Mr. D. Lance Bullard  
Safety Quest, Inc.  
505 University Drive  
Suite 701  
College Station, Texas 77840  

Dear Mr. Bullard:

This is in reply to your letter of July 24 requesting Federal Highway Administration's (FHWA) acceptance of the "ROADGUARD" safety device as a crashworthy traffic control device for use in work zones on the National Highway System. You included a video tape of the informal crash testing that was done to show that the device shows no potential for passenger compartment intrusion. The enclosed drawings were also submitted with your application.

The panel and base of the device are made of crossed linked polyethylene and have a total mass of 18 kg with full ballast. The upright panel alone is approximately 2 kg and is inserted into a slot in the base. The panel and the slot in the base are designed so that the panel can lay flat on the ground if hit at low speed. At high speeds the panel is knocked loose by the impacting vehicle. The base is hollow and can be filled with sand or water for ballasting. The overall height of this vertical panel and base is 1118 mm, the base alone measuring 76 mm tall.

A number of hits occurred during the informal crash testing at speeds from 80 km/h to 113 km/h. Installations of one, two, and three devices were struck, with some being mounted backwards. What was evident was the ease at which the vehicle knocked the vertical panel loose from the ballasted base. The loose panels were projected in the direction of travel of the test vehicle and did not show potential to penetrate the passenger compartment. The panels remained intact with occasional damage to the reflective sheeting.

The ROADGUARD breakaway vertical highway delineator panel was demonstrated to be crashworthy via reduced testing and recording procedures and is therefore acceptable for use on the National Highway System at NCHRP Report 350 Test Level 3, when proposed by a State.
Our acceptance is limited to the crashworthiness characteristics of the device and does not cover its structural features, nor conformity with the Manual on Uniform Traffic Control Devices. Presumably, you will supply potential users with sufficient information on design and installation requirements to ensure proper performance. We anticipate that the States will require certification from Traffic Safety Devices that the hardware furnished has essentially the same chemistry, mechanical properties, and geometry as that submitted for acceptance. To prevent misunderstanding by others, this letter of acceptance shall not be reproduced except in full.

The ROADGUARD is a patented product and is considered "proprietary." The use of proprietary work zone traffic control devices in Federal-aid projects is generally of a temporary nature. They are selected by the contractor for use as needed and removed upon completion of the project. Under such conditions they can be presumed to meet requirement "a" given below for the use of proprietary products on Federal-aid projects. On the other hand, if proprietary devices are specified for use on Federal-aid projects, except exempt non-NHS projects, they: (a) must be supplied through competitive bidding with equally suitable unpatented items; (b) the highway agency must certify that they are essential for synchronization with existing highway facilities or that no equally suitable alternative exists or: (c) they must be used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes. Our regulations concerning proprietary products are contained in Title 23, Code of Federal Regulations, Section 635.411, a copy of which is enclosed.

Sincerely yours,

[Signature]

Dwight A. Horne
Chief, Federal-Aid and Design Division

2 Enclosures

Geometric and Roadside Safety Acceptance Letter WZ-9
VERTICLE PANEL

TRAFFIC SAFETY DEVICES INCORPORATED
the request. The FHWA will have approval authority on the request.

(3) Requests for waivers may be made for specific projects, or for certain materials or products in specific geographic areas, or for combinations of both, depending on the circumstances.

(4) The denial of the request by the FHWA may be appealed to the State to the Federal Highway Administrator (Administrator), whose action on the request shall be considered administratively final.

(5) A request for a waiver which involves nationwide public interest or availability issues or more than one FHWA region may be submitted by the FHWA to the Administrator for action.

(6) A request for waiver and an appeal from a denial of a request must include facts and justification to support the granting of the waiver. The FHWA response to a request or appeal will be in writing and made available to the public upon request. A request for a nationwide waiver and FHWA's action on such a request may be published in the FEDERAL REGISTER for public comment.

(7) In determining whether the waivers described in paragraphs (c) of this section will be granted, the FHWA will consider all appropriate factors including, but not limited to, cost, administrative burden, and delays that would be imposed if the provisions were not waived.

(d) Standard State and Federal-aid contract procedures may be used to assure compliance with the requirements of this section.


