



Memorandum

Memorandum No: 20-110

Date: November 20, 2020
To: Honorable Mayor and Commissioners
From: Chris Lagerbloom, ICMA-CM, City Manager
Subject: Transportation and Mobility Commission Action Items

This memo serves as a response to four Commission Action Items related to the Transportation and Mobility Department. Specifically, the following topics were discussed during Commission meetings:

1. New River Passenger Rail Bridge/Tunnel Feasibility Study
2. Safety analysis near the Las Olas Garage and crossing Seabreeze/A1A
3. COVID19 related signage be placed along Las Olas Boulevard
4. Traffic Signal Review at NE 30th and A1A

New River Passenger Rail Bridge/Tunnel Feasibility Study

At the November 19, 2019 City Commission Conference Meeting, Mayor Trantalis discussed the proposed rail bridge and its interaction with the proposed Joint Government Center Campus (JGCC). In July 2019, the State of Florida legislature passed specific Appropriations 1939, requiring the Florida Department of Transportation (FDOT) to study the feasibility of constructing a second rail bridge for passenger trains across the New River in Fort Lauderdale. FDOT acquired the Corradino Group to conduct the study which was finalized in January 2020.

The report includes four options that were deemed feasible:

- Low-level Bascule bridge with a 21-foot clearance over Mean High Water
- Mid-level Bascule bridge with a 56-foot clearance over Mean High Water
- High-level Fixed bridge with an 80-foot clearance over Mean High Water
- A tunnel 63' below grade

The report, attached as Exhibit 1, provided additional details outlining the feasibility of these options, and that the next step in the process is for FDOT to undergo a Project Development and Environment (PD&E) study. To date, FDOT has not initiated the PD&E study.

Safety analysis near the Las Olas Garage and crossing Seabreeze/A1A

At the November 19, 2019 City Commission Conference Meeting, Vice Mayor Glassman requested that a safety study be performed for the area near the Las Olas garage and the walking paths to the beach. The City requested that the Florida Department of Transportation (FDOT) conduct a study, specifically focused on the intersection of Cortez and Seabreeze, which was the intersection of a fatal accident involving a construction forklift and a passenger vehicle. FDOT began the study in early 2020 but suspended the efforts due to the COVID-19 pandemic. The study resumed during the fall of 2020 and was finalized in November. The full report, attached as Exhibit 2, provided three primary recommendations which are being evaluated by City staff at this time:

1. Relocate the landscaping and fence on the northeast side of the intersection to open the sight triangle.
2. Add Rectangular Rapid Flashing Beacon's (RRFB) and advanced warning signs to the north of the intersection to improve safety for pedestrians crossing. Add additional roadway lighting because the majority of pedestrians hit were at night.
3. Add parking wayfinding to mitigate last minute turning movements.

COVID-19 related signage be placed along Las Olas Boulevard

At the November 5, 2020 City Commission Conference Meeting, Commissioner Sorensen requested that City staff deploy additional COVID-19 signage along Las Olas Boulevard to promote safe practices. After Tropical Storm Eta's condition subsided, Transportation and Mobility staff dispersed available A-frame sandwich boards between SE 6th and SE 11th Streets. Exhibit 3 illustrates the sign message.

Traffic Signal Review at NE 30th and A1A

City staff reached out to the Broward County Traffic Engineering Department (BCTED), to assist with traffic signal review. BCTED reviewed the signal programming, as well as conducted an on-site inspection and determined that the intersection is functioning correctly. During the Commission meeting discussion, there was some general confusion about the directional turning movements. Exhibit 4 outlines the existing conditions for each intersection segment.

For further information on this initiative, please contact Ben Rogers, Director of Transportation and Mobility, at brogers@fortlauderdale.gov.

Attachments:

- Exhibit 1: FDOT Feasibility Study
- Exhibit 2: FDOT Safety Study
- Exhibit 3: COVID-19 Sign Layout
- Exhibit 4: Images of Intersection

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Department Directors
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New River Crossing Feasibility Technical Memorandum

Project Development & Environment (PD&E) Study Services for Tri-Rail Coastal Link (TRCL)
FPID: 417031-5-22-01; 417031-6-22-01; 417031-7-22-01
Contract No.: C9D69



Prepared for:



**District 4
Office of Modal
Development**

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Fort Lauderdale, Florida 33309

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January 2020

New River Crossing Feasibility Study Technical Memorandum

Project Development & Environment (PD&E) Study Services for Tri-Rail Coastal Link (TRCL)
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1.0 EXECUTIVE SUMMARY

1.1 Introduction

In response to Legislative Specific Appropriation 1939 passed in July 2019, an evaluation was initiated by the Florida Department of Transportation (FDOT), District 4, to study the feasibility of new crossing alternatives at the New River to provide a solution which will meet reasonable needs of navigation, freight trains, and passenger trains within the crossing area. There is an existing rail bascule bridge spanning the New River within the existing Florida East Coast (FEC) right of way, currently used by freight and passenger trains, which are operated by FEC and Virgin Trains/Brightline, respectively.

1.2 Objective

The objective of the study is to evaluate the feasibility of a rail crossing at the New River to provide a solution which will meet reasonable needs of navigation, freight trains, and passenger trains within the crossing area. This study includes the evaluation of several crossing alternatives including movable bridges of various vertical clearances, a fixed bridge, and tunnel concepts to identify feasible alternatives that could be advanced into the Project Development and Environment (PD&E) Study phase.

1.3 Study Area

The limits of this study run parallel to Andrews Avenue and FEC Railway Corridor from approximately SR 838/Sunrise Boulevard (northern terminus) to SW 15th Street (southern terminus). The total length of the study is approximately 2.5 miles (refer to [Figure 1](#)).

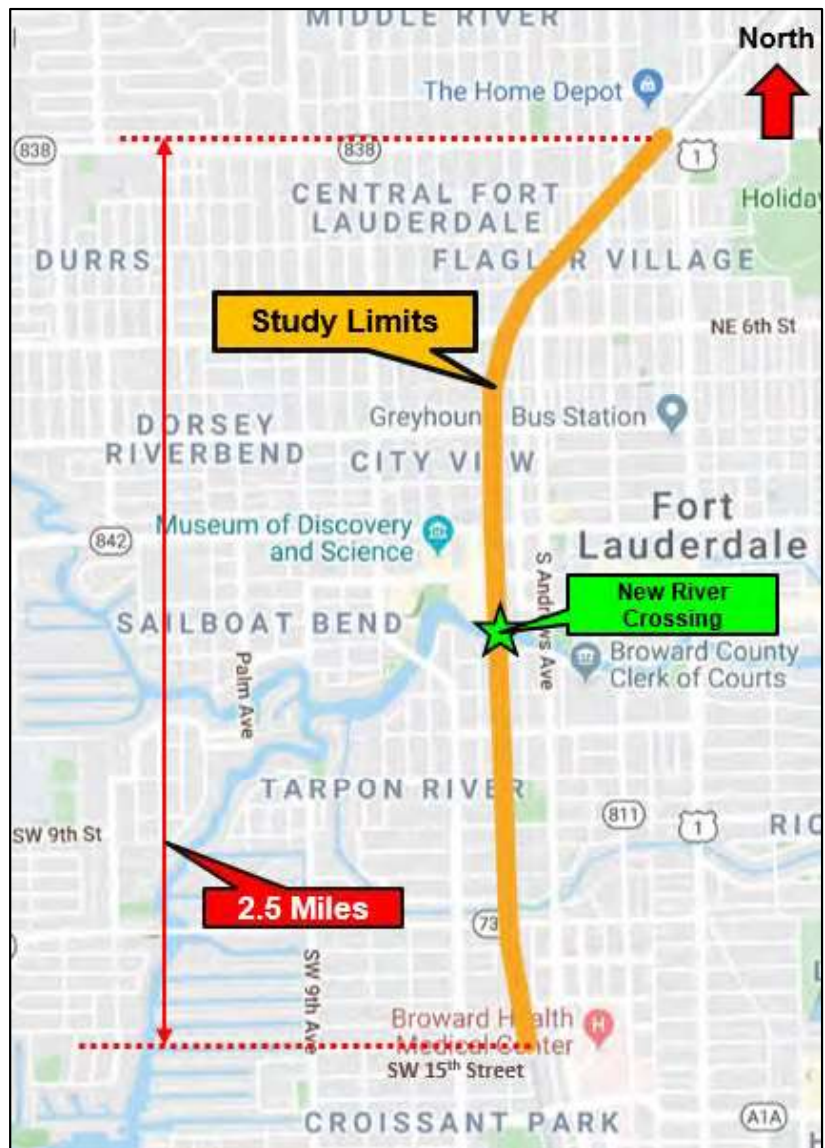


Figure 1: Location Map

1.4 Context and Background

The New River Crossing Feasibility Study is a continuation of the Tri-Rail Coastal Link (TRCL) Transit Analysis Study. As part of Legislative Specific Appropriation 1939, the legislation identifies the utilization of resources from the State Transportation Trust Fund that allows the FDOT to update the Tri-Rail Coast Link Study (formerly known as the South Florida East Coast Corridor Transit Study) Phase 2 Navigable Waterway Analysis Technical Memorandum (see [Appendix A](#)).

1.5 Conceptual Alternatives

Four crossing alternatives were evaluated as part of this study. Track horizontal and vertical alignments, typical sections, navigational clearances, structural analysis, environmental impacts, and constructability were evaluated in the development of the preliminary concept alternatives for further development and analysis during the PD&E phase and subsequent phases.

The alternatives evaluated are listed below:

- **Alternative 1** - Low-Level Bascule Bridge (21-foot clearance)
- **Alternative 2** - Mid-Level Bascule Bridge (56.5-foot clearance)
- **Alternative 3** - High-Level Fixed Bridge (80-foot clearance)
- **Alternative 4** - Tunnel (5-foot clearance below the riverbed; proposed track depth of 63-feet below existing track grade; total depth to bottom of bored tunnel is 75-feet below the existing track)

Figure 2 provides a schematic comparison between the different alternatives. The Low-Level Bascule Bridge Alternative requires approximately 1.1 miles of overall improvements which includes a new bascule bridge structure at the New River, and track work needed to re-establish track connections to existing railroad tracks on both the north and south side of proposed improvements. The Mid-Level Bascule Bridge, High-Level Fixed Bridge, and Tunnel alternatives require approximately 2.5 miles of overall improvements. The structural configurations differ between these alternatives, however, due to design constraints, and geometric needs based on design criteria, the overall length of track improvements are similar. All four alternatives would also re-establish connections to existing railroad tracks on both the north and south side of the proposed improvements. The following sections provide additional details regarding each alternative.



New River Crossing Feasibility Study Technical Memorandum

Project Development & Environment (PD&E) Study Services for Tri-Rail Coastal Link (TRCL)

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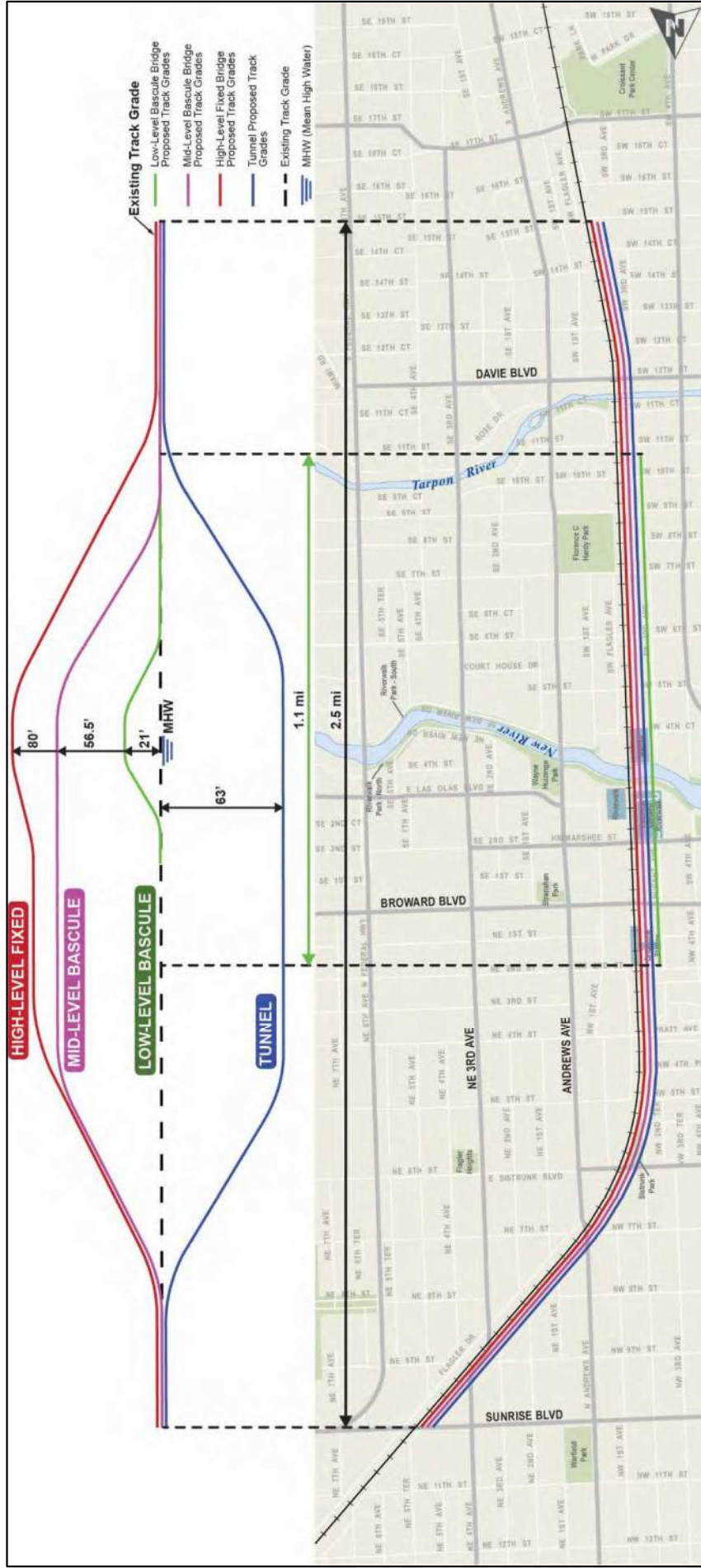


Figure 2: Overview of Alternatives (Schematic)



1.6 Stakeholder Coordination

Stakeholder coordination meetings were conducted throughout the duration of the study to introduce the project and receive input during the evaluation process. In general, the stakeholders support a new rail crossing of the New River. Meeting notes are included in [Appendix B. Table 1](#) shows the stakeholder meetings that were conducted between August 2019 and December 2019.

Table 1: Stakeholder Meeting Log

Stakeholder	Date/Time	Location
Virgin Trains (Brightline)	August 14 th , 2019 1:30 PM	8075 Gate Parkway W, Suite 204 Jacksonville, FL 32216
United States Coast Guard (USCG) District 7	October 11, 2019 10:00 AM	909 SE 1 st Avenue #510 Miami, FL 33131
Marine Industries Association of South Florida	October 15 th , 2019 11:00 AM	221 SW 3 rd Avenue Fort Lauderdale, FL 33312
Florida East Coast Railway (FEC)	October 25 th , 2019 11:00 AM	7150 Philips Hwy Jacksonville, FL 32256
Marine Advisory Board – City of Fort Lauderdale	November 7 th , 2019 6:00 PM	100 N Andrews Avenue, 8 th Floor Fort Lauderdale, FL 33301
City of Fort Lauderdale & Downtown Development Authority	November 14 th , 2019 1:00 PM	290 NE 3 rd Avenue Fort Lauderdale, FL 33301
Broward County	November 14 th , 2019 4:00 PM	115 South Andrews Avenue, Suite 409G Fort Lauderdale, FL 33301
Marine Industries Association of South Florida	December 5 th , 2019 10:30 AM	221 SW 3 rd Avenue Fort Lauderdale, FL 33312
Marine Advisory Board – City of Fort Lauderdale	December 5 th , 2019 5:30 PM	100 N Andrews Avenue, 8 th Floor Fort Lauderdale, FL 33301
Broward County	December 6 th , 2019 9:00 AM	115 South Andrews Avenue, Suite 409G Fort Lauderdale, FL 33301
City of Fort Lauderdale & Downtown Development Authority	December 10 th , 2019 11:00 AM	290 NE 3 rd Avenue Fort Lauderdale, FL 33301
Broward Metropolitan Planning Organization (MPO)	December 13 th , 2019 1:30 PM	100 West Cypress Creek Rd., Suite 650 Fort Lauderdale, FL 33309



1.7 Analysis Results

In summary, all alternatives are considered feasible. A preliminary right of way impact assessment, environmental screening, constructability review, and cost estimate were conducted as part of this study. In addition, a high-level qualitative analysis was conducted to compare the feasibility of the alternatives. The summary of the qualitative analysis is presented in [Section 9.5](#), [Table 17](#) of this report.

1.7.1 Right of Way Needs

Alternative 1 impacts seven parcels with a total impact area of 0.78 acres. Alternative 2 impacts 56 parcels with a total impact area of 6.81 acres. Alternative 3 impacts 65 parcels with a total impact area of 7.09 acres. Alternative 4 impacts 68 parcels with a total impact area of 8.16 acres, however, there are additional subterranean impacts that would need to be considered in the evaluation of the total impacts. [Table 2](#) lists the acreage impacted with each alternative.

Table 2: Right of Way Impacts Summary

Alternative	Parcels Impacted (Acres)
Alternative 1 Low-Level Bascule Bridge	0.78
Alternative 2 Mid-Level Bascule Bridge	6.81
Alternative 3 High-Level Fixed Bridge	7.09
Alternative 4 Tunnel	8.16

1.7.2 Environmental Considerations

Several potential cultural resources were identified within the study area. Those include potential Section 4(f) and Section 106 properties that may be publicly owned parks, recreational lands, wildlife and waterfowl refuge areas, or historic sites of national, state, or local significance.

Potential Section 4(f) resources:

- Sistrunk Park
- Riverwalk Linear Park
- Florence C. Hardy & Southside Park
- Tarpon River Park, Esplanade (Discovery) Park
- Bubier Park/Huizenga Plaza
- Marshall Point



Potential historic and archeological resources:

- Sears Town, Progress Plaza (8BD0176)
- Broward Plasma Corp./Archaeology Museum (8BD01330)
- Tom M. Bryan Building (8BD00227)
- King-Cromartie House (8BD00062)
- New River Inn (8BD00063)
- Philemon Bryan House (8BD00212)
- Antique Car Museum
- Himmarshee Street/SW 2nd Avenue Historic District (H-1)
- Fort Lauderdale Historic District (8BD181)
- Brickell Block (8BD02916)

Section 9.2 of this report discusses the location of the cultural resources with respect to the footprint of the alternatives. For Section 4(f) resources, the Determination of Applicability (DOA) will be made during the PD&E phase to determine as to whether Section 4(f) does or does not apply to the project and if the project is eligible for exceptions, exemptions, and exclusions to a Section 4(f) requirement. The PD&E phase will also initiate the Section 106 process by establishing the undertaking, conducting consultation, identifying historic properties, assessing adverse effects, and resolving adverse effects by avoiding, minimizing, or mitigating. A Cultural Resource Assessment Survey (CRAS) will need to be developed during the PD&E phase.

1.7.3 Constructability

A constructability review is a process that reviews and ensures that a project is buildable, while also being cost-effective, biddable, and maintainable. It is important to note that a constructability review in the early stages of a project has the best potential for providing meaningful benefits without having an adverse effect on project schedules. Conducting constructability reviews early and consistently throughout the project's life can also avoid potential project delays, increased costs, construction claims, and delays and/or disruptions to the public. As part of this study, construction factors were considered during the development of the alternatives. This includes identification of potential challenges, fatal flaws, assumptions, sequencing, temporary conditions, etc. In summary, all alternatives are considered constructible during this phase of the project. Additional constructability reviews will be needed during the PD&E and subsequent phases to ensure the project is buildable and biddable.



1.7.4 Cost Estimate

A preliminary order of magnitude cost estimate was developed for each alternative. Cost components associated with improvements include bridge structures, track, tunnel, stations, roadway, sitework, special conditions, rail signals/communications, construction, right of way, professional services, and operations & maintenance (O&M). **Table 3** shows the preliminary costs associated with each alternative.

Table 3: Preliminary Cost Estimate

Construction Costs	Alternative 1 Low Level Bascule Bridge (21 feet)	Alternative 2 Mid-Level Bascule Bridge (55 feet)	Alternative 3 High-Level Fixed Bridge (80 Feet)	Alternative 4 Tunnel
Structures	\$50,170,640	\$214,940,440	\$245,477,908	\$1,714,960
Track	\$12,074,010	\$15,402,114	\$15,402,114	\$15,409,030
Tunnel (including track, ventilation, emergency evacuation, fire suppression)	N/A	N/A	N/A	\$2,315,256,047
<i>Stations</i>	N/A	\$23,378,228	\$23,378,228	\$49,632,656
<i>Roadway</i>	\$399,100	\$2,772,900	\$2,772,900	\$1,078,350
Sitework and Special Conditions	\$3,182,362	\$10,207,549	\$9,962,674	\$8,909,927
Utility Relocation Allowance	\$1,000,000	\$2,800,000	\$3,100,000	\$8,000,000
Rail Signals/ Communications	\$16,587,901	\$17,430,183	\$16,191,787	\$17,357,371
Construction Cost	\$83,414,013	\$286,931,414	\$316,285,611	\$2,417,358,341
Right of Way Costs	\$21,100,000	\$54,200,000	\$48,600,000	\$53,400,000
Professional Services	\$29,820,510	\$102,577,980	\$113,072,106	\$864,205,607
Total Project Costs	\$134,334,523	\$443,709,394	\$477,957,717	\$3,334,963,948
Operations and Maintenance Cost (\$/Year)	\$1,900,000	\$3,300,000	2,400,000	\$8,200,000



1.8 Conclusion

1.8.1 Conclusions

The following are the consensus of the conclusions reached by the FDOT as part of this study:

- All alternatives were determined to be feasible and should be further developed and evaluated in the PD&E phase.
- Potential Section 4(f) and Section 106 resources will need to be further evaluated in the PD&E phase. At this time, this study did not determine a fatal flaw, however, additional coordination with the FDOT, FTA, stakeholders, and consultation parties will be needed as part of the PD&E study to provide appropriate documentation of identified environmental resources and whether there any adverse effects to environmental resources.
- Appropriate level of documentation to meet NEPA requirements will be on going and will be part of the PD&E phase.
- An in-depth traffic analysis should be conducted as part of the PD&E study to determine how local Downtown Fort Lauderdale traffic will be impacted by the various bridge crossing alternatives.
- A vessel survey update will need to be conducted as part of the PD&E study.
- A benefit cost analysis should be conducted as part of the PD&E phase to determine the life cycle benefits to the initial capital cost investment of the project.

1.8.2 Additional Considerations

Prior to initiation of a PD&E study, an agreement between the railroad owner and the public sector for public access and use of the rail corridor is required. The potential for the addition of a freight track to the east of the existing freight track alignment, and a review of the remaining lifespan of the existing freight bascule bridge should be considered. This will allow for an environmental assessment (PD&E) to minimize right of way impacts and costs, business damages and potential relocations, access impacts within the immediate river crossing vicinity, impacts to recreational or historic properties (Section 4(f) & Section 106) and potentially extend the life cycle of the existing freight bascule bridge. This study identified additional options that should be considered as part of the PD&E phase.

Option 1:

To achieve a shorter construction duration impact on freight and passenger operations, the existing bascule bridge could be relocated to the east within the railroad right of way with the construction of new foundations and a lifting and resetting of the existing bascule bridge mechanical equipment and bridge deck. This will allow 13 to 15 feet of additional horizontal distance for the construction of any of the bridge alternatives examined in this study.



