



November 10, 2005

In Reply Refer To: HSA-10/CC-12P

Mr. Steve L. Brown President Trinity Highway Safety Products Division P.O. Box 568887 Dallas, Texas 75356-8887

Dear Mr. Brown:

In his October 20, 2005, letter to Mr. Richard Powers, Mr. Don Johnson requested the Federal Highway Administration acceptance of a retrofit design whereby damaged CRT posts originally installed in steel tubes in ET-2000 installations could be replaced with your steel SYTP posts. In order to reduce the gap in the existing tubes resulting from the use of the smaller steel posts in lieu of a replacement 6-inch x 8-inch wood CRT post, a 1.25-inch thick by 5.5-inch square block made from high-density polyethylene (HDPE) is used to fill the space between the field-side post flange and the inside of the tube. A 5/8-inch diameter bolt through the tube, spacer, and SYTP post is used to hold all three components in place, as shown in the enclosure.

A report dated October 26, 2004, prepared by the Texas Transportation Institute summarized pendulum testing done on SYTP posts driven directly into soil and compared the results to SYTP posts installed in steel tubes as described above. The report concluded that in both strong and weak axis directions, the post failure modes were similar for both the direct embedded posts and your proposed foundation tube retrofit design.

Based on these findings, I agree that damaged CRT posts set in existing steel tubes can be replaced with equal length SYTP posts when the spacer block described and installed as noted above is used.

Sincerely yours,

/original signed by/

John R. Baxter, P.E. Director, Office of Safety Design Office of Safety

**Enclosure** 



