PROJECT TRAFFIC ANALYSIS REPORT

Florida Department of Transportation

District Seven

US 92/SR600/Gandy Boulevard (PD&E) Study

4th Street North to West Shore Boulevard

Pinellas & Hillsborough Counties, Florida

Financial Management Number: XXXXX-X

ETDM Number: 14335

Date: February 2023

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022, and executed by FHWA and FDOT.

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Project Traffic Analysis Report

US 92/SR 600/Gandy Boulevard
from 4th Street North to West Shore Boulevard
Project Development and Environment Study

Pinellas & Hillsborough Counties, Florida

Work Program Item Segment No.: 441250-1

Federal Aid Project No.: N/A
ETDM #14335

Prepared for:

Florida Department of Transportation
District Seven

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February 2023

Traffic forecast for the project was developed using:	
☒ Travel Demand Model	☐ Growth Rates
Type of Travel Demand Model Used: ☒ Metropolitan Planning Model ☐ Other Model TBRPM v9.1	*Refer to appropriate section of Project Traffic Analysis Report that discusses growth rates*
Is the travel demand model based on the latest adopted Long Range Transportation Plan?	
☒ YES	☐ NO
11/05/2019 Date when MPO adopted the latest Long Range Transportation Plan	Explain why?
2015 Base Year of Travel Demand Model	
2045 Horizon Year of Travel Demand Model	
Long Range Transportation Plan documentation is available at (provide web address):	
Traffic Data and Factors	
Standard K = 9.0% D Factor = 53.4% T_{Daily} = 5.0%	Data Collection Year = 2020 Opening Year = 2030 Interim Year = N/A Design Year = 2050
Discuss any changes in land use, economics, population and employment data since the model was built	
Traffic Analysis Assumptions	
Discuss study area, data calibration/validation parameters, analysis tools, analysis periods and MOEs The Design Year Annual Average Daily Traffic (AADT) were developed using a calculated growth rate from the results of the TBRPM v9.1. Existing Year (2020), Opening Year (2030) and Design Year (2050) operations were analyzed using FDOT Generalized Tables, Synchro v11.1 and the Highway Capacity Software (HCS) v7. Measures of Effectiveness (MOEs) of delay, queues, and LOS were reported.	

Executive Summary

The Florida Department of Transportation (FDOT), District Seven, is conducting a Project Development and Environment (PD&E) study to evaluate improvements to US 92/SR 600/Gandy Boulevard including roadway widening, bridge widening and replacement, new stormwater management facilities, and pedestrian and bicycle accommodations. The limits of the study are from 4th Street North in St. Petersburg (Pinellas County) to West Shore Boulevard in Tampa (Hillsborough County), a distance of approximately 7.0 miles. This portion of Gandy Boulevard is functionally classified by the FDOT as an urban principal arterial and is part of FDOT's Strategic Intermodal System (SIS) and a designated evacuation route. The project study area and project limits are shown in **Figure E-1**. The results of the study will aid FDOT District Seven and the FDOT Office of Environmental Management (OEM) in deciding the location and design concept for the proposed improvements.

The project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process as project #14335. An ETDM Programming Screen Summary Report containing comments from the Environmental Technical Advisory Team (ETAT) was published on November 8, 2018. The ETAT evaluated the project's effects on various natural, physical, and social resources.

The purpose of this project is to reduce traffic congestion and improve pedestrian and bicycle accommodations on Gandy Boulevard. This project is intended to address current and future traffic demand by improving roadway capacity and to address pedestrian and bicycle accommodations with potential connectivity over Old Tampa Bay. According to the Forward Pinellas Bicycle Pedestrian Master Plan, construction of bike lanes and a trail from 4th Street North to west of San Martin Boulevard is planned. The Duke Energy/Pinellas Loop from 28th Street to San Martin Boulevard is also planned.

This Project Traffic Analysis Report (PTAR) documents the assumptions, methodology, existing conditions, traffic forecasts, traffic analysis results for existing and future conditions, and safety analysis to assist FDOT District Seven in making decisions related to the evaluation of the PD&E Study for US 92/SR 600/Gandy Boulevard. This PTAR was prepared following the guidelines of the *FDOT's PD&E Manual Part 2, Chapter 2* (effective July 1, 2020).

The project was divided into three segments for the purpose of evaluating future traffic capacity needs and differences in existing roadway typical sections as shown in **Figure E-1.**

Segment 1

Segment 1 (Pinellas Segment) begins at the western project limit at 4th Street North and extends 3.5 miles to the west end of the Gandy Boulevard bridges over Old Tampa Bay in Pinellas County. There are numerous side street and driveway connections to the residential and business land uses between 4th Street North and San Fernando Drive.

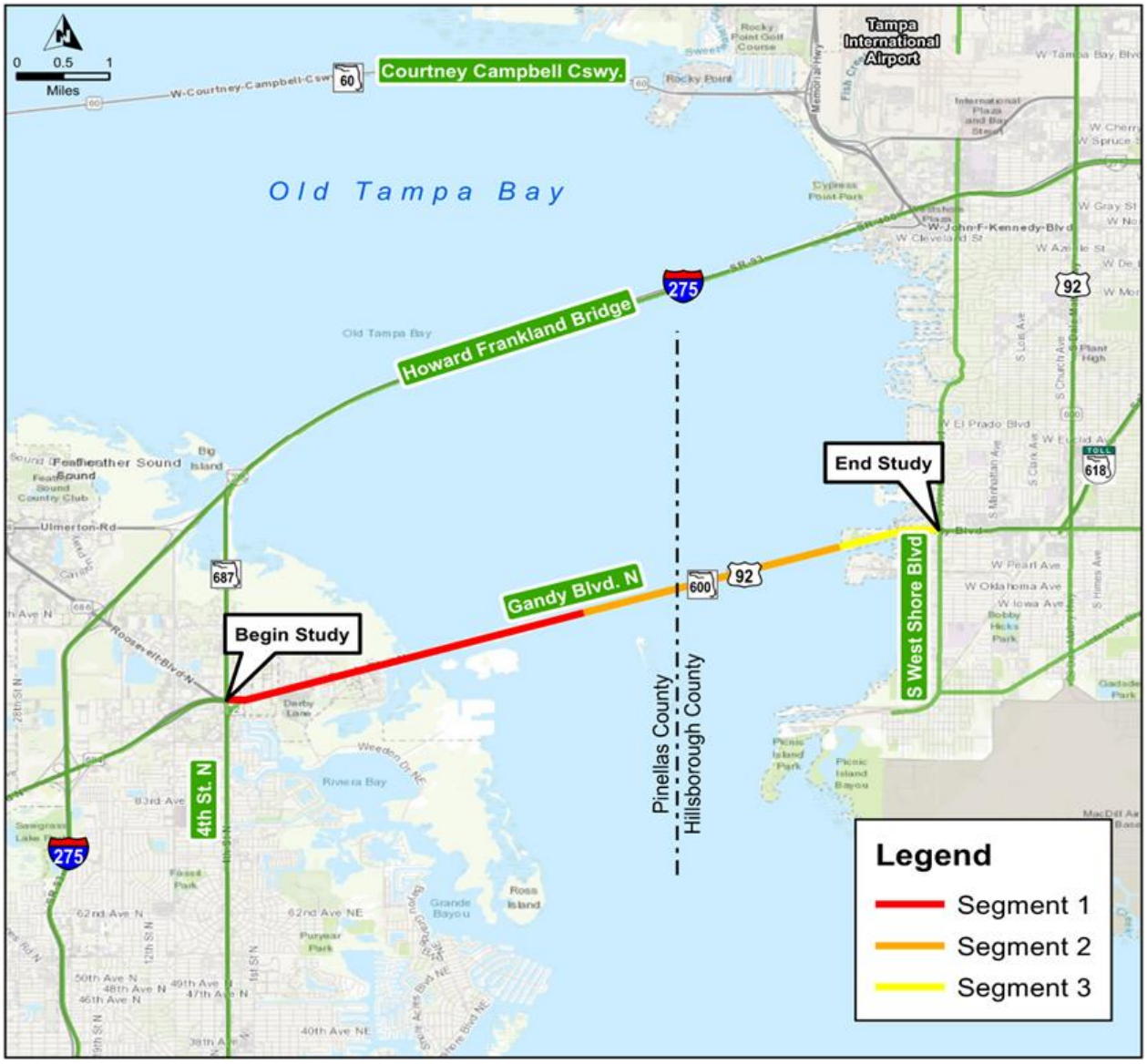


Figure E-1: Project Location Map

Segment 2

Segment 2 (Bay Segment) includes the Gandy Boulevard bridges over Old Tampa Bay. The Gandy Boulevard bridges extend approximately 2.5 miles. Currently, neither the eastbound nor westbound bridge provides pedestrian or bicycle accommodations.

Segment 3

Segment 3 (Hillsborough Segment) begins at the east end of the Gandy Boulevard bridges over Old Tampa Bay and extends for approximately one mile to West Shore Boulevard in Hillsborough County.

The following study intersections have been defined for the project:

- 4th Street North and North Frontage Road
- 4th Street North and South Frontage Road
- Gandy Boulevard and Brighton Bay Boulevard
- Gandy Boulevard and San Martin Boulevard/Mangrove Cay Lane
- Gandy Boulevard and West Shore Boulevard

Existing conditions evaluations show the multilane highway facilities and the Gandy Boulevard bridges operating at acceptable Level of Service (LOS) but the intersections along Gandy Boulevard operate at unacceptable LOS with most movements operating at LOS E or F.

The northbound and southbound approaches of the unsignalized intersection of Gandy Boulevard and San Martin Boulevard experience excessive delays waiting for gaps on Gandy Boulevard to complete their movements.

Tables E-1 and E-2 show for Design Year 2050, under the No-Build Alternative, the multilane highway facilities and the Gandy Boulevard bridges operating at acceptable LOS (except for the segment between 4th Street North and Brighton Bay Boulevard) but the intersections along Gandy Boulevard will continue to operate at unacceptable LOS with most movements operating at LOS E or F.

Table E-1: Design Year (2050) No-Build Multilane Highway Segment Analysis

Gandy Blvd Segment	Eastbound Direction				Westbound Direction			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
From 4th St North ramps to Brighton Bay Blvd	29.7	D	35.5	E	44.6	E	31.5	D
From Brighton Bay Blvd to west end of Gandy Blvd bridges	26.2	D	30.5	D	30.8	D	25.9	C
From east end of Gandy Blvd bridges to 600 ft west of US Marine entrance	21.6	C	25.5	C	25.5	C	21.6	C
From 600 ft west of US Marine entrance to Selmon Expwy ramps	17.9	B	20.9	C	20.9	C	17.9	B
From Selmon Expwy ramps to 1700 ft west of Bridge St	10.1	A	11.5	B	17.3	B	15.1	B
From 1700 ft west of Bridge St to West Shore Blvd	17.9	B	20.2	C	22.9	C	19.6	C

Table E-2: Design Year (2050) No-Build Intersection Analysis Results

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
4th St North and North Frontage Rd	62.8	E	63.2	E
4th St North and South Frontage Rd	46.7	D	50.7	D
Gandy Blvd at Brighton Bay Blvd	157.2	F	104.8	F
Gandy Blvd at San Martin Blvd/Mangrove Cay*	2252.5	F	**	**
Gandy Blvd at West Shore Blvd	116.8	F	113.6	F

*Unsignalized intersection. Results show worst intersection movement delay ** Excessive delay, threshold exceeded.

The westbound through movement at the intersection of Gandy Boulevard and Brighton Bay Boulevard shows a queue of approximately 3,000 feet in the AM peak hour meaning the queue is projected to impact the operations at Gandy Boulevard and San Martin Boulevard and Gandy Boulevard and Snug Harbor Road NE intersections. The eastbound through movement at the intersection of Gandy Boulevard and Brighton Bay Boulevard shows a queue of over 3,200 feet in the PM peak hour meaning the queue is projected to impact traffic merging from the South Frontage Road and 4th Street North intersection.

The northbound and southbound approaches of the unsignalized intersection of Gandy Boulevard and San Martin Boulevard are expected to continue to experience excessive delays waiting for gaps on Gandy Boulevard to complete their movements.

Gandy Boulevard is being reconstructed between 4th Street North and the east end of the Gandy Boulevard bridges as an elevated controlled-access facility with ramps and frontage roads under the Build Alternative. **Tables E-3 and E-4** show for Design Year 2050, under the Build Alternative, all the freeway segments, multilane highway segments, ramps and intersections on the Pinellas County side operating at acceptable LOS D or better. The overall operations on the Pinellas County side improve significantly when compared to the No-Build conditions.

Table E-3: Design Year (2050) Build Freeway and Multilane Highway Segment Analysis

Gandy Blvd Segment	Analysis Type	AM Peak Hour		PM Peak Hour	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Eastbound Direction					
From Martin Luther King Jr St North off-ramp to Diverge Off-Ramp east of 4th St North	Freeway	20.3	C	23.4	C
Off-ramp east of 4th St - Diverge	Freeway	21.7 Fr/ 16.4 Ramp	B	24.9 Fr/ 19.2 Ramp	B
From Off-ramp east of 4th St North to On-ramp west of Brighton Blvd	Freeway	16.3	B	19.3	C
Gandy Blvd On-ramp west of Brighton Bay Blvd - Merge	Freeway	25.3 Fr/ 19.3 Ramp	B	29.7 Fr/ 22.6 Ramp	C
From Merge On-ramp west of Brighton Blvd to On-ramp east of San Fernando Dr	Freeway	24.4	C	28.5	D
From On-ramp east of San Fernando Dr to Beach Access Frontage Rd On-ramp	Freeway	16.7	B	19.2	C
Access Frontage Rd On-ramp - Merge	Freeway	17.2 Fr/ 11.2 Ramp	B	19.9 Fr/ 13.3 Ramp	B
From Beach Access Rd On-ramp Merge to east end of the Gandy Blvd bridges	Freeway	16.8	B	19.3	C

Gandy Blvd Segment	Analysis Type	AM Peak Hour		PM Peak Hour	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Eastbound Direction					
From east end of Gandy Blvd bridges to EB on-ramp to Selmon Expressway	Multilane Highway	19.7	C	22.6	C
From EB on-ramp to Selmon Expressway to West Shore Blvd	Multilane Highway	19.1	C	21.3	C
Westbound Direction					
From West Shore Blvd to EB Selmon Expressway On-ramp	Multilane Highway	25.1	C	21.7	C
From EB On-ramp to Selmon Expressway to east end of Gandy Blvd bridges	Multilane Highway	19.4	C	17.3	B
From east end of Gandy Blvd bridges to Off-ramp east of San Fernando Dr	Freeway	19.1	C	16.6	B
From Off-ramp east of San Fernando Dr to Diverge Off-ramp west of Brighton Bay Blvd	Freeway	28.3	D	24.2	C
Off-ramp west of Brighton Bay Blvd - Diverge	Freeway	30.7 Fr/ 23.5 Ramp	C	26.2 Fr/ 19.8 Ramp	B
From Off-ramp west of Brighton Bay Blvd to On-ramp east of 4th St N	Freeway	19.2	C	16.2	B
On-ramp east of 4th St North – Merge	Freeway	24.2 Fr/ 18.4 Ramp	B	21.0 Fr/ 15.9 Ramp	B
From Merge On-ramp east of 4th St North to Martin Luther King Jr St North On-ramp	Freeway	23.2	C	20.2	C

Table E-4: Design Year (2050) Build Intersection Analysis Results

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
4th St North and North Frontage Rd	55.2	E	55.0	D
4th St North and South Frontage Rd	31.7	C	47.4	D
Gandy Blvd at Brighton Bay Blvd	33.5	C	34.9	C
WB Frontage Rd at Mangrove Cay	11.0	B	15.6	B
EB Frontage Rd at San Martin Blvd	15.1	B	13.7	B
Gandy Blvd at West Shore Blvd	141.9	F	137.4	F

An additional analysis was performed to determine the year of failure of a four-lane typical section on the Gandy Boulevard bridges using the *2020 Quality/Level of Service Handbook (Q/LOS)* Generalized Annual Average Daily Service Volume Tables (January 2020) for Florida's Urbanized Areas. The Build Alternative Annual Average Daily Traffic (AADT) volumes were grown for successive years using the selected growth rate for the bridges determined during the project traffic forecasting development. The bridges were assumed to fail when the LOS degrades to LOS E.

The results of the year of failure analysis are summarized in **Table E-5**, which indicate that the four-lane bridge section is expected to fail in Year 2051 based on the Q/LOS analysis.

Table E-5: Gandy Boulevard Bridges Year of Failure Analysis

Analysis Year	AADT	LOS*
2050	64,800	D
2051	66,800	E
2052	68,800	E
2053	71,000	E
2054	73,200	E
2055	75,400	F

*LOS D AADT threshold: 66,200; LOS E AADT threshold: 75,300

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Appendix C: Traffic Data Collection

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Appendix E: Crash Data Heat Maps

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Appendix G: Project Traffic Forecasting Memorandum

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Appendix J: Build Alternative Concept Plans

Appendix K: Opening Year (2030) Build Analysis Results

Appendix L: Design Year (2050) Build Analysis Results

Appendix M: Future Condition Safety Analysis Results

1.0 Introduction

1.1 Project Description

The Florida Department of Transportation (FDOT), District Seven, is conducting a Project Development and Environment (PD&E) study to evaluate improvements to US 92/SR 600/Gandy Boulevard including roadway widening, bridge widening and/or replacement, new stormwater management facilities, and pedestrian and bicycle accommodations. The limits of the study are from US 92/SR 687/4th Street North in St. Petersburg (Pinellas County) to CR 587/South West Shore Boulevard in Tampa (Hillsborough County), a distance of approximately 7.0 miles. The project study area and project limits are shown in **Figure 1-1**. The existing Gandy Boulevard is a four-lane roadway with sidewalks and segments of multi-use trails. The project is located in Sections 7 and 8 of Township 30 South, Range 18 East, and Sections 15, 16, 17, 18, and 19 of Township 30 South, Range 17 East. Proposed improvements include a 4-lane to 6-lane controlled access elevated roadway, frontage roads and multi-use trails. The results of the study will aid FDOT District Seven and the FDOT Office of Environmental Management (OEM) in deciding the location and design concept for the proposed improvements.

The project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process as project #14335. An ETDM *Programming Screen Summary Report* containing comments from the Environmental Technical Advisory Team (ETAT) was published on November 8, 2018. The ETAT evaluated the project's effects on various natural, physical, and social resources.

1.2 Project Purpose and Need

The purpose of this project is to reduce traffic congestion and improve pedestrian and bicycle accommodations on Gandy Boulevard.

This project is needed to address current and future traffic demand by improving roadway capacity and to address pedestrian and bicycle accommodations with potential connectivity over Old Tampa Bay. According to Forward Pinellas (Metropolitan Planning Organization) Active Transportation Plan, construction of bike lanes and a trail from 4th Street to west of San Martin Boulevard is planned. The Duke Energy/Pinellas Loop Trail from 28th Street to San Martin Boulevard and the San Martin Boulevard Trail from Macoma Drive (at Patica Road NE) to Gandy Boulevard are also planned.

Roadway Capacity: The US 92/SR 600/Gandy Boulevard PD&E study segment was divided into three segments for the purposes of roadway capacity and pedestrian analysis. The segment from 4th Street to the west end of the Gandy Bridge operates at a deficient level of service (LOS) in both the existing year 2020 and design year 2050. The segment from the east end of the Gandy bridges to West Shore Boulevard is forecasted to have a deficient LOS in the design year 2050.

Roadway Deficiencies: On the western side of the Gandy Bridge, a sidewalk is present on the south side of the roadway from the vicinity of 99th Avenue North to approximately 0.25 miles east of San Fernando Drive. On the north side of the roadway a sidewalk is present from Oak Street to Brighton Bay Boulevard. At Brighton Bay Boulevard, a multi-use trail begins and terminates in the vicinity of the west end of Gandy bridges over Old Tampa Bay. On the eastern side of the Gandy Bridge, sidewalks are present on both sides of the roadway from the vicinity of Gandy Park South to West Shore Boulevard. There are no pedestrian or bicycle accommodations located on the Gandy Bridge. This project will address the need for bicycle and pedestrian improvements along the US 92/SR 600/Gandy Boulevard corridor

1.3 Existing Facility and Project Segments

Gandy Boulevard is part of FDOT's Strategic Intermodal System (SIS) and a designated hurricane evacuation route. FDOT's functional classification for Gandy Boulevard is an urban principal arterial-other roadway.

The project was divided into three segments for the purpose of evaluating future traffic capacity needs and differences in existing roadway typical sections as shown in **Figure 1-1**.

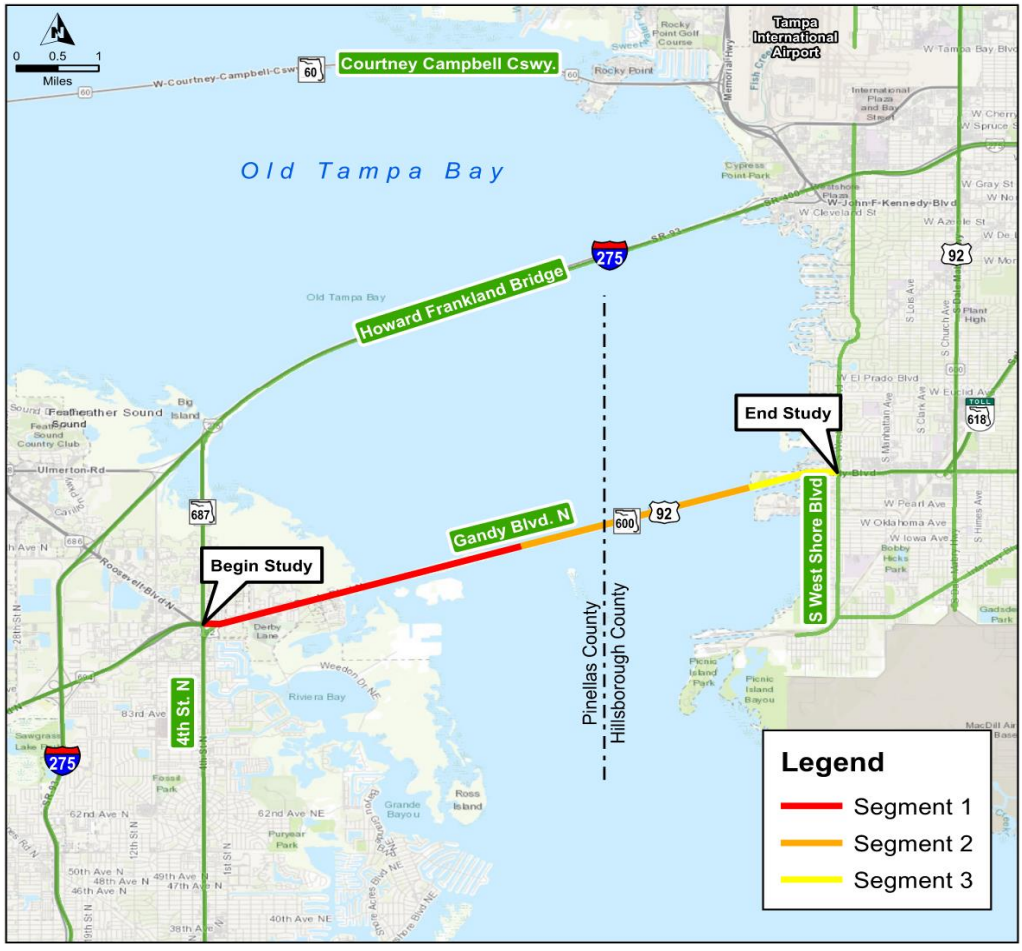


Figure 1-1: **Project Location Map**

Segment 1

Segment 1 (Pinellas Segment) begins at the western project limit at 4th Street and extends 3.5 miles to the west end of the Gandy bridges over Old Tampa Bay in Pinellas County. Within Segment 1, the existing facility consists of a four-lane divided roadway with a varying median width (40 feet minimum), four 12-foot travel lanes, paved outside shoulders (four-foot minimum) designated for bicycle use on the south side, intermittent sidewalk segments, a 12-foot multi-use trail on the north side, and open ditches along the outside. The existing right-of-way (ROW) width varies in Segment 1 with a minimum width of 172 feet. There are numerous side street and driveway connections to the residential and business land uses between 4th Street and San Fernando Drive.

Segment 2

Segment 2 (Bay Segment) includes the Gandy bridges over Old Tampa Bay. The existing eastbound bridge (#100300), constructed in 1975, and existing westbound bridge (#100585), constructed in 1996, extend approximately 2.5 miles. Both the existing eastbound and westbound bridges consist of two 12-foot travel lanes, a six-foot inside shoulder, and a ten-foot outside shoulder. The westbound bridge was designed to accommodate an additional travel lane by widening on both sides of the bridge. Currently, neither the eastbound or westbound bridge provides pedestrian or bicycle accommodations.

Segment 3

Segment 3 (Hillsborough Segment) begins at the east end of the Gandy Boulevard bridges over Old Tampa Bay and extends for approximately one mile to West Shore Boulevard in Hillsborough County. Within Segment 3, the existing facility consists of a four-lane divided roadway with a varying median width, and it consists of two typical sections. The first existing typical section extends from the east end of the bridges to the Gandy Boat Ramp turnout and has 11-foot travel lanes, varying paved inside shoulder widths, and ten-foot paved outside shoulders with open ditches on the outside and a 12-foot multi-use trail on the south side. For the rest of Segment 3, the typical section transitions from open ditches to an urban curb and gutter section with ten-foot inside travel lanes, 11-foot outside travel lanes, and two six-foot sidewalks on the outside. The median width varies along the segment. The existing ROW also varies within Segment 3 with a minimum width of 100 feet. The Selmon Extension was still in construction when the notice to proceed was given and the counts were taken for the PD&E study.

1.4 Proposed Action

The proposed action is to reduce traffic congestion and improve pedestrian and bicycle accommodations by reconstructing Gandy Boulevard to provide an elevated controlled access roadway mainline separated from local traffic with frontage roads and multi-use trails on both sides of the corridor for pedestrians and bicyclists. The proposed action will also widen the existing westbound Gandy bridge to accommodate a third travel lane and construct a new bridge to provide a wider structure for three travel lanes and a multi-use trail.

1.5 Alternatives

1.5.1 No-Build Alternative

Throughout this study, a "No-Build" or "No-Action" Alternative is also considered with the Build Alternatives. The No-Build Alternative proposes no capacity or operational improvements to the existing Gandy Boulevard besides the Selmon Extension. The Selmon Extension is considered part of the No-Build Alternative since it opened to the public on April 19, 2021. Only routine roadway and bridge maintenance activities would be conducted along the limits of the project.

The No-Build Alternative results in zero ROW acquisition, avoiding environmental impacts, and no new construction costs. However, it does not accomplish the purpose and need for this project.

1.5.2 Build Alternative

1.5.2.1 Segment 1

Typical Section 1

The Build Alternative for Segment 1 (Pinellas Segment) includes three typical sections. Typical Section 1 is proposed from 4th Street to Brighton Bay Boulevard and from east of San Martin Boulevard to approximately 3,000 feet east of San Fernando Drive. Typical Section 1 consists of an elevated controlled access facility with two 12-foot travel lanes in each direction, varying inside shoulder widths (four feet to eight feet paved), ten-foot paved outside shoulders, and a 46-foot depressed median separated by guardrail. The local traffic will be accommodated along eastbound and westbound one-way frontage roads consisting of two 11-foot travel lanes with curb and gutter. Twelve-foot multi-use trails are proposed along the outside of the frontage roads on both sides of the corridor as shown in **Figure 1-2**. Typical Section 1 will require ROW acquisition to the south side of Gandy Boulevard approaching Brighton Bay Boulevard which varies from zero to 119 feet. The alignment shifts from the south to the north through the San Martin Boulevard intersection heading east where the ROW acquisition varies from zero to 80 feet.

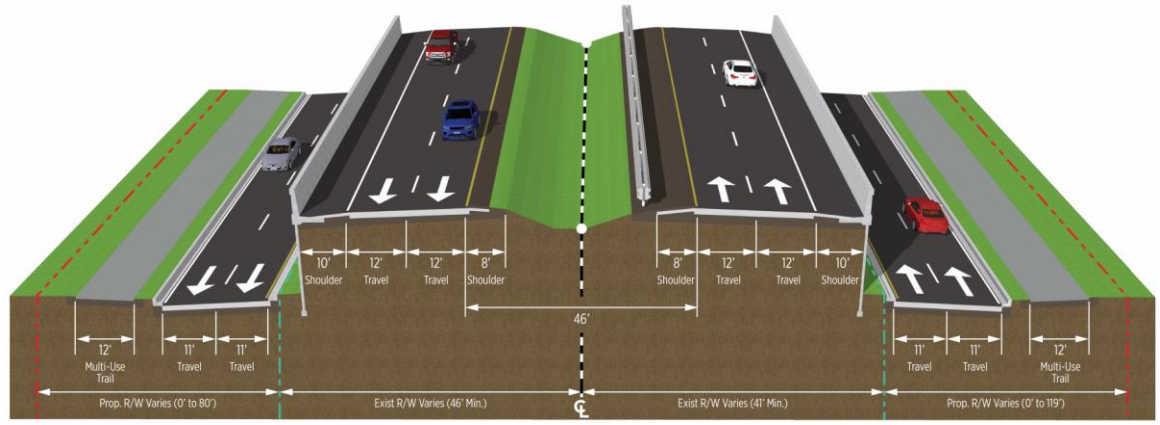


Figure 1-2: Segment 1 – Typical Section 1 from 4th Street to Brighton Bay Blvd.; San Martin Blvd. to East of San Fernando Dr.

Typical Section 2

Typical Section 2 is proposed from west of Brighton Bay Boulevard to San Martin Boulevard and consists of a centered elevated viaduct with frontage roads on both sides. The viaduct consists of two 12-foot travel lanes in each direction separated by a concrete barrier wall with six-foot inside shoulders and ten-foot outside shoulders. The bridge concept could be widened to the outside if additional lanes are needed in the future. The eastbound and westbound frontage roads consist of two 11-foot travel lanes with curb and gutter. Twelve-foot multi-use trails are proposed along the outside of the frontage roads on both sides of the corridor as shown in **Figure 1-3**. Typical Section 2 will require ROW acquisition along the south side of Gandy Boulevard which varies from zero to 119 feet and along the north side of Gandy Boulevard varying from zero to 80 feet.