Option 2:

A second option would be the addition of a new freight track to the east of the existing Track 2, and reconstruction of the bascule bridge, thereby reducing the footprint of the new bascule bridge serving freight operations. This allows for additional horizontal space to locate the new passenger tracks and bridge structures within the existing right of way. This additional right of way will potentially allow the proposed Low-Level Bascule Bridge alternative 5 to 11 feet of additional space for improvements, resulting in minimal impact to the existing angle parking on SW 2nd Avenue, and maintain access to the businesses and Historic Society buildings north of the river and have no impacts to the existing boat storage facility on the river's south bank. For the Mid-Level Bascule Bridge and High-Level Fixed Bridge alternatives, the new freight track will provide additional right of way to construct the foundations and support columns for the bridge alternatives and will maximize the use of the existing right of way while minimizing impacts to parking along SW 2nd Avenue north of the river.

The limits of the additional freight track to the east of the existing freight Track 2, will be consistent with the limits of the track impacts identified for each of the bridge alternatives. These limits range from approximately 5,740 feet (1.1 mile) for the Low-Level Bascule Bridge alternative to approximately 13,215 feet (2.5 miles) for the Mid-Level Bascule and High-Level Fixed Bridge alternatives.



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Prepared for:

Florida Department of
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Traffic Operations Office
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Fort Lauderdale, FL 33309

SR A1A (Seabreeze Boulevard) At Poinsettia Street, Fort Lauderdale

Pedestrian Safety Assessment

TWO 49 | Financial Project Number 230094-6-32-01 | Contract Number C-9029

Section No. 86050100 | Mileposts 0.381

November 2020

Engineer's Certification

I, Ravindra K. Wijesundera, P.E. # 69259, certify that I currently hold an active Professional Engineers License in the State of Florida and am competent through education or experience to provide engineering services in the civil and traffic engineering disciplines contained in this plan, print, specification, or report. I further certify that this Pedestrian Safety Assessment was prepared by me or under my responsible charge as defined in Chapter 61G15-18.001 F.A.C. and that all statements, conclusions, and recommendations made herein are true and correct to the best of my knowledge and ability.

- Study Location: SR A1A (Seabreeze Boulevard) at Poinsettia Street in Fort Lauderdale, Broward County
- Section Number and Mileposts: 86050100, MP 0.381

This item has been digitally signed and sealed by Ravindra K. Wijesundera on the date indicated here.

Ravindra K. Wijesundera, P.E.
State of Florida Professional Engineer, License No. 69259

Kimley-Horn and Associates, Inc.
8201 Peters Road, Suite 2200
Plantation, FL 33324
Registry 696

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Introduction

The Florida Department of Transportation (FDOT) District 4 has retained Kimley-Horn and Associates, Inc. to perform a pedestrian safety study at the intersection of SR A1A (Seabreeze Boulevard) (hereafter referred to as Seabreeze Boulevard) and Poinsettia Street in Fort Lauderdale, Broward County (Section Number 86050100, MP 0.381). A location map is included as Figure 1 and the straight-line diagram (SLD) is provided in Appendix A.

This study was requested by the City of Fort Lauderdale. The primary purpose of this study is to evaluate control measures for the existing crosswalks across Seabreeze Boulevard at Poinsettia Street. This report documents location characteristics, field review, analysis of crash data, traffic and pedestrian counts, crosswalk traffic control warrant analysis, all-way stop control warrant analysis, sight distance analysis for eastbound/westbound approaches, planned projects in the FDOT Work Program, and recommendations.

The data collection and analysis methods used to conduct the crosswalk control traffic control analysis are consistent with guidelines provided in FDOT's *Traffic Engineering Manual* (TEM) and *Manual on Uniform Traffic Studies* (MUTS), and the Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices* (MUTCD).

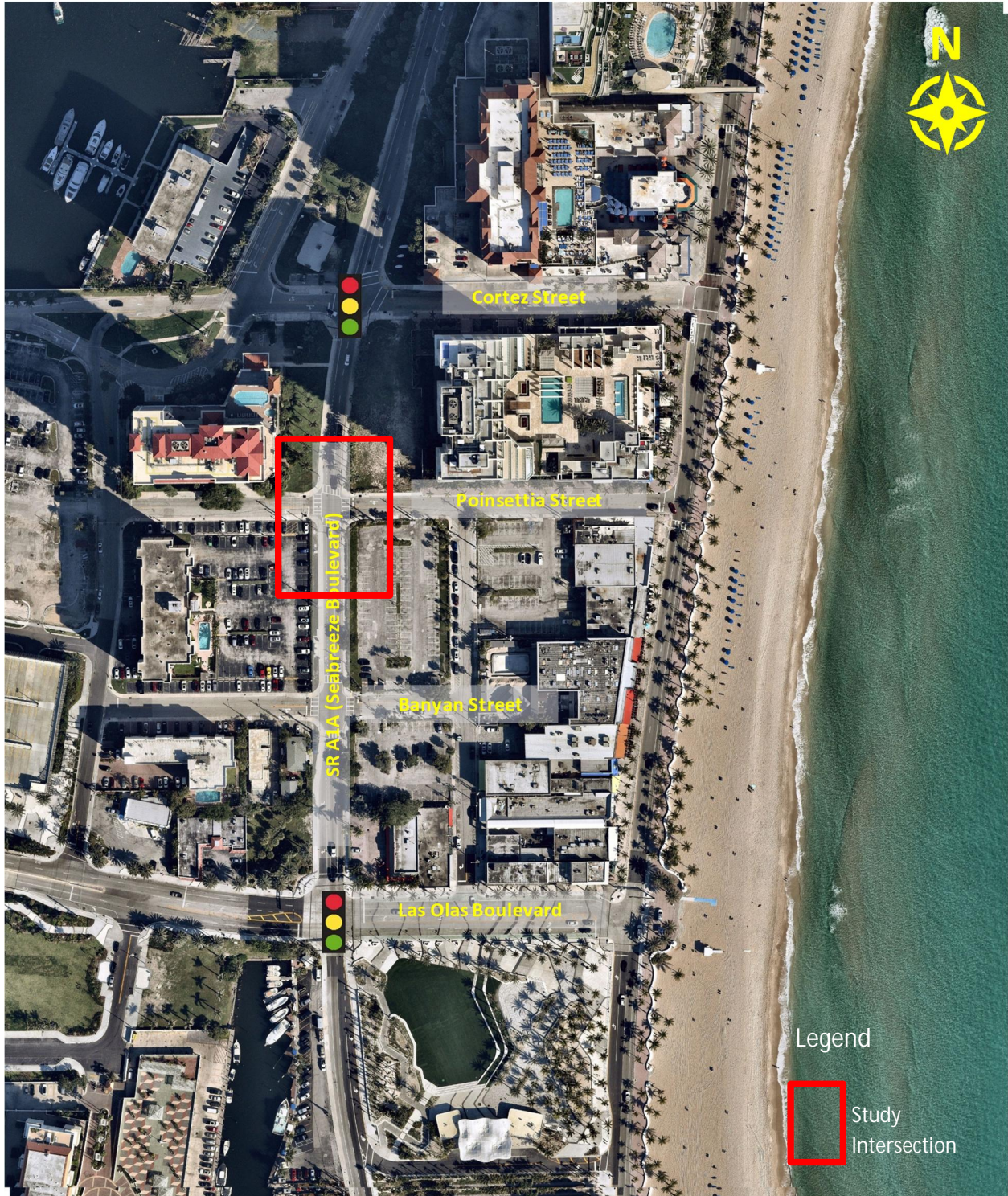


Figure 1: Location Map

Location Characteristics

The following section provides a summary of the characteristics of Seabreeze boulevard. Table 1 provides additional information. FDOT Annual Average Daily Traffic data is included in Appendix B.

Table 1: Location Characteristics

Typical Section	Seabreeze Boulevard: Two-lane (one-way southbound) Poinsettia Street: Two-lane undivided
Functional Classification	Urban Minor Arterial
Access Classification	Class 07
Context Classification	C4 – Urban General
Speed Limit	30 mph
Traffic Data (AADT) 2019	14,000 (FDOT Site 5309) north of Las Olas Boulevard
Street Lighting	Cobra head lighting on the east side south of Poinsettia Street and on the west side north of Poinsettia Street
Signalized Intersections	Cortez Street (290 feet to the north) Las Olas Boulevard (590 feet to the south)
Horizontal/Vertical Curves	Horizontal curve north of Poinsettia Street
Drainage	Curb and gutter
Sidewalks	Both sides along Seabreeze Boulevard
Bicycle Facilities	Marked bicycle lanes along Seabreeze Boulevard
Transit	BCT Routes 11 and 40

Seabreeze Boulevard at Poinsettia Street is a two-way stop controlled intersection with stop signs facing the eastbound and westbound approaches of Poinsettia Street. Seabreeze Boulevard is a southbound one-way two-lane roadway with a posted speed limit of 30 miles per hour (mph). There are on-street marked bicycle lanes on the west side of the roadway, and high-emphasis crosswalks on all legs of the study intersection. The approximate crossing distance (width) across Seabreeze Boulevard is 26 feet from curb to curb.

The adjacent land uses include residential (condominiums) and parking. Retail/restaurant uses are located to the east towards the beach. Poinsettia Street provides access to the beach. A Broward County Transit (BCT) bus stop is located approximately 190 feet south of Poinsettia Street (Stop ID 3507) and routes 11 and 40 operate along Seabreeze Boulevard. Cortez Street (signalized), located 290 feet to the north and Banyan Street (two-way stop controlled), located 280 feet to the south also provide crosswalks across Seabreeze Boulevard.

Field Observations

A field review was conducted on Sunday, October 11, 2020 between 2:50 P.M. and 4:40 P.M. The field review times were selected based on the pedestrian counts collected in March 2020. The field review was conducted during COVID-19 after FDOT's consultation with City of Fort Lauderdale staff. The weather was sunny except for a brief rain towards the end of field review. The focus was on a general review of pedestrian activity at Poinsettia Street and Seabreeze Boulevard. A summary of observations is provided below.

- Seabreeze Boulevard (Photographs 1 and 2) is a southbound one-way street with two lanes. There is a designated bicycle lane on the west side and sidewalks are provided on both sides.
- Poinsettia Street (Photographs 3 and 4) is an east-west two-lane undivided local roadway. Sidewalks are provided on both sides near the intersection with Seabreeze Boulevard.
- High-emphasis crosswalks are provided on all four legs (installed in September 2019 per FDOT). The eastbound and westbound approaches are stop-controlled. Pedestrian crossing signs are provided on the north leg, but the south leg crosswalk does not have pedestrian crossing signs. There is no advance signage for the crosswalks.
- Las Olas Beach is approximately 500 feet east of Seabreeze Boulevard. The beach and restaurants were crowded with people and the nearby surface parking lots were at capacity.
- Pedestrians frequently crossed at the intersection along both the north and south leg crosswalks (Photographs 5 and 6).
 - Pedestrians crossing Seabreeze Boulevard were counted for 15 minutes, during which seven pedestrians crossed on the north leg and 13 pedestrians crossed on the south leg.
 - The pedestrian trips were generated from the public parking and condominiums to the west of the intersection and the trips were mostly destined to the beaches or restaurants. The Las Olas Parking Garage is located approximately 400 feet southwest of the intersection and a city resident beach parking lot is located approximately 330 feet west of the intersection.
 - Sometimes, southbound vehicles would stop to allow pedestrians to cross.
 - The majority of pedestrians crossed at the intersection; very few pedestrians were observed crossing mid-block. This observation is consistent with the counts in Table 9.
 - The average time to cross Seabreeze Boulevard was eight seconds.

- One pedestrian/vehicle conflict was observed where a pedestrian entered the crosswalk on the north leg with an oncoming vehicle.
- Trees/shrubs on the northeast corner of the intersection affect visibility of approaching southbound traffic for westbound motorists (Photograph 7). These trees/shrubs are located within a private property.
 - Two conflicts were observed between southbound left-turning and westbound through (or left-turning) vehicles.
 - Several southbound left turn vehicles were observed heading for the surface parking lot on the southeast corner.
 - North of Cortez Street there is a sign indicating parking straight ahead and to the right. There is a parking sign within the private parking lot property on the southeast corner, which is not readily visible from distance (Photograph 8).
- There are no apparent sight line obstructions for eastbound vehicles.
- Speeds of southbound vehicles appeared to be higher north of Poinsettia Street compared to south of Poinsettia Street. There is a horizontal curve along Seabreeze Boulevard to the north of Poinsettia Street.
- BCT Routes 11 and 40 operate along Seabreeze Boulevard. Transit users were observed at the stop approximately 75 feet north of Banyan Street (Photograph 9).
- Street lighting is provided along the west side of Seabreeze Boulevard north of Poinsettia Street and along the east side of Seabreeze Boulevard south of Poinsettia Street. Street lighting is provided along the south side of Poinsettia Street. However, there is no intersection specific lighting.



Photograph 1: Southbound Seabreeze Boulevard at Cortez Street



Photograph 2: Southbound Seabreeze Boulevard approaching Poinsettia Street



Photograph 3: Westbound Poinsettia Street approaching Seabreeze Boulevard



Photograph 4: Eastbound Poinsettia Street approaching Seabreeze Boulevard



Photograph 5: Pedestrians Crossing Seabreeze Boulevard (looking north)



Photograph 6: Pedestrians on north and south crossings (looking east)



Photograph 7: Vegetation, Trees and Fence on Northeast Corner (view from westbound vehicle)



Photograph 8: Parking Lot East of Study Intersection (looking southeast)



Photograph 9: Bus Stop along Seabreeze Boulevard South of Poinsettia Street (looking north)

Crash Data Analysis

Five-year historical crash data were obtained from FDOT's (Crash Analysis Reporting) CAR Online database for 2013 to 2017. In addition, data from the University of Florida's Signal Four Analytics database was obtained for informational purposes for 2018 and 2019. It should be noted that Signal Four data is not certified by FDOT to be complete. Crash data was obtained for the segment of Seabreeze Boulevard between south of Cortez Street and Banyan Street.

CAR Online Data

As summarized in Table 2, there were 68 reported crashes between 2013 and 2017. Overall, the annual frequency of crashes remained steady between 2013 and 2016 and increased in 2017. While there were no fatal crashes, 18 crashes (26 percent) resulted in injuries and 50 crashes (74 percent) were property damage only (PDO). See Appendix C for crash data.

Table 2: Crash Data (2013-2017)

Year	Fatal Crashes	Injury Crashes	PDO Crashes	Total
2013	0	5	7	12
2014	0	4	6	10
2015	0	4	10	14
2016	0	2	10	12
2017	0	3	17	20
Total	0	18	50	68

Crashes by Type

Table 3 summarizes the crash types. Sideswipe was the most frequent crash type, accounting for 38 crashes (56 percent of total). The other most frequent crash types were 16 angle (24 percent) and six rear end (9 percent). There were three reported pedestrian crashes and three reported bicycle crashes. Three pedestrian crashes and two bicycle crashes resulted in an injury.

Table 3: Crashes by Type

Crash Type	Number of Crashes	Percent of Total
Sideswipe	38	56%
Angle	16	24%
Rear-End	6	9%
Pedestrian	3	4%
Bicycle	3	4%
Backed into	2	3%
Total	68	100%

Crashes by Time Period

Table 4 shows that 37 percent of crashes occurred between 3:00 PM and 6:00 PM. Therefore, the peak crash period is during typical afternoon peak traffic periods. Further, 32 percent of crashes occurred between 6:00 PM and 12:00 AM.

Table 4: Crashes by Time Period

Time Period	Number of Crashes	Percent of Total
0:00 – 6:00	3	4%
6:00 – 9:00	3	4%
9:00 – 11:00	4	6%
11:00 – 13:00	6	9%
13:00 – 15:00	5	7%
15:00 – 18:00	25	37%
18:00 – 24:00	22	32%
Total	68	100%

Note: due to rounding the total of percentages may not add to 100.

Crashes by Day

Table 5 shows that Saturdays and Sundays had a slightly higher frequency of crashes in comparison to weekdays. This weekend pattern may be associated with the location's proximity to the beaches and associated activities.

Table 5: Crashes by Day

Day	Number of Crashes	Percent of Total
Monday	10	15%
Tuesday	7	10%
Wednesday	7	10%
Thursday	10	15%
Friday	9	13%
Saturday	13	19%
Sunday	12	18%
Total	68	100%

Crashes by Lighting Condition

Table 6 shows that 68 percent of crashes occurred during daylight conditions and 32 percent occurred during non-daylight (dark, dawn and dusk) conditions. The percent of non-daylight

crashes is slightly higher than the statewide average (30 percent). All three pedestrian crashes occurred during non-daylight conditions, whereas all three bicycle crashes occurred during daylight conditions.

Table 6: Crashes by Lighting Condition

Lighting Conditions	Number of Crashes	Percent of Total
Daylight	46	68%
Dusk	1	1%
Dawn	2	3%
Dark	19	28%
Total	68	100%

CAR Online Collision Diagram

Appendix C depicts crashes from 2013 to 2017 and the following observations are made:

- 38 crashes occurred at Poinsettia Street and 29 crashes occurred at Banyan Street (one bicycle crash at Cortez Street was also mapped).
- Multiple sideswipe crashes occurred due to vehicles attempting to turn left from southbound lanes on Seabreeze Boulevard onto Poinsettia Street or Banyan Street. Per police reports, the majority of sideswipe crashes occurred when motorists attempted to make a left turn from the far (outside) through lane, possibly to access surface parking lots on the east side of Seabreeze Boulevard. There were 21 sideswipe crashes at Poinsettia Street and 17 sideswipe crashes at Banyan Street, involving southbound vehicles. Therefore, coordinate with City of Fort Lauderdale to evaluate the need for enhancing roadside signs to provide information on parking facility locations.
- Angle crashes were attributed to vehicles traveling eastbound/westbound and failing to yield to southbound vehicles along Seabreeze Boulevard. There were nine angle crashes at Poinsettia Street and seven angle crashes at Banyan Street.
- There were three pedestrian crashes at Poinsettia Street. Two pedestrian crashes involved southbound vehicles and one crash involved a westbound vehicle.
- There were three bicycle crashes: one crash at Poinsettia Street, one crash at Banyan Street, and one crash at Cortez Street. These crashes involved bicyclists traveling southbound on Seabreeze Boulevard and vehicles traveling eastbound or westbound on the minor street.

Signal Four Analytics Crash Data

Crash data available from Signal Four Analytics for years 2018-2019 is summarized in Table 7 for informational purposes. Short Form crashes are not included in Table 7 for consistency and comparison with CAR Online data for years 2013-2017. There were 17 crashes in 2018 and 24 crashes in 2019, including one fatal crash and one pedestrian crash. Please note that several crashes that occurred at Cortez Street are mapped in the collision diagram but were not counted in Table 7 since Cortez Street is outside of the study limits.

Table 7: Signal Four Analytics Crash Data (2018-2019)

Year	Fatal Crashes	Injury Crashes	PDO Crashes	Total
2018	0	3	14	17
2019	1	5	18	24
Total	1	8	32	41

The fatal crash is described below:

- 11/17/2019 (8:56 AM): A vehicle was traveling southbound on Seabreeze Boulevard when a forklift operator traveling westbound on Poinsettia Street stopped at the westbound stop sign approach then continued to travel through the intersection and struck the vehicle traveling southbound. The crash occurred during daylight under dry roadway surface conditions.

Signal 4 Collision Diagram

Appendix C depicts crashes from 2018 to 2019 and the following observations are made:

- 28 crashes occurred at Poinsettia Street and 13 crashes occurred at Banyan Street.
- Multiple sideswipe crashes occurred due to vehicles attempting to turn left from southbound lanes on Seabreeze Boulevard onto Poinsettia Street or Banyan Street. Per police reports, the majority of sideswipe crashes occurred when motorists attempted to make a left turn from the far (outside) through lane, possibly to access surface parking lots on the east side of Seabreeze Boulevard. There were 20 sideswipe crashes at Poinsettia Street and nine sideswipe crashes at Banyan Street, involving southbound vehicles.
- There were five angle crashes at Poinsettia Street, four of which involved westbound and southbound vehicles, including the fatal crash. The other angle crash involved eastbound and southbound vehicles.

- One pedestrian crash occurred when a left turning vehicle from Poinsettia Street failed to yield to a pedestrian in the crosswalk on the south leg.
- Nine crashes occurred during non-daylight conditions.

High Crash Locations

FDOT’s High Crash Locations lists for years 2013-2017 were reviewed. The following high crash spots or segments were identified within the study limits:

Table 8: High Crash Spots and Segments (2013-2017)

Milepost(s)	Location	Confidence Rating
0.381	Poinsettia Street and Seabreeze Boulevard (Spot)	99.99
0.432	Banyan Street and Seabreeze Boulevard (Spot)	99.99
0.200 – 0.700	South of Cortez Street to Banyan Street (Segment)	99.99

Pedestrian/Bicycle and Traffic Counts

Pedestrian and bicycle counts, approach counts, and speed data were collected on Friday, Saturday, and Sunday, March 6-8, 2020.

Pedestrian and Bicycle Counts

Pedestrian and bicycle counts were conducted on Friday, Saturday, and Sunday, March 6-8, 2020 from 7:00 AM to 7:00 PM at the following locations:

- Seabreeze Boulevard at Poinsettia Street,
- Seabreeze Boulevard at Banyan Street, and
- Midblock from Poinsettia Street to Banyan Street.

A summary of pedestrian and bicyclist count data is provided in Table 9. Complete pedestrian and bicyclist count data is included in Appendix D. The data indicates higher pedestrian activity during weekends. Additionally, on Friday pedestrian counts were comparable at Poinsettia Street and Banyan Street; however, on the weekend days Poinsettia Street had higher pedestrian volumes. Overall, afternoon hours had higher pedestrian volumes than morning hours. The pedestrians and bicyclists cross at intersections rather than at midblock.

Table 9: Pedestrian and Bicycle Counts

Start Time	Seabreeze Boulevard at Poinsettia Street			Seabreeze Boulevard at Banyan Street			Seabreeze Boulevard Midblock between Poinsettia Street and Banyan Street		
	Peds & Bikes			Peds & Bikes			Peds & Bikes		
	3/6	3/7	3/8	3/6	3/7	3/8	3/6	3/7	3/8
7:00 AM	6	12	13	5	4	12	0	0	0
8:00 AM	14	18	11	3	11	14	0	0	0
9:00 AM	28	32	20	7	9	11	0	0	2
10:00 AM	11	37	47	20	24	34	0	0	0
11:00 AM	16	62	62	34	36	38	0	1	0
12:00 PM	21	35	59	32	55	35	4	0	0
1:00 PM	57	84	79	25	62	77	2	0	0
2:00 PM	44	93	68	40	47	69	1	0	0
3:00 PM	42	74	88	42	79	48	0	0	0
4:00 PM	36	111	90	77	84	72	0	0	0
5:00 PM	34	73	109	29	79	38	0	0	0
6:00 PM	33	65	66	75	80	54	0	0	0
Total	342	696	712	389	570	502	7	1	2

Speed Data

The 72-hour speed data was collected in the southbound direction on the same three days as pedestrian counts (March 6-8, 2020). The data was collected between Cortez Street and Poinsettia Street. A summary of the speed data is provided in Table 10 and detailed speed data is included in Appendix E.

Table 10: Speed Data Summary

Direction	85 th Percentile Speed		
	3/6/2020	3/7/2020	3/8/2020
Southbound	32.9	31.8	31.9
Direction	10 MPH Pace		
Southbound	20-30	20-30	20-30

The speed limit on Seabreeze Boulevard at the study area is 30 mph. As shown in Table 7, the 85th percentile speeds are approximately 2-3 mph over the speed limit. The 10-mile pace (defined as the 10-mph range containing the most vehicles) is between 20 and 30 mph. These statistics are consistent with the posted speed limit.

Approach Volume Data

The traffic volumes on southbound, eastbound, and westbound approaches to the intersection of Seabreeze Boulevard at Poinsettia Street were collected on Friday, Saturday, and Sunday, March 6-8, 2020 from 7:00 AM to 7:00 PM. A summary of the approach volume data is provided in Table 11 and detailed speed data is included in Appendix F.

The southbound approach of Seabreeze Boulevard had the highest traffic volume, followed by the westbound approach of Poinsettia Street, then the eastbound approach of Poinsettia Street. While the southbound traffic volume was higher on Friday than on Saturday and Sunday, the eastbound and westbound volumes were higher on Saturday and Sunday than on Friday.

