



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
NASHVILLE, TENNESSEE 37243-0348**

INSTRUCTIONAL BULLETIN NO. 10-02

Safety Improvements on Resurfacing Projects

The following section is added to Section 1, Chapter 2 of the Design Guidelines. This guidance applies to resurfacing projects on State Routes.

1-200.15 SAFETY IMPROVEMENTS ON RESURFACING PROJECTS

In order to enhance safety on state routes, low cost safety improvements should be included on all state route resurfacing projects. Eligible safety improvements include the following: installation of skid-resistant surfaces in intersections or curves, installation and upgrade of guardrails and end terminals, improvements for pedestrian or bicycle safety, improvements for safety of the disabled, addition of ADA compliant handicap ramps, installation of centerline rumble stripes, improvement to pavement markings, sign replacement or upgrades, installation of safety headwalls, removal of roadside objects to improve clear zone, correcting superelevation rates, improvements (such as vegetation removal) to improve stopping site distance and/or intersection sight distance without purchasing ROW or relocating utilities, and widening shoulders without purchasing ROW or relocating utilities. The applicable use of the above various safety improvements will be guided by the attached "Resurfacing Safety Checklist" and will be completed by the team responsible for each resurfacing project. This checklist will be used as documentation for decisions regarding low cost safety improvements on resurfacing projects.

Installation of shoulder rumble stripes, shoulder rumble strips, and raised pavement markers are also considered low cost safety improvements. Guidance for the application of these measures is found in Section 4 of the Design Guidelines.

For federally funded state route resurfacing projects for pavement designs 2" thick or less and the ADT is greater than 2,000, the project shall provide at a minimum for a minimum 2' paved shoulder; compliance with current guidelines for placement of rumble stripes, rumble strips and raised pavement markers; and replacement of any end terminals not meeting NCHRP 350 requirements. For pavement designs 2" thick or less and an ADT less than 2,000, the project shall provide at a minimum for a minimum 2' paved shoulder and the replacement of any end terminals not meeting NCHRP 350 requirements.

Items for low cost safety improvements shall be funded separately from other resurfacing plan items in both federally funded and 100% state funded resurfacing projects. The Department currently intends to use federal funds for low cost safety improvements included in resurfacing projects. Therefore, it will be necessary to have an additional project number set up for payment of safety improvement items.

Designers will be responsible for obtaining the additional federal project number from the Programming Development and Scheduling Office and correctly identifying items by funding source in the resurfacing plans when safety improvements are identified to be included in a resurfacing project. Designers should advise the Programming Development and Scheduling Office the additional project number is needed for the inclusion of safety improvements in the resurfacing project.

Original signed by Jeff C. Jones
Jeff C. Jones, Civil Engineering Director
Design Division

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JCJ:MA:ma
Attachment

RESURFACING SAFETY REVIEW CHECKLIST

It is the intent of this checklist to identify “low cost safety improvements” that will provide improvements in the areas of lane departures/run-off-the-road crashes and pedestrian and bicycle safety on this route at a minimal cost. A review of the crash history data for this route will be necessary for completion of this checklist and should be attached to the final report. Special attention should be given to those areas identified in the crash history as “hot spots” where work should be accomplished to provide a significant improvement to safety.

County _____ Route _____

Description _____

Log Miles _____ ADT _____

1. Is shoulder width greater than or equal to 2' and AADT greater than 2,000? If yes, follow guidance regarding the placement of either rumble stripes or rumble strips found in 4-411.03, 4-411.04 and 4-716.15 of the TDOT – Roadway Design Guidelines

2. If AADT is greater than 2,000 and shoulders are not present or less than 2' wide, can minimum 2' shoulders be added without utility relocations or the purchase of ROW? If so, provide a minimum 2' shoulder.

3. Replace all guardrail and end terminals not meeting NCHRP 350 requirements.

4. Is signing adequate and visible, particularly in areas where curves exist? Does signing meet MUTCD requirements? Provide recommendations for upgrades and/or additional signing.

5. Would the use of centerline rumble strips or rumble stripes or raised pavement markers help in the delineation of curves or areas with a known crash history?

6. Could the condition in curves be improved by correcting superelevation rates or widening shoulders without purchasing ROW or relocating utilities? Would the construction of a specialized skid resistant surface improve conditions in curves or intersections that can not be addressed by other means? If so, please explain.

7. Are there roadside obstacles (trees, tree stumps more than 4" above the ground, utility poles, culverts, headwalls, mailboxes, etc.) that could be removed, relocated or delineated? Could the installation of safety headwalls improve the site condition? Are signs obscured by brush or trees that could be removed or tree stumps present that are more than 4" out of the ground?

8. Can improvements be made that would enhance pedestrian or bicycle safety (the addition of a bike lane, share the road signing, enhancement or upgrading crosswalks to TDOT standards)? Is the addition of approved handicap ramps needed to comply with ADA requirements?

9. Could improvements be made to ditches to assure proper drainage and/or to reshape ditches to mitigate substandard foreslope or backslope without the relocation of utilities or purchase of ROW?

10. Are there areas along the roadway where stopping sight distance is not adequate that can be improved by measures that would not require additional ROW acquisition or utility relocation? Are there intersections where intersection sight distance is not sufficient that can be improved by vegetation removal or other measures that do not require additional ROW or utility relocation?