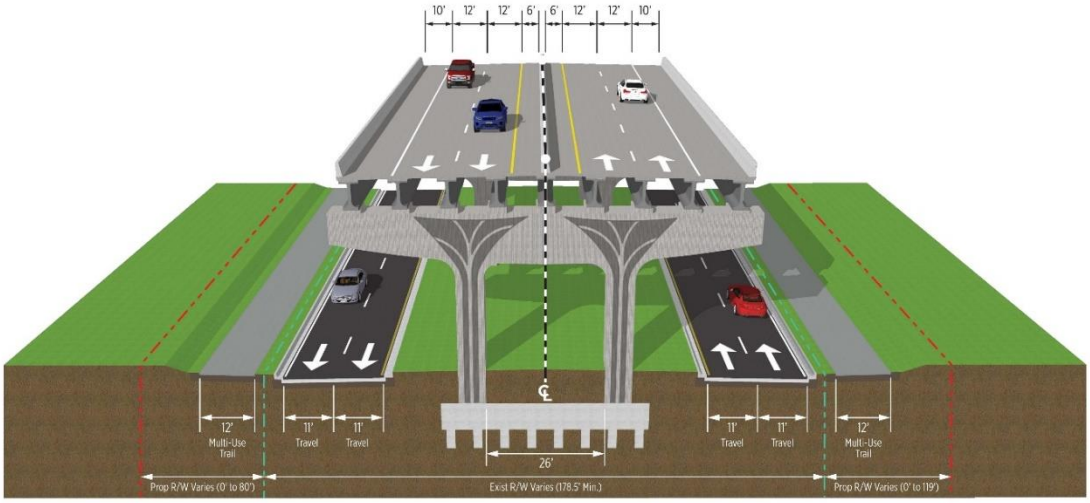


Figure 1-3: Segment 1 – Typical Section 2 from Brighton Bay Blvd. to San Martin Blvd

Typical Section 3

Typical Section 3 is proposed from East of San Fernando Drive to the west end of the Gandy bridges. An additional travel lane in either direction is developed from the direct connect access ramps from the local frontage roads creating a six-lane typical section throughout the causeway which continues east over the Gandy bridges. Typical Section 3 consists of an elevated controlled access roadway with three 12-foot travel lanes in each direction, ten-foot paved inside shoulders, and ten-foot paved outside shoulders with barrier wall in each direction. The median transitions from 46 feet to 22 feet with opposing travel lanes separated by median barrier wall. One-lane frontage roads are proposed on the outside of the controlled access roadway in each direction with a 15-foot travel lane, varying outside shoulder widths (seven feet to nine feet paved), curb and gutter, and a 12-foot multi-use trail. One of the frontage roads will provide access to multi-use trail parking. Typical Section 3 is proposed within the existing FDOT ROW as shown in **Figure 1-4.**

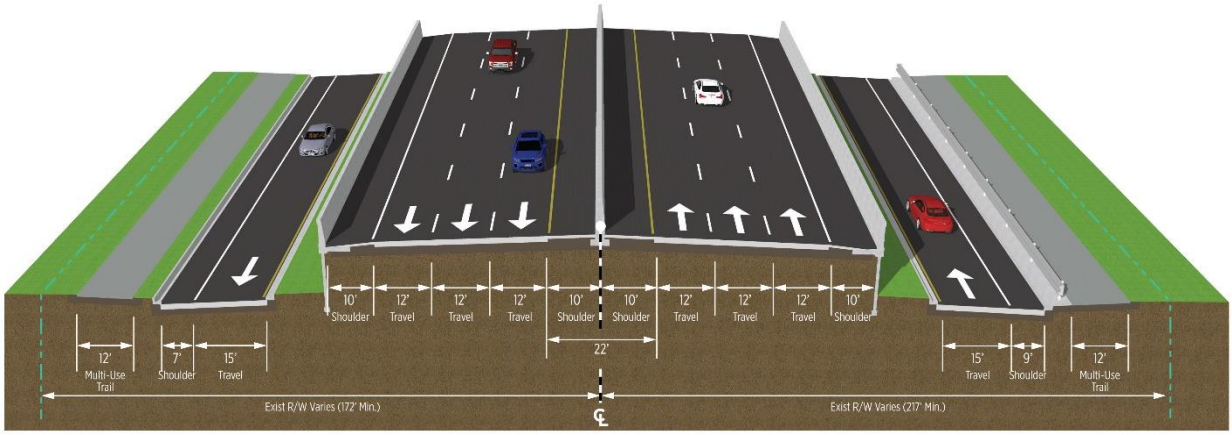


Figure 1-4: Segment 1 – Typical Section 3 from East of San Fernando Dr. to west end of Gandy bridges

1.5.2.2 Segment 2

Typical Section 4

The Build Alternative for Segment 2 (Bay Segment) includes Typical Section 4 with three eastbound travel lanes, three westbound travel lanes, and a multi-use trail on the north side of the westbound bridge. As part of the Build Alternative, the existing eastbound bridge (#100300) will be demolished. The existing westbound bridge (#100585) will be widened to both the north and south sides and placed into service as the eastbound bridge. The widened bridge (#100585) will consist of three 12-foot travel lanes and ten-foot inside and outside shoulders. A new westbound bridge will be constructed on the north side of the widened bridge. The new westbound bridge will consist of three 12-foot travel lanes, ten-foot inside and outside shoulders, and a 16-foot multi-use trail separated by barrier wall as shown in **Figure 1-5**. The typical section includes an 88-foot median with approximately 65 feet of separation between the two bridges for constructability. The proposed bridge improvements over Old Tampa Bay are within the existing FDOT ROW.

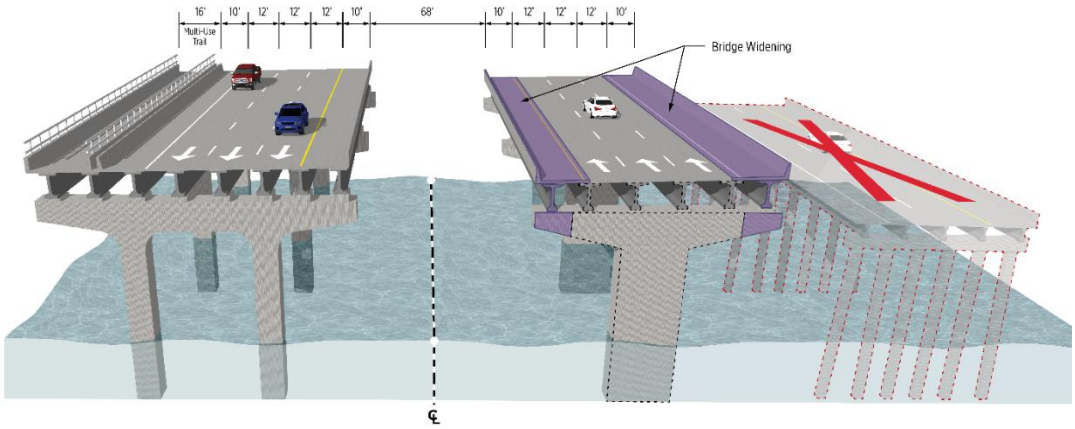


Figure 1-5: Segment 2 – Typical Section 4 Bridges over Old Tampa Bay

1.5.2.3 Segment 3

Typical Section 5

The Build Alternative for Segment 3 (Hillsborough Segment) provides a four-lane and six-lane divided typical section. Typical Section 5 is a transitional typical section proposed between the east end of the Gandy bridges to approximately 1,800 feet west of Bridge Street where the Selmon Expressway two-lane elevated viaduct begins in the median. Typical Section 5 consists of three 12-foot travel lanes in each direction, ten-foot paved inside shoulders bordered with guardrail and barrier wall, and ten-foot paved outside shoulders with barrier wall. The inside travel lanes function as the general use lanes across the Gandy bridges and become auxiliary lanes to serve as the entrance and exit lanes for the Selmon Expressway viaduct in the median. A 12-foot wide multi-use trail is proposed on both sides of the roadway as shown in **Figure 1-6**.

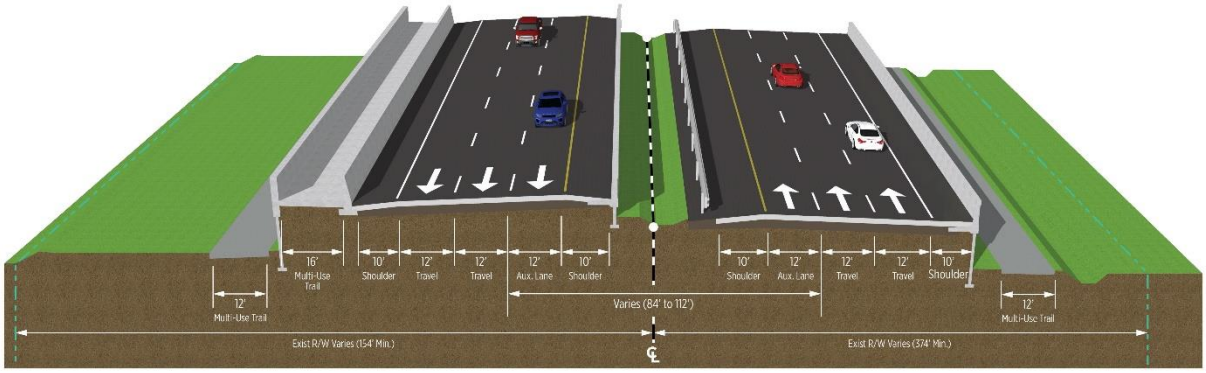


Figure 1-6: Segment 3 – Typical Section 5 from east end of the Gandy bridges to approximately 1,800 feet west of Bridge Street

Typical Section 6

Typical Section 6 is proposed from approximately 1,800 feet west of Bridge Street to West Shore Boulevard. The proposed improvements within the limits of Typical Section 6 are limited to intersection and access management improvements, and auxiliary lane development to connect the proposed relocated Gandy Boat Ramp turnout approximately 800 feet west of Bridge Street. The proposed typical section will match the existing roadway with a four-lane divided roadway, one 10-foot travel lane and one 11-foot travel lane in each direction. Typical Section 6 will accommodate the existing Selmon Expressway two-lane viaduct within the median with intermittent bridge piers. (**Figure 1-7**). The Segment 3 improvements are proposed within the existing FDOT ROW.

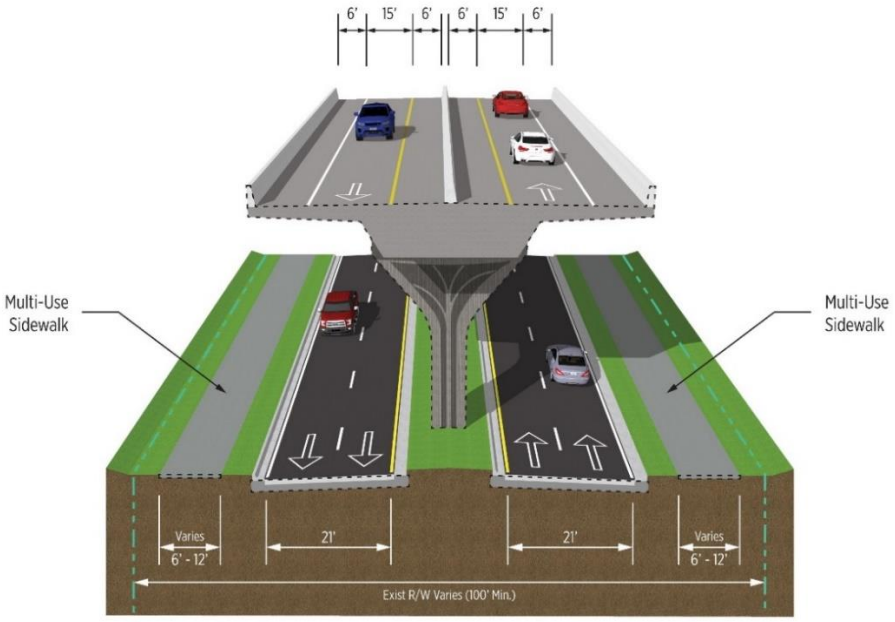


Figure 1-7: Segment 3 – Typical Section 6 from 1,800 feet west of Bridge Street to West Shore Blvd.

1.5 Proposed Pond Sites

There are four proposed drainage basins associated with the Build Alternative. In Basin 1, there is one proposed stormwater management facility (SMF), which is an expansion of an existing FDOT SMF at Gandy Boulevard and 4th Street. In Basin 2, there are two offsite wet detention SMF alternatives, both located on the south side of Gandy Boulevard, and one (Pond 2B) is recommended for this study. Basins 3 are 4 are proposed to utilize nutrient removal credits that were created by the Old Tampa Bay Water Quality Improvement Project, and therefore do not have proposed SMFs. In total, two SMFs are recommended for this study.

1.6 Purpose of Report

The purpose of this Project Traffic Analysis Report (PTAR) is to provide FDOT District Seven the necessary traffic data, operational analysis, and safety analysis to conduct the engineering and environmental evaluations needed for the recommended improvements along US 92/SR 600/Gandy Boulevard. This PTAR was conducted in accordance with *FDOT PD&E Manual Part 2, Chapter 2* (effective July 1, 2020).

2.0 Study Methodology

The methodology discussed in this section was used to document how the analysis shall be conducted to meet project goals. A summary is presented below, and the approved traffic methodology is included in **Appendix A.**

2.1 Studied Intersections

The following study intersections have been defined for the project:

- 4th Street North and North Frontage Road
- 4th Street North and South Frontage Road
- Gandy Boulevard and Brighton Bay Boulevard
- Gandy Boulevard and San Martin Boulevard/Mangrove Cay Lane
- Gandy Boulevard and West Shore Boulevard

2.2 Analysis Years

Travel Demand Model - Tampa Bay Regional Planning Model (TBRPM v9.1):

- Base Year: 2015
- Horizon Year: 2045

Traffic Operations and Safety Analyses:

- Existing Year: 2020
- Opening Year: 2030
- Design Year: 2050

2.3 Traffic Data Collection

72-hour bi-directional traffic counts, 72-hour classification counts, and 4-hour turning movement counts were conducted in the study area between November 2020 and January 2021.As mentioned in the description of Segment 3 in Section 1.3, the counts collected do not reflect the opening of the elevated section of the Selmon Expressway. This facility was under construction at the time the data collection was performed.

2.4 Existing Year (2020) AADT Development

The initial development of Annual Average Daily Traffic (AADT) from the project counts followed the procedures published in FDOT's *2019 Project Traffic Forecasting Handbook*. The daily counts were averaged and appropriate traffic factors, namely the Seasonal Factor (SF) and Axle Correction Factor (ACF), were applied to develop 2020 AADTs.

A map was then developed to visually compare the 2020 AADTs to 2019 AADTs at locations available from Florida Traffic Online (FTO) within the project area, in order to discern what

affects, if any, the COVID-19 Pandemic was having on traffic volumes. After discussing with FDOT, it was decided the most conservative approach would be to assume volumes similarly to pre-pandemic levels along the traffic corridor.

Additionally, for all side streets along the corridor, it was determined no further adjustment was needed to the 2020 AADTs. The Final Existing AADT Development Memorandum is included in **Appendix B**.

2.5 Future Years (2030 and 2050) AADT Development

The travel demand forecasting for this project was developed in accordance with the procedures in FDOT's *2019 Project Traffic Forecasting Handbook.*

The Tampa Bay Regional Planning Model (TBRPM) Version 9.1 (v9.1) was selected as the travel demand model used for the project. The TBRPM v9.1 is a time-of-day based, four-step model with Base Year 2015 and Horizon Year (Cost Affordable Year) 2045.

Subarea Validation

A subarea validation was performed to determine the TBRPM's performance and adequacy for the Gandy Boulevard PD&E Study. To this end, model inputs (highway network and socioeconomic data) and outputs (loaded highway network assignment) were reviewed and compared for Base Year 2015 and Horizon Year 2045 within the defined project subarea. Specifically, the geometry of the highway networks were reviewed, including the provision of centroid connectors and turning penalties/prohibitors; additionally, the socio-economic data were reviewed to ensure the West Shore planned unit development (PUD) development was included within the Traffic Analysis Zones (TAZs) as necessary.

To assess the reasonableness of the TBRPM v9.1 Base Year 2015 highway assignment output, the 2015 Peak Season Weekday Average Daily Traffic (PSWADT) volumes generated by the model were compared with 2015 PSWADT counts within the defined subarea using scatterplots and standard validation measures such as the Coefficient of Determination (R^2), Volume-over-Count ratio (V/C), and Root Mean Squared Error Percent (RMSE%). The validation for the subarea was performed on a daily basis and grouped by facility type. Results were compared to corridor level standards published in FDOT's *2019 Project Traffic Forecasting Handbook* and the *FSUTMS-Cube Framework Phase II Model Calibration and Validation Standards. R*efinements to the model are documented in the Gandy Boulevard PD&E Study Project Traffic Forecasting Memorandum.

Travel Demand Modeling

Three travel demand model runs were performed as follows: 2015 Base Year, 2045 No-Build, and 2045 Build. All runs included appropriate refinements as determined during the subarea validation process. The 2045 No-Build highway network includes all funded improvements through Design Year 2045 without the project. To develop the 2045 Build highway network, the 2045 No-Build highway network was used, and the project coded. For the 2045 Build model run, the trip table was locked and remains constant between the No-Build and Build models, ensuring no changes in origin or destination of the trips are induced by the project improvements.

Growth Rate Analysis

From the travel demand model runs, two sets of growth rates were developed through interpolation of Base Year and Horizon Year model runs: No-Build and Build growth rates. For the No-Build scenario, Base Year 2015 and Horizon Year 2045 No-Build model data sets were used; and for the Build scenario, Base Year 2015 and Horizon Year 2045 Build model data sets were used. To determine growth rates, historical growth rates, model assignment growth, and socio-economic growth were also considered.

Future AADTs for No-Build and Build Analysis

The No-Build and Build growth rates have been determined and applied for each scenario, respectively, to the Existing Year 2020 AADTs. All volumes were rounded in accordance with standards published in FDOT's *2019 Project Traffic Forecasting Handbook.*

2.6 Directional Design Hour Volumes and Turning Movement Volumes

The existing and future AADTs were multiplied by the K and D factors to develop existing and future directional design hour volumes (DDHVs), and additionally multiplied by turning movement percentages to estimate peak hour turning movement volumes. The K and D factors are the percentage of daily traffic volumes occurring during the peak hour and the proportion of traffic traveling in the peak direction, respectively.

2.7 Analysis Tools

All analyses were conducted in compliance with guidelines published in the FDOT's 2*021 Traffic Analysis Handbook.* Intersection analyses were conducted using Synchro 11. Highway Capacity Manual (HCM) 6th Edition, and vehicle delay and Level of Service (LOS) have been reported. In cases where limitations in the HCM 6th Edition methodology precluded its use, prior HCM methodologies (i.e., HCM 2010 and HCM 2000) were applied. Traffic signal timing information was obtained from the maintaining agency and used in the existing conditions analysis.

Highway Capacity Software (HCS) 7 was used to evaluate the multilane highway portions of Gandy Boulevard for existing, No-Build, and Build conditions. It was also used to analyze the Gandy Boulevard bridges, ramp influence areas, and elevated sections of Gandy Boulevard in Pinellas County under the Build conditions.

Ramp capacity analyses were also performed to evaluate the capacity of the Build Alternative ramps.

The *FDOT 2020 Quality/Level of Service Handbook* Generalized Service Volume tables were used to evaluate the anticipated LOS on the Gandy Boulevard bridges.

The target LOS for the study area is LOS D. The measures of effectiveness (MOEs) used in this study include:

- Level of Service (LOS)

- Delay for the overall intersection and individual movements (interrupted flow facilities)
- 95th Percentile Queue (interrupted flow facilities)
- Density (uninterrupted flow facilities)

2.8 Safety Analysis

Crash data for years 2015 to 2019, provided by FDOT, was obtained from CAR Online and used to evaluate existing crash patterns in accordance with FDOT's *2019 Safety Analysis Guidebook for PD&E Studies.* The crash data analysis included summarizing the number and type of crashes, crash locations, number of fatalities and injuries, and estimates of property damage and economic loss. In addition, crash rates were compared with the statewide average crash rates of similar locations to identify any high crash locations.

When possible, *Highway Safety Manual (HSM)* procedures were used to perform a predictive crash analysis for the No-Build and Build Alternatives, as follows:

- Elevated Limited Access Facility with ramps –HSM 1st Edition Part C, Chapters 18 and 19.
- Frontage Roads – HSM cannot be used because the 1st Edition does not have a Safety Performance Function (SPF) for one-way urban roadways and ISATe does not account for the influence of the frontage roads.
- At grade arterials (2 to 5 lanes) – HSM 1st Edition Part C, Chapter 12.
    - If HSM Part C cannot be applied, the Countermeasure Crash Modification Factor (CMF) methodology was applied.
    - In the case neither HSM procedures nor Countermeasure CMF methodology could be applied, a qualitative discussion of the safety benefits of the proposed project was provided.
- Because of limitations in the application of HSM 1st Edition Part C, a direct comparison between the No-Build and Build Alternative predicted number of crashes was not performed.

3.0 Existing Condition Analysis

3.1 Existing Roadway Characteristics

As stated in Section 1.3, Gandy Boulevard is classified as an Urban Principal Arterial Other roadway and is part of the FDOT Strategic Intermodal System (SIS). **Table 3-1** shows additional roadway characteristics of the segments in the studied area. **Figure 3-1** shows the existing geometry and traffic control features of the intersections in the study area

Table 3-1: Roadway Characteristics

Segment	Length (mi)	Speed Limit (mph)	Facility Type[1]
#1: 4th St North to west end of the Gandy Blvd bridges	3.5	50	Multilane Highway
#2: Gandy Blvd bridges	2.5	55	Uninterrupted Flow Highway
#3: East end of the Gandy Blvd bridges to West Shore Blvd	1.0	45	Multilane Highway

[1]Based on *FDOT 2020 Quality/Level of Service Handbook*

3.2 Annual Average Daily Traffic Volumes

As mentioned in Sections 2.3 and 2.4, traffic data for this PTAR was taken between November 2020 and January 2021 and the elevated section of the Selmon Expressway was under construction at the time of traffic data collection. The Final Existing AADT Development Memorandum included in **Appendix B** describes the development of the Existing Year (2020) AADTs. The AADTs are summarized in **Table 3-2** and shown graphically in **Figure 3-2**. The traffic data collection is included in **Appendix C**.

3.3 Traffic Factors

The K and D factors are the percentage of daily traffic volumes occurring during the peak hour and the proportion of traffic traveling in the peak direction, respectively. Design Hour Trucks (DHT) is the percentage of daily truck traffic during the design hour. The traffic factors used in this PTAR were submitted and reviewed as part of the Existing AADT Development Memorandum included in **Appendix B** and are summarized in **Table 3-3**.

3.4 Turning Movement Volumes

The K and D factors were applied to the 2020 AADTs to obtain the directional design hour volumes (DDHVs). The intersection turning volumes were determined by applying turning movement percentages derived from existing turning movement counts (TMCs) to the segment DDHVs. The Existing Year 2020 AM and PM peak hour turning movement volumes are shown on **Figure 3-3.**

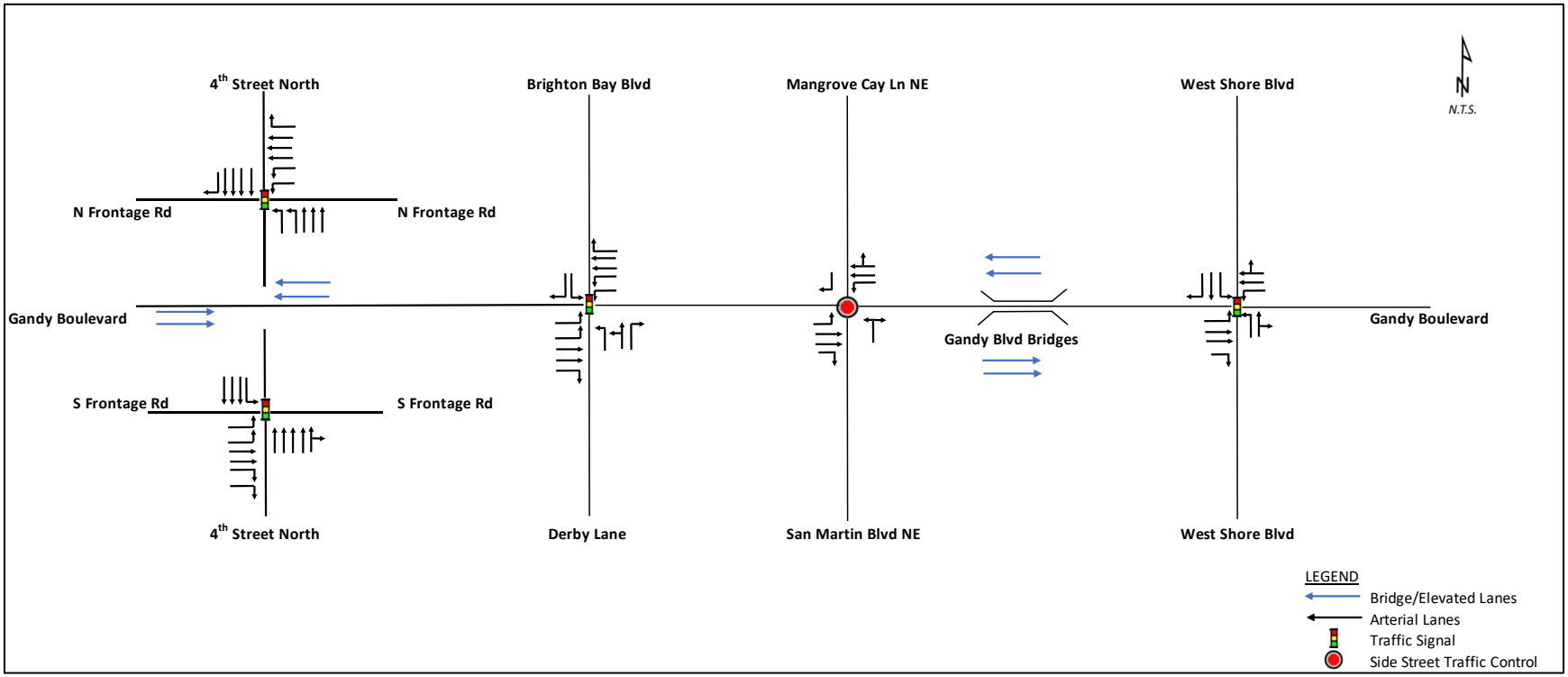


Figure 3-1: Existing Year (2020) Lane Geometry

Table 3-2: Existing Year (2020) AADTs

Location	2020 AADT
Gandy Blvd Elevated Section over 4th St North	24,500
4th St North south of Gandy Blvd	27,500
4th St North north of Gandy Blvd	22,500
North Frontage Rd west of 4th St North	12,750
South Frontage Rd west of 4th St North	12,750
North Frontage Rd east of 4th St North	11,500
South Frontage Rd east of 4th St North	11,500
Gandy Blvd west of Brighton Bay Blvd	47,000
Gandy Blvd east of Brighton Bay Blvd	41,500
Derby Lane Entrance	2,900
Brighton Bay Blvd	6,000
Gandy Blvd east of San Martin Blvd/Mangrove Cay Lane	36,500
San Martin Blvd	4,400
Mangrove Cay Lane	250
Gandy Blvd bridges	33,500
Gandy Blvd west of West Shore Blvd	38,500
Gandy Blvd east of West Shore Blvd	42,500
West Shore Blvd south of Gandy Blvd	17,000
West Shore Blvd north of Gandy Blvd	16,500

Table 3-3: Traffic Factors

Factors	Value
K-Factor	9.0%
D-Factor (Gandy Blvd and most side streets)	53.4%
• Brighton Bay Blvd north of Gandy Blvd	69.1%
• Derby Lane Entrance	77.7%
• Frontage Rd (as One-Way Pair)	62.0%
DHT	2.5%

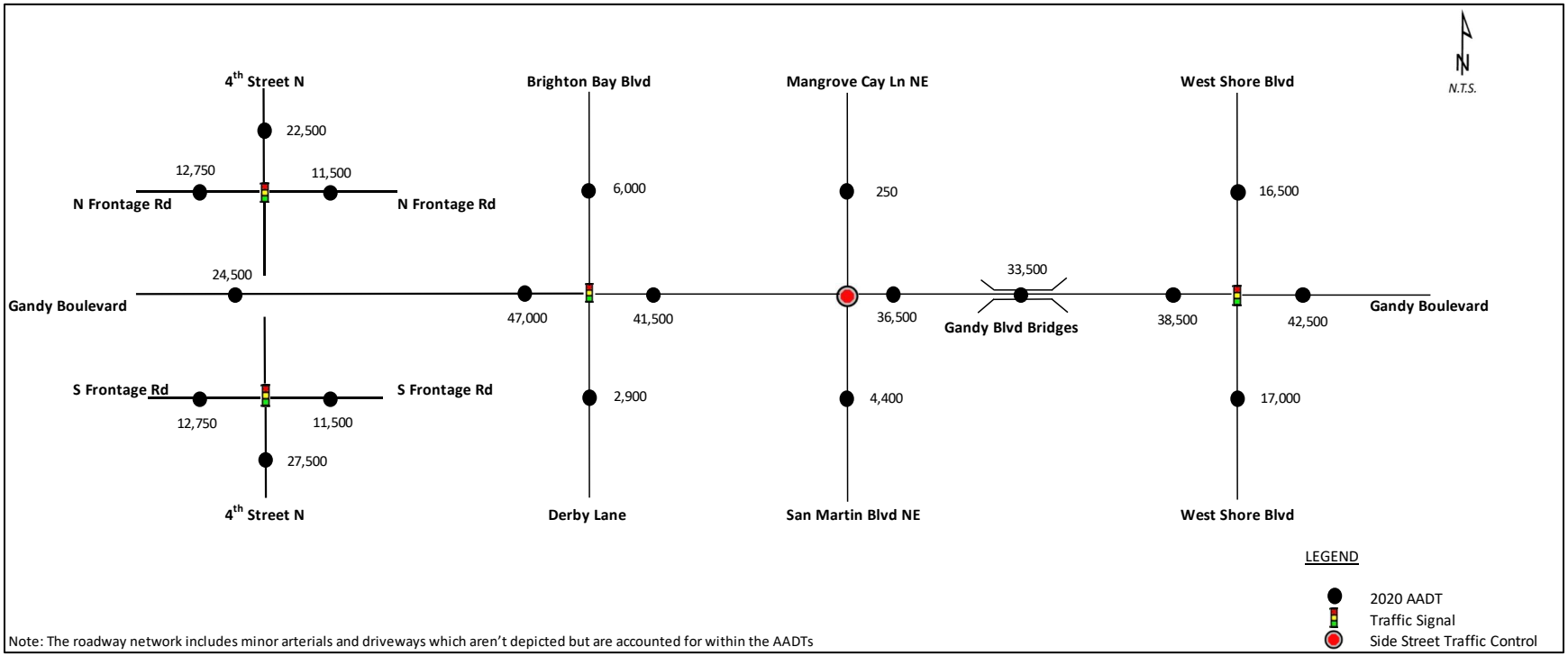
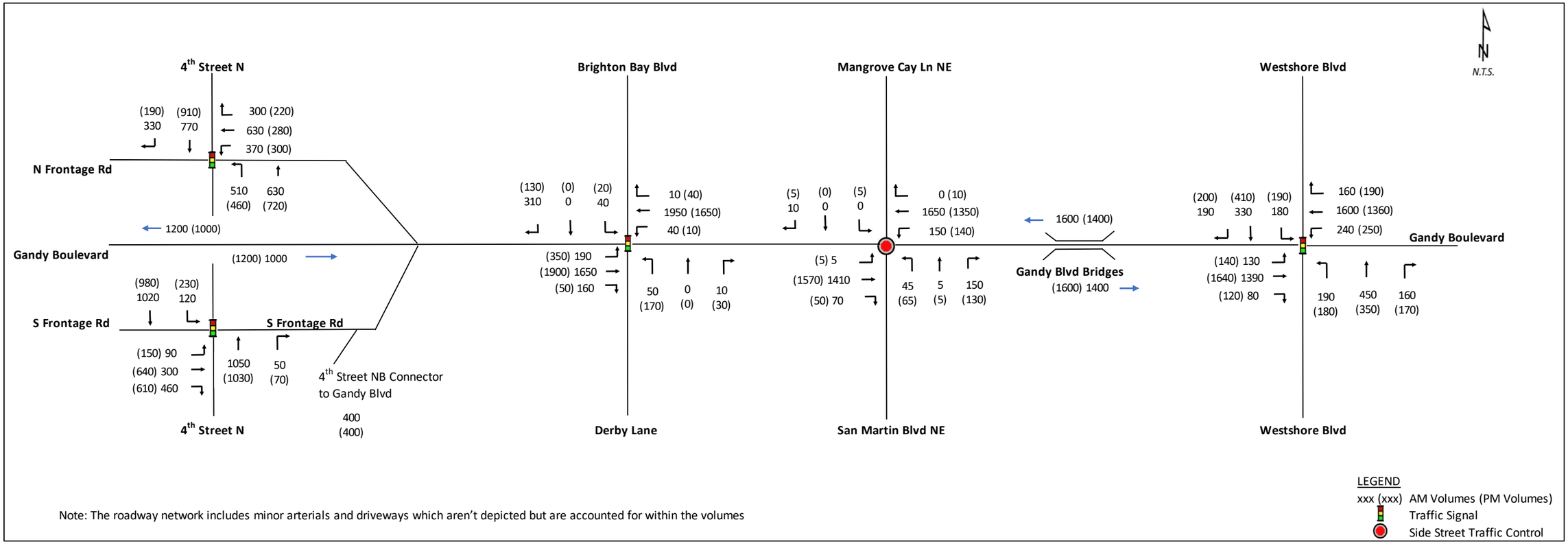


Figure 3-2: Existing Year (2020) AADT Volumes



Note: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes

Figure 3-3: Existing Year (2020) Turning Movement Volumes

3.5 Existing Year (2020) Operational Analysis

3.5.1 Multilane Highway

As shown in **Table 3-1**, Gandy Boulevard operates as a multilane highway facility within Segment #1 (Pinellas County) and Segment #3 (Hillsborough County).