Table 11: Approach Volume Data

Start Time	Seabreeze Boulevard at Poinsettia Street								
	3/6/2020			3/7/2020			3/8/2020		
	SB	EB	WB	SB	EB	WB	SB	EB	WB
7:00 AM	583	9	19	456	7	16	341	3	16
8:00 AM	705	10	22	531	4	19	485	6	23
9:00 AM	693	16	26	702	10	29	629	8	33
10:00 AM	684	8	44	706	7	53	677	9	47
11:00 AM	783	9	58	827	10	54	806	13	53
12:00 PM	789	19	70	798	19	78	801	12	54
1:00 PM	791	17	73	801	25	80	789	16	74
2:00 PM	837	22	72	810	20	108	788	23	113
3:00 PM	799	23	88	830	29	118	798	40	115
4:00 PM	832	19	78	723	48	116	702	31	111
5:00 PM	835	11	81	656	29	102	640	29	90
6:00 PM	794	11	51	774	20	86	693	18	80
Total	9,125	174	682	8,614	228	859	8,149	208	809

Crosswalk Traffic Control Warrant Analysis

Analyses were performed to determine the appropriate traffic control for a crosswalk at the intersection of Seabreeze Boulevard and Poinsettia Street based on the guidelines provided in the Manual on Uniform Traffic Control Devices (MUTCD) and Traffic Engineering Manual (TEM). The following traffic control measures were evaluated:

- Pedestrian Traffic Signal
- Pedestrian Actuated Warning Treatments
- In-Street Pedestrian Crosswalk signs

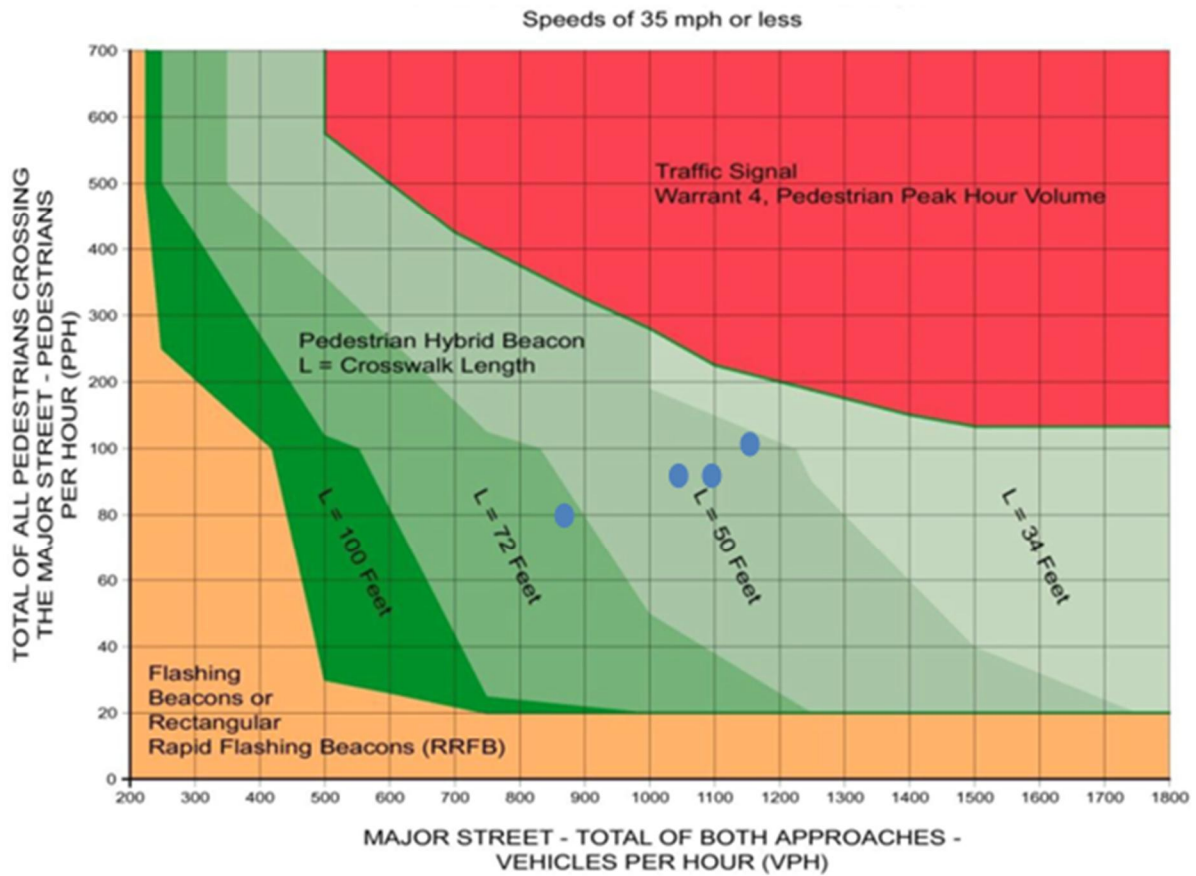
Note that the Pedestrian Hybrid Beacon (PHB) is not applicable for this two-way stop-controlled intersection. The MUTCD recommends a minimum 100-foot clearance between a PHB-controlled crosswalk and side streets or driveways controlled by STOP or YIELD signs.

Figure 3.8-1 of the TEM (see next page) illustrates the guidelines for selection of traffic control treatments based on the pedestrian volume, major street traffic volume, and crossing distance. The approximate crossing distance is 26 feet. The highest 4-hour pedestrian demand and corresponding major street traffic volumes summarized in Table 12 were plotted to determine appropriate traffic control methods.

Table 12: Highest Pedestrians Volumes and Traffic Volumes

Four Highest Hours	Major Street Volume	Pedestrian Volume
1:15 PM	871	80
3:15 PM	1,047	91
4:15 PM	1,103	91
5:15 PM	1,161	109

Figure 3.8-1. Guidelines for the Installation of Pedestrian Treatments on Low-Speed Roadways



The following sections summarize the results of the crosswalk warrant treatment analyses for the study location.

Pedestrian Traffic Signal

The criteria outlined in Section 4C.05 of the MUTCD for consideration of a traffic control signal states that the minimum pedestrian volumes thresholds to warrant are:

- Condition A: Minimum of 107 pedestrians per hour for four hours on an average day
- Condition B: Minimum of 133 pedestrians per hour for one hour during the highest pedestrian demand

The pedestrian volumes recorded at Seabreeze Boulevard and Poinsettia Street (see Table 12) do not meet the four-hour or one-hour minimum threshold pedestrian volumes to warrant a traffic signal. Furthermore, the distance to the nearest signalized intersection (Cortez Street) is

280 feet. Per F.A.C. Rule Chapter 14-97 and FDOT's Access Management Standards, the minimum signal spacing for an Access Class 7 road is 1,320 feet.

Pedestrian Actuated Warning Treatments

Pedestrian actuated warning treatments such as Rectangular Rapid Flashing Beacons (RRFB), flashing yellow beacons, and In-Roadway Lights do not require a warrant analysis per Section 3.8.7(3) of TEM. The data points plotted in Figure 3.8-1 indicate the flashing warning treatments may be considered since a PHB is not applicable and the warrants are not met for a traffic signal both from volume and signal spacing standpoints.

As previously noted, there are two existing crosswalks across Seabreeze Boulevard at Poinsettia Street (north leg and south leg), and field reviews indicated that pedestrians use both crossings. Based on a limited review of current deployment of pedestrian actuated warning treatments using aerials, such traffic control measures are not evident at intersections with two crosswalks across the uncontrolled approach of a State Highway System (SHS) road. However, one location was identified in a non-SHS road intersection in Fort Lauderdale (listed below). The TEM does not prohibit pedestrian actuated warning treatments at intersections with two crosswalks across uncontrolled approaches. Examples of pedestrian treatments at crosswalks are listed below.

- At SR A1A (Fort Lauderdale Beach Boulevard) and Poinsettia Street, there are In-Roadway Lights for the crosswalk on the south leg and a crosswalk is not provided on the north leg. Based on Google aerials, there were crosswalks on both sides, but in 2015 the north leg crosswalk was removed to add In-Roadway Lights to the crosswalk on the south leg.
- At SR A1A (N Ocean Boulevard) and Pine Avenue in Lauderdale-by-the-Sea, there are RRFBs for the crosswalk on the south leg and a crosswalk is not provided on the north leg.
- At SR A1A (Fort Lauderdale Beach Boulevard) and Castillo Street, there are crosswalks on the north and south legs, and pedestrian actuated warning treatments are not provided. One "Stop for Pedestrian in Crosswalk" (R1-6a) sign (with optional State Law legend) is provided facing southbound traffic at the north leg crosswalk.
- At SE 8 Avenue and SE 2 Court in Fort Lauderdale, there are RRFBs for the crosswalks on the north and south legs. Both are non-SHS roads.

Based on the review of pedestrian counts, pedestrian generators, crash data, and roadway alignment, a recommendation is made to install RRFBs for the existing crosswalks across Seabreeze Boulevard at Poinsettia Street. However, if a determination is made the RRFBs are not feasible (e.g., constructability review and right-of-way), the "Stop for Pedestrian in Crosswalk" (R1-6a) signs (with optional State Law legend) are recommended (see Section 2B.12 of MUTCD).

All Way Stop Control Warrant Analysis

The analysis to determine if an all way stop control is warranted was performed based on the guidelines provided in Section 2B.07 of the MUTCD. The all-way stop control warrant analysis evaluated traffic volumes under existing conditions. Seabreeze Boulevard is a two-lane (southbound), undivided roadway with a posted speed limit of 30 mph and is considered the major street for the purpose of the analysis. Poinsettia Street is a two-lane (eastbound/westbound), undivided roadway and is considered the minor street for the purpose of the analysis.

The major street approach volumes include vehicular volumes from the southbound approach. The minor street approach volumes include vehicular volumes (eastbound/westbound) and pedestrian and bicycle volumes across the major street. The following describes the criterion that should be considered for a multi-way stop installation. Note that not all criterion need to be met to warrant an all-way stop control at the intersection.

- Criterion B- Crash History
 - Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn, left-turn, and angle collisions.
- Criterion C- Minimum Volume
 - Condition 1: The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day.
 - Condition 2: The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour.
 - Condition 3: If the 85th percentile approach speed of the major-street traffic exceeds 40 mph, then minimum vehicular volume warrants are 70 percent of the values provided in Conditions 1 and 2.
- Criterion D: 80 percent Minimum Values
 - Condition 1: Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

The following sections summarize the results of the warrant analyses for the study location. The results are summarized in Table 13 and warrant analysis worksheets are included in Appendix G.

- Criterion B - Crash History. Crash data was obtained for years 2013-2017 from CAR Online, and for years 2018-2019 from the University of Florida’s Signal Four Analytics online database. The analysis of the crash data indicated that five angle crashes occurred in 2019. As there are at least five correctable crashes in a 12-month span Criterion B is satisfied. Historical crash data and collision diagrams are contained in Appendix C. Please see Sight Distance Analysis for additional considerations.
- Criterion C – Minimum Volume. As Table 13 and Appendix G indicate, the intersection satisfies Condition 1 of Criterion C. However, it does not satisfy Condition 2 of Warrant C. It should be noted however that the minor street volumes exceed 200 vehicles/pedestrians/bicyclist four out of the eight hours required to meet Condition 2 of Criterion C on Saturday and Sunday. Since the 85th percentile speed along Seabreeze Boulevard ranges between 31 mph and 33 mph, the major street does not satisfy Condition 3 of Criterion C as they do not exceed 40 mph.
- Criterion D: 80 percent Minimum Values. Since Criteria B and C1 are satisfied, Criterion D need not be evaluated.

Table 13: All-Way Stop Control Warrant Analysis Summary

MUTCD Warrant	Analysis Results
Warrant B – Crash History	Satisfied
Warrant C.1 – Eight-Hour, Major Street Vehicular Volumes	Satisfied
Warrant C.2 – Eight-Hour, Minor Street Vehicular, Pedestrian, and Bicycle Volumes	Not Satisfied
Warrant C.3 – 85 th Percentile Approach Speed	Not Satisfied
Warrant D – 80 Percent of Minimum Values	N/A

In addition to the minimum volume criteria, Section 2B.07 of the MUTCD provides the option to consider additional criteria as part of all way stop control assessment. The following optional criteria may be considered in an engineering analysis to evaluate an all way stop control:

- Option A – The need to control left-turn conflicts. *While no left-turn crashes were recorded, the sideswipe crashes occurred when drivers attempted to make a left turn from the outside southbound lane. As previously noted, a recommendation is made to improve parking signage to reduce the potential for sudden left turns.*

- Option B – The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes. *Alternative strategies are recommended to address vehicle/pedestrian conflicts.*
- Option C – Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop. *A sight distance analysis is presented in the next section.*
- Option D – An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection. *Not applicable.*

Sight Distance Analysis

Based on Option C, a sight distance/sight triangle analysis was conducted to determine if there is unobstructed sight distance at the intersection of Seabreeze Boulevard and Poinsettia Street for minor street movements. The sight distance criteria used in the analysis was based on the FDOT Design Manual (FDM) Section 212.11.1 and Exhibit 212-4.

FDOT criteria for a two-lane, undivided roadway with a 30 mph design speed was used for the analysis of sight distance for the eastbound and westbound approaches. FDM Exhibit 212-4 indicates that a clear sight line of 335 feet is required upstream (note: main road is a one-way street) from a vehicle entering from a minor road. A sight distance analysis exhibit is included in Appendix H. FDM indicates that these sight triangles “apply only to intersections with intersecting angles between 60 degrees and 120 degrees, and where vertical and horizontal curves are not present.” There are trees present within the area identified as “free of sight obstructions” for the westbound motorists. There are trees and a chain link fence located within a private property along Seabreeze Boulevard in the northeast corner of the intersection. Therefore, a recommendation is made for FDOT to coordinate with the City of Fort Lauderdale to reach out to the property owner for potential mitigation actions.

Summary of All Way Stop Control Warrant Analysis

Overall, two of the MUTCD all way stop control warrant criteria (crash history and major street vehicular volume) are satisfied. The scope of this study did not include an operational analysis to estimate the queues lengths on Seabreeze Boulevard associated with all way stop control. Note that the signalized intersection at Cortez Street is located approximately 280 feet to the north. Furthermore, the following recommendations made in this study, if implemented, may reduce the need for all way stop control:

- Coordinate with the City of Fort Lauderdale to reach out to the owner of the property on the northeast corner to examine the feasibility of (1) removing/relocating existing trees and (2) replacing the chain link fence to improve the sight lines for westbound vehicles. This action should reduce vehicular delay and reduce the potential for angle crashes. Note that one angle crash in 2019 resulted in a fatality.
- Coordinate with City of Fort Lauderdale to evaluate the need for enhancing roadside signs to provide information on parking facility locations. The sideswipe crashes attributed to sudden left turns from the outside southbound through lane at Poinsettia Street may be associated with drivers attempting to access the surface parking lot on the east side. Enhanced signage on parking facilities may help to reduce the potential for such crashes.

If the FDOT intends to further examine the feasibility of all way stop control (especially if the sight line improvements cannot be implemented), an operational analysis should be conducted. Furthermore, implementation of all way stop control would mean the recommendation for RRFB for the crosswalks should not be implemented.

FDOT Work Program

The FDOT Five-Year Work Program for FY 2021-2025 was reviewed for programmed projects within the limits of the study intersection. The following programmed project in the Five-Year Work Program was identified.

- Item # 441754-1: SR A1A Arterial Traffic Management System (ATMS) Deployment
 - Project letting is programmed for FY2023

Summary and Recommendations

This study evaluated potential traffic control measures to improve pedestrian safety at the intersection of SR A1A (Seabreeze Boulevard) and Poinsettia Street in Fort Lauderdale. This study was requested by the City of Fort Lauderdale.

Based on a pedestrian count performed in March 2020, approximately 700 pedestrians were recorded crossing Seabreeze Boulevard at Poinsettia Street between 7:00 AM and 7:00 PM on Saturdays and Sundays. There were 38 crashes between 2013 and 2017 at the subject intersection, which included 21 sideswipe crashes, nine angle crashes, four rear end crashes, three pedestrian crashes, and one bicycle crash. Further, there were 28 crashes in 2018 and 2019 per data available from Signal Four Analytics, which included 20 sideswipe crashes, five angle crashes, one pedestrian crash, one fixed object crash and one backed into crash. One angle crash in 2019 resulted in a fatality. The majority of sideswipe crashes occurred when motorists attempted to make a left turn from the outer southbound through lane onto Poinsettia Street. The majority of angle crashes involved southbound and westbound vehicles.

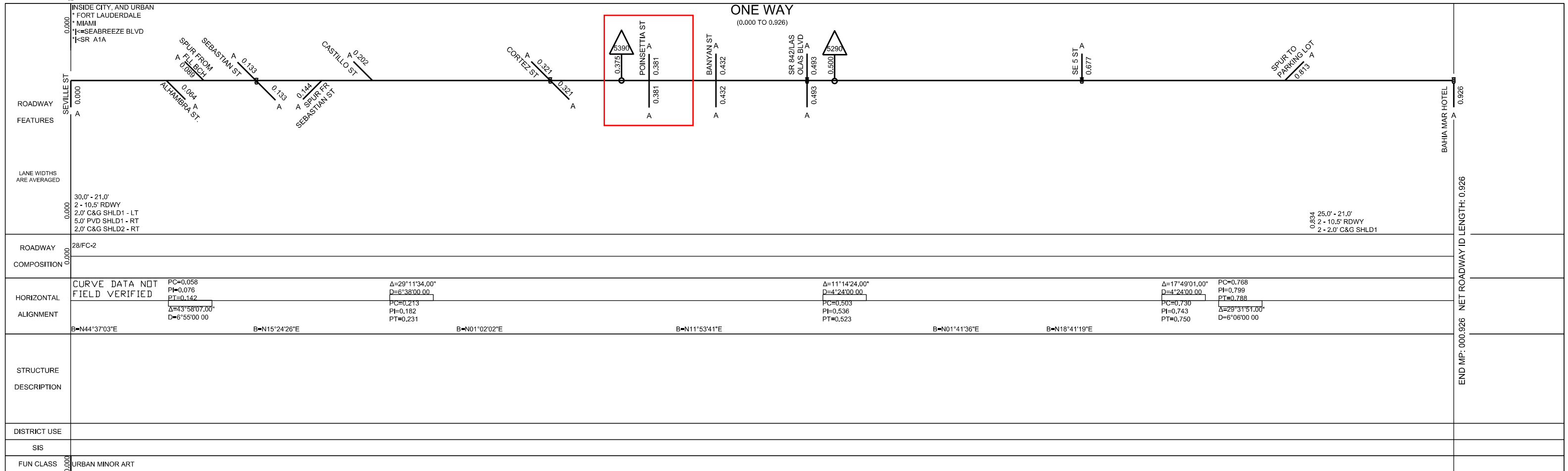
Based on the analysis of crash data, pedestrian counts, a field review, and sight distance assessment, the following recommendations are made:

- Coordinate with the City of Fort Lauderdale to reach out to the owner of the property on the northeast corner to examine the feasibility of (1) removing/relocating existing trees and (2) replacing the chain link fence to improve the sight lines for westbound vehicles. These recommendations are made to reduce the potential for angle crashes and reduce the delay for westbound vehicles. Note that one angle crash in 2019 resulted in a fatality. Please see sight distance analysis (page 23 and Appendix H) for additional information.
 - If the sight line improvements cannot be implemented, consider the possibility of all way stop control. An operational analysis should be conducted to assess queue lengths. If all way stop control is implemented, the recommendation for RRFB for the crosswalks across Seabreeze Boulevard (see below) should not be implemented.
- Install Rectangular Rapid Flashing Beacons (RRFBs) for the existing crosswalks across Seabreeze Boulevard at Poinsettia Street. However, if RRFBs are not feasible (e.g., due to inadequate right-of-way), the “Stop for Pedestrian in Crosswalk” (R1-6a) signs (with optional State Law legend) are recommended. Install pedestrian crossing ahead (W11-2 and W16-9P) signs on the southbound approach. Evaluate the need for improving intersection lighting.

- Coordinate with City of Fort Lauderdale to evaluate the need for enhancing roadside signs on Seabreeze Boulevard to provide information on parking facility locations. The sideswipe crashes attributed to sudden left turns from the outside southbound through lane at Poinsettia Street may be associated with drivers attempting to access the surface parking lot on the east side. Enhanced signage on parking facilities may help to reduce the potential for such crashes.

Appendix A

Straight Line Diagram



Appendix B
FDOT Annual Average Daily Traffic

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2019 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

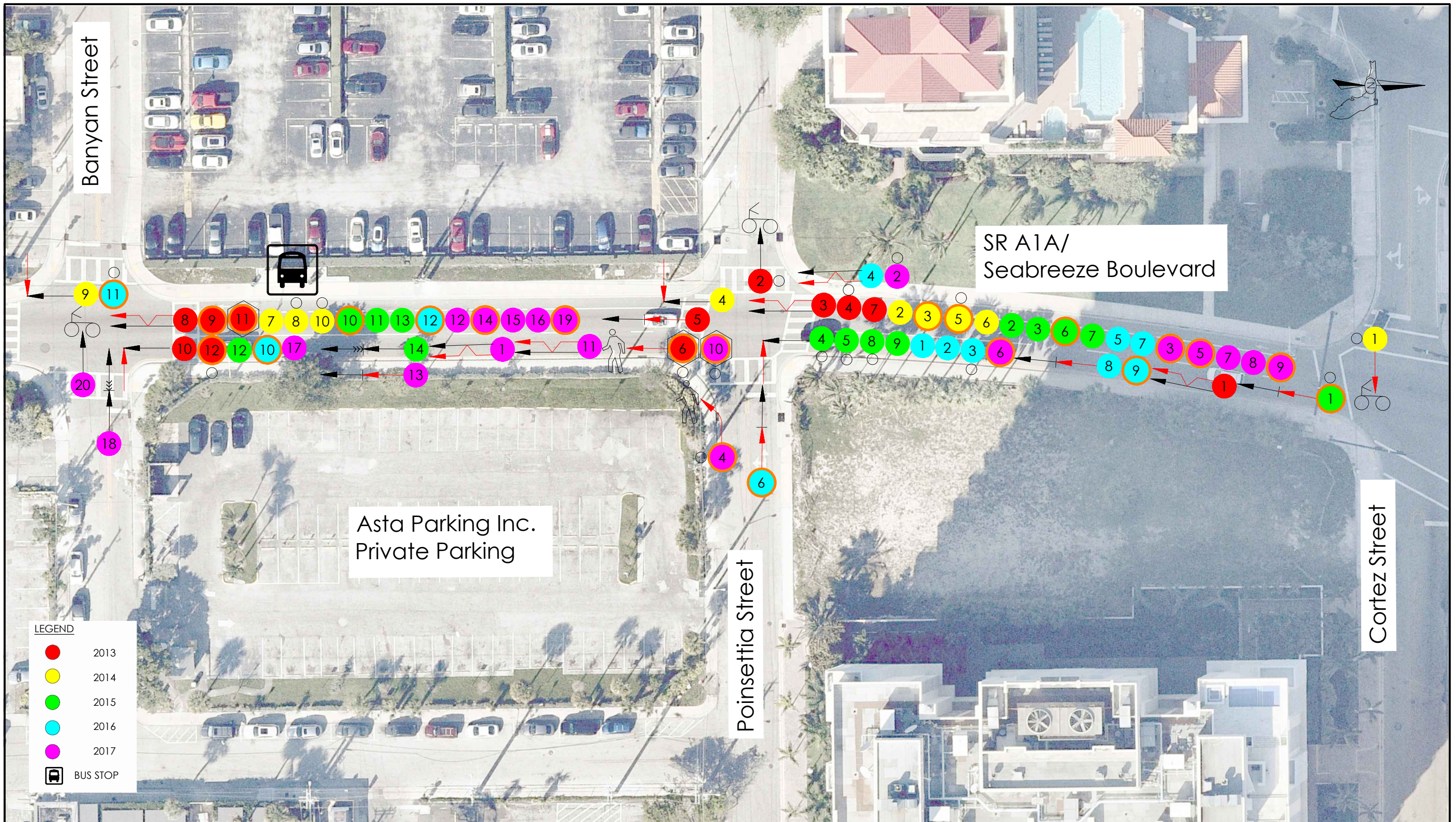
SITE: 5390 - SR A1A/SEABREEZE BLVD - SB ONLY N OF LAS OLAS BLVD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2019	14000 C	S 14000	0	9.00	99.90	2.20
2018	13500 C	S 13500	0	9.00	99.90	2.20
2017	13000 C	S 13000	0	9.00	99.90	3.80
2016	14500 C	S 14500	0	9.00	99.90	3.80
2015	14500 C	S 14500	0	9.00	99.90	3.80
2014	13500 C	S 13500	0	9.00	99.90	3.70
2013	14500 C	S 14500	0	9.00	99.90	3.70
2012	14500 C	S 14500	0	9.00	99.90	3.70
2011	14000 C	S 14000	0	9.00	99.90	2.20
2010	15500 C	S 15500	0	9.37	99.99	2.20
2009	15500 C	S 15500	0	9.31	99.99	2.20
2008	19000 C	S 19000	0	9.70	99.99	4.10
2007	18000 C	S 18000	0	9.10	99.99	4.10
2006	15500 C	S 15500	0	9.48	99.99	2.80
2005	17000 C	S 17000	0	10.60	99.90	2.00
2004	16000 C	S 16000	0	10.40	99.90	2.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Appendix C
Collision Diagrams and CAR On-Line Crash Data

