

SECTION 544 CRASH CUSHIONS

544-1 Description.

Install redirective crash cushions as shown in the Plans. Redirective crash cushions are safety devices with capabilities to redirect the impacting vehicle along the full length of the device.

544-2 Approved Product List (APL).

Use crash cushions listed on the APL. Manufacturers seeking evaluation of crash cushions for inclusion on the APL must submit the following:

1. Product drawings, which at a minimum include:
 - a. Anchorage details for the crash cushion
 - b. Tables showing the relevant system information and lengths for all options
 - c. Length of need location
 - d. Transition details
 - e. List of all components
2. Installation manuals
3. Crash testing reports demonstrating that the system meets the requirements of NCHRP 350 or ~~the Manual for Assessing Safety Hardware 2016 (MASH)~~
4. All relevant FHWA Eligibility Letters
~~approval must submit and meet all crash testing requirements of the National Cooperative Highway Research Program Report 350 (NCHRP 350) or the Manual for Assessing Safety Hardware 2009 (MASH-09).~~

Any new or revised highway safety hardware review request submitted to and received by FHWA after January 1, 2011 must meet the crash test requirements of MASH-09.

544-3 Installation.

Handle and install manufactured materials or articles in accordance with the manufacturer's instructions and the ~~Design~~ Standard Plans.

Delineate crash cushion ends with Type IV or better retroreflective sheeting meeting the requirements of Section 994. Install retroreflective sheeting with a minimum surface area of 360 square inches and a minimum height of 15 inches. As an alternative, a Type 1 object marker meeting the requirements of Section 705 may be used to delineate the crash cushion end. Center the object marker 3 feet in front of the crash cushion end.

Perform repairs necessary due to defective material, work, or operations without additional cost to the Department.

Restore crash cushions damaged by the traveling public after the installation is completed, accepted and serving its intended purpose on an open section of bridge or roadway within 24 hours.

544-4 Compensation.

Price and payment will be full compensation for the complete system or module in place and accepted, including object marker or sheeting.

Relocation of an existing crash cushion to a permanent location called for in the Plans will be paid for at the Contract unit price for relocating existing systems. Price and payment will

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be full compensation for relocating and reinstalling the system in accordance with the manufacturer's instructions and the ~~Design~~ Standard Plans.

Payment will be made under:

Item No. 544- 74- Relocate Crash Cushion - each.

Item No. 544- 75- Crash Cushion - each.