



MEMO

DATE: September 3, 2010
TO: Terry Stewart, Town Manager
FROM: Cathie Lewis, Public Works Director *CLewis*
SUBJECT: Survey Estero Boulevard – Seafarers Location

Attached are copies of plan sheets depicting the right-of-way in the area from Fifth to Crescent Streets along Estero Blvd. These sheets depict all structures in the right-of-way as well as portions of structures directly adjacent to the right-of-way.

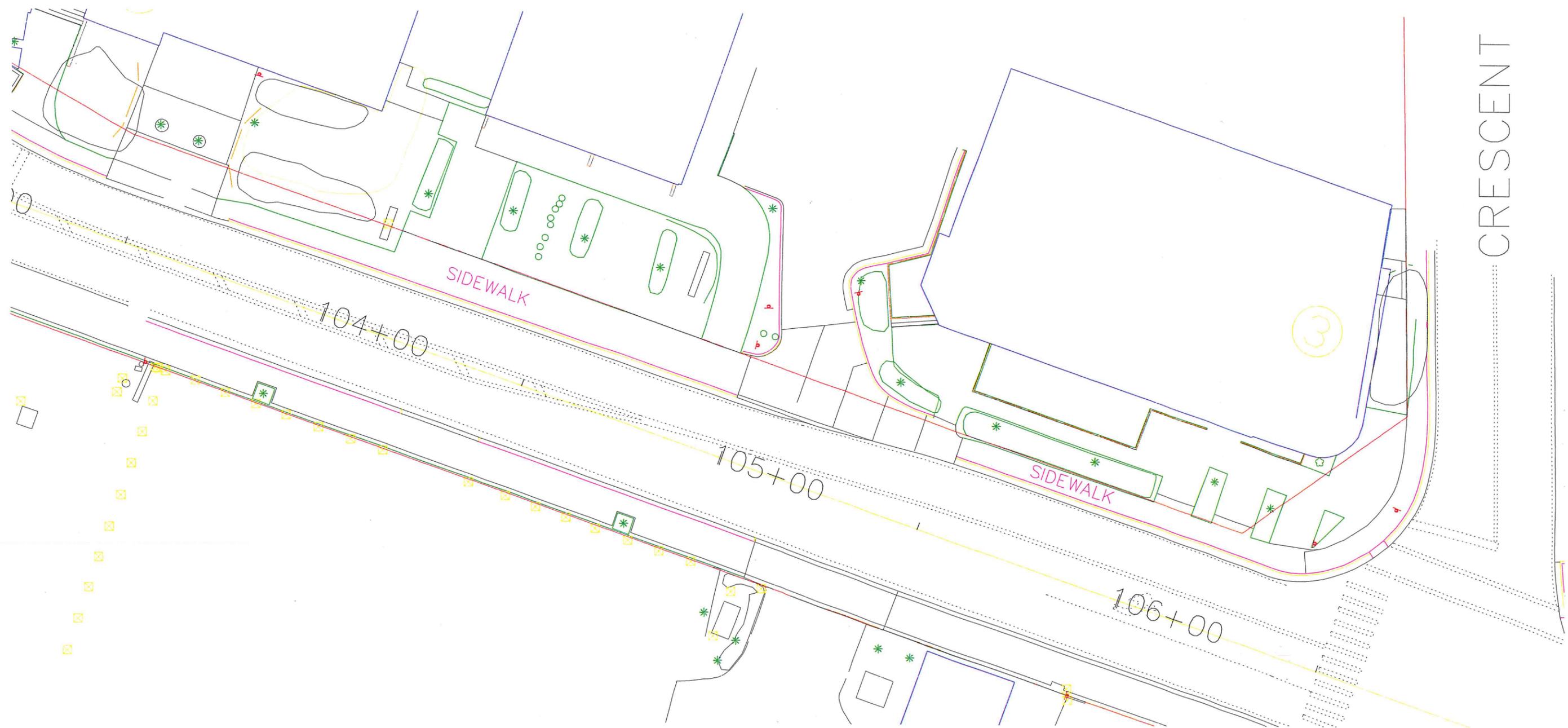
It is my understanding that the request for these additional plan sheets stems from a question associated with the relationship of the right-of-way to the edge of pavement. In general you will note that the edge of pavement ends at the curb on both sides of the roadway. The sidewalk then extends to the edge of right-of-way. On the bay side the sidewalk extends into the five foot sidewalk easement.