Collision Diagram (2013-2017)



LEGEND

● (Red)	2013
● (Yellow)	2014
● (Green)	2015
● (Cyan)	2016
● (Magenta)	2017
□ (Black)	BUS STOP

LEGEND:

←	BACKING VEHICLE	↔	REAR-END COLLISION	↔	LEFT TURN COLLISION	⦿	DARK LIGHTING CONDITION
↔	SIDESWIPE	↔	HEAD-ON COLLISION	↔	RIGHT TURN COLLISION	⦿	DRIVER UNDER INFLUENCE
↔	PEDESTRIAN PATH	↔	OVERTURNED VEHICLE	↔	COMMERCIAL TRUCK	⦿	DUI+DARK LIGHTING CONDITION
↔	OUT OF CONTROL	↔	ANGLE COLLISION	⦿	WET CONDITIONS	□	FIXED OBJECT
↔	PEDESTRIAN /BIKE COLLISION	⦿	PARKED VEHICLE	⦿	VEHICLE INVOLVED	↔	VEHICLE AT FAULT
		⦿	PERSONAL INJURY				
		●	FATALITY				

PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	CITY OR TOWN
SR-A1A	Broward	Fort Lauderdale

COLLISION DIAGRAM
SR A1A from south of Cortez Street to Banyan Street
Data Source: Car Online
YEAR 2013 - YEAR 2017

SHEET
1 OF 1

Collision Diagram (2018-2019)



SR A1A/
Seabreeze Boulevard

Banyan Street

Cortez Street

Poinsettia Street

Asta Parking Inc.
Private Parking

LEGEND

- 2018
- 2019
- BUS STOP

LEGEND:

	BACKING VEHICLE		REAR-END COLLISION		DARK LIGHTING CONDITION
	SIDESWIPE		HEAD-ON COLLISION		DRIVER UNDER INFLUENCE
	PEDESTRIAN PATH		OVERTURNED VEHICLE		DUI+DARK LIGHTING CONDITION
	OUT OF CONTROL		LEFT TURN COLLISION		FIXED OBJECT
	PEDESTRIAN /BIKE COLLISION		RIGHT TURN COLLISION		COMMERCIAL TRUCK
			ANGLE COLLISION		WET CONDITIONS
			PARKED VEHICLE		VEHICLE INVOLVED
			PERSONAL INJURY		VEHICLE AT FAULT
			FATALITY		

PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	CITY OR TOWN
SR-A1A	Broward	Fort Lauderdale

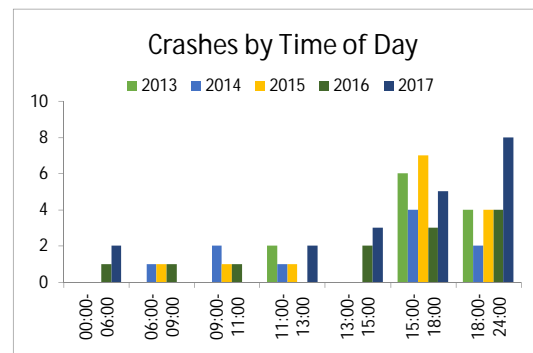
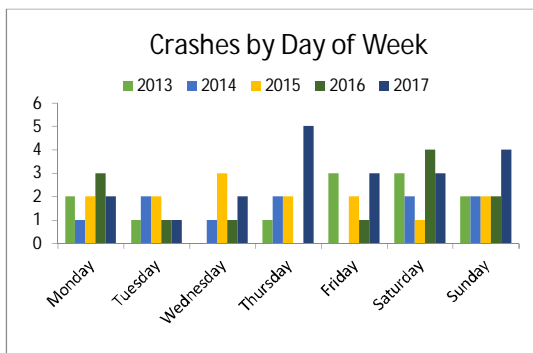
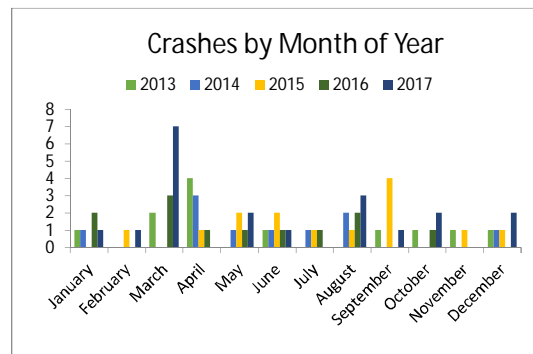
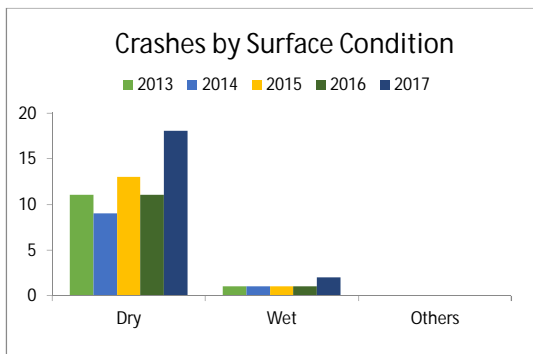
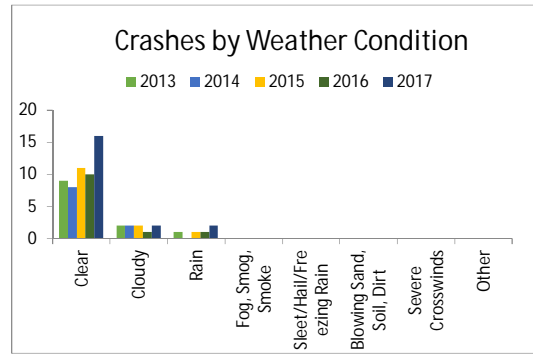
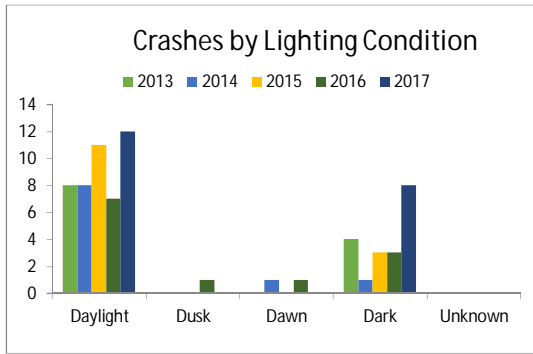
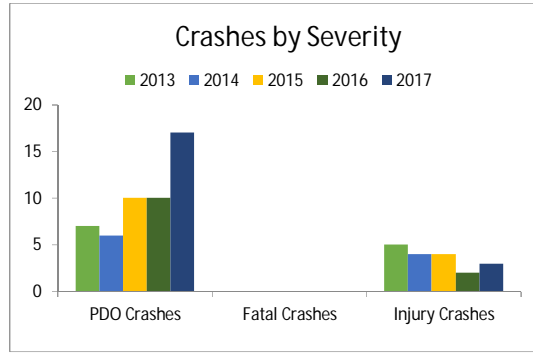
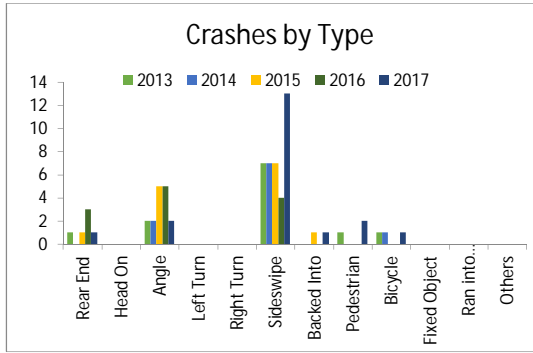
COLLISION DIAGRAM
SR A1A from south of Cortez Street to Banyan Street
Data Source: Signal4 Analytics
YEAR 2018 - YEAR 2019

SHEET
1 OF 1

CAR Online Crash Data (2013-2017)

SR A1A/Seabreeze Blvd from south of Cortez Street to Banyan Street Segment/Spot with No Expected Values Available		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%	Expected Annual Crash Value		90 %ile	95 %ile
		Year								Abnormally High Crashes per year			
		2013	2014	2015	2016	2017				90th percentile	95th percentile		
CRASH TYPE	Rear End	1	0	1	3	1	6	1.20	8.8%	0.00	0.00		
	Head On	0	0	0	0	0	0	0.00	0.0%	0.00	0.00		
	Angle	2	2	5	5	2	16	3.20	23.5%	0.00	0.00		
	Left Turn	0	0	0	0	0	0	0.00	0.0%	0.00	0.00		
	Right Turn	0	0	0	0	0	0	0.00	0.0%	0.00	0.00		
	Sideswipe	7	7	7	4	13	38	7.60	55.9%	0.00	0.00		
	Backed Into	0	0	1	0	1	2	0.40	2.9%	0.00	0.00		
	Pedestrian	1	0	0	0	2	3	0.60	4.4%	0.00	0.00		
	Bicycle	1	1	0	0	1	3	0.60	4.4%	0.00	0.00		
	Fixed Object	0	0	0	0	0	0	0.00	0.0%	0.00	0.00		
	Other Non-Collisions	0	0	0	0	0	0	0.00	0.0%	0.00	0.00		
	Overturn/Rollover	0	0	0	0	0	0	0.00	0.0%	0.00	0.00		
	Others	0	0	0	0	0	0	0.00	0.0%	0.00	0.00		
Total Crashes	12	10	14	12	20	68	13.60	100.0%	0.00	0.00			
SEVERITY	PDO Crashes	7	6	10	10	17	50	10.00	73.5%	0.00	0.00		
	Fatal Crashes	0	0	0	0	0	0	0.00	0.0%	0.00	0.00		
	Injury Crashes	5	4	4	2	3	18	3.60	26.5%	0.00	0.00		
LIGHTING CONDITIONS	Daylight	8	8	11	7	12	46	9.20	67.6%	0.00	0.00		
	Dusk	0	0	0	1	0	1	0.20	1.5%	0.00	0.00		
	Dawn	0	1	0	1	0	2	0.40	2.9%	0.00	0.00		
	Dark	4	1	3	3	8	19	3.80	27.9%	0.00	0.00		
	Unknown	0	0	0	0	0	0	0.00	0.0%	0.00	0.00		
SURFACE CONDITIONS	Dry	11	9	13	11	18	62	12.40	91.2%	0.00	0.00		
	Wet	1	1	1	1	2	6	1.20	8.8%	0.00	0.00		
	Others	0	0	0	0	0	0	0.00	0.0%	0.00	0.00		
MONTH OF YEAR	January	1	1	0	2	1	5	1.00	7.4%	0.00	0.00		
	February	0	0	1	0	1	2	0.40	2.9%	0.00	0.00		
	March	2	0	0	3	7	12	2.40	17.6%	0.00	0.00		
	April	4	3	1	1	0	9	1.80	13.2%	0.00	0.00		
	May	0	1	2	1	2	6	1.20	8.8%	0.00	0.00		
	June	1	1	2	1	1	6	1.20	8.8%	0.00	0.00		
	July	0	1	1	1	0	3	0.60	4.4%	0.00	0.00		
	August	0	2	1	2	3	8	1.60	11.8%	0.00	0.00		
	September	1	0	4	0	1	6	1.20	8.8%	0.00	0.00		
	October	1	0	0	1	2	4	0.80	5.9%	0.00	0.00		
	November	1	0	1	0	0	2	0.40	2.9%	0.00	0.00		
	December	1	1	1	0	2	5	1.00	7.4%	0.00	0.00		
DAY OF WEEK	Monday	2	1	2	3	2	10	2.00	14.7%	0.00	0.00		
	Tuesday	1	2	2	1	1	7	1.40	10.3%	0.00	0.00		
	Wednesday	0	1	3	1	2	7	1.40	10.3%	0.00	0.00		
	Thursday	1	2	2	0	5	10	2.00	14.7%	0.00	0.00		
	Friday	3	0	2	1	3	9	1.80	13.2%	0.00	0.00		
	Saturday	3	2	1	4	3	13	2.60	19.1%	0.00	0.00		
	Sunday	2	2	2	2	4	12	2.40	17.6%	0.00	0.00		
HOUR OF DAY	00:00-06:00	0	0	0	1	2	3	0.60	4.4%	0.00	0.00		
	06:00-09:00	0	1	1	1	0	3	0.60	4.4%	0.00	0.00		
	09:00-11:00	0	2	1	1	0	4	0.80	5.9%	0.00	0.00		
	11:00-13:00	2	1	1	0	2	6	1.20	8.8%	0.00	0.00		
	13:00-15:00	0	0	0	2	3	5	1.00	7.4%	0.00	0.00		
	15:00-18:00	6	4	7	3	5	25	5.00	36.8%	0.00	0.00		
18:00-24:00	4	2	4	4	8	22	4.40	32.4%	0.00	0.00			

SR A1A/Seabreeze Blvd from south of Cortez Street to Banyan Street



State of Florida Department of Transportation
CRASH SUMMARY

SECTION: 86050100 STATE ROUTE: ATA
 ROADWAY LIMITS: south of Cortez Street to Banyan Street M.P. 0.274 TO 0.451 ENGINEER: FDOT
 STUDY PERIOD: FROM 1/ 2013 TO 12/ 2013 COUNTY: Broward

No.	MILE POST	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURIES	PROP DAM	DAY / NIGHT	WET / DRY	CONTRIBUTING CAUSE (VEHICLE ONLY)
1	0.375	10/15/13	Tue	1628	Sideswipe	0	0	1	Day	Dry	Failed To Keep In Proper Lane
2	0.381	04/06/13	Sat	1515	Pedalcycle	0	1	0	Day	Dry	Failed to Yield Right-Of-Way
3	0.381	04/15/13	Mon	1746	Sideswipe	0	0	1	Day	Wet	Failed to Yield Right-Of-Way
4	0.381	04/18/13	Thu	1823	Sideswipe	0	1	0	Day	Dry	No Contributing Action
5	0.381	04/21/13	Sun	1757	Rear-End	0	0	1	Day	Dry	Followed too Closely
6	0.381	03/22/13	Fri	2051	Pedestrian	0	1	0	Night	Dry	Failed to Yield Right-Of-Way
7	0.381	11/09/13	Sat	1247	Sideswipe	0	0	1	Day	Dry	Failed To Keep In Proper Lane
8	0.430	03/22/13	Fri	1259	Sideswipe	0	4	0	Day	Dry	Failed to Yield Right-Of-Way
9	0.432	01/04/13	Fri	2104	Sideswipe	0	0	1	Night	Dry	Improper Turn
10	0.432	06/15/13	Sat	1520	Angle	0	0	1	Day	Dry	No Contributing Action
11	0.432	09/16/13	Mon	1750	Sideswipe	0	0	1	Night	Dry	Careless or Negligent Manner
12	0.432	12/08/13	Sun	1832	Angle	0	1	0	Night	Dry	Failed to Yield Right-Of-Way

Total No.	Fatal	Injury	PDO	Rear-End	Head-On	Angle	Left-Turn	Right-Turn	Sideswipe	Backed Into	Ped/Bike	Parked Car	Fixed Object	Ran into Water	Other
12	0	5	7	1	0	2	0	0	7	0	2	0	0	0	0
Percent	0.00%	41.67%	58.33%	8.33%	0.00%	16.67%	0.00%	0.00%	58.33%	0.00%	16.67%	0.00%	0.00%	0.00%	0.00%
Contrib. Cause	Day	Night	Wet	Dry	Careless Driving	FTYRW	Improper Turn	Ran Red Light	Exceeded Speed	Improper Passing	Disreg Cntl Dev	Erratic/Aggress	Ran off Road	DUI	Wrong Way
Total	8	4	1	11	1	5	1	0	0	0	0	0	0	2	0
Percent	66.67%	33.33%	8.33%	91.67%	8.33%	41.67%	8.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%	0.00%

TOTAL ENTERING VEHICLES/ADT: 14,500

SEGMENT CRASH RATE: 12.810 CRASHES PER MILLION VEHICLE MILES

State of Florida Department of Transportation
CRASH SUMMARY

SECTION: 86050100 STATE ROUTE: A1A
 INTERSECTING ROADWAY: south of Cortez Street to Banyan Street M.P. 0.274 TO 0.451 ENGINEER: KHA
 STUDY PERIOD: FROM 1/ 2014 TO 12/ 2014 COUNTY: Broward

No.	MILE POST	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURIES	PROP DAM	DAY / NIGHT	WET / DRY	CONTRIBUTING CAUSE (VEHICLE ONLY)
1	0.321	08/09/14	Sat	1529	Pedalcycle	0	1	0	Day	Dry	Failed to Yield Right-Of-Way
2	0.378	07/27/14	Sun	1640	Sideswipe	0	0	1	Day	Dry	Improper Turn
3	0.381	01/18/14	Sat	2030	Sideswipe	0	0	1	Night	Dry	Improper Passing
4	0.381	04/06/14	Sun	0930	Angle	0	0	1	Day	Dry	Ran Stop Sign
5	0.381	04/15/14	Tue	1911	Sideswipe	0	1	0	Night	Wet	Improper Turn
6	0.381	05/19/14	Mon	1520	Sideswipe	0	0	1	Day	Dry	Improper Turn
7	0.430	12/11/14	Thu	1232	Sideswipe	0	0	1	Day	Dry	Failed to Yield Right-Of-Way
8	0.432	04/29/14	Tue	1515	Sideswipe	0	1	0	Day	Dry	Other Contributing Action
9	0.432	06/26/14	Thu	0942	Angle	0	0	1	Day	Dry	Ran Stop Sign
10	0.432	08/06/14	Wed	0825	Sideswipe	0	1	0	Day	Dry	Improper Turn

Total No.	Fatal	Injury	PDO	Rear-End	Head-On	Angle	Left-Turn	Right-Turn	Sideswipe	Backed Into	Ped/Bike	Parked Car	Fixed Object	Ran into Water	Other
10	0	4	6	0	0	2	0	0	7	0	1	0	0	0	0
Percent	0.00%	40.00%	60.00%	0.00%	0.00%	20.00%	0.00%	0.00%	70.00%	0.00%	10.00%	0.00%	0.00%	0.00%	0.00%
Contrib. Cause	Day	Night	Wet	Dry	Careless Driving	FTYRW	Improper Turn	Ran Red Light	Exceeded Speed	Improper Passing	Disreg Cntl Dev	Erratic/Aggress	Ran off Road	DUI	Wrong Way
Total	8	2	1	9	0	2	4	0	0	1	0	0	0	0	0
Percent	80.00%	20.00%	10.00%	90.00%	0.00%	20.00%	40.00%	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%

TOTAL ENTERING VEHICLES/ADT: 13,500 SPOT CRASH RATE: 2.029 CRASHES PER MILLION ENTERING VEHICLES

State of Florida Department of Transportation
CRASH SUMMARY

SECTION: 86050100 STATE ROUTE: A1A
 INTERSECTING ROADWAY: south of Cortez Street to Banyan Street M.P. 0.274 TO 0.451 ENGINEER: KHA
 STUDY PERIOD: FROM 1/ 2015 TO 12/ 2015 COUNTY: Broward

No.	MILE POST	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURIES	PROP DAM	DAY / NIGHT	WET / DRY	CONTRIBUTING CAUSE (VEHICLE ONLY)
1	0.325	09/15/15	Tue	2309	Rear-End	0	5	0	Night	Dry	Followed too Closely
2	0.376	08/09/15	Sun	1620	Sideswipe	0	0	1	Day	Dry	Failed To Keep In Proper Lane
3	0.381	02/28/15	Sat	1220	Sideswipe	0	0	1	Day	Wet	Improper Turn
4	0.381	04/15/15	Wed	1836	Angle	0	3	0	Day	Dry	Ran Stop Sign
5	0.381	06/01/15	Mon	1613	Angle	0	2	0	Day	Dry	Failed to Yield Right-Of-Way
6	0.381	07/23/15	Thu	2238	Sideswipe	0	0	1	Night	Dry	Other Contributing Action
7	0.381	09/24/15	Thu	1630	Sideswipe	0	0	1	Day	Dry	Failed To Keep In Proper Lane
8	0.381	11/25/15	Wed	1655	Angle	0	2	0	Day	Dry	Failed to Yield Right-Of-Way
9	0.381	12/20/15	Sun	1500	Angle	0	0	1	Day	Dry	Failed to Yield Right-Of-Way
10	0.423	05/08/15	Fri	2050	Sideswipe	0	0	1	Night	Dry	Careless or Negligent Manner
11	0.431	09/23/15	Wed	1644	Sideswipe	0	0	1	Day	Dry	Failed To Keep In Proper Lane
12	0.432	05/01/15	Fri	1618	Angle	0	0	1	Day	Dry	No Contributing Action
13	0.432	06/22/15	Mon	1000	Sideswipe	0	0	1	Day	Dry	Failed to Yield Right-Of-Way
14	0.432	09/08/15	Tue	0759	Backed Into	0	0	1	Day	Dry	Improper Backing

Total No.	Fatal	Injury	PDO	Rear-End	Head-On	Angle	Left-Turn	Right-Turn	Sideswipe	Backed Into	Ped/Bike	Parked Car	Fixed Object	Ran into Water	Other
14	0	4	10	1	0	5	0	0	7	1	0	0	0	0	0
Percent	0.00%	28.57%	71.43%	7.14%	0.00%	35.71%	0.00%	0.00%	50.00%	7.14%	0.00%	0.00%	0.00%	0.00%	0.00%
Contrib. Cause	Day	Night	Wet	Dry	Careless Driving	FTYRW	Improper Turn	Ran Red Light	Exceeded Speed	Improper Passing	Disreg Cntl Dev	Erratic/Aggress	Ran off Road	DUI	Wrong Way
Total	11	3	1	13	1	4	1	0	0	0	0	0	0	0	0
Percent	78.57%	21.43%	7.14%	92.86%	7.14%	28.57%	7.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

TOTAL ENTERING VEHICLES/ADT: 14,500 SPOT CRASH RATE: 2.645 CRASHES PER MILLION ENTERING VEHICLES

State of Florida Department of Transportation
CRASH SUMMARY

SECTION: 86050100 STATE ROUTE: A1A
 INTERSECTING ROADWAY: south of Cortez Street to Banyan Street M.P. 0.274 TO 0.451 ENGINEER: KHA
 STUDY PERIOD: FROM 1/ 2016 TO 12/ 2016 COUNTY: Broward

