DRAFT ITEM P-621 SAW-CUT GROOVES

DESCRIPTION

621-1.1 This item consists of providing a skid-resistant surface that prevents hydroplaning during wet weather in accordance with these specifications and at the locations shown on the plans, or as directed by the Engineer.

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SKID-RESISTANT SURFACES. The method for determining the need for saw-cut grooves can be found in the most recent revision to AC 150/5320-12.

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CONSTRUCTION METHODS

621-2.1 Transverse grooves saw-cut in the pavement must form a 1/4 inch wide by 1/4 inch deep by 1-1/2 inch center-to-center configuration. The grooves must be continuous for the entire runway length. They must be saw-cut transversely in the runway pavement to not less than **[10 feet]** from the runway pavement edge to allow adequate space for equipment operation.

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The 10-foot distance from the pavement edge allows adequate space for equipment operation. Grooving to within 1 or 2 feet from the pavement edge may be possible when adequate paved shoulder area is available.

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The saw-cut grooves must meet the following tolerances. The tolerances apply to each day's production and to each piece of grooving equipment used for production. The Contractor is responsible for all controls and process adjustments necessary to meet these tolerances.

Alignment tolerance.
Plus or minus 1-1/2 inches in alignment for 75 feet.

Groove tolerance.
Depth. The standard depth is 1/4 inch. At least 95 percent must be at least 3/16 inch, at least 60 percent must be at least 1/4 inch, and not more than 5 percent may exceed 5/16 inch.

Width. The standard width is 1/4 inch. At least 95 percent must be at least 3/16 inch, at least 60 percent must be at least 1/4 inch, and not more than 5 percent may exceed 5/16 inch.

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Center-to-center spacing.
The standard spacing is 1-1/2 inches
Minimum spacing is 1-3/8 inches
Maximum spacing is 1-1/2 inches.

Saw-cut grooves must not be closer than 3 inches or more than 9 inches from transverse paving joints or working cracks. Grooves must not be closer than 6 inches and no more than 18 inches from in-pavement light fixtures or similar items. Grooves may be continued through longitudinal joints, except where compression seals have been installed. Where compression seals have been installed, grooves must not be closer than 3 inches or more than 5 inches from the longitudinal joints.

621-2.2 CLEANUP. Cleanup of waste material must be continuous during the grooving operation. During and after installation of saw-cut grooves, the Contractor must remove from the site all debris, waste, and by-products generated by the operations to the satisfaction of the Engineer. Waste material must be disposed of in an approved manner. Waste material must not be allowed to enter the airport storm or sanitary sewer system. The Contractor

must dispose of these wastes in strict compliance with all applicable state, local, and Federal environmental statutes and regulations.

[621-2.3 PRODUCTION RATE. The Contractor must furnish sufficient equipment to groove **[___square yards]** of pavement **[per hour][per day].]**

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The Engineer may wish to specify a production rate depending on schedule. Delete paragraph if not used.

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ACCEPTANCE

621-3.1 ACCEPTANCE TESTING. Grooves will be accepted based on results of zone testing. All acceptance testing necessary to determine conformance with the groove tolerances specified will be performed by the Engineer.

Instruments for measuring groove width and depth must have a range of at least 0.5 inches and a resolution of at least 0.005 inches.

Instruments for measuring center-to-center spacing must have a range of at least 3 inches and a resolution of at least 0.02 inches.

The Engineer will measure grooves in five zones across the pavement width. Measurements in all zones will be made for each cutting head on each piece of grooving equipment used for each day's production at least THREE times during each day's production.

The five zones are as follows:

Zone 1	Centerline to 5 feet left or right of the centerline.
Zone 2	5 feet to 25 feet left of the centerline.
Zone 3	5 feet 25 feet right of the centerline.
Zone 4	25 feet to edge of grooving left of the centerline.
Zone 5	25 feet to edge of grooving right of the centerline.

At a random location within each zone, five consecutive grooves sawed by each cutting head on each piece of grooving equipment will be measured for width, depth, and spacing. The five consecutive measurements must be located about the middle blade of each cutting head plus or minus four inches. Measurements will be made along a line perpendicular to the grooves PRODUCTION MUST BE ADJUSTED WHEN MORE THAN ONE GROOVE ON A CUTTING HEAD FAILS TO MEET THE STANDARD DEPTH, WIDTH, OR SPACING IN MORE THAN ONE ZONE.

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Blade wear and surface variability may require more testing than the minimum of three per day per equipment. It is expected that the Contractor will routinely spot check for compliance each time the equipment aligns for a grooving pass.

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MEASUREMENT AND PAYMENT

621-4.1 PAYMENT FOR SAW-CUT GROOVING. Payment for saw-cut grooving will be made at the contract unit price per square yard for saw-cut grooving.