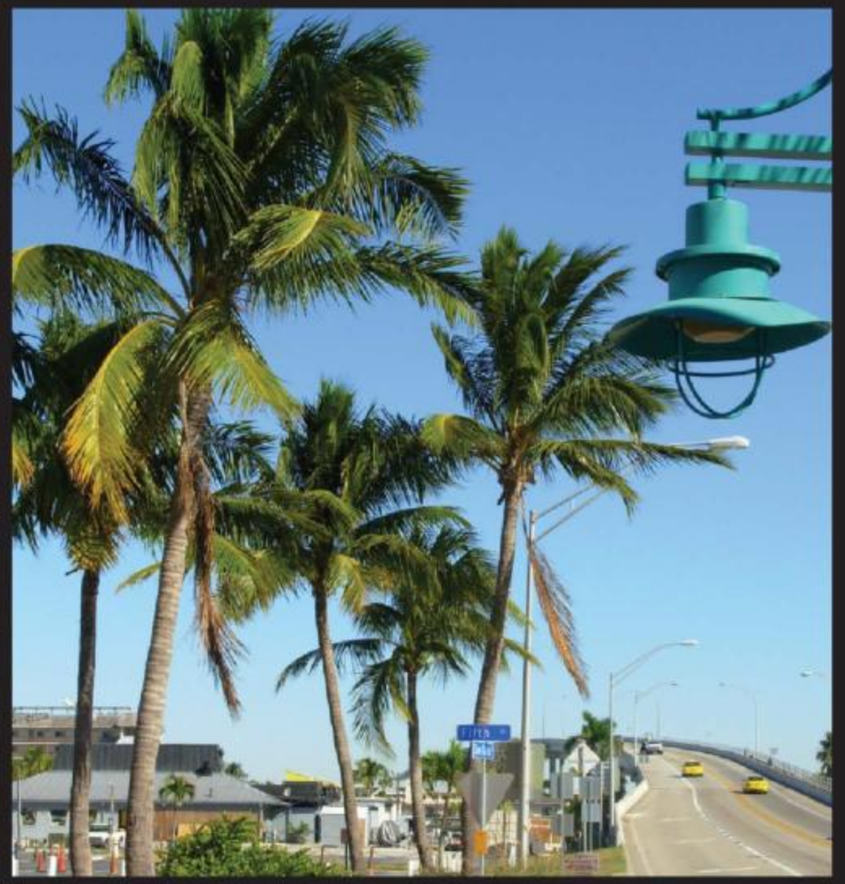
Estero Boulevard Analysis & Design: Phase I Report



August 1, 2008

ESTERO Boulevard

Prepared for:

Town of Fort Myers Beach

Lee County DOT

Prepared by:

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

McMahon Project No.: H07283.01

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1.0 INTRODUCTION

1.1 Project Background & Study Area

SR-865/Estero Boulevard runs southeast-northwest is the only major arterial in the Town of Fort Myers Beach. Estero Boulevard is a seven-mile corridor that traverses Estero Island and extends from the Matanzas Pass Sky Bridge to the Bonita Beach Causeway/Hickory Boulevard, in the Town of Fort Myers Beach in Lee County, Florida. The site location is graphically depicted in **Figure 1**. Numerous private and commercial driveways currently exist along the Estero Boulevard corridor. Paved sidewalks for pedestrians are present along most of the corridor, although they are often only avilable along one side of the rodway. Exclusive bicycle lanes are not provided on this corridor. More than 35 beach-access connections and approximately 73 bus stops also exist along the corridor. Pedestrian travel throughout the corridor is high, but is generally viewed as unsafe and unpleasant.

In 1999, the Town of Fort Myers Beach adopted a Comprehensive Plan establishing goals and policies to control the redevelopment of and future new development in the Town. In June 2000, and in support of the Comprehensive Plan, the Estero Boulevard Streetscape Master Plan was developed in accordance with the Comprehensive Plan and following the vision of Town residents. Both plans divided the seven-mile corridor into six geographical areas based primarily on land-use characteristics. These include the following: North End, Core Area, Civic Complex, Quiet Center, High-Rise Resort and South End. Pedestrian, bicycle, and vehicle design elements were proposed for each of the sections. Improvements for the North End are currently under design, with construction anticipated to begin in late 2008.

1.2 Project Purpose

The purpose of the Estero Boulevard Analysis and Design project was to select a pilot design section (Phase 1) and develop the necessary engineering design plans (Phase 2) for construction with the design elements outlined in the Estero Boulevard Streetscape Master Plan as a basis. The Estero Boulevard Analysis and Design project will be part of an overall solution to improve the entire corridor for Town residents and tourists. This report summarizes the selection of the section to be used for the pilot project, Phase 1.

1.3 Agency Coordination

Extensive coordination has occurred between respective governmental agencies to identify the preferred design elements for the corridor. These agencies included the following:

- Lee County Department of Transportation
- Florida Department of Transportation (FDOT)Town of Fort Myers Beach
- Fort Myers Beach Public Works Department
- Lee County Utilities
- LeeTran

1.4 Public Involvement

Throughout the project process, ongoing coordination has occurred between government agencies, local engineering firms, developers, local business owners, homeowner associations, the Fort Myers Beach Chamber of Commerce and Town residents. Input from these entities was crucial in the selection of the pilot design segment for the corridor.

2.0 KICK-OFF PRESENTATION – TOWN OF FORT MYERS BEACH TOWN COUNCIL

2.1 General Information

In an effort to ensure a general understanding of the project, a kick-off meeting was held during a regular Town Council Meeting on February 4, 2008 at the Town of Fort Myers Beach Town Hall, located at 2523 Estero Boulevard, Town of Fort Myers Beach, Florida. Attendees of the meeting included the Town of Fort Myers Beach Town Council and staff and representatives from the project team including, McMahon Associates, Inc (McMahon), Lee County DOT, Cella & Molnar Associates and David Douglas Associates.

The meeting was conducted in a "Presentation-Style" format allowing time for discussion at the end of the presentation. The presentation included a summary of the cross-section, design elements obtained from the Estero Boulevard Streetscape Master Plan, as well as the project criteria and construction challenges. The meeting presentation is included in **Appendix A**.

2.2 Comments & Recommendations

From the meeting, there was a clear understanding that the project was not intended to be a capacity-improvement project, but rather a corridor analysis to evaluate potential design elements for a more pedestrian-friendly environment.

Figure 1
Site Location Map
Estero Boulevard Corridor Analysis and Design
Lee County, FL

3.0 IDENTIFICATION OF POSSIBLE PILOT SECTIONS

3.1 Location of Potential Pilot Sections

The project assignment included the selection of a pilot roadway segment for design. In order to complete the project assignment, the Estero Boulevard corridor was divided into six roadway segments. These roadway segments were approximately one-mile in length, starting with Section 1 at the south end of the corridor and ending with Section 6 at the north end of the corridor. It is worth mentioning that these six segments did not coincide with the six roadway sections outlined in the Estero Boulevard Streetscape Master Plan. Further, it should also be noted that an approximate one-mile section at the northern end of the project, referred to as the "North End" by the Estero Boulevard Streetscape Master Plan, was excluded from consideration as a pilot section since a project is currently underway at this location. **Figure 2** shows the location of the six roadway segments for analysis and design consideration relative to the six roadway segments from the Estero Boulevard Streetscape Master Plan.

3.2 Evaluation Criteria

Several preliminary evaluation criteria were developed in an effort to provide a reasonable evaluation of the six roadway sections and determine the most appropriate pilot segment for analysis and design. The criteria included the following: Safety, mobility, design issues, utilities, landscape features, right-of-way, permitting, constructability and community.

3.2.1 Safety

The criteria evaluated as part of safety features included sidewalk lengths, bike-path lengths, number and types of crosswalks, lighting and crash information.

3.2.2 Mobility

Mobility criteria included the evaluation of the number of public-parking areas, bus stops, bicycle parking, side-street parking and driveway locations.

3.2.3 Design Issues

The criteria analyzed as part of the design issues criteria consisted of the number and length of turn lanes, site-distance issues, pedestrian and vehicle traffic volumes, number of typical cross sections, pavement conditions and water-quality treatment opportunities.

3.2.4 Utilities

The evaluation criteria regarding to utilities included identification of the existence of, or lack of, sewer systems, water, gas, the location of communication and power sources, and the number of drainage areas.

3.2.5 Landscape Features

Landscape features criteria consisted of the availability of irrigation systems, number of benches, condition and existence of pavers, number of tree wells and number of transit shelters.

3.2.6 Right-of-Way

The criteria evaluated as part of the right-of-way (ROW) included estimated impacts and constraints, width, and the presence of suspected ROW encroachments.

3.2.7 Permitting

Permitting criteria consisted of determining whether or not the permitting areas were coastal conversation areas, Federal, State, County or Town areas. Further, it also entailed determining whether the right-of-way ownership was Town, County or state.

3.2.8 Constructability

Several criteria were evaluated as part of the constructability of the roadway section. These included construction cost, maintenance of traffic (MOT) complexity, number or businesses and residents, total number of parcels, number of easement opportunities, number or water quality treatment opportunities, and night-time construction opportunities.

3.2.9 Community

Community criteria included number of churches, child-care facilities, nursing homes, fire stations/emergency centers, other public services and impacts on cultural/historic resources. Further, criteria also included the determination of public park impacts and environmental areas.

4.0 DATA COLLECTION & ANALYSIS

4.1 Field Review & Roadway Characteristics

Field reviews were conducted to obtain relevant roadway characteristics. These included, but were not limited to, roadway geometries, speed-

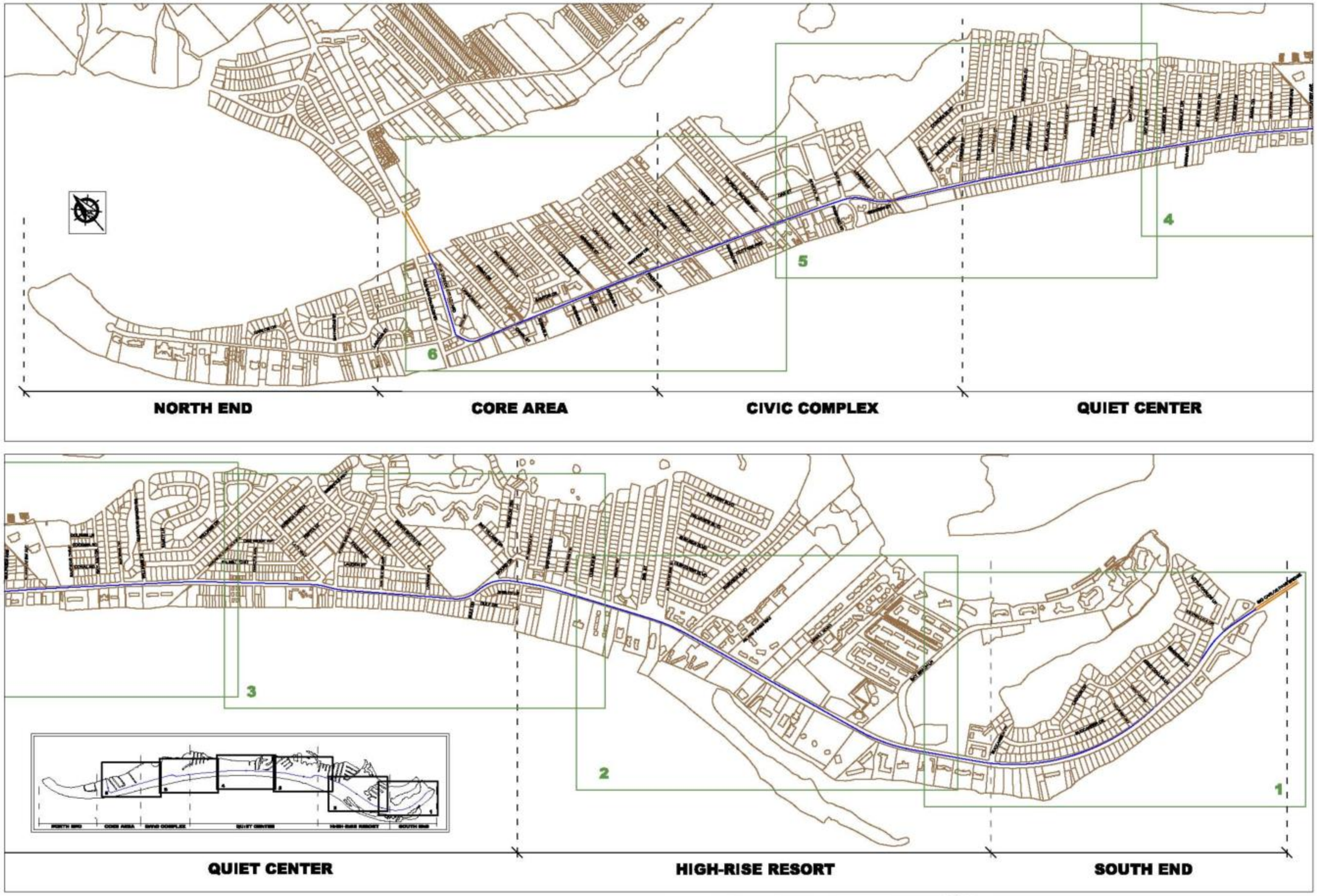

Figure 2
Corridor Sections
Estero Boulevard Corridor Analysis and Design
Lee County, FL

limit information, jurisdiction, area photographs, and the location of access connections, bus stops, traffic signals, pedestrian crosswalks and bicycle paths. From the data gathered, it was determined that the island currently contains approximately 0.3 miles of bike and walking paths along the south side of Estero Boulevard and approximately 6.3 miles along the north side of Estero Boulevard. Field review photographs of the corridor are attached in Appendix B.