With the idea of shifting the road and travel lanes there are of course underground utilities that will need to be relocated. Without a plan design of the modification it is difficult to determine to what extent these relocations will be. The Town has water lines on both sides of the roadway in that area which again depending on final design may need to be relocated.

Please let me know if you have any questions regarding the attached or require additional information.

Attachments

pc: file



CRESCENT

REPORT ON REVIEW OF ESTERO BOULEVARD – SAN CARLOS BOULEVARD FROM CRESCENT STREET TO FIFTH AVENUE CONCEPTUAL TRANSPORTATION IMPROVEMENTS

INTRODUCTION AND SUMMARY

Long vehicular delays are very typical for peak arrival and departure periods to and from any popular beach area. When traffic volumes exceed “saturation” each added minute of delay builds geometrically if the traffic volume continues at the same rate.

To and from the Town of Fort Myers Beach (Island), the off-season and off-peak traffic flows are normal along San Carlos Boulevard and Estero Boulevard with no significant traffic delay. However, under some seasonal peak traffic conditions the vehicular traffic flow to, and/or off, Fort Myers Beach (Island) can experience additional vehicular delays in the general range of 15 to 60 minutes starting at or approaching one of the following locations:

- On San Carlos Boulevard from north of Siesta Drive traveling to the Island.
- On Estero Boulevard from Andre Mar Dr traveling towards the Times Square area. Due events or on high volume days traffic can queue back to the Catholic Church.
- Delays can also be experience by motorists once on the Island as they proceed south on Estero Boulevard these delays can extend south to the area of the Town Hall but can extend beyond

The delays on and off the Island are attributed to the high volume of traffic traveling to and from Fort Myers Beach combined with the capacity constraints of the corridor particularly the two lane roadway, turning traffic along Estero Boulevard, pedestrians crossing randomly and at crosswalks, and the visual distractions of a beach town. Peak daily traffic in the winter months is often in excess of 30,000 vehicles per day on the Matanzas Pass Bridge.

Recently Fifth-Third Bank foreclosed upon several parcels on Fort Myers Beach, one of which (Seafarer’s improved non-beach front) was part of the proposed redevelopment of the area between Crescent Street, 5th Ave and north of Estero Boulevard. While the entire redevelopment plan included properties owned by multiple parties, Fifth-Third Bank only acquired 1 of the parcels. The other parcels that Fifth-Third Bank foreclosed upon were 3 vacant beach front properties and 2 improved beach front properties. Lee County BOCC has approved the acquisition of the improved non-beachfront parcel and 3 vacant contiguous. Fifth-Third Bank would not sell the three contiguous beachfront parcels without including the improved Seafarer’s parcel.

With the proposed acquisition of the properties on Estero Boulevard, from Fifth Third Bank, Lee County Department of Transportation was presented a question as to how the lots might be utilized to facilitate a viable, beneficial, and cost feasible transportation improvement. There have been numerous documents that have proposed and evaluated modifications to roads in this area in an effort to reduce vehicle delay and facilitate pedestrian movement. The Town of Fort Myers Beach provided portions of some of the previous alternatives that dealt with area. The alternatives included variations of, or combinations of redevelopment of the area, realignment of the roadway, redirection of traffic, installation of a roundabout, signalization of intersections, pedestrian overpasses or elevated roadways.

Because the properties proposed to be acquired are limited to the three beach front properties and the existing Seafarer's building some of the proposed alternatives are not feasible.

Re-Alignment of San Carlos Blvd/Estero Boulevard

Many of the proposed re-alignment alternatives include recommendations to shift the section of Estero Boulevard between the foot of the bridge and Crescent Street to the north (further from the Gulf). The Seafarer's building site by itself is insufficient to provide for any re-alignment alternative. Should the Huttingburg Properties, which include the McDonalds Building, the commercial building south of Seafarer's and the adjacent parking lot's, as well as the gift shop building on the corner of Fifth Ave and Estero Blvd become available the re-alignment may be more feasible. Issues that would need to be reviewed would include the radius of the curves that would be need shift the roadway which might present an operational issues with traffic flow. The sight distance for vehicles going through the curves would need to be evaluated to ensure that it is sufficient to observe both other vehicles as well as pedestrians.

Any re-alignment that closes the existing section of Estero Boulevard between 5th Ave and Crescent St would need to address vehicular access to the private parking lot adjacent to Times Square as well as delivery vehicle access. Additionally, the existing bus stop/shelter at Time Square would need to be relocated.