East of the 4th Street North overpass, Gandy Boulevard operates as a multilane highway due to the long distance between traffic signals and the number of driveways and stop-controlled cross-streets providing access to surrounding land uses. Brighton Bay Boulevard is the only signalized intersection located along Gandy Boulevard within the Pinellas County portion of the study area. The closest traffic signals to Brighton Bay Boulevard are at Grand Avenue and West Shore Boulevard approximately 3.4 miles to the west and 7.6 miles to the east, respectively. Therefore, *HCM 6th Edition, Chapter 12 Multilane Highway Segment* methodology was applied east of the 4th Street North overpass.

Table 3-4 shows the operation results for the multilane highway segments.

Table 3-4: Existing Year (2020) Multilane Highway Segment Analysis

Gandy Blvd Segment	Eastbound Direction				Westbound Direction			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
From 4th St North ramps to Brighton Bay Blvd	21.6	C	26.9	D	23.5	C	19.0	C
From Brighton Bay Blvd to west end of the Gandy Blvd bridges	17.3	B	20.0	C	18.3	C	15.6	B
From east end of the Gandy Blvd bridges to West Shore Blvd	18.6	C	21.3	C	21.7	C	18.6	C

3.5.2 Gandy Boulevard Bridges

As shown in **Table 3-1**, the Gandy Boulevard bridges operate as an uninterrupted flow highway. Although the methodology statement indicated the volumes on the Gandy Boulevard bridges were going to be compared to the FDOT Q/LOS Generalized Service Volume Tables to obtain the LOS, the *FDOT 2020 Quality/Level of Service Handbook* Chapter 11 states the FDOT Q/LOS Generalized Service Volume Tables are not detailed enough for PD&E studies. Therefore, an analysis was performed using the HCS 7 multilane highway module and the results are shown in **Table 3-5**.

Table 3-5: Existing Year (2020) Multilane Highway Segment Analysis – Gandy Boulevard Bridges

Gandy Blvd Segment	Eastbound Direction				Westbound Direction			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Gandy Blvd bridges	14.5	B	16.2	B	16.2	B	13.3	B

3.5.3 Intersections

There are four signalized intersection and one unsignalized intersection along Gandy Boulevard within the study area. An analysis of the signalized intersections was performed using existing signal phasing/timing information obtained from Pinellas County and the City of Tampa. The intersections operations were analyzed using Synchro v11.1 and the Highway Capacity Manual (HCM), results are summarized in **Tables 3-6 through 3-8**. A target LOS of D is established for the study area. The key measures of effectiveness are 95th percentile queue length and delay for overall intersection and individual movements.

Tables 3-6 and 3-7 shows the delay and LOS for the existing conditions during the AM and PM peak hours, respectively. **Table 3-8** shows the vehicle queue results for the intersection movements. HCM 6th Edition results are provided for the intersection of Gandy Boulevard and West Shore Boulevard. HCM 2000 results are provided for the signalized intersections on the Pinellas County side because of the limitations of the HCM 6th Edition and HCM 2010 in analyzing clustered intersections or shared movements.

3.5.4 Existing Year (2020) Operations Summary

The existing condition analyses show the multilane highway facilities and the Gandy Boulevard bridges operating at acceptable LOS but the intersections along Gandy Boulevard operate at unacceptable LOS with most movements operating at LOS E or F.

The westbound through movement at the intersection of Gandy Boulevard and Brighton Bay Boulevard shows a queue of over 1,000 feet in the AM peak hour and the eastbound through movement shows a queue of approximately 900 feet during both peak hours.

The northbound and southbound approaches of the unsignalized intersection of Gandy Boulevard and San Martin Boulevard experience excessive delays waiting for gaps on Gandy Boulevard to complete their movements.

The Existing Year (2020) operation analysis results and signal timing information are included in **Appendix D**.

Table 3-6: Existing Year (2020) Intersection Delay and LOS Results – AM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St North and North Frontage Rd*	Westbound	Left	56.9	E	56.6	E
		Through	58.0	E		
		Right	53.3	D		
	Northbound	Left	56.5	E	49.4	D
		Through	43.7	D		
	Southbound	Through	66.3	E	66.3	E
		Right	66.4	E		
				Intersection	**57.3**	**E**
4th St North and South Frontage Rd*	Eastbound	Left	55.9	E	29.7	C
		Through	25.1	C		
		Right	27.6	C		
	Northbound	Through/Right	59.7	E	59.7	E
	Southbound	Left	57.8	E	34.3	C
		Through	31.5	C		
				Intersection	**42.1**	**D**
Gandy Blvd at Brighton Bay Blvd*	Eastbound	Left	430.3	F	60.6	E
		Through	22.8	C		
		Right	11.6	B		
	Westbound	Left	105.4	F	32.6	C
		Through	31.2	C		
		Right	11.1	B		
	Northbound	Left	104.2	F	103.3	F
		Left/Thru	104.5	F		
		Right	98.5	F		
	Southbound	Left/Thru	88.5	F	294.0	F
		Right	320.5	F		
				Intersection	**67.0**	**E**
Gandy Blvd at San Martin Blvd/Mangrove Cay**	Eastbound	Left	15.3	C		
	Westbound	Left	17.5	C		
	Northbound	Left/Thru/Right	260.5	F	260.5	F
	Southbound	Left/Thru/Right	17.7	C	17.7	C
Gandy Blvd at West Shore Blvd	Eastbound	Left	50.9	D	180.4	F
		Through	200.9	F		
		Right	35.6	D		
	Westbound	Left	71.0	E	210.5	F
		Thru/Right	237.1	F		
	Northbound	Left	158.9	F	175.0	F
		Thru/Right	180.0	F		
	Southbound	Left	562.2	F	185.1	F
		Thru	58.8	E		
		Right	48.0	D		
				Intersection	**192.0**	**F**

*HCM2000 results provided. **Per HCM 6th Edition: For Two Way Stop Control (TWSC) intersections only minor movements delay and LOS are reported. HCM 6th Edition does not calculate LOS for major street thru movements and approaches or for the intersection as a whole.

Table 3-7: Existing Year (2020) Intersection Delay and LOS Results – PM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St North and North Frontage Rd*	Westbound	Left	64.2	E	62.2	E
		Through	61.6	E		
		Right	60.2	E		
	Northbound	Left	50.1	D	43.4	D
		Through	39.1	D		
	Southbound	Through	80.3	F	78.0	E
		Right	66.9	E		
				Intersection	**60.7**	**E**
4th St North and South Frontage Rd*	Eastbound	Left	58.9	E	36.6	D
		Through	33.3	C		
		Right	34.5	C		
	Northbound	Through	69.5	E	69.5	E
	Southbound	Left	59.0	E	36.2	D
		Through	30.8	C		
				Intersection	**46.2**	**D**
Gandy Blvd at Brighton Bay Blvd*	Eastbound	Left	313.4	F	57.0	E
		Through	11.2	B		
		Right	4.4	A		
	Westbound	Left	140.2	F	17.7	B
		Through	17.2	B		
		Right	8.2	A		
	Northbound	Left	736.4	F	649.7	F
		Left/Thru	747.0	F		
		Right	134.8	F		
	Southbound	Left/Thru	144.7	F	158.5	F
		Right	160.6	F		
				Intersection	**72.4**	**E**
Gandy Blvd at San Martin Blvd/Mangrove Cay**	Eastbound	Left	12.8	B		
	Westbound	Left	20.2	C		
	Northbound	Left/Thru/Right	420.4	F	420.4	F
	Southbound	Left/Thru/Right	124.5	F	124.5	F
Gandy Blvd at West Shore Blvd	Eastbound	Left	80.9	F	153.1	F
		Through	167.5	F		
		Right	39.9	D		
	Westbound	Left	95.0	F	83.9	F
		Thru/Right	84.6	F		
	Northbound	Left	397.5	F	306.7	F
		Thru/Right	275.4	F		
	Southbound	Left	265.9	F	135.3	F
		Thru	107.6	F		
		Right	68.1	E		
				Intersection	**147.0**	**F**

*HCM2000 results provided. **Per HCM 6th Edition: For Two Way Stop Control (TWSC) intersections only minor movements delay and LOS are reported. HCM 6th Edition does not calculate LOS for major street thru movements and approaches or for the intersection as a whole.

Table 3-8: Existing Year (2020) Intersection Vehicle Queues

Intersection	Movement	Storage (ft)	AM Peak Hour Queues (95th Percentile)		PM Peak Hour Queues (95th Percentile)	
			Vehicles	Feet	Vehicles	Feet
4th St North and North Frontage Rd	WB Left	500	---	264	---	233
	WB Through	690	---	304	---	149
	WB Right	500	---	85	---	78
	NB Left	690*	---	428	---	407
	NB Through	239	---	**362**	---	**428**
	SB Through	1150	---	302	---	395
	SB Right	300	---	231	---	79
4th St North and South Frontage Rd	EB Left	350	---	78	---	129
	EB Through	350	---	147	---	**382**
	EB Right	350	---	224	---	**353**
	NB Through/Right	1000	---	346	---	374
	SB Left	680**	---	244	---	436
	SB Through	239	---	**370**	---	**407**
Gandy Blvd at Brighton Bay Blvd	EB Left	560	---	#311	---	**#584**
	EB Through	1000	---	917	---	825
	EB Right	780	---	30	---	2
	WB Left	300	---	56	---	26
	WB Through	1000	---	**1312**	---	816
	WB Right	500	---	0	---	0
	NB Left	1000	---	80	---	#444
	NB Left/Thru	1000	---	83	---	#444
	NB Right	950	---	0	---	0
	SB Left/Thru	435	---	105	---	82
	SB Right	435	---	**#664**	---	#195
Gandy Blvd at San Martin Blvd/Mangrove Cay	EB Left	215	0.0	0	0.0	0
	WB Left	225	1.6	40	1.8	45
	NB Left/Thru/Right	1000	13.2	330	16.0	400
	SB Left/Thru/Right	400	0.1	3	0.9	23
Gandy Blvd at West Shore Blvd	EB Left	625	6.7	168	13.0	325
	EB Through	1000	61.9	**1548**	78.4	**1960**
	EB Right	265	3.9	98	7.6	190
	WB Left	500	16.2	405	21.6	**540**
	WB Thru/Right	1000	86.8	**2170**	58.9	**1473**
	NB Left	200	17.3	**433**	25.8	**645**
	NB Thru/Right	1000	52.1	**1303**	61.1	**1528**
	SB Left	225	26.4	**660**	24.0	**600**
	SB Thru	1000	18.2	455	34.4	860
	SB Right	225	10.3	**258**	14.8	**370**

*Includes left-turn storage south of the intersection. ** Includes left-turn storage north of the intersection.
#: 95th percentile volume exceeds capacity; queue may be longer. **XXX** means queue exceeds storage length.

3.6 Historical Crash Analysis

A five-year historical crash analysis was performed in accordance with Part 2, Chapter 2 of the *FDOT PD&E Manual* for years 2015-2019. Crash data for Gandy Boulevard was obtained from the FDOT District Seven Crash Data Management System, which pulls data from FDOT Crash Analysis Reporting (CAR) Online.

The crash statistics were summarized for the number and type of crashes, number of fatalities and injuries, contributing causes, lighting conditions, pavement conditions, and crash location. **Table 3-9** provides a summary of the total crashes per year in the study area and the location of crashes. **Table 3-10** provides a summary of the crash severity.

Table 3-9: Number of Crashes

Year	Location			Total
	Segment #1	Segment #2	Segment #3	
2015	102	2	45	149
2016	88	4	40	132
2017	103	10	37	150
2018	105	10	62	177
2019	76	3	51	130
Total	**474**	**29**	**235**	**738**

Table 3-10: Crash Severity Summary

Location	Total Number of Crashes	Number of Fatal Crashes	Number of Fatalities	Number of Injury Crashes	Number of Injuries	Number of Property Damage Only (PDO) Crashes
Segment #1	474	4	4	182	275	288
Segment #2	29	2	2	12	15	15
Segment #3	235	2	2	94	148	139
Total	**738**	**8**	**8**	**288**	**438**	**442**

As shown in **Tables 3-9** and **3-10**, 738 crashes occurred in the Gandy Boulevard study area, of which eight were fatal crashes resulting in eight fatalities and 288 were injury crashes resulting in 438 injuries. The remaining 442 crashes were property damage only (PDO). On average, the crash frequency for the Gandy Boulevard study area is 148 crashes per year.

Table 3-11 summarizes the types of crashes. The most predominant crash type for the study area is rear end with 334 crashes (45.3%) and it is the predominant crash type in all three segments. Other common crash types in the study area include angle (17.9%) and hit fixed object (12.2%) crashes.

Table 3-12 indicates the common cause of crashes is operating a motor vehicle in a careless or negligent manner with 262 crashes (35.5%) followed by failure to yield the right-of-way with 151 crashes (20.5%).

Table 3-11: Crash Type Summary

Type of Crash	Location			Total	Percentage
	Segment #1	Segment #2	Segment #3		
Hit Fixed Object	56	9	25	90	12.2%
Rear End	230	12	92	334	45.3%
Sideswipe	28	4	25	57	7.7%
Single Vehicle	18	1	6	25	3.4%
Unknown	8	1	4	13	1.8%
Hit Non-Fixed Object	2	1	0	3	0.4%
Head On	6	0	4	10	1.4%
Angle	93	0	39	132	17.9%
Left Turn	16	0	33	49	6.6%
Run Off Road	4	1	2	7	0.9%
U-Turn	6	0	1	7	0.9%
Bike	4	0	0	4	0.5%
Pedestrian	3	0	2	5	0.7%
Right Turn	0	0	2	2	0.3%
Total	**474**	**29**	**235**	**738**	**100%**

Table 3-12: Cause of Crashes Summary

Cause of Crash	Location			Total	Percentage
	Segment #1	Segment #2	Segment #3		
Failed to Keep in Proper Lane	15	2	13	30	4.1%
Followed too Closely	3	0	52	55	7.5%
Failed to Yield Right-of-Way	104	0	47	151	20.5%
No Contributing Action	26	2	23	51	6.9%
Other Contributing Actions	35	2	8	45	6.1%
Improper Turn	11	0	8	19	2.6%
Operated MV in Careless or Negligent Manner	213	14	35	262	35.5%
Drove Too Fast for Conditions	5	2	7	14	1.9%
Ran off Roadway	4	0	3	7	0.9%
Ran Red Light	2	0	3	5	0.7%
Over-Correcting/Over-Steering	1	0	4	5	0.7%
Improper Backing	5	0	1	6	0.8%
N/A	30	4	16	50	6.8%
Improper Passing	4	1	7	12	1.6%
Swerved or Avoided: Due to Wind, Slippery Surface, MV Object, Non-Motorist in Roadway, etc.	5	0	0	5	0.7%
Disregarded Other Traffic Sign	1	0	0	1	0.1%
Ran Stop Sign	3	0	0	3	0.4%
Operated MV in Erratic, Reckless or Aggressive Manner	3	1	5	9	1.2%
Wrong Side or Wrong Way	4	0	0	4	0.5%
Exceeded Posted Speed	0	1	3	4	0.5%
Total	**474**	**29**	**235**	**738**	**100%**

Table 3-13 shows 469 (63.6%) of the crashes occurred at daylight and 232 (31.4%) of the crashes occurred under dark conditions. **Table 3-14** shows 564 (76.4%) of the crashes occurred under clear conditions. Table **3-15** shows 646 (87.5%) of the crashes occurred on dry pavement and 90 (12.2%) of the crashes occurred on wet pavement.

Table 3-13: Lighting Condition

Lighting Condition	Location			Total	Percentage
	Segment #1	Segment #2	Segment #3		
Daylight	300	15	154	469	63.6%
Dark-Lighted	126	12	72	210	28.5%
Dusk	15	2	5	22	3.0%
Dark-Not Lighted	15	0	3	18	2.4%
Dark-Unknown Lighting	4	0	0	4	0.5%
Dawn	12	0	1	13	1.8%
Unknown	2	0	0	2	0.3%
Total	**474**	**29**	**235**	**738**	**100%**

Table 3-14: Weather Condition

Weather Condition	Location			Total	Percentage
	Segment #1	Segment #2	Segment #3		
Clear	341	20	203	564	76.4%
Cloudy	99	3	12	114	15.4%
Rain	32	6	20	58	7.9%
Fog, Smog, Smoke	1	0	0	1	0.1%
Other, Explain in Narrative	1	0	0	1	0.1%
Total	**474**	**29**	**235**	**738**	**100%**

Table 3-15: Pavement Condition

Weather Condition	Location			Total	Percentage
	Segment #1	Segment #2	Segment #3		
Dry	416	22	208	646	87.5%
Wet	56	7	27	90	12.2%
Unknown	1	0	0	1	0.1%
Mud, Dirt Gravel	1	0	0	1	0.1%
Total	**474**	**29**	**235**	**738**	**100%**

Heat maps of the location of crashes in the study area are included in **Appendix E**.

3.6.1 Intersection Crash Rates

The intersection crash rates for the study area are listed in **Table 3-16**. The table shows that all three intersections have higher intersection crash rates than the statewide average.

Table 3-16: Intersection Crash Rate

Intersection	Total Crashes (2015-2019)	Crash Rate per Million Entering Vehicles	Statewide Average
Gandy Blvd at Brighton Bay Blvd	121	**1.361**	0.526
Gandy Blvd at San Martin Blvd/ Mangrove Cay	45	**0.597**	0.526
Gandy Blvd at West Shore Blvd	138	**1.321**	0.526

3.6.2 Economic Loss

Table 3-17 summarizes the economic loss for the study area using the FDOT KABCO injury classification scale crash costs. The KABCO unit crash costs were taken from the *2023 FDOT Design Manual Table 122.6.2* and the costs are taken from CAR Online for analysis years 2015 to 2019. The KABCO unit crash costs are included in **Appendix F**. The crashes in the study area during the five-year period resulted in an estimated economic loss of approximately $158.1 million.

Table 3-17: 2015-2019 Crash Estimated Economic Loss

Crash Severity	Crash Cost	Number of Crashes	Economic Loss
Fatal (K)	$10,890,000	8	$87,120,000
Severe Injury (A)	$888,030	38	$33,745,140
Moderate Injury (B)	$180,180	103	$18,558,540
Minor Injury (C)	$103,950	147	$15,280,650
Property Damage Only (O)	$7,700	442	$3,403,400
Total		**738**	**$158,107,730**

4.0 Travel Demand Forecasting

The travel demand forecast was developed in accordance with the procedures in the *2019 FDOT Project Traffic Forecasting Handbook* and documented in the *Gandy Boulevard from 4th Street North to West Shore Boulevard PD&E Study Project Traffic Forecasting Memorandum*. The travel demand forecasting is summarized in the following sections. The Project Traffic Forecasting Memorandum is included **in Appendix G**.

4.1 Travel Demand Model Validation

The Tampa Bay Regional Planning Model (TBRPM) Version 9.1 (v9.1) was the adopted travel demand model for this study area. The TBRPM v9.1 is a time-of-day based four-step model with Base Year 2015 and Horizon Year (Cost Affordable Year) 2045.

To assess the TBRPM's performance and adequacy for the Gandy Boulevard PD&E Study, a project subarea was defined. The subarea extends to include I-275 in the west, the Howard Frankland Bridge to the north, and in the southeast the limits capture the peninsula that divides Old Tampa Bay from Hillsborough Bay and includes MacDill Air Force Base and the southern portion of the Selmon Expressway.

The highway network within the subarea was reviewed, particularly along the project corridor and cross streets. While the Base Year model highway network was determined to be generally consistent with the Year 2015 geometry, an improvement was identified to more accurately represent the highway network, and more specifically the connectivity between Gandy Boulevard from/to the south on the Pinellas County side of the bridges east of San Martin Boulevard. The subarea validation results were compared to corridor level standards published in FDOT's *2019 Project Traffic Forecasting Handbook* and the *FSUTMS-Cube Framework Phase II Model Calibration and Validation Standards.*

4.2 Project Traffic Forecast

No-Build and Build AADTs were developed for Opening Year (2030) and Design Year (2050). The volumes were obtained by applying the respective recommended annual growth rates to the Existing Year (2020) recommended AADTs for both No-Build and Build Alternatives.

4.2.1 Growth Rate Analysis

The annual growth rates recommended for the study area were developed from the travel demand highway assignment growth forecasted by TBRPM. Two sets of growth rates were determined from the loaded highway networks – one from the Base Year 2015 to the Horizon Year 2045 No-Build scenario model and the other from the Base Year 2015 to the Horizon Year 2045 Build scenario model. Given the fact that traffic is expected to grow differently based on location within the study area, different growth rates were calculated for each of the three segments in the study area.

The recommended linear growth rates are shown in **Table 4-1**.

Table 4-1: Recommended Annual Growth Rates

Gandy Boulevard	Annual Growth Rates (%)	
	No-Build	Build
Segment #1 – Pinellas County	1.6	2.7
Segment #2 – Gandy Blvd bridges	2.4	3.1
Segment #3 – Hillsborough County	2.0	2.5

In the case of the cross streets in Pinellas County, a linear growth rate of 0.3% is recommended, while the growth rate recommended for the cross streets in Hillsborough is 1.1%. The same growth rates are recommended for the No-Build and Build scenarios for the cross streets.

4.3 Future Years AADTs

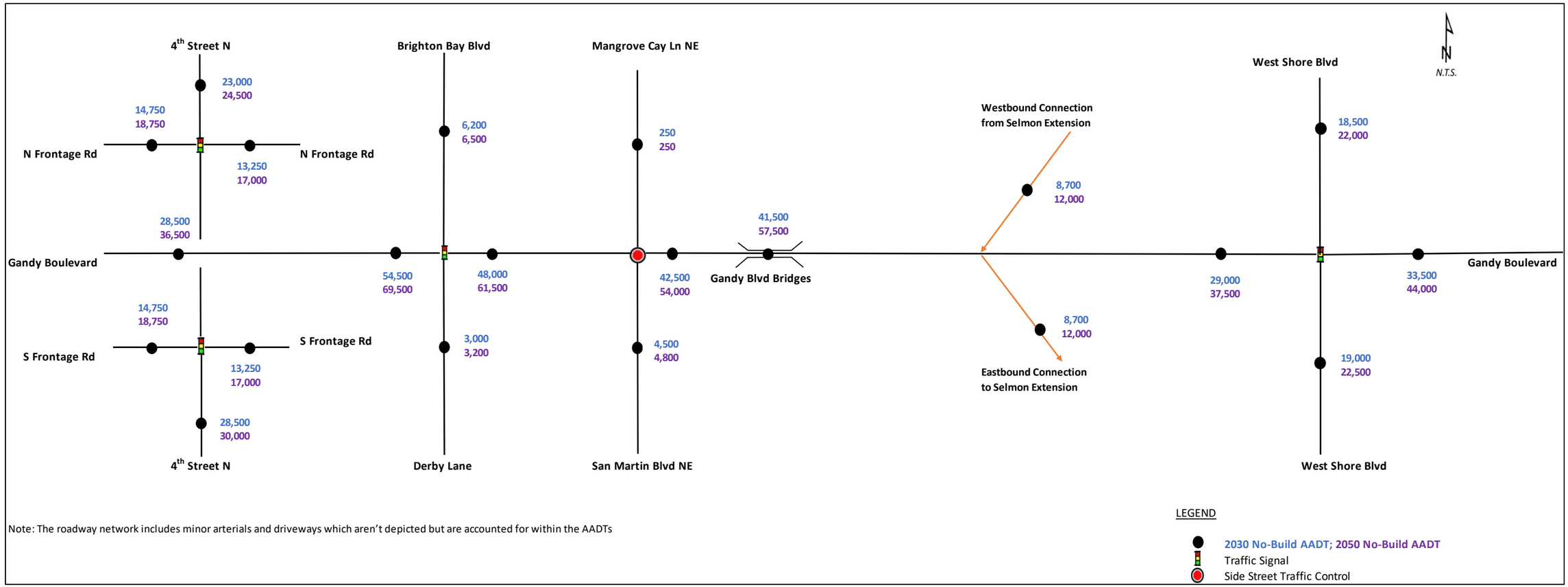
Figures 4-1 and 4-2 shows the No-Build and Build ADDTs, respectively, for the study area. The AADTs were balanced and rounded in accordance with the American Association of State Highway and Transportation Officials (AASHTO) standards published in the *2019 Project Traffic Forecasting Handbook.*

4.4 Future Years Turning Movement Volumes

The K and D factors were applied to the Opening Year (2030) and Design Year (2050) AADTs to obtain the directional design hour volumes (DDHVs). The intersection turning volumes were determined by applying turning movement percentages derived from existing turning movement counts (TMCs) to the segment DDHVs.

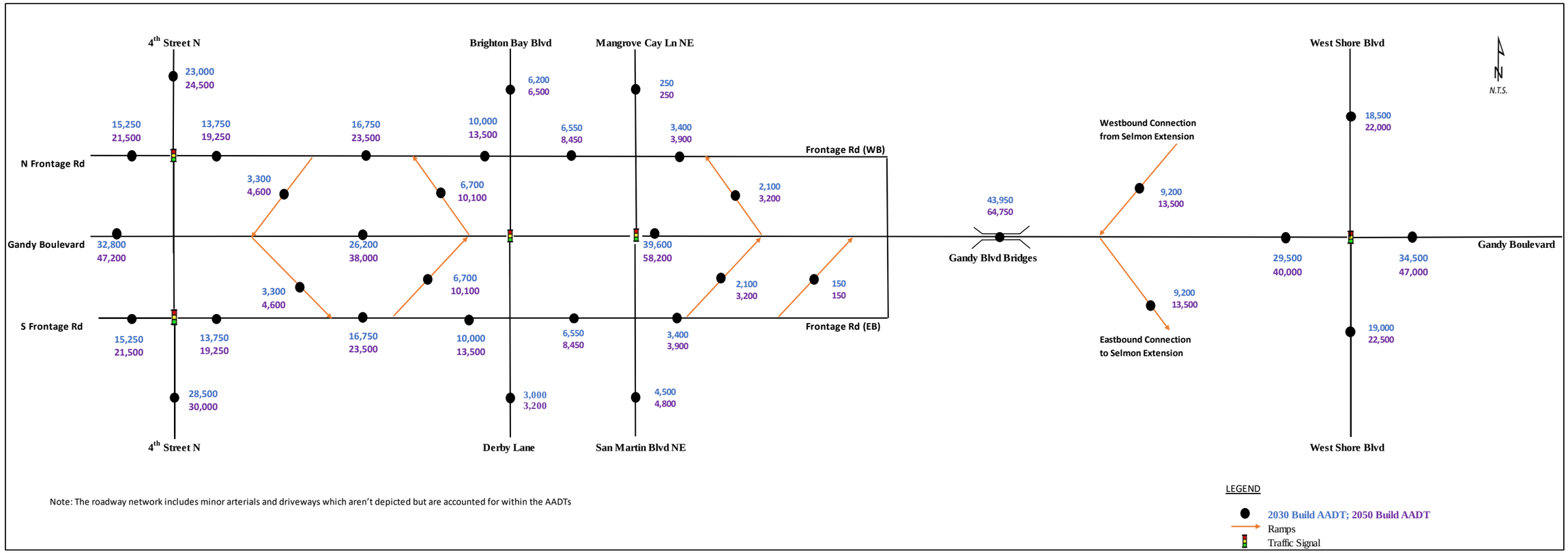
Figure 4-3 shows the Opening Year (2030) No-Build AM and PM peak hour volumes and **Figure 4-4** shows the Design Year (2050) No-Build AM and PM peak hour volumes.

Figure 4-5 shows the Opening Year (2030) Build AM and PM peak hour volumes and **Figure 4-6** shows the Design Year (2050) Build AM and PM peak hour volumes.