4.2 Aerial Photography

The project site location was flown on two occasions to obtain the most current aerial photography. These aerial photographs will be utilized as the basis for developing photogrammetric survey data for the phase II design efforts.

4.3 Traffic Volume Data

Existing (2008), seventy-two hour automatic traffic recorder (ATR) counts were collected by McMahon from January 15, 2008 through January 17, 2008 along the Estero Boulevard corridor. In addition, turning-movement counts were also collected at the intersection of San Carlos Boulevard and Fifth Street on January 15, 2008 for AM and PM peak hours. From the collected data, it was determined that daily traffic, along Estero Boulevard ranges between approximately 9,200 and 19,200 vehicles per day. Daily variations of traffic were also determined from the collected data and were summarized using histograms. The collected data and histograms are included in **Appendix C**.

Morning, midday and evening peak-hour volumes were also determined. **Figure 3** and **Figure 4** graphically depict existing 2008 traffic counts for the northern and the southern portions of the corridor, respectively. From the graphics, it is evident that the traffic volumes observed along the northern portion of the island are significantly greater than the traffic volumes observed along the southern portion of the island. This is expected since the northern portion of Estero Boulevard includes significant retail establishments, whereas the southern portion of the island is mostly residential.

4.4 Traffic Projections

In an effort to more appropriately determine the proposed design features for the Estero Boulevard corridor, future (2030) traffic projections were determined from a review of various sources. These include the following:

- Trend analyses using ten-year, historical traffic data for count stations along the corridor.
- Growth rate between Year 2000 Validation Year and Year 2030 Florida Standard Urban Model Structure (FSUTMS).
- Comparison of socio-economical, Zonal Data (ZDATA) between Year 2000 Validation Year and Year 2030 FSUTMS.

After a review of the growth rates obtained from the above-mentioned methodologies, it was determined that the growth rates obtained as a result of the comparison of socio-economical data were the most conservative and appropriate to use in projecting future (2030) traffic for the corridor. From the analysis, minimal growth, of approximately one (1) percent or less, is anticipated throughout the corridor for future traffic conditions. This is expected since the area is essentially built out. **Appendix D** includes the Design Traffic Memorandum, which summarizes the traffic forecasting effort. **Figure 5** and **Figure 6** graphically depict the future (2030) traffic volumes for the northern portion and the southern portion of the corridor, respectively.

4.5 License-Plate Survey

It was suspected that a considerable number of vehicles from north of the Estero Island use Estero Boulevard to access I-75 via Bonita Beach Road. To verify the actual trip patterns on the Estero Island, origins and destinations of the trips needed to be identified. For this effort, an Origin-Destination (O-D) Study was performed to estimate the pass-by traffic through the Estero Island to US-41 via Bonita Beach Road. Four locations were selected along Estero Boulevard for collecting the license plate information. The license-plate data was collected using digital voice recorders.

To determine the travel characteristics for peak as well as the off-peak hours, license-plate data was collected, on January 16, 2008, for both directions of travel and for eight total hours including 2 hours (7:00 AM to 9:00 AM) during the AM peak period, 2 hours (11:00 AM to 1:00 PM) during the Mid-day peak period, 2 hours (4:00 PM to 6:00 PM) during the PM peak period, and 2 off-peak hours (9:30 AM to 10:30 AM, and 2:00 PM to 3:00 PM). The collected data was subsequently analyzed. Results of the analysis indicated that the majority of the traffic in the Estero Island is

TRAFFIC COUNT LOCATIONS

1. North End of MATANZAS Bridge
2. NW of LAGOON St.
3. NW of OHIO Ave.
4. NW of DONORA Blvd.
5. NW of SANDERS Dr.

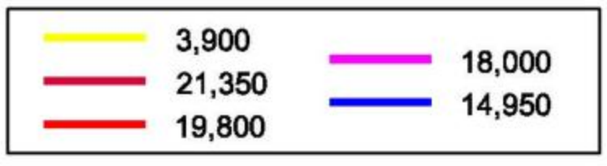

Figure 3
Existing (2008) Traffic Counts - Northern Portion of Corridor
Estero Boulevard Corridor Analysis and Design
Lee County, FL

XX - AM Peak Hour Volumes
[XX] - Noon Peak Hour Volumes
(XX) - PM Peak Hour Volumes

ESTERO Boulevard

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

TRAFFIC COUNT LOCATIONS

5. NW of SANDERS Dr.
6. NW of FLAMINGO St.
7. NW of LENNEL Rd.
8. NW of BUCCANEER Dr.
9. West End of SAN CARLOS Bridge

AADT Volumes

14,150	9,750
11,500	9,200

Figure 4
Existing (2008) Traffic Counts - Southern Portion of Corridor
Estero Boulevard Corridor Analysis and Design
Lee County, FL

XX - AM Peak Hour Volumes
[XX] - Noon Peak Hour Volumes
(XX) - PM Peak Hour Volumes

ESTERO Boulevard

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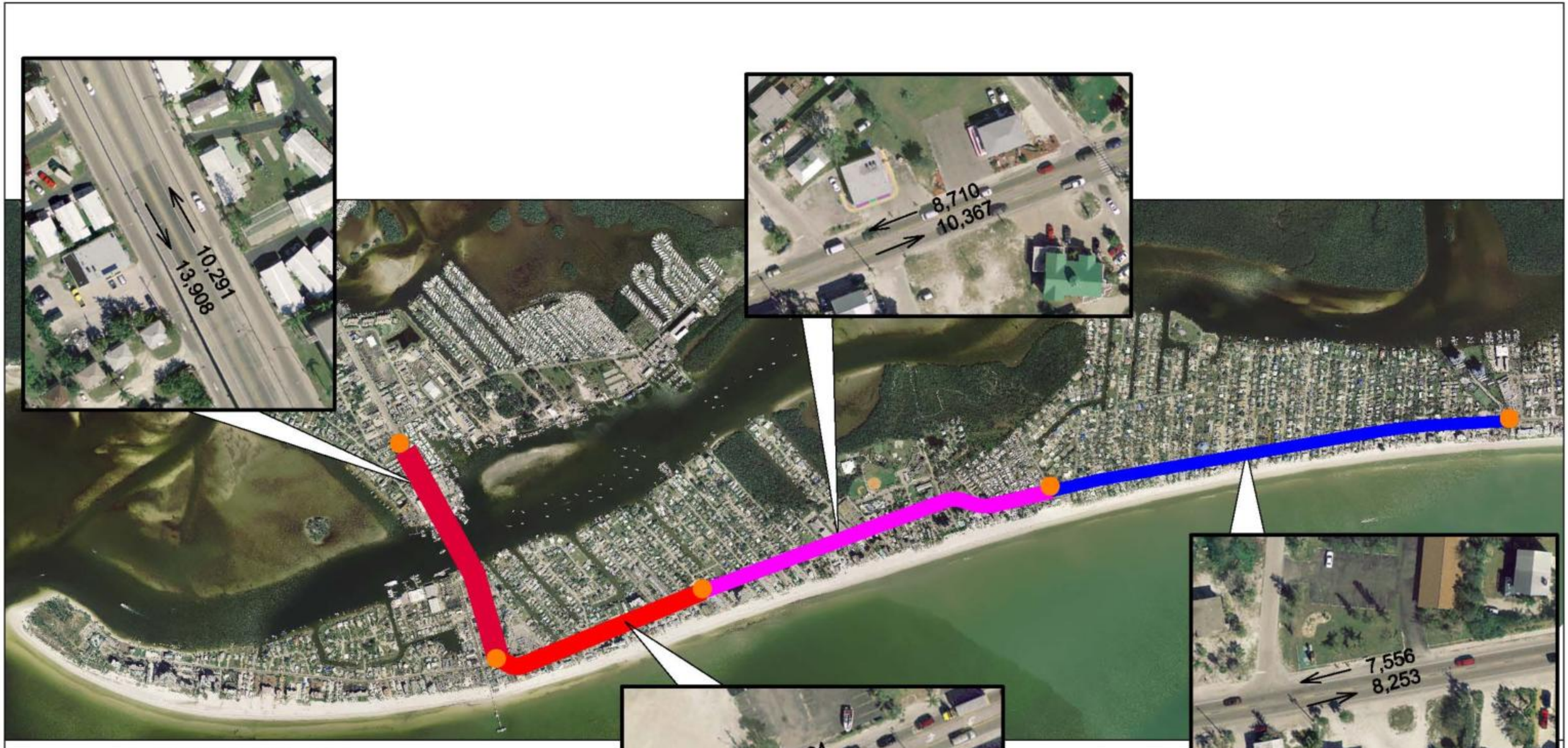


Figure 5
Future (2030) Traffic Volumes - Northern Portion of Corridor
Estero Boulevard Corridor Analysis and Design
Lee County, FL

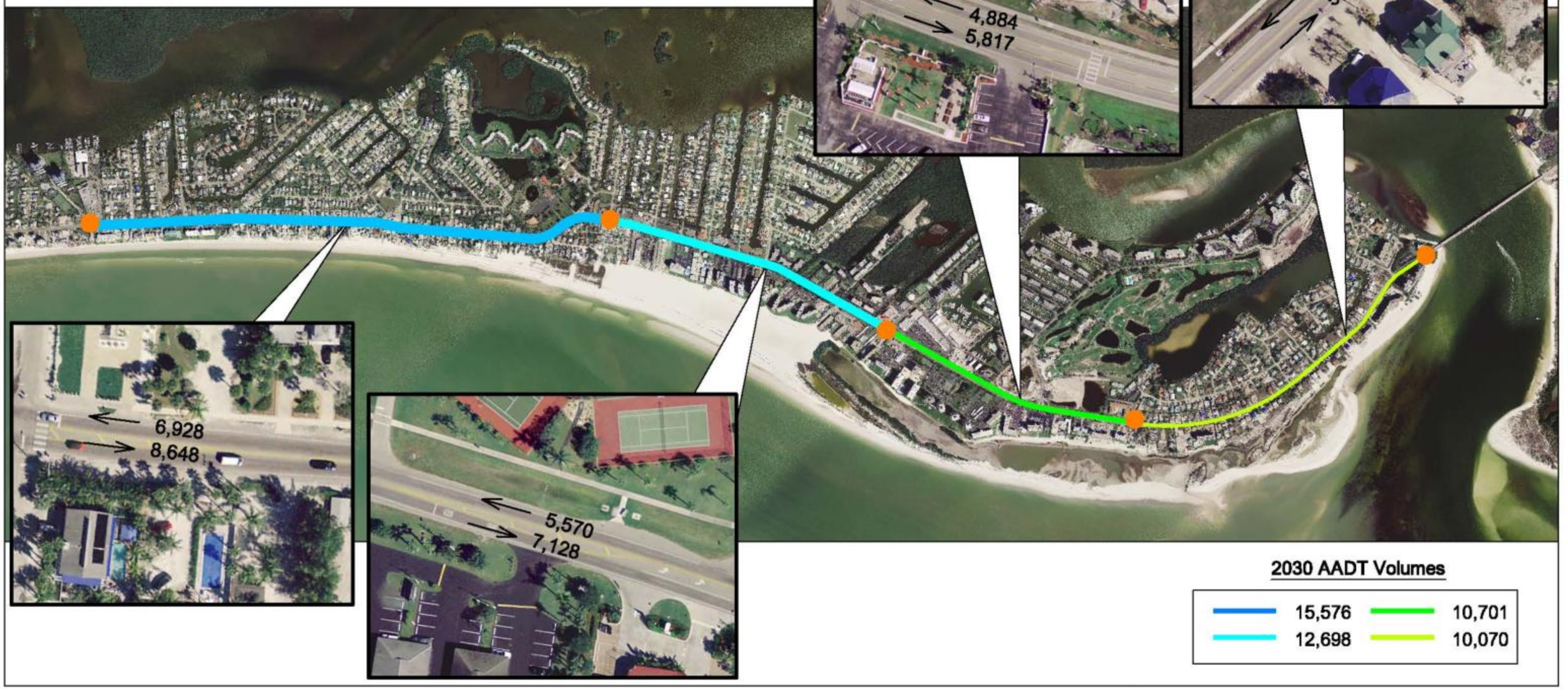


Figure 6
Future (2030) Traffic Volumes - Southern Portion of Corridor
Estero Boulevard Corridor Analysis and Design
Lee County, FL

primarily local-based and only a small percentage of it is "cut-through" traffic. The analysis results indicate that, in the AM peak period, 4.32% of the eastbound traffic and 4.40% of the westbound traffic passes through the island. During the midday peak period, 5.37% of the eastbound traffic and 10.08% of the westbound traffic passes through the island, while in the PM peak period, 5.34% of the eastbound traffic and 9.18% of the westbound traffic passes through the island. In the Off-peak period, 4.56% of the eastbound traffic and 9.96% of the westbound traffic passes through the island. More detailed information regarding the study methodology, data collection and results can be obtained from the License-Plate Survey Report.

