



Bureau of Materials Materials Approval Procedures

MAP Number: **129-15**

Effective Date: April 1, 2015

Approved By: Eileen Sheehy

PROCEDURE FOR APPROVAL OF INERTIAL BARRIER SYSTEMS

PURPOSE:

To establish a procedure to approve inertial barrier systems (sand barrel type crash cushions) for addition to the NJDOT Bureau of Material's Qualified Products List (QPL).

REFERENCES:

New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction
Section 611.02
NCHRP 350. Report - http://safety.fhwa.dot.gov/roadway_dept/road_hardware/nchrp_350.htm

PROCEDURE:

A. Manufacturer's Request for Approval.

The Manufacturer shall request in writing for the approval of the product. Include the following information in the request:

1. The name, address, and contact information for the manufacturer.
2. The name and designation of product to be evaluated.
3. Documentation of FHWA acceptance of the inertial barrier system.
4. Documentation of NCHRP 350, test level 3 (TL-3) results.
5. Four copies of detailed drawing and specification sheet for the inertial barrier system.
6. Four copies of the Manufacturer's recommendations for installation, maintenance and repair of the inertial barrier system.
7. An estimate of initial cost and repair costs for the inertial barrier system.

Mail the request for approval to the following:

Mailing Address (USPS):

Manager, Bureau of Materials (Thiokol Bldg. 4)
New Jersey Department of Transportation
P.O. Box 600
Trenton, NJ 08625-0600

Street Address (UPS, FedEx, etc.):

Manager, Bureau of Materials (Thiokol Bldg. 4)
New Jersey Department of Transportation
930 Lower Ferry Road
West Trenton, NJ 08628

B. Bureau of Materials Review

The ME will review the submitted package for completeness and will verify that the submitted inertial barrier system was approved by comparison with the NCHRP 350 website. If the package is incomplete or the inertial barrier system does not comply, the ME will notify the manufacturer.

C. Departmental Review

If the ME determines that the package is complete, he will call a meeting of representatives from Maintenance and Operations (Regional and Bureau of Maintenance Offices), Bureau of Civil Engineering (Roadway Design Group1 and Rapid Design Group), and New Technology and Products for Departmental review of the inertial barrier system. The Departmental Review Team will consider the following information in their evaluation of an inertial barrier system:

1. Cost, ease, and frequency of maintenance.
2. Cost and ease of construction.
3. Design parameters and requirements.
4. The number of currently approved systems and the impact on the inventory of adding a new system.

D. Field Trial

The Departmental Review Team may request a field trial if all pertinent data is not available. The Team will negotiate the duration of the field trial with the manufacturer based on the data needed to make the determination of acceptability of the inertial barrier system.

E. Product Approval/Rejection

The Departmental Review Team will determine the acceptability of the inertial barrier system. The ME will notify the manufacturer of the Department's decision. The Bureau of Civil Engineering will write design guidelines for the inertial barrier system, if necessary, for inclusion in the Roadway Design Manual.

PROJECT ACCEPTANCE REQUIREMENTS:

Qualification of a product and addition to the QPL does not constitute a blanket approval of the material. The Contractor for each proposed project must submit the product and source on a Materials Questionnaire as specified in Section 106. The ME will approve the product and source on a project to project basis based on the specifications for the project.

DISQUALIFICATION:

The ME may remove the product from the QPL for non-conformance with specification requirements or for a documented history of poor field performance. The manufacturer shall notify the ME, in writing, of any change in inertial barrier system configuration. Failure to notify the ME of changes in the product will result in disqualification. The Departmental Review Team may also disqualify a product to limit inventory control problems with a proliferation of inertial barrier systems.

REQUALIFICATION:

The ME will reevaluate a product which has been disqualified and removed from the QPL only after submission of a formal request along with acceptable evidence that the problems causing the disqualification have been resolved.

The ME may require the manufacturer to requalify the product for any of the following reasons:

1. To ensure that obsolete products are not kept on the list, the ME may request written confirmation from the manufacturer that the product is still available and has not changed design. Failure to respond to the Bureau's written request will result in the product being removed from the list.
2. If the design of the product has changed, the ME will require that the new design be requalified.
3. If the Department's standard specifications change or if the NCHRP 350 criteria change, the ME may require requalification to ensure that the product meets the new specification.