Among the re-alignment alternatives there was also some that included the construction of a "New Street" between 5th Ave and Crescent Street. The issue of property ownership also limits the implementation of this.

Redirection of Traffic

The re-direction of all northbound (off island) traffic from Estero Boulevard onto Crescent St requires northbound traffic to turn onto 5th Ave to get to the bridge and traffic heading to the Times Square area or north end of the island continuing on to one of the street that pass under the bridge (1st, 2nd or 3rd). This does reduce vehicle traffic and the number of potential conflict between pedestrians between Crescent St and 5th Ave, but will increase the conflicts at the Crescent St/Estero Boulevard intersection.

The Town did test this configuration and due to a variety of reasons the results were inconclusive. The acquisition of the Fifth-Third Bank properties does not facilitate improvements to Crescent Street or Fifth Street as a route for traffic to leave the island. The property in question does not abut either street. Making improvements to existing streets or building a new connector street would require the purchase of additional properties.

Modern Roundabout

Previous transportation studies have identified a Modern Roundabout as one potential improvement but the analyses did not fully explore the operational characteristics or the upstream and downstream limitations.

While Roundabouts can be a viable improvement to maximize traffic flow at an intersection, there are serious questions as to both the capacity limitations and other physical limitations which would cause the proposed single lane Roundabout option to fail during peak season traffic. Appendix "A" outlines the Pros and Cons, and the comparisons between Roundabouts and Traffic Signals and All-Way Stops. Specific issues with the proposed single lane Roundabout option are also outlined in Appendix "A". Key points are:

- 1) A Roundabout with two lanes in each direction would be required to handle peak season traffic in excess of 30,000 vehicles today.
- 2) The Stop condition at Fifth Street and Old San Carlos Blvd could cause failure in the peak season.
- 3) The peak season traffic queues onto the Island, and at times the off the Island queues, will block the east to north movement from Fifth Street.
- 4) The 6 % slope for the southbound movement onto the Island is generally considered too steep for the entering traffic to reduce speed.
- 5) To achieve the proper deflection of movements, the foot of the Bridge would need to be rebuilt.

One method of addressing the issue of traffic queuing up and through roundabouts is through the use of a metering signal place up stream from the roundabout. In this case, it would require that the signal be installed on or near the end of the bridge. As this is on a 6% downgrade it may present some issues.

Proposed Public Right of Way Accessibility Guidelines (PROWAG) are scheduled for formal adoption by 2011. The Federal Highway Administration (FHWA) and the Access Board have set the standards and are directing these ADA requirements shall be followed on new transportation projects and reconstruction of transportation facilities. PROWAG requires a method be provided to stop traffic for the sight-impaired to cross the legs of a Multi-lane Roundabout approach. Stopping traffic to facilitate the pedestrian crossings will reduce the capacity of the Roundabout and a wider median refuge area becomes essential.

The application of the Roundabout as an option might have some limited benefits if sufficient right of way was available for two lanes through the intersection in each direction, but the other peak season operational issues, including how to manage the pedestrian traffic would still need to be resolved. The costs of rebuilding the foot of the Bridge, the impact on closing off access to the Island during construction, the cost of acquiring adjacent rights of way and the understanding that upstream and down stream constraints would be unresolved, resulted in the conclusion that the Roundabout proposal would be an unfeasible project.

Trolley Pull-out

The acquisition of these properties would provide ample space for enhanced transit stops. There would be plenty of room for amenities such as shelters, "Next-Bus" technology kiosks, and vending.

Depending upon the location the bus routes may need to be modified as currently the Southbound Trolleys use the existing stop at the end of Times Square and the Northbound Trolley route take Crescent Street to 5th Ave to head off-island or go under the bridge to access the Bowditch Park.

Separation of Vehicles and Pedestrians

The conflict between pedestrians and vehicles is frequently pointed to as one of the contributing factors to the delay on Estero Boulevard. Separation could be achieved by elevating the pedestrians over the traffic, elevating the traffic over the pedestrians, physically separating the pedestrians from the traffic by a barrier or a combination of these measures.

Elevated Pedestrian Walkways

The acquisition of these properties would provide ample space for a pedestrian overpass. The effectiveness of constructing one, however, needs to be closely reviewed. Experience with pedestrian overpasses show that they are seldom used since most people will not walk too far out of their way to utilize them.