4.6 Accident Information

Since pedestrian and vehicle safety along Estero Boulevard is a concern for Town residents and visitors, crash data was obtained for 2005, 2006 and from January through September of 2007. From the collected data, it was determined that there were 96 accidents along the corridor in 2005. While the total number of accidents reduced from 96 to 84 in 2006, the number of pedestrian-related and bicycle-related accidents actually increased. This is a growing concern since significant pedestrian and bicycle volumes can be observed throughout the corridor.

In 2004, six pedestrian/bicycles accidents occurred along the corridor. The number of pedestrian/bicycles accidents increased to eight in 2005 and to 13 in 2006. For the nine months data was collected in 2007, the same number of pedestrian/bicycle accidents was observed as in 2006. The increasing number of accidents between motorists and pedestrians/bicycles indicates degradation in the safety along the corridor.

From the data gathered, three-year, historical data was estimated. Results indicate the following number of accidents for the three-year period: Section 1: 15 accidents; Section 2: 25 accidents; Section 3: 29 accidents; Section 4: 34 accidents; Section 5: 44 accidents; Section 6: 97 accidents.

From the crash information and the existing daily counts information, annual average crash rates were determined, per million vehicle miles per year, for each corridor section. Results include the following: Section 1: 1.51; Section 2: 1.98; Section 3: 1.98; Section 4: 2.27; Section 5: 2.47; Section 6: 4.05. From the sectional crash information, it is evident that a greater number of accidents have occurred along the northern portion of the corridor, where volumes are significantly higher, when compared to the southern portion of the island. While the number of crashes, and the crash rates, may appear high, they are lower than the statewide average rates for similar facility types.

Figure 7 graphically shows the accident type and location for the historical three-year period. The gathered, crash-data information is included in **Appendix E**.

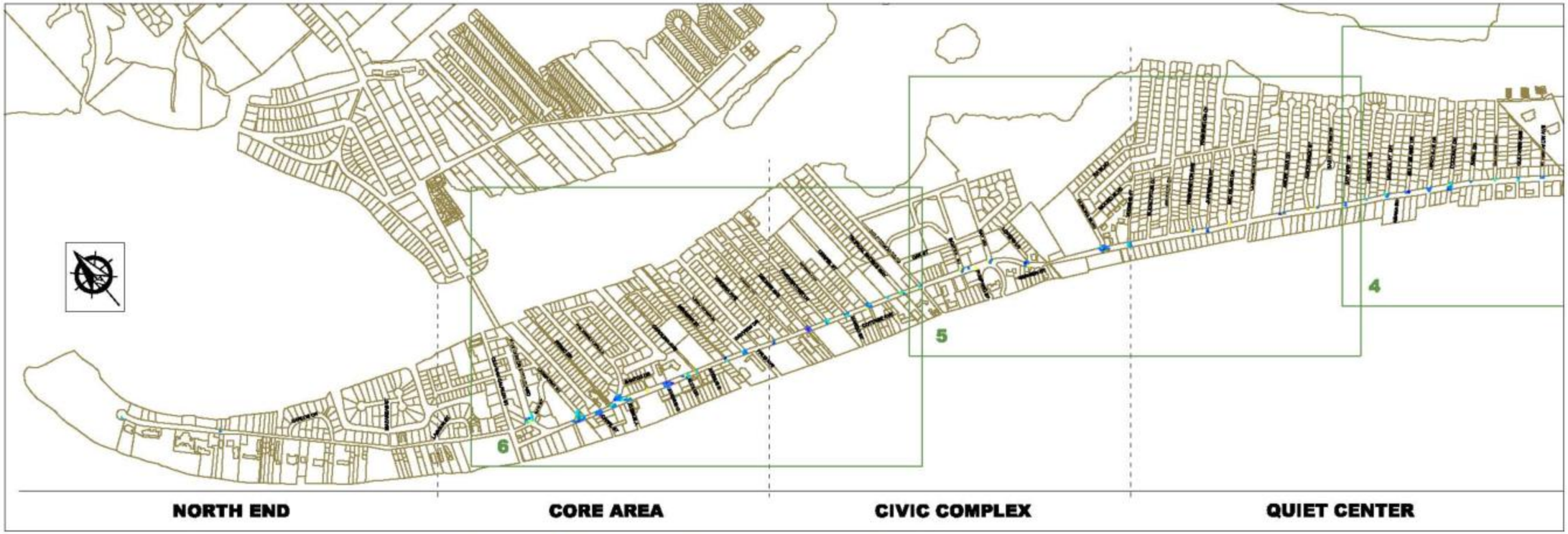
4.7 Transit

Public transportation on Estero Boulevard is limited to a fixed-route bus service and an on call service for disabled persons. Both operations are provided by the County's transit authority, LeeTran. A Beach Trolley, from Bowditch Park to Lovers Key State Park, circulates Estero Boulevard every 30 minutes between 6:20 AM and 9:50 AM, and every 12 minutes from 10:10 AM to 9:55 PM, in each travel direction. Another bus route, Summerlin Square Park and Ride, provides an additional connection between Lee County and the Island. During 2007, 350,750 travelers used the Beach Trolley. The transit routes for the area are included in **Appendix F**.

From field reviews, it was determined that approximately 73 bus stops currently exist throughout the Estero Boulevard corridor. The number and type of bus stops, per section, are summarized in **Table 1**. From the collected information, and from the field reviews, it is evident that the bus-stop locations are unevenly spaced throughout the corridor. The greatest number of bus stops appear to be located though section 4, in both the northbound and southbound travel directions.

TABLE 1
NUMBER AND TYPE OF BUS STOPS
ESTERO BOULEVARD ANALYSIS AND DESIGN PROJECT

SECTION	NORTHBOUND			SOUTHBOUND		
	TOTAL STOPS	BENCHED STOPS	PULL-OUT STOPS	TOTAL STOPS	BENCHED STOPS	PULL-OUT STOPS
1						
2	3	0	0	3	2	0
3	9	6	0	7	4	0
4	15	7	1	13	7	1
5	9	8	3	7	4	0
6	3	1	0	4	2	0
TOTAL	39	22	4	34	19	1



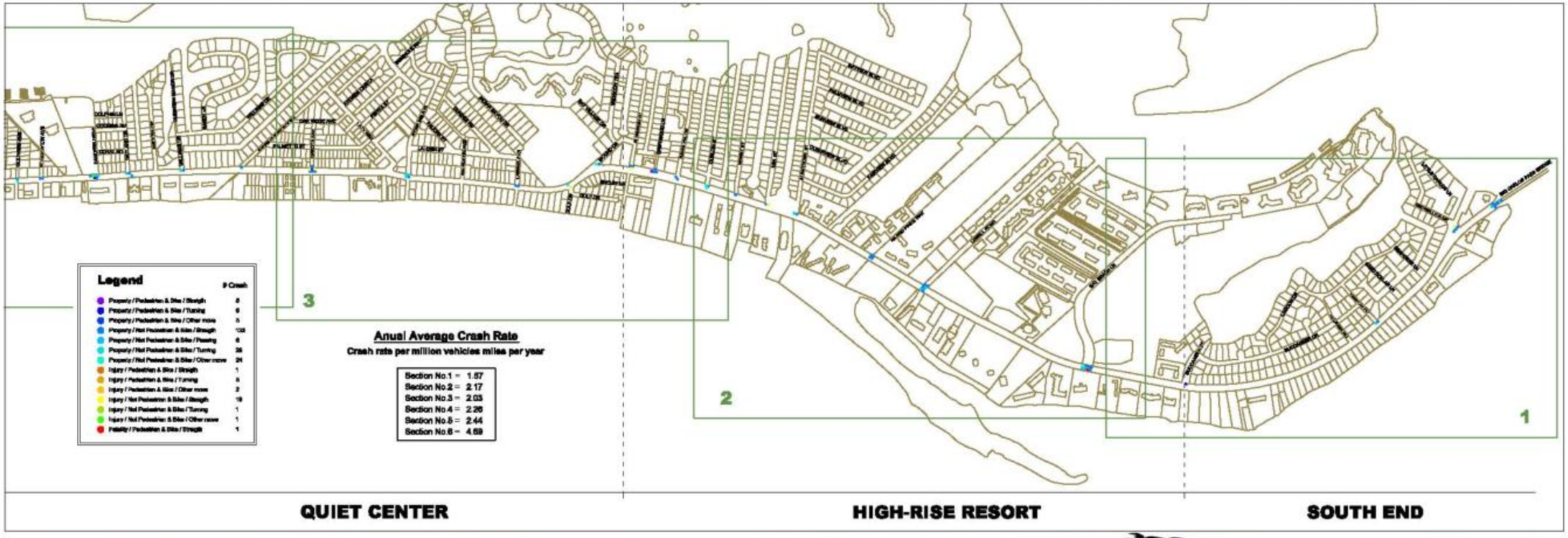


Figure 7
Crash Information (2005-2007)
Estero Boulevard Corridor Analysis and Design
Lee County, FL

4.8 Right-of-Way

In order to estimate the available ROW along the Estero Boulevard corridor, surveyors for the project reviewed the historical documents and plats. From their investigation, it was estimated that the ROW widths, along the corridor, range between 50 feet and 100 feet, with several transition areas of unknown widths.

Figures 8-13 graphically depict the estimated ROW for Section 1, Section 2, Section 3, Section 4, Section 5 and Section 6, respectively. From field reviews, it was believed that some existing ROW areas are currently being utilized by Town residents for building structures, parking and other uses. Based on this information, ROW encroachment is expected within all segments of the Estero Boulevard corridor.

4.9 Utilities

An inventory was performed to determine the existing utilities located along the Estero Boulevard Corridor. **Table 2** summarizes the list of utilities for the corridor. Efforts are currently underway to obtain the location and other relevant information regarding the utilities for use during the phase II design efforts. Boyle Engineering Corporation (Boyle) performed an analysis of the water system along the Estero Boulevard corridor. The analysis methodology and findings were summarized in the Evaluation of Existing Water Distribution System of the Town of Fort Myers Beach report, dated February 14, 2008. Existing and future conditions were examined for analysis purposes. Results of their evaluation indicated that, while a water system currently exists throughout the corridor, upgrades to the system are necessary and are, therefore, proposed throughout the corridor. Upgrades are expected to be performed along the corridor in four phases as follows:

- Phase I: South End to Albatross Street
- Phase II: Chapel Street to North End
- Phase III: Strandview Avenue to Tropical Shores Way
- Phase IV: Ibis Street to Bayland Road

The Town staff has indicated their desire to include water system updates in the pilot project efforts. Discussions are also ongoing with Lee County Utilities to upgrade their sanitary sewer system simultaneously.

4.10 Transportation Plans

As previously mentioned, the Estero Boulevard Streetscape Master Plan, was drafted in June 2000, in accordance with Town goals outlined in the Comprehensive Plan and the vision of Town residents. The plan divided the seven-mile corridor into six geographical areas. These include the following: North End, Core Area, Civic Complex, Quiet Center, High-Rise Resort and South End. Improvements for the North End are currently under design, with construction anticipated to begin in late 2008. Pedestrian and vehicle design elements were proposed for each of the remaining five sections. The report summarized existing conditions along each section of the corridor and proposed specific design elements for the same. Since available ROW varies throughout the corridor, roadway cross sections were developed for each of the roadway sections. Design elements proposed throughout the corridor were based on information obtained from the Estero Boulevard Streetscape Master Plan.