Note: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the AADTs

Figure 4-1: Opening Year (2030) and Design Year (2050) No-Build AADTs



Note: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the AADTs

Figure 4-2: Opening Year (2030) and Design Year (2050) Build AADTs

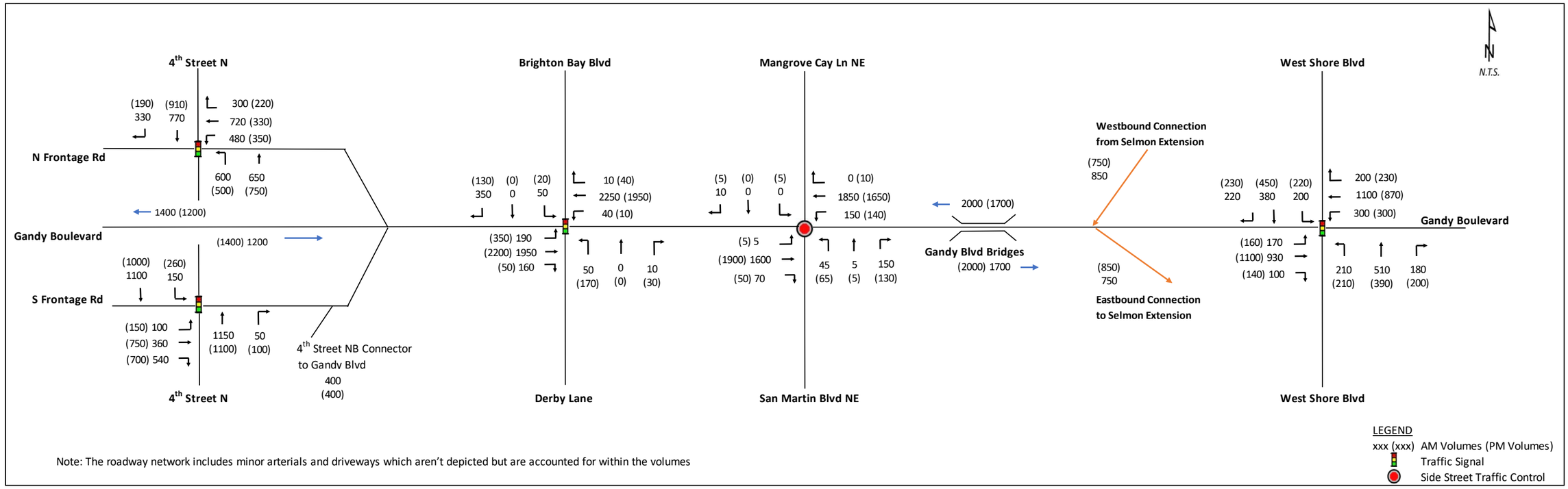
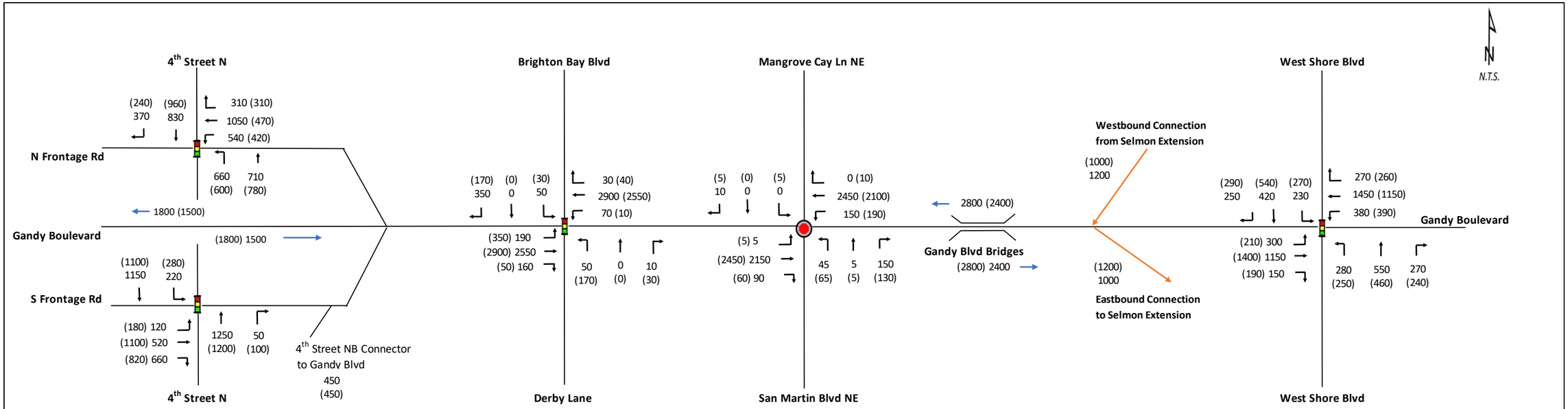
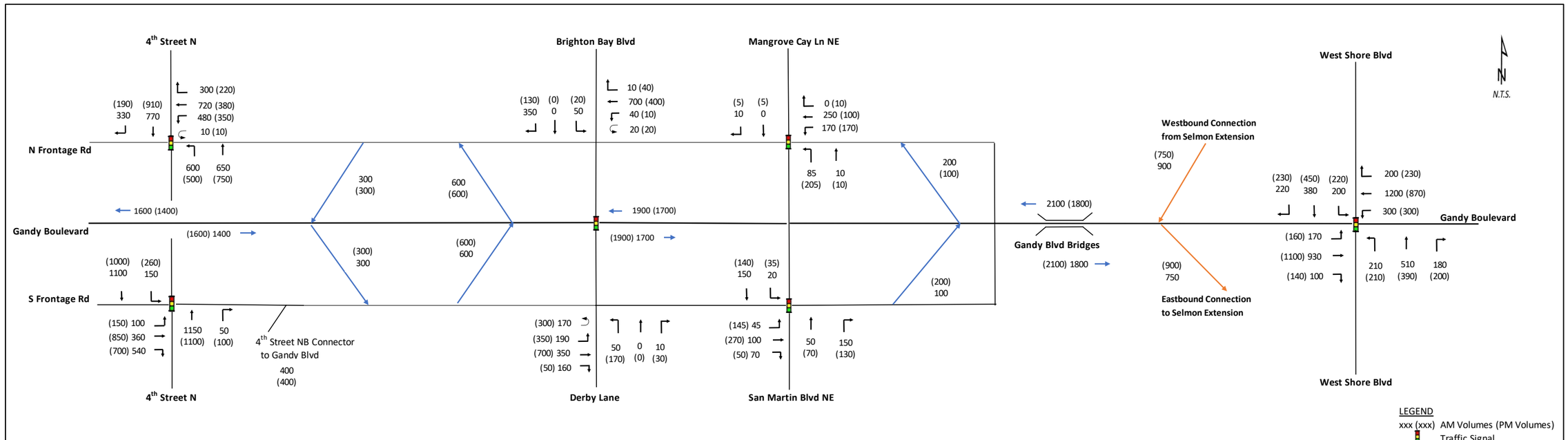


Figure 4-3: Opening Year (2030) No-Build Peak Hour Turning Movement Volumes



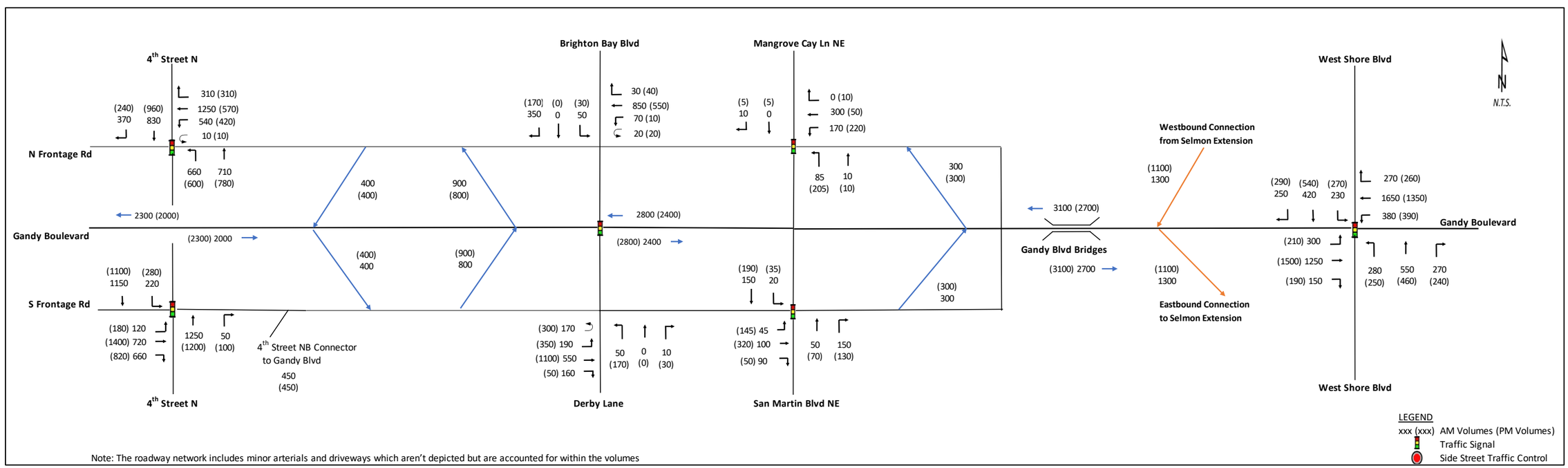
Note: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes

Figure 4-4: Design Year (2050) No-Build Peak Hour Turning Movement Volumes



Note: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes

Figure 4-5: Opening Year (2030) Build Peak Hour Turning Movement Volumes



Note: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes

Figure 4-6: Design Year (2050) Build Peak Hour Turning Movement Volumes

5.0 Alternatives Analysis

The future traffic analysis was conducted for the following scenarios:

- No-Build Alternative
- Build Alternative

The No-Build Alternative and Build Alternative were evaluated for Opening Year (2030) and Design Year (2050).

5.1 No-Build Alternative

The No-Build Alternative consists of existing conditions plus the following improvements that were in construction when the traffic data was collected:

- Improvements at the Gandy Boulevard and West Shore Boulevard intersection
    - Exclusive westbound right turn lane
    - Additional left turn lane and exclusive right turn lane in the northbound approach
    - Additional left turn lane in the southbound approach
- Selmon Expressway Extension

The No-Build Alternative Geometry is shown in **Figure 5-1**.

5.1.1 Opening Year (2030) No-Build Analysis

5.1.1.1 Multilane Highway

The No-Build Alternative performance measures for the multilane highway segments, including (LOS), for the Opening Year are included in **Table 5-1.** Under the No-Build Alternative, the multilane highway segments along Gandy Boulevard are expected to operate at LOS D or better in Opening Year 2030.

5.1.1.2 Gandy Boulevard Bridges

As with existing condition analysis, an analysis was performed using the HCS 7 multilane highway module and the results are shown in **Table 5-2**. As shown in both tables, the Gandy Boulevard bridges are expected to operate at acceptable LOS under the No-Build Alternative for Opening Year 2030.

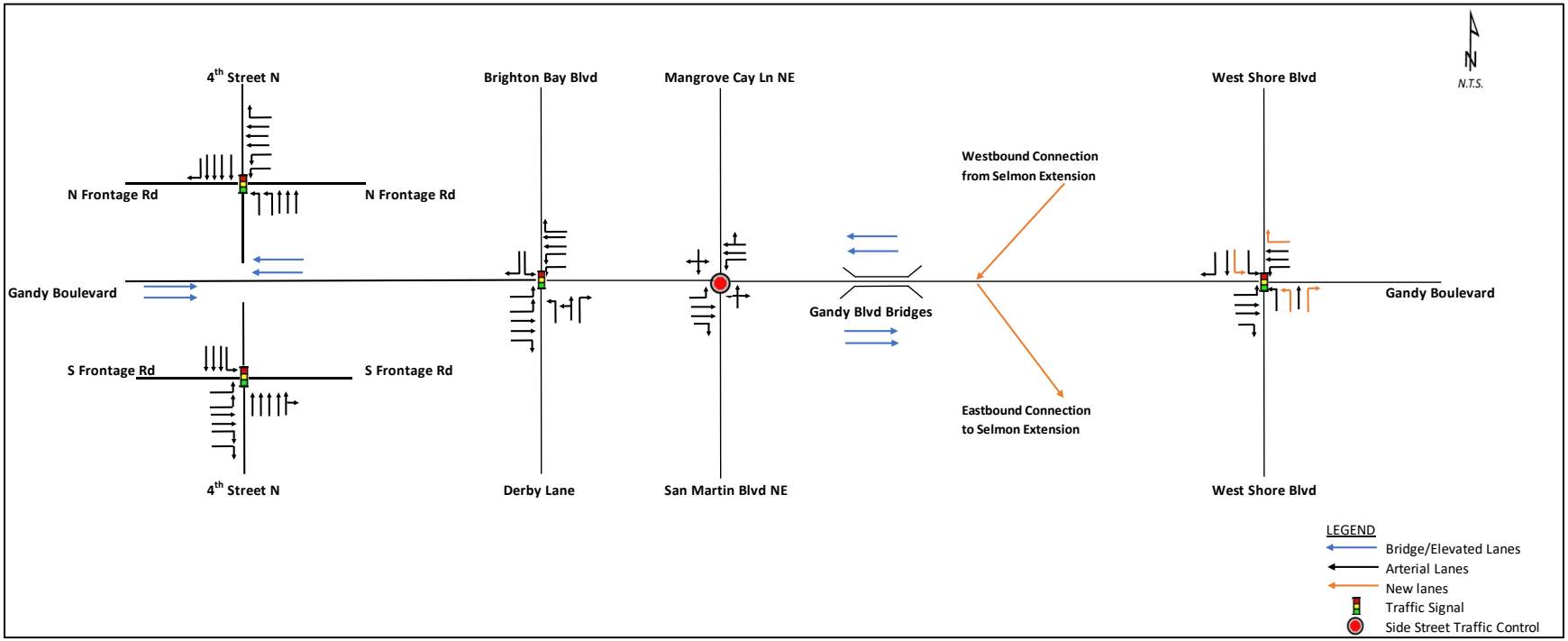


Figure 5-1: No-Build Alternative Geometry

Table 5-1: Opening Year (2030) No-Build Multilane Highway Segment Analysis

Gandy Blvd Segment	Eastbound Direction				Westbound Direction			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
From 4th St North ramps to Brighton Bay Blvd	23.0	C	26.1	D	31.7	D	24.1	C
From Brighton Bay Blvd to west end of Gandy Blvd bridges	20.1	C	22.6	C	22.8	C	19.8	C
From east end of Gandy Blvd bridges to 600 ft west of US Marine entrance	15.3	B	18.0	B	18.0	B	15.3	B
From 600 ft west of US Marine entrance to Selmon Expwy ramps	12.7	B	14.9	B	14.9	B	12.7	B
From Selmon Expwy ramps to 1700 ft west of Bridge St	6.8	A	8.3	A	12.4	B	10.2	A
From 1700 ft west of Bridge St to West Shore Blvd	13.5	B	15.7	B	17.7	B	15.2	B

Table 5-2: Opening Year (2030) No-Build Multilane Highway Segment Analysis – Gandy Boulevard Bridges

Gandy Blvd Segment	Eastbound Direction				Westbound Direction			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Gandy Blvd bridges	15.3	B	18.0	B	18.0	B	15.3	B

5.1.1.3 Intersections

Tables 5-3 and 5-4 summarize the intersection delay and LOS for Opening Year 2030 No-Build operations during the AM and PM peak hours, respectively. **Table 5-5** lists the vehicle queue results for the intersection movements. HCM 6th Edition results are provided for the intersection of Gandy Boulevard and West Shore Boulevard. HCM 2000 results are provided for the signalized intersections on the Pinellas County side because of the limitations of the HCM 6th Edition and HCM 2010 in analyzing clustered intersections or shared movements.

Table 5-3: Opening Year (2030) No-Build Intersection Delay and LOS Results – AM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St North and North Frontage Rd*	Westbound	Left	59.3	E	58.0	E
		Through	59.2	E		
		Right	53.1	D		
	Northbound	Left	62.2	E	52.5	D
		Through	43.6	D		
	Southbound	Through	66.3	E	66.7	E
		Right	67.4	E		
				Intersection	**58.7**	**E**
4th St North and South Frontage Rd*	Eastbound	Left	58.2	E	32.0	C
		Through	27.1	C		
		Right	30.5	C		
	Northbound	Through/Right	60.7	E	60.7	E
	Southbound	Left	68.7	E	32.7	C
		Through	27.8	C		
				Intersection	**42.3**	**D**
Gandy Blvd at Brighton Bay Blvd*	Eastbound	Left	430.3	F	61.4	E
		Through	29.6	C		
		Right	11.6	B		
	Westbound	Left	105.4	F	52.7	D
		Through	51.9	D		
		Right	11.1	B		
	Northbound	Left	104.2	F	103.3	F
		Left/Thru	104.5	F		
		Right	98.5	F		
	Southbound	Left/Thru	89.3	F	400.9	F
		Right	445.7	F		
				Intersection	**84.8**	**F**
Gandy Blvd at San Martin Blvd/Mangrove Cay**	Eastbound	Left	17.5	C		
	Westbound	Left	21.7	C		
	Northbound	Left/Thru/Right	454.9	F	454.9	F
	Southbound	Left/Thru/Right	20.0	C	20.0	C
Gandy Blvd at West Shore Blvd	Eastbound	Left	47.6	D	54.6	D
		Through	57.7	E		
		Right	36.8	D		
	Westbound	Left	70.6	E	51.1	D
		Through	49.0	D		
		Right	33.2	C		
	Northbound	Left	71.0	E	68.3	E
		Through	77.3	E		
		Right	39.5	D		
	Southbound	Left	107.2	F	63.1	E
		Thru	51.5	E		
		Right	42.9	D		
				Intersection	**57.6**	**E**

*HCM2000 results provided. **Per HCM 6th Edition: For Two Way Stop Control (TWSC) intersections only minor movements delay and LOS are reported. HCM 6th Edition does not calculate LOS for major street thru movements and approaches or for the intersection as a whole.

Table 5-4: Opening Year (2030) No-Build Intersection Delay and LOS Results – PM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St North and North Frontage Rd*	Westbound	Left	63.8	E	61.5	E
		Through	60.9	E		
		Right	58.9	E		
	Northbound	Left	53.3	D	45.9	D
		Through	40.9	D		
	Southbound	Through	80.3	F	78.0	E
		Right	66.9	E		
				Intersection	**61.1**	**E**
4th St North and South Frontage Rd*	Eastbound	Left	62.7	E	41.2	D
		Through	38.2	D		
		Right	39.8	D		
	Northbound	Through	69.2	E	69.2	E
	Southbound	Left	65.2	E	36.2	D
		Through	28.6	C		
				Intersection	**47.9**	**D**
Gandy Blvd at Brighton Bay Blvd*	Eastbound	Left	313.4	F	54.8	D
		Through	14.9	B		
		Right	4.4	A		
	Westbound	Left	140.2	F	21.9	C
		Through	21.6	C		
		Right	8.2	A		
	Northbound	Left	736.4	F	649.7	F
		Left/Thru	747.0	F		
		Right	134.8	F		
	Southbound	Left/Thru	144.7	F	225.4	F
		Right	237.8	F		
				Intersection	**70.8**	**E**
Gandy Blvd at San Martin Blvd/Mangrove Cay**	Eastbound	Left	15.4	C		
	Westbound	Left	31.5	D		
	Northbound	Left/Thru/Right	953.1	F	953.1	F
	Southbound	Left/Thru/Right	3.5	A	3.5	A
Gandy Blvd at West Shore Blvd	Eastbound	Left	32.3	C	51.3	D
		Through	55.6	E		
		Right	38.7	D		
	Westbound	Left	78.6	E	45.0	D
		Through	36.8	D		
		Right	32.2	C		
	Northbound	Left	117.1	F	92.6	F
		Through	92.6	F		
		Right	67.0	E		
	Southbound	Left	107.5	F	104.5	F
		Thru	121.2	F		
		Right	69.1	E		
				Intersection	**67.3**	**E**

*HCM2000 results provided. **Per HCM 6th Edition: For Two Way Stop Control (TWSC) intersections only minor movements delay and LOS are reported. HCM 6th Edition does not calculate LOS for major street thru movements and approaches or for the intersection as a whole.

Table 5-5: Opening Year (2030) No-Build Intersection Vehicle Queues

Intersection	Movement	Storage (ft)	AM Peak Hour Queues (95th Percentile)		PM Peak Hour Queues (95th Percentile)	
			Vehicles	Feet	Vehicles	Feet
4th St North and North Frontage Rd	WB Left	500	---	347	---	271
	WB Through	690	---	352	---	173
	WB Right	500	---	85	---	78
	NB Left	690*	---	493	---	438
	NB Through	239	---	**373**	---	**445**
	SB Through	1150	---	302	---	395
	SB Right	300	---	252	---	79
4th St North and South Frontage Rd	EB Left	350	---	84	---	129
	EB Through	350	---	176	---	**460**
	EB Right	350	---	275	---	**432**
	NB Through/Right	1000	---	381	---	412
	SB Left	680**	---	#301	---	485
	SB Through	239	---	**354**	---	**391**
Gandy Blvd at Brighton Bay Blvd	EB Left	560	---	#311	---	**#584**
	EB Through	1000	---	**1312**	---	**1195**
	EB Right	780	---	30	---	2
	WB Left	300	---	56	---	26
	WB Through	1000	---	**#1954**	---	**1160**
	WB Right	500	---	0	---	0
	NB Left	1000	---	80	---	#444
	NB Left/Thru	1000	---	83	---	#444
	NB Right	950	---	0	---	0
	SB Left/Thru	435	---	126	---	82
	SB Right	435	---	**#814**	---	#236
Gandy Blvd at San Martin Blvd/Mangrove Cay	EB Left	215	0.1	3	0.0	0
	WB Left	225	2.1	63	2.9	73
	NB Left/Thru/Right	1000	16.5	388	20.9	520
	SB Left/Thru/Right	400	0.1	3	0.0	0
Gandy Blvd at West Shore Blvd	EB Left	625	8.4	210	8.3	208
	EB Through	1000	24.4	610	34.2	855
	EB Right	265	5.1	128	8.6	215
	WB Left	500	16.2	405	25.2	**630**
	WB Through	1000	26.6	665	22.2	555
	WB Right	200	9.3	**233**	12.0	**300**
	NB Left	388***	7.4	185	10.7	268
	NB Through	1000	30.1	753	30.6	765
	NB Right	575	9.0	225	14.7	368
	SB Left	300	8.7	218	10.8	270
	SB Thru	1000	19.5	488	39.3	983
	SB Right	225	11.1	**278**	16.8	**420**

*Includes left turn storage south of the intersection. ** Includes left turn storage north of the intersection.
#: 95th percentile volume exceeds capacity; queue may be longer. **XXX** means queue exceeds storage length. ***Average of both NB left turn storage lengths.

The Opening Year (2030) analyses under No-Build Alternative show the multilane highway facilities and the Gandy Boulevard bridges operating at acceptable LOS but the intersections along Gandy Boulevard will continue to operate at unacceptable LOS with most movements operating at LOS E or F.

The westbound through movement at the intersection of Gandy Boulevard and Brighton Bay Boulevard shows a queue of over 1,900 feet in the AM peak hour meaning the queue is projected to impact the operations at the Gandy Boulevard and San Martin Boulevard intersection.

The northbound and southbound approaches of the unsignalized intersection of Gandy Boulevard and San Martin Boulevard are expected to continue to experience excessive delays waiting for gaps on Gandy Boulevard to complete their movements.

The Opening Year No-Build Analysis are included in **Appendix H.**

5.1.2 Design Year (2050) No-Build Analysis

5.1.2.1 Multilane Highway

The No-Build Alternative performance measures for the multilane highway segments, including (LOS), for the Design Year are included in **Table 5-6.** Under the No-Build Alternative, the multilane highway segments along Gandy Boulevard are expected to operate at LOS D or better, with the exception of the segment between the 4th Street North ramps and Brighton Bay Boulevard that operates at LOS E during the AM and PM peak hours in Design Year 2050.

Table 5-6: Opening Year (2050) No-Build Multilane Highway Segment Analysis

Gandy Blvd Segment	Eastbound Direction				Westbound Direction			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
From 4th St North ramps to Brighton Bay Blvd	29.7	D	35.5	E	44.6	E	31.5	D
From Brighton Bay Blvd to west end of Gandy Blvd bridges	26.2	D	30.5	D	30.8	D	25.9	C
From east end of Gandy Blvd bridges to 600 ft west of US Marine entrance	21.6	C	25.5	C	25.5	C	21.6	C
From 600 ft west of US Marine entrance to Selmon Expwy ramps	17.9	B	20.9	C	20.9	C	17.9	B
From Selmon Expwy ramps to 1700 ft west of Bridge St	10.1	A	11.5	B	17.3	B	15.1	B
From 1700 ft west of Bridge St to West Shore Blvd	17.9	B	20.2	C	22.9	C	19.6	C

5.1.2.2 Gandy Boulevard Bridges

As with existing condition analysis, an analysis was performed using the HCS 7 multilane highway module and the results are shown in **Table 5-7**. As shown in both tables, the Gandy Boulevard bridges are expected to operate at acceptable LOS under the No-Build Alternative for Design Year 2050.

Table 5-7: Design Year (2050) No-Build Multilane Highway Segment Analysis – Gandy Boulevard Bridges

Gandy Blvd Segment	Eastbound Direction				Westbound Direction			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Gandy Blvd bridges	21.6	C	25.5	C	25.5	C	21.6	C

5.1.2.3 Intersections

Tables 5-8 and 5-9 summarize the delay and LOS for Design Year 2050 No-Build operations during the AM and PM peak hours, respectively. **Table 5-10** shows the vehicle queue results for the intersection movements. HCM 6th Edition results are provided for the intersection of Gandy Boulevard and West Shore Boulevard. HCM 2000 results are provided for the signalized intersections on the Pinellas County side because of the limitations of the HCM 6th Edition and HCM 2010 in analyzing clustered intersections or shared movements.

The Design Year (2050) analyses under No-Build Alternative show the multilane highway facilities and the Gandy Boulevard bridges operating at acceptable LOS but the intersections along Gandy Boulevard will continue to operate at unacceptable LOS with most movements operating at LOS E or F.

The westbound through movement at the intersection of Gandy Boulevard and Brighton Bay Boulevard shows a queue of approximately 3,000 feet in the AM peak hour meaning the queue is projected to impact the operations at Gandy Boulevard and San Martin Boulevard and Gandy Boulevard and Snug Harbor Road NE intersections. The eastbound through movement at the intersection of Gandy Boulevard and Brighton Bay Boulevard shows a queue of over 3,200 feet in the PM peak hour meaning the queue is projected to impact traffic merging from the South Frontage Road and 4th Street North intersection.

The northbound and southbound approaches of the unsignalized intersection of Gandy Boulevard and San Martin Boulevard are expected to continue to experience excessive delays waiting for gaps on Gandy Boulevard to complete their movements. The Design Year No-Build Analysis are included in **Appendix I**.

Table 5-8: Design Year (2050) No-Build Intersection Delay and LOS Results – AM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St North and North Frontage Rd*	Westbound	Left	62.8	E	65.3	E
		Through	69.8	E		
		Right	54.4	D		
	Northbound	Left	66.3	E	53.8	D
		Through	42.2	D		
	Southbound	Through	67.4	E	69.1	E
		Right	72.9	E		
				Intersection	**62.8**	**E**
4th St North and South Frontage Rd*	Eastbound	Left	59.2	E	33.9	C
		Through	29.2	C		
		Right	33.1	C		
	Northbound	Through/Right	63.7	E	63.7	E
	Southbound	Left	129.9	F	42.7	D
		Through	26.0	C		
				Intersection	**46.7**	**D**
Gandy Blvd at Brighton Bay Blvd*	Eastbound	Left	423.5	F	116.6	F
		Through	100.2	F		
		Right	12.2	B		
	Westbound	Left	109.7	F	165.3	F
		Through	168.3	F		
		Right	11.3	B		
	Northbound	Left	103.2	F	102.4	F
		Left/Thru	103.5	F		
		Right	97.7	F		
	Southbound	Left/Thru	88.4	F	398.2	F
		Right	442.8	F		
				Intersection	**157.2**	**F**
Gandy Blvd at San Martin Blvd/Mangrove Cay**	Eastbound	Left	27.7	D		
	Westbound	Left	54.4	F		
	Northbound	Left/Thru/Right	2252.5	F	2252.5	F
	Southbound	Left/Thru/Right	30.3	D	30.3	D
Gandy Blvd at West Shore Blvd	Eastbound	Left	257.4	F	138.2	F
		Through	120.0	F		
		Right	39.6	D		
	Westbound	Left	177.0	F	135.4	F
		Through	142.5	F		
		Right	38.1	D		
	Northbound	Left	76.9	E	78.5	E
		Through	96.3	F		
		Right	43.8	D		
	Southbound	Left	146.4	F	82.5	F
		Thru	67.9	E		
		Right	48.2	D		
				Intersection	**116.8**	**F**

*HCM2000 results provided. **Per HCM 6th Edition: For Two Way Stop Control (TWSC) intersections only minor movements delay and LOS are reported. HCM 6th Edition does not calculate LOS for major street thru movements and approaches or for the intersection as a whole.

Table 5-9: Design Year (2050) No-Build Intersection Delay and LOS Results – PM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St North and North Frontage Rd*	Westbound	Left	64.1	E	61.7	E
		Through	61.6	E		
		Right	58.7	E		
	Northbound	Left	63.1	E	50.4	D
		Through	40.6	D		
	Southbound	Through	82.2	F	79.3	E
		Right	67.8	E		
				Intersection	**63.2**	**E**
4th St North and South Frontage Rd*	Eastbound	Left	66.4	E	49.5	D
		Through	49.0	D		
		Right	46.4	D		
	Northbound	Through	69.2	E	69.2	E
	Southbound	Left	66.2	E	35.0	D
		Through	27.1	C		
				Intersection	**50.7**	**D**
Gandy Blvd at Brighton Bay Blvd *	Eastbound	Left	313.4	F	83.6	F
		Through	57.3	E		
		Right	4.4	A		
	Westbound	Left	140.2	F	52.2	D
		Through	52.5	D		
		Right	8.2	A		
	Northbound	Left	736.4	F	649.7	F
		Left/Thru	747.0	F		
		Right	134.8	F		
	Southbound	Left/Thru	187.5	F	591.8	F
		Right	664.1	F		
				Intersection	**104.8**	**F**
Gandy Blvd at San Martin Blvd/Mangrove Cay**	Eastbound	Left	21.2	C		
	Westbound	Left	196.7	F		
	Northbound	Left/Thru/Right	Err***	Err***	Err***	Err***
	Southbound	Left/Thru/Right	Err***	Err***	Err***	Err***
Gandy Blvd at West Shore Blvd	Eastbound	Left	57.1	E	133.9	F
		Through	156.9	F		
		Right	49.9	D		
	Westbound	Left	135.1	F	65.1	E
		Through	47.7	D		
		Right	36.9	D		
	Northbound	Left	150.6	F	132.8	F
		Through	153.4	F		
		Right	75.0	E		
	Southbound	Left	114.3	F	143.0	F
		Thru	191.8	F		
		Right	78.8	E		
				Intersection	**113.6**	**F**

*HCM2000 results provided. **Per HCM 6th Edition: For Two Way Stop Control (TWSC) intersections only minor movements delay and LOS are reported. HCM 6th Edition does not calculate LOS for major street thru movements and approaches or for the intersection as a whole. ***No results provided. Delay threshold is exceeded.

Table 5-10: Design Year (2050) No-Build Intersection Vehicle Queues

Intersection	Movement	Storage (ft)	AM Peak Hour Queues (95th Percentile)		PM Peak Hour Queues (95th Percentile)	
			Vehicles	Feet	Vehicles	Feet
4th St North and North Frontage Rd	WB Left	500	---	394	---	326
	WB Through	690	---	539	---	244
	WB Right	500	---	87	---	92
	NB Left	690*	---	#555	---	#536
	NB Through	239	---	**402**	---	**457**
	SB Through	1150	---	327	---	419
	SB Right	300	---	**341**	---	91
4th St North and South Frontage Rd	EB Left	350	---	98	---	152
	EB Through	350	---	258	---	**758**
	EB Right	350	---	**358**	---	**564**
	NB Through/Right	1000	---	418	---	451
	SB Left	680**	---	#515	---	m#505
	SB Through	239	---	**350**	---	**408**
Gandy Blvd at Brighton Bay Blvd	EB Left	560	---	#311	---	**#584**
	EB Through	1000	---	**#2423**	---	**#3262**
	EB Right	780	---	30	---	2
	WB Left	300	---	89	---	26
	WB Through	1000	---	**#2970**	---	**#2745**
	WB Right	500	---	0	---	0
	NB Left	1000	---	80	---	#444
	NB Left/Thru	1000	---	83	---	#444
	NB Right	950	---	0	---	0
	SB Left/Thru	435	---	126	---	#142
	SB Right	435	---	**#822**	---	#418
Gandy Blvd at San Martin Blvd/Mangrove Cay	EB Left	215	0.1	3	0.1	3
	WB Left	225	4.7	118	11.2	**280**
	NB Left/Thru/Right	1000	24.8	620	****	****
	SB Left/Thru/Right	400	0.2	5	****	****
Gandy Blvd at West Shore Blvd	EB Left	625	28.5	**713**	12.5	313
	EB Through	1000	40.4	**1010**	65.2	**1630**
	EB Right	265	7.9	198	12.4	**310**
	WB Left	500	28.1	**703**	35.7	**893**
	WB Through	1000	54.7	**1368**	33.4	835
	WB Right	200	12.7	**318**	14.2	**355**
	NB Left	388***	9.7	243	13.8	345
	NB Through	1000	35.5	888	43.3	**1083**
	NB Right	575	13.4	335	18.2	455
	SB Left	300	11.0	275	13.2	**330**
	SB Thru	1000	24.1	603	55.3	**1383**
	SB Right	225	13.1	**328**	22.0	**550**

*Includes left turn storage south of the intersection. ** Includes left turn storage north of the intersection.
#: 95th percentile volume exceeds capacity; queue may be longer. **XXX** means queue exceeds storage length. ***Average of both NB left turn storage lengths. m: Volume for 95th percentile queue is metered by upstream signal. **** No results provided, or computations not completed. Delay threshold is exceeded.

5.2 Build Alternative

As described in Section 1.4, the Build Alternative consists of different typical sections and intersection improvements. The Build Alternative Concept Plans are included **in Appendix J**.

Gandy Boulevard is being reconstructed between 4th Street North and the east end of the Gandy Boulevard bridges as an elevated controlled-access facility with ramps and frontage roads under the Build Alternative. Because the controlled-access portion of the corridor is comprised of continuously connected basic freeway, merge, and diverge segments, *HCM 6th Edition Chapter 10 Freeway Facilities Core Methodology*[1], which relies on the methodologies in *Chapters 12 Basic Freeway and Multilane Segments, 13 Freeway Weaving Segments, and 14 Freeway Merge and Diverge Segments,* was employed in determining the operational performance of this portion of the corridor. In addition to level-of-service determination for the segments, the capacity of the ramps was also verified against the traffic demand using the ramp roadway capacities listed in *HCM 6th Edition*, Exhibit 14-12.

Moreover, the section of Gandy Boulevard east of the bridges to West Shore Boulevard was analyzed as a multilane highway following the methodology in *HCM 6th Edition, Chapter 12*, because it has driveway and cross-street access points and maintains the uninterrupted traffic flow from the Gandy Boulevard bridges to West Shore Boulevard.

