

Ref: 5799.16

TECHNICAL MEMORANDUM

To: Corinna Gumm, PE, Traffic Operations Manager

From: Gil A. Ramirez, PE

Date: November 1, 2024

Subject: Silvestri Property Traffic Calming Study Supplemental Technical Memorandum 2

Lassiter Transportation Group (LTG) has been informed that public outreach efforts undertaken to gather input on the recommendations provided within the subject Traffic Calming Study (TCS) have concluded. Brevard County staff has requested that LTG review and finalize the conclusions included in the first Supplemental Technical Memorandum, addressing the latest information that has been gathered.

Background

Brevard County has tabulated the results of the public information campaign and noted that residents are in favor of installing the speed tables. County staff are concerned about drivers willfully participating in reckless driving and attempting to subvert the speed tables by driving around the speed tables on a flush-shoulder roadway and falling into the ditch along James Road. There is also substantial concern that without lateral redirection reckless drivers driving at high speed could be redirected into the ditch without a guardrail present.

Discussion

In response to the concerns of the County staff, LTG has reevaluated the design of the guardrail. The purpose was to minimize or eliminate the hazard posed by the guardrail, while ensuring compliance by preventing subversion, and also providing adequate protection for errant drivers.

Florida Department of Transportation Greenbook standards adopt the guardrail design provided within the American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide which provides flexibility in guardrail designs for lateral redirection and particularly when providing protection to a ditch or canal where a fixed aboveground object does not exist.

This additional flexibility allows the guardrail to be located further away from the edge of travel, and any increase in setback improves the ability of a vehicle to use the available recoverable terrain to correct off-tracking before encountering the guardrail.

Conclusions

Based on an evaluation of the available standards it is my recommendation that if the guardrail is to be installed, it should be set at 2 feet from the top of bank of the ditch, maximizing the offset to the travel lane. I also recommend that profiled thermoplastic auditory/vibratory treatment be provided to the inside of the existing lane lines to increase the offset between the travel lane and the guardrail and induce reduced speeds in the vicinity of the speed tables. These recommendations will reduce the incidence of off-tracking within James Road, improve the effectiveness of the guardrail, and maximize the amount of recoverable terrain available.

In addition, the structural design of the guardrail should be revised to provide additional support to account for the reduced soil support behind the guardrail posts, in accordance with AASHTO guidelines.

I affirm, by affixing my signature and seal below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional engineering.

Name: Gil Ramirez, PE
Gilberto A Ramirez
Signature: ~~2024.11.01 11:14:49-04'00'~~
Florida PE License No.: 62600
Date: November 1, 2024

This item has been electronically signed and sealed by: Gil A. Ramirez, PE on date shown using a digital signature. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.