TABLE 2
LIST OF UTILITIES
ESTERO BOULEVARD ANALYSIS AND DESIGN PROJECT

FIRST NAME	LAST NAME	COMPANY	BUSINESS ADDRESS	CITY	STATE	ZIP CODE
MELVIN	FISHER	BONITA SPRINGS UTILITIES, INC.	11860 E TERRY ST	BONITA SPRINGS	FL	33133-2368
MARK	COOK	COMCAST	26102 BONITA GRANDE DR	BONITA SPRINGS	FL	34135
KELLY	STARNES	WOODARD & CURRAN, INC.	2801-I ESTERO BLVD	FORET MYERS BEACH	FL	33931
TRACY	STERN	FLORIDA POWER & LIGHT	425 N WILLIAMSON BLVD	DAYTONA BEACH	FL	32114
JOE	FOOSE	LEE COUNTY SIGNAL DEPARTMENT	5650 ENTERPRISE PKWY	FORT MYERS	FL	33905
TERRY	KELLEY	LEE COUNTY UTILITIES	1500 MONROE	FORT MYERS	FL	33912
ANGEL	QUANT	PEOPLE GAS - SOUTHWEST	5101 NW 21ST AVE Suite 460	FORT LAUDERDALE	FL	33309
ED	HALL	EMBARQ	2820 CARGO ST	FORT MYERS	FL	33916

4.11 Construction Challenges

Several construction challenges were evaluated in order to determine the best, possible, design improvements for the corridor. Some of the challenges include the following:

- Maintain two directions of traffic at all times: Maintaining continuous travel flow, in both directions, will be a crucial component of the construction phase of the project. Disrupting flow of traffic in either direction would be expected to create serious traffic congestion and safety issues, and is, therefore, undesirable.
- Integrate reconstruction with City Utility Improvement Program: Since utility upgrades are expected throughout the corridor, it is anticipated that the design improvements, proposed as part of this Estero Boulevard Analysis and Design

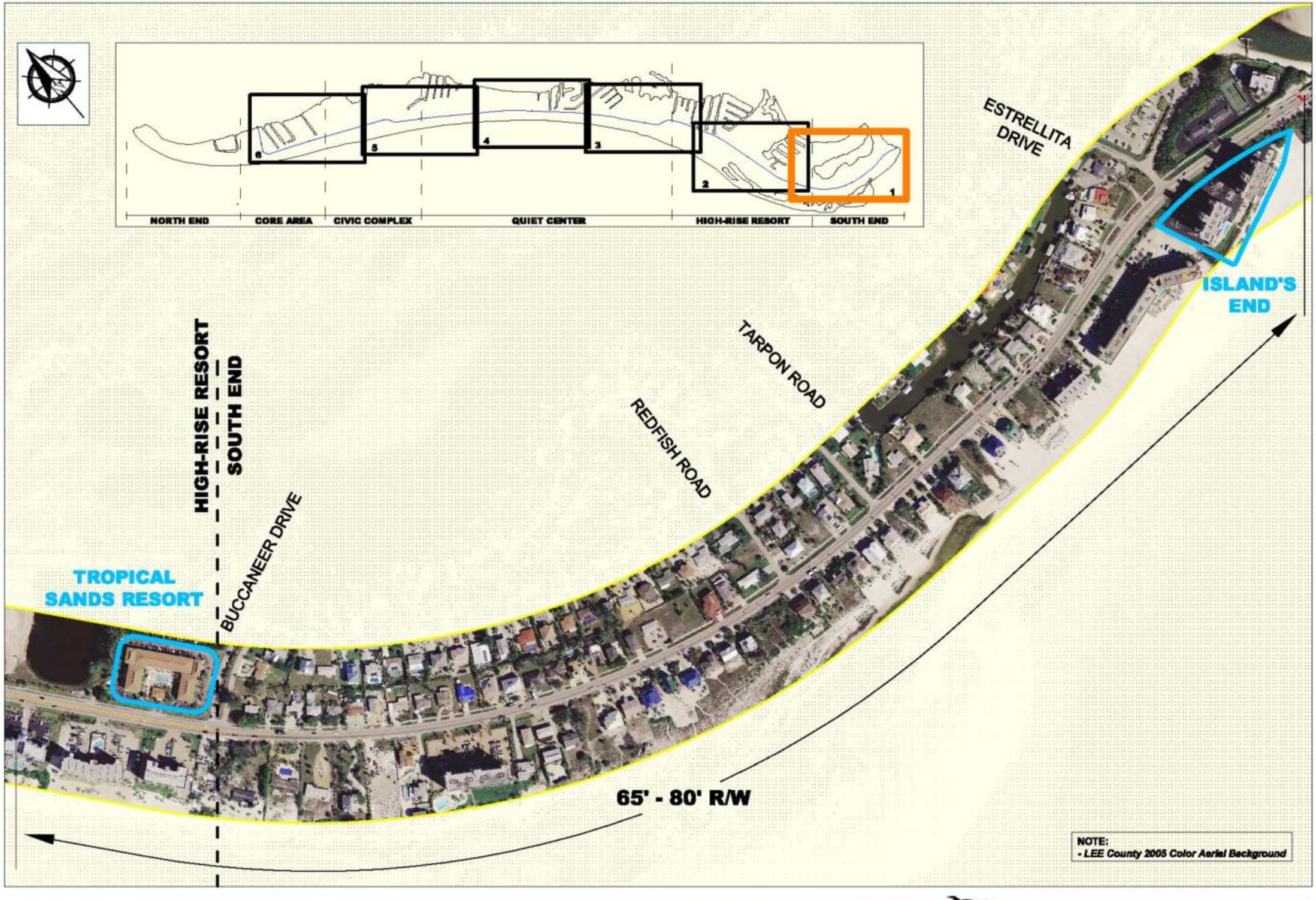


Figure 8
Right of Way Section 1: Buccaneer Dr.- San Carlos Bridge
Estero Boulevard Corridor Analysis and Design
Lee County, FL

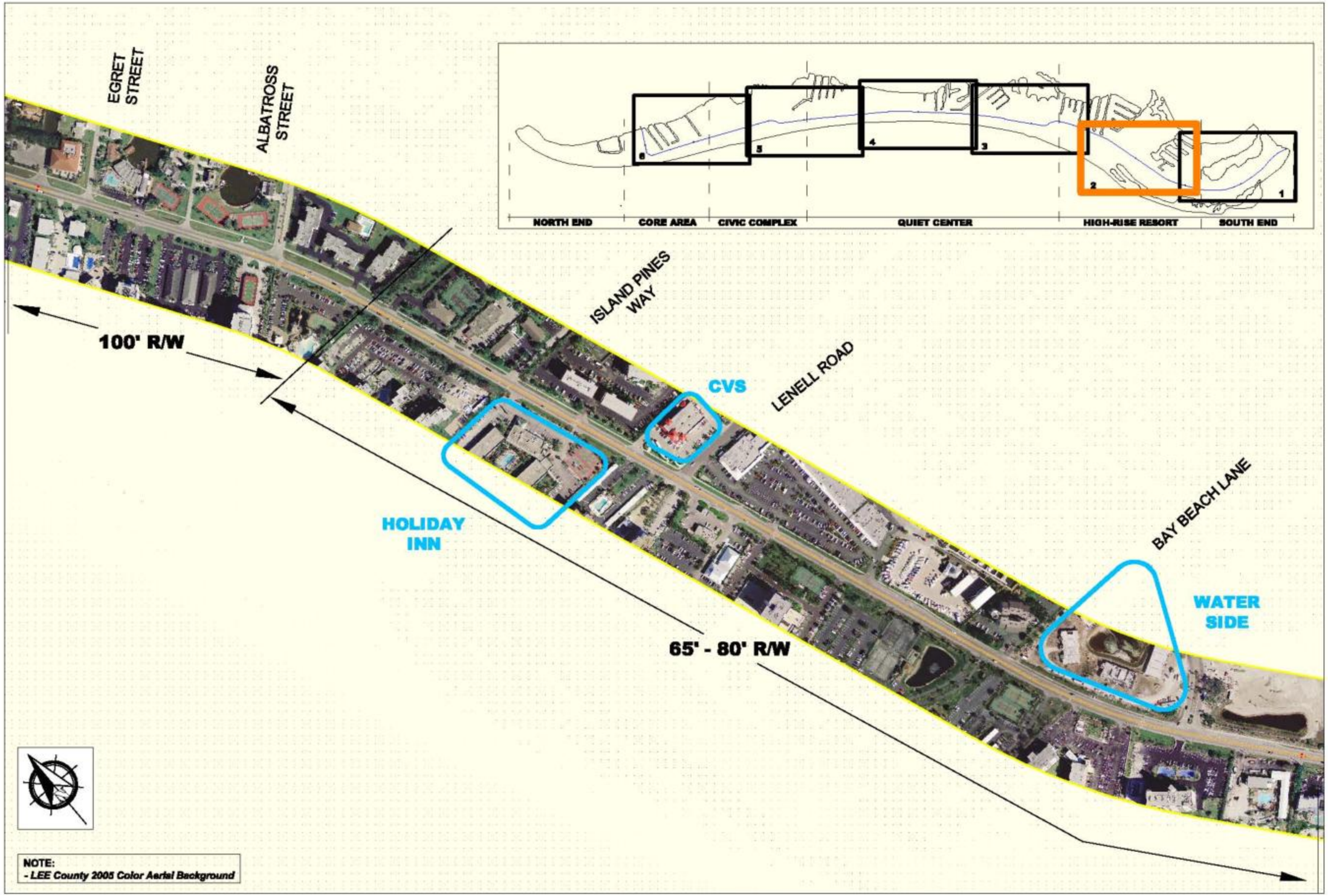
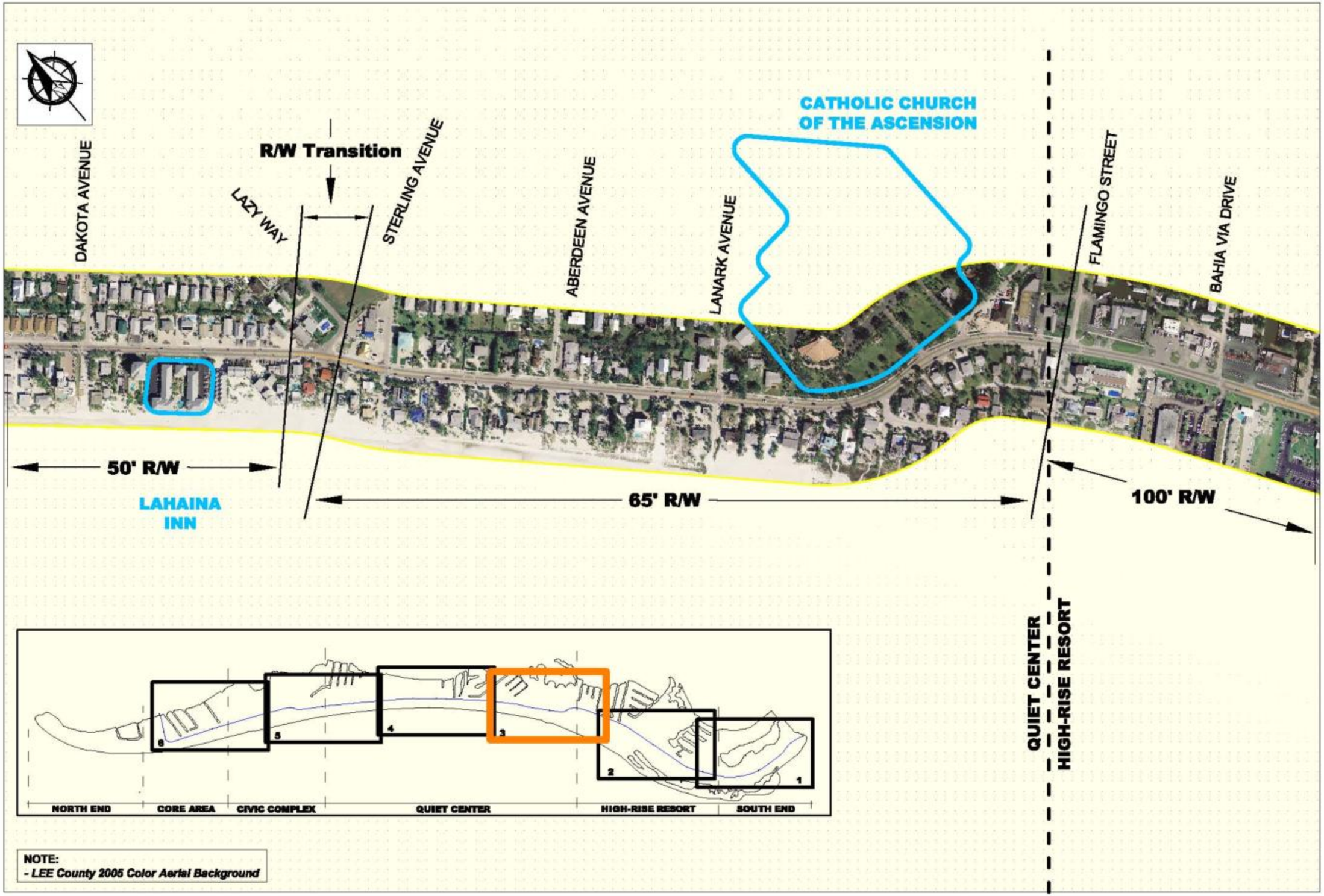


