U.S. Department
Of Transportation
Federal Highway
Administration

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

October 17, 1996

Refer to: HNG-14/XX-02

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 your company's dual-post EZE-Erect system. Your letter was accompanies by a Southwest Research Institute report dates August 1987 on a tripe-post support test (which did not pass) and calculations performed by Mr. Malcolm Ray indicating expected performance bases on single-post test results.

Our Geometric and Roadside Design Acceptance Letter Number SS-9, dates 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.

Sincerely,

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