



# Memorandum

Subject: **INFORMATION:** ET-Plus W-Beam  
Guardrail Terminal

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In Reply Refer To:  
HSST

To: Division Administrators  
Directors of Field Services  
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The Office of Safety has received inquiries from FHWA Division Offices and State DOTs regarding the Federal-aid eligibility of the ET-Plus w-beam guardrail end terminal manufactured by Trinity Highway Products (Trinity). Our September 2, 2005 letter (FHWA No. CC-94) to Trinity is still in effect and the ET-Plus w-beam guardrail end terminal became eligible on that date and continues to be eligible for Federal-aid reimbursement.

## Background

In general, FHWA's eligibility letters confirm that roadside safety hardware was crash tested to the relevant standards, that those crash test results were presented to FHWA, and that FHWA confirmed that the device met the relevant crash test standards. The FHWA reimbursement eligibility process provides a consistent process that establishes a tested hardware's eligibility for reimbursement under the Federal-aid highway program on a national level.

In January 2012, allegations were made to FHWA that the ET-Plus had been modified by Trinity and that those modifications had not been presented to FHWA. Specifically, it was alleged that the ET-Plus crash tests presented to FHWA in 2005 did not document a dimensional change to the guide channels of 5 inches to 4 inches.

On February 14, 2012, Trinity confirmed to FHWA that the reduction in the width of the guide channels from 5 inches to 4 inches was a design detail inadvertently omitted from the documentation submitted to FHWA. Additionally, Trinity confirmed that the company's ET-Plus end terminal with the 4-inch wide guide channels was crash tested to the relevant crash test standards (NCHRP Report 350) at the Texas Transportation Institute (TTI) in May 2005. TTI also confirmed this information on February 14, 2012. Therefore, based upon all of the information available to the agency (including a re-examination of the documentation from ET-Plus crash tests), FHWA validated that the

ET-Plus with the 4 inch guide channels was crash tested in May 2005. The FHWA confirmed this information in correspondence dated October 11, 2012 to State departments of transportation in Illinois, New Hampshire, and South Carolina, and reiterated that confirmation on January 10, 2013 in a letter to AASHTO.

The Trinity ET-Plus with 4-inch guide channels became eligible for Federal reimbursement under FHWA letter CC-94 on September 2, 2005. In addition, the device is eligible for reimbursement under FHWA letters CC-94A and CC-12Q. Staff confirmed the reimbursement eligibility of the device at heights from 27 <sup>3</sup>/<sub>4</sub> to 31 inches. An unbroken chain of eligibility for Federal-aid reimbursement has existed since September 2, 2005 and the ET-Plus continues to be eligible today.

Please note:

- 1) the Federal-Aid reimbursement eligibility process for roadside hardware is posted at [http://safety.fhwa.dot.gov/roadway\\_dept/policy\\_guide/roadHardware/acceptprocess/](http://safety.fhwa.dot.gov/roadway_dept/policy_guide/roadHardware/acceptprocess/),
- 2) frequently asked questions about the process are posted at [http://safety.fhwa.dot.gov/roadway\\_dept/policy\\_guide/roadHardware/faq\\_eligibility\\_letters.cfm](http://safety.fhwa.dot.gov/roadway_dept/policy_guide/roadHardware/faq_eligibility_letters.cfm), and
- 3) all FHWA letters on guardrail terminals and impact attenuators eligible for reimbursement under the Federal-aid Highway Program are posted at: [http://safety.fhwa.dot.gov/roadway\\_dept/policy\\_guide/roadHardware/listing.cfm?code=cushions](http://safety.fhwa.dot.gov/roadway_dept/policy_guide/roadHardware/listing.cfm?code=cushions)