5.2.1 Opening Year (2030) Build Analysis

5.2.1.1 Freeway Segments, Multilane Highways, and Ramps Analysis

The Build Alternative performance measures for the freeway and multilane highway segments, including (LOS), for the Opening Year are included in **Table 5-11.** Under the Build Alternative, the freeway and multilane highway segments along Gandy Boulevard are expected to operate at LOS D or better in Opening Year 2030. The results of the ramp capacity analyses are shown in **Table 5-12.**

Table 5-11: Opening Year (2030) Build Freeway and Multilane Highway Segment Analysis

Gandy Blvd Segment	Analysis Type	AM Peak Hour		PM Peak Hour	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Eastbound Direction					
From Martin Luther King Jr St North off-ramp to Diverge Off-Ramp east of 4th St North	Freeway	14.2	B	16.3	B
Off-ramp east of 4th St North - Diverge	Freeway	15.1 Fr/ 10.8 Ramp	B	17.3 Fr/ 12.7 Ramp	B
From Off-ramp east of 4th St North to On-ramp west of Brighton Blvd	Freeway	11.2	B	13.2	B
Gandy Blvd On-ramp west of Brighton Bay Blvd - Merge	Freeway	17.8 Fr/ 13.5 Ramp	B	19.9 Fr/ 15.2 Ramp	B
From Merge On-ramp west of Brighton Blvd to	Freeway	17.3	B	19.3	C

[1] The analysis limits for HCM freeway facilities methodology must begin and end with a basic freeway segment. Therefore, the basic freeway segment along Gandy Boulevard between Martin Luther King Jr. Street ramps and 4th Street North ramps was included in the analysis.

Gandy Blvd Segment	Analysis Type	AM Peak Hour		PM Peak Hour	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Eastbound Direction					
On-ramp east of San Fernando Dr*					
From On-ramp east of San Fernando Dr to Beach Access Frontage Rd On-ramp	Freeway	11.2	B	13.0	B
Access Frontage Rd On-ramp - Merge	Freeway	11.4 Fr/ 6.5 Ramp	A	13.3 Fr/ 8.1 Ramp	B
From Beach Access Road On-ramp Merge to east end of Gandy Blvd bridges	Freeway	11.2	B	13.1	B
From east end of Gandy Blvd bridges to EB on-ramp to Selmon Expressway	Multilane Highway	13.2	B	15.3	B
From EB on-ramp to Selmon Expressway to West Shore Blvd	Multilane Highway	13.5	B	15.7	B
Westbound Direction					
From West Shore Blvd to EB Selmon Expressway On-ramp	Multilane Highway	18.7	B	15.1	B
From EB On-ramp to Selmon Expressway to east end of Gandy Blvd bridges	Multilane Highway	12.9	B	11.3	B
From east end of Gandy Blvd bridges to Off-ramp east of San Fernando Dr	Freeway	12.9	B	11.1	B
From Off-ramp east of San Fernando Dr to Diverge Off-ramp west of Brighton Bay Blvd	Freeway	19.2	C	17.2	B
Off-ramp west of Brighton Bay Blvd - Diverge	Freeway	20.7 Fr/ 15.1 Ramp	B	18.5 Fr/ 13.3 Ramp	B
From Off-ramp west of Brighton Bay Blvd to On-ramp east of 4th St North	Freeway	13.1	B	11.1	B
On-ramp east of 4th St North – Merge	Freeway	16.7 Fr/ 12.6 Ramp	B	14.6 Fr/ 10.9 Ramp	B
From Merge On-ramp east of 4th St North to Martin Luther King Jr St North On-ramp	Freeway	16.2	B	14.1	B

*Segment analyzed as a basic freeway segment because a third outside lane is added at the on-ramp's entrance to eastbound Gandy Boulevard.

Table 5-12: Opening Year (2030) Build Ramp Capacity Analysis

Ramp	Capacity (pc/h)	AM Peak Hour		PM Peak Hour	
		Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)
EB Gandy Blvd Off-Ramp east of 4th St North	2,000	324	UC	324	UC
EB Gandy Blvd On-ramp west of Brighton Bay Blvd	2,000	647	UC	647	UC
EB Gandy Blvd On-ramp east of San Martin Blvd	2,000	108	UC	216	UC
WB Gandy Blvd Off-ramp east of San Martin Blvd	2,000	216	UC	108	UC
WB Gandy Blvd Off-Ramp west of Brighton Bay Blvd	2,000	647	UC	647	UC
WB Gandy Blvd On-Ramp east of 4th St North	2,000	324	UC	324	UC

5.2.1.2 Gandy Boulevard Bridges

As stated in Section 5.2, Gandy Boulevard is being reconstructed between 4th Street North and the east end of the Gandy Boulevard bridges as an elevated controlled-access facility with ramps and frontage roads under the Build Alternative, The Gandy Boulevard bridges analysis is included in the Basic Freeway Segment analysis shown in **Table 5-11**.

5.2.1.3 Intersections

Tables 5-13 and 5-14 shows the intersection delay and LOS for Opening Year 2030 Build operations during the AM and PM peak hours, respectively. **Table 5-15** shows the vehicle queue results for the intersection movements. HCM 6th Edition results are provided for the intersection of Gandy Boulevard and West Shore Boulevard. HCM 2000 results are provided for the signalized intersections on the Pinellas side because of the limitations of the HCM 6th Edition and HCM 2010 in analyzing clustered intersections, shared movements, or U-turns.

Table 5-13: Opening Year (2030) Build Intersection Delay and LOS Results – AM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St North and North Frontage Rd*	Westbound	Left	39.3	D	38.4	D
		Through	39.1	D		
		Right	35.2	D		
	Northbound	Left	52.7	D	41.9	D
		Through	31.9	C		
	Southbound	Through	63.4	E	62.2	E
		Right	59.3	E		
				Intersection	**46.3**	**D**
4th St North and South Frontage Rd*	Eastbound	Left	42.2	D	28.7	C
		Through	25.3	C		
		Right	28.4	C		
	Northbound	Through/Right	40.0	D	40.0	D
	Southbound	Left	33.0	C	16.6	B
		Through	14.2	B		
				Intersection	**28.2**	**C**
Gandy Blvd Frontage Rd at Brighton Bay Blvd*	Eastbound	Left	43.4	D	27.5	C
		Through	16.6	B		
		Right	15.5	B		
	Westbound	Left	45.6	D	29.4	C
		Through	28.1	C		
		Right	20.8	C		
	Northbound	Left	44.9	D	43.4	D
		Thru/Right	36.3	D		
	Southbound	Left	35.5	D	32.9	C
		Thru/Right	32.6	C		
				Intersection	**29.7**	**C**
WB Gandy Frontage Rd at Mangrove Cay*	Westbound	Left/Thru/Right	11.1	B	11.1	B
	Northbound	Left/Thru	10.3	B	10.3	B
	Southbound	Thru/Right	9.7	A	9.7	A
				Intersection	**11.0**	**B**
EB Gandy Frontage Rd at St Martin Blvd*	Eastbound	Left/Thru/Right	10.0	B	10.0	B
	Northbound	Thru/Right	10.5	B	10.5	B
	Southbound	Left/Thru	15.2	B	15.2	B
				Intersection	**11.7**	**B**
Gandy Blvd at West Shore Blvd	Eastbound	Left	70.2	E	63.6	E
		Through	65.1	E		
		Right	38.4	D		
	Westbound	Left	88.9	F	71.3	E
		Through	72.9	F		
		Right	35.6	D		
	Northbound	Left	73.9	E	76.1	E
		Through	89.4	F		
		Right	40.9	D		
	Southbound	Left	184.4	F	87.2	F
		Thru	59.5	E		
		Right	46.5	D		
				Intersection	**73.0**	**E**

*HCM2000 results provided.

Table 5-14: Opening Year (2030) Build Intersection Delay and LOS Results – PM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St North and North Frontage Rd*	Westbound	Left	43.5	D	41.7	D
		Through	41.3	D		
		Right	39.2	D		
	Northbound	Left	34.2	C	27.0	C
		Through	22.1	C		
	Southbound	Through	55.6	E	53.3	D
		Right	42.4	D		
				Intersection	**40.0**	**D**
4th St North and South Frontage Rd*	Eastbound	Left	42.8	D	30.0	C
		Through	28.8	C		
		Right	28.6	C		
	Northbound	Through/Right	49.3	D	49.3	D
	Southbound	Left	40.0	D	21.6	C
		Through	16.6	B		
				Intersection	**33.0**	**C**
Gandy Blvd Frontage Rd at Brighton Bay Blvd*	Eastbound	Left	55.3	E	36.4	D
		Through	20.3	C		
		Right	16.1	B		
	Westbound	Left	46.2	D	32.2	C
		Through	31.6	C		
		Right	27.6	C		
	Northbound	Left	52.8	D	49.4	D
		Thru/Right	30.5	C		
	Southbound	Left	58.0	E	38.0	D
		Thru/Right	34.9	C		
				Intersection	**36.8**	**D**
WB Gandy Frontage Rd at Mangrove Cay*	Westbound	Left/Thru/Right	13.0	B	13.0	B
	Northbound	Left/Thru	19.2	B	19.2	B
	Southbound	Thru/Right	11.5	B	11.5	B
				Intersection	**15.6**	**B**
EB Gandy Frontage Rd at St Martin Blvd*	Eastbound	Left/Thru/Right	13.9	B	13.9	B
	Northbound	Thru/Right	12.5	B	12.5	B
	Southbound	Left/Thru	22.8	C	22.8	C
				Intersection	**15.4**	**B**
Gandy Blvd at West Shore Blvd	Eastbound	Left	33.3	C	63.4	E
		Through	71.0	E		
		Right	37.9	D		
	Westbound	Left	112.4	F	53.7	D
		Through	38.7	D		
		Right	33.6	C		
	Northbound	Left	109.0	F	79.1	E
		Through	77.3	E		
		Right	51.3	D		
	Southbound	Left	97.9	F	89.7	F
		Thru	104.5	F		
		Right	52.9	D		
				Intersection	**68.4**	**E**

*HCM2000 results provided.

Table 5-15: Opening Year (2030) Build Intersection Vehicle Queues

Intersection	Movement	Storage (ft)	AM Peak Hour Queues (95th Percentile)		PM Peak Hour Queues (95th Percentile)	
			Vehicles	Feet	Vehicles	Feet
4th St North and North Frontage Rd	WB Left	500	---	250	---	190
	WB Through	1350	---	245	---	134
	WB Right	500	---	72	---	68
	NB Left	690*	---	#374	---	m#275
	NB Through	240	---	**267**	---	**282**
	SB Through	1150	---	#236	---	252
	SB Right	300	---	184	---	64
4th St North and South Frontage Rd	EB Left	350	---	63	---	86
	EB Through	350	---	146	---	347
	EB Right	350	---	214	---	278
	NB Through/Right	1000	---	263	---	272
	SB Left	680**	---	m179	---	m280
	SB Through	240	---	**249**	---	**245**
Gandy Blvd Frontage Rd at Brighton Bay Blvd	EB Left	300	---	#159	---	#275
	EB Through	1000	---	110	---	213
	EB Right	300	---	9	---	0
	WB Left/U-turn	300	---	38	---	23
	WB Through	1000	---	265	---	156
	WB Right	300	---	0	---	0
	NB Left	1000	---	34	---	#94
	NB Thru/Right	950	---	0	---	0
	SB Left	400	---	67	---	35
	SB Thru/Right	400	---	107	---	0
WB Gandy Frontage Rd at Mangrove Cay	WB Left/Thru/Right	1000	---	71	---	62
	NB Left/Thru	140	---	41	---	**142**
	SB Thru/Right	220	---	0	---	9
EB Gandy Frontage Rd at St Martin Blvd	EB Left/Thru/Right	1000	---	31	---	422
	NB Thru/Right	1000	---	44	---	493
	SB Left/Thru	140	---	103	---	60
Gandy Blvd at West Shore Blvd	EB Left	625	10.2	255	7.5	188
	EB Through	1000	26.2	655	33.1	828
	EB Right	265	5.2	130	7.6	190
	WB Left	500	21.7	**543**	24.1	**603**
	WB Through	1000	35.0	875	20.3	508
	WB Right	200	9.6	**240**	10.8	**270**
	NB Left	388***	7.7	193	9.4	235
	NB Through	1000	32.7	818	24.8	620
	NB Right	575	9.2	230	11.5	288
	SB Left	300	10.8	270	9.3	233
	SB Thru	1000	20.9	523	32.2	805
	SB Right	225	11.6	**290**	13.2	**330**

*Includes left turn storage south of the intersection. ** Includes left turn storage north of the intersection.
#: 95th percentile volume exceeds capacity; queue may be longer. **XXX** means queue exceeds storage length.
***Average of both NB left turn storage lengths.

The Opening Year (2030) Build Alternative results shows the all the freeway segments, multilane highway segments, ramps and intersections on the Pinellas side operating at acceptable LOS D or better. The overall operations on the Pinellas side improve significantly when compared to the No-Build conditions.

The Opening Year (2030) Build Alternative results are shown in **Appendix K**.

5.2.2 Design Year (2050) Build Analysis

5.2.2.1 Freeway Segments, Multilane Highways, and Ramps Analysis

The Build Alternative performance measures for the freeway and multilane highway segments, including LOS, for the Design Year are included in **Table 5-16.** Under the Build Alternative, the freeway and multilane highway segments along Gandy Boulevard are expected to operate at LOS D or better in Design Year 2050. The results of the ramp capacity analyses are shown in **Table 5-17.**

Table 5-16: Design Year (2050) Build Freeway and Multilane Highway Segment Analysis

Gandy Blvd Segment	Analysis Type	AM Peak Hour		PM Peak Hour	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Eastbound Direction					
From MLK Jr St North off-ramp to Diverge Off-Ramp east of 4th Street North	Freeway	20.3	C	23.4	C
Off-ramp east of 4th St North - Diverge	Freeway	21.7 Fr/ 16.4 Ramp	B	24.9 Fr/ 19.2 Ramp	B
From Off-ramp east of 4th St North to On-ramp west of Brighton Blvd	Freeway	16.3	B	19.3	C
Gandy Blvd On-ramp west of Brighton Bay Blvd - Merge	Freeway	25.3 Fr/ 19.3 Ramp	B	29.7 Fr/ 22.6 Ramp	C
From Merge On-ramp west of Brighton Blvd to On-ramp east of San Fernando Dr*	Freeway	24.4	C	28.5	D
From On-ramp east of San Fernando Dr to Beach Access Frontage Rd On-ramp	Freeway	16.7	B	19.2	C
Access Frontage Rd On-ramp - Merge	Freeway	17.2 Fr/ 11.2 Ramp	B	19.9 Fr/ 13.3 Ramp	B
From Beach Access Road On-ramp Merge to east end of the Gandy Blvd bridges	Freeway	16.8	B	19.3	C
From east end of Gandy Blvd bridges to EB on-ramp to Selmon Expressway	Multilane Highway	19.7	C	22.6	C
From EB on-ramp to Selmon Expressway to West Shore Blvd	Multilane Highway	19.1	C	21.3	C
Westbound Direction					
From West Shore Blvd to EB Selmon Expressway On-ramp	Multilane Highway	25.1	C	21.7	C
From EB On-ramp to Selmon Expressway to east end of Gandy Blvd bridges	Multilane Highway	19.4	C	17.3	B
From east end of the Gandy Blvd bridges to Off-ramp east of San Fernando Dr	Freeway	19.1	C	16.6	B
From Off-ramp east of San Fernando Dr to Diverge Off-ramp west of Brighton Bay Blvd	Freeway	28.3	D	24.2	C
Off-ramp west of Brighton Bay Blvd - Diverge	Freeway	30.7 Fr/ 23.5 Ramp	C	26.2 Fr/ 19.8 Ramp	B

Gandy Blvd Segment	Analysis Type	AM Peak Hour		PM Peak Hour	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
From Off-ramp west of Brighton Bay Blvd to On-ramp east of 4th St North	Freeway	19.2	C	16.2	B
On-ramp east of 4th St North – Merge	Freeway	24.2 Fr/ 18.4 Ramp	B	21.0 Fr/ 15.9 Ramp	B
From Merge On-ramp east of 4th St North to Martin Luther King Jr St North On-ramp	Freeway	23.2	C	20.2	C

*Segment analyzed as a basic freeway segment because a third outside lane is added at the on-ramp's entrance to eastbound Gandy Boulevard.

Table 5-17: Design Year (2050) Build Ramp Capacity Analysis

Ramp	Capacity (pc/h)	AM Peak Hour		PM Peak Hour	
		Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)
EB Gandy Blvd Off-Ramp east of 4th St North	2,000	432	UC	432	UC
EB Gandy Blvd On-ramp west of Brighton Bay Blvd	2,000	863	UC	971	UC
EB Gandy Blvd On-ramp east of San Martin Blvd	2,000	324	UC	324	UC
WB Gandy Blvd Off-ramp east of San Martin Blvd	2,000	324	UC	324	UC
WB Gandy Blvd Off-Ramp west of Brighton Bay Blvd	2,000	971	UC	863	UC
WB Gandy Blvd On-Ramp east of 4th St North	2,000	432	UC	432	UC

5.2.2.2 Gandy Boulevard Bridges

As stated in Section 5.2, Gandy Boulevard is being reconstructed between 4th Street North and the east end of the Gandy Boulevard Bridge as an elevated controlled-access facility with ramps and frontage roads under the Build Alternative, The Gandy Boulevard bridges analysis is included in the Basic Freeway Segment analysis shown in **Table 5-16**.

5.2.2.3 Intersections

Tables 5-18 and 5-19 show the intersection delay and LOS for Design Year 2050 Build operations during the AM and PM peak hours, respectively. **Table 5-20** shows the vehicle queue results for the intersection movements. HCM 6th Edition results are provided for the intersection of Gandy Boulevard and West Shore Boulevard. HCM 2000 results are provided for the signalized intersections on the Pinellas side because of the limitations of the HCM 6th Edition and HCM 2010 in analyzing clustered intersections, shared movements, or U-turns.

Table 5-18: Design Year (2050) Build Intersection Delay and LOS Results – AM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St North and North Frontage Rd*	Westbound	Left	42.6	D	52.7	D
		Through	61.0	E		
		Right	36.6	D		
	Northbound	Left	61.9	E	45.6	D
		Through	30.5	C		
	Southbound	Through	69.6	E	70.5	E
		Right	72.6	E		
				Intersection	**55.2**	**E**
4th St North and South Frontage Rd*	Eastbound	Left	42.6	D	31.2	C
		Through	29.7	C		
		Right	30.7	C		
	Northbound	Through/Right	42.9	D	42.9	D
	Southbound	Left	62.9	E	21.7	C
		Through	13.4	B		
				Intersection	**31.7**	**C**
Gandy Blvd Frontage Rd at Brighton Bay Blvd*	Eastbound	Left	48.7	D	29.6	C
		Through	20.6	C		
		Right	17.9	B		
	Westbound	Left	48.0	D	35.8	D
		Through	34.9	C		
		Right	22.7	C		
	Northbound	Left	44.6	D	43.5	D
		Thru/Right	38.1	D		
	Southbound	Left	38.9	D	36.7	D
		Thru/Right	36.4	D		
				Intersection	**33.5**	**C**
WB Gandy Frontage Rd at Mangrove Cay*	Westbound	Left/Thru/Right	13.7	B	13.7	B
	Northbound	Left/Thru	13.4	B	13.4	B
	Southbound	Thru/Right	11.6	B	11.6	B
				Intersection	**13.6**	**B**
EB Gandy Frontage Rd at St Martin Blvd*	Eastbound	Left/Thru/Right	12.3	B	12.3	B
	Northbound	Thru/Right	12.5	B	12.5	B
	Southbound	Left/Thru	22.0	C	22.0	C
				Intersection	15.1	B
Gandy Blvd at West Shore Blvd	Eastbound	Left	246.7	F	106.5	F
		Through	81.4	F		
		Right	35.1	D		
	Westbound	Left	247.3	F	161.6	F
		Through	162.4	F		
		Right	35.9	D		
	Northbound	Left	208.7	F	168.7	F
		Through	201.4	F		
		Right	60.2	E		
	Southbound	Left	223.0	F	126.1	F
		Thru	111.8	F		
		Right	60.8	E		
				Intersection	**141.9**	**F**

*HCM2000 results provided.

Table 5-19: Design Year (2050) Build Intersection Delay and LOS Results – PM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St North and North Frontage Rd*	Westbound	Left	39.9	D	38.8	D
		Through	39.1	D		
		Right	36.6	D		
	Northbound	Left	49.7	D	38.0	D
		Through	29.1	C		
	Southbound	Through	102.7	F	92.1	F
		Right	49.6	D		
				Intersection	**55.0**	**D**
4th St North and South Frontage Rd*	Eastbound	Left	43.8	D	53.0	D
		Through	64.9	E		
		Right	34.8	C		
	Northbound	Through/Right	42.9	D	42.9	D
	Southbound	Left	143.1	F	41.9	D
		Through	15.3	B		
				Intersection	**47.4**	**D**
Gandy Blvd Frontage Rd at Brighton Bay Blvd*	Eastbound	Left	46.2	D	31.8	C
		Through	24.1	C		
		Right	15.4	B		
	Westbound	Left	52.3	D	37.2	D
		Through	36.9	D		
		Right	29.7	C		
	Northbound	Left	48.3	D	46.3	D
		Thru/Right	35.3	D		
	Southbound	Left	58.2	E	43.8	D
		Thru/Right	41.2	D		
				Intersection	**34.9**	**C**
WB Gandy Frontage Rd at Mangrove Cay*	Westbound	Left/Thru/Right	11.5	B	11.5	B
	Northbound	Left/Thru	15.6	B	15.6	B
	Southbound	Thru/Right	9.8	A	9.8	A
				Intersection	**13.2**	**B**
EB Gandy Frontage Rd at St Martin Blvd*	Eastbound	Left/Thru/Right	12.7	B	12.7	B
	Northbound	Thru/Right	10.7	B	10.7	B
	Southbound	Left/Thru	18.8	B	18.8	B
				Intersection	**13.7**	**B**
Gandy Blvd at West Shore Blvd	Eastbound	Left	216.1	F	126.7	F
		Through	114.6	F		
		Right	48.8	D		
	Westbound	Left	136.2	F	133.8	F
		Through	148.0	F		
		Right	43.6	D		
	Northbound	Left	140.2	F	165.8	F
		Through	222.0	F		
		Right	78.0	E		
	Southbound	Left	167.5	F	132.2	F
		Thru	143.0	F		
		Right	81.6	F		
				Intersection	**137.4**	**F**

*HCM2000 results provided.

Table 5-20: Design Year (2050) Build Intersection Vehicle Queues

Intersection	Movement	Storage (ft)	AM Peak Hour Queues (95th Percentile)		PM Peak Hour Queues (95th Percentile)	
			Vehicles	Feet	Vehicles	Feet
4th St North and North Frontage Rd	WB Left	500	---	282	---	218
	WB Through	1350	---	#498	---	192
	WB Right	500	---	73	---	73
	NB Left	690*	---	#440	---	#378
	NB Through	240	---	**287**	---	**309**
	SB Through	1150	---	#275	---	#346
	SB Right	300	---	#300	---	79
4th St North and South Frontage Rd	EB Left	350	---	73	---	104
	EB Through	350	---	307	---	**#826**
	EB Right	350	---	282	---	**386**
	NB Through/Right	1000	---	288	---	286
	SB Left	680**	---	m#255	---	m#301
	SB Through	240	---	**m244**	---	**m246**
Gandy Blvd Frontage Rd at Brighton Bay Blvd	EB Left	300	---	#182	---	298
	EB Through	1000	---	184	---	394
	EB Right	300	---	17	---	0
	WB Left/U-turn	300	---	56	---	29
	WB Through	1000	---	351	---	264
	WB Right	300	---	0	---	0
	NB Left	1000	---	36	---	104
	NB Thru/Right	950	---	0	---	0
	SB Left	400	---	73	---	57
	SB Thru/Right	400	---	143	---	21
WB Gandy Frontage Rd at Mangrove Cay	WB Left/Thru/Right	1000	---	97	---	63
	NB Left/Thru	140	---	48	---	140
	SB Thru/Right	220	---	0	---	9
EB Gandy Frontage Rd at St Martin Blvd	EB Left/Thru/Right	1000	---	38	---	112
	NB Thru/Right	1000	---	49	---	52
	SB Left/Thru	140	---	125	---	**156**
Gandy Blvd at West Shore Blvd	EB Left	625	32.5	**813**	33.8	**845**
	EB Through	1000	39.4	985	52.6	**1315**
	EB Right	265	7.8	195	10.1	253
	WB Left	500	40.2	**1005**	35.3	**883**
	WB Through	1000	69.1	**1728**	76.2	**1905**
	WB Right	200	12.8	**320**	16.0	**400**
	NB Left	388***	15.1	378	14.9	373
	NB Through	1000	51.3	**1283**	59.7	**1493**
	NB Right	575	16.1	403	20.6	515
	SB Left	300	13.2	**330**	13.4	**335**
	SB Thru	1000	31.0	775	39.2	980
	SB Right	225	15.1	**378**	19.6	**490**

*Includes left turn storage south of the intersection. ** Includes left turn storage north of the intersection.
#: 95th percentile volume exceeds capacity; queue may be longer. ***Average of both NB left turn storage lengths.
m: Volume for 95th percentile queue is metered by upstream signal

The Design Year (2050) Build Alternative results shows that all the freeway segments, multilane highway segments, ramps, and all but one intersection on the Pinellas side operating at acceptable LOS D or better. The overall operations on the Pinellas side improve significantly when compared to the No-Build conditions.

The Design Year (2050) Build Alternative results are shown in **Appendix L.**

5.3 Gandy Boulevard Bridges Year of Failure Analysis

An additional analysis was performed to determine the year of failure of a four (4)-lane typical section (two lanes in each direction) on the Gandy Boulevard bridges using the *2020 Quality/Level of Service Handbook (Q/LOS)* Generalized Annual Average Daily Service Volume Tables (January 2020) for Florida's Urbanized Areas. The Build Alternative AADTs were grown for successive years using the selected growth rate for the bridges determined during the project traffic forecasting development. As previously mentioned, the State's LOS target is LOS D. Therefore, the Gandy Boulevard bridges were assumed to fail when the LOS degrades to LOS E.

The results of the year of failure analysis are summarized in **Table 5-21**, which indicate that the four-lane bridge section is expected to fail in Year 2051 based on the Q/LOS analysis.

Table 5-21: Gandy Boulevard Bridges Year of Failure Analysis

Analysis Year	AADT	LOS
2050	64,800	D
2051	66,800	E
2052	68,800	E
2053	71,000	E
2054	73,200	E
2055	75,400	F

*LOS D AADT threshold: 66,200; LOS E AADT threshold: 75,300

5.4 Future Conditions Safety Analysis

A predictive safety analysis for future conditions was performed for US 92/SR 600/Gandy Boulevard between 4th Street North in St. Petersburg (Pinellas County) to West Shore Boulevard in Tampa (Hillsborough County), where possible. In cases where the predictive approach could not be applied due to limitations in the methodologies, a qualitative discussion is provided to address the safety benefits and implications of the Build Alternative. The future conditions safety analyses are presented in the following sections.

5.4.1 Predictive Safety Analysis

5.4.1.1 Study Area

The extent of the roadway segments and intersections analyzed using the predictive safety analysis approach are dependent on the limitations of the methodology. The existing limitations within the first edition of American Association of State Highway and Transportation Officials' (AASHTO)

Highway Safety Manual (HSM), Part C predictive methodologies precluded the analysis of all roadway segments and intersections within the study area.

In particular, HSM Part C does not include methodologies to estimate the predicted crash frequency for the following roadway types within the No-Build and Build Alternatives:

- One-way frontage roadways
- Urban multilane highways
- Five- and Six-lane urban arterials (the five-lane arterial analysis included in HSM is for two lanes in each direction separated by a center two-way left-turn lane)

The roadway segments listed below, along with all intersections within said segment, were excluded from the No-Build and Build Alternatives predictive analyses:

- No-Build
    - Five-lane and Six-lane segment between the east end of the Gandy Boulevard bridges and approximately 1,500 feet west of Bridge Street
    - One-way South Frontage Road and South Frontage Road/4th Street North intersection
    - One-way North Frontage Road and North Frontage Road/4th Street North intersection
- Build
    - Five-lane segments between the Gandy Boulevard bridges and approximately 2,300 feet west of Bridge Street
    - One-way frontage roadways (South Frontage Road and North Frontage Road) and associated intersections from 4th Street North to west of the Gandy Boulevard bridges. The excluded intersections include:
        - South Frontage Road at 4th Street North
        - North Frontage Road at 4th Street North
        - South Frontage Road at Brighton Bay Boulevard
        - North Frontage Road at Brighton Bay Boulevard
        - South Frontage Road at San Martin Boulevard
        - North Frontage Road at San Martin Boulevard
        - U-turn intersections along South Frontage Road and North Frontage Road between San Fernando Drive and the Gandy Boulevard bridges

The predictive safety analysis was therefore performed for the following roadway segments and intersections:

- No-Build Alternative
    - Controlled-access segment of Gandy Boulevard from the 4th Street North overpass to the connection with the at-grade segment of Gandy Boulevard (east of 4th Street North)
    - At-grade segment of Gandy Boulevard and the Gandy Boulevard bridges from 4th Street North to West Shore Boulevard (with the exception of the five and six-lane segments between Gandy Boulevard bridges and Bridge Street), including intersections at:

        - Brighton Bay Boulevard
        - San Martin Boulevard
        - Bridge Street
        - West Shore Boulevard
- Build Alternative
    - Controlled-access segment of Gandy Boulevard and the Gandy Boulevard bridges from 4th Street North to east end of the Gandy Boulevard bridges, including ramps providing access connections along Gandy Boulevard
    - At-grade segment of Gandy Boulevard from approximately 2,300 feet west of Bridge Street to West Shore Boulevard, including the intersections at:
        - West Shore Boulevard
        - Bridge Street

5.4.1.2 Analysis Methods

The future conditions safety performance of the No-Build and Build Alternatives were evaluated for the Opening Year 2030 and Design Year 2050 following the predictive methods outlined in the *HSM 1st Edition*, with specific attention to the predictive methods for freeways (Chapter 18 (freeways) and 19 (ramps)) and urban and suburban arterials (Chapter 12). The predictive method is applied to estimate the projected number of crashes for individual sites (e.g., freeway segment, freeway speed-change lane, ramp, ramp terminal, arterial segment, intersection, etc.) under defined volume, geometric, and traffic control conditions during a specified time period.

The predictive method involves application of the appropriate safety performance function (SPF) and predictive model. SPFs are used to estimate the predicted average crash frequency under a set of base conditions, and they are provided for different cross-sections, crash types (multiple vehicle and single vehicle), and crash severity (Fatal and Injury (FI) and Property Damage Only (PDO)).

The predicted average crash frequency of a particular site is determined by combining the crash frequency for the SPF base condition with site specific Crash Modification Factors (CMFs) and calibration factors. CMFs account for the change in crash frequency expected as a result of specific geometric and operational modifications. The calibration factors adjust for local conditions (i.e., differences between jurisdictions).

As detailed in **Section 5.4.1.1**, although the HSM predictive method is very comprehensive, it does not account for all of the conditions represented in No-Build and Build Alternatives, and the relevant exceptions and locations are identified in said section.

