COLORADO DEPARTMENT OF TRANSPORTATION

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 3074-11

Product Evaluation Coordinator
Colorado Department of Transportation
4670 North Holly Street, Unit A
Denver, Colorado 80216

Material code: 614.07.02.00

FOR INTERNAL CDOT USE

Material code description full name: Impact Attenuator

PART 1

Product name: QuadGuard II

Product category: Roadway Safety\Crash Cushion\Impact Attenuator, Permanent

Product representative (name & address):
Attn: Roger N. Egan
Interwest Safety Supply, Inc.
195 South Navajo Street
Denver, CO 80223
Phone: (303) 733-8447 FAX: (303) 733-8664

Manufacturer (name & address):
Attn:
Energy Absorption Systems, Inc.
35 East Wacker Drive
Chicago, IL 60601
Phone: (312) 467-6750 FAX: (312) 467-9625

Web-site address: www.energyabsorption.com

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Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)

The QuadGuard II is a modified version of the QuadGuard System which has been an approved crash cushion for permanent and work zone applications within CDOT since 1996. There are 2 modifications as follows: (1) The QuadGuard II features a steel nose rather than plastic, and (2) Stabilizer plates have been added between the diaphragm and rail guide. The steel nose provides increased strength and allows the cartridge to crush uniformly, while the stabilizer plates assist in allowing the diaphragm to slide on the monorail and reduce twisting during an impact. These 2 modifications enable the QuadGuard II to become shorter by eliminating an entire bay from the system. A TL-2 QuadGuard II is a 2-bay system rather than a 3-bay system, while the TL-3 QuadGuard II is a 5-bay system rather than a 6-bay unit.

Restrictions, (installation and/or use):

Use of the product, (be specific to CDOT highway activities only):

The QuadGuard II is intended to be used in permanent applications protecting hazard widths of 24", 30", 36", 48", 69", and 90".

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):

The QuadGuard II will provide the same high quality protection for motorists as the original version has done over the years; however, since it is shorter, the likelihood of an impact occurring is reduced. Furthermore, eliminating an entire bay will reduce the cost of the system, resulting in considerable cost savings to CDOT.

Specifications, (listing those applicable is required) **& Certificate of Compliance** (required to certify compliance with listed specifications):

- ☐ CDOT :
- ☐ ASTM :
- ☐ AASHTO :
- ☒ FHWA : NCHRP 350, TL-2 & TL-3
- ☐ other :

Product testing, (from national/independent laboratories or universities) **& Certified Test Report** (CTR required to validate all claims):

- ☐ NTPEP-AASHTO :
- ☐ FHWA :
- ☒ other : FHWA Letter of Acceptance HSSD/CC-35I (March 20, 2009)
- ☒ other : E-TECH Testing Serves, Inc. (November 2008)

State DOT Approvals, (current documentation required):

Sample submitted: ☐ yes ☒ no ☐ n/a

Materials Safety Data Sheets (MSDS): ☐ yes ☒ no ☐ n/a

Notes/Additional Comments

A sample QuadGuard II could be made available if CDOT requires it to evaluate the product completely.