

Revision of Section 202 Remove Concrete Pavement (Planing) (Special)

Revise Section 202 of the Standard Specifications for this project to include the following:

Description

This work consists of saw cutting and diamond grinding to remove the top surface of the bridge deck and approach slabs to provide a smooth (0.2 percent maximum grade break) transition between the existing approach pavement and 3/4-inch Polyester Concrete overlay.

The work also consists of removing existing pourable joint material before grinding.

Construction Requirements

Diamond Grinding machines shall be required; do not use general milling machines to remove existing bridge deck and approach slab concrete.

The equipment for diamond grinding and removing the pavement surface shall be capable of removing a thickness of concrete material to 3/4 inch, or as specified on the plans, and providing a tapered transition from the maximum thickness to 0 inches. The grinding length shall be a minimum of 30 feet longitudinally, or as specified in the plans, and is based on a maximum allowable grade break of 0.2 percent for a 3/4-inch depth. The equipment shall also be capable of grinding to the full required depth flush with the face of curb or barrier.

Grind the surface to the depth, width, grade, and cross-slope shown on the plans or as directed by the Engineer. The grinding process shall produce a surface that is true to grade and uniform in appearance. After grinding, the concrete surface shall have no depressions or misalignment of slope exceeding 1/8 inch in 12 feet when measured with a 12-foot straightedge.; re-grind all areas of deviation at no additional cost.

Do not allow the slurry and residue resulting from the grinding operation to flow across lanes occupied by the traffic and remove continuously during the grinding operation, leaving the pavement clean. The Contractor shall dispose of the grinding residue off site at no additional cost.

The removal edge parallel to the existing expansion joints and end dams shall be saw cut to a depth of 3/4 inches, or as shown in the plans, to provide a smooth, clean and uniform removal line. Complete sawing of concrete to a true line, with a vertical face, unless otherwise specified.

After grinding is complete, the Contractor shall sound the ground area for delamination per ASTM D4580, Procedure B Chain Drag. The Contractor shall mark the areas of deteriorated concrete to be removed as directed by the Engineer. Remove unsound concrete per Project

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**Revision of Section 202
Remove Concrete Pavement (Planing) (Special)**

Special Provision, Section 202 - Removal of Portions of Present Structure (Class 1, 2, and 3).

The Contractor shall take all steps necessary to prevent saw cutting, diamond grinding, or otherwise damaging concrete, reinforcing steel, drains, inlets, or other assets not designated for removal. Any damage caused by the Contractor to assets not intended for repair shall be repaired in kind by the Contractor at the Contractor's expense using means and methods approved by the Engineer with no allowance for contract time extension.

If the plans show grinding across the joint between the back face of abutment and approach slab, remove the pourable joint material before grinding.

If existing concrete header end dams are to remain at the existing elevation at expansion joints, the diamond ground approach shall have a temporary HMA taper. The taper length shall be as defined in the plans or as accepted by the Engineer. Place the final roadway surface within 28 calendar days of grinding.

Additional grinding may be required at bridge deck drains or inlets in approach slabs. As shown on the plans, this additional grinding may be inside or outside of grinding taper area limits.

Method of Measurement

Remove Concrete Pavement (Planing) (Special) will be measured by the quantity completed to the required depth and accepted.

Any concrete removed beyond the limits and depths shown on the plans will not be measured and shall be replaced with Polyester Concrete material at the Contractor's expense.

Basis of Payment

The accepted quantities of Remove Concrete Pavement (Planing) (Special) will be paid for at the contract unit price.

Payment will be made under:

Pay Item	Pay Unit
Remove Concrete Pavement (Planing) (Special)	Square Yard

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Payment for Remove Concrete Pavement (Planing) (Special) will be total compensation for all labor, equipment, materials, tools, and incidentals required to complete the work, including debris handling and disposal of materials.

Removal of existing pourable joints and saw cutting along the existing expansion joints and end dams will not be paid for separately but shall be included in the work.

Removal of unsound concrete material removed beyond the designated grinding depths will be paid for per Project Special Provision 202 - Removal of Portions of Present Structure (Class 1, 2, and 3).

Additional grinding at bridge deck drains or inlets in approach slabs will not be paid for separately but shall be included in the work.

Instructions to Designers (delete instructions and symbols from final draft):

Use this project special provision when concrete grinding is necessary, most often from the end of approach slab and onto the bridge, to provide a smooth transition (0.2% maximum grade break) for a thin bonded polyester concrete overlay.

The thin bonded polyester overlay thickness is typically 3/4", which requires the grinding length to be 30 feet. The grinding is typically 3/4" deep at the end of the approach slab, tapers to 0 inches over the 30 feet, and typically ends on the bridge. If a thicker overlay is planned, the taper length should be adjusted accordingly.

Permanent Changes to Project Dated Special Provisions

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<u>Date</u>	<u>Author</u>	<u>Description of Change</u>
1/14/19	BPM Cons.	Initial Website Issue
11.1.2021	M. Kayen	Revisions to grammar, format as per CDOT Style Guide (4.22.21)
04.06.2023	M. Kayen	Revisions to make spec online accessibility-compliant. 5.22.23 Additional accessibility work.