

Activity 151 Guardrail and Barrier Maintenance

Description

Activity 151 involves maintaining, repairing, realigning, or replacing guardrail and barrier to preserve or restore the installation to its designed condition. It includes all elements and hardware needed to properly perform the work. It also involves maintaining, repairing, or replacing glare screen devices located on barrier.

General Instructions

Perform this activity to maintain guardrail and barrier at the level allowed by the performance budget and as described in the *Desired Conditions of Maintenance Features on State Highways*.

Refer to Activity 149 if the work resulted from a specific crash or incident and ODOT will not seek reimbursement from others.

Refer to Activity 160 or 162 when maintaining bridge rail that is not guardrail or concrete barrier.

Charge Activity 165 when maintaining guardrail or barrier that is only needed for operation of moveable bridges.

Refer to Activity 305 if the work resulted from a crash or incident and ODOT will seek reimbursement from others.

Refer to Activity 304 when upgrading an existing installation to a current design, when extending an installation, or when installing guardrail or barrier at a new location.

If existing guardrail or barrier has deteriorated or needs other maintenance or repair, the guardrail or barrier must be maintained or replaced unless either of the following occur:

- ODOT has reviewed the design of the roadway at that location and has concluded that guardrail or barrier is not needed at that location. A Professional Engineer must approve that review and conclusion.
- ODOT has reconstructed or reconfigured the roadway at that location such that guardrail or barrier is no longer needed.

Replace guardrail, barrier, and associated elements and hardware with similar design materials. The exception is that the old cable or obsolete wood guardrail designs are no longer acceptable and must be replaced with current design features.

When removing and replacing or restoring guardrail or barrier, either:

- Replace all removed elements by the end of each working day, or
- Install temporary guardrail or barrier to properly protect traffic until the installation is removed, replaced, or restored.

Replace or restore existing or needed delineators on guardrail posts or reflective markers on barrier.

Refer to the ODOT *Standard Drawings for Design and Construction* for installation details. Seek guidance and assistance from the District Manager and the ODOT Standards Engineer in the Roadway Section of the Technical Services Branch.

Because specialized equipment can install guardrail posts very efficiently, it may be appropriate to establish a contract for replacement of guardrail, including that needed under Activities 149 and 305. Refer to discussion in the Purchasing and Acquisition of Goods and Materials section of this Guide.

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*.

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

Select equipment suitable for the work and situation. It may include:

- A backhoe or other device to remove and replace guardrail posts and anchors.
- A boom truck, crane, large front end loader, or large backhoe to remove and replace concrete barrier.

Materials

Materials may include:

- Posts, rail or cable elements, anchor devices, and needed hardware for guardrail.
- Barrier elements and connectors for barrier.
- Glare screen elements, reflective markers, or delineators.

Work Method

1. Identify sections needing work and secure needed equipment and materials.
2. Implement appropriate traffic control.
3. Implement appropriate methods to control erosion and sedimentation if needed.
4. Perform work, including temporary guardrail or barrier as needed.
5. Remove traffic control.
6. Dispose of removed, waste, or excess material in an appropriate location. Recycle material as appropriate.

Measurement of Accomplishment, Expenditure Account, and Charge Activity

Measurement is feet (meters) maintained or repaired. Expenditure account type is Highway EA.

- Charge TEAMS Activity 151 for all work except work on glare screens.
- Charge TEAMS Activity 545 for work on glare screens located on barrier.