Elevated Roadway

The most effective way to separate the vehicles from the pedestrian is to raise the vehicles away from the pedestrians and not allow pedestrian crossing of the travelway. To do this would require the extension of the existing bridge approach or the construction of a new bridge/overpass. The elevated roadway could consist of elevating both lanes of traffic, elevating just the northbound (off island) on island or elevating just the southbound (on-island) traffic.

Elevating both lanes of traffic would require construction of essentially a new bridge structure that has a minimum deck width of 40' to accommodate two lanes of traffic plus shoulders. This structure would start near the end of the existing bridge and extend to just north of Crescent Street. The ability to accommodate the right turn lane off of the bridge would need to be evaluated to determine if sufficient room is present to incorporate a crash cushion that would be required to protect the bridge barrier wall. The geometrics needed to transition from the existing bridge to the roadway surface would not provide adequate clearance for vehicles to pass under the structure at 5th Ave. All traffic heading to and from the north end of the Island would have to use the streets under the existing bridge. This would increase the volume of turning traffic at the Crescent Street / Estero Boulevard intersection and could potentially result in a further degradation of traffic in both directions. Access to the properties along the Gulf side would need to be addressed, in particular the private parking lot and whatever use is proposed for the parcels under consideration for purchase.

Elevating just the northbound (off-island) traffic and keeping the southbound (on-island) on the existing pavement would eliminate some of the vehicle/pedestrian conflicts. As discussed above, the vertical geometrics would not provide sufficient clearance for vehicles to pass beneath. While access to and from 5th Street to Estero Boulevard would still remain, access from 5th Ave heading off the island would be eliminated. This would result in all existing vehicles from the north end of the island having to turn onto Old San Carlos Boulevard and either pass under the existing bridge and use 1st, 2nd or 3rd Street to get to Crescent St then turn onto Estero Boulevard. For the majority of vehicles this should not be a problem but larger vehicles like tractor trailers may have an issue negotiating the tight corners. As mentioned above, the treatment of the barrier wall for the structure would need to be addressed and may restrict the number of lanes available to traffic particularly coming off of the existing bridge. This configuration would permit access to some of the parcels along the gulf.

Elevating just the southbound (on-island) traffic would also eliminate some of the vehicle/pedestrian conflicts. Again, the necessary vertical alignment would prohibit vehicular access under the bridge. Maintaining the right turn lane from the existing bridge to 5th Street would be problematic due to the protection of the bridge wall that would be required. Vehicle access to the gulf side properties would be limited by the structure.

Anyone of these alternatives would need to provide pedestrian access underneath the structure, by nature the structures would limit the locations where pedestrians could cross. The alignment for a structure would need evaluation since the existing roadway consists of a series of small radius curves. Flattening out the curve to provide a smooth travel path as well as adequate

sight distance may require the acquisition of the building on the corner of Estero Blvd and 5th Ave. which is not included in the current acquisitions being considered.

The construction of any types of elevated structure would have a significant impact on the characteristic of the community and would need input from the community. An evaluation of the potential benefits/impacts would be needed along with a detailed cost estimate. The construction of any structure would have a major impact on traffic and the use of the existing bridge and the effects on the area would need to be considered.

Pedestrian Mall

The acquisition of these properties would provide space for improvements to sidewalks along Estero Boulevard. The existing sidewalks are much too narrow for the volume of pedestrian traffic in the Times Square area. Wider sidewalks, set back from traffic, would enhance the pedestrians' experience of the beach.

Summary

The proposed improvements to Estero Boulevard that are being now designed and will be implemented in phases as a joint improvement project with the Town of Fort Myers Beach, provides an effective balance between traffic movement along Estero Boulevard, bicycle and pedestrian movement and improvements to safety. When the Matanzas Pass Bridge approaches its useful life, an FDOT widening project may be a potential option to pursue.

The conclusion is that these properties could be used to enhance pedestrian and transit operations in the Time Square area but the property but does not present any significant opportunity for substantial transportation improvements. The property being acquired does not abut either Crescent Street or Fifth Street, so is not at a location that is useful to providing any significant improvement to vehicular traffic during the most congested traffic times. Pull-offs for the Beach Trolley, wider sidewalks and potentially an overhead pedestrian walkway in conjunction with redevelopment of the properties should be investigated further if the lots are acquired.

When expanding roadway capacity is the only objective, the resulting impacts are on businesses from the necessary right of way acquisitions, the changes in access, and some businesses will have less visibility (particularly if elevated ramps or roads are constructed). The increases in operating speeds will effect pedestrian and bicycle safety, and constraints will still exist upstream and downstream of the improvements.