Given the number of segments excluded from the analysis due to inherent limitations of the HSM methodology, it is not possible to establish a comparison between predicted crash frequencies for the No-Build and Build Alternatives. For the roadway segments where the HSM Part C method could be applied, the predicted crash frequencies were determined following the process shown in **Figure 5-2.**

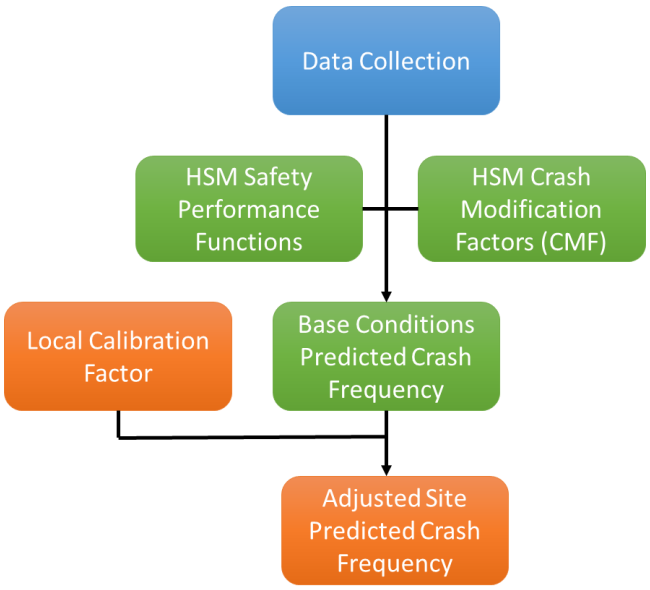


Figure 5-2: Predictive Method

5.4.1.3 Empirical Bayes Method

The Empirical Bayes (EB) Method combines the predictive model estimate with the site's observed crash data to determine the expected average crash frequency. The method corrects for the regression-to-mean bias that can exist in statistical models, thereby providing a more reliable crash prediction. The EB Method is only applicable under certain conditions depending on the availability of historical crash data, type of analysis (existing vs. future), and the type of roadway improvements.

According to Appendix B.2. of the *HSM 1st Edition Supplement*, the EB Method should not be applied if a major geometric change is proposed because "the observed crashed data for a previous time period is not necessarily indicative of the crash experience that is likely to occur after a major geometric improvement".

Considering the extensive change in the typical section proposed by the ongoing PD&E Study (namely, to transform a portion of the existing at-grade roadway to a separated, access-controlled facility for through travel with frontage roads that provide a means for local traffic flow and access to the adjacent properties), and the fact that the EB Method needs to be consistently applied to all the Alternatives being evaluated (i.e., No-Build and all Build Alternatives), it was determined that the EB Method was not appropriate for this safety analysis.

5.4.1.4 Calibration Factors

A series of calibration factors were developed by FDOT and published in the *FDOT Design Manual (FDM)* for use in predicting crash frequencies on State roadways. However, the current version of the manual (January 1, 2022) does not include factors for all facility types (e.g., freeways and ramps, urban arterials with more than five lanes, etc.). Since calibration factors were not available for all analyzed facility types and could not be applied consistently among all

Alternatives, they were not used in the predictive analysis for this study.

5.4.1.5 Selected Analysis Tools

AASHTO maintains several tools that assist in the application of the HSM Part C predictive methods. For the purposes of this analysis, the following AASHTO tools were utilized:

- Urban and Suburban Arterials Spreadsheet v3.2 (Updated April 2020)
- Enhanced Interchange Safety Analysis Tool (ISATe)

Although the operation of the segment from east of the Gandy Boulevard bridges to West Shore Boulevard is close to a multilane highway given the distance between signalized intersections, the Urban and Suburban Arterials Spreadsheet was used to analyze the four-lane divided highway segments and signalized intersections within the study limits. This selection was deemed appropriate because HSM only has a methodology for analyzing *Rural* Multilane Highways, and the corridor has suburban and urban characteristics.

Likewise, the HSM does not have a methodology for analyzing access-controlled highways. Therefore, although the controlled-access portion of Gandy Boulevard in the No-Build and Build Alternatives is not classified as a freeway facility, ISATe was selected as the most appropriate tool available given its ability to analyze safety performance of controlled access facilities and ramps.

5.4.2 Alternatives Evaluation

5.4.2.1 No-Build Alternative

Alternative Description for Safety Evaluation

Although the No-Build Alternative analysis generally assumes the existing roadway characteristics, it also considers the recent geometric changes along Gandy Boulevard associated with the construction of the Selmon Expressway Extension and the intersection modifications at West Shore Boulevard.

HSM Predictive Analysis

The results of the predictive safety analysis for the No-Build Alternative in Opening Year 2030 and Design Year 2050 are summarized in **Table 5-22**. The evaluation was limited to the roadway segments identified in Section 5.4.1.

Table 5-22: **No-Build HSM Crash Predictions for 2030 and 2050**

Analysis Year	Crash Severity Level	No-Build Alternative				
		Controlled-Access Segment Crashes (Crashes/Yr)	Controlled-Access Ramps Crashes (Crashes/Yr)	Urban Arterial Segments Crashes (Crashes/Yr)	Urban Arterial Intersection Crashes (Crashes/Yr)	Total
2030	Total	2.3	NA	60.4	15.7	78.3
	Fatal and Injury (FI)	0.7	NA	15.7	5.3	21.7
	Property Damage Only (PDO)	1.5	NA	44.7	10.4	56.6
2050	Total	3.0	NA	85.0	20.2	108.1
	Fatal and Injury (FI)	0.9	NA	21.9	6.9	29.7
	Property Damage Only (PDO)	2.1	NA	63.1	13.3	78.5

A direct correlation between historical crash data and the predictive *Highway Safety Manual (HSM)* results cannot be made in this study for the reasons below:

- The estimated crash frequency reported by HSM is based on safety performance functions derived from national data.
- Empirical Bayes Method could not be applied for this analysis. Empirical Bayes Method combines the predictive model estimate with the site's observed crash data to determine the expected average crash frequency. However, it should not be used when the observed crash data is not indicative of the crash experience that is likely to occur after a major geometric improvement, which is the case for the No-Build (includes the new Selmon Expressway Extension) and Build (includes complete reconstruction of the facility with a change in facility types - at-grade highway to elevated controlled access with ramps and frontage roads). In addition, per the HSM methodology Empirical Bayes Method should only be used when it can be consistently applied to all the Alternatives being evaluated.
- Calibration factors that adjust for local conditions (i.e., differences between jurisdictions) could not be applied for this analysis. FDOT does not provide factors for all of the facility types being analyzed. To maintain consistency in the analysis, calibration factors should only be used when they can be applied to all facilities and alternatives being analyzed.
- The HSM safety performance functions in the Urban and Suburban Arterials methodology are applicable within certain AADT ranges. The HSM states that when the AADT falls outside these thresholds, the analysis may not provide reliable results. There are some locations/analysis years in which the AADTs along Gandy Boulevard fell outside the specified ranges. In these cases where the segment AADT exceeded the maximum AADT for the applicable SPF, the maximum allowable AADT was used. This note is specified in the analysis output.

5.4.2.2 Build Alternative

Alternative Description for Safety Evaluation

The Build Alternative includes reconstructing Gandy Boulevard with through traffic in controlled access lanes separated from local traffic in frontage roads with shared use paths on both sides of

the corridor for pedestrians and bicyclists. The proposed Alternative will also widen the existing Gandy Boulevard bridges to accommodate a third travel lane in each direction and construct a new bridge to provide a wider structure for three travel lanes and a shared use path.

HSM Predictive Analysis

The estimated crash frequency for the Build Alternative in Opening Year 2030 and Design Year 2050 is summarized in **Table 5-23**. The evaluation was limited to the roadway segments identified in Section 5.4.1.

Table 5-23: **Build HSM Crash Predictions for 2030 and 2050**

Analysis Year	Crash Severity Level	Build Alternative				
		Controlled-Access Segment Crashes (Crashes/Yr)	Controlled-Access Ramps Crashes (Crashes/Yr)	Urban Arterial Segments Crashes (Crashes/Yr)	Urban Arterial Intersection Crashes (Crashes/Yr)	Total
2030	Total	59.5	0.9	4.3	8.0	72.7
	Fatal and Injury (FI)	19.3	0.4	1.1	2.6	23.4
	Property Damage Only (PDO)	40.2	0.5	3.2	5.4	49.3
2050	Total	94.3	1.2	6.2	11.7	113.4
	Fatal and Injury (FI)	28.7	0.5	1.6	3.9	34.7
	Property Damage Only (PDO)	65.6	0.7	4.6	7.8	78.7

As previously mentioned, it is not possible to make any correlation between the No-Build and Build Alternatives results due to:

- differences in analysis methodologies (i.e., freeways vs. arterials),
- difference in extents between Alternatives due to limitations in the HSM Part C Method, and
- the fact that the nationwide data used in the development of the HSM safety performance functions does not exactly represent the roadway characteristics and operations present in the No-Build and Build Alternatives.

The future condition safety analysis results are included in **Appendix M**.

5.4.3 Qualitative Safety Assessment

Given the limitations within the *HSM 1st Edition* methodology to address one-way roadways and certain characteristics within the study corridor, a qualitative safety assessment has been provided to supplement the results of the predictive analyses. To this end, published documents were researched to provide additional information on the expected safety benefits and challenges associated with grade-separated intersections and one-way frontage roads.

In general, intersections present challenges from a safety perspective due to the number of conflict points and the potential to create a bottleneck in the traffic flow. Separating traffic for the heavy through movement from the local traffic should improve safety conditions by reducing congestion

and conflict points related crashes at the intersection. It is noted, however, that poor synchronization of the two at-grade signals could result in additional stoppages, and the presence of one-way frontage roads could result in wrong-way movements by unfamiliar drivers.[2] Notwithstanding, well-coordinated signal timing at grade-separated intersections and adequate pavement markings and signage can potentially reduce the occurrence of congestion and wrong way related crashes types like rear-end and head-on crashes.

In addition to limiting access along Gandy Boulevard to facilitate the movement of through traffic along the corridor, frontage roads are being proposed between 4th Street North and the Gandy Boulevard bridges to provide both access to adjacent and nearby properties and a means to maintain local traffic flows. Although the crash performance of the frontage roads could not be quantified using the HSM Part C predictive method, there are implied safety benefits associated with separating through and local traffic flows. The implementation of frontage roads along a main roadway is expected to reduce the frequency and severity of crashes along the main roadway by limiting and separating conflicts.[3] Providing a separate facility for through traffic, also reduces the amount of traffic (i.e., exposure) along the frontage road, where the access-related conflicts occur. Reducing the exposure can reduce the frequency of crashes. Moreover, since the frontage road can be used by local and vulnerable road users as a lower speed alternative to the higher speed main roadway, a reduction in pedestrian and bike crashes and crash severity could also be expected.

It is worth mentioning that additional resources were also consulted, including Federal Highway Administration (FHWA) Crash Modification Factors (CMF) Clearinghouse, and the FDOT Crash Reduction Factors (CRF) spreadsheet. The crash modification factors for "Presence of an elevated road above intersection" and "grade-separated interchanges" contained in the CMF Clearinghouse were deemed not applicable in this case, due to intersection separation, research study's location, absence of defined roadway type and area type, as well as the quality or confidence in the results of the study producing the CMF. With respect to the FDOT CRF spreadsheet, the latest available version (as of 02/14/2014) does not provide any data related to crash reduction for "Construct grade separation". Lastly, no factors could be found in the FHWA's CMF Clearinghouse or FDOT's CRF spreadsheet associated with converting an arterial into a controlled access main roadway with at-grade one-way frontage roads.

[2] FHWA Public Roads - May/June 2000, Advantages of The Split Intersection by Joe G. Bared and Evangelos I. Kaisar

[3] FHWA-HRT-14-057 Safety Evaluation of Access Management Policies and Techniques (February 2018)

6.0 Summary of Analysis Results

Existing conditions evaluations show the multilane highway facilities and the Gandy Boulevard bridges operating at acceptable Level of Service (LOS) but the intersections along Gandy Boulevard operate at unacceptable LOS with most movements operating at LOS E or F.

Motorists traveling on the northbound and southbound approaches of the unsignalized intersection of Gandy Boulevard and San Martin Boulevard experience excessive delays waiting for gaps on Gandy Boulevard to complete their movements.

Tables 6-1 and 6-2 show for Design Year 2050, under the No-Build Alternative, the multilane highway facilities and the Gandy Boulevard bridges operating at acceptable LOS (except for the segment between 4th Street North and Brighton Bay Boulevard) but the intersections along Gandy Boulevard will continue to operate at unacceptable LOS with most movements operating at LOS E or F.

Table 6-1: Design Year (2050) No-Build Multilane Highway Segment Analysis

Gandy Blvd Segment	Eastbound Direction				Westbound Direction			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
From 4th St North ramps to Brighton Bay Blvd	29.7	D	35.5	E	44.6	E	31.5	D
From Brighton Bay Blvd to west end of Gandy Blvd bridges	26.2	D	30.5	D	30.8	D	25.9	C
From east end of Gandy Blvd bridges to 600 ft west of US Marine entrance	21.6	C	25.5	C	25.5	C	21.6	C
From 600 ft west of US Marine entrance to Selmon Expwy ramps	17.9	B	20.9	C	20.9	C	17.9	B
From Selmon Expwy ramps to 1700 ft west of Bridge St	10.1	A	11.5	B	17.3	B	15.1	B
From 1700 ft west of Bridge St to West Shore Blvd	17.9	B	20.2	C	22.9	C	19.6	C

Table 6-2: Design Year (2050) No-Build Intersection Analysis Results

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
4th St North and North Frontage Rd	62.8	E	63.2	E
4th St North and South Frontage Rd	46.7	D	50.7	D
Gandy Blvd at Brighton Bay Blvd	157.2	F	104.8	F
Gandy Blvd at San Martin Blvd/Mangrove Cay*	2252.5	F	**	**
Gandy Blvd at West Shore Blvd	116.8	F	113.6	F

*Unsignalized intersection. Results show worst intersection movement delay ** Excessive delay, threshold exceeded.

The westbound through movement at the intersection of Gandy Boulevard and Brighton Bay Boulevard shows a queue of approximately 3,000 feet in the AM peak hour meaning the queue is projected to impact the operations at Gandy Boulevard and San Martin Boulevard and Gandy Boulevard and Snug Harbor Road NE intersections. The eastbound through movement at the intersection of Gandy Boulevard and Brighton Bay Boulevard shows a queue of over 3,200 feet in the PM peak hour meaning the queue is projected to impact traffic merging from the South Frontage Road and 4th Street North intersection.

Motorists traveling on the northbound and southbound approaches of the unsignalized intersection of Gandy Boulevard and San Martin Boulevard are expected to continue to experience excessive delays waiting for gaps on Gandy Boulevard to complete their movements

Gandy Boulevard is being reconstructed between 4th Street North and the west end of the Gandy Boulevard bridges as an elevated controlled-access facility with ramps and frontage roads under the Build Alternative. **Tables 6-3 and 6-4** show for Design Year 2050, under the Build Alternative, all the freeway segments, multilane highway segments, ramps, and all but one intersection on the Pinellas County side operating at acceptable LOS D or better. The overall operations on the Pinellas County side improve significantly when compared to the No-Build conditions.

Table 6-3: Design Year (2050) Build Freeway and Multilane Highway Segment Analysis

Gandy Blvd Segment	Analysis Type	AM Peak Hour		PM Peak Hour	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Eastbound Direction					
From Martin Luther King St North off-ramp to Diverge Off-Ramp east of 4th St North	Freeway	20.3	C	23.4	C
Off-ramp east of 4th St North - Diverge	Freeway	21.7 Fr/ 16.4 Ramp	B	24.9 Fr/ 19.2 Ramp	B
From Off-ramp east of 4th St North to On-ramp west of Brighton Blvd	Freeway	16.3	B	19.3	C
Gandy Blvd On-ramp west of Brighton Bay Blvd - Merge	Freeway	25.3 Fr/ 19.3 Ramp	B	29.7 Fr/ 22.6 Ramp	C
From Merge On-ramp west of Brighton Blvd to On-ramp east of San Fernando Dr	Freeway	24.4	C	28.5	D
From On-ramp east of San Fernando Dr to Beach Access Frontage Rd On-ramp	Freeway	16.7	B	19.2	C
Access Frontage Rd On-ramp - Merge	Freeway	17.2 Fr/ 11.2 Ramp	B	19.9 Fr/ 13.3 Ramp	B
From Beach Access Road On-ramp Merge to east end of Gandy Blvd bridges	Freeway	16.8	B	19.3	C
From east end of Gandy Blvd bridges to EB on-ramp to Selmon Expressway	Multilane Highway	19.7	C	22.6	C
From EB on-ramp to Selmon Expressway to West Shore Blvd	Multilane Highway	19.1	C	21.3	C
Westbound Direction					
From West Shore Blvd to EB Selmon Expressway On-ramp	Multilane Highway	25.1	C	21.7	C
From EB on-ramp to Selmon Expressway to east end of Gandy Blvd bridges	Multilane Highway	19.4	C	17.3	B
From east end of Gandy Blvd bridges to Off-ramp east of San Fernando Dr	Freeway	19.1	C	16.6	B

Gandy Blvd Segment	Analysis Type	AM Peak Hour		PM Peak Hour	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
From Off-ramp east of San Fernando Dr to Diverge Off-ramp west of Brighton Bay Blvd	Freeway	28.3	D	24.2	C
Off-ramp west of Brighton Bay Blvd - Diverge	Freeway	30.7 Fr/ 23.5 Ramp	C	26.2 Fr/ 19.8 Ramp	B
From Off-ramp west of Brighton Bay Blvd to On-ramp east of 4th St North	Freeway	19.2	C	16.2	B
On-ramp east of 4th St North – Merge	Freeway	24.2 Fr/ 18.4 Ramp	B	21.0 Fr/ 15.9 Ramp	B
From Merge On-ramp east of 4th St North to Martin Luther King Jr St North On-ramp	Freeway	23.2	C	20.2	C

Table 6-4: Design Year (2050) Build Intersection Analysis Results

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
4th St North and North Frontage Rd	55.2	E	55.0	D
4th St North and South Frontage Rd	31.7	C	47.4	D
Gandy Blvd at Brighton Bay Blvd	33.5	C	34.9	C
WB Frontage Rd at Mangrove Cay	11.0	B	15.6	B
EB Frontage Rd at San Martin Blvd	15.1	B	13.7	B
Gandy Blvd at West Shore Blvd	141.9	F	137.4	F

An additional analysis was performed to determine the year of failure of a four -lane typical section on the Gandy Boulevard bridges using the *2020 Quality/Level of Service Handbook (Q/LOS)* Generalized Annual Average Daily Service Volume Tables (January 2020) for Florida's Urbanized Areas. The Build Alternative volumes were grown for successive years using the selected growth rate for the bridges determined during the project traffic forecasting development. As previously mentioned, the State's LOS target is LOS D. Therefore, the bridge was assumed to fail when the LOS degrades to LOS E.

The results of the year of failure analysis are summarized in **Table 6-5**, which indicate that the four-lane bridge section is expected to fail in Year 2051 based on the Q/LOS analysis.

Table 6-5: Gandy Boulevard Bridges Year of Failure Analysis

Analysis Year	AADT*	LOS
2050	64,800	D
2051	66,800	E
2052	68,800	E
2053	71,000	E
2054	73,200	E
2055	75,400	F

*LOS D AADT threshold: 66,200; LOS E AADT threshold: 75,300

Appendix A:
Traffic Methodology

Traffic Analysis Methodology

US 92/SR 600/Gandy Blvd from 4th St. to West Shore Blvd (SWAT)

This traffic analysis methodology is prepared to document how the analysis shall be conducted to meet project goals. The methodology includes the following elements:

Project Description:

The project limits of the Gandy PD&E Study extend along US 92/SR 400/Gandy Boulevard from 4th Street North in Pinellas County to West Shore Boulevard in Hillsborough County, including the Gandy Bridge over Tampa Bay, a distance of approximately seven (7) miles. Gandy Boulevard is currently a four-lane divided facility throughout the entire study area. This portion of Gandy Boulevard is functionally classified by the Florida Department of Transportation (FDOT) as an urban principal arterial and is part of FDOT's Strategic Intermodal System (SIS). The improvements will consider grade separations at major intersections along the corridor and widening up to six (6) lanes. Bridge widening and/or replacement will be evaluated as part of this project.

The following study intersections have been defined for the project:

- 4th Street and North Frontage Road
- 4th Street and South Frontage Road
- Gandy Boulevard and Brighton Bay Boulevard
- Gandy Boulevard and San Martin Boulevard/Mangrove Cay Lane
- Gandy Boulevard and West Shore Boulevard.

Analysis Years:

Travel Demand Model - Tampa Bay Regional Planning Model (TBRPM v9.1):

- Base Year 2015
- Horizon Year 2045

Traffic Operational Analysis:

- Existing Year: 2020
- Opening Year: 2025
- Design Year: 2045

Traffic Data Collection:

72-hour bi-directional traffic counts, 72-hour classification counts, and 4-hour turning movement counts were conducted in the study area between November 2020 and January 2021.

Existing AADT Development:

The initial development of Annual Average Daily Traffic (AADT) from the project counts followed the procedures published in FDOT's *2019 Project Traffic Forecasting Handbook*. Daily traffic counts taken for the project were filtered down to include only typical weekdays (Tuesday / Wednesday / Thursday) and from there a QA/QC was performed to additionally filter out any days that may include atypical volumes, as compared to the count data from other days. The daily counts were then averaged and appropriate traffic factors, namely the Seasonal Factor (SF) and Axle Correction Factor (ACF), were applied to develop 2020 AADTs.

A map was then developed to visually compare the 2020 AADTs to 2019 AADTs at locations available from Florida Traffic Online (FTO) within the project area, in order to discern what affects, if any, the COVID-19 Pandemic was having on traffic volumes. After discussing with FDOT, it was decided the most conservative approach would be to assume volumes similarly to pre-pandemic levels along the traffic corridor.

Additionally, for all side streets along the corridor, it was determined no further adjustment was needed to the 2020 AADTs.

The Existing Year (2020) AADTs were submitted to FDOT for approval on March 25, 2021. A meeting was held with FDOT to discuss the Existing 2020 AADT Development and the Final Existing AADT Development Memorandum was submitted May 6, 2021.

Traffic Factors:

The traffic factors to be used in this study were submitted with the Existing Year (2020) AADT Development Memorandum and approved by FDOT. The traffic factors are summarized below:

- K-Factor: 9%
- D-Factor:
    - Along Gandy Boulevard and side streets other than Brighton Bay and Frontage Road: 53.4%
    - Brighton Bay Boulevard North of Gandy Boulevard: 69.1%
    - Brighton Bay Boulevard South of Gandy Boulevard: 77.7%
    - Frontage Road: 62.0% (as One-Way Pair)
- T-Factor: 5% with a Design Hour T Factor of 2.5%

DDHVs and Turning Movement Volumes:

The AADT's will be multiplied by the K and D Factors to develop existing and future directional design hour volumes (DDHVs), and additionally multiplied by turning movement percentages to estimate peak hour turning movement volumes.

For the development of balanced turning movement volumes, minor adjustments may be necessary to the existing AM and PM peak turning movement percentages at the study intersections for the No Build Alternative. Based upon a preliminary comparison analysis with turning movement percentages from counts collected during previous years, it was found turning

percentages collected during peak hours from December 2020 to January 2021 varied slightly in the eastbound and westbound directions. This is likely due to the decrease in the number of commuters caused by the pandemic. Comparison analysis results and recommended turning movement percentages for the No Build Alternative will be presented as part of the traffic forecasting effort for the project. The DDHVs and turning movement volumes for the Build alternative will reflect the additional demand in the eastbound and westbound directions as a result of the project. All volumes will be rounded in accordance with standards published in *FDOT's 2019 Project Traffic Forecasting Handbook*.

Future Years (2025 and 2045) AADT Development:

The travel demand model version, subarea validation, travel demand modeling procedure, growth rate analysis and future AADTs for the No Build and Build alternatives have previously been reviewed and approved by District Seven (August 2021). Nonetheless, the subsequent sub-sections document the general methodology employed for the future AADT development.

The travel demand forecasting for this project was developed in accordance with the procedures in *FDOT's 2019 Project Traffic Forecasting Handbook*.

The Tampa Bay Regional Planning Model (TBRPM) Version 9.1 (v9.1) is the travel demand model being used for the project. The TBRPM v9.1 is a time-of-day based, four-step model with Base Year 2015 and Horizon Year (Cost Affordable Year) 2045; other interim year model scenarios are also available but of no relevance for this study.

Subarea Validation

A subarea validation was performed to determine the TBRPM's performance and adequacy for the Gandy Boulevard PD&E Study. To this end, model inputs (highway network and socioeconomic data) and outputs (loaded highway network assignment) were reviewed and compared for Base Year 2015 and Horizon Year 2045 within the defined project subarea. Specifically, the geometry of the highway networks were reviewed, including the provision of centroid connectors and turning penalties/prohibitors; additionally, the socio-economic data were reviewed to ensure the PUD (Westshore) development was included within the Traffic Analysis Zones (TAZs) as necessary.

To assess the reasonableness of the TBRPM v9.1 Base Year 2015 highway assignment output, the 2015 Peak Season Weekday Average Daily Traffic (PSWADT) volumes generated by the model were compared with 2015 PSWADT counts within the defined subarea using scatterplots and standard validation measures such as the Coefficient of Determination (R^2), Volume-over-Count ratio (V/C), and Root Mean Squared Error Percent (RMSE%). The validation for the subarea were performed on a daily basis and grouped by facility type. Results were compared to corridor level standards published in *FDOT's 2019 Project Traffic Forecasting Handbook* and the *FSUTMS-Cube Framework Phase II Model Calibration and Validation Standards.* Any refinements to the model will be documented accordingly in the forthcoming Project Traffic Forecasting Memorandum.

Travel Demand Modeling

Three (3) travel demand model runs were performed as follows: 2015 Base Year, 2045 No Build, and 2045 Build. All runs included appropriate refinements as determined during the subarea validation process. The 2045 No Build highway network includes all funded improvements through Design Year 2045 without the project. To develop the 2045 Build highway network, the 2045 No Build highway network was used, and the project coded. For the 2045 Build model run, the trip table was locked and remains constant between the No Build and Build models, ensuring no changes in origin or destination of the trips are induced by the project improvements.

Growth Rate Analysis

From the travel demand model runs, two (2) sets of growth rates were developed through interpolation of Base Year and Horizon Year model runs: No Build and Build growth rates. For the No Build scenario, Base Year 2015 and Horizon Year 2045 No Build model data sets were used; and for the Build scenario, Base Year 2015 and Horizon Year 2045 Build model data sets were used. To determine growth rates, historical growth rates, model assignment growth, and socio-economic growth were also considered.

Future AADTs for No Build and Build Analysis

The No Build and Build growth rates have been determined and applied for each scenario, respectively, to the Existing Year 2020 AADTs. All volumes were rounded in accordance with standards published in *FDOT's 2019 Project Traffic Forecasting Handbook*.

Analysis Tools:

All analyses will be conducted in compliance with guidelines published in the *FDOT's 2021 Traffic Analysis Handbook*. Intersection analysis will be conducted using Synchro 11. Highway Capacity Manual (HCM) 6th Edition, and vehicle delay and Level of Service (LOS) will be reported. In cases where limitations in the HCM 6th Edition methodology preclude its use, prior HCM methodologies (i.e., HCM 2010 and HCM 2000) will be applied. Traffic signal timing information shall be obtained from the maintaining agency and used in the existing conditions analysis.

HCS 7 will be used on the elevated section in Pinellas County to evaluate the ramps and the elevated portion of Gandy Boulevard.

The FDOT 2020 Generalized Service Volume tables will be used to evaluate the anticipated LOS on the Gandy Bridge.

The target LOS for the study area is LOS D. The measures of effectiveness (MOEs) to be used in this study include:

- Level of Service (LOS)
- Delay for the overall intersection and individual movements (interrupted flow facilities)
- 95th Percentile Queue (interrupted flow facilities)
- Density (uninterrupted flow facilities)

Alternatives Evaluation:

- No Build Alternative:
    - The No Build Alternative will be evaluated for Opening (2025) and Design (2045) Years AM and PM peak hours.
- Build Alternative:
    - The No Build Alternative will be evaluated for Opening (2025) and Design (2045) Years AM and PM peak hours.
- A queueing analysis will be conducted to determine the recommended left-turn storage length.

Safety Analysis:

The CONSULTANT will utilize crash data for years 2015 to 2019 from CARS Online provided by the DEPARTMENT in accordance with FDOT's *2019 Safety Analysis Guidebook for PD&E Studies.* The crash data will include the number and type of crashes, crash locations, number of fatalities and injuries, and estimates of property damage and economic loss. Crash rates will be compared with the statewide average crash rates of similar locations to identify any high crash locations.

Based on the information obtained from the crash data, the CONSULTANT will identify project safety needs.

When possible, Highway Safety Manual (HSM) procedures will be used to perform a predictive crash analysis for the No-Build and Preferred Build alternatives.

a. Elevated Limited Access Facility with ramps –HSM 1st Edition Part C, Chapter 18.

b. Frontage Roads – HSM cannot be used because the 1st Edition does not have a Safety Performance Function (SPF) for one-way urban roadways and ISATe does not account for the influence of the frontage roads.

c. At grade arterials (2 to 5 lanes) – HSM 1st Edition Part C, Chapter 12.

d. If HSM Part C cannot be applied, the Countermeasure Crash Modification Factor (CMF) methodology will be applied. In the case neither HSM procedures nor Countermeasure CMF methodology can be applied, a qualitative discussion of the safety benefits of the proposed project will be provided.

e. Because of limitations in the application of HSM 1st Edition Part C, a direct comparison between the No Build and Preferred Build alternative predicted number of crashes will not be performed.

Appendix B:
Final Existing AADT Development Memorandum

US 92/SR 600/GANDY BLVD (SWAT) – 2020 AADT Development and Recommended Traffic Factors

TO:	Craig Fox, PE, FDOT D7 Project Manager
FROM:	Jacobs
DATE:	May 6, 2021
RE:	2020 AADT Development and Recommended Traffic Factors US 92/SR 600/Gandy Blvd from 4th Street to West Shore Blvd (SWAT)

As part of the US 92/SR 600/Gandy Blvd (SWAT), Jacobs was requested to develop annual average daily traffic (AADT) estimates based on the counts taken for the project in December 2020 – January 2021. The development of these estimates has presented a unique challenge given the unusual circumstances of the counts being performed during the COVID-19 pandemic, in which many within the community are now working from home and are no longer commuting to and from work. This has caused atypical drops in AADTs, as compared to previous years, and additionally produces the question of whether this trend will continue in the future or if things will gradually return to normal.

The initial development of AADTs from the project counts followed the usual procedures. Daily traffic counts taken for the project were filtered down to include only typical weekdays (Tuesday / Wednesday / Thursday) and from there a QA/QC review was performed to additionally filter out any days that may include atypical volumes, as compared to the count data from other days. The daily counts were then averaged and appropriate traffic factors, namely the Seasonal Factor (SF) and Axle Correction Factor (ACF), were applied to develop 2020 AADTs, shown in **Attachment A**.

A map was then developed to visually compare the 2020 AADTs to 2019 AADTs at locations available from Florida Traffic Online (FTO) within the project area, in order to discern what affects, if any, the pandemic was having on traffic volumes. This map can be seen in **Attachment B**. After studying the map, it was observed for most locations directly on the project corridor, the 2020 AADTs were approximately 5,000 vehicles per day (vpd) less than the 2019 AADTs. After internal discussion it was decided the most conservative approach would be to assume volumes similarly to pre-pandemic levels along the traffic corridor. Therefore, 5,000 vpd was added to develop the recommended 2020 AADTs along Gandy Boulevard. The one exception to this is the count located west of West Shore Boulevard. The count data for this location appeared to be considerably lower than expected, when compared with other count data available. Therefore, for this location the 2019 AADT obtained from the FTO for the location east of the Gandy Boulevard bridge, was used in its place. Additionally, for all side streets along the corridor, it was determined no further adjustment was needed to the 2020 AADTs. A comparison map showing the recommended 2020 AADT volumes and 2019 AADTs is presented in **Attachment C** and the final recommended 2020 AADTs are presented in **Attachment D**.

K Factor

Per Table 2-1 of the *2019 Project Traffic and Forecasting Handbook*, a standardized K of 9% is recommended for arterials and highways in urbanized areas, and therefore will be used for the subject project.

