Cement Slurry for Full Depth Reclamation

Stabilizing Local Roads with Cement Slurry

Full Depth Reclamation (FDR) using cement slurry is an innovative technique to assist PennDOT, local governments, and FDR contractors by providing a widely available and **dust-free method** for stabilizing pavements. Full-Depth Reclamation (FDR) of asphalt pavement is a rehabilitation method that involves the in-place recycling of an existing asphalt pavement and its underlying layer(s) into a new base layer.

What are the benefits?

- **Cost-effective** by using existing pavement
- **Increased structural capacity** by providing a stronger & more consistent base
- **Increased durability** (compared to granular base materials)
- **Shortened construction schedule** and improved staging
- **Reduced carbon footprint** by using in-place materials and minimizing waste

How does it work?

Introduced by the Pennsylvania State Transportation Innovation Council's (STIC) Construction and Materials Technical Advisory Group, this innovation allows cement slurry to be applied in liquid form to the ground during FDR projects to provide base stability.

The cement slurry is supplied to FDR projects through a network of PennDOT-approved concrete plants and delivered in ready-mixed concrete trucks. Cement slurry can be used to replace or augment the practice of spreading dry cement on the roadway base. This process **requires less equipment**, **expedites the FDR process**, and **provides environmental benefits** by reducing the amount of dust created during application.

The addition of cement slurry into the existing FDR specification is designed to improve and expand the use of FDR, which has been proven to be a cost-effective, long-term improvement for Pennsylvania roadways. One advantage to the use of cement slurry rather than dry cement is the elimination of the fugitive dust that may be associated with the latter. This benefit is particularly useful for those projects that might be located in urban or closed environments.

How do I learn more?

Visit www.penndot.gov/stic or email penndotstic@pa.gov.

Step 1:

Grind the Existing Pavement

Step 2:

Apply Cement Slurry to Prepared Road Base

Step 3:

Grind the Slurry into the Prepared Road Base

Step 4:

Once Smooth, Apply Chip and Seal Coat