

Activity 101 Major Surface Repair

Description

Activity 101 involves machine patching, with asphalt concrete, of surface distortions, rutting, and surface irregularities in bituminous surfaces to restore smoothness, rideability, and drainage and to strengthen the pavement structure.

General Instructions

Also refer to discussion in the General Instructions section preceding Activity 100 in this section of this Guide.

Generally, perform major surface repairs before performing striping, pavement legend markings, or similar work.

Hot mix asphalt concrete is the preferred material for this work, but emulsified asphalt concrete may also be used, especially for lower volume roadways. Do not use cold patch asphalt concrete for this work.

Machine patches generally include only a portion of the roadway width, but may be applied to the full width of short sections of roadway, as appropriate.

If this work will cover manholes, valve boxes or covers, survey markers, traffic legends, or other items, mark the location of each item and plan for or arrange for the raising or replacement of the item.

If significant machine patching is needed, consider having the work performed by contract methods. Refer to discussion in the Purchase and Acquisition of Goods and Services section of this Guide. The District Manager may also request the Region Manager to include a project in ODOT's Statewide Transportation Improvement Program to overlay the section of roadway.

Before performing Activity 101, perform needed work under Activities 100, 102, 107, and possibly 110.

Before performing Activity 101 on a bridge or other structure, consult the District Manager and the ODOT Bridge Section to assure that the work will not add unacceptable load on the bridge or structure.

Activity 101 also includes the placement of temporary pavement markers or markings until permanent markers or markings can be applied.

Activity 101 may also be used to correct, normally temporarily, depressions in portland cement concrete pavement.

Controlling Erosion, Sedimentation, and Pollutants or Contaminants

Plan and implement methods to control erosion, sedimentation, and pollutants or contaminants, including those discussed in the Control of Erosion, Sedimentation, and Pollutants or Contaminants section of this Guide and the *ODOT Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices*.

As appropriate, implement and maintain devices and processes including those described in the *Field Manual for Erosion and Sediment Control*.

Also implement appropriate practices to control or contain waste material from the tack operation, from coating truck beds, from cleanup of tools or equipment, or other operations. Use only approved release agents in truck beds, on tires, and on tools. Do not use diesel for this purpose.

Temporary Protection and Direction of Traffic

Plan, implement, and maintain traffic control as addressed in the *Traffic Control on State Highways for Short Term Work Zones* handbook.

Equipment

Equipment may include:

- Trucks to haul asphalt concrete (use appropriate material to coat truck beds).
- Grader, pull box, or paver to spread asphalt concrete mixture.
- Device to haul, heat if needed, and apply tack.
- Roller.

Materials

Materials may include:

- Asphalt concrete mixture.
- Liquid asphalt cement for tack.
- Material to clean tools and equipment.
- Water for roller.
- Temporary pavement markers or other appropriate marking material.

Work Method

1. Locate and mark limits of area to receive treatment.
2. Implement appropriate traffic control.
3. Sweep loose, or otherwise remove inappropriate, material from the work area.
4. Appropriately mark or reference the location of manholes, valve boxes or covers, survey markers, traffic legends, or other items to allow them to be found and raised or replaced. Plan or arrange for needed work.
5. Remove temporary, unstable, or unacceptable surfacing as needed. Perform Activity 100 or 102 as needed.
6. Apply tack coat and allow to properly cure or break before placing asphalt concrete mixture.

7. Place the asphalt concrete mixture in lifts of 50 mm (2 inches) or less and compact properly with a minimum of 4 passes of the roller. Use other appropriate methods to properly compact areas where the roller cannot be used.
8. Properly feather and compact the new asphalt concrete mixture to provide:
 - A smooth riding surface
 - A smooth transition from the adjacent to the resurfaced areas
 - An adequate drainage of surface water.
9. Properly dispose of or remove waste material.
10. Place temporary pavement markers or pavement markings as appropriate.
11. Remove traffic control.
12. Properly clean tools and equipment to prevent environmental damage.
13. Dispose of waste material at an appropriate location.

Measurement of Accomplishment, Expenditure Account, and Charge Activity

Measurement is tons (megagrams) of asphalt concrete mixture placed. Expenditure account type is Highway EA. Designate a subjob of 800 if the work involves bicycle path facilities. Also record the milepoint locations of work performed, for use by the Pavement Management System.

- Charge TEAMS Activity 101 when using hot mix asphalt concrete mixture.
- Charge TEAMS Activity 501 when using other than hot mix asphalt concrete mixture.