

BRIDGE DESIGN STANDARD PRACTICES

The following standard practices were established by the Bridge Design Standard Practices Committee.

1. Modification of Safety Walk Parapets

The Department has developed details to modify older style bridge parapets with safety walks to approximate a Jersey shape. While not precisely matching the formal Jersey shape, since the top part of the parapet retains a vertical face, this procedure achieves a much better performing shape than the safety walk at a cost much less than complete parapet replacement.

This modification should be included on resurfacing projects or rehabilitation projects which involve resurfacing of bridges on the National Highway System with existing safety walk type parapets where the curb extends more than 225 mm (9") from the face of the parapet.

Sample details for this modification are attached for the designer's use. This detail should be used wherever possible in lieu of complete parapet replacement.

2. Metal Bridge Rail Replacement

Existing metal bridge rails often require replacement on rehabilitation projects due to their deteriorated condition. The Department has developed a detail for replacement of these metal bridge rails with a concrete cap which should be used in lieu of replacement of the existing either in-kind or with a new aluminum rail.

On resurfacing or rehabilitation projects on limited access highways where existing metal bridge rail is deteriorated to a point where repairs to the rail are required, the rail shall be replaced with a concrete cap to bring the total height of parapet to 1075 mm (42") in lieu of repair of the railing or replacement in-kind. In cases where the existing rail is not deteriorated to a point precluding satisfactory performance for at least another 10 years, the rail should not be replaced. Additional maintenance, such as painting of rails determined to be in good enough condition to remain in place, shall not be performed.

Sample details of a concrete parapet cap retrofit are attached for the designer's information. This detail can be used in conjunction with details for safety walk modification.