

November 14, 1996

Refer to: HNG-14

Mr. David E. Wasserstrom
President
Safety Barrier Systems
77 East Market Street
Wilkes-Barre, Pennsylvania 18701-3116

Dear Mr. Wasserstrom:

The Federal Highway Administration's January 29, 1996, acceptance of the Guardian Safety Barrier as an NCHRP Report 350 TL-3 barrier was conditional, based upon successful testing of a re-designed splice detail. As stated in your October 3 letter to Mr. James Hatton, you elected to run a series of static and pendulum tests in lieu of a full-scale test to demonstrate the strength of the new design. Changes included the use of 5-inch, Grade 8 bolts and the addition of an inner sleeve welded inside the 2-inch pipe to prevent tearing of the pipe at the joint. This modified design, shown in Enclosure 1, showed a significant increase in strength, from 12,000 pounds in the original design to over 50,000 pounds in the final design. In light of this information and considering the fact that the original crash test met the evaluation criteria in spite of the failure at the pipe joint, we will rescind our earlier qualification without requiring an additional full-scale test.

However, we need a copy of a revised specification sheet for the 350 Highway Kit (similar to that furnished with your original January 4 letter requesting FHWA acceptance of the Guardian) describing in detail the modified splice design. These specifications must identify the type(s) of steel used for all pipes and the outer sleeve in the splice, the pipe end reinforcement weld detail(relative pipe positions, weld type and size, and welding procedures), the method used to align the bolt holes in the inner sleeve and the 2-inch pipe, and the maximum and minimum unthreaded length of the 5-inch long splice bolt. This latter information is of particular importance because, as we understand the splice design, it is important that the full body of a splice bolt bear on all the splice elements through which the bolt passes and that the washer at

each end of the bolt be held snugly against the outer sleeve in the splice. Any questions you may have regarding the specification requirements should be addressed to Mr. James Hatton of my staff at (202) 366-1329.

Upon receipt of the above information, the FHWA will consider the revised Guardian Safety Barrier acceptable for use as a TL-3 temporary barrier when such use is requested by a highway agency. As a proprietary barrier, such use on Federal-aid highway projects, except exempt, non-National Highway System projects, is subject to the conditions stated in Title 23, Code of Federal Regulations, Section 635.411, a copy of which is Enclosure 2.

Sincerely yours,

(original signed by James H. Hatton, Jr.)

for Seppo I. Sillan, Acting Chief
Federal-Aid and Design Division

2 Enclosures
Acceptance Letter B-34A