No.	MILE POST	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURIES	PROP DAM	DAY / NIGHT	WET / DRY	CONTRIBUTING CAUSE (VEHICLE ONLY)						
1	0.381	01/15/16	Fri	0936	Angle	0	0	1	Day	Wet	Failed to Yield Right-Of-Way						
2	0.381	03/19/16	Sat	1332	Angle	0	0	1	Day	Dry	Failed to Yield Right-Of-Way						
3	0.381	06/12/16	Sun	1347	Angle	0	1	0	Day	Dry	Failed to Yield Right-Of-Way						
4	0.381	07/25/16	Mon	1558	Sideswipe	0	0	1	Day	Dry	Other Contributing Action						
5	0.381	08/17/16	Wed	1500	Sideswipe	0	0	1	Day	Dry	Other Contributing Action						
6	0.381	08/20/16	Sat	1939	Rear-End	0	0	1	Night	Dry	Other Contributing Action						
7	0.381	10/17/16	Mon	0118	Sideswipe	0	0	1	Day	Dry	Failed to Yield Right-Of-Way						
8	0.382	04/26/16	Tue	1544	Rear-End	0	0	1	Day	Dry	Other Contributing Action						
9	0.413	03/05/16	Sat	0605	Rear-End	0	0	1	Night	Dry	Careless or Negligent Manner						
10	0.432	01/18/16	Mon	2200	Angle	0	0	1	Night	Dry	No Contributing Action						
11	0.432	03/13/16	Sun	2248	Angle	0	2	0	Night	Dry	Failed to Yield Right-Of-Way						
12	0.432	05/07/16	Sat	2224	Sideswipe	0	0	1	Night	Dry	No Contributing Action						
Total No.	Fatal	Injury	PDO	Rear-End	Head-On	Angle	Left-Turn	Right-Turn	Sideswipe	Backed Into	Ped/Bike	Parked Car	Fixed Object	Ran into Water	Other		
12	0	2	10	3	0	5	0	0	4	0	0	0	0	0	0		
Percent	0.00%	16.67%	83.33%	25.00%	0.00%	41.67%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Contrib. Cause	Day	Night	Wet	Dry	Careless Driving	FTYRW	Improper Turn	Ran Red Light	Exceeded Speed	Improper Passing	Disreg Cntl Dev	Erratic/Aggress	Ran off Road	DUI	Wrong Way		
Total	7	5	1	11	1	5	0	0	0	0	0	0	0	0	0		
Percent	58.33%	41.67%	8.33%	91.67%	8.33%	41.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
TOTAL ENTERING VEHICLES/ADT:							14,500		SPOT CRASH RATE:							2.645 CRASHES PER MILLION ENTERING VEHICLES	

State of Florida Department of Transportation
CRASH SUMMARY

SECTION: 86050100 STATE ROUTE: A1A
 INTERSECTING ROADWAY: south of Cortez Street to Banyan Street M.P. 0.274 TO 0.451 ENGINEER: KHA
 STUDY PERIOD: FROM 1/ 2017 TO 12/ 2017 COUNTY: Broward

No.	MILE POST	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURIES	PROP DAM	DAY / NIGHT	WET / DRY	CONTRIBUTING CAUSE (VEHICLE ONLY)				
1	0.375	08/25/17	Fri	1358	Sideswipe	0	0	1	Day	Wet	Failed To Keep In Proper Lane				
2	0.377	03/13/17	Mon	1425	Sideswipe	0	1	0	Day	Dry	No Contributing Action				
3	0.378	10/13/17	Fri	2315	Sideswipe	0	0	1	Night	Wet	Improper Turn				
4	0.381	01/14/17	Sat	2300	Pedestrian	0	1	0	Night	Dry	#N/A				
5	0.381	03/15/17	Wed	2238	Sideswipe	0	0	1	Night	Dry	Failed To Keep In Proper Lane				
6	0.381	03/23/17	Thu	0101	Angle	0	0	1	Night	Dry	Other Contributing Action				
7	0.381	06/04/17	Sun	2026	Sideswipe	0	0	1	Day	Dry	Improper Turn				
8	0.381	08/13/17	Sun	1549	Sideswipe	0	0	1	Day	Dry	Other Contributing Action				
9	0.381	12/28/17	Thu	2135	Sideswipe	0	0	1	Night	Dry	Careless or Negligent Manner				
10	0.382	03/10/17	Fri	2012	Pedestrian	0	1	0	Night	Dry	No Contributing Action				
11	0.400	03/08/17	Wed	1642	Sideswipe	0	0	1	Day	Dry	Other Contributing Action				
12	0.427	02/25/17	Sat	1435	Sideswipe	0	0	1	Day	Dry	Failed To Keep In Proper Lane				
13	0.429	05/07/17	Sun	1915	Rear-End	0	0	1	Day	Dry	Followed too Closely				
14	0.432	03/05/17	Sun	0223	Sideswipe	0	0	1	Night	Dry	Improper Turn				
15	0.432	03/14/17	Tue	1728	Sideswipe	0	0	1	Day	Dry	Other Contributing Action				
16	0.432	05/11/17	Thu	1154	Sideswipe	0	0	1	Day	Dry	Careless or Negligent Manner				
17	0.432	08/19/17	Sat	1600	Angle	0	0	1	Day	Dry	Failed to Yield Right-Of-Way				
18	0.432	09/07/17	Thu	1130	Backed Into	0	0	1	Day	Dry	Improper Backing				
19	0.432	10/26/17	Thu	1950	Sideswipe	0	0	1	Night	Dry	Improper Turn				
20	0.432	12/25/17	Mon	1640	Pedalcycle	0	0	1	Day	Dry	Failed to Yield Right-Of-Way				
Total No.	Fatal	Injury	PDO	Rear-End	Head-On	Angle	Left-Turn	Right-Turn	Sideswipe	Backed Into	Ped/Bike	Parked Car	Fixed Object	Ran into Water	Other
20	0	3	17	1	0	2	0	0	13	1	3	0	0	0	0
Percent	0.00%	15.00%	85.00%	5.00%	0.00%	10.00%	0.00%	0.00%	65.00%	5.00%	15.00%	0.00%	0.00%	0.00%	0.00%
Contrib. Cause	Day	Night	Wet	Dry	Careless Driving	FTYRW	Improper Turn	Ran Red Light	Exceeded Speed	Improper Passing	Disreg Cntl Dev	Erratic/Aggress	Ran off Road	DUI	Wrong Way
Total	12	8	2	18	2	2	4	0	0	0	0	0	0	1	0
Percent	60.00%	40.00%	10.00%	90.00%	10.00%	10.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%
TOTAL ENTERING VEHICLES/ADT:							14,500	SPOT CRASH RATE:		2.645 CRASHES PER MILLION ENTERING VEHICLES					



```
          CCCCCCCCCC      AAAAAAAAAA      RRRRRRRRRR
        CCCCCCCCCC      AAAAAAAAAAAA      RRRRRRRRRRRR
       CCC             AAA      AAA      RRR      RRR
      CCC             AAA      AAA      RRR      RRR
     CCC             AAAAAAAAAA      RRRRRRRRRRRR
    CCC             AAAAAAAAAAAA      RRRRRRRRRRRRRR
   CCC             AAA      AAA      RRR      RRR
  CCC             AAA      AAA      RRR      RRR
 CCCCCCCCCC      AAA      AAA      RRR      RRRR
CCCCCCCCCCCC      AAA      AAA      RRR      RRRRRR
```

C R A S H R E P O R T I N G S Y S T E M

N O T I C E: THE INFORMATION CONTAINED IN THIS DOCUMENT (REPORT, SCHEDULE, LIST, OR DATA) HAS BEEN COMPILED FROM INFORMATION COLLECTED FOR THE PURPOSE OF IDENTIFYING, EVALUATING, OR PLANNING SAFETY ENHANCEMENTS. THIS PRODUCT IDENTIFIES INFORMATION USED FOR THE PURPOSE OF DEVELOPING HIGHWAY SAFETY CONSTRUCTION IMPROVEMENT PROJECTS WHICH MAY BE IMPLEMENTED UTILIZING FEDERAL-AID HIGHWAY FUNDS. ANY DOCUMENT DISPLAYING THIS NOTICE SHALL BE USED ONLY FOR THOSE PURPOSES DEEMED APPROPRIATE BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. SEE TITLE 23, UNITED STATES CODE, SECTION 409.

```
I/O NAME: ..... CARI122
PROGRAM ID: ..... CARPJ122
REPORT NUMBER: ..... 01
RUN CLASS: ..... A
MESSAGE CLASS: ..... Q
PRINTER DEST: ..... LOCAL
# COPIES: ..... 01
ACCOUNT #: ..... 5565945
SUBMIT W/HOLD? ..... N
USERID: ..... KNKHALT
DETAIL SORT ORDER: ..... 1 - SORT BY ROADWAY, MILE POINT
PRINT SEGMENTS? ..... N
PRINT INTERSECTIONS? ..... N
SUMMARY FORMAT: ..... 2 - TOP LINE ALL BREAKS
OVERRIDE VALUES:
MAX # OF BREAKS: ..... 06
CRASH RATE CATEGORY: ...
AVERAGE DAILY TRAFFIC:..
# OF LEGS: .....
```


REPORT...CARPJ122-01
DATE...03/17/2020
TIME...15:09:28

FLORIDA - DEPARTMENT OF TRANSPORTATION
C A R - CRASH ANALYSIS REPORTING SYSTEM
CRASH DATA (IN 2011 AND LATER) DETAIL FOR STATE-MAINTAINED ROADS

PAGE NO: 3
USERID: KNKHALT
I/O.... CARO213

COMMENT:

1 - SORT BY ROADWAY, MILE POINT

FROM: 01/01/2013 TO 12/31/2017
FROM CO/SEC/SUB: 86 050 100
TO CO/SEC/SUB: 86 050 100

RAMPS INCL
INFL INCL
CR/OS INCL
MP: 000.274
MP: 000.451

C	ROADWYID	M	N	S	ADT	Y	M	D	H	CRCC	A	H	MO	L	W	R	R	DL	R	A	V	V	VF	VM	VA	V	V	V	VN	VN	N	V	#	#	#					
R	N	C	S	I	EN	TR	VAR	E	O	A	O	RALA	L	AE	AF	IC	EC	D	OC	OO	O	C	1	1	1U	1A	1C	1A	2	2N	2N	2M	2M	M	2N					
A	U	O	E	L	AO	AO	EIA	A	N	Y	U	ATAT	C	RV	N	GO	AO	AO	TC	A	C	N	N	T	G	M	M								M	V	K	I		
S	M	U	C	SC	E	RD	TA	R	L	F	R	T	SESE	ME	NC	HN	TN	S	DN	A	D	D	B	SC	E	DI	DE	D	B	F	MP	AA	A	D	E	I	N			
H	B	N	T	UT	P	EE	ED	AYF	H			H	SG	I	FN	EO	TD	HD	U	D	ST	L	I	OT	P	U	RO	R	I	OD	UL	NR	CC	C	RA	H	L	J		
E	T	I	BI	O	S			G	I			O	N	UT	RL	IT	ET	R	T	II	S	N	R	DY	E	V	IN	I	R	DE	NO	VI	TT	T	AG	C	L	U		
R	Y	O	O	S	T			E	C			R	V	L	L	NN	RN	F	N	TO	D		YP	C	E	V	V	/S	CC	RO	1N	N	GE	L	E	R				
	N	N	T					Y				1	GS	S				S	EN	#		E	R	R	R	R	C	/	/R	/1	2	E	S	D	D					
839088800	86050100	00.430	4689	A1A	014500	13	03	22	12	U1WAY	0	14	04	01	01	01	01	02	R	1	S	01	01	06	03	44	S	01	88	01	01					25	2	0	04	
850196870	86050100	00.430	4689	A1A	013500	14	12	11	12	U1WAY	0	14	03	01	01	01	01	02	R	1	S	16	01	06	03	51	S	01	01	01	01					31	2	0	00	
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860104200	86050100	00.432	4689	A1A	014500	15	06	22	10	U1WAY	0	14	03	01	01	01	01	02	R	1	S	01	01	06	03	37	S	16	01	01	01					49	2	0	00	
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869453920	86050100	00.432	4689	A1A	013000	17	05	11	11	U1WAY	0	14	03	01	01	01	01	02	L	1	S	01	01	03	02	28	S	01	01	01	01					37	2	0	00	
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874040530	86050100	00.432	4689	A1A	013000	17	09	07	11	U1WAY	0	14	01	01	01	01	01	02	S	1	W	16	01	04	04	64	W	01	01	01	01					29	2	0	00	
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864661760	86050100	00.441	4689	A1A	014500	16	08	16	14	U1WAY	0	14	04	01	01	01	01	01	L	1	S	01	01	06	25	17	S	01	01	01	01					49	2	0	00	

REPORT...CARPJ122-01
 DATE...03/17/2020
 TIME...15:09:28

FLORIDA - DEPARTMENT OF TRANSPORTATION
 C A R - CRASH ANALYSIS REPORTING SYSTEM
 CRASH DATA (IN 2011 AND LATER) DETAIL FOR STATE-MAINTAINED ROADS

PAGE NO: 4
 USERID: KNKHALT
 I/O.... CARI122

COMMENT: 1 - SORT BY ROADWAY, MILE POINT
 FROM: 01/01/2013 TO 12/31/2017
 FROM CO/SEC/SUB: 86 050 100
 TO CO/SEC/SUB: 86 050 100

MP: 000.274
 MP: 000.451
 RAMPS INCL
 INFL INCL
 CR/OS INCL

FOR YEAR	FATAL CRASH STATISTICS			INJURY CRASH STATS		PROPERTY DAMAGE ONLY	TOTALS			INFLUENCE CRASHES OCCURRING ON INTERSECTING RDWYS	
	CRASHES	FATALITIES	INJURIES	CRASHES	INJURIES	CRASHES	CRASHES	FATALITIES	INJURIES	AT INT.	INFL AREA
2013	0	0	0	7	12	14	21	0	12	4	3
2014	0	0	0	7	7	12	19	0	7	0	3
2015	0	0	0	4	12	14	18	0	12	1	0
2016	0	0	0	2	3	21	23	0	3	2	3
2017	0	0	0	4	5	22	26	0	5	2	0
TOTAL	0	0	0	24	39	83	107	0	39	9	9

N O T I C E: THE INFORMATION CONTAINED IN THIS DOCUMENT (REPORT, SCHEDULE, LIST, OR DATA) HAS BEEN COMPILED FROM INFORMATION COLLECTED FOR THE PURPOSE OF IDENTIFYING, EVALUATING, OR PLANNING SAFETY ENHANCEMENTS. THIS PRODUCT IDENTIFIES INFORMATION USED FOR THE PURPOSE OF DEVELOPING HIGHWAY SAFETY CONSTRUCTION IMPROVEMENT PROJECTS WHICH MAY BE IMPLEMENTED UTILIZING FEDERAL-AID HIGHWAY FUNDS. ANY DOCUMENT DISPLAYING THIS NOTICE SHALL BE USED ONLY FOR THOSE PURPOSES DEEMED APPROPRIATE BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. SEE TITLE 23, UNITED STATES CODE, SECTION 409.

REPORT...CARPJ122-01
 DATE...03/17/2020
 TIME...15:09:28

FLORIDA - DEPARTMENT OF TRANSPORTATION
 C A R - CRASH ANALYSIS REPORTING SYSTEM
 CRASH DATA (IN 2011 AND LATER) DETAIL FOR STATE-MAINTAINED ROADS
 *** REPORT TOTALS ***

PAGE NO: 5
 USERID: KNKHALT
 I/O.... CARI122

CUMULATIVE TOTALS FOR ALL LOCATIONS SUBMITTED - OVERLAPPING OR INTERSECTING LOCATIONS MAY RESULT IN CRASHES COUNTED MORE THAN ONCE

FOR YEAR	FATAL CRASH STATISTICS			INJURY CRASH STATS		PROPERTY DAMAGE ONLY	TOTALS			INFLUENCE CRASHES OCCURRING ON INTERSECTING RDWYS	
	CRASHES	FATALITIES	INJURIES	CRASHES	INJURIES	CRASHES	CRASHES	FATALITIES	INJURIES	AT INT.	INFL AREA
2013	0	0	0	7	12	14	21	0	12	4	3
2014	0	0	0	7	7	12	19	0	7	0	3
2015	0	0	0	4	12	14	18	0	12	1	0
2016	0	0	0	2	3	21	23	0	3	2	3
2017	0	0	0	4	5	22	26	0	5	2	0
TOTAL	0	0	0	24	39	83	107	0	39	9	9

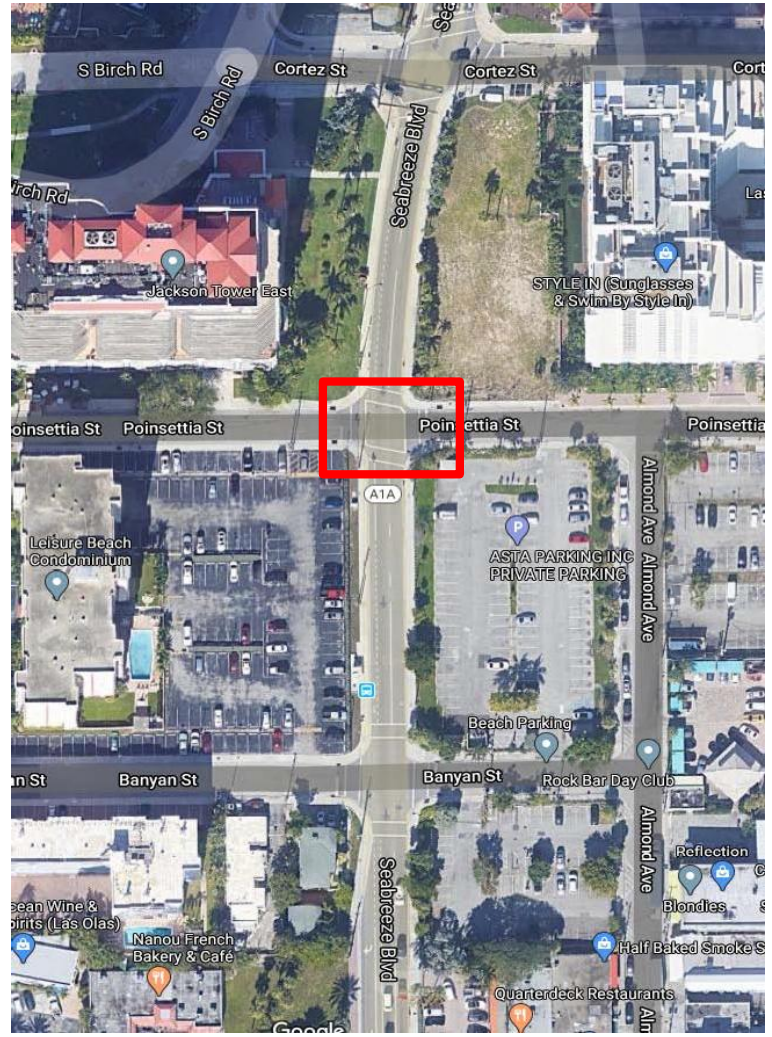
N O T I C E: THE INFORMATION CONTAINED IN THIS DOCUMENT (REPORT, SCHEDULE, LIST, OR DATA) HAS BEEN COMPILED FROM INFORMATION COLLECTED FOR THE PURPOSE OF IDENTIFYING, EVALUATING, OR PLANNING SAFETY ENHANCEMENTS. THIS PRODUCT IDENTIFIES INFORMATION USED FOR THE PURPOSE OF DEVELOPING HIGHWAY SAFETY CONSTRUCTION IMPROVEMENT PROJECTS WHICH MAY BE IMPLEMENTED UTILIZING FEDERAL-AID HIGHWAY FUNDS. ANY DOCUMENT DISPLAYING THIS NOTICE SHALL BE USED ONLY FOR THOSE PURPOSES DEEMED APPROPRIATE BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. SEE TITLE 23, UNITED STATES CODE, SECTION 409.

Appendix D

Pedestrian and Bicycle Counts

Location Name A1A North of Poinsettia to South of Banyan.
 Start Date: 3/6/2020
 Start Time: 7:00

Start Time	Seabreeze Blvd & Poinsettia Street			
	Eastbound		Westbound	
	Peds	Bikes	Peds	Bikes
7:00 AM	1	0	1	0
7:15 AM	0	0	0	0
7:30 AM	1	0	2	0
7:45 AM	1	0	0	0
8:00 AM	1	0	2	0
8:15 AM	1	0	2	0
8:30 AM	0	0	0	1
8:45 AM	0	0	7	0
9:00 AM	1	0	5	0
9:15 AM	2	0	1	0
9:30 AM	0	0	14	0
9:45 AM	0	0	5	0
10:00 AM	1	0	1	0
10:15 AM	0	0	0	0
10:30 AM	1	0	2	0
10:45 AM	5	0	1	0
11:00 AM	1	0	1	0
11:15 AM	2	0	4	0
11:30 AM	1	0	3	0
11:45 AM	1	0	3	0
12:00 PM	0	0	5	0
12:15 PM	1	0	6	0
12:30 PM	5	0	2	0
12:45 PM	1	0	1	0
1:00 PM	6	0	7	0
1:15 PM	1	0	10	0
1:30 PM	9	0	9	0
1:45 PM	3	0	12	0
2:00 PM	2	0	3	0
2:15 PM	5	1	2	0
2:30 PM	9	0	10	0
2:45 PM	5	0	7	0
3:00 PM	3	0	5	0
3:15 PM	7	0	4	0
3:30 PM	7	0	4	0
3:45 PM	4	0	7	1
4:00 PM	5	0	2	1
4:15 PM	13	0	1	0
4:30 PM	4	0	5	0
4:45 PM	3	0	2	0
5:00 PM	7	0	4	0
5:15 PM	2	0	2	0
5:30 PM	2	0	2	1
5:45 PM	8	1	5	0
6:00 PM	4	0	2	0
6:15 PM	3	0	5	0
6:30 PM	7	0	4	0
6:45 PM	5	0	3	0
Total	151	2	185	4

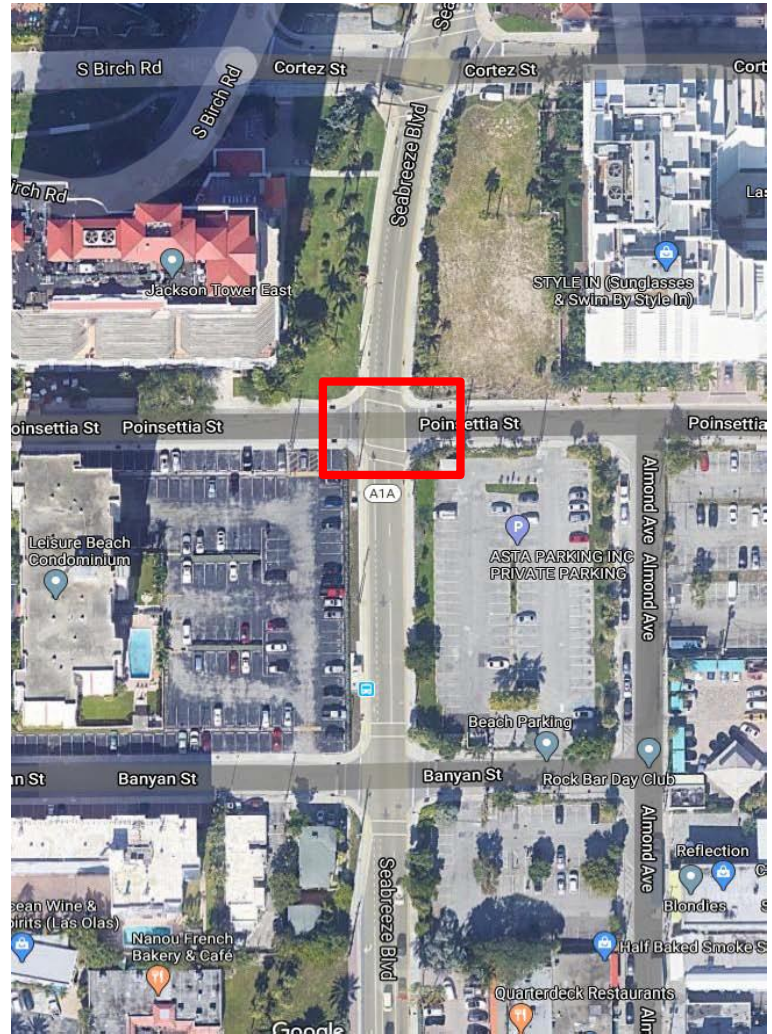


Location Name A1A North of Poinsettia to South of Banyan.

