

**COURSE NUMBER**

FHWA-NHI-134207D

**COURSE TITLE****Proper Construction Techniques for Dowel Bar Retrofit (DBR) and Cross-Stitching**

This course provides how-to instruction that covers the scope of tasks and considerations involved in performing dowel bar retrofit and cross-stitching operations.

DBR is the installation of dowel bars at existing transverse joints or cracks in order to effectively transfer wheel loads across slabs and reduce deflections. Dowel bars are retrofitted into the joints of existing concrete pavements, which either do not have load transfer devices, or in which the existing devices are no longer functional.

Cross-stitching is a preservation method designed for longitudinal joints or cracks that are in relatively good condition, but that need to be tied stronger together.

This course contains short, focused lessons that are task-based, and contain detailed visual aids and videos, reinforcing content so that it can be directly applied to work in the field.

OUTCOMES

Upon completion of the course, participants will be able to:

- Explain what dowel bar retrofitting and cross-stitching are, and why they are used
- Define load transfer
- Describe the steps you should take to prepare for a project involving DBR or cross-stitching
- Explain the basic components of DBR and cross-stitching projects
- Describe how to determine the size of the components for both DBR and cross-stitching
- Determine the proper locations to use DBR and cross-stitching for different pavement distresses
- Identify the materials used in DBR and cross-stitching operations
- List the important factors in selecting materials for DBR and cross-stitching
- Explain how slots are created and prepared for a DBR project
- Describe how dowel bars should be placed in the slot
- Explain how the backfill material is placed and finished
- Explain how to drill and clean holes for cross-stitching
- Describe the process for installing tie bars
- Explain the procedures for finishing the cross-stitching project
- Describe aspects of DBR and cross-stitching projects that are tested or inspected for quality or acceptance
- List important quality considerations for DBR and cross-stitching projects

TARGET AUDIENCE

This course provides support and instruction for individuals involved in construction projects using concrete pavement preservation techniques. This training is ideal for construction foremen, workers, technicians, agency inspectors, construction managers, and engineers.

TRAINING LEVEL: Basic

FEE: 2021: \$25 Per Person; 2022: N/A

LENGTH: 2 HOURS (CEU: 0 UNITS)

CLASS SIZE: MINIMUM: 0; MAXIMUM: 0

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