

IGGA Guide Specification: Longitudinal Grooving For Bridge Decks

Introduction

This standard developed, by the International Grooving and Grinding Association (IGGA), specifies the procedures for longitudinal grooving for bridge decks. The user of this standard shall be responsible to ensure that all local safety, health and environmental standards are made a part of the specifications.

The user of this standard accepts ALL responsibility for decisions made as a result of its use. The International Grooving and Grinding Association, its Officers, Board of Directors and staff are absolved of any responsibility for any decisions made as a result of its use. Use of this standard implies acceptance of the terms of use.

Guide Specification: Longitudinal Grooving For Bridge Decks

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SCOPE

This standard specifies the procedures for continuous diamond grooving of Portland cement concrete bridge decks and approach slabs. Work will be completed in accordance with these specifications and at the locations indicated in the plans and as directed by the engineer. The user of this standard shall be responsible to ensure that all local safety, health and environmental standards are made a part of the project specifications.

EQUIPMENT

Longitudinal grooving shall be performed using multiple diamond blades mounted on a self-propelled machine designed for diamond grooving concrete pavement and bridge decks. The grooving equipment shall have a depth control device enabling adjustment of the cutting head height to maintain the specified groove depth. The grooving equipment will also have the capability to maintain alignment to the center of the roadway. The equipment will be capable of installing grooves to the dimensions and spacing contained herein.

The equipment shall have a positive means of vacuuming the grooving residue from the surface, leaving the surface in a clean, near-dry condition. See IGGA Best Management Practices for Slurry Disposal.

The equipment shall be maintained to ensure it is in proper working order prior to commencement of work.

CONSTRUCTION

Longitudinal grooving shall be constructed parallel to the centerline of the pavement. Grooved areas should begin and end with lines normal to the bridge centerline. Longitudinal grooving should extend full width across the traffic lanes and terminate at the pavement shoulder stripes with the exception that grooves should not be cut closer than 3 inches nor more than 6 inches to joints parallel to the grooves. Grooves shall be terminated no more than 6 inches from any device imbedded in the deck, such as metal inserts, access plates, expansion joints, etc. In tight curves or locations where it is expected that the shoulder will be commonly used for traffic, grooving can extend across the shoulder to within 18 inches of the barrier wall.

Longitudinal grooving shall consist of grooves 1/8 to 3/16 inch wide, constructed on 3/4 inch (\pm 1/16 inch) center to center spacing. The groove depth should extend between 1/8 and 1/4 inches. In areas where consistent texture depth is not obtainable, the surface should be diamond ground prior to the grooving operation, or the area should be exempted from meeting the groove depth requirements.

During the grooving operation, if a single grooving blade on any individual grooving machine becomes incapable of cutting a groove, the machine will be permitted to continue for the remainder of the work shift. The contractor will not be required to cut the omitted

groove location. Should two or more blades become incapable of cutting the grooves to specification; the contractor will immediately cease operation with the affected equipment and repair it to a fully working condition.

METHOD OF MEASUREMENT

Pavement grooving will be measured in square yards of pavement surface grooved and accepted. The quantity will be determined by measuring the square yards of deck surface area from the faces of parapets, sidewalks, or curb lines. No deductions will be made for drainage items, joints, or lane lines.

BASIS OF PAYMENT

Grooving will be paid for at the contract price per square yard or square foot. Payment shall be full compensation for all labor, equipment, material and incidentals to complete this work, including hauling and disposal of grooving residue.