Figure 9
Right of Way Section 2: Curlew St. - Bay Beach Lane
Estero Boulevard Corridor Analysis and Design
Lee County, FL



NOTE:
- LEE County 2005 Color Aerial Background

Figure 10
Right of Way Section 3: Dakota Ave. - Curlew St.
Estero Boulevard Corridor Analysis and Design
Lee County, FL

Figure 11
Right of Way Section 4: Bay Mar Dr. - Avenida Pescadora
Estero Boulevard Corridor Analysis and Design
Lee County, FL

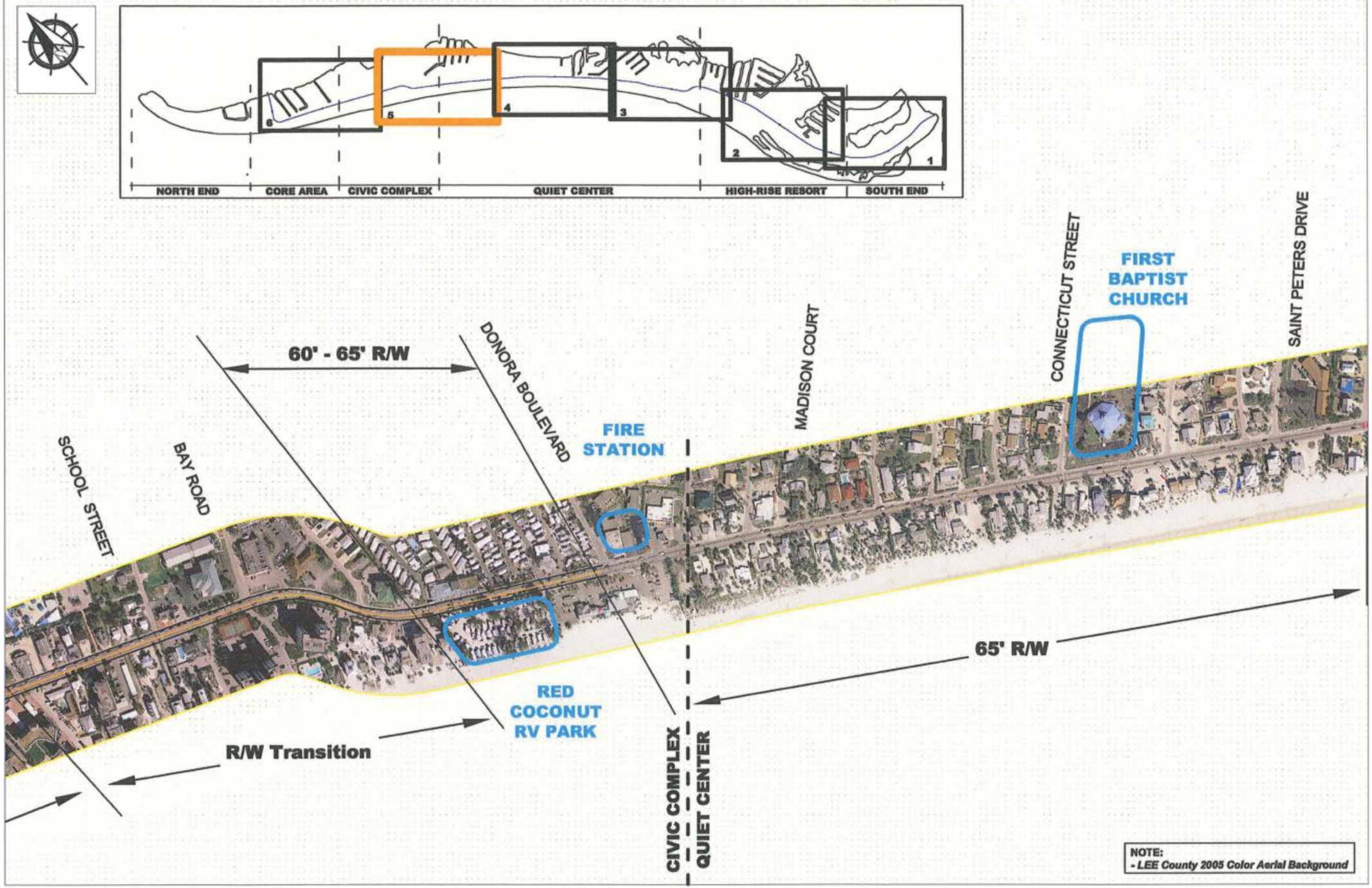


Figure 12
Right of Way Section 1: Gulf Beach Rd.-Bay Mar Dr.
Estero Boulevard Corridor Analysis and Design
Lee County, FL

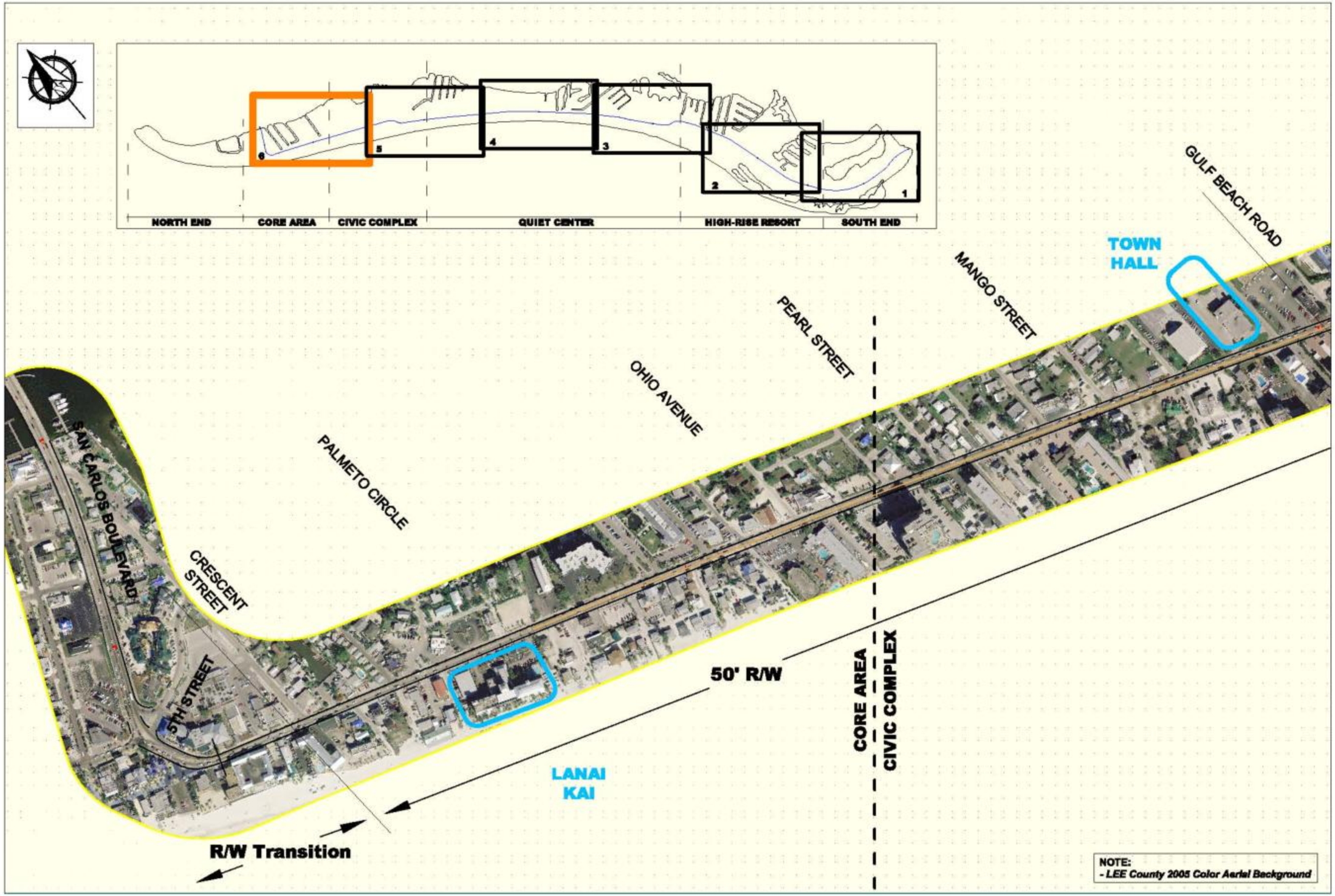


Figure 13
Right of Way Section 6: San Carlos Blvd. - Gulf Beach Road
Estero Boulevard Corridor Analysis and Design
Lee County, FL

Estero Boulevard Analysis and Design Project, will be integrated with the reconstruction of the utilities, where possible, in an effort to minimize the disruption of traffic along the corridor.

By resolving the above-listed, construction challenges, it is expected that impact to businesses, tourism and residents will be minimized.

5.0 FIRST PUBLIC WORKSHOP

5.1 General Information

In an effort to present the general direction of the project to the public, and to obtain public questions/comments regarding the Estero Boulevard corridor, The Town of Fort Myers Beach, in cooperation with Lee County DOT, held the first of two public workshops on Wednesday, March 19, 2008 at the Chapel by the Sea at 100 Chapel Street, Fort Myers Beach.

A flyer announcing the workshop was mailed out to all adjacent property owners and tenants, as listed by the Lee County Property Appraiser, and is included in Appendix G. In addition, two variable message boards, a legal display ad, and a press release advertised the "open house" for the public to attend. There were 145 attendees that signed in at the workshop. In addition to the public, attendees included the Lee County Project Representatives (including consultants), Lee County staff and Town of Fort Myers Beach Staff and elected officials. For background on the project, attendees were first directed to view a brief presentation, included in Appendix G. This presentation played continuously throughout the evening. Display boards depicting the various "segments" of Estero Boulevard, as well as other project information, were available for viewing. The Lee County project team was available to explain the project and to answer questions.

5.2 Public Comments

Approximately 70 comments were received since the beginning of the project and from the workshop and are attached in **Appendix H**. There was not a clear segment chosen by the public as the pilot project, but the public expressed excitement that improvements are planned after many years of study and discussion. Many comments were received about creating a safe corridor for bicycles and pedestrians. There were many different ideas as to how this would be accomplished, but there were suggestions that landscaping be ranked behind bicycle facilities when allocating ROW in design. Since the ROW is so limited in most segments, people thought that bike/pedestrian facilities would be a better use than landscaping. There were also many comments in support of trolley pull-offs to help with rider safety and to help ease congestion. Fewer stops were also thought to help with congestion along the Boulevard. The public requested that the center, turn lane remain and there not be median strips that would create more U-turns.

5.3 Conclusions and Recommendations

While no specific corridor section was selected by the public, it was concluded that there is significant public support for the project.

6.0 COMMUNITY MEETING #1

6.1 General Information

On April 10, 2008, a presentation was made to the Greater Fort Myers Beach Chamber of Commerce at the Pink Shell Resort. The same presentation that was utilized for the first public workshop was utilized for this meeting. There were approximately 100 people in attendance. The organization consisted of representatives of the business, retail and hotel industry and they are very supportive of the project. Project team attendees included Rob Phelan, Lee County DOT; Mike Spitz, McMahon; Kris Cella, Cella Molnar & Associates; Jack Green, Public Works Director of the Town of Fort Myers Beach.

6.2 Public Comments & Recommendations

Elements important to the Chamber include landscaping, good maintenance of traffic, trying to complete the construction with impacts to one tourist season only, and selecting a pilot project in an area of the island that everyone will be able to see; i.e., civic complex.

7.0 BIKE AND PEDESTRIAN ACTION COMMITTEE (BPAC) MEETING

7.1 General Information

In April 2008, a presentation was made to the Bike and Pedestrian Action Committee (BPAC) at Lee County offices. The same presentation that was utilized for the first public workshop was utilized for this meeting, with additional information regarding roadway cross sections and estimated right-of-way information. The presentation is included in **Appendix I**. The Lee County Project Manager for the Estero Boulevard Analysis and Design Project, Rob Phelan, was present at the meeting.

