



U.S. Department  
Of Transportation  
**Federal Highway  
Administration**

400 Seventh St., S.W.  
Washington, D.C. 20590

September 20, 1990

Refer to: HNG-14/SS-20

Mr. James W. Young  
General Sales Manager  
Franklin Steel  
P.O. Box 671  
Franklin, Pennsylvania 16323

Dear Mr. Young:

Thank you for your letter of September 10 to Mr. James Hatton requesting Federal highway Administration (FHWA) acceptance of your company's rerolled rail steel U-channel posts as alternates to Marion Steel's rail steel equivalent billet steel posts. The Marion Steel posts were accepted by our letters of August 31, 1989, and October 2, 1989, (copies enclosed). Either rerolled rail steel posts or billet steel posts conforming to the mechanical and implied chemical requirements of ASTM A499, grade 60, may be used in the following configurations when installed in soil equivalent to NCHRP 230 "S1" (strong) soil:

2.0, 2.25, 2.5, 2.75, and 3.0 pound-per-foot posts, with a maximum of three posts in a 7-foot path, each with a 6-inch splice, no more than 4 inches of which projects above the ground line.

4.0 pound-per-foot posts with a maximum of two posts in a 7-foot path, each with a splice as described above.

As your letter states, spacers are needed at the splice to prevent distortion of the posts as the bolts are tightened. We infer from your letter that only one size spacer (5/8-inch) is needed with all weights of posts. However, if the spacer width varies with post size, your drawings should specify the correct size to use in each case. We assume there will be no mixing of post types in an installation.

The Arizona Department of Transportation's tests which led to our acceptance of U-channel posts with 6-inch ground splices were conducted in strong soil. To date, FHWA has accepted, for restricted use, breakaway supports that have only been qualified through testing on one of the NCHRP soils. We are now administering a study, "Small and Large Sign Supports" in which supports will be tested in both "strong" and "weak" soils. This

pooled fund study, with 27 participating States, may reveal performance problems with different soils. In this study, testing will be discontinued on any support system that fails in one of the soils and the system will be judged unacceptable until it is modified and found acceptable in both soils. Furthermore, this office will, from now on, only evaluate the breakaway acceptability of sign support systems where there is assurance that they will meet our breakaway requirement in both soil types. Thus, it seems likely that near the end of the pooled-fund study (last testing is scheduled for late 1992), the FHWA will require all new breakaway systems installed on Federal-aid highway projects be qualified as breakaway in both soils. Therefore, we suggest that you qualify your sign support system in "weak" soil in order to ensure its acceptability in the future.

This acceptance is limited to the breakaway characteristics of your rerolled rail steel posts and does not cover their structural features. We anticipate that user agencies will require certification that the post material conforms to ASTM A499, grade 60, and that the posts will meet AASHTO breakaway requirements when installed according to your recommendations.

Sincerely yours,

L.A. Staron, Chief  
Federal-Aid and Design Division

Enclosures