Course Number
FHWA-NHI-134207C

Course Title
Proper Diamond Grinding Techniques for Pavement Preservation

This course provides how-to instruction covering the scope of tasks and considerations involved in performing diamond grinding, diamond grooving, and next generation concrete surfacing (NGCS) operations.

Diamond grinding and grooving are surface restoration procedures used to correct concrete pavement surface distresses or deficiencies. They are often used in conjunction with other pavement preservation techniques (e.g., dowel bar retrofit, partial-depth repairs, full-depth repairs) as part of a comprehensive pavement preservation program. Each technique addresses a specific pavement shortcoming. In some situations, it may be justified to use diamond grinding or diamond grooving as the sole preservation technique. However, this depends on the conditions and characteristics of the specific project.

You will benefit from short, focused, and task-based lessons and visual aids that reinforce content by showing its relevance to work in the field.

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

• Explain what diamond grinding is, and why it is used
• Explain how diamond grinding equipment works
• Describe the steps to take to prepare for diamond grinding on a project
• List the components of the cutting head
• Describe how blade selection impacts grinding success
• Explain basic procedures for safely operating diamond grinding equipment
• Determine when specialized equipment may be necessary
• Explain how to measure head wear
• Define slurry
• Describe how slurry is picked up and disposed of during diamond grinding operations
• Name the diamond grinding machine's systems and their components
• Identify the system to which each part of the diamond grinding machine belongs
• Describe the function of each part or system on a diamond grinding machine
• Describe how diamond grinding is used to affect road smoothness, noise, and friction
• Explain what Next Generation Concrete Surfacing (NGCS) is, and when it is used
• List considerations for grinding on city streets
• Identify quality issues that can occur during diamond grinding
• Explain how diamond grinding quality issues can be prevented or addressed
• Identify issues that cannot be controlled by the contractor and require owner consideration and input
• Describe the equipment used in diamond grooving operations
• Explain how the diamond grooving texture is achieved

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: 2020: $0 Per Person; 2021: N/A

LENGTH: 2 HOURS (CEU: 0 UNITS)

CLASS SIZE: MINIMUM: 0; MAXIMUM: 0

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