7.2 Comments & Recommendations

The meeting was held to inform the committee of the project progress.

8.0 COMMUNITY MEETING #2

8.1 General Information

On April 30, 2008, a meeting was held for the representatives from homeowners' groups in Fort Myers Beach at the Town of Fort Myers Beach Town Council Chambers. A flyer was mailed out to the community stakeholders, including the Fort Myers Beach Homeowners' Association, announcing this community meeting. Follow-up phone calls and e-mails were also made to remind residents of the presentation. There were four people in attendance from the public. The project team members that were present included Rob Phelan, Lee County DOT; Mike Spitz, McMahon; Kris Cella & Jennifer Dorning, Cella Molnar & Associates; Jack Green, Public Works Director of the Town of Fort Myers Beach. A presentation was planned for the meeting, but due to the size of the group, the meeting was more of a question and answer format that led to many discussions.

8.2 Public Comments & Recommendations

When discussing the segments to be considered as the pilot project, a strong argument was made to do a segment with fewer design challenges so that the public would see it and have "buy-in" for the remaining segments of the project. The bicycle lanes were again an important topic. Residents want them in both directions, with possibly getting right-of-way through development negotiations, especially along the north end of the project. A comment was made to possibly have "valley gutters" since those are safer when bicyclists need to move off of the roadway. There was also the comment that, with "valley gutters", the sand may encroach on the roadway. Americans with Disabilities Act (ADA) standards were discussed in regards to current requirements, possible upcoming changes to those requirements, and how they could affect this project. This also led to a discussion of underground utilities. The public questioned whether or not it was desirable to place the power lines underground given the required funding to do so. Other comments made during the meeting included not to give up the turn lane for a bike path, the desire for a turn lane in every section, and that Lee County should help shoulder the costs of these improvements. Attendees were worried about the businesses in the civic and core areas during construction. A member of the public-safety task force suggested that we look at grants such as the "Safe Route to School" grant, for more funding opportunities.

9.0 COMMUNITY MEETING #3

9.1 General Information

On May 9, 2008, a presentation was made to representatives of Fort Myers Beach Civic Organizations at the Town of Fort Myers Beach Town Council Chambers. A flyer was mailed out to the community stakeholders announcing this community meeting. Follow-up phone calls and e-mails were also made to remind residents of the presentation. Attendees included five representatives and three Fort Myers Beach Police Officers. The project team members that were present included Rob Phelan, Lee County DOT; Mike Spitz, McMahon; Kris Cella & Jennifer Dorning, Cella Molnar & Associates; Jack Green, Public Works Director of the Town of Fort Myers Beach.

9.2 Public Comments & Recommendations

Multiple attendees thought that the south end should be selected as the pilot project since the Times Square area and Seafarer's Village will be going through changes from private development. They also believed that the south end would have the least impact on traffic. However, it was also mentioned that by completing the south end first, none of the problems will be solved at the north end, which is the first area people see when coming over the bridge. Trolley pull-offs were again discussed, as well as the elimination of some of the trolley stops. When discussing the trolley stops, it was mentioned that the benches with advertising may be under contract and need to remain. One comment was that there should be a public education campaign to teach people how to use the crosswalks and the trolleys. Trolley-stop improvements, like the implementation of timers to inform patrons of the wait time, were suggested.

The subject of underground utilities was discussed at this meeting. A suggestion was made to possibly bury power lines that cross Estero Boulevard to help with aesthetics. It was also suggested that the Town could encourage property owners to bury their service lines to help the aesthetics of the corridor. This group also made the comment that they want to be sure that there will be sufficient transitions between sections, particularly for bicyclists. Another concern was the curbing along the roadway when bicyclists need an option to go back and forth from road to sidewalk. In closing, these attendees were all notified of the upcoming public information workshop #2, scheduled for June 3, 2008.

10.0 BIKE AND PEDESTRIAN COORDINATION COMMITTEE (BPCC) MEETING

10.1 General Information

In May 2008, a presentation was made to the Bike and Pedestrian Coordination Committee (BPCC) at the Lee County Metropolitan Planning Organization (MPO) offices. The same presentation that was utilized for the BPAC meeting was utilized for this meeting. Attendees of the meeting included the Lee County Project Manager for the Estero Boulevard Analysis and Design Project, Rob Phelan, as well as Kris Cella from Cella Molnar & Associates and Daniel Craig from David Douglas Associates.

10.2 Comments & Recommendations

The meeting was held to inform the committee of the project progress.

11.0 RECOMMENDED PILOT SECTION

11.1 Selection of the Preferred Pilot Section

In order to assist in determining the pilot section for analysis and design, an evaluation matrix was performed, which evaluated the criteria outlined in Section 3 of this report. Results of the evaluation criteria, summarized in **Table 3**, were considered, as well as previous public and agencies' comments in determining the recommended pilot section for analysis and design.

After review of all the available information, the recommended pilot section was a combination of Section 5 and Section 6, from Figure 2, which included portions of the Core Area, Civic Complex and Quiet Center, as described in the Estero Boulevard Streetscape Master Plan. The recommended pilot section is graphically depicted in **Figure 14**. This new section was selected since it was determined to represent the most critical section along the corridor given numerous factors. These include the following:

- Analysis and design of transition areas since various ROW widths exist within the pilot section.
- Minimal ROW widths ranging between 50 feet and 65 feet, with the inclusion of a transition area.
- Presence of an elementary school would require special consideration.
- Limited presence of pedestrian or bicycle facilities.
- Significant number of utility poles, a number of which are located near ROW lines.
- Uneven roadway surface – area ponds after rain.
- Inadequate drainage system - no presence of curb and gutters.
- No presence of landscape areas.
- Limited lighting – perception of unsafe and uncomfortable area to travel through.
- Reduced number of trolley stops.
- Reduced shaded areas for pedestrians.
- High speeding section.
- High pedestrian-traffic zone.
- High crash incidents relative to the corridor.
- Minimal interference with emergency-service providers – fire station and medical centers.

11.2 Conceptual Design Plan

Two sets of improvements are necessary to enhance the aesthetic qualities of the corridor. The first is to improve the safety aspects for motorists, pedestrians, and bicyclists, while the second is to maintain the corridor's ability to function as a regional connector, and evacuation route.

The Town of Fort Myers Beach has included a requirement for pedestrian and bicyclist facilities. Two options are traditionally promoted for bicycle facilities. These include an on-road dedicated bicycle lane, or a multi-use pathway to be shared with pedestrians. The primary issue for the safety of the bicyclist is to weigh the potential conflict at driveways with the risks of sharing a roadway with high-speed traffic. This potential for conflict at driveways is higher at these pathways, since motorists entering and exiting the driveways may not check the pathways for bicycles. However, the potential for injury is greater on a high-speed roadway. In this instance, the pathway is generally considered the safer option. Encouraging the bicyclists to use a multi-use path can also increase the hazard potential for pedestrians, as the pedestrians would be forced to share space with vehicles moving at a substantially higher rate of speed and with far less maneuverability. Unfortunately, pedestrian usage along this corridor is not restricted.

Cross-sectional roadway designs were obtained from the Estero Boulevard Streetscape Master Plan and evaluated to determine their reasonableness and potential implementation along the corridor. **Figure 15** shows the conceptual cross-sections for the Estero Boulevard corridor.

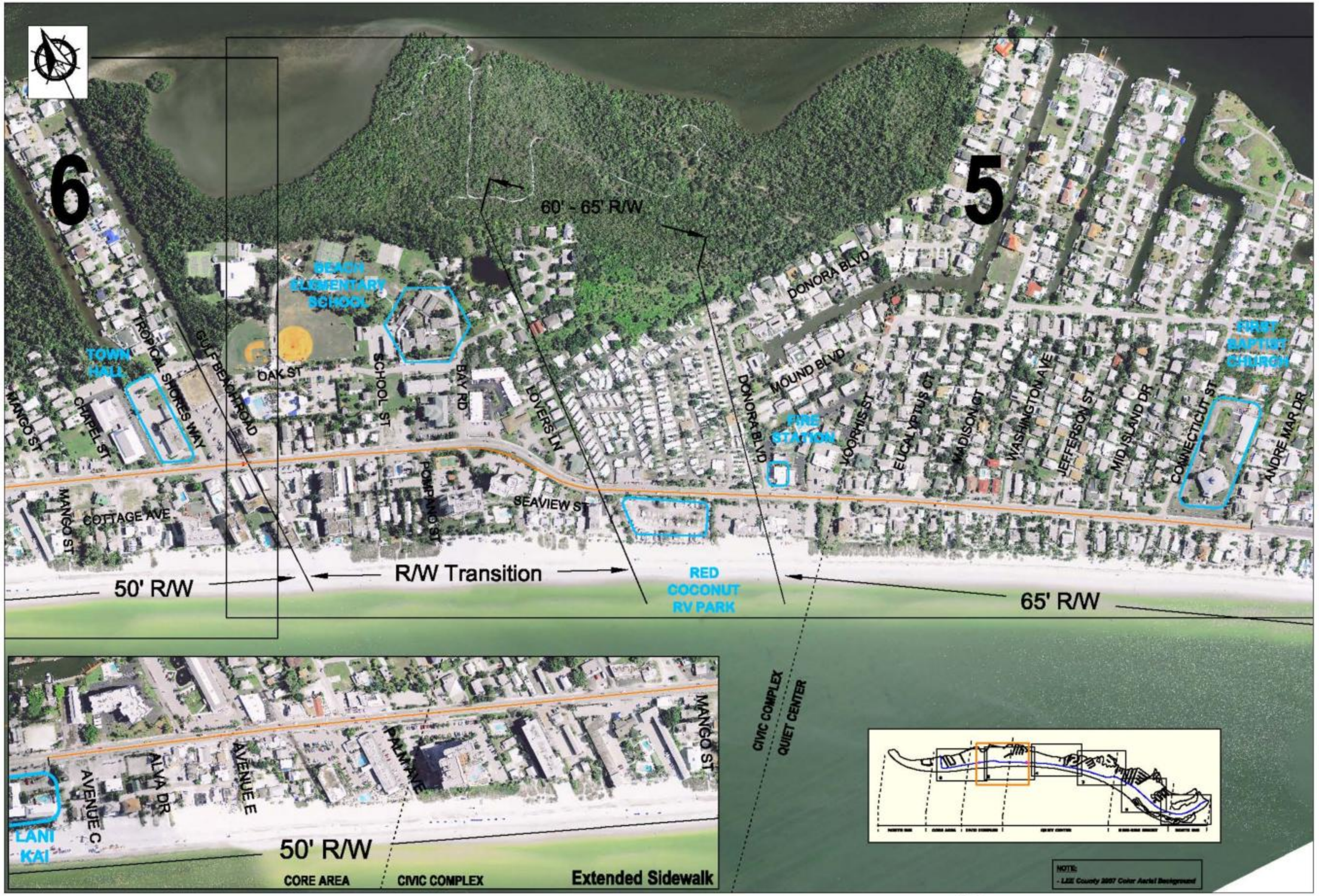
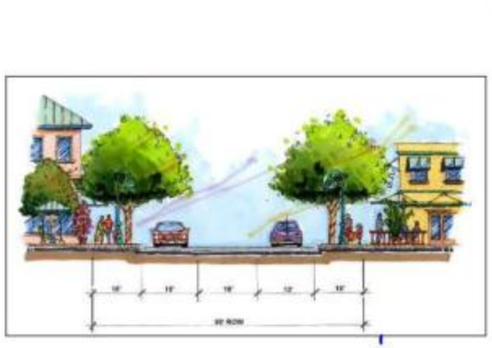
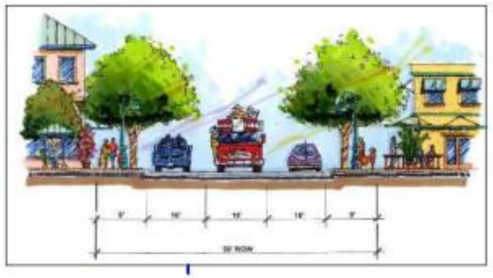


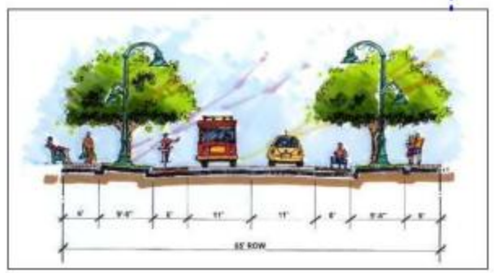
Figure 14
Recommended Pilot Section & Extended Gulfside Sidewalk
Estero Boulevard Corridor Analysis and Design
Lee County, FL

