I. GENERAL
The final surface texture on bridge deck slabs and overlays is to be obtained by longitudinal sawcut grooving. Grooving shall not begin until the proper curing period has elapsed.

Grooving is done before the penetrating sealer is applied. It should be noted that penetrating sealers are not required on Polyester Polymer Concrete (PPC) overlays, nor Ultra-High Performance Concrete (UHPC) overlays.

Establishing containment to protect the under feature is an important procedure to be included when longitudinal sawcut grooving bridge deck slabs and overlays. Longitudinal grooving involves wet cutting concrete and creates a lot of slurry. Slurry shall be channeled, contained, and otherwise handled in a similar manner to concrete washout material.

1. Procedure
The grooving patterns shall be established as follows:

   a. Lay out a line 4 inches from, and parallel to the edges of all joint assemblies, curb lines (or faces of rail), and drainage structures.
   b. Make the first full length pass which can be made near (minimum 4 inches, maximum 15 inches) one side of the bridge.
   c. Near the joints, fill in the skew areas with a single blade saw to conform with the 15” maximum pass (see Exhibit 558-A).
   d. Make subsequent full length passes from the first full length pass.
   e. Grooving shall terminate no closer than 4 inches, and no farther than 15 inches, from joints or drainage structures, unless otherwise indicated on the contract plans.

2. Grooving in Sections/Stages
When grooving a deck in sections, grooves will not have to be lined up from one part to the next; i.e., adjacent spans or in the skew areas. Grooving shall never be overlapped for any reason. Grooves in multiple stages, shall adhere to the same tolerances as grooves made with multiple passes in the same stage, i.e., ¾ inch ± 10% (see Exhibit 558-B).

3. Curved Decks
The grooving passes shall be made concentric with the TGL (see Exhibit 558-B).

4. Overlays
When decks are overlaid in a "lane-at-a-time" configuration, traffic will be allowed to travel on a completed turf-dragged surface prior to sawcutting.

5. Inspection
A constant check shall be maintained on the geometry of the grooves. The width and spacing of the grooves are important to ensure that the grooves perform their intended function. The depth of the groove is also necessary for the functional performance of the grooves and, in addition, it determines the usable life of the grooved surface.

If the Contractor is not obtaining proper groove geometry as required by the specifications, the operation shall be stopped and the equipment adjusted to obtain proper groove geometry; i.e., adjust blade spacing/depth and/or replace blades. Occasional areas with a depth shallower than specified shall be allowed if they result solely from unevenness of the deck surface and constitute no more than 10% of any single pass.
SECTION 558 – LONGITUDINAL SAWCUT GROOVING OF STRUCTURAL SLAB SURFACE

EXHIBIT 558-A
LONGITUDINAL SAWCUT GROOVING PLAN
SECTION 558 – LONGITUDINAL SAWCUT GROOVING OF STRUCTURAL SLAB SURFACE

EXHIBIT 558-B
LONGITUDINAL SAWCUT GROOVING PLAN