§635.411 Material or product selection.

(a) Federal funds shall not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project unless:

(1) Such patented or proprietary item is purchased or obtained through competitive bidding with equally suitable unpatented items; or

(2) The State highway agency certifies either that such patented or proprietary item is essential for synchronization with existing highway facilities, or that no equally suitable alternative exists; or

(3) Such patented or proprietary item is used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes.

(b) When there is available for purchase more than one nonpatented, nonproprietary material, semifinished or finished article or product that will fulfill the requirements for an item of work of a project and these available materials or products are judged to be of satisfactory quality and equally acceptable on the basis of engineering analysis and the anticipated prices for the related item(s) of work are estimated to be approximately the same, the FHWA may not require the minimum number of bids for the procurement of the material(s) or product(s) unless the specifications for each such material or product that is considered acceptable for incorporation in the work. If the State highway agency wishes to substitute some other acceptable material or product for the material or product designated by the successful bidder or bidders as the lowest alternate, and such substitution results in an increase in costs, the FHWA will not be required to participate in any increase in cost.

(c) A State highway agency may require a specific material or product when there are other acceptable materials and products, or when such specific choice is approved by the Federal Highway Administration as being in the public interest. When the Division Administrator's approval is not obtained, the item will be nonparticipating unless bidding procedures are used that establish the unit price of each acceptable alternative. In this case Federal-aid participation will be based on the lowest price so established.

(d) Appendix A sets forth the FHWA requirements regarding (1) the specification of alternative types of culvert pipes, and (2) the number and types of such alternatives which must be set forth in the specifications for various types of drainage installations.

Federal Highway Administration, DOT

§635.413 Warranty clauses.

The SHA may include warranty provisions in National Highway System (NHS) construction contracts in accordance with the following:

(a) Warranty provisions shall be for a specific construction product or feature. Items of maintenance not eligible for Federal participation shall not be covered.

(b) All warranty requirements and subsequent revisions shall be submitted to the Division Administrator for advance approval.

(c) No warranty requirement shall be approved which, in the judgment of the Division Administrator, may place an undue obligation on the contractor or hinder the operation of which the contractor has no control.

(d) A SHA may follow its own procedures regarding the inclusion of warranty provisions in non-Federal-aid contracts.

[80 FR 41274, Aug. 25, 1966]

§635.417 Convict produced materials.

(a) Materials produced after July 1991, by convict labor may only be used in Federal-aid highway construction projects if such materials have been:

1. Produced by convicts who are parole, supervised release, or probation from a prison or jail;

2. Produced in a prison or jail, and the cumulative annual production value of such materials used in Federal-aid highway construction does not exceed the amount of such materials produced in the same period ending July 1991, for use in Federal-aid highway construction projects for the 12-month period ending July 1991.

(b) Qualified prison facility means prison facility in which convict, parole, supervised release, or probation from a prison or jail for use in Federal-aid highway construction projects for the 12-month period ending July 1991, produced materials for use in Federal-aid highway construction projects.


APPENDIX A TO SUBPART D—SUMMARY OF ACCEPTABLE CRITERIA FOR SPECIFYING TYPES OF CULVERT PIPES

<table>
<thead>
<tr>
<th>Type of drainage installation</th>
<th>Alternatives required</th>
<th>AASHTO designations to be included in bidder's requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross drains under high type pavement</td>
<td>X</td>
<td>M-170 and M-190</td>
</tr>
<tr>
<td>Other cross-drain installations</td>
<td>X</td>
<td>M-36</td>
</tr>
<tr>
<td>Side drain installations</td>
<td>X</td>
<td>M-170</td>
</tr>
<tr>
<td>Special installation conditions</td>
<td>X</td>
<td>M-170</td>
</tr>
<tr>
<td>Special drainage systems (closed, semi-closed, etc.)</td>
<td>X</td>
<td>M-170</td>
</tr>
</tbody>
</table>

Subpart E—Interstate Maintenance Guidelines

SOURCE: 45 FR 27993, Mar. 31, 1980, unless otherwise noted

§635.501 Purpose.

To prescribe Interstate maintenance guidelines and establish the policy procedures to ensure that the condition of interstate routes is maintained at the level required by the purposes which they were designed.