



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

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

DEC 005

Refer to: HOTO-

Mr. Mark C. Wilson
Deputy State Traffic Operations Engineer
Florida Department of Transportation
605 Suwannee Street
Tallahassee, FL 32399-0450

Dear Mr. Wilson:

Thank you for your October 5 letter forwarding a request from the City of Pinellas Park for permission to experiment with a flashing warning beacon having a rectangular shape, a nonstandard flash rate, and a nonstandard position in relation to the signs it supplements, at four midblock pedestrian crosswalks in Pinellas Park. Your letter indicates that the Florida Department of Transportation (FL DOT) supports and sponsors the city's request.

We have reviewed the city's proposal and, while we support the idea of conducting experimentation with this new device, we regret that we are unable to approve the request at this time because of significant shortcomings in the evaluation plan. Mr. Scott Wainwright of our MUTCD Team has discussed this with Mr. Bob Griner of your office and has provided him and Mr. Rick Eggers of the City of Pinellas Park with detailed information about the problems with the proposed evaluation plan, which can be summarized as follows:

- The experimentation must compare the performance of the experimental device. There needs to be a comparison of the performance of the experimental device with the performance of the MUTCD-standard device (circular flashing beacon, with yellow LED indications) under the same conditions--preferably at the same locations, but at the very least at comparable midblock crosswalk locations on the same road(s). The purpose of the comparison is to quantify and document what safety and operational advantages the new device may have over the standard device. The proposed evaluation plan does not include the collection of data to enable such a comparison.
- There are three separate nonstandard things being experimented with--the rectangular shape of the beacon, the different position of the beacon with respect to the signs, and the use of different flash rates. These three features must be installed and evaluated at separate stages of implementation during the experimentation period, or else there will be no way of knowing what effects are caused by the different beacon shape, what effects are caused by the different flash rates, and so forth. The evaluation plan must be designed so that, after data is collected for the condition with the standard beacon in place, the rectangular beacon is installed and flashed at the standard once per second rate for a period of time allowing adequate before and after data collection, and then the flash



rate should be changed for a subsequent set of data collection. The plan also needs to include separate evaluations of performance with the rectangular beacon in the standard position and then in the proposed nonstandard position relative to the signs.

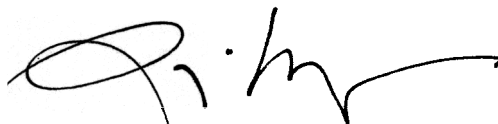
- Collecting information on vehicles that "noticeably slow down" is too subjective to be a valid performance measure. Actual speed data (mph), as well as data on the distance from the crosswalk that vehicles first apply their brakes when a pedestrian is in the crosswalk or getting ready to cross, must be collected for each "before" and "after" period for each condition being evaluated. Data collection should start only after road users have become accustomed to the new device, to avoid the "novelty effect." Sufficient data should be collected with the standard beacon (with LED indications), and with each of the various configurations of flash rate and beacon position for the rectangular beacon.

We strongly recommend that the city enlist the help of an established transportation research organization (such as a university's civil engineering department, the FL DOT research division, or a traffic engineering consultant familiar with research project design) to develop a scientifically credible evaluation plan. Such assistance will likely be critical in assuring that sufficient objective and appropriate data are collected to enable credible comparisons.

When the evaluation plan for the proposed experimentation is ready, please submit it to this office and we will then reconsider the experimentation request. For reference purposes, we have assigned the request the following official experimentation number and title: "4-299(E) – Rectangular Flashing Beacon – Pinellas Park, FL." Please refer to this number in future correspondence.

We appreciate your interest and effort in improving traffic safety and operations, and we look forward to receiving your resubmission. If we can be of further assistance in this project, please contact Mr. Scott Wainwright by email at scott.wainwright@fhwa.dot.gov or by telephone at 202-366-0857.

Sincerely yours,



Regina S. McElroy
Director, Office of Transportation
Operations

cc: Mr. Roger Wentz, ATSSA