

**MEMORANDUM**

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To: Traffic Review Committee Members

From: Leah Edwards, Assistant Civil Engineer *LE*

Date: June 27, 2012

Subject: Crosswalk Options on Edgewater Boulevard at Port Royal Avenue  
(Item No. 1 --- Action)

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**RECOMMENDATION**

It is recommended that the Traffic Review Committee (TRC) continue with a progressive approach to traffic calming by adding Advance Yield Lines and corresponding signage at the crosswalk on Edgewater Boulevard at Port Royal Avenue (north).

**SUMMARY**

The TRC reviewed and discussed the Edgewater Boulevard and Port Royal Avenue stop sign warrant study at the March 28, 2012 meeting. Based on the study, stop signs are not warranted, and the TRC requested further review of the intersection. Staff conducted site visits and pedestrian counts and studied options for improving pedestrian safety at the marked uncontrolled crosswalk. Installing advance yield lines and corresponding signage on Edgewater Boulevard at the Port Royal Avenue (north) crosswalk is recommended as the next step in a progressive approach to traffic calming.

**BACKGROUND/ANALYSIS**

The posted speed limit along this section of Edgewater Boulevard is 35 mph. There are marked crosswalks across Edgewater Boulevard both north and south of Port Royal Avenue (north). In past years, the TRC has reviewed this intersection and voted to implement improvement measures. Both crosswalks were striped to increase visibility. In 2004, all pedestrian advance and pedestrian crosswalk signs for northbound and southbound traffic at this intersection were changed to high visibility florescent signage.

To increase nighttime visibility, the power of the streetlights adjacent to the intersection was increased from 150 watts to 200 watts. In 2006, two "State Law - Yield to Pedestrians" signs were installed in the crosswalks on Edgewater Boulevard at Port Royal Avenue (north).

In March 2012, the TRC reviewed a stop sign warrant study conducted for the intersection of Edgewater Boulevard/Port Royal Avenue (north). The study showed that stop signs were not warranted, however the TRC decided to further study the intersection for additional improvements.

As part of the stop sign warrant study, 4 pedestrians were counted during the peak hour traffic (5-6pm). During April and May, Staff performed additional hourly pedestrian counts at the intersection. Pedestrians were counted on weekdays, between 7am and 5pm. On a typical weekday, 7am-5pm, an average of 6.5 pedestrians per hour (pph) crossed Edgewater Boulevard at Port Royal Avenue (north). The highest volume was 19 pph during one of thirty total hours counted. This occurred on a Thursday, between 3 and 4pm.

The following is a list of options for the crosswalk on Edgewater Boulevard at Port Royal Avenue (north):

#### 1. Remove Crosswalk

Removing the crosswalk and signage on Edgewater Boulevard at Port Royal Avenue (north) would eliminate the false sense of security pedestrians may have when crossing at an uncontrolled intersection. This option is relatively inexpensive, and reduces maintenance costs at the intersection. However, pedestrians may still cross legally at this location, but it would be done with less driver awareness. Therefore removing the crosswalk is not recommended.

#### 2. No action

Take no action, and leave the intersection as is.

#### 3. Advance Yield Line

Advance yield lines encourage drivers to stop further back from the crosswalk, promoting better visibility between pedestrians and motorists. Yield lines (triangles) are painted prior to the crosswalk and "Yield Here to Pedestrians" signs point to the lines. These are markings and signs included in the most recent Manual on Uniform Traffic Control Devices (MUTCD). Costs include purchasing and installing the signs, painting the roadway and maintaining both. City crews would be able to do the work.

Adding yield lines could improve driver awareness of pedestrians at the intersection with minimal disruption to vehicular traffic on Edgewater Boulevard. Staff recommends proceeding with this option.

#### 4. Pedestrian hybrid beacon

A pedestrian hybrid beacon is used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked crosswalk. The lights are activated with pedestrian push buttons on either side of the intersection, so there is minimal disruption to vehicular traffic. The pedestrian volume at the intersection does not meet the 20pph lower threshold recommended in the MUTCD. The cost of equipment and installation is approximately \$15,000 plus ongoing maintenance costs. Staff does not recommend pursuing Option 4 at this time.

## 5. In-roadway lights

In-roadway lights would be installed at one of the crosswalks, and the second crosswalk eliminated. The lights are activated with pedestrian push buttons on either side of the intersection, so there is minimum disruption to vehicular traffic. The cost varies from \$20,000 – \$30,000, and ongoing maintenance costs tend to be high. The MUTCD recommends at least 40 pedestrians crossing during each of any two hours of a day before installing this device. The pedestrian count at the intersection does not meet this guideline. Due to the low number of pedestrians and the high costs, in-roadway lights are not recommended.

## 6. Stop signs

Stop signs on Edgewater Boulevard at Port Royal Avenue (north) are not warranted (see Item 1 from March 28, 2012 TRC Meeting). Installing stop signs would disrupt and delay the high volume of vehicular traffic on Edgewater Boulevard, which is a major arterial designed to move traffic through the city. There is a signalized intersection 800 feet north of the study intersection on Edgewater Boulevard at Beach Park Boulevard. Under normal conditions, it is unlikely that stop signs at Port Royal Avenue (north) would affect the signalized intersection of Edgewater Boulevard and Beach Park Boulevard. However, during peak traffic periods, a stop sign at Port Royal Avenue (north) could back up traffic to the signalized intersection, affecting signal operations. The highest volume of southbound traffic travels on Edgewater Boulevard at Port Royal Avenue (north) during the evening commute, 5-6pm. The cost of installing stop signs is relatively minor and work could be performed by City crews. However, since stop signs are unwarranted, this option is not recommended.

Based on pedestrian and vehicle counts, collisions, MUTCD guidelines, and costs, along with our policy of a progressive approach to traffic calming, Staff recommends pursuing Option 3, Advance Yield Lines and signage, at this time.