

# **IGGA Guide Specification: Transverse Grooving For Bridge Decks**

## **Introduction**

This standard developed, by the International Grooving and Grinding Association (IGGA), specifies the procedures for transverse 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: Transverse Grooving For Bridge Decks**

**Publication Date: 9-30-14**

### **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**

Transverse 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 specified 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**

Transverse grooved areas shall begin and end with lines normal to the roadway centerline and installed in accordance with attachment 1. As indicated in attachment 1, grooving may be stair stepped based on the width of the head, but in no case shall an ungrooved area extend further than 30 inches from a joint face.

Transverse 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.

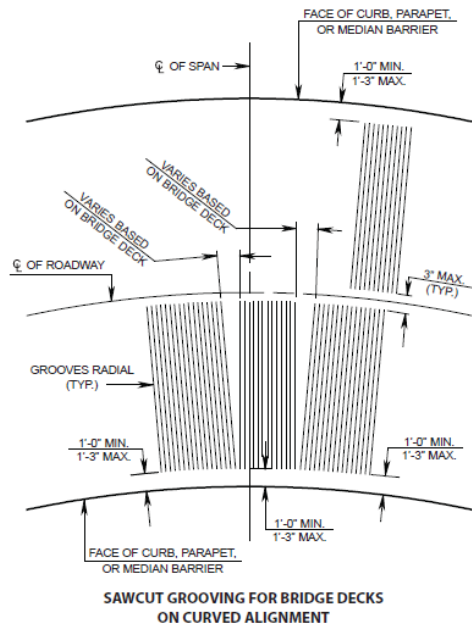
**METHOD OF MEASUREMENT**

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.

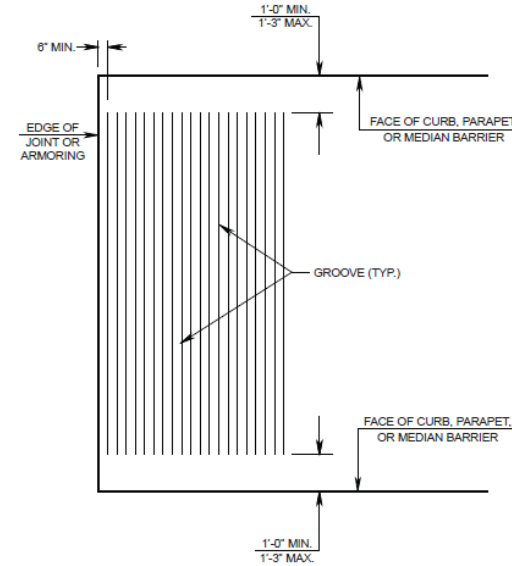
**BASIS OF PAYMENT**

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.

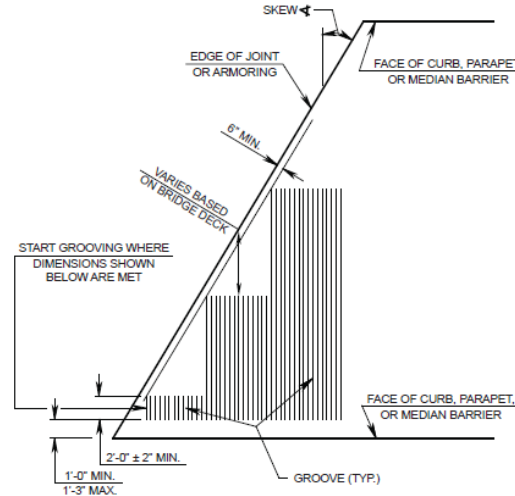
# Attachment 1



SAWCUT GROOVING FOR BRIDGE DECKS ON CURVED ALIGNMENT



SAWCUT GROOVING FOR BRIDGE DECKS



SAWCUT GROOVING FOR SKEWED BRIDGE DECKS

**NOTES:**  
SAWCUT GROOVES SHALL BE RECTANGULAR IN CROSS SECTION.



## TRANSVERSE GROOVING OF BRIDGE DECK

SHEET 1 OF 1 SHEETS

07-07-14

ADAPTED BY THE INTERNATIONAL GROOVING & GRINDING ASSOCIATION (IGGA) FROM NEW JERSEY DEPARTMENT OF TRANSPORTATION (NJDOT) STANDARD PLAN BCD-507-3, BRIDGE CONSTRUCTION DETAILS, 12-17-07; PERMISSION TO USE AND MODIFY DRAWING PROVIDED COURTESY OF NJDOT.