

722-B-317 LONGITUDINAL GROOVING FOR THE RCBA, CONCRETE FLOOR SLABS, AND  
CONCRETE BRIDGE DECK OVERLAYS SURFACES

(Adopted 01-20-22)

The Standard Specifications are revised as follows:

SECTION 609, BEGIN LINE 67, DELETE AND INSERT AS FOLLOWS:

**609.09 Finishing**

The RCBA shall be finished with equipment in accordance with 508.04(c)3 and 508.04(c)4. The operations shall be controlled so that an excess of mortar and water is not worked to the top. Long handled floats may be used to smooth and fill in open textured areas. The edges of formed RCBA shall be tooled or chamfered.

The finished RCBA surface shall be textured with a double thickness burlap drag or a minimum 4 ft wide turf drag. ~~Immediately after the finishing operation is complete and before the surface film has formed, the surface of the RCBA shall be textured by transverse grooving in accordance with 504.03. The grooves may be formed by mechanized equipment using a vibrating beam roller, a series of discs or other approved device. Manual tools such as fluted floats, spring steel tined rakes, or finned floats with a single row of fins may be used. The grooves shall be relatively uniform and smooth and shall be formed without tearing the surface or bringing coarse aggregate to the top. Longitudinal grooving shall be in accordance with 722.11 and shall not commence until the smoothness has been measured in accordance with 609.11.~~

~~All areas of hardened RCBA which do not conform to the requirements due to either a deficiency in the grooving or a rough open textured surface shall be corrected. Corrections shall be made by cutting transverse grooves in the hardened surface with an approved cutting machine and retexturing to a satisfactory finish as directed.~~

SECTION 609, AFTER LINE 138, INSERT AS FOLLOWS:

*Longitudinal grooving will be measured in accordance with 722.15.*

SECTION 609, AFTER LINE 149, INSERT AS FOLLOWS:

*Longitudinal grooving will be paid for in accordance with 722.16.*

SECTION 704, BEGIN LINE 129, INSERT AS FOLLOWS:

As soon as the water begins to leave, the surface shall be given a final check with the lightweight straightedge. The required cross section shall be preserved. The final surface shall be free from porous spots caused by the disturbance of coarse aggregate particles during the final checking and brooming. ~~After final checking, the surface shall be tined finished in accordance with 504.03.~~ If a new bridge deck is to be overlaid with latex modified concrete, the surface of such deck shall be heavily broom textured to provide maximum bonding of the overlay material.

SECTION 704, AFTER LINE 145, INSERT AS FOLLOWS:

*After final smoothness checking, the surface shall be longitudinally grooved in accordance with 722.11.*

SECTION 704, AFTER LINE 164, INSERT AS FOLLOWS:

*Longitudinal grooving will be measured in accordance with 722.15.*

SECTION 704, AFTER LINE 169, INSERT AS FOLLOWS:

*Longitudinal grooving will be paid for in accordance with 722.16.*

SECTION 722, BEGIN LINE 552, DELETE AND INSERT AS FOLLOWS:

**722.11 Texturing**

The overlay surface shall be textured with a double thickness burlap drag or a minimum 4 ft wide turf drag immediately following the placement of the overlay material. Areas where the texture is disturbed by other finishing operations shall be immediately restored to a burlap drag finish.

Grooving or tining in the plastic concrete of the concrete overlay will not be allowed. ~~Transverse~~ *Longitudinal* grooving, ~~when specified,~~ shall not commence until the curing requirements have been met in accordance with 722.12. Grooves shall be cut into the hardened concrete surfaces ~~perpendicular~~ *parallel* to the centerline using a mechanical cutting device. For curved bridges, grooves shall be cut ~~transverse to~~ *along* the curve chord within the spans. Grooving shall be done before traffic is allowed on the surface except as follows.

The Contractor shall have the option of cutting the ~~transverse~~ *longitudinal* grooves at the end of each phase of construction or waiting until all phases have been completed. If the Contractor elects to delay the grooving process until completion of all phases, the concrete overlay surface for any phase opened to traffic shall receive an interim coarse broom finish during placement.

The completion of the grooving process shall be within 30 days of completion of the last phase of construction. Any additional maintenance of traffic operations required for the grooving process shall be included in the cost of Maintaining Traffic. The interim broom finish shall not be allowed as a surface texture when opened to traffic over a winter season. If the coarse broom texture is present and the Contractor is not in a position to finish all phases of the project, ~~transverse~~ *longitudinal* grooving shall be placed into the hardened concrete in order to establish an acceptable driving surface texture for the winter season.

Each groove shall be 1/8 in.  $\pm$ 1/64 in. in width, 3/16 in.  $\pm$ 1/16 in. in depth. The grooves shall be uniformly spaced at 3/4 in. intervals measured from the center of groove to center of groove ~~or randomly spaced at intervals between 5/8 in. to 1 1/4 in. from center of groove to center of groove with an average spacing of 7/8 in.~~ Grooving shall not be within the area approximately 2 ft adjacent to the curbs *or railings*. ~~The grooving shall terminate approximately 6 in. from any expansion joints with steel nosing~~ *The grooving shall not be cut closer than 3 in. nor further than 6 in. from any construction joint running parallel to the grooving. The grooving shall not be cut within 6 in. of deck drains, curbs, or expansion joints. If the bridge has a variable width traffic lane, the grooving shall remain parallel to the centerline of the main roadway. Any staggering of the groove terminations to accommodate the variable width shall be within the shoulders.* Stair stepped ends in grooving will be allowed for skewed bridge decks. When a new reinforced concrete approach slab is placed adjacent to the overlay, the grooving shall extend across the reinforced concrete approach slab. Grooving shall terminate approximately 6 in. from the interface with the roadway pavement.

*The grooving machine shall contain diamond blades mounted on a multi-blade arbor on a self-propelled machine built for grooving hardened concrete surfaces. The grooving machine shall have a depth control device that detects variations in the deck surface and adjusts the cutting head height to maintain a specified depth of the grooves. The grooving machine shall have a guide device to control multi-pass alignment.*

SECTION 722, BEGIN LINE 863, DELETE AND INSERT AS FOLLOWS:

~~Transverse~~*Longitudinal* grooving will be measured by the square yard. No deduction in measurement will be made for areas where grooving is terminated or not required.

Epoxy resin adhesive and bond coat will not be measured for payment. Blasting, cleaning, finishing, texturing other than the ~~transverse~~*longitudinal* grooving, and curing will not be measured for payment.

SECTION 722, BEGIN LINE 913, DELETE AND INSERT AS FOLLOWS:

~~Transverse~~*Longitudinal* grooving will be paid for at the contract unit price per square yard.

SECTION 722, BEGIN LINE 942, DELETE AND INSERT AS FOLLOWS:

~~Transverse~~*Longitudinal* Grooving .....SYS

SECTION 722, BEGIN LINE 1009, DELETE AND INSERT AS FOLLOWS:

The cost of removing and disposing of the slurry created during the ~~transverse~~*longitudinal* grooving shall be included in the cost of ~~transverse~~*longitudinal* grooving.