D Factor

Based on the calculations using an average of all available count data along Gandy Boulevard within the project corridor, the recommended D factor is 53.4%, which is within the allowable range for urban arterials included in Table 2-2 of the *2019 Project Traffic and Forecasting Handbook*. The recommended D factor is also comparable to the most recently reported 2019 D factor for the permanent count station located on the Gandy Boulevard bridge, which was 53.0%. The recommended D factor of 53.4% is also applicable for the majority of side streets with the exception of Brighton Bay Blvd and the Frontage Road. As shown in the counts performed during the peak periods, there is more directionality along these side streets and therefore the following D factors are recommended, respectively:

- Brighton Bay Blvd North of Gandy Blvd: 69.1%
- Brighton Bay Blvd South of Gandy Blvd: 77.7%
- Frontage Road: 62.0% (as One-Way Pair)

While the D factor of 62.0% for the Frontage Road fails within the recommended range for an urban arterial, the recommended D factors for Brighton Bay Blvd do not. However, it should be noted that Brighton Bay Blvd functions more as a driveway providing access to the residential and commercial land uses and therefore is not considered a thoroughfare roadway. As such, the higher D factors of 69.1% and 77.7% are recommended, pending any substantial land uses changes in the future.

It should be noted the D factors identified herein have been determined from counts and therefore, as new facilities and land use are incorporated into the study area for the future horizon years, adjustments may be made accordingly. Any adjustments to the D factors identified herein, as well as those identified for new facilities will be documented as part of the project traffic forecasting effort.

T Factor

The recommended T factor is 5% and the recommended Peak Hour T factor is 2.5%.

The calculations used to determine the recommended traffic factors can be found in **Attachment E**.

Turning Movement Volumes

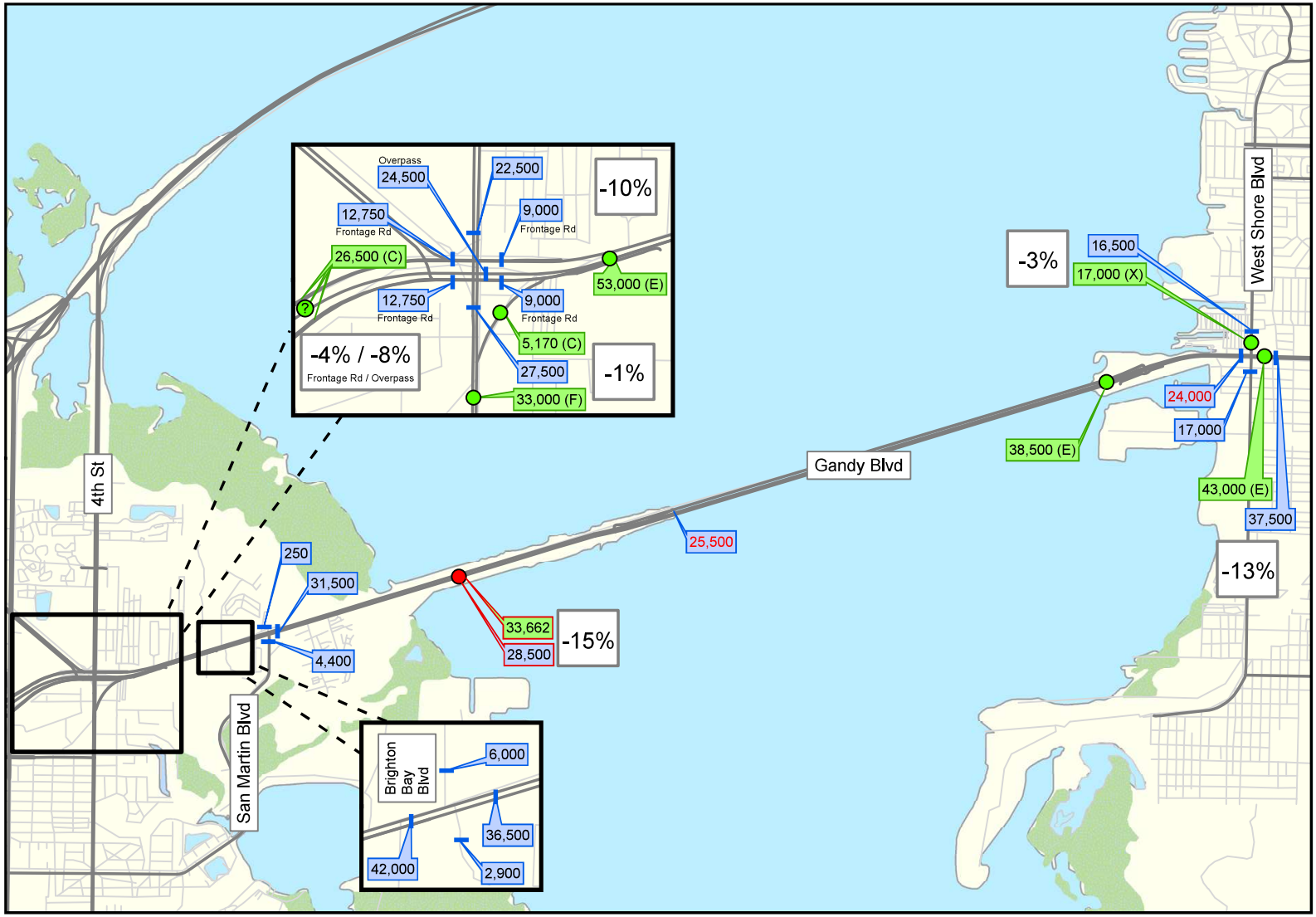
For the development of future turning movement volumes, minor adjustments may be necessary to the existing AM and PM peak turning movement percentages at the study intersections. Based upon a preliminary comparison analysis with turning movement percentages from counts collected during previous years, turning percentages as collected during peak hours in the field from December 2020 to January 2021 varied slightly in the eastbound and westbound directions. This is expected to be due to the decrease in the number of commuters caused by the pandemic. Comparison analysis results and recommended turning movement percentages will be presented as part of the traffic forecasting effort for the project.

ATTACHMENT A

Street Name: Location	Date	County	Tues	Weds	Thurs	Tues	Weds	Thurs	Daily			SF	ACF	2020 AADT	
			SB/WB			NB/EB			SB/WB	NB/EB	Total			Unrounded	Rounded
Gandy Blvd: West of 4th St N (Frontage Rd)	January 5th-7th	Pinellas	15,199	15,143	15,048	9,977	9,962	10,107	15,130	10,015	25,145	1.03	0.98	25,382	25,500
Gandy Blvd: East of 4th St N (Overpass)	January 12th-14th		10,590	10,855	11,336	13,612	13,614	14,564	10,927	13,930	24,857	1.02	0.97	24,594	24,500
Gandy Blvd: East of 4th St N (Frontage Rd)	January 5th-7th		10,728	10,863	10,973	7,063	6,922	7,072	10,855	7,019	17,874	1.03	0.98	18,042	18,000
Gandy Blvd: West of Brighton Blvd	December 15th-17th		20,200	19,561	21,198	20,967	20,689	21,233	20,320	20,963	41,283	1.04	0.98	42,075	42,000
Gandy Blvd: East of Bighton Blvd	December 15th-17th		18,610	18,020	19,473	17,143	16,827	17,259	18,701	17,076	35,777	1.04	0.98	36,464	36,500
Gandy Blvd: East of San Martin Blvd	January 12th-14th		15,459	15,715	16,522	15,363	15,508	16,627	15,899	15,833	31,731	1.02	0.97	31,395	31,500
Gandy Blvd: Permanent Station Counts	December 2-17										28,554	1.04	0.98	29,102	29,000
Gandy Blvd: Permanent Station Counts	January 13-21										28,418	1.01	0.97	27,841	28,000
Gandy Blvd West of the Bridge	December 15th-17th		12,938	12,533	12,847	12,420	12,014	12,074	12,773	12,169	24,942	1.04	0.98	25,421	25,500
Gandy Blvd West of Westshore Blvd	December 8th-10th	Hillsborough	9,100	9,198	9,400	14,120	14,593	14,997	9,233	14,570	23,803	1.03	0.97	23,781	24,000
Gandy Blvd East of Westshore Blvd	December 8th-10th		18,934	18,665	19,276	16,466	20,360	-	18,958	18,413	37,371	1.03	0.97	37,338	37,500
4th St N: North of Gandy Blvd	January 5th-7th	Pinellas	11,982	11,790	11,936	10,365	10,230	10,434	11,903	10,343	22,246	1.03	0.99	22,684	22,500
4th St N: South of Gandy Blvd	January 5th-7th		14,893	14,972	15,238	11,963	11,980	12,216	15,034	12,053	27,087	1.03	0.99	27,621	27,500
Brighton Bay Blvd: North of Gandy Blvd	December 15th-17th		2,476	2,378	2,479	3,396	3,250	3,436	2,444	3,361	5,805	1.04	0.99	5,977	6,000
Brighton Bay Blvd: South of Gandy Blvd [1]	December 15th-17th		715	695	687	2,056	2,197	2,092	699	2,115	2,814	1.04	0.99	2,897	2,900
Mangrove Cay: North of Gandy Blvd	January 12th-14th		140	124	150	101	104	130	125	112	237	1.02	0.99	239	250
San Martin Blvd South of Gandy Blvd	January 12th-14th		2,497	2,672	2,754	1,645	1,654	1,751	2,641	1,683	4,324	1.02	0.99	4,367	4,400
West Shore Blvd North of Gandy Blvd	December 8th-10th	Hillsborough	9,332	9,094	8,725	7,859	7,753	7,228	9,050	7,613	16,664	1.03	0.97	16,649	16,500
West Shore Blvd South of Gandy Blvd	December 8th-10th		-	7,945	7,823	8,985	8,707	9,024	7,884	8,905	16,789	1.03	0.97	16,774	17,000

[1] The daily loop count for the Northbound approach was adjusted by half to account for double counting of vehicles approaching the red signal. Adjustment was determined by comparing the loop counts taken during the peak period with the manual turning movement counts. Even after adjustment of the Northbound approach only, the daily volumes are highly directional which is due to the majority of delivery drivers using the adjacent joining driveway to the west (DeLane) to turn in to access the lot, and then exit the lot via the traffic signal at Brighton Bay Blvd.

ATTACHMENT B



LEGEND

- FDOT Portable Site
- FDOT Telemetered Site
- 72 Hour Count Location
- 10,000 FDOT Portable Site 2019 AADT
- 10,000 2020 AADT
- 10,000 2020 AADT - Possible Bad Count
- 10,000 FDOT Telemetered Site 2019 AADT
- 10,000 FDOT Telemetered Site 2020 AADT Dec 2020 & Jan 2021

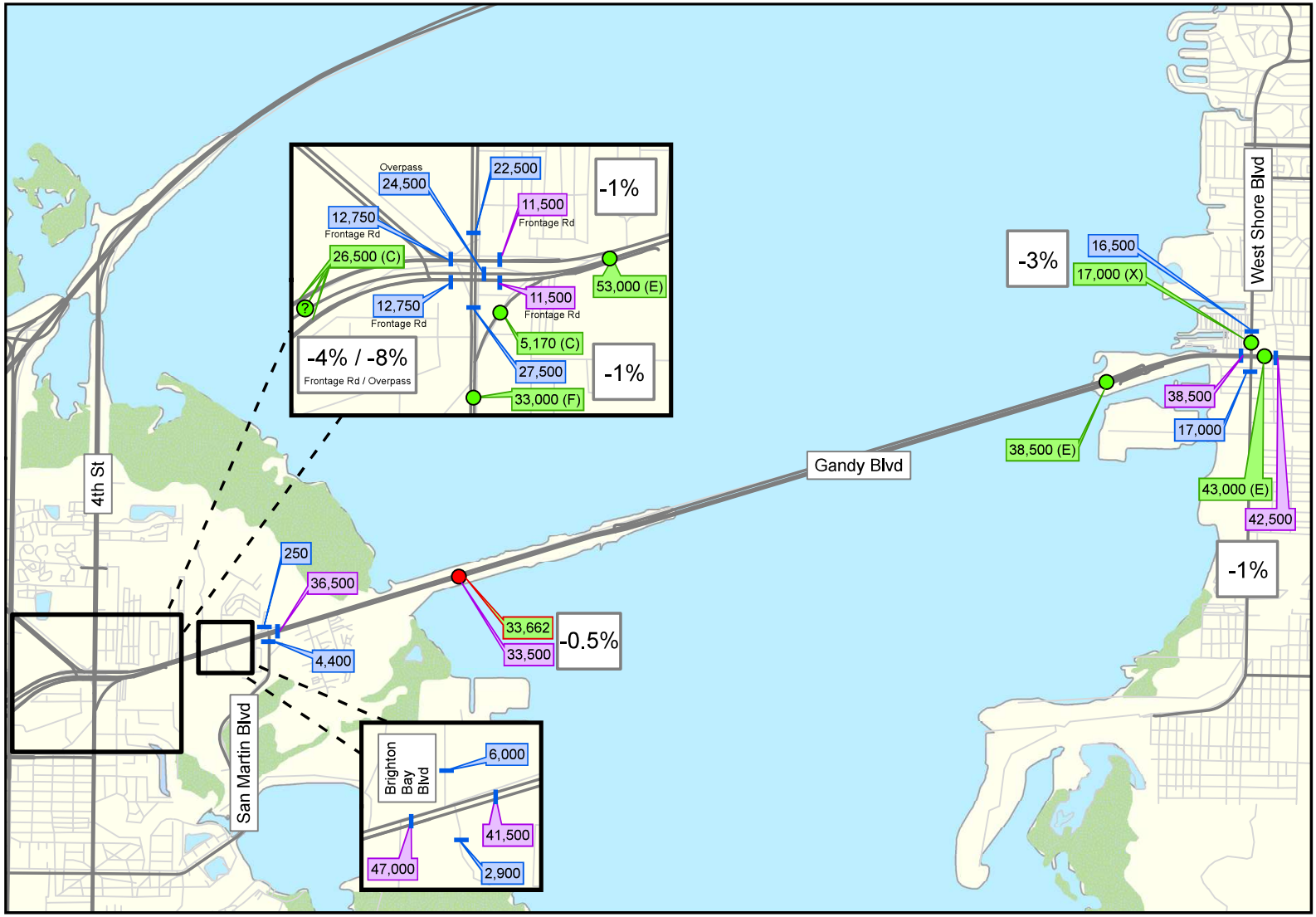
FDOT AADT FLAGS

(C) = Computed
(E) = Manual Estimate
(F) = First Year Estimate
(X) = Unknown

US 92/SR 600/GANDY BLVD (SWAT)
From 4th Street to West Shore Boulevard
Hillsborough County, FL
Financial Project Number: 441250-1-22-01

COMPARISON MAP: 2020 AADTs vs FDOT AADT Data

ATTACHMENT C



LEGEND

- FDOT Portable Site
- FDOT Telemetered Site
- 72 Hour Count Location
- 10,000 FDOT Portable Site 2019 AADT
- 10,000 2020 AADT
- 10,000 Recommended 2020 AADT
- 10,000 FDOT Telemetered Site 2019 AADT

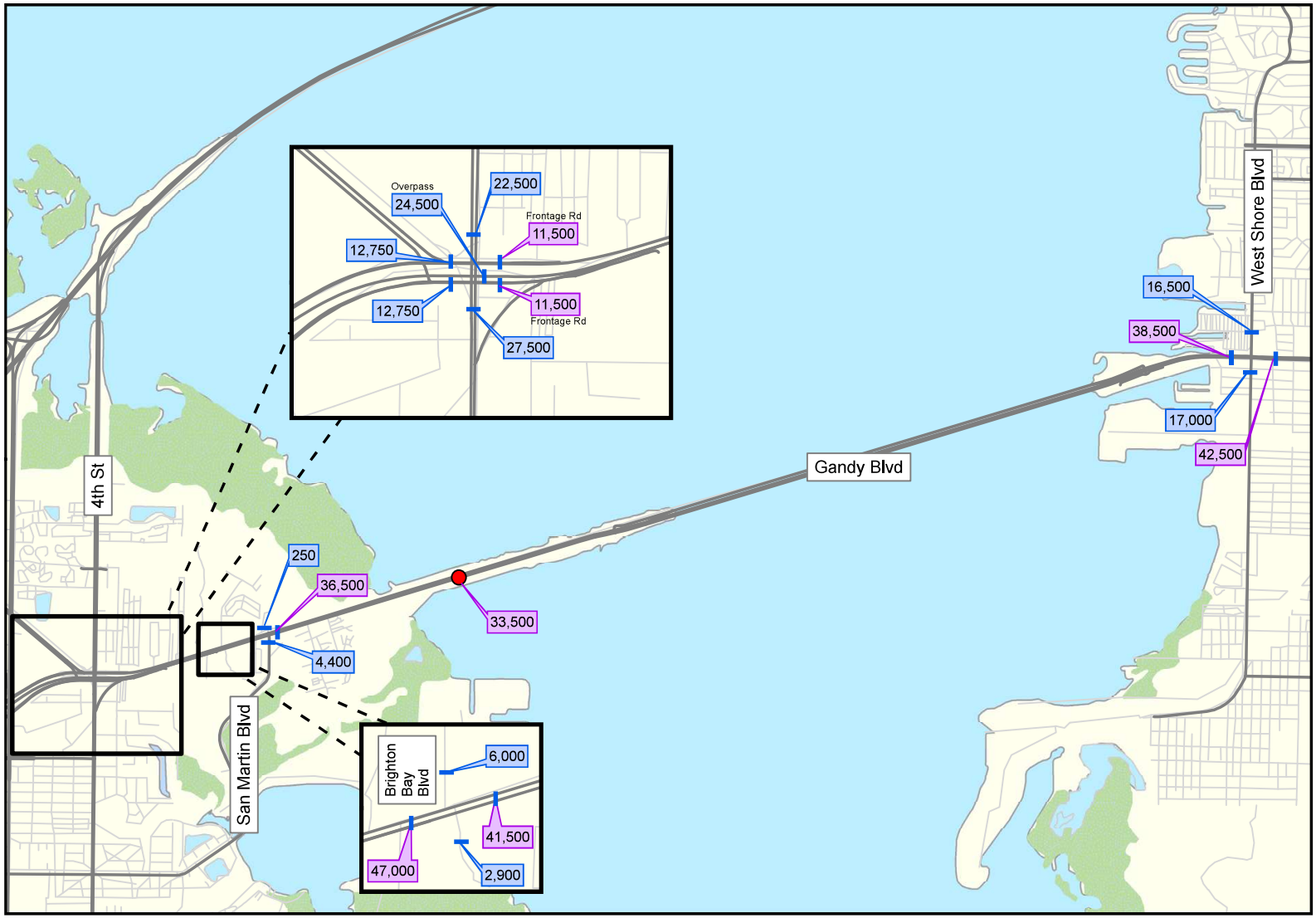
FDOT AADT FLAGS

(C) = Computed
(E) = Manual Estimate
(F) = First Year Estimate
(X) = Unknown

US 92/SR 600/GANDY BLVD (SWAT)
From 4th Street to West Shore Boulevard
Hillsborough County, FL
Financial Project Number: 441250-1-22-01

COMPARISON MAP: Recommended 2020 AADTs vs FDOT AADT Data

ATTACHMENT D



LEGEND

- FDOT Telemetered Site
- 72 Hour Count Location
- 10,000 2020 AADT
- 10,000 Recommended 2020 AADT

US 92/SR 600/GANDY BLVD (SWAT)
From 4th Street to West Shore Boulevard
Hillsborough County, FL
Financial Project Number: 441250-1-22-01

Recommended 2020 AADTs

ATTACHMENT E

Gandy Boulevard SWAT Traffic Factors:

A. Gandy Boulevard:

a. **D Factor Calculations based on Traffic Counts**

Location/Date	**12/8/2020**		**12/9/2020**		**12/10/2020**	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:30 to 8:30	4:30 to 5:30	7:30 to 8:30		7:30 to 8:30	4:30 to 5:30
Gandy Blvd E of Westshore Blvd EB	1130	**1673**	1134	**2151**	1986	3218
Gandy Blvd E of Westshore Blvd WB	**1294**	1570	**1301**	1499	1303	1683
	53.4%	51.6%	53.4%	58.9%	39.6%	65.7%

Location/Date	**1/12/2021**		**1/13/2021**		**1/14/2021**	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:00 to 8:00	4:30 to 5:30	7:15 to 8:15	4:15 to 5:15	7:15 to 8:15	4:45 to 5:45
Gandy Blvd E of San Martin Blvd EB	1146	**1534**	1127	**1498**	1182	1524
Gandy Blvd E of San Martin Blvd WB	**1208**	1520	**1307**	1457	**1267**	**1675**
	51.3%	50.2%	53.7%	50.7%	51.7%	47.6%

Location/Date	**12/15/2020**		**12/16/2020**		**12/17/2020**	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:15 to 8:15	4:15 to 5:15	7:15 to 8:15	3:30 to 4:30	7:30 to 8:30	4:15 to 5:15
Gandy Blvd E of Brighton Bay EB	1241	1575	1166	**1683**	1059	1571
Gandy Blvd E of Brighton Bay WB	**1409**	**1722**	**1303**	1577	**1401**	**1617**
	53.2%	47.8%	52.8%	51.6%	57.0%	49.3%

Location/Date	**12/15/2020**		**12/16/2020**		**12/17/2020**	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:15 to 8:15	4:45 to 5:45	7:15 to 8:15	4:15 to 5:15	7:15 to 8:15	4:30 to 5:30
Gandy Blvd W of Brighton Bay EB	1309	**1993**	1230	**1873**	1171	**1937**
Gandy Blvd W of Brighton Bay WB	**1586**	1791	**1483**	1640	**1533**	1676
	54.8%	52.7%	54.7%	53.3%	56.7%	53.6%

Location/Date	1/12/2021		1/13/2021		1/14/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:30 to 8:30	5:00 to 6:00	7:30 to 8:30	4:15 to 5:15	7:15 to 8:15	5:00 to 6:00
Gandy Blvd over 4th Street EB	**920**	**1316**	793	**1287**	874	**1376**
Gandy Blvd over 4th Street WB	884	959	**924**	967	**898**	1038
	51.0%	57.8%	53.8%	57.1%	50.7%	57.0%

Location/Date	12/15/2020		12/16/2020		12/17/2020	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:15 to 8:15	5:00 to 6:00	7:15 to 8:15	3:30 to 4:30	7:45 to 8:45	3:45 to 4:45
Gandy Blvd Bridge EB	946	1200	850	**1265**	792	**1094**
Gandy Blvd Bridge WB	**1030**	**1244**	**960**	1149	**965**	1161
	52.1%	49.1%	53.0%	52.4%	54.9%	48.5%

b. D Factor based on Historical Data

Site: 100028 - SR 600/US 92, EAST OF GANDY BRIDGE				
Year	AADT	K Factor	D Factor	T Factor
2019	38500	9.00	58.90	4.90
2018	38000	9.00	59.70	6.80
2017	37000	9.00	59.60	6.80
2016	36000	9.00	57.00	6.80
2015	36500	9.00	56.80	5.70
	Average	**9.00**	**58.40**	**6.20**

Site: 105158 - SR 600/US 92/W GANDY BLVD, EAST OF WESTSHORE BLVD				
Year	AADT	K Factor	D Factor	T Factor
2019	43000	9.00	58.90	4.90
2018	42000	9.00	59.70	5.20
2017	41000	9.00	59.60	5.20
2016	40000	9.00	57.00	5.20
2015	42500	9.00	56.80	4.70
	Average	**9.00**	**58.40**	**5.04**

Site: 150010 - SR 600/US 92/GANDY BLVD, E OF SR 687/4TH ST N				
Year	AADT	K Factor	D Factor	T Factor
2019	26000	9.00	55.70	4.60
2018	53000	9.00	55.50	4.60
2017	53000	9.00	54.50	4.90
2016	52000	9.00	55.90	4.20
2015	51000	9.00	55.00	4.20
	Average	9.00	55.32	4.50

Notes:

Gandy Blvd:

- AM Peak Direction – Westbound
- PM Peak Direction – Eastbound

Recommendation:

- Based on Traffic Counts: (taking an average of AM and PM): **D Factor = 53.4% along Gandy Blvd.**

The recommended D Factor also applies to the majority of side streets.

B. Side Streets D Factor Calculation

	12/8/2020		12/9/2020		12/10/2020	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	8:15 to 9:15	4:30 to 5:30	7:45 to 8:45	4:00 to 5:00	8:00 to 9:00	4:30 to 5:30
Westshore Blvd North of Gandy Blvd NB	**544**	**595**	487	**568**	450	**558**
Westshore Blvd North of Gandy Blvd SB	514	550	**569**	552	**579**	517
	51.4%	52.0%	53.9%	50.7%	56.3%	51.9%

	12/8/2020		12/9/2020		12/10/2020	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	8:00 to 9:00	5:45 to 6:45	8:15 to 9:15	5:45 to 6:45	6:30 to 7:30	5:45 to 6:45
Westshore Blvd South of Gandy Blvd NB	**563**	436	**570**	**469**	529	450
Westshore Blvd South of Gandy Blvd SB	N/A	**508**	519	441	**592**	**486**
	#VALUE!	53.8%	52.3%	51.5%	52.8%	51.9%

	1/12/2021		1/13/2021		1/14/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:30 to 8:30	4:30 to 5:30	8:15 to 9:15	4:45 to 5:45	7:45 to 8:45	4:15 to 5:15
San Martin Blvd South of Gandy Blvd NB	121	191	124	154	141	203
San Martin Blvd South of Gandy Blvd SB	**144**	**271**	**146**	**289**	**149**	**281**
	54.3%	58.7%	54.1%	65.2%	51.4%	58.1%

	1/12/2021		1/13/2021		1/14/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:15 to 8:15	3:30 to 4:30	8:15 to 9:15	4:45 to 5:45	7:00 to 8:00	4:15 to 5:15
Mangrove Cay Lane North of Gandy Blvd NB	9	8	13	**12**	7	**13**
Mangrove Cay Lane North of Gandy Blvd SB	**11**	**13**	**14**	7	**12**	10
	55.0%	61.9%	51.9%	63.2%	63.2%	56.5%

	12/15/2020		12/16/2020		12/17/2020	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:15 to 8:15	4:45 to 5:45	7:15 to 8:15	5:45 to 6:45	7:15 to 8:15	5:00 to 6:00
Brighton Bay North of Gandy Blvd NB	110	**412**	127	**340**	102	**366**
Brighton Bay North of Gandy Blvd SB	**285**	215	**313**	167	**279**	192
	72.2%	65.7%	71.1%	67.1%	73.2%	65.6%

	12/15/2020		12/16/2020		12/17/2020	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	6:30 to 7:30	3:30 to 4:30	8:30 to 9:30	3:30 to 4:30	8:30 to 9:30	3:45 to 4:45
Brighton Bay South of Gandy Blvd NB	**107**	**184**	**126**	**219**	**127**	**219**
Brighton Bay South of Gandy Blvd SB	55	46	34	44	39	49
	66.0%	80.0%	78.8%	83.3%	76.4%	81.7%

	1/5/2021		1/6/2021		1/7/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:45 to 8:45	5:00 to 6:00	7:30 to 8:30	4:15 to 5:15	7:30to 8:30	4:45 to 5:45
4th Street North of Gandy Blvd NB	632	860	665	773	696	786
4th Street North of Gandy Blvd SB	**793**	**1013**	**776**	**1039**	**771**	**1039**
	55.6%	54.1%	53.9%	57.3%	52.6%	56.9%

	1/5/2021		1/6/2021		1/7/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:45 to 8:45	5:00 to 6:00	7:30 to 8:30	4:15 to 5:15	7:30to 8:30	4:45 to 5:45
4th Street South of Gandy Blvd NB	845	932	823	850	846	883
4th Street South of Gandy Blvd SB	**968**	**1331**	**948**	**1374**	**995**	**1354**
	53.4%	58.8%	53.5%	61.8%	54.0%	60.5%

	1/5/2021		1/6/2021		1/7/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:30 to 8:30	5:00 to 6:00	7:30 to 8:30	4:15 to 5:15	7:45to 8:45	5:00 to 6:00
N Frontage Road East of 4th Street WB	**790**	**897**	**790**	**847**	**852**	**818**
S Frontage Road East of 4th Street EB	262	791	283	743	316	737
	75.1%	53.1%	73.6%	53.3%	72.9%	52.6%

	1/5/2021		1/6/2021		1/7/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:30 to 8:30	5:00 to 6:00	7:45 to 8:45	4:45 to 5:45	7:45to 8:45	4:45 to 5:45
N Frontage Road West of 4th Street WB	**1160**	**1105**	**1171**	1053	**1265**	1013
S Frontage Road West of 4th Street EB	475	1059	478	**1094**	510	**1033**
	70.9%	51.1%	71.0%	51.0%	71.3%	50.5%

Recommendation: The D Factor of 53.4% can be used for the majority of side streets, with the exception of Brighton Bay Blvd North of Gandy Blvd (69.1%), Brighton Bay Blvd South of Gandy Blvd (77.7%), and the Frontage Road (62.0%).

