

TRANSMITTAL

TO: Mike Davis and Tom Pridgen

RE: Updates for Website

FROM: William H. Cook

Type of Update:

DATE: October 10, 2006

☒ New Criteria

☐ Addendum

☐ Lessons Learned

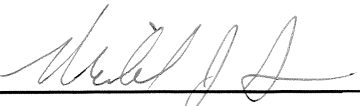
I am sending you ☐ Attached
☐ Under Separate Cover
☒ Included

the following item(s) for review and concurrence:

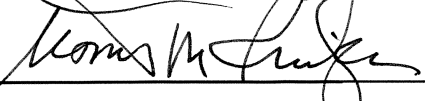
COPIES	DATE	No. of Sheets	DESCRIPTION
1	10/10/06		Cable barrier design guide

REMARKS: With the continued use of high tension cable barrier Roadway has developed a set of design guides to be used with Turnpike projects. I sent an email to the Turnpike Design Engineer with my recommendation to implement this policy and he has concurred.

The attached reflects this option that I recommend be added to the Turnpike's Bulletin Website.

Concurrence: 
Michael Davis, P.E., Program Manager

10/10/06
Date

Concurrence: 
Thomas Pridgen, P.E., Assistant Turnpike Design Engineer

10/10/06
Date

Florida Turnpike Enterprise High Tension Cable Barrier Design Guidelines

In 2004 Florida's Turnpike initiated and constructed a pilot project using High Tension Cable Barrier, a newer roadside barrier designed for minimum maintenance effort, lower installation cost and softer vehicle impacts. The Turnpike's pilot project has been a success with multiple impacts, no crossovers, and no reported injuries due to impact with the high tension cable barrier.

During the cable barrier pilot project the design criteria used for the high tension cable barrier systems was obtained from the manufactures of the high tension cable barrier, other state DOT's using this barrier, our own central office staff and FHWA staff. Since the completion of Turnpike's pilot project there have been a number of lessons learned that should be incorporated into future cable barrier design projects. There have also been changes to a number of the high tension cable barrier systems available to DOT's. Some of the changes being implemented by manufacturers result in different maintenance criteria and deflection criteria than that used for the pilot project.

As a result Roadway offers the following Criteria to be used on Florida's Turnpike high tension cable barrier projects:

- Maximum post spacing of 16 feet
- Design deflection equal to 1.5 times the dynamic deflection listed in the FHWA acceptance letter or the maximum deflection required by the manufacturer. The greater of the two.
- Line post shall be the socket type in a concrete collar with a steel sleeve.
- Minimum length of high tension cable barrier should not be less than 1000 feet.
- A high tension cable barrier shall not be placed between 1 foot and 8 feet from the bottom of a ditch on the back slope.
- The maximum slope a high tension cable barrier shall be placed on is 1:6
- No roadside hazard shall be placed within the design deflection (see bullet above) distance of a high tension cable barrier.