



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.  
GOVERNOR

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

E. NORRIS TOLSON  
SECRETARY

AUG 14 1998  
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MEMO TO: Guardrail Committee Members  
Jim Trogdon, PE  
Tracy Parrott, PE  
Garry Lee, PE  
Jay Bennett, PE  
Ron Davenport, PE  
Ed Lorbacher  
Brad Hibbs, PE  
Randy Pace

FROM: Debbie Barbour, PE *Debbie Barbour*  
Roadway Design Unit

DATE: August 14, 1998

SUBJECT: Summary of Guardrail Committee Meeting on July 14, 1998

The Guardrail committee met on July 14, 1998. Lacy Love, Don Lee, and other members of the staff from the Roadside Environmental Unit, Wendi Oglesby and other members of the Signing Unit were present at the meeting.

The first item of business discussed was the recent guideline which recommends the addition of guardrail in freeway median widths of 70 feet and less. I distributed copies of details and guidelines which note the recommended placement of median guardrail approaching dual lane bridges and overhead bridges.

Lacy Love and Don Lee noted maintenance problems that had been created by existing sections of median guardrail. It was also noted that our current details did not reflect a break in the guardrail in areas where two rows of median guardrail were proposed. A detail has recently been developed which shows provision for an opening in the guardrail on one mile intervals. This opening will provide an opportunity for mowing equipment to turn around. A copy of the detail is attached with the memorandum.

Immediately following the guardrail committee meeting, a separate meeting was held to discuss Guardrail Vegetation Management. Attached is Mr. Don Lee's memorandum which summarizes the concerns and recommendations generated from this meeting. This memorandum discusses many of the same concerns that Don and Lacy presented to the guardrail committee. The guardrail committee has noted the comments regarding the guardrail placement issues and the comments regarding vegetation management. Wherever possible, we will abide by the recommendations listed for guardrail placement and schedule the letting of median guardrail projects so that sod seeding can be done in the fall or spring months.

The second part of the meeting focused on sign support protection for non-breakaway sign supports. Ms. Wendi Oglesby noted that the Signing Unit assumes that guardrail will not be added if the center of the non-breakaway sign is placed 32 feet from the edge of the travel lane.

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After discussion, it was noted that traffic speeds are increasing on freeways as well as traffic volumes. It was also noted that 30 feet is a minimum clear zone width for freeways. The Roadside Design Guide actually recommends a range of clear zone widths from 30 feet to 45 feet. It was agreed that ideally, the center of the sign support should be 40 feet from the edge of the travel lane. The Signing Unit will proceed with this placement change after coordination with the Structure Design Unit. This change will be implemented on freeway facilities.

If the 40 foot distance cannot be obtained for the sign support locations on freeways, it was determined that guardrail would be used in front of the sign support. In order to decrease the guardrail length, the sign support will be moved to a location 20 feet from the edge of the travel lane.

Non-Breakaway sign support locations were then discussed for expressway facilities. On expressways, it was decided that the center of the sign support would continue to be placed at a distance of 32 feet from the edge of the travel lane. In this sign support placement, guardrail would not be used in front of the sign support unless required for another roadside hazard.

Following this discussion, it was noted that guardrail special provisions have been changed as listed below:

The GRAU-350 special provision was changed to exclude the Best Anchor Unit from consideration. The Best was replaced with the SKT-350 which is an improved version of the Best. Both units are manufactured by the same company.

The IAU-350 was changed to exclude the React-350 from consideration. This attenuator requires a clear zone area for a vehicle to rebound after impact. In narrow median situations, a sufficient clear zone area could not be obtained.

It was noted that several end units are becoming approved for NCHRP 350 criteria. After discussion, it was determined that Mr. Ed Lorbacher would keep a file containing the information on the end units as they become approved. At the guardrail committee meetings, Ed will relay the new treatments that have passed the NCHRP 350 crash tests. The committee will review each treatment to determine if the end units should be added within the Special Provisions for use on roadway projects.

The next guardrail committee meeting will be Tuesday, October 6, 1998 at 9:00 am in the Roadway Design Conference Room.

DMB

Attachments

cc: Len Hill, PE  
Tom Shearin, PE  
Lacy Love, PE  
Don Lee  
Wendy Oglesby, PE