Start Date: 3/7/2020

Start Time: 7:00

Start Time	Seabreeze Blvd & Poinsettia Street			
	Eastbound		Westbound	
	Peds	Bikes	Peds	Bikes
7:00 AM	2	0	2	0
7:15 AM	1	0	1	0
7:30 AM	0	0	2	0
7:45 AM	1	0	3	0
8:00 AM	2	0	5	0
8:15 AM	3	0	3	0
8:30 AM	0	0	2	0
8:45 AM	1	0	2	0
9:00 AM	3	0	9	0
9:15 AM	3	0	1	0
9:30 AM	2	0	5	0
9:45 AM	5	0	4	0
10:00 AM	2	0	15	0
10:15 AM	0	0	4	0
10:30 AM	3	0	7	1
10:45 AM	0	0	5	0
11:00 AM	7	0	9	0
11:15 AM	5	0	11	0
11:30 AM	5	0	11	0
11:45 AM	2	0	12	0
12:00 PM	0	0	10	0
12:15 PM	1	2	8	0
12:30 PM	3	0	7	0
12:45 PM	2	0	2	0
1:00 PM	8	0	15	1
1:15 PM	4	0	18	0
1:30 PM	4	0	18	0
1:45 PM	5	0	11	0
2:00 PM	3	0	18	0
2:15 PM	9	0	15	0
2:30 PM	9	0	19	0
2:45 PM	16	0	4	0
3:00 PM	12	0	8	0
3:15 PM	10	0	4	1
3:30 PM	12	0	5	1
3:45 PM	13	0	8	0
4:00 PM	12	0	20	0
4:15 PM	16	0	5	0
4:30 PM	18	0	11	0
4:45 PM	15	0	14	0
5:00 PM	12	0	11	0
5:15 PM	9	0	9	0
5:30 PM	11	0	10	0
5:45 PM	7	0	4	0
6:00 PM	10	0	5	0
6:15 PM	12	0	8	0
6:30 PM	8	0	10	2
6:45 PM	6	0	4	0
Total	294	2	394	6

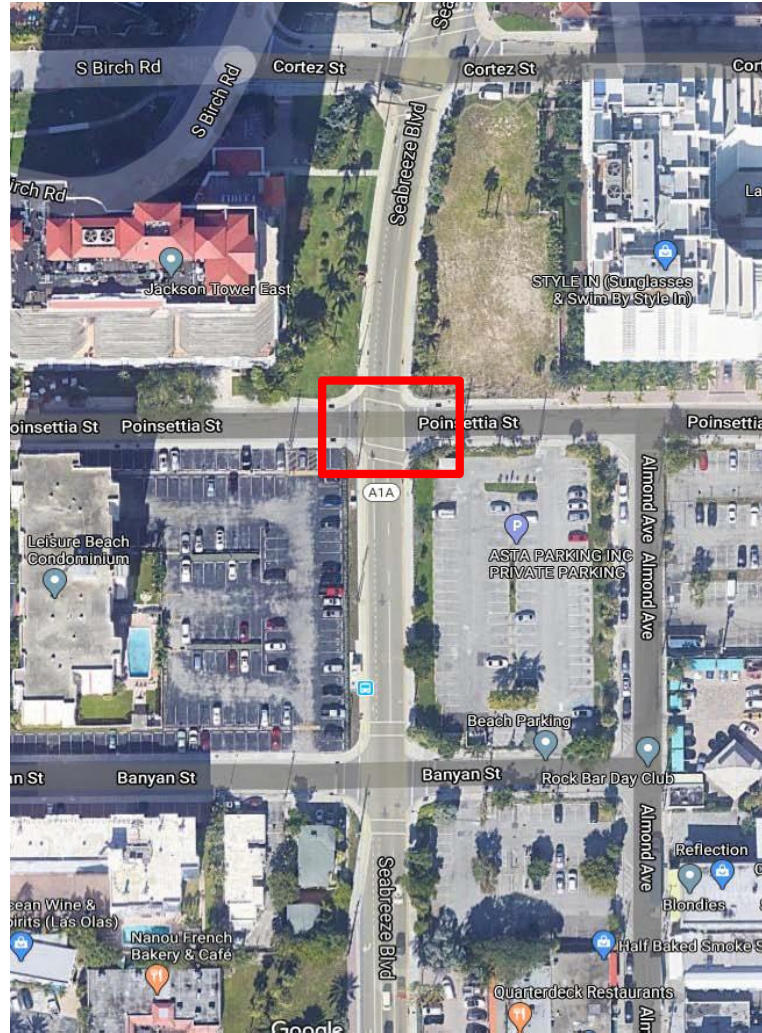


Location Name A1A North of Poinsettia to South of Banyan.

Start Date: 3/8/2020

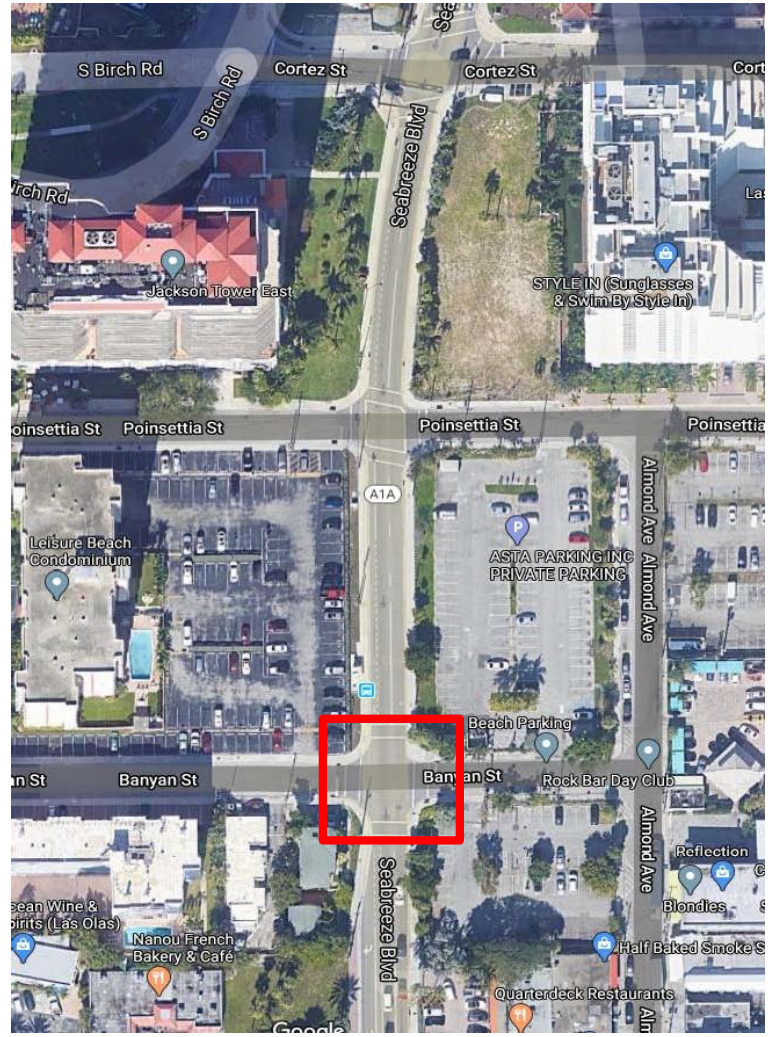
Start Time: 7:00

Start Time	Seabreeze Blvd & Poinsettia Street			
	Eastbound		Westbound	
	Peds	Bikes	Peds	Bikes
7:00 AM	0	0	1	0
7:15 AM	0	0	4	0
7:30 AM	0	0	3	0
7:45 AM	3	0	2	0
8:00 AM	1	0	0	0
8:15 AM	0	0	1	0
8:30 AM	0	1	1	0
8:45 AM	0	0	7	0
9:00 AM	0	0	2	0
9:15 AM	4	0	0	0
9:30 AM	1	0	8	0
9:45 AM	1	0	4	0
10:00 AM	3	1	12	0
10:15 AM	2	0	5	0
10:30 AM	1	0	10	0
10:45 AM	5	0	8	0
11:00 AM	8	0	8	0
11:15 AM	4	0	12	0
11:30 AM	5	0	15	0
11:45 AM	3	0	7	0
12:00 PM	5	0	16	0
12:15 PM	2	0	12	0
12:30 PM	4	0	10	1
12:45 PM	2	0	7	0
1:00 PM	2	0	15	0
1:15 PM	3	0	16	0
1:30 PM	7	0	17	0
1:45 PM	5	0	14	0
2:00 PM	7	0	11	0
2:15 PM	8	0	10	0
2:30 PM	13	0	7	0
2:45 PM	4	0	8	0
3:00 PM	8	0	12	0
3:15 PM	10	0	10	0
3:30 PM	11	0	7	0
3:45 PM	14	1	15	0
4:00 PM	15	0	7	1
4:15 PM	10	0	8	0
4:30 PM	15	0	10	0
4:45 PM	11	0	12	1
5:00 PM	9	0	15	0
5:15 PM	12	0	12	0
5:30 PM	18	0	12	0
5:45 PM	15	0	16	0
6:00 PM	12	0	12	0
6:15 PM	7	0	10	0
6:30 PM	8	0	5	0
6:45 PM	5	0	7	0
Total	283	3	423	3



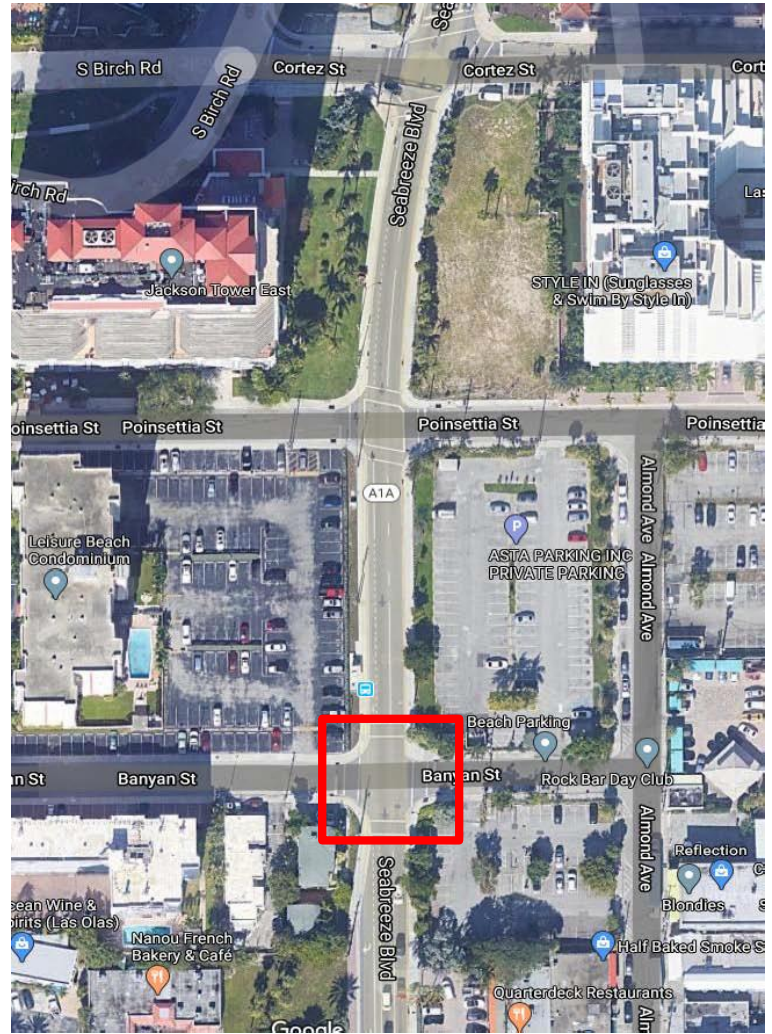
Location Name A1A North of Poinsettia to South of Banyan.
 Start Date: 3/6/2020
 Start Time: 7:00

Start Time	Seabreeze Blvd & Banyan Street			
	Eastbound		Westbound	
	Peds	Bikes	Peds	Bikes
7:00 AM	0	0	2	0
7:15 AM	0	0	0	0
7:30 AM	0	0	1	0
7:45 AM	1	0	1	0
8:00 AM	0	0	1	0
8:15 AM	0	0	0	0
8:30 AM	0	0	1	0
8:45 AM	0	0	1	0
9:00 AM	1	0	0	0
9:15 AM	2	0	1	0
9:30 AM	0	0	2	0
9:45 AM	1	0	0	0
10:00 AM	0	0	3	0
10:15 AM	1	0	8	0
10:30 AM	1	0	3	0
10:45 AM	2	0	2	0
11:00 AM	1	0	3	0
11:15 AM	3	0	7	0
11:30 AM	2	0	9	0
11:45 AM	3	0	6	0
12:00 PM	1	0	7	0
12:15 PM	2	0	7	0
12:30 PM	6	0	3	0
12:45 PM	4	0	2	0
1:00 PM	5	0	2	0
1:15 PM	2	0	5	0
1:30 PM	5	0	2	0
1:45 PM	1	0	3	0
2:00 PM	4	0	3	0
2:15 PM	6	0	7	0
2:30 PM	3	0	7	0
2:45 PM	4	0	6	0
3:00 PM	4	0	6	0
3:15 PM	3	0	4	1
3:30 PM	6	0	9	0
3:45 PM	6	0	3	0
4:00 PM	6	0	15	1
4:15 PM	17	0	10	1
4:30 PM	5	0	6	0
4:45 PM	6	0	10	0
5:00 PM	0	0	0	0
5:15 PM	2	0	2	1
5:30 PM	1	0	11	0
5:45 PM	2	0	10	0
6:00 PM	11	0	9	0
6:15 PM	9	0	6	0
6:30 PM	5	0	14	0
6:45 PM	11	0	10	0
Total	155	0	230	4



Location Name A1A North of Poinsettia to South of Banyan.
 Start Date: 3/7/2020
 Start Time: 7:00

Start Time	Seabreeze Blvd & Banyan Street			
	Eastbound		Westbound	
	Peds	Bikes	Peds	Bikes
7:00 AM	0	0	0	0
7:15 AM	0	0	1	0
7:30 AM	1	0	1	0
7:45 AM	0	0	1	0
8:00 AM	2	0	2	0
8:15 AM	0	0	4	0
8:30 AM	0	0	1	0
8:45 AM	0	0	2	0
9:00 AM	0	0	4	0
9:15 AM	0	0	1	0
9:30 AM	0	0	1	0
9:45 AM	0	0	3	0
10:00 AM	3	0	6	0
10:15 AM	1	0	5	0
10:30 AM	1	0	5	0
10:45 AM	1	0	2	0
11:00 AM	6	0	2	0
11:15 AM	3	0	1	0
11:30 AM	9	0	6	1
11:45 AM	3	0	5	0
12:00 PM	0	0	15	0
12:15 PM	0	2	15	0
12:30 PM	6	0	7	0
12:45 PM	0	0	10	0
1:00 PM	2	0	2	0
1:15 PM	1	0	20	0
1:30 PM	2	0	17	0
1:45 PM	3	0	15	0
2:00 PM	8	0	11	0
2:15 PM	6	0	4	0
2:30 PM	4	0	9	0
2:45 PM	2	0	3	0
3:00 PM	8	0	5	1
3:15 PM	9	0	8	0
3:30 PM	4	0	20	0
3:45 PM	11	0	13	0
4:00 PM	13	0	12	2
4:15 PM	7	0	11	0
4:30 PM	8	0	9	0
4:45 PM	6	0	16	0
5:00 PM	6	0	7	0
5:15 PM	14	0	6	0
5:30 PM	18	0	10	0
5:45 PM	6	0	11	1
6:00 PM	14	0	12	0
6:15 PM	6	0	11	0
6:30 PM	13	0	17	0
6:45 PM	2	0	5	0
Total	209	2	354	5

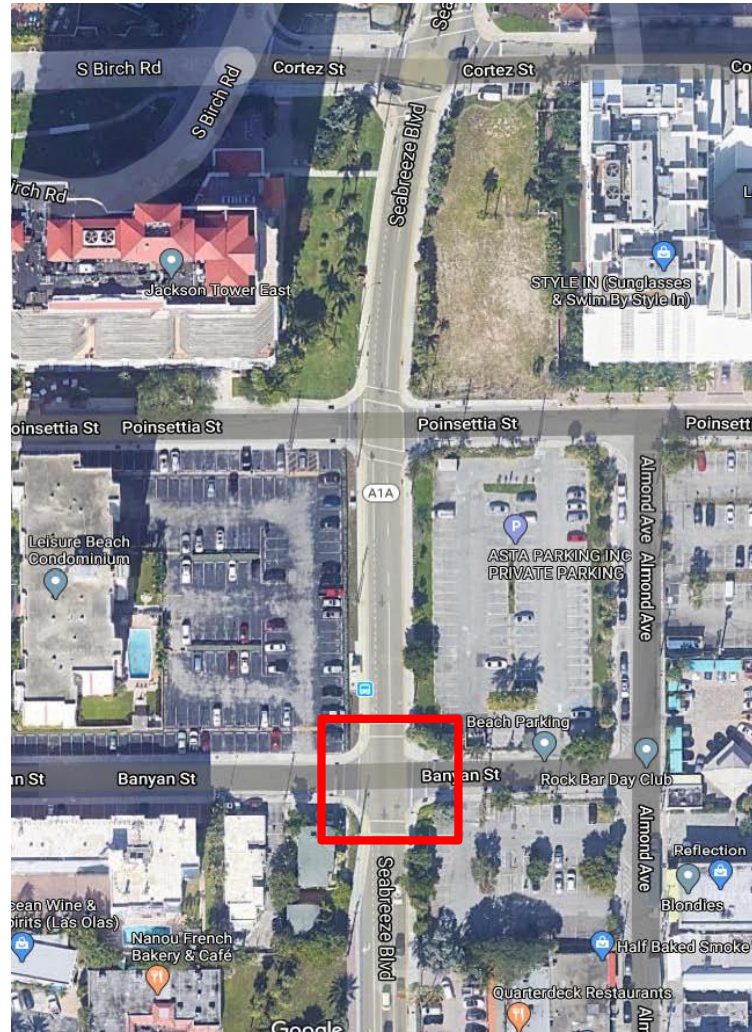


Location Name A1A North of Poinsettia to South of Banyan.

Start Date: 3/8/2020

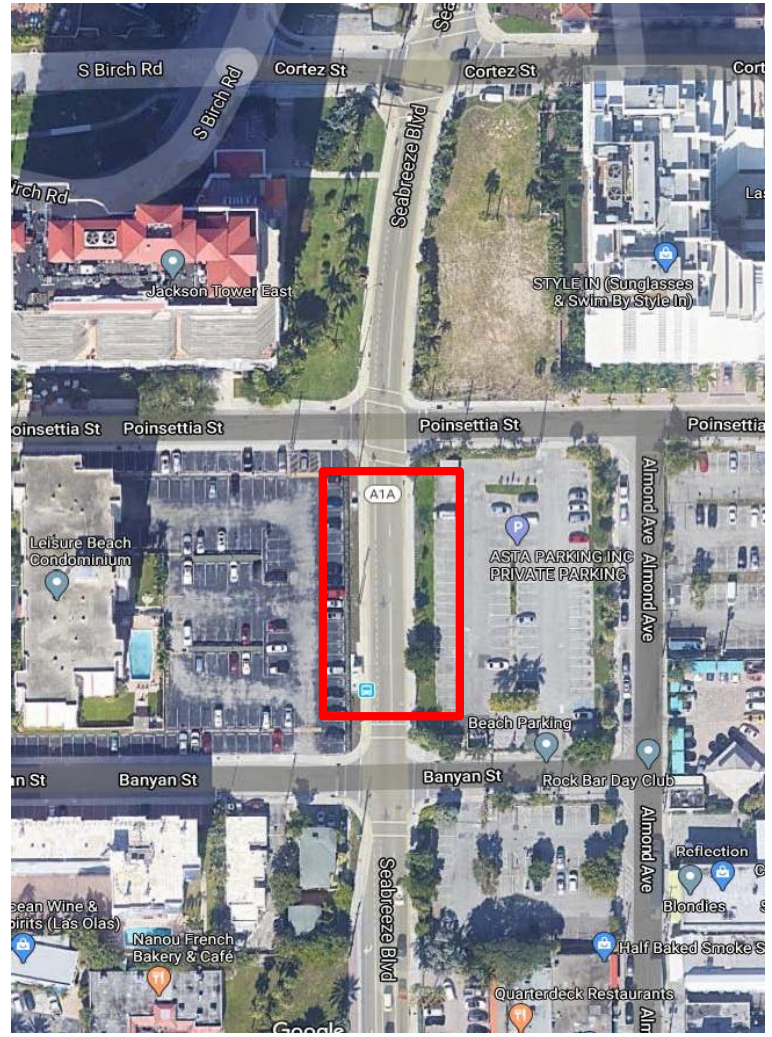
Start Time: 7:00

Start Time	Seabreeze Blvd & Banyan Street			
	Eastbound		Westbound	
	Peds	Bikes	Peds	Bikes
7:00 AM	1	0	0	0
7:15 AM	0	0	1	0
7:30 AM	0	0	2	3
7:45 AM	0	0	5	0
8:00 AM	1	0	1	1
8:15 AM	0	0	2	0
8:30 AM	0	0	1	0
8:45 AM	0	0	8	0
9:00 AM	1	0	1	0
9:15 AM	1	0	1	0
9:30 AM	0	0	2	0
9:45 AM	1	0	4	0
10:00 AM	1	0	3	1
10:15 AM	3	0	7	1
10:30 AM	1	0	9	0
10:45 AM	3	0	5	0
11:00 AM	7	0	3	0
11:15 AM	4	0	4	0
11:30 AM	2	0	4	0
11:45 AM	3	0	11	0
12:00 PM	4	0	6	0
12:15 PM	1	0	6	1
12:30 PM	3	0	5	1
12:45 PM	2	0	6	0
1:00 PM	3	0	13	0
1:15 PM	5	0	15	0
1:30 PM	5	0	20	0
1:45 PM	2	0	14	0
2:00 PM	8	0	13	1
2:15 PM	6	0	12	0
2:30 PM	7	0	6	0
2:45 PM	9	0	7	0
3:00 PM	5	0	7	0
3:15 PM	7	0	6	0
3:30 PM	5	0	6	0
3:45 PM	6	0	5	1
4:00 PM	6	0	6	0
4:15 PM	11	0	8	0
4:30 PM	11	0	7	0
4:45 PM	9	0	13	1
5:00 PM	6	0	1	0
5:15 PM	7	0	4	0
5:30 PM	4	0	10	0
5:45 PM	3	0	2	1
6:00 PM	7	0	3	0
6:15 PM	8	0	3	0
6:30 PM	12	0	8	0
6:45 PM	5	0	8	0
Total	196	0	294	12



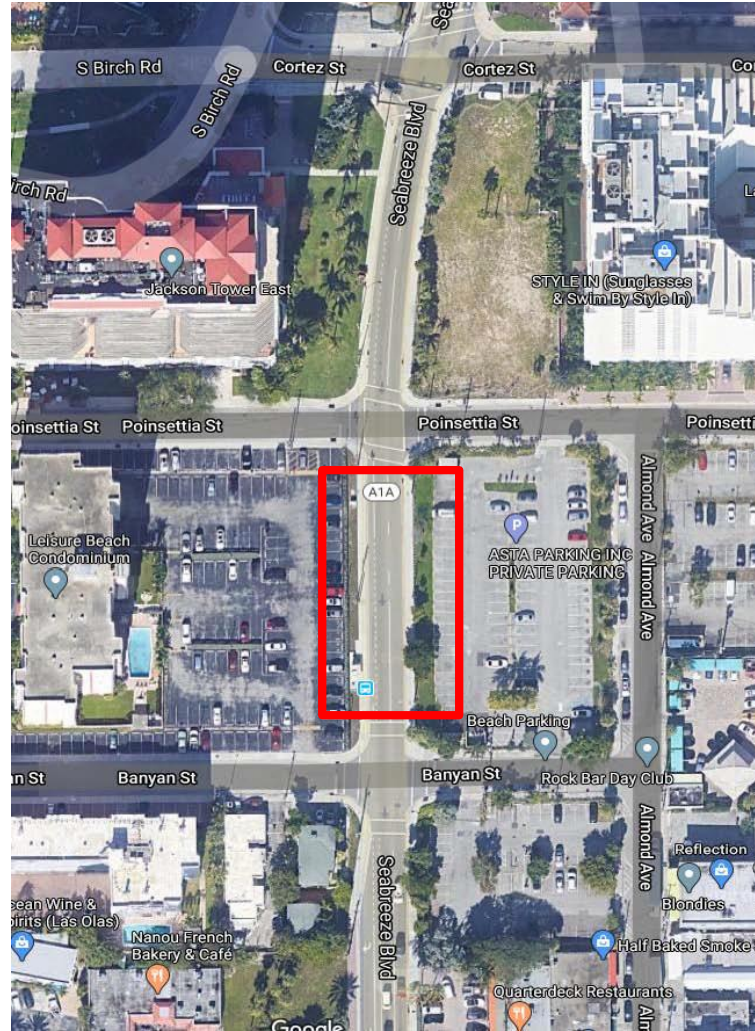
Location Name A1A North of Poinsettia to South of Banyan.
 Start Date: 3/6/2020
 Start Time: 7:00