CONCEPTUAL CROSS-SECTIONS

ESTERO BOULEVARD STREETSCAPE MASTER PLAN - Adopted June 12, 2000







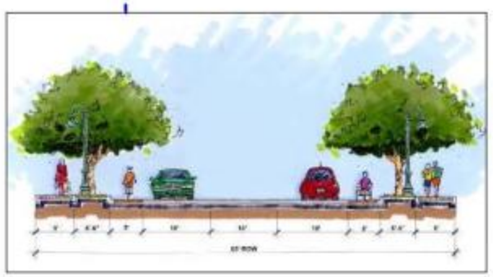


Figure 15
Conceptual Cross-Sections
Estero Boulevard Corridor Analysis and Design
Lee County, FL

TABLE 3

ESTERO BOULEVARD EVALUATION CRITERIA PILOT DESIGN SECTION

EVALUATION CRITERIA	QUANTITATIVE MEASURE	SECTION					
		1	2	3	4	5	6
SAFETY						G=Gulf	B=Bay
Side walks	Side / Length (ft)	B 5500	B 5790	B 5430	B 5250	B 5330	G 1670, B 6116
Bike paths	Side / Length (ft)	0	0	0	0	0	0
Cross walks							
Mainline	Number	1	4	5	2	3	8
Side Streets	Number	0	2	2	0	3	1
Lighting							
Street Light - Cobra Head	Side / Number	B 0, G 20	B 0, G 17	B 0, G 18	B 0, G 18	B 1, G 21	B 4, G 17
Decorative	Side / Number	B 0, G 0	B 4, G 0	B 0, G 0	B 0, G 0	B 0, G 0	B 1, G 16
Crash data & reports	Crash Rate (vehicle miles(10^-6)*year^(-1))	1.57	2.17	2.00	2.28	2.44	4.69
MOBILITY						G=Gulf	B=Bay
Public parking lots & parking areas	Number	0	0	2 of 8	3 of 8	2 of 3	1 of 4
Bus stops	Side / Number	B 3, G 3	B 9 , G 7	B 15, G 13	B 9, G 7	B 15, G 13	B 3, G 4
Bicycle parking spots	Number	0	0	0	0	0	0
Side street	Side / Number	B 2, G 0	B 10 , G 9	B 12, G 7	B 28, G 11	B 10, G 1	B 4, G 0
Driveway	Side / Number	G 51 , B 47	G 28, B 11	G 51, B 43	G 52, B 33	G 55, B 24	G 30, B 27
DESIGN ISSUES						G=Gulf	B=Bay
Lanage	Number, Length (ft)	5 (600 ft)	3 (660 ft)	5 (500 ft)	3 (500 ft)	54 (100 ft)	5 (3274 ft)
Turn lanes	Number, Length (ft)	1 (200 ft)	3 (700 ft)	4 (500 ft)	2 (260 ft)	1 (125 ft)	4 (700 ft)
Sight distance	Number spots less than FDOT standards	0	0	3	2	2	4
Pedestrians	Low / Medium / High	Low	Low	Low	Low	Low	High
Traffic volumes	AADT Projected	11000	11700	15900	15700	17400	23500
Number of typical cross sections	Number / ROW Width (ft)	1 / 65-80	2 / 100, 65-80	3 / 50,65,100	3 / 50, 80, 65	2 / 50, 65	1 / 80
Pavement conditions	Description	Minor Cracks	Minor Cracks Not Smooth	Minor Cracks Not Smooth	Cracks Not Smooth	Cracks Bumpy Patched Parts	Cracks Not Smooth
UTILITIES						G=Gulf	B=Bay
Sewer							
Gravity Sewer	Size	12", 10", 8"	8"	8"	12", 10", 8"	12", 10", 8"	8"
Forcemain	Size	6"	12", 8"	14", 8"	14", 8", 6"	16", 14", 8", 4"	16", 8", 6"
Water	Size	12", 8", 8",4", 2"	16", 12", 10", 8", 6", 2"	16", 12", 6", 2"	16", 10", 6", 2"	16", 10", 8", 6", 2"	18",16", 10", 8", 2"
Gas	Yes / No, Size	No	No	No	No	2400 '- 8 PL I-3 (Gulf)	4800' - 8 PL I-3 (Gulf)
Communication							
Phone	Above/Under - Side	Above - G	Above - G	Above - G	Above - G	Above - G	Under - B
Cable	Above/Under - Side	Above - G	Above - G	Above - G	Above - G	Above - G	Under - B
Power	Side / Number	B 6, G 36	B 2, G 40	B 5, G 36	B 5, G 43	B 7, G 41	B 5, G 29
Existings Ponds	Number	2	4	3	0	1	0
Aerial Utility Service Line Crossings	Number	20	11	18	38	25	22
LANDSCAPE FEATURES						G=Gulf	B=Bay
Benches	Side / Number	B 3, G3	B 9 , G 7	B 15, G 13	B 9, G 7	B 15, G 13	B 3, G 4
Pavers	Yes / No - Good / Bad	No	No	No	No	No	Yes - Good
Tree wells	Number	0	0	0	0	0	20
RIGHT OF WAY (ROW)							
ROW Ownership	County / FDOT	County	County	County	County	County	County & FDOT
Width	Length (ft)	65 - 80	65 - 80 - 100	50 - 65 - 100	50 - 80 - 65	50 - 80 - 65	80 ft
PERMITTING							
Coastal Conservation Areas	Yes / No	Yes	Yes	Yes	Yes	Yes	Yes
Federal Agencies	Yes / No	Yes	Yes	Yes	Yes	Yes	Yes
State Agencies	Yes / No	Yes	Yes	Yes	Yes	Yes	Yes
County Agencies	Yes / No	Yes	Yes	Yes	Yes	Yes	Yes
Town	Yes / No	Yes	Yes	Yes	Yes	Yes	Yes
CONSTRUCTABILITY						G=Gulf	B=Bay
Construction cost	$						
Maintenance of Traffic (MOT) Complexity	Low / Medium / High	Low	Low	Medium	High	High	High
Businesses	Side / Number of Parcels	B 0, G 0	B 42, G 5	B 31, G5	B 1, G 3	B 50, G 7	B49 - G28
Residences	Side / Number of Parcels	B 43, G 35	B 6, G 21	B 31, G 45	B 48, G 36	B 28, G 40	B 3, G 10
Total number of Parcels	Side / Number of Parcels	B 49, G 41	B 15, G 26	B 47, G 51	B 54, G 47	B 58, G 51	B 56, G 41
COMMUNITY							
Churches	Number	0	0	1	0	4	1
Child Care Facilities	Number	1	0	0	0	0	0
Nursing Homes	Number	0	0	0	0	0	0
Fire Station / Emergency Centers	Number	0	0	0	0	1 FS	0
Other public services	Number	0	2	1	0	1	2

For the 50-foot ROW segment of the pilot section, the roadway cross-section includes, for both directions of travel, one 10-foot travel lane, two feet of curb and gutter, trees in grates, and an 8-foot sidewalk. In addition, a 10-foot center turn lane is also provided. For the 65-foot ROW segment of the pilot section, the roadway cross section includes, for both directions of travel, one 11-foot travel lane, a 4-foot colorized shoulder to serve as an unmarked bike path, two (2) feet of curb and gutter, 4.5 feet of green area and six (6) feet of sidewalk. In addition, a 10-foot center turn lane is also provided. The transition between these ROW segments is anticipated to be located at an intersection. A conceptual rendering of the intersection transition area is depicted in **Figure 16.**

11.3 Consideration of Alternative Design Plans

Based on public comments and discussions between relevant agencies, preliminary alternative design plans were also considered. These included the potential for relocation of existing crosswalks in order to optimize their locations, the consolidation of bus stops provided throughout the corridor and the potential for bus pull-offs within the existing ROW along the corridor. For the bus pull-off alternative, the center turn lane could be removed to provide the required width for the bus pull-off area. The area would be equipped with seating, shelter and handicapped ramps. Conceptual layouts of the bus pull-off alternative, for 50 feet of ROW and for 65 feet of ROW, are shown on **Figure 17** and **Figure 18**, respectively.

12.0 TOWN OF FORT MYERS BEACH TOWN COUNCIL WORKSHOP

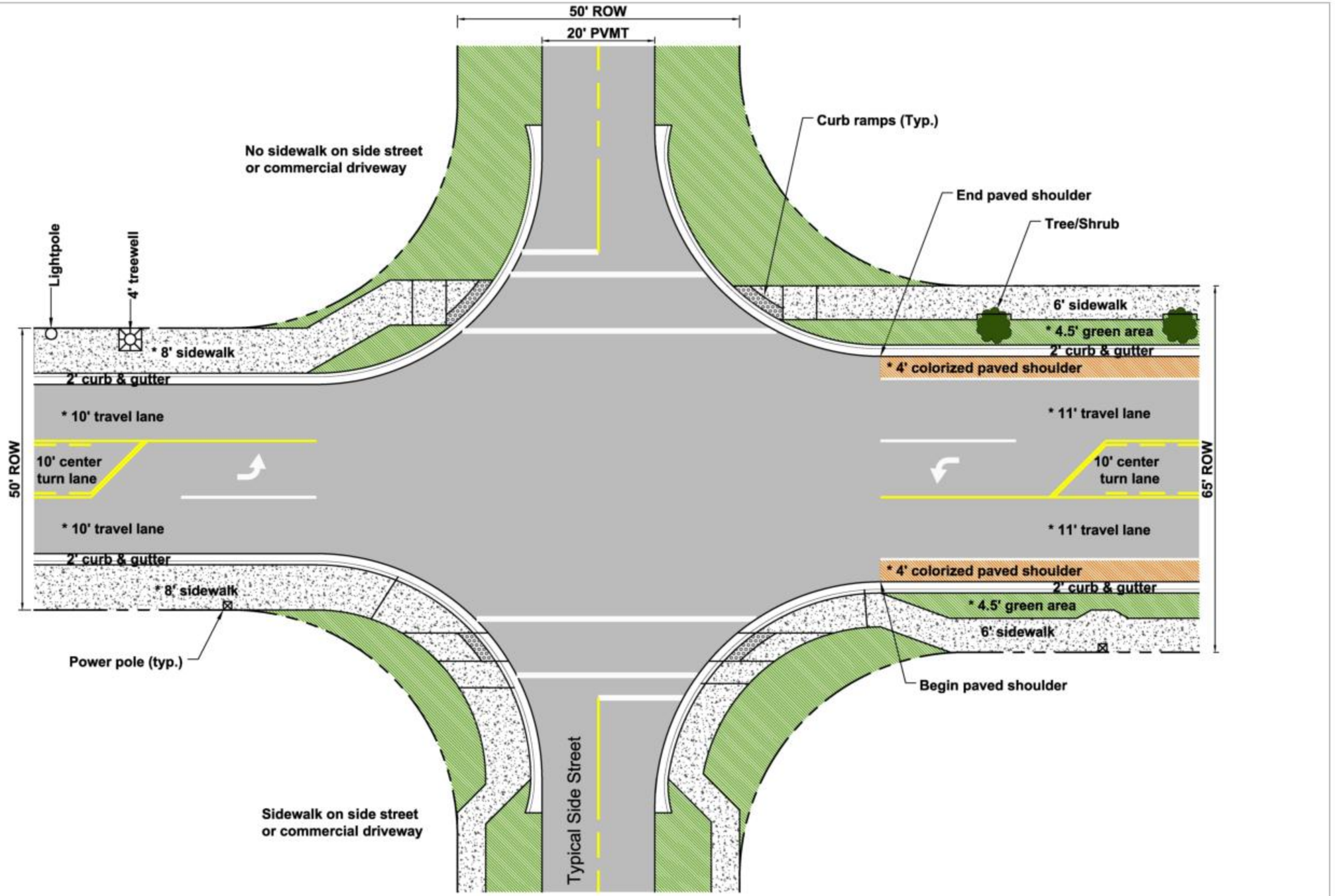
12.1 General Information

On May 19, 2008, a workshop was held at the Town of Fort Myers Beach Town Hall. Attendees of the meeting included the Town of Fort Myers Beach Town Council, McMahon, Lee County DOT, Cella & Molnar Associates and David Douglas Associates.

The meeting was conducted in a "Presentation-Style" format allowing time for discussion at the end of the presentation. The presentation focused on the design concepts for the recommended pilot section. The meeting presentation is included in **Appendix J**.