APPENDIX A

Estero Boulevard – San Carlos Boulevard from Crescent Street to Fifth Street

Pros and Cons of Roundabouts

Pros

1. Properly designed Roundabouts can generally handle moderately heavy traffic volumes with less delay than Traffic Signals or Multi-Way stops.
 - a. A one-lane per approach modern Roundabout has a daily capacity of 25,000 vehicles per day, or about 2,500 to 3,000 vehicles per hour, depending on turning improvements.
 - b. A compact Roundabout, less than 100 feet in diameter, has a capacity of 15,000 vehicles per day.
 - c. A two-lane per approach modern Roundabout with two lanes through the Roundabout has a daily capacity of 40,000 vehicles per day, or about 4,000 to 4,500 vehicles per hour, depending on turning movements.
 - d. By comparison, an All-Way Stop, with single lanes, has a capacity of less than 2,000 vehicles per hour, depending on turning improvements.
2. Roundabouts can be flexible in processing traffic at varying volumes.
 - a. Delay is about the same for all legs of the intersection regardless of volume up to 75 to 80 percent of capacity.
3. Roundabouts can use less right-of-way than a conventional Traffic Signal with the associated intersection improvements.
 - a. Depending upon capacity needs, most construction for single lane configuration can occur within existing rights-of-way, except for corner clips at the intersection.
 - b. By comparison, the required turn lanes for Traffic Signals may require right-of-way several hundred feet from the intersection.
4. As compared to Traffic Signals, annual operating and maintenance costs for Roundabouts are much lower.
5. Traffic safety is improved at properly designed Roundabouts as compared to Traffic Signals.
 - a. The low speeds of entry into a properly designed Roundabout result in very few injury crashes. Safety Studies show about an 80% reduction in injury crashes if the Roundabout is located and designed correctly.
 - b. Low speeds allow time for drivers to avoid collisions. Historically, there has been shown to be a 50% reduction in all crashes if the Roundabout is located and designed correctly.

Cons

1. If improperly designed or located, Roundabouts can fail to process the expected traffic volumes.
 - a. Exit lanes that are blocked by queued traffic will result in the Roundabout failing to process traffic leading to gridlock.

- b. Roundabouts that have too small inscribed diameter or improper deflection will result in lower capacity than expected.
2. Roundabouts can be difficult for pedestrians to cross.
 - a. Safe pedestrian crossings depend on the Roundabout creating adequate gaps. As the Roundabout approaches capacity, those gaps become fewer.
 - b. Since there is no time when traffic is stopped, visually impaired pedestrians have difficulty in identifying gaps.
 - c. High volumes of pedestrian crossings will reduce the capacity of the Roundabout by restricting drivers' ability to enter or exit the circle.
 - i. Drivers exiting the circle and slowing for pedestrians can result in queuing in the circle causing the Roundabout to fail.
 - ii. Multi-lane Roundabouts require Signalized crossings for pedestrians. (PROWAG requirement for visually and physically impaired pedestrians.)
3. Drivers unfamiliar with the area may need extra signage and pavement marking guidance to navigate the Roundabout.

Specific Issues with Estero Boulevard/San Carlos/Fifth Street – Proposed Roundabout Concepts

1. Average daily traffic on the Matanzas Pass Bridge during the winter months often exceeds 30,000 vehicles per day. A multi-lane Roundabout would be required to process these volumes.
2. The southbound approach to the proposed Roundabout, from Matanzas Pass Bridge, is a 6 percent slope downward. This is generally steeper than recommended for entering traffic and may result in too high of speeds to safely negotiate the Roundabout.
3. Traffic on westbound Fifth Street often queues to San Carlos Blvd from the All-Way Stop. This would block the exit lane and definitely cause the proposed Roundabout to fail.
4. Traffic on southbound San Carlos/Estero often backs up through Fifth Street due to congestion downstream. This would block the exit lane and definitely cause the Roundabout to fail.
5. To address the backups on the receiving lanes a metering signal may need to be considered; this would require a signal structure to be installed on the downgrade of the bridge, generally not recommended.
6. The large number of pedestrians desiring to cross in the vicinity of the Roundabout would reduce the capacity. During peak tourist months, this reduction in capacity may be sufficient to cause the proposed Roundabout to fail.
7. In order to achieve the proper deflection for traffic exiting the Bridge, the approach would need to be reconstructed.