Start Time	Seabreeze Blvd midblock from Poinsettia St. to Banyan Street			
	Eastbound		Westbound	
	Peds	Bikes	Peds	Bikes
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
10:00 AM	0	0	0	0
10:15 AM	0	0	0	0
10:30 AM	0	0	0	0
10:45 AM	0	0	0	0
11:00 AM	0	0	0	0
11:15 AM	0	0	0	0
11:30 AM	0	0	0	0
11:45 AM	0	0	0	0
12:00 PM	2	0	0	0
12:15 PM	1	0	0	0
12:30 PM	0	0	0	0
12:45 PM	1	0	0	0
1:00 PM	2	0	0	0
1:15 PM	0	0	0	0
1:30 PM	0	0	0	0
1:45 PM	0	0	0	0
2:00 PM	0	0	0	0
2:15 PM	0	0	0	0
2:30 PM	0	0	1	0
2:45 PM	0	0	0	0
3:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
6:00 PM	0	0	0	0
6:15 PM	0	0	0	0
6:30 PM	0	0	0	0
6:45 PM	0	0	0	0
Total	6	0	1	0



Location Name A1A North of Poinsettia to South of Banyan.
 Start Date: 3/7/2020
 Start Time: 7:00

Start Time	Seabreeze Blvd midblock from Poinsettia St. to Banyan Street			
	Eastbound		Westbound	
	Peds	Bikes	Peds	Bikes
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
10:00 AM	0	0	0	0
10:15 AM	0	0	0	0
10:30 AM	0	0	0	0
10:45 AM	0	0	0	0
11:00 AM	0	0	1	0
11:15 AM	0	0	0	0
11:30 AM	0	0	0	0
11:45 AM	0	0	0	0
12:00 PM	0	0	0	0
12:15 PM	0	0	0	0
12:30 PM	0	0	0	0
12:45 PM	0	0	0	0
1:00 PM	0	0	0	0
1:15 PM	0	0	0	0
1:30 PM	0	0	0	0
1:45 PM	0	0	0	0
2:00 PM	0	0	0	0
2:15 PM	0	0	0	0
2:30 PM	0	0	0	0
2:45 PM	0	0	0	0
3:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
6:00 PM	0	0	0	0
6:15 PM	0	0	0	0
6:30 PM	0	0	0	0
6:45 PM	0	0	0	0
Total	0	0	1	0

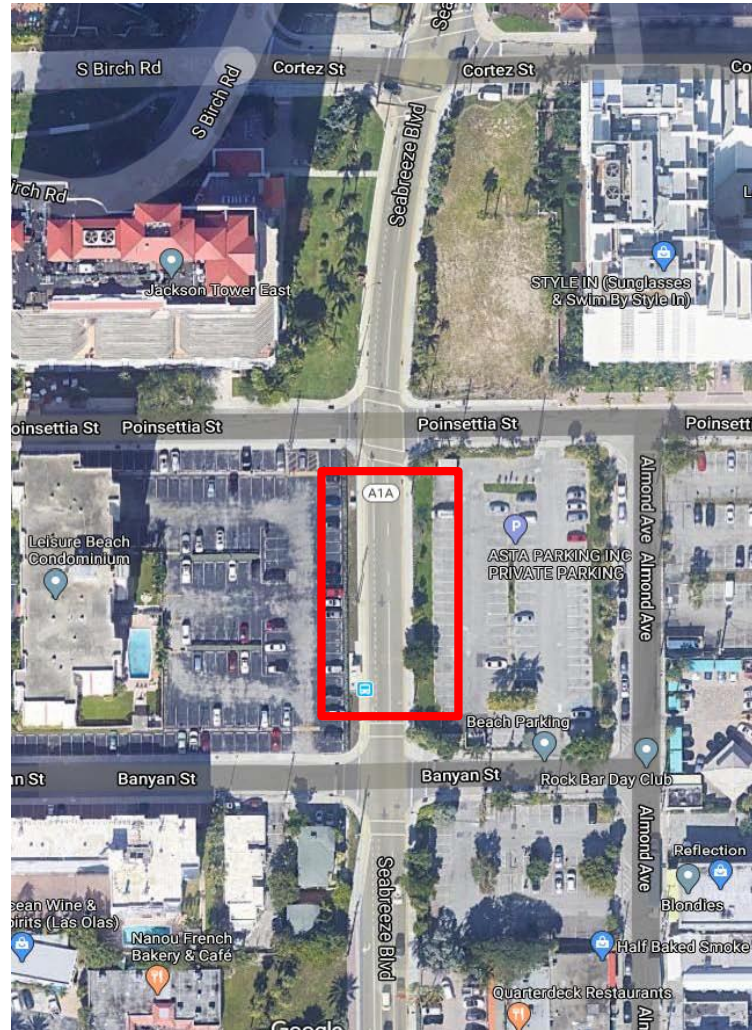


Location Name A1A North of Poinsettia to South of Banyan.

Start Date: 3/8/2020

Start Time: 7:00

Start Time	Seabreeze Blvd midblock from Poinsettia St. to Banyan Street			
	Eastbound		Westbound	
	Peds	Bikes	Peds	Bikes
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	1	0	0	0
9:15 AM	0	0	1	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
10:00 AM	0	0	0	0
10:15 AM	0	0	0	0
10:30 AM	0	0	0	0
10:45 AM	0	0	0	0
11:00 AM	0	0	0	0
11:15 AM	0	0	0	0
11:30 AM	0	0	0	0
11:45 AM	0	0	0	0
12:00 PM	0	0	0	0
12:15 PM	0	0	0	0
12:30 PM	0	0	0	0
12:45 PM	0	0	0	0
1:00 PM	0	0	0	0
1:15 PM	0	0	0	0
1:30 PM	0	0	0	0
1:45 PM	0	0	0	0
2:00 PM	0	0	0	0
2:15 PM	0	0	0	0
2:30 PM	0	0	0	0
2:45 PM	0	0	0	0
3:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
6:00 PM	0	0	0	0
6:15 PM	0	0	0	0
6:30 PM	0	0	0	0
6:45 PM	0	0	0	0
Total	1	0	1	0



Appendix E

Speed Data

SPEED PROFILE

SR-A1A (Seabreeze Blvd.) - between Cortez Street and Poinsettia St. (SOUTH BOUND)

QTD PROJ/LOC #:	2020138 - 002	GPS COORDINATES:	0
ON STREET:	SR-A1A (Seabreeze Blvd.)	START DATE:	Friday, March 06, 2020
CROSS STREETS:	between Cortez Street and Poinsettia St.	VICINITY:	FL

Time	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Total
0:00	1	14	44	77	66	22	6	2	0	0	0	0	0	232
1:00	1	8	19	32	43	23	9	1	0	0	0	0	0	136
2:00	0	4	14	21	28	11	4	0	0	0	1	0	0	83
3:00	1	0	7	15	17	7	6	0	0	0	0	0	0	53
4:00	0	2	2	13	28	29	13	3	0	1	0	0	0	91
5:00	0	5	10	28	42	44	14	3	0	1	0	0	0	147
6:00	0	7	44	48	100	108	23	9	0	0	0	0	0	339
7:00	1	25	62	141	170	142	33	6	3	0	0	0	0	583
8:00	3	19	127	213	191	118	32	0	2	0	0	0	0	705
9:00	2	44	133	200	213	79	17	3	2	0	0	0	0	693
10:00	6	50	201	215	160	47	2	3	0	0	0	0	0	684
11:00	5	62	267	263	144	36	6	0	0	0	0	0	0	783
12:00	15	86	298	232	123	31	4	0	0	0	0	0	0	789
13:00	19	81	292	214	137	39	8	1	0	0	0	0	0	791
14:00	7	89	306	248	142	36	8	1	0	0	0	0	0	837
15:00	14	104	258	226	145	47	5	0	0	0	0	0	0	799
16:00	12	129	283	255	118	25	9	1	0	0	0	0	0	832
17:00	55	141	286	222	94	31	5	0	1	0	0	0	0	835
18:00	12	87	242	227	174	48	4	0	0	0	0	0	0	794
19:00	6	63	244	278	133	30	0	1	0	0	0	0	0	755
20:00	8	69	233	243	141	36	7	1	1	1	0	0	0	740
21:00	5	94	238	248	131	34	4	0	0	0	0	0	0	754
22:00	1	37	208	234	167	46	10	4	0	0	0	0	0	707
23:00	2	22	155	136	139	71	13	2	0	0	0	0	0	540
Total	176	1242	3973	4029	2846	1140	242	41	9	3	1	0	0	13702
% of Total	1%	9%	29%	29%	21%	8%	2%	0%	0%	0%	0%	0%	0%	

PERCENTILE SPEEDS:	10%	15%	50%	85%	90%
	18.8 mph	19.8 mph	25.8 mph	32.9 mph	34.3 mph

SPEED EXCEEDED:	15 MPH	25 MPH	35 MPH	45 MPH	55 MPH	65 MPH
	98.7%	60.7%	10.5%	0.4%	0.0%	0.0%
	13526	8311	1436	54	4	0

10 MPH PACE:	SPEED	NUMBER IN PACE	% IN PACE
	20 - 30 MPH	8002	58.4%



QUALITY TRAFFIC DATA, LLC

Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

SPEED PROFILE

SR-A1A (Seabreeze Blvd.) - between Cortez Street and Poinsettia St. (SOUTH BOUND)

QTD PROJ/LOC #:	2020138 - 002	GPS COORDINATES:	0
ON STREET:	SR-A1A (Seabreeze Blvd.)	START DATE:	Saturday, March 07, 2020
CROSS STREETS:	between Cortez Street and Poinsettia St.	VICINITY:	FL

Time	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Total
0:00	3	23	98	136	107	48	17	2	0	0	0	0	0	434
1:00	3	16	61	61	69	29	7	3	0	0	0	0	0	249
2:00	1	10	33	42	58	22	5	1	1	0	0	0	0	173
3:00	2	5	16	27	35	20	8	3	0	0	0	0	0	116
4:00	2	4	4	24	35	34	13	3	0	0	0	0	0	119
5:00	0	6	14	20	46	57	17	4	2	0	0	0	0	166
6:00	1	3	24	38	93	74	30	7	3	0	0	0	0	273
7:00	0	15	68	110	124	107	26	6	0	0	0	0	0	456
8:00	3	25	80	129	176	96	20	1	1	0	0	0	0	531
9:00	10	40	167	216	201	53	14	1	0	0	0	0	0	702
10:00	17	58	200	221	153	45	11	1	0	0	0	0	0	706
11:00	21	102	284	251	127	36	6	0	0	0	0	0	0	827
12:00	29	146	299	203	96	23	1	0	1	0	0	0	0	798
13:00	28	133	328	222	80	10	0	0	0	0	0	0	0	801
14:00	78	152	294	197	67	17	4	0	0	1	0	0	0	810
15:00	61	184	348	172	52	7	4	1	0	1	0	0	0	830
16:00	48	119	357	151	47	0	0	0	0	0	1	0	0	723
17:00	27	124	299	169	33	3	0	0	0	0	1	0	0	656
18:00	32	196	353	143	34	14	1	1	0	0	0	0	0	774
19:00	19	101	331	279	130	21	3	0	0	0	0	0	0	884
20:00	18	69	250	247	97	30	6	2	0	0	0	0	0	719
21:00	7	82	295	259	123	27	3	0	0	0	0	0	0	796
22:00	20	97	300	306	143	30	4	0	0	0	0	0	0	900
23:00	17	77	189	221	151	47	5	0	2	0	0	0	0	709
Total	447	1787	4692	3844	2277	850	205	36	10	2	2	0	0	14152
% of Total	3%	13%	33%	27%	16%	6%	1%	0%	0%	0%	0%	0%	0%	

PERCENTILE SPEEDS:	10%	15%	50%	85%	90%
	16.7 mph	18.7 mph	24.2 mph	31.8 mph	33.3 mph

SPEED EXCEEDED:	15 MPH	25 MPH	35 MPH	45 MPH	55 MPH	65 MPH
	96.8% 13705	51.1% 7226	7.8% 1105	0.4% 50	0.0% 4	0.0% 0

10 MPH PACE:	SPEED	NUMBER IN PACE	% IN PACE
	20 - 30 MPH	8536	60.3%



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SPEED PROFILE

SR-A1A (Seabreeze Blvd.) - between Cortez Street and Poinsettia St. (SOUTH BOUND)

QTD PROJ/LOC #:	2020138 - 002	GPS COORDINATES:	0
ON STREET:	SR-A1A (Seabreeze Blvd.)	START DATE:	Sunday, March 08, 2020
CROSS STREETS:	between Cortez Street and Poinsettia St.	VICINITY:	FL

Time	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Total
0:00	0	19	119	149	120	49	11	2	0	0	0	0	0	469
1:00	3	21	84	92	95	36	8	0	0	0	0	0	0	339
2:00	1	8	40	37	49	19	7	1	0	0	0	0	0	162
3:00	0	8	14	25	28	24	19	0	0	0	0	0	0	118
4:00	1	4	13	13	27	19	10	2	1	0	0	0	0	90
5:00	2	5	10	25	48	50	29	3	0	0	0	0	0	172
6:00	1	9	34	49	84	79	31	4	1	0	0	0	0	292
7:00	1	10	66	59	103	78	22	2	0	0	0	0	0	341
8:00	4	15	118	117	135	71	21	3	1	0	0	0	0	485
9:00	8	28	194	194	128	62	15	0	0	0	0	0	0	629
10:00	12	51	231	230	105	38	10	0	0	0	0	0	0	677
11:00	18	129	257	256	98	42	5	1	0	0	0	0	0	806
12:00	16	138	277	277	56	32	4	0	1	0	0	0	0	801
13:00	28	129	286	286	44	15	1	0	0	0	0	0	0	789
14:00	68	143	255	254	52	12	2	1	0	0	1	0	0	788
15:00	57	175	241	240	75	5	5	0	0	0	0	0	0	798
16:00	37	125	211	210	104	10	5	0	0	0	0	0	0	702
17:00	35	116	179	178	124	5	2	1	0	0	0	0	0	640
18:00	25	175	168	168	142	12	1	2	0	0	0	0	0	693
19:00	24	126	262	261	122	19	4	0	0	0	0	0	0	818
20:00	24	78	221	221	134	25	2	0	1	0	0	0	0	706
21:00	5	77	240	240	128	24	3	0	0	0	0	0	0	717
22:00	15	82	273	272	137	25	6	0	0	0	0	0	0	810
23:00	12	67	184	184	152	37	4	0	0	0	0	0	0	640
Total	397	1738	3977	4037	2290	788	227	22	5	0	1	0	0	13482
% of Total	3%	13%	29%	30%	17%	6%	2%	0%	0%	0%	0%	0%	0%	

PERCENTILE SPEEDS:	10%	15%	50%	85%	90%
	16.7 mph	18.7 mph	24.8 mph	31.9 mph	33.3 mph

SPEED EXCEEDED:	15 MPH	25 MPH	35 MPH	45 MPH	55 MPH	65 MPH
	97.1% 13085	54.7% 7370	7.7% 1043	0.2% 28	0.0% 1	0.0% 0

10 MPH PACE:	SPEED	NUMBER IN PACE	% IN PACE
	20 - 30 MPH	8014	59.4%



QUALITY TRAFFIC DATA, LLC

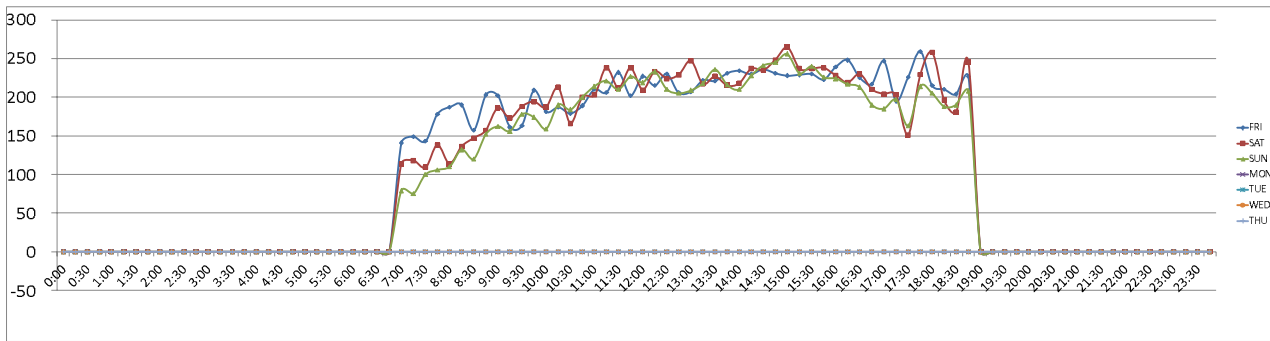
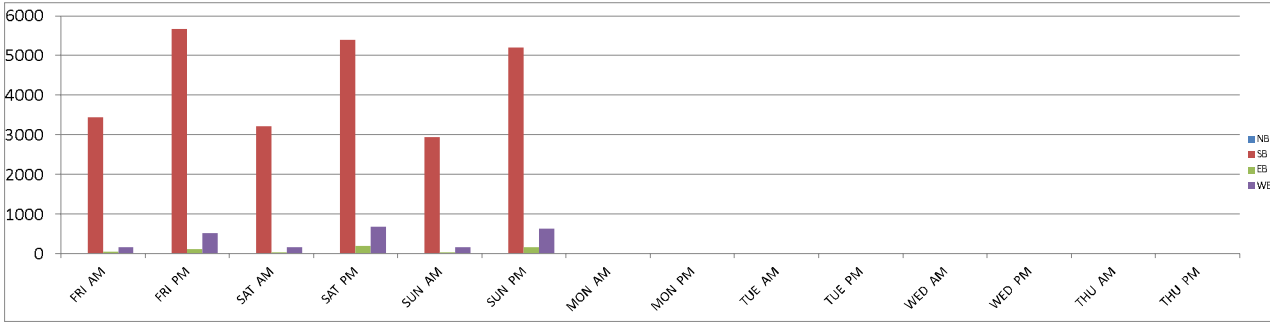
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Appendix F

Volume Data

Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2020138 - 002		
ON STREET:	SR A1A (Seabreeze Blvd.) (N/S)	START DATE:	Friday, March 06, 2020
CROSS STREETS:	Poinsettia Street (E/W)	VICINITY:	FL



QUALITY TRAFFIC DATA, LLC

Phone: 887-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

Average Daily Traffic Volumes Quality Traffic Data, LLC

QTD PROJ/LOC #:	2020138 - 002		
ON STREET:	SR A1A (Seabreeze Blvd.) (N/S)	START DATE:	Friday, March 06, 2020
CROSS STREETS:	Poinsettia Street (E/W)	VICINITY:	FL

AM COUNTS					PM COUNTS							
NB	SB	EB	WB		NB	SB	EB	WB				
00:00					12:00	206	6	15				
00:15					12:15	197	3	15				
00:30					12:30	214	3	13				
00:45					12:45	172	789	7	19	27	70	878
01:00					13:00	191	3	13				
01:15					13:15	198	6	18				
01:30					13:30	192	5	24				
01:45					13:45	210	791	3	17	18	73	881
02:00					14:00	221	10	3				
02:15					14:15	202	5	23				
02:30					14:30	207	4	25				
02:45					14:45	207	837	3	22	21	72	931
03:00					15:00	201	1	26				
03:15					15:15	210	4	15				
03:30					15:30	196	8	26				
03:45					15:45	192	799	10	23	21	88	910
04:00					16:00	216	2	21				
04:15					16:15	218	10	20				
04:30					16:30	205	3	17				
04:45					16:45	193	832	4	19	20	78	929
05:00					17:00	220	2	25				
05:15					17:15	170	7	18				
05:30					17:30	210	1	15				
05:45					17:45	235	835	1	11	23	81	927
06:00					18:00	204	0	11				
06:15					18:15	199	0	11				
06:30					18:30	185	5	14				
06:45					18:45	206	794	6	11	15	51	856
07:00	133	2	6		19:00							
07:15	141	4	4		19:15							
07:30	141	0	2		19:30							
07:45	168	583	3	9	19:45							
				19								611
08:00	181	2	4		20:00							
08:15	182	3	5		20:15							
08:30	150	1	6		20:30							
08:45	192	705	4	10	20:45							737
				7								
				22								
09:00	194	6	2		21:00							
09:15	150	2	9		21:15							
09:30	152	5	6		21:30							
09:45	197	693	3	16	21:45							735
				9								
				26								
10:00	167	4	10		22:00							
10:15	175	1	11		22:15							
10:30	165	1	13		22:30							
10:45	177	684	2	8	22:45							736
				10								
				44								
11:00	200	1	9		23:00							
11:15	194	2	10		23:15							
11:30	203	3	26		23:30							
11:45	186	783	3	9	23:45							850
				13								
				58								
TOTALS:	3448	52	169	3669	TOTALS:	5677	122	513	6312			

SPLIT	94.0%	1.4%	4.6%	36.8%	SPLIT	89.9%	1.9%	8.1%	63.2%
PEAK HOUR	11:45	08:45	11:30	11:30	PEAK HOUR	17:30	15:30	14:15	15:30
PH VOLUME	803	17	69	876	PH VOLUME	848	30	95	940
PHF	0.94	0.71	0.66	0.94	PHF	0.90	0.75	0.91	0.95

DAY'S TOTAL				
NB	SB	EB	WB	TOTAL
9125	174	682	9981	9981



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Average Daily Traffic Volumes Quality Traffic Data, LLC

QTD PROJ/LOC #:	2020138 - 002		
ON STREET:	SR A1A (Seabreeze Blvd.) (N/S)	START DATE:	Saturday, March 07, 2020
CROSS STREETS:	Poinsettia Street (E/W)	VICINITY:	FL

AM COUNTS					PM COUNTS							
NB	SB	EB	WB		NB	SB	EB	WB				
00:00					12:00	183	4	22				
00:15					12:15	214	4	15				
00:30					12:30	201	6	17				
00:45					12:45	200	798	5	19	24	78	895
01:00					13:00	218	7	22				
01:15					13:15	193	5	19				
01:30					13:30	196	10	21				
01:45					13:45	194	801	3	25	18	80	906
02:00					14:00	190	3	25				
02:15					14:15	199	6	32				
02:30					14:30	202	7	26				
02:45					14:45	219	810	4	20	25	108	938
03:00					15:00	240	3	22				
03:15					15:15	199	5	33				
03:30					15:30	206	3	28				
03:45					15:45	185	830	18	29	35	118	977
04:00					16:00	180	9	39				
04:15					16:15	187	8	24				
04:30					16:30	185	16	29				
04:45					16:45	171	723	15	48	24	116	887
05:00					17:00	160	13	31				
05:15					17:15	167	9	27				
05:30					17:30	124	5	22				
05:45					17:45	205	656	2	29	22	102	787
06:00					18:00	224	8	26				
06:15					18:15	166	5	25				
06:30					18:30	157	1	23				
06:45					18:45	227	774	6	20	12	86	880
07:00	110	0	4		19:00							
07:15	113	3	2		19:15							
07:30	102	1	6		19:30							
07:45	131	456	3	7	4	16	479					
08:00	109	0	5		20:00							
08:15	130	2	4		20:15							
08:30	140	1	6		20:30							
08:45	152	531	1	4	4	19	554					
09:00	179	1	6		21:00							
09:15	162	5	6		21:15							
09:30	178	3	7		21:30							
09:45	183	702	1	10	10	29	741					
10:00	170	3	14		22:00							
10:15	195	2	16		22:15							
10:30	160	1	5		22:30							
10:45	181	706	1	7	18	53	766					
11:00	188	3	12		23:00							
11:15	226	1	11		23:15							
11:30	191	2	19		23:30							
11:45	222	827	4	10	12	54	891					
TOTALS:	3222	38	171	3431	TOTALS:	5392	190	688	6270			

