

## Section 42 Groove and Grind Pavement

### 4-4201 General

Groove and grind strategies for rehabilitation of existing rigid pavements is discussed in the *Rigid Pavement Preservation and Rehabilitation Guidelines* at the following web site:

<http://www.dot.ca.gov/hq/oppd/pavement/>

Grooving is usually performed on:

- existing pavements to improve drainage of water at the pavement surface, and
- on new and existing pavements to improve skid resistance.

Grinding is usually performed to improve the ride quality of new or existing pavements.

### 4-4202 Before Work Begins

Review the contract plans and specifications. Also, take the following steps:

- Discuss traffic handling with the contractor and review the contractor's plan for lane closures. For a discussion of traffic handling devices and lane closure procedures, see Section 4-12, "Construction Area Traffic Control Devices," and Section 2-2, "Traffic," of the *Construction Manual* (manual).
- Ensure the contractor's equipment meets specified requirements.
- Before the grooving or grinding operation, inspect and locate any existing detector loops on either new or existing pavement to prevent damage to the detector loops' sealant. If detector loops are not visible, consult with the district traffic unit.
- Check local noise ordinances and review specified noise requirements.
- In areas to be grooved and ground, verify that yellow stripe and pavement markings do not contain lead. For instructions regarding this issue, see Section 4-15, "Existing Highway Facilities," of this manual.
- Verify that the required water pollution control plan is approved and in place.
- The contract or materials information handout may identify locations within the right-of-way for final disposal of portland cement concrete grinding and grooving residue. The resident engineer must verify that a Regional Water Quality Control Board (RWQCB) permit or approvals is included in the materials information handout or resident engineer file. If a RWQCB permit or approval has not been included, contact your environmental-construction liaison for assistance in obtaining these documents. Refer to the contract special provisions to obtain information about off-site disposal facilities for portland cement concrete grooving and grinding residue.

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### 4-4202 Before Work Begins

- When the contract documents do not allow final disposal of grooving and grinding residue within the right-of-way; obtain from the contractor, the name and location of the disposal facility that will receive the portland cement concrete grooving and grinding residues, in accordance with Section 7-1.13, “Disposal of Materials Outside of the Highway Right of Way,” of the *Standard Specifications* and Section 7-103, “Protection of Environmental Resources,” of this manual.
  1. Verify that the disposal facility is permitted to accept portland cement concrete residue, by the California Environmental Protection Agency (Cal EPA). Verbal confirmation from the facility operator and documentation in the resident engineer’s daily report is sufficient verification of permit status of commercial disposal facilities on this list.
  2. When the contractor chooses to use a noncommercial off-site disposal facility, the contractor must provide a copy of the CalEPA permit for disposal of the liquid portland cement concrete liquid residue.
  3. When the contractor chooses a disposal site that is located outside of California, the contractor must provide a copy of the permit issued by the state agency having jurisdiction over the site to the resident engineer. The permit must be provided before disposal.

**4-4203 4-4203 During the Course of Work**

**During the Course of Work**

4-4203A The following applies to both grooving and grinding operations

- Observe the operation to ensure that equipment and noise levels comply with specifications.
- Ensure that the handling of residue and dust from the operation meets specifications.
- Ensure that the grooved or ground widths meet specifications.
- Ensure the portland cement concrete is picked up by means of a vacuum device and not allowed to flow across the pavement or enter the storm drain inlets.
- For projects that temporarily store portland cement concrete residue in washout facilities, make sure that the plastic liner seams are installed in accordance with manufacturer requirements. Regularly inspect plastic liners during installation and operations to ensure that they are free of holes, tears or other defects that will compromise the impermeability of the liner. Inspect washout facilities to ensure that adequate holding capacity and minimum freeboard are maintained.
- When the operation is complete, and off-site disposal is specified, obtain from the contractor final proof of delivery of the residue to the off-site disposal facility.

4-4203B When grooving is specified

- At the beginning of the work shift, check behind the grooving machine to ensure that all the blades are cutting grooves to the specified depth.
- Record the locations of omitted grooves. When specified, require the cutting of omitted grooves.

#### 4-4203C When grinding is specified

- As work progresses, check the ground pavements with the specified straightedge.
- Determine if any abnormally depressed areas must be excluded from testing with the profilograph and the 3.6 m straightedge. Measure these areas to ensure they do not exceed the specified percentage of the total ground area.
- In accordance with California Test 526, "Operation of California Profilograph and Evaluation of Profiles," measure ground portland cement concrete pavements for a profile index.
- Ensure ground areas on structures, approach slabs, and 15 m of approach pavement meet the smoothness and cover requirements in Section 51-1.17, "Finishing Bridge Decks," of the *Standard Specifications*.
- In accordance with California Test 342, "Surface Skid Resistance with the California Portable Skid Test," determine the coefficient of friction for surfaces that have been ground.

#### 4-4204 Measurement and Payment

Measure both grooving and grinding by the area grooved or ground. As the work progresses, make transverse measurements to ensure the grooved or ground areas meet the widths specified. You may compute lengths by measuring the distance to start and stop locations from known stations and by computing the length grooved or ground from the stationing. Include curve corrections in the calculations.

#### 4-4204 Measurement and Payment

