and sometimes, subbase) are uniformly pulverized and blended to provide an upgraded, homogeneous base material. The blended base material can be compacted as is, or can be stabilized by the addition of emulsified asphalt, cementitious stabilizers, or foamed asphalt.



FDR with cementitious stabilization additive.

Photo Source: FHWA-CFLHD

Traffic Range:

No limitations on traffic volumes when used for stabilized base applications.

Life Expectancy:

7 to 10 years when covered by thin surface treatment. 15 to 20 years or longer when covered by HACP.

Unit Price:

Material & Installation: \$4.00 to \$7.00/m² (\$3.30 to \$5.90/yd²) for a 150 to 200 mm (6 to 8 in.) mixing depth.

Appearance:

Appearance is similar to a stabilized aggregate base material, with the appearance influenced by the presence of asphalt-coated particles and the original aggregate base material.

Advantages:

In situ process; Reuses existing asphalt concrete and base materials.

Limitations:

With excessive dosages of cementitious additive, layer may become brittle and incompatible with flexible surfacing.

Product Description: Full depth reclamation (FDR) is a rehabilitation technique in which the full thickness of the asphalt pavement and predetermined portion of the underlying materials (base, and sometimes, subbase) are uniformly pulverized and blended to provide an upgraded, homogeneous base material. A cementitious additive is used to stabilize the reclaimed material.



Spreading of cement prior to reclamation process.

Photo Source: FHWA-CFLHD



FDR reclamation process.

Photo Source: Slurry Pavers Inc.



Compacted FDR-emulsified asphalt material.

Photo Source: EJ Breneman LP

Traffic Range:

No limitations on traffic volumes for stabilized base applications.

Life Expectancy:

7 to 10 years when covered by thin surface treatment. 15 to 20 years or longer when covered by HACP.

Unit Price:

Material & Installation: \$5.00 to \$8.00/m² (\$4.20 to \$6.70/yd²) for 150 to 200 mm (6 to 8 in.) mixing depth.

Appearance:

Appearance is similar to a dark aggregate base material, with the asphalt coated particles visible on close examination. Surface texture is coarse.

Advantages:

In situ process; Reuses existing asphalt concrete and base materials.

Limitations:

Difficult to achieve a smooth finish.

Product Description: Full depth reclamation (FDR) is a rehabilitation technique in which the full thickness of the asphalt pavement and predetermined portion of the underlying materials (base, and sometimes, subbase) are uniformly pulverized and blended to provide an upgraded, homogeneous base material. An emulsified asphalt is used to stabilize the reclaimed material.



FDR-emulsified asphalt construction.

Photo Source: EJ Breneman LP



Compaction of FDR-emulsified asphalt material.

Photo Source: FHWA-CFLHD