SPLIT	93.9%	1.1%	5.0%	35.4%	SPLIT	86.0%	3.0%	11.0%	64.6%
PEAK HOUR	11:00	11:45	11:30	11:45	PEAK HOUR	14:45	16:30	15:15	14:45
PH VOLUME	827	18	68	904	PH VOLUME	864	53	135	987
PHF	0.91	0.75	0.77	0.95	PHF	0.90	0.83	0.87	0.93

DAY'S TOTAL				
NB	SB	EB	WB	TOTAL
8614	228	859	9701	9701



QUALITY TRAFFIC DATA, LLC

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Average Daily Traffic Volumes Quality Traffic Data, LLC

QTD PROJ/LOC #:	2020138 - 002		
ON STREET:	SR A1A (Seabreeze Blvd.) (N/S)	START DATE:	Sunday, March 08, 2020
CROSS STREETS:	Poinsettia Street (E/W)	VICINITY:	FL

AM COUNTS					PM COUNTS							
NB	SB	EB	WB		NB	SB	EB	WB				
00:00					12:00	200	7	12				
00:15					12:15	216	1	16				
00:30					12:30	195	2	13				
00:45					12:45	190	801	2	12	13	54	867
01:00					13:00	196	3	10				
01:15					13:15	199	5	14				
01:30					13:30	203	7	26				
01:45					13:45	191	789	1	16	24	74	879
02:00					14:00	187	2	21				
02:15					14:15	195	5	28				
02:30					14:30	200	8	33				
02:45					14:45	206	788	8	23	31	113	924
03:00					15:00	219	10	27				
03:15					15:15	197	13	21				
03:30					15:30	195	12	33				
03:45					15:45	187	798	5	40	34	115	953
04:00					16:00	190	7	27				
04:15					16:15	179	5	33				
04:30					16:30	174	14	25				
04:45					16:45	159	702	5	31	26	111	844
05:00					17:00	156	8	21				
05:15					17:15	167	8	22				
05:30					17:30	130	9	24				
05:45					17:45	187	640	4	29	23	90	759
06:00					18:00	179	5	21				
06:15					18:15	167	3	18				
06:30					18:30	160	6	24				
06:45					18:45	187	693	4	18	17	80	791
07:00	78	0	1		19:00							
07:15	71	1	3		19:15							
07:30	96	2	2		19:30							
07:45	96	341	0	3	10	16	360					
08:00	106	1	3		20:00							
08:15	120	3	9		20:15							
08:30	117	0	3		20:30							
08:45	142	485	2	6	8	23	514					
09:00	156	2	4		21:00							
09:15	150	1	5		21:15							
09:30	163	4	11		21:30							
09:45	160	629	1	8	13	33	670					
10:00	149	2	8		22:00							
10:15	179	1	10		22:15							
10:30	164	4	16		22:30							
10:45	185	677	2	9	13	47	733					
11:00	197	2	15		23:00							
11:15	203	5	13		23:15							
11:30	197	2	11		23:30							
11:45	209	806	4	13	14	53	872					
TOTALS:	2938	39	172	3149	TOTALS:	5211	169	637	6017			

SPLIT	93.3%	1.2%	5.5%	34.4%	SPLIT	86.6%	2.8%	10.6%	65.6%
PEAK HOUR	11:30	11:15	10:30	11:30	PEAK HOUR	14:30	14:45	15:30	14:30
PH VOLUME	822	18	57	889	PH VOLUME	822	43	127	973
PHF	0.95	0.64	0.89	0.95	PHF	0.94	0.83	0.93	0.95

DAY'S TOTAL				
NB	SB	EB	WB	TOTAL
8149	208	809	9166	



QUALITY TRAFFIC DATA, LLC

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Appendix G
All Way Stop Control Warrant Analysis

TABLE 2

SR A1A (Seabreeze Boulevard) & Poinsettia Street All-Way Stop Control Warrant Analysis Warrant C.1

Major Street Approach Volumes

Major Road: SR A1A (Seabreeze Boulevard) County: Broward County
 Minor Road: Poinsettia Street City: Fort Lauderdale
 Posted Speed: 30 MPH Count Dates: 03/07/20
 PSCF: 1.00

Time	SB Approach	Total	Warrant Satisfied
7:00 AM	456	456	Yes
8:00 AM	531	531	Yes
9:00 AM	702	702	Yes
10:00 AM	706	706	Yes
11:00 AM	827	827	Yes
12:00 PM	798	798	Yes
1:00 PM	801	801	Yes
2:00 PM	810	810	Yes
3:00 PM	830	830	Yes
4:00 PM	723	723	Yes
5:00 PM	656	656	Yes
6:00 PM	774	774	Yes
Avg. 03/7	718	718	-

TABLE 3

SR A1A (Seabreeze Boulevard) & Poinsettia Street All-Way Stop Control Warrant Analysis Warrant C.2

Minor Street Approach Volumes

Major Road: SR A1A (Seabreeze Boulevard) County: Broward County
 Minor Road: Poinsettia Street City: Fort Lauderdale
 Posted Speed: 30 MPH Count Dates: 03/07/20
 PSCF: 1.00

Time	Poinsettia Street			
	WB Approach	EB Approach	Total	Warrant Satisfied
7:00 AM	24	11	35	No
8:00 AM	31	10	41	No
9:00 AM	48	23	71	No
10:00 AM	85	12	97	No
11:00 AM	97	29	126	No
12:00 PM	105	27	132	No
1:00 PM	143	46	189	No
2:00 PM	164	57	221	Yes
3:00 PM	145	76	221	Yes
4:00 PM	166	109	275	Yes
5:00 PM	136	68	204	Yes
6:00 PM	115	56	171	No
Avg. 03/07	105	44	149	-

Average Daily Traffic Volumes Quality Traffic Data, LLC

QTD PROJ/LOC #:	2020138 - 002		
ON STREET:	SR A1A (Seabreeze Blvd.) (N/S)	START DATE:	Saturday, March 07, 2020
CROSS STREETS:	Poinsettia Street (E/W)	VICINITY:	FL

AM COUNTS					PM COUNTS							
NB	SB	EB	WB		NB	SB	EB	WB				
00:00					12:00	183	4	22				
00:15					12:15	214	4	15				
00:30					12:30	201	6	17				
00:45					12:45	200	798	5	19	24	78	895
01:00					13:00	218	7	22				
01:15					13:15	193	5	19				
01:30					13:30	196	10	21				
01:45					13:45	194	801	3	25	18	80	906
02:00					14:00	190	3	25				
02:15					14:15	199	6	32				
02:30					14:30	202	7	26				
02:45					14:45	219	810	4	20	25	108	938
03:00					15:00	240	3	22				
03:15					15:15	199	5	33				
03:30					15:30	206	3	28				
03:45					15:45	185	830	18	29	35	118	977
04:00					16:00	180	9	39				
04:15					16:15	187	8	24				
04:30					16:30	185	16	29				
04:45					16:45	171	723	15	48	24	116	887
05:00					17:00	160	13	31				
05:15					17:15	167	9	27				
05:30					17:30	124	5	22				
05:45					17:45	205	656	2	29	22	102	787
06:00					18:00	224	8	26				
06:15					18:15	166	5	25				
06:30					18:30	157	1	23				
06:45					18:45	227	774	6	20	12	86	880
07:00	110	0	4		19:00							
07:15	113	3	2		19:15							
07:30	102	1	6		19:30							
07:45	131	456	3	7	4	16	479					
08:00	109	0	5		20:00							
08:15	130	2	4		20:15							
08:30	140	1	6		20:30							
08:45	152	531	1	4	4	19	554					
09:00	179	1	6		21:00							
09:15	162	5	6		21:15							
09:30	178	3	7		21:30							
09:45	183	702	1	10	10	29	741					
10:00	170	3	14		22:00							
10:15	195	2	16		22:15							
10:30	160	1	5		22:30							
10:45	181	706	1	7	18	53	766					
11:00	188	3	12		23:00							
11:15	226	1	11		23:15							
11:30	191	2	19		23:30							
11:45	222	827	4	10	12	54	891					
TOTALS:	3222	38	171	3431	TOTALS:	5392	190	688	6270			

SPLIT	93.9%	1.1%	5.0%	35.4%	SPLIT	86.0%	3.0%	11.0%	64.6%
PEAK HOUR	11:00	11:45	11:30	11:45	PEAK HOUR	14:45	16:30	15:15	14:45
PH VOLUME	827	18	68	904	PH VOLUME	864	53	135	987
PHF	0.91	0.75	0.77	0.95	PHF	0.90	0.83	0.87	0.93

DAY'S TOTAL				
NB	SB	EB	WB	TOTAL
8614	228	859	9701	9701



QUALITY TRAFFIC DATA, LLC

Phone: 887-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

TABLE 2

SR A1A (Seabreeze Boulevard) & Poinsettia Street All-Way Stop Control Warrant Analysis Warrant C.1

Major Street Approach Volumes

Major Road: SR A1A (Seabreeze Boulevard) County: Broward County
 Minor Road: Poinsettia Street City: Fort Lauderdale
 Posted Speed: 30 MPH Count Dates: 03/08/20
 PSCF: 1.00

Time	SB Approach	Total	Warrant Satisfied
7:00 AM	341	341	Yes
8:00 AM	485	485	Yes
9:00 AM	629	629	Yes
10:00 AM	677	677	Yes
11:00 AM	806	806	Yes
12:00 PM	801	801	Yes
1:00 PM	789	789	Yes
2:00 PM	788	788	Yes
3:00 PM	798	798	Yes
4:00 PM	702	702	Yes
5:00 PM	640	640	Yes
6:00 PM	693	693	Yes
Avg. 03/8	679	679	-

TABLE 3

SR A1A (Seabreeze Boulevard) & Poinsettia Street All-Way Stop Control Warrant Analysis Warrant C.2

Minor Street Approach Volumes

Major Road: SR A1A (Seabreeze Boulevard) County: Broward County
 Minor Road: Poinsettia Street City: Fort Lauderdale
 Posted Speed: 30 MPH Count Dates: 03/08/20
 PSCF: 1.00

Time	Poinsettia Street			Warrant Satisfied
	WB Approach	EB Approach	Total	
7:00 AM	26	6	32	No
8:00 AM	32	8	40	No
9:00 AM	47	14	61	No
10:00 AM	82	21	103	No
11:00 AM	95	33	128	No
12:00 PM	100	25	125	No
1:00 PM	136	33	169	No
2:00 PM	149	55	204	Yes
3:00 PM	159	84	243	Yes
4:00 PM	150	82	232	Yes
5:00 PM	145	83	228	Yes
6:00 PM	114	50	164	No
Avg. 03/08	103	41	144	-

Average Daily Traffic Volumes Quality Traffic Data, LLC

QTD PROJ/LOC #:	2020138 - 002		
ON STREET:	SR A1A (Seabreeze Blvd.) (N/S)	START DATE:	Sunday, March 08, 2020
CROSS STREETS:	Poinsettia Street (E/W)	VICINITY:	FL

AM COUNTS					PM COUNTS							
NB	SB	EB	WB		NB	SB	EB	WB				
00:00					12:00	200	7	12				
00:15					12:15	216	1	16				
00:30					12:30	195	2	13				
00:45					12:45	190	801	2	12	13	54	867
01:00					13:00	196	3	10				
01:15					13:15	199	5	14				
01:30					13:30	203	7	26				
01:45					13:45	191	789	1	16	24	74	879
02:00					14:00	187	2	21				
02:15					14:15	195	5	28				
02:30					14:30	200	8	33				
02:45					14:45	206	788	8	23	31	113	924
03:00					15:00	219	10	27				
03:15					15:15	197	13	21				
03:30					15:30	195	12	33				
03:45					15:45	187	798	5	40	34	115	953
04:00					16:00	190	7	27				
04:15					16:15	179	5	33				
04:30					16:30	174	14	25				
04:45					16:45	159	702	5	31	26	111	844
05:00					17:00	156	8	21				
05:15					17:15	167	8	22				
05:30					17:30	130	9	24				
05:45					17:45	187	640	4	29	23	90	759
06:00					18:00	179	5	21				
06:15					18:15	167	3	18				
06:30					18:30	160	6	24				
06:45					18:45	187	693	4	18	17	80	791
07:00	78	0	1		19:00							
07:15	71	1	3		19:15							
07:30	96	2	2		19:30							
07:45	96	341	0	3	10	16	360					
08:00	106	1	3		20:00							
08:15	120	3	9		20:15							
08:30	117	0	3		20:30							
08:45	142	485	2	6	8	23	514					
09:00	156	2	4		21:00							
09:15	150	1	5		21:15							
09:30	163	4	11		21:30							
09:45	160	629	1	8	13	33	670					
10:00	149	2	8		22:00							
10:15	179	1	10		22:15							
10:30	164	4	16		22:30							
10:45	185	677	2	9	13	47	733					
11:00	197	2	15		23:00							
11:15	203	5	13		23:15							
11:30	197	2	11		23:30							
11:45	209	806	4	13	14	53	872					
TOTALS:	2938	39	172	3149	TOTALS:	5211	169	637	6017			

SPLIT	93.3%	1.2%	5.5%	34.4%	SPLIT	86.6%	2.8%	10.6%	65.6%
PEAK HOUR	11:30	11:15	10:30	11:30	PEAK HOUR	14:30	14:45	15:30	14:30
PH VOLUME	822	18	57	889	PH VOLUME	822	43	127	973
PHF	0.95	0.64	0.89	0.95	PHF	0.94	0.83	0.93	0.95

DAY'S TOTAL				
NB	SB	EB	WB	TOTAL
8149	208	809	9166	

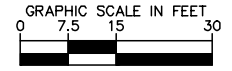
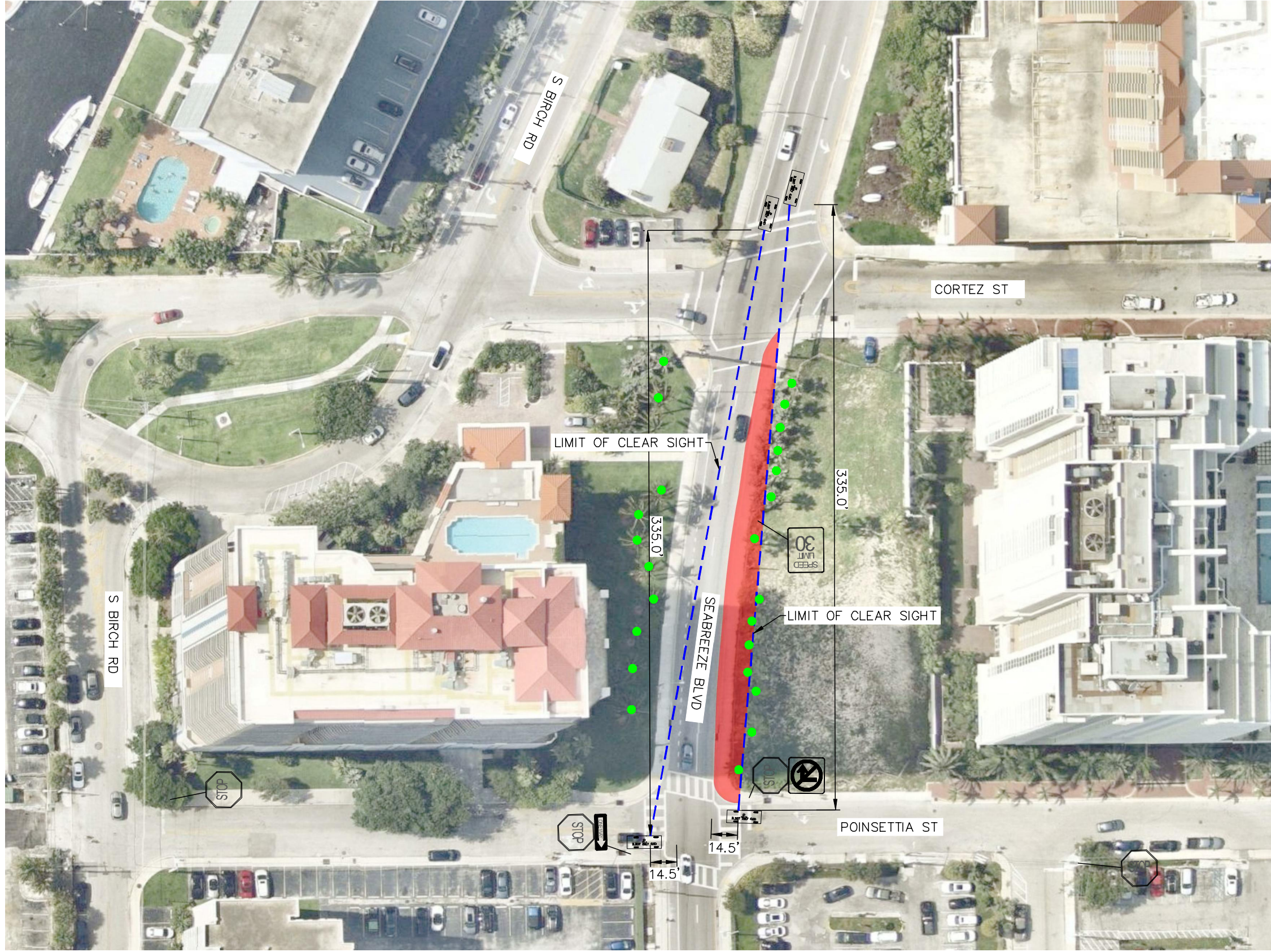


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Appendix H
Sight Distance Analysis Exhibit

Plotted By: Reynolds, Jeff Sheet Set: Metropolitan Apts Layout: 22.3.4 October 21, 2020 12:13:41pm K:\VTL_IP\10\040005701_09029_TWD_49_Ped Safety Study\CAD\Sight Distance Exhibit.dwg



LEGEND



SIGHT TRIANGLE AS PER FDOT DESIGN MANUAL EXHIBIT 212-4



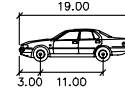
APPROXIMATE LOCATION OF EXISTING TREE TRUNK



AREA MUST BE FREE OF SIGHT OBSTRUCTIONS

NOTES:

1. THE SIGHT DISTANCES SHOWN ARE BASED ON EXHIBIT 212-4 OF THE FDOT DESIGN MANUAL WITH A DESIGN SPEED OF 30 MPH.
2. THE SIGHT DISTANCES SHOWN ARE FOR A STANDARD PASSENGER VEHICLE AS SHOWN BELOW.



PM

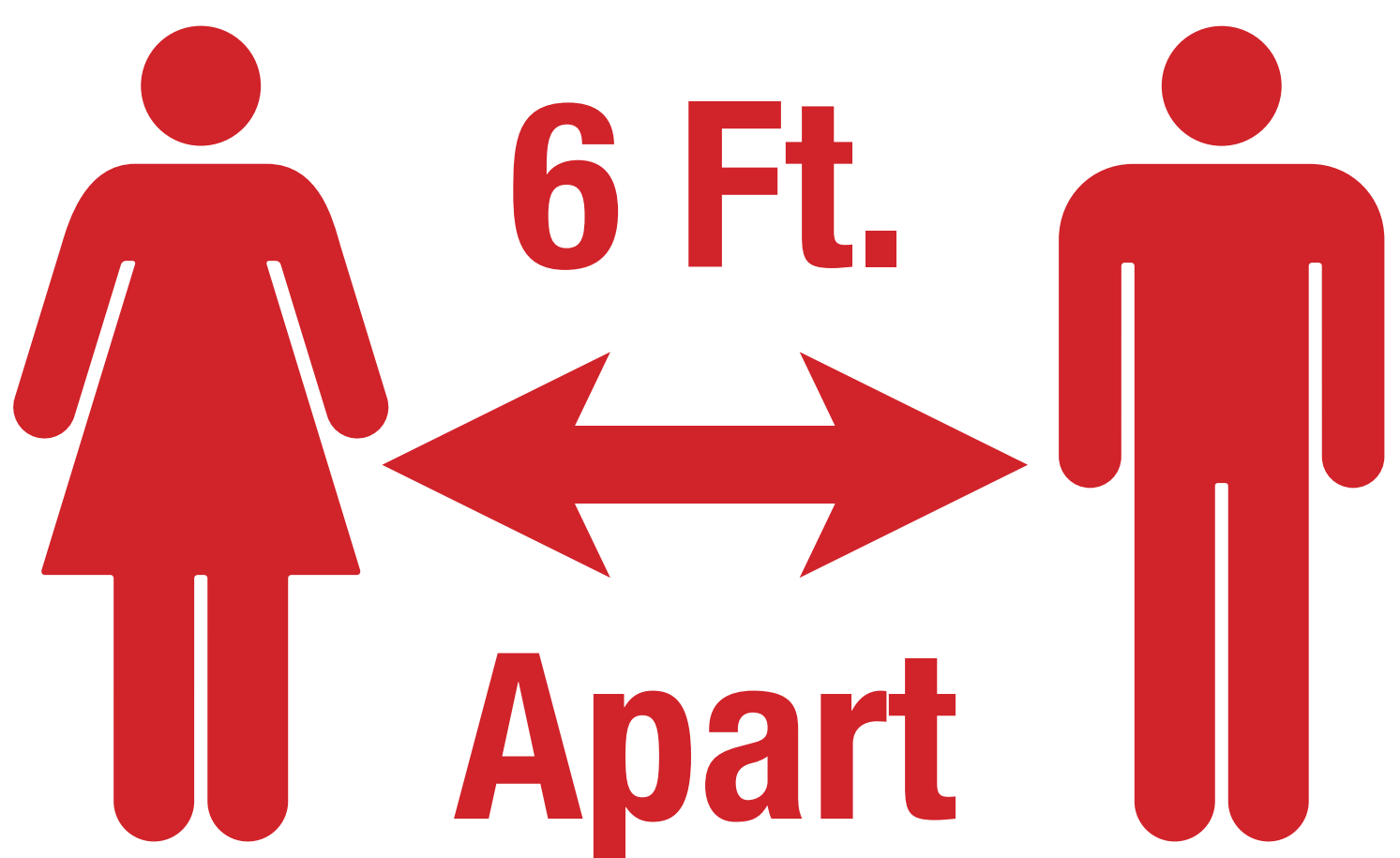
Width	: 7.00
Track	: 6.00
Lack to Lack Time	: 6.0
Steering Angle	: 31.6

SEABREEZE BLVD AND POINSETTIA STREET INTERSECTION PREPARED FOR FDOT	FLORIDA				
	SIGHT DISTANCE ANALYSIS	KHA PROJECT 040005701	DATE 09/14/2020	SCALE AS SHOWN	DESIGNED BY JUR
SHEET NUMBER EX-1	DRAWN BY JUR	CHECKED BY RW	REVISIONS	DATE	BY



CITY OF FORT LAUDERDALE

STOP COVID-19 TOGETHER



**Maintain Social
Distancing**



Wear A Mask



**Wash Hands
Frequently**

Follow CDC Guidelines
www.cdc.gov/covid-19

The intersection of N Ocean Blvd and NE 30th St has four approaches:

a. Southbound approach:

- i. Two through Lanes
- ii. One bike lane.
- iii. One permissive left turn lane with 80 feet long storage lane.



b. Northbound approach:

- i. Two through Lanes
- ii. One bike lane.
- iii. One protected left turn lane with 90 feet long storage lane (has left turn signal on mast arm). The northbound left turn lane turning westbound on to NE 30th St is operational and in service.



c. Eastbound approach:

- i. One right turn only lane with 80 feet long storage lane.
- ii. One shared left turn and through lane.
- iii. This left turn movement does not have a protective left turn signal.



d. Westbound approach:

i. One through lane.

1. This lane combines through, left, and right turns in the same lane.
2. This left turn movement does not have a protective left turn signal.

