U.S. Department
Of Transportation
Federal Highway
Administration

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

October 17, 1996

Refer to: HNG-14/SS-09B

Mr. James W. Young
Vice President
Sales and Marketing
Franklin Industries
P.O. Box 671
Franklin, Pennsylvania 16323

Dear Mr. Young:

This is in response to your September 16 letter to Mr. Nicholas Artimovich requesting the Federal Highway Administration's acceptance of our company's dual-post EXE-Erect system. Your letter was accompanied by a Southwest Research Institute report dated August 1987 on a triple-post support test (which did not pass) and calculations performed by Mr. Malcolm Ray indicating expected performance based on single-post test results.

Our Geometric and Roadside Design Acceptance letter Number SS-9, dated March 16, 1989, found single, 6.0-kg/m (4-pound/foot) EZE-Erect posts acceptable in both strong and weak soils. Some States have found two-EZE-Erect posts acceptable by virtue of an extrapolation of the results of the single-post tests. Mr. Ray's calculations that you provided show that the dual post support would meet the change-in-velocity criteria

The report of the triple-post test shows an excessive velocity change. However, this was predictable from the single-post testing. In fact, the energy dissipated per post in the triple-post test was very close to that in the comparable single-post test. This gives us confidence in the interpolation and extrapolation of the test data. Thus, from these data we can infer that a dual-post support will perform satisfactorily in the strong-soil conditions under which the three-post support was tested. Therefore, a dual-post EZE-Erect sign support system using posts of up to and including 6.0 kg/m will be acceptable for use in strong soil on the National Highway System when requested by a State. Our reason for excluding the dual posts in weak soil is the fact that doubling the energy dissipated in the low-speed, single-post test in weak soil predicts a dual-post energy loss at 98 percent of the allowable. We consider this too close for us to base our acceptance on the available data. In addition, in the single-post, weak-soil, low-speed test the post and stub pulled entirely out of the ground. While this, in and of itself, has not been used as a basis for disqualifying a breakaway system, it does cast doubt on the repeatability of

the performance of the system and certainly requires caution in extrapolating the performance data.

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

Geometric and Safety Design Acceptance letter Number SS-09B