12.2 Comments & Recommendations

From meeting discussions, it was concluded that there is a general consensus on the location of the



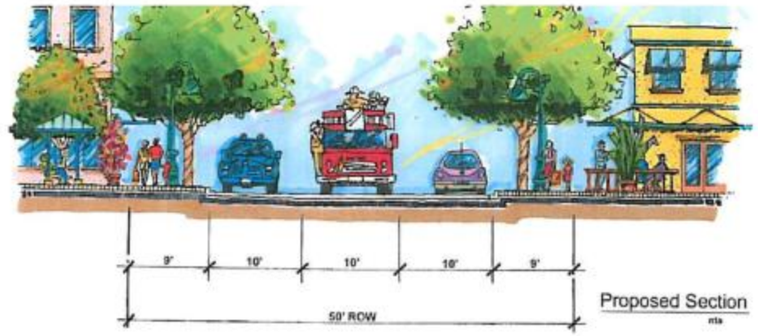
Section Analysis - Paved Shoulder Transition

Figure 16
Conceptual Cross-Sections Transition Area
Estero Boulevard Corridor Analysis and Design
Lee County, FL

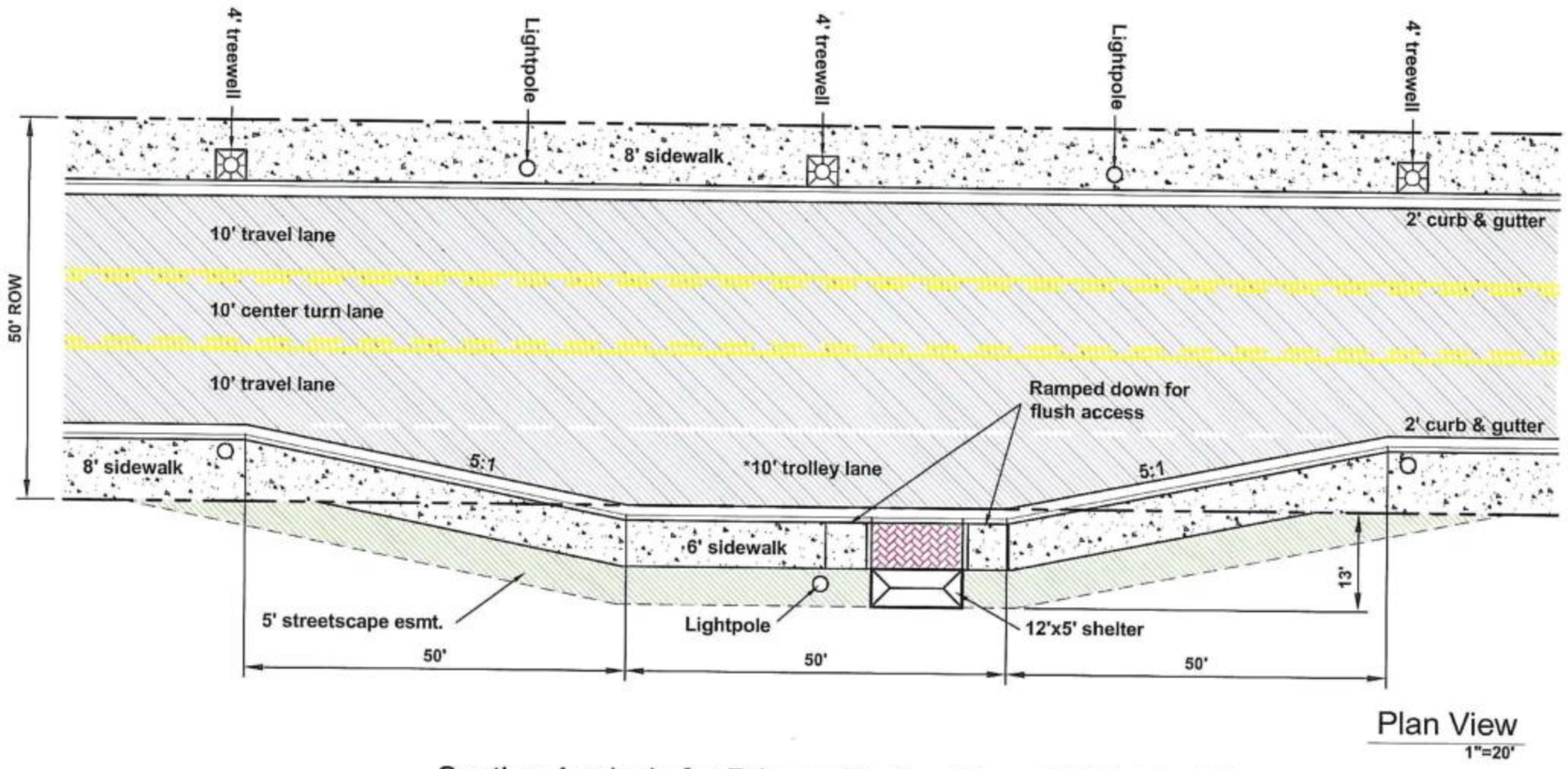
March 19, 2008

* Recommend 10' trolley stop lane with 6' sidewalk and shelter for midblock location. Lane width and tapers are minimums as recomended by AASHTO policy of geometric design. (Exit taper may be reduced to 3:1)

This configuration will extend beyond the existing 50' right of way requiring esmt. or additional right of way (Shelter is optional). Additional area will vary based on facilities provided at each stop.



Proposed Section
nts



Plan View
1"=20'

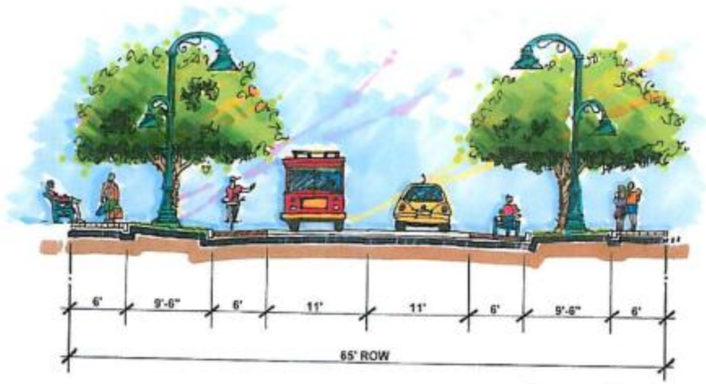
Section Analysis for Primary Trolley Stop - 50' Right of Way

Figure 17
Conceptual Bus Pull-Offs for a 50-Foot ROW
Estero Boulevard Corridor Analysis and Design
Lee County, FL

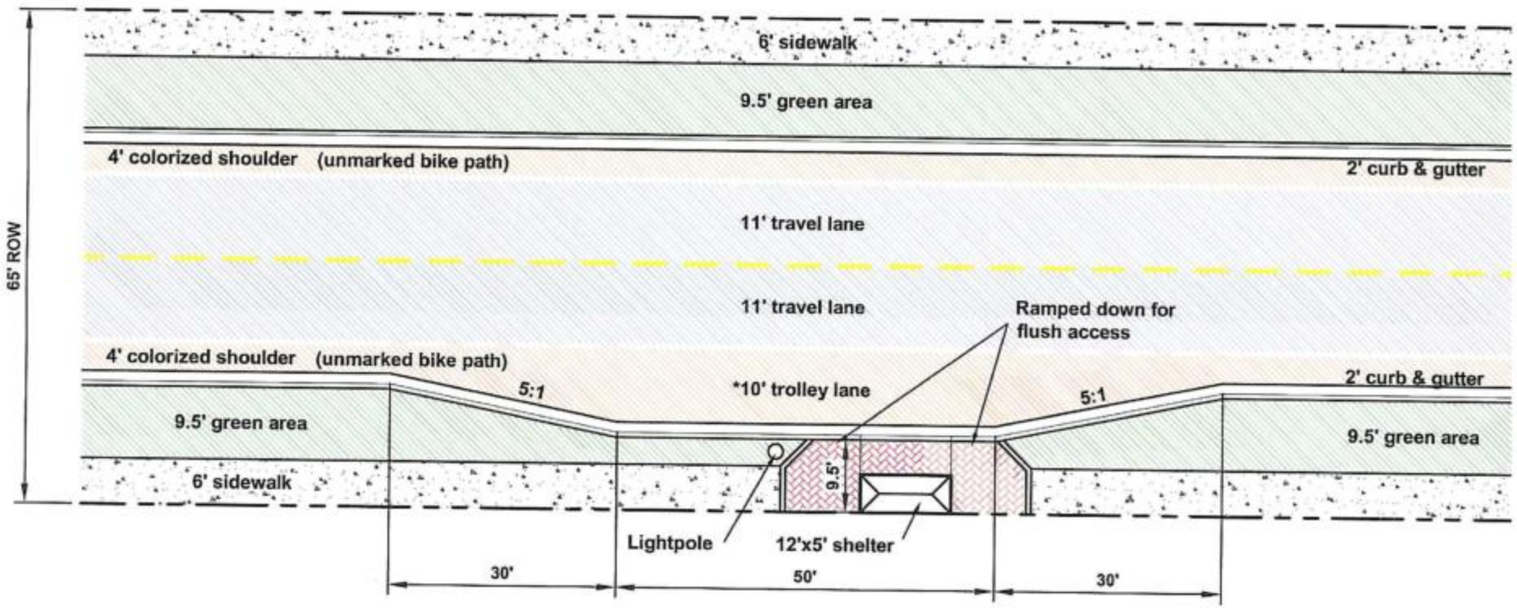
March 19, 2008

* Recommend 10' trolley stop lane with 6' sidewalk and shelter for midblock location. Lane width and tapers are minimums as recomended by AASHTO policy of geometric design. (Exit taper may be reduced to 3:1)

This configuration will fit within the existing 65' right of way (Shelter is optional).



Proposed Section
NTS



Plan View
1"=20'

Section Analysis for Primary Trolley Stop - 65' Right of Way

Figure 18
Conceptual Bus Pull-Offs for a 65-Foot ROW
Estero Boulevard Corridor Analysis and Design
Lee County, FL

March 19, 2008

recommended pilot section, as well as the conceptual, roadway cross-sectional design elements for the same.

13.0 SECOND PUBLIC WORKSHOP

13.1 General Information

In an effort to obtain public questions/comments regarding the design concepts for the recommended pilot section of the Estero Boulevard corridor, the second public workshop was held, on June 3, 2008 at Chapel by the Sea in Fort Myers Beach.

A flyer announcing the workshop was mailed out to all adjacent property owners and tenants, as listed by the Lee County Property Appraiser, and is included in **Appendix K**. There were 135 attendees that signed in at the workshop. In addition to the public, attendees included the County Project Representatives (including consultants), Lee County staff and Town of Fort Myers Beach Staff and elected officials. Display boards depicting the roadway design cross sections for the pilot section of Estero Boulevard, as well as other project information, were available for viewing. The Lee County project team explained the project and answered the public's questions.

13.2 Public Comments

Approximately 23 comments were received from the workshop and are attached in **Appendix L**. The response from the project was overwhelmingly positive with responses such as, *"This is progress!"* and *"We agree that you should have full use of the right-of-way area in the Phase I section of the Estero Blvd. Corridor."*

13.3 Conclusions & Recommendations

Based on the feedback from the public, it is recommended that the Town of Fort Myers Beach move forward with Phase II of the Estero Boulevard Enhancement Project.

14.0 TOWN OF FORT MYERS BEACH TOWN COUNCIL MEETING

14.1 General Information

On June 16th, a regular Town Council meeting was held at the Town of Fort Myers Beach Town Hall. Attendees of the meeting included the Town of Fort Myers Beach Town Council, McMahon, Lee County DOT, Cella & Molnar Associates and David Douglas Associates.

The recommended pilot section was included as an agenda item for consideration by the Council. No presentation was given; however, the Council discussed the topic for approximately two hours. The Council also asked for and received input from Town staff and the consultant team. The meeting agenda is included in **Appendix M**.

14.2 Comments & Recommendations

From meeting discussions, it was concluded that the City Council of the Town of Fort Myers Beach would like to have the project extended north to the Lani Kai side walk, and most importantly, any contract that Lee County enters into with a consultant require that the first deliverable from this phase of the project be a detailed ROW study from the Lani Kai to Andre Mar in order to review ROW conflicts and to share them with the affected public. City Council believes that this new step is extremely important to provide an opportunity to seek solutions to anticipated conflicts along the Estero Boulevard ROW and finally to get broad public support to materialize the joined efforts of the Lee County and the Town of Fort Myers Beach with the new face of the Estero Boulevard.

15.0 NEXT STEPS

The next step in the process is to obtain approval from the Board of County Commissioners for the design of the recommended pilot section, including the Fort Myers Beach City Council above mentioned recommendations.