July 11, 2002

HSA-10/B34E

Sidney D. Chase Armorcast Products Company 13230 Saticay Street North Hollywood, California 91605

Dear Ms. Chase:

Dr. Dean Alberson's June 11 letter to Mr. Richard Powers of my staff requested Federal Highway Administration acceptance of a modified "350 kit" for use with the Guardian Barrier. This modification eliminates the steel straps used to support the 2-inch diameter Schedule 40 steel pipes and attach them to the sides of the barrier. Instead, these pipes are now bolted together through the plastic barrier using ½-inch diameter threaded rods. In addition, rubber spacers are used to extend the upper pipe rails beyond the face of the barrier, placing them approximately over the lower pipe rails, which have been recessed into the barrier. The connection of the pipe rails at the joints is identical to the previously accepted design, as are the overall dimensions of the plastic barrier segments. Details of the modified design are shown as an enclosure to this letter.

Because the only significant difference from the original Guardian is the method of attaching the 350 kit to the barrier, the modified design can be considered equivalent and the Guardian barrier may be used on the National Highway System (NHS) as an NCHRP Report 350 test level 3 (TL-3) traffic barrier. However, since the new attachment detail has not been crash tested, I recommend that an informal in-service evaluation be conducted to verify satisfactory field performance. Chapter 7 of NCHRP Report 350 outlines the requirements for an appropriate in-service evaluation of roadside hardware.

Please note that the following standard provisions apply to FHWA letters of acceptance:

- The acceptance is limited to the crashworthiness characteristics of the device and does not cover other structural features, or conformity with the Manual on Uniform Traffic Control Devices.
- Any design changes that may adversely influence the crashworthiness of the device will require a new acceptance letter.
- Should the FHWA discover that an in-service performance evaluation reveals unacceptable safety problems, or that the device being marketed is significantly different from the version that was accepted for use on the NHS, it reserves the right to modify or revoke its acceptance.
- You will be expected to supply potential users with sufficient information on design and installation requirements to ensure proper performance.

- You will be expected to certify to potential users 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. This letter is considered public information. All such letters and documentation may be reviewed at our office upon request.

The Guardian Barrier is a patented device and is thus 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) 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, Section 635.411, a copy of which is enclosed.

Should you have any questions concerning this letter, please call Mr. Powers at (202) 366-1320.

Sincerely yours,

(original signed by Harry W. Taylor) for

> Carol H. Jacoby, P.E. Director, Office of Safety Design

2 Enclosures



Sec. 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 alternate 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 PS&E for the project shall either contain or include by reference 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 bid as the lowest alternate, and such substitution results in an increase in costs, there will not be Federal-aid participation in any increase in costs.

(c) A State highway agency may require a specific material or product when there are other acceptable materials and products, when such specific choice is approved by the Division Administrator 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.

(e) Reference in specifications and on plans to single trade name materials will not be approved on Federal-aid contracts.

ENCLOSURE 2