C. DHT Factor Calculation

Based on Vehicle Classification Counts:

Gandy Blvd Bridge (Class 6 to Class 13)	12/15/2020	12/16/2020	12/17/2020	**Average**
	2.7	2.6	2.5	**2.60**
Gandy Blvd over 4th Street EB (Class 6 to Class 13)	12/15/2020	12/16/2020	12/17/2020	**Average**
	5.3	5.9	6.1	**5.77**
Gandy Blvd over 4th Street WB (Class 6 to Class 13)	12/15/2020	12/16/2020	12/17/2020	**Average**
	2.4	2.3	2.2	**2.30**

Based on Historical Data:

Gandy Boulevard:

Site: 100028 - SR 600/US 92, EAST OF GANDY BRIDGE				
Year	AADT	K Factor	D Factor	T Factor
2019	38500	9.00	58.90	4.90
2018	38000	9.00	59.70	6.80
2017	37000	9.00	59.60	6.80
2016	36000	9.00	57.00	6.80
2015	36500	9.00	56.80	5.70
	Average	**9.00**	**58.40**	**6.20**

Site: 105158 - SR 600/US 92/W GANDY BLVD, EAST OF WESTSHOR					
Year	AADT	K Factor	D Factor	T Factor	
2019	43000	9.00	58.90	4.90	
2018	42000	9.00	59.70	5.20	
2017	41000	9.00	59.60	5.20	
2016	40000	9.00	57.00	5.20	
2015	42500	9.00	56.80	4.70	
	Average	**9.00**	**58.40**	**5.04**	

Site: 150010 - SR 600/US 92/GANDY BLVD, E OF SR 687/4TH ST N					
Year	AADT	K Factor	D Factor	T Factor	
2019	26000	9.00	55.70	4.60	
2018	53000	9.00	55.50	4.60	
2017	53000	9.00	54.50	4.90	
2016	52000	9.00	55.90	4.20	
2015	51000	9.00	55.00	4.20	
	Average	**9.00**	**55.32**	**4.50**	

Side Streets:

Site: 109183 - WESTSHORE BLVD, N OF W GANDY BLVD				
Year	AADT	K Factor	D Factor	T Factor
2019	43000	9.00	58.90	7.20
2018	42000	9.00	59.70	5.70
2017	41000	9.00	59.60	7.90
2016	40000	9.00	57.00	6.80
2015	42500	9.00	56.80	6.90
	Average	**9.00**	**58.40**	**6.90**

Site: 150059 - SR 687/4TH ST N, NORTH OF GANDY BLVD				
Year	AADT	K Factor	D Factor	T Factor
2019	25500	9.00	55.70	5.40
2018	25500	9.00	55.50	4.10
2017	25500	9.00	54.50	4.90
2016	25000	9.00	55.90	4.00
2015	24500	9.00	55.00	3.50
	Average	**9.00**	**55.32**	**4.38**

Site: 155141 - SR 687/US 92/4TH ST N, SOUTH OF GANDY I				
Year	AADT	K Factor	D Factor	T Factor
2019	33000	9.00	55.70	2.70
2018	33000	9.00	55.50	2.70
2017	36000	9.00	54.50	2.30
2016	35000	9.00	55.90	2.30
2015	34000	9.00	55.00	2.30
	Average	**9.00**	**55.32**	**2.46**

Site: 155173 - SAN MARTIN BLVD NE, SOUTH OF GANDY (HPMS)					
Year	AADT	K Factor	D Factor	T Factor	
2019	3500	9.00	55.70	3.50	
2018	3500	9.00	55.50	2.60	
2017	3500	9.00	54.50	5.40	
2016	3400	9.00	55.90	2.50	
2015	3400	9.00	55.00	3.40	
	Average	**9.00**	**55.32**	**3.48**	

Site: 151259 - SR 687 TO SR 600 CONNECTOR (ramp)				
Year	AADT	K Factor	D Factor	T Factor
2019	5170	9.00	55.70	3.80
2018	6400	9.00	55.50	3.70
2017	6350	9.00	54.50	3.90
2016	6250	9.00	55.90	3.90
2015	6090	9.00	55.00	3.90
	Average	**9.00**	**55.32**	**3.84**

Recommendation: T Factor of 5% and Peak Hour T factor of 2.5%

Appendix C:

Traffic Data Collection

MetroCount Traffic Executive
Event Counts

EventCount-569 -- English (ENU)

Datasets:

Site:	**[Gandy 4th] North of Gandy on 4th st,**
Attribute:	Pinellas
Input A:	4 - West bound. - Lane= 3, Added to totals. (/2.000)
Input B:	2 - East bound. - Lane= 3, Excluded from totals.
Survey Duration:	12:39 Sunday, January 3, 2021 => 9:58 Saturday, January 9, 2021,
Zone:	
File:	Gandy 4th 0 2021-01-09 0957.EC3 (Plus)
Identifier:	JF85HVS6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**12:40 Sunday, January 3, 2021 => 9:58 Saturday, January 9, 2021 (5.88751)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 88695 / 88702 (99.99%)

* Sunday, January 3, 2021=2 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	2	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0

* Monday, January 4, 2021=9763, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**55**	**160**	**369**	**569**	**581**	**509**	**507**	**549**	**599**	**648**	**651**	**674**	**689**	**726**	**716**	**562**	**481**	**327**	**253**	**142**	
0	0	0	0	0	37	74	113	162	142	140	134	**153**	190	164	166	177	**201**	181	148	120	87	76	36	38
0	0	0	0	12	26	96	159	149	137	132	124	**157**	162	161	158	155	**167**	182	155	136	108	66	47	29
0	0	0	0	24	36	98	151	133	112	136	148	**167**	156	168	176	194	**205**	190	134	110	66	57	38	26
0	0	0	0	20	61	101	146	138	118	100	**144**	123	140	158	175	**164**	153	164	126	116	66	55	21	25

AM Peak 1145 - 1245 (620), AM PHF=0.93 PM Peak 1645 - 1745 (736), PM PHF=0.90

* Tuesday, January 5, 2021=10344, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
117	**62**	**47**	**46**	**81**	**137**	**362**	**563**	**634**	**480**	**494**	**551**	**623**	**625**	**726**	**684**	**707**	**850**	**732**	**604**	**491**	**317**	**251**	**164**	
38	18	11	14	16	24	67	102	**166**	123	134	137	152	140	170	168	161	**255**	197	164	141	89	68	44	29
29	10	11	11	17	35	85	161	**169**	129	106	155	147	177	186	154	169	**218**	173	166	120	92	62	50	33
26	18	14	15	28	32	113	**156**	152	119	112	109	148	165	181	215	192	**201**	203	139	112	72	57	35	21
25	16	11	6	20	47	97	**145**	148	109	143	151	177	144	190	148	**186**	177	160	136	119	64	65	36	17

AM Peak 0730 - 0830 (636), AM PHF=0.94 PM Peak 1645 - 1745 (859), PM PHF=0.84

* Wednesday, January 6, 2021=10209, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
100	**61**	**62**	**45**	**76**	**140**	**350**	**598**	**649**	**516**	**476**	**521**	**616**	**577**	**632**	**697**	**683**	**773**	**737**	**623**	**498**	**365**	**292**	**127**	
29	14	15	9	12	29	64	119	**172**	133	97	129	137	150	165	173	184	**205**	198	193	127	99	89	47	34
33	14	21	15	18	26	84	150	**164**	121	112	119	173	149	152	174	171	**192**	193	137	125	99	77	34	30
21	19	11	11	30	44	105	**162**	149	122	145	129	148	151	160	190	174	**203**	199	153	134	99	64	30	32
17	14	15	10	17	42	99	**167**	165	140	123	145	158	129	156	161	155	**173**	148	140	113	69	62	17	17

AM Peak 0730 - 0830 (664), AM PHF=0.97 PM Peak 1700 - 1800 (773), PM PHF=0.94

* Thursday, January 7, 2021=10413, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
113	**59**	**61**	**40**	**71**	**154**	**375**	**607**	**650**	**508**	**475**	**507**	**671**	**649**	**684**	**681**	**695**	**785**	**715**	**580**	**463**	**400**	**291**	**185**	
34	22	22	17	21	26	57	116	**172**	135	128	128	159	175	157	184	176	**217**	194	146	134	115	87	55	30
30	17	16	8	18	24	98	149	**181**	138	114	139	157	172	184	178	152	**185**	175	185	125	98	72	44	32
32	7	14	8	18	59	107	**169**	142	123	99	118	174	139	177	181	183	**195**	210	124	98	98	71	45	31
17	13	9	7	14	45	114	**174**	156	113	134	123	182	164	167	139	185	**189**	136	125	107	90	62	42	22

AM Peak 0730 - 0830 (694), AM PHF=0.96 PM Peak 1700 - 1800 (785), PM PHF=0.90

* Friday, January 8, 2021=506, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
114	**82**	**54**	**54**	**75**	**128**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
30	22	22	12	16	**24**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	25	12	14	15	**32**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	14	6	12	20	**34**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	21	14	16	24	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0500 - 0600 (128), AM PHF=0.84 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, January 9, 2021=3 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

MetroCount Traffic Executive
Event Counts

EventCount-570 -- English (ENU)

Datasets:

Site:	**[Gandy 4th] North of Gandy on 4th st,**
Attribute:	Pinellas
Input A:	4 - West bound. - Lane= 3, Excluded from totals.
Input B:	2 - East bound. - Lane= 3, Added to totals. (/2.000)
Survey Duration:	12:39 Sunday, January 3, 2021 => 9:58 Saturday, January 9, 2021,
Zone:	
File:	Gandy 4th 0 2021-01-09 0957.EC3 (Plus)
Identifier:	JF85HVS6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**12:40 Sunday, January 3, 2021 => 9:58 Saturday, January 9, 2021 (5.88751)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 88695 / 88702 (99.99%)

* Sunday, January 3, 2021=2 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	2	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0

* Monday, January 4, 2021=11303, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**53**	**150**	**427**	**678**	**762**	**644**	**611**	**672**	**710**	**777**	**709**	**794**	**855**	**1006**	**745**	**588**	**425**	**309**	**247**	**145**	
0	0	0	0	0	21	71	153	181	**193**	140	162	169	198	180	201	198	**241**	204	178	108	82	63	58	29
0	0	0	0	14	28	87	165	**189**	159	180	151	183	187	163	196	208	**276**	213	158	128	80	60	19	35
0	0	0	0	16	41	117	178	**195**	131	141	157	179	191	176	192	216	**245**	175	125	106	71	68	32	26
0	0	0	0	23	61	153	183	**198**	161	151	203	180	202	190	206	234	**244**	154	128	84	77	56	36	21

AM Peak 0815 - 0915 (774), AM PHF=0.98 PM Peak 1700 - 1800 (1006), PM PHF=0.91

* Tuesday, January 5, 2021=11957, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
111	**60**	**47**	**37**	**62**	**181**	**443**	**733**	**772**	**679**	**628**	**673**	**749**	**724**	**786**	**844**	**914**	**995**	**822**	**571**	**443**	**323**	**217**	**150**	
29	15	15	11	16	25	68	147	**179**	159	175	149	173	184	176	210	187	**255**	242	171	121	92	64	40	24
35	15	8	6	12	37	96	187	**194**	164	137	160	205	159	213	209	243	**279**	227	144	119	84	49	44	21
26	18	12	9	18	54	143	194	**214**	180	174	188	215	199	202	203	**240**	233	181	131	100	69	60	28	19
21	13	12	12	17	65	137	**206**	186	176	143	177	157	182	197	222	**246**	229	173	125	104	79	44	39	13

AM Peak 0745 - 0845 (792), AM PHF=0.93 PM Peak 1630 - 1730 (1018), PM PHF=0.91

* Wednesday, January 6, 2021=11768, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
77	**65**	**54**	**40**	**60**	**177**	**440**	**728**	**735**	**654**	**579**	**646**	**719**	**713**	**735**	**788**	**863**	**1037**	**815**	**625**	**472**	**331**	**237**	**182**	
24	22	18	11	5	20	66	149	**165**	161	149	150	186	184	183	205	201	**255**	225	174	143	98	68	49	27
21	11	17	14	13	39	89	167	**198**	174	143	170	192	183	185	189	215	**272**	214	172	125	99	47	53	17
19	18	9	8	18	54	138	**208**	195	153	137	162	163	165	193	194	220	**280**	180	149	89	73	68	39	25
13	14	10	7	24	65	148	**205**	177	167	150	165	179	183	175	201	228	**232**	197	131	116	61	55	42	13

AM Peak 0730 - 0830 (776), AM PHF=0.93 PM Peak 1700 - 1800 (1037), PM PHF=0.93

* Thursday, January 7, 2021=11916, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
82	**60**	**58**	**56**	**68**	**159**	**445**	**746**	**789**	**621**	**589**	**680**	**735**	**736**	**707**	**750**	**894**	**1039**	**828**	**617**	**458**	**363**	**252**	**192**	
27	14	21	14	11	20	65	153	**175**	147	149	154	197	182	156	185	207	**273**	245	182	120	87	71	53	28
17	18	8	17	14	32	103	192	**195**	153	157	184	171	189	174	187	222	**273**	202	152	113	104	77	64	20
25	18	18	17	17	42	137	196	**199**	154	134	173	178	178	177	172	220	**254**	212	132	117	88	58	48	31
13	10	12	9	26	65	140	205	**221**	168	150	170	189	188	200	208	**246**	239	169	152	109	84	46	27	20

AM Peak 0800 - 0900 (789), AM PHF=0.89 PM Peak 1645 - 1745 (1045), PM PHF=0.96

* Friday, January 8, 2021=508, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
98	**74**	**59**	**57**	**66**	**155**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
28	22	10	15	11	**24**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	17	20	10	16	**24**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	20	11	15	14	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	16	18	18	26	**58**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0500 - 0600 (155), AM PHF=0.67 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, January 9, 2021=3 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

MetroCount Traffic Executive
Event Counts

EventCount-561 -- English (ENU)

Datasets:

Site:	**[Gandy & 4st] South of Gandy on 4th street--A--North --- B;;;South**
Attribute:	Pinellas
Input A:	1 - North bound. - Lane= 2, Added to totals. (/2.000)
Input B:	3 - South bound. - Lane= 2, Excluded from totals.
Survey Duration:	12:43 Sunday, January 3, 2021 => 9:49 Saturday, January 9, 2021,
Zone:	
File:	Gandy _ 4st 0 2021-01-09 0950.EC2 (Plus)
Identifier:	JH712202 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**12:44 Sunday, January 3, 2021 => 9:49 Saturday, January 9, 2021 (5.8791)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 107388 / 107390 (100.00%)

* Sunday, January 3, 2021=2 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	2	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	3	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0

* Monday, January 4, 2021=11062, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**29**	**197**	**429**	**707**	**683**	**635**	**618**	**663**	**745**	**817**	**749**	**796**	**799**	**776**	**728**	**548**	**454**	**327**	**233**	**133**	
0	0	0	0	0	37	97	140	**194**	171	170	172	188	225	190	221	210	**229**	181	140	124	107	72	38	31
0	0	0	0	1	38	97	**184**	160	174	158	153	177	204	195	186	**196**	187	198	126	112	80	62	38	26
0	0	0	0	0	55	121	**206**	173	152	158	173	210	207	203	194	**204**	195	180	147	114	73	56	34	19
0	0	0	0	28	68	115	**177**	157	139	133	166	171	182	163	195	**189**	165	170	136	106	67	44	23	19

AM Peak 0715 - 0815 (761), AM PHF=0.92 PM Peak 1615 - 1715 (818), PM PHF=0.89

* Tuesday, January 5, 2021=11944, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
95	**47**	**38**	**51**	**88**	**177**	**421**	**716**	**801**	**627**	**657**	**727**	**795**	**745**	**862**	**826**	**860**	**932**	**768**	**599**	**441**	**313**	**230**	**135**	
31	10	8	15	8	25	80	137	**214**	169	181	182	188	221	212	208	210	**263**	188	168	112	98	75	46	24
26	11	8	12	16	42	97	189	**210**	149	145	194	209	176	200	224	212	**233**	220	133	110	84	55	34	29
19	13	13	13	31	37	125	185	**216**	157	171	154	193	189	246	220	**211**	211	202	159	110	73	53	29	16
19	13	9	11	34	73	120	**205**	162	153	160	198	207	159	205	175	**227**	225	159	139	111	58	47	26	15

AM Peak 0745 - 0845 (844), AM PHF=0.98 PM Peak 1630 - 1730 (934), PM PHF=0.89

* Wednesday, January 6, 2021=11959, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
83	**66**	**56**	**41**	**73**	**176**	**424**	**762**	**768**	**649**	**634**	**699**	**788**	**759**	**787**	**798**	**807**	**849**	**788**	**649**	**529**	**378**	**278**	**124**	
24	17	15	10	9	33	83	145	**199**	182	133	172	180	196	204	199	208	**231**	198	180	151	108	83	42	35
29	15	11	13	20	33	95	181	**188**	150	151	155	200	174	176	200	198	**215**	231	160	138	100	78	33	25
16	20	11	7	27	51	130	**229**	190	149	188	209	191	201	203	209	204	**205**	196	154	136	91	55	23	24
15	14	19	12	18	59	117	**207**	193	168	163	163	217	188	205	191	198	**199**	163	156	104	81	63	26	19

AM Peak 0730 - 0830 (822), AM PHF=0.90 PM Peak 1700 - 1800 (849), PM PHF=0.92

* Thursday, January 7, 2021=12197, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
103	**41**	**55**	**50**	**76**	**175**	**461**	**737**	**800**	**648**	**628**	**681**	**887**	**827**	**885**	**833**	**800**	**865**	**742**	**599**	**492**	**390**	**253**	**176**	
35	11	15	15	20	22	94	132	**221**	177	177	172	218	**234**	221	226	212	240	199	152	156	112	81	51	21
25	10	14	16	16	34	105	189	**208**	183	152	158	199	**212**	226	205	178	234	185	152	123	97	64	44	22
24	7	13	8	20	59	146	**217**	192	149	153	187	**252**	201	241	209	199	198	181	149	109	92	64	37	29
19	13	13	11	21	60	116	**200**	180	139	146	165	**219**	181	197	194	211	194	178	147	105	90	44	44	14

AM Peak 0730 - 0830 (845), AM PHF=0.96 PM Peak 1230 - 1330 (916), PM PHF=0.91

* Friday, January 8, 2021=651, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
86	**66**	**53**	**55**	**72**	**164**	**155**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
21	16	17	8	14	29	**89**	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	18	13	16	12	28	**65**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	13	10	14	19	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	19	13	17	27	**65**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0530 - 0630 (262), AM PHF=0.73 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, January 9, 2021=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

MetroCount Traffic Executive
Event Counts

EventCount-562 -- English (ENU)

Datasets:

Site:	**[Gandy & 4st] South of Gandy on 4th street--A--North --- B;;;South**
Attribute:	Pinellas
Input A:	1 - North bound. - Lane= 2, Excluded from totals.
Input B:	3 - South bound. - Lane= 2, Added to totals. (/2.000)
Survey Duration:	12:43 Sunday, January 3, 2021 => 9:49 Saturday, January 9, 2021,
Zone:	
File:	Gandy _ 4st 0 2021-01-09 0950.EC2 (Plus)
Identifier:	JH712202 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**12:44 Sunday, January 3, 2021 => 9:49 Saturday, January 9, 2021 (5.8791)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 107388 / 107390 (100.00%)

* Sunday, January 3, 2021=2 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	2	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	3	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0

* Monday, January 4, 2021=13915, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**23**	**154**	**376**	**809**	**819**	**843**	**747**	**881**	**983**	**910**	**956**	**1058**	**1120**	**1265**	**937**	**718**	**503**	**366**	**281**	**170**	
0	0	0	0	0	24	69	175	193	244	162	194	**255**	255	241	233	258	**318**	283	209	133	94	59	55	33
0	0	0	0	1	26	72	186	210	217	198	218	**220**	204	244	277	263	**327**	251	195	145	110	79	45	39
0	0	0	0	0	41	98	229	215	182	180	224	**262**	220	208	242	292	**320**	221	164	125	69	81	33	33
0	0	0	0	23	64	138	219	201	200	207	**246**	247	232	263	306	**308**	301	183	151	101	94	63	38	23

AM Peak 1145 - 1245 (982), AM PHF=0.94 PM Peak 1645 - 1745 (1272), PM PHF=0.97

* Tuesday, January 5, 2021=14873, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
128	**74**	**51**	**52**	**50**	**166**	**364**	**890**	**967**	**876**	**820**	**836**	**971**	**916**	**1033**	**1106**	**1160**	**1331**	**1019**	**717**	**503**	**395**	**274**	**179**	
33	21	14	16	11	22	60	180	**245**	224	223	172	252	235	232	257	264	**323**	297	219	152	110	69	49	32
39	20	5	10	11	41	68	206	**244**	214	191	196	233	210	261	280	313	**374**	292	187	120	102	73	57	24
33	22	16	12	15	47	112	**275**	249	208	205	249	273	229	263	273	284	**303**	218	180	132	85	82	35	33
23	12	16	15	14	57	125	**230**	229	232	201	220	213	242	278	297	300	**331**	213	131	100	99	50	38	20

AM Peak 0730 - 0830 (993), AM PHF=0.90 PM Peak 1700 - 1800 (1331), PM PHF=0.89

* Wednesday, January 6, 2021=14948, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
109	**96**	**64**	**48**	**59**	**152**	**387**	**913**	**921**	**832**	**777**	**912**	**958**	**952**	**1007**	**1067**	**1121**	**1373**	**1021**	**740**	**596**	**389**	**271**	**189**	
32	20	19	15	12	14	63	202	229	206	183	193	**248**	239	229	244	251	**343**	295	204	181	120	64	56	33
24	28	16	11	10	26	91	213	221	226	215	**235**	234	260	241	261	279	**357**	274	181	153	99	66	47	24
33	27	18	15	14	50	113	260	244	203	193	**242**	237	219	252	279	266	**346**	221	198	141	90	66	45	34
20	21	11	7	24	62	121	238	228	199	187	**243**	241	236	286	284	325	**328**	232	158	122	80	76	41	17

AM Peak 1115 - 1215 (967), AM PHF=0.98 PM Peak 1700 - 1800 (1373), PM PHF=0.96

* Thursday, January 7, 2021=15218, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
108	**72**	**62**	**60**	**55**	**170**	**368**	**941**	**974**	**839**	**788**	**938**	**976**	**959**	**1019**	**1054**	**1161**	**1353**	**1058**	**791**	**550**	**431**	**284**	**213**	
33	18	22	18	15	25	60	174	**232**	252	191	196	227	238	245	273	285	**341**	288	241	152	125	77	60	40
24	19	9	16	10	28	82	**250**	245	194	220	248	236	268	238	271	286	**377**	285	203	140	109	74	68	19
34	19	14	16	12	51	109	**266**	257	190	178	236	244	211	243	247	290	**335**	269	171	146	112	71	46	34
17	17	17	10	18	66	118	**252**	240	203	200	259	270	244	294	264	301	**301**	217	176	113	85	62	39	28

AM Peak 0715 - 0815 (999), AM PHF=0.94 PM Peak 1700 - 1800 (1353), PM PHF=0.90

* Friday, January 8, 2021=612, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
121	**78**	**47**	**50**	**60**	**152**	**104**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
40	24	8	12	20	21	**72**	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	24	14	11	14	24	**32**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	12	4	17	8	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	18	21	11	19	**61**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0530 - 0630 (210), AM PHF=0.73 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, January 9, 2021=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

MetroCount Traffic Executive
Event Counts

EventCount-565 -- English (ENU)

Datasets:

Site:	**[Gandy & N Frontage] On North Frontage /// East of Gandy/// A--Westbound-- B BLANK**
Attribute:	Pinellas
Input A:	4 - West bound. - Lane= 2, Added to totals. (/2.000)
Input B:	0 - Unused or unknown. - Lane= 0, Excluded from totals.
Survey Duration:	12:56 Sunday, January 3, 2021 => 10:01 Saturday, January 9, 2021,
Zone:	
File:	Gandy _ N Frontage 0 2021-01-09 1001.EC2 (Plus)
Identifier:	JE356JET MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**12:57 Sunday, January 3, 2021 => 10:01 Saturday, January 9, 2021 (5.87788)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 43141 / 43146 (99.99%)

* Sunday, January 3, 2021=3 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	2	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0

* Monday, January 4, 2021=10172, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**77**	**155**	**402**	**734**	**742**	**606**	**527**	**660**	**721**	**596**	**626**	**693**	**722**	**757**	**666**	**539**	**364**	**244**	**226**	**119**	
0	0	0	0	20	37	64	160	**189**	149	113	132	197	171	168	161	191	179	**185**	176	99	63	52	34	27
0	0	0	0	18	22	105	187	**179**	163	149	143	170	133	156	181	158	**198**	174	145	109	78	70	32	29
0	0	0	0	18	49	112	181	**195**	151	138	204	181	142	145	171	189	**195**	166	106	76	54	57	24	23
0	0	0	0	21	48	121	**207**	180	144	127	181	174	150	158	180	184	**186**	142	112	80	49	47	29	20

AM Peak 0745 - 0845 (769), AM PHF=0.93 PM Peak 1715 - 1815 (763), PM PHF=0.96

* Tuesday, January 5, 2021=10711, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
99	**64**	**45**	**53**	**65**	**148**	**378**	**778**	**725**	**609**	**569**	**673**	**695**	**652**	**675**	**714**	**726**	**897**	**686**	**491**	**365**	**271**	**198**	**141**	
27	24	13	13	20	22	63	164	**169**	124	150	126	172	164	145	181	171	**239**	192	117	121	57	47	42	29
29	12	6	15	13	29	99	187	**193**	165	132	176	150	167	173	161	185	**227**	191	156	87	82	62	40	28
23	18	9	12	18	45	103	**213**	170	169	138	178	180	175	181	185	181	**220**	162	106	84	66	46	34	24
20	10	17	14	14	52	114	**215**	193	151	150	195	193	147	176	188	190	**211**	142	113	73	66	43	25	20

AM Peak 0730 - 0830 (790), AM PHF=0.92 PM Peak 1700 - 1800 (897), PM PHF=0.94

* Wednesday, January 6, 2021=10836, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
100	**69**	**50**	**53**	**69**	**152**	**381**	**766**	**752**	**662**	**559**	**650**	**694**	**615**	**689**	**731**	**720**	**846**	**725**	**526**	**397**	**303**	**212**	**121**	
29	9	17	13	18	24	69	185	**194**	137	130	139	165	153	147	158	166	**214**	208	150	106	82	62	49	25
28	24	16	13	20	28	99	172	**177**	169	128	153	178	159	166	198	174	**219**	190	119	95	80	50	33	23
24	20	11	16	14	49	105	182	**191**	157	158	205	175	155	185	180	195	**207**	172	136	107	78	46	16	28
20	16	7	11	17	51	109	**228**	192	200	144	154	177	148	193	196	186	**207**	156	123	90	63	54	25	16

AM Peak 0745 - 0845 (788), AM PHF=0.87 PM Peak 1700 - 1800 (846), PM PHF=0.97

* Thursday, January 7, 2021=10958, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
92	**63**	**54**	**62**	**63**	**145**	**366**	**798**	**781**	**637**	**583**	**709**	**738**	**679**	**676**	**662**	**715**	**818**	**740**	**553**	**359**	**309**	**212**	**149**	
25	15	25	18	14	24	44	171	**201**	142	140	172	179	192	160	183	177	**225**	205	146	97	91	62	47	34
23	20	16	16	20	29	89	185	**229**	172	160	198	188	170	157	172	172	**202**	209	146	101	74	63	32	24
28	11	5	16	15	49	125	**210**	190	159	155	179	166	150	173	153	179	**193**	188	157	84	68	45	39	27
16	17	9	12	14	44	108	**232**	162	165	129	161	207	168	187	155	187	**198**	139	104	77	76	43	31	30

AM Peak 0730 - 0830 (872), AM PHF=0.94 PM Peak 1700 - 1800 (818), PM PHF=0.91

* Friday, January 8, 2021=439, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
114	**63**	**36**	**58**	**66**	**103**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
34	24	11	19	17	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	14	8	10	14	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	11	5	12	11	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	15	12	17	24	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (114), AM PHF=0.85 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, January 9, 2021=5 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

MetroCount Traffic Executive
Event Counts

EventCount-563 -- English (ENU)

Datasets:

Site:	**[Gandy & N frontage] On North Frontage/// West of Gandy//// A Westbound**
Attribute:	Pinellas
Input A:	4 - West bound. - Lane= 2, Added to totals. (/2.000)
Input B:	0 - Unused or unknown. - Lane= 0, Excluded from totals.
Survey Duration:	13:03 Sunday, January 3, 2021 => 9:54 Saturday, January 9, 2021,
Zone:	
File:	Gandy _ N frontage 0 2021-01-09 0954.EC2 (Plus)
Identifier:	JE42AZ9K MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**13:04 Sunday, January 3, 2021 => 9:54 Saturday, January 9, 2021 (5.86826)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 60241 / 60245 (99.99%)

* Sunday, January 3, 2021=8 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**4**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	4	0	0	0	0	5	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0

* Monday, January 4, 2021=14195, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**2**	**249**	**574**	**1075**	**1073**	**895**	**832**	**980**	**971**	**1013**	**908**	**1009**	**992**	**989**	**853**	**672**	**424**	**325**	**232**	**132**	
0	0	0	0	0	39	107	226	**282**	199	175	234	223	**289**	228	266	274	244	200	217	116	84	62	45	31
0	0	0	0	2	44	151	269	**277**	257	265	202	**256**	245	232	265	229	253	263	158	105	87	67	29	34
0	0	0	0	0	83	148	**252**	252	228	207	261	**262**	244	218	238	249	263	216	134	94	78	57	26	22
0	0	0	0	1	84	169	**328**	262	212	186	285	**231**	235	231	241	241	230	174	165	110	76	47	32	17

AM Peak 0730 - 0830 (1139), AM PHF=0.87 PM Peak 1215 - 1315 (1038), PM PHF=0.90

* Tuesday, January 5, 2021=15176, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
104	**59**	**50**	**60**	**87**	**276**	**553**	**1093**	**1103**	**986**	**940**	**1009**	**1105**	**958**	**988**	**1022**	**981**	**1104**	**929**	**658**	**438**	**336**	**210**	**130**	
31	15	19	13	16	30	85	240	**291**	234	231	221	**250**	250	236	268	231	294	269	175	119	93	61	45	30
34	12	5	20	14	49	151	277	**285**	232	223	234	**293**	228	270	250	235	283	264	156	125	87	62	40	21
22	13	12	12	27	89	149	251	**258**	267	271	282	**244**	264	244	240	265	266	220	166	85	77	48	23	16
17	20	15	15	32	109	169	**326**	269	254	215	273	**319**	216	239	265	251	262	177	162	110	80	40	23	10

AM Peak 0745 - 0845 (1160), AM PHF=0.89 PM Peak 1200 - 1300 (1105), PM PHF=0.87

* Wednesday, January 6, 2021=15121, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
77	**60**	**58**	**62**	**82**	**243**	**622**	**1061**	**1120**	**1012**	**851**	**983**	**1030**	**921**	**954**	**1015**	**1005**	**1043**	**906**	**717**	**516**	**386**	**248**	**155**	
30	14	21	13	8	38	109	215	**297**	258	226	235	216	229	227	248	253	**269**	255	211	140	110	84	48	27
21	20	15	20	31	48	159	244	**290**	232	181	224	281	213	235	273	253	**282**	254	196	150	108	59	44	17
16	13	10	15	18	73	162	**276**	257	225	258	297	260	260	244	267	272	**275**	214	163	105	87	53	15	25
10	14	13	15	25	85	193	**327**	276	298	187	228	273	220	249	227	**227**	218	184	148	122	81	53	48	19

AM Peak 0730 - 0830 (1190), AM PHF=0.91 PM Peak 1645 - 1745 (1052), PM PHF=0.93

* Thursday, January 7, 2021=15025, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
88	**61**	**59**	**86**	**95**	**254**	**584**	**1158**	**1170**	**939**	**881**	**1009**	**1054**	**1006**	**943**	**928**	**939**	**1016**	**867**	**696**	**453**	**366**	**214**	**166**	
27	11	19	16	12	34	81	267	**311**	200	236	271	243	**274**	193	249	255	287	253	199	133	86	66	40	15
17	13	13	26	29	45	157	283	**346**	254	230	261	**293**	255	252	225	256	245	222	186	122	88	59	51	25
25	20	16	22	18	67	176	**283**	268	240	256	254	**239**	249	229	215	213	265	204	182	102	89	60	37	30
19	18	12	22	36	109	171	**325**	246	245	159	224	**279**	229	269	240	216	220	189	129	98	104	31	38	25

AM Peak 0730 - 0830 (1265), AM PHF=0.91 PM Peak 1215 - 1315 (1084), PM PHF=0.93

* Friday, January 8, 2021=690, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
95	**74**	**60**	**82**	**102**	**239**	**39**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
15	20	9	26	10	**39**	38	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	18	21	18	27	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	11	16	19	22	**69**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	27	15	19	44	**93**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0500 - 0600 (239), AM PHF=0.64 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, January 9, 2021=4 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

MetroCount Traffic Executive
Event Counts

EventCount-572 -- English (ENU)

Datasets:

Site:	**[Gandy & S Frontage] On South Frontage, East of Gandy///// B// Eastbound**
Attribute:	Pinellas
Input A:	0 - Unused or unknown. - Lane= 2, Excluded from totals.
Input B:	6 - West/East. - Lane= 0, Added to totals. (/2.000)
Survey Duration:	13:11 Sunday, January 3, 2021 => 9:48 Saturday, January 9, 2021,
Zone:	
File:	Gandy _ S Frontage 0 2021-01-09 0948.EC2 (Plus)
Identifier:	JE32D7JE MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**13:12 Sunday, January 3, 2021 => 9:48 Saturday, January 9, 2021 (5.85854)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 27978 / 27978 (100.00%)

* Sunday, January 3, 2021=2 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	2	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0

* Monday, January 4, 2021=6587, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**2**	**56**	**227**	**248**	**335**	**315**	**336**	**356**	**406**	**339**	**387**	**492**	**647**	**761**	**568**	**424**	**305**	**181**	**130**	**76**	
0	0	0	0	0	0	32	62	86	86	69	75	**95**	79	86	113	165	**166**	151	112	93	49	39	24	23
0	0	0	0	1	0	58	60	59	83	90	97	**104**	89	97	111	141	**203**	133	120	92	47	30	20	17
0	0	0	0	0	19	66	66	88	75	89	101	**102**	91	104	118	158	**225**	162	93	71	51	32	17	14
0	0	0	0	1	37	72	61	103	71	89	**83**	106	81	101	150	**184**	167	123	99	50	35	29	15	13

AM Peak 1145 - 1245 (384), AM PHF=0.93 PM Peak 1645 - 1745 (777), PM PHF=0.87

* Tuesday, January 5, 2021=7044, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
67	**43**	**22**	**30**	**37**	**86**	**243**	**255**	**311**	**326**	**343**	**396**	**449**	**361**	**392**	**516**	**632**	**790**	**591**	**459**	**282**	**197**	**121**	**100**	
23	14	9	4	5	12	35	48	54	89	59	95	**94**	86	84	114	150	**202**	153	134	82	59	38	31	18
17	15	4	14	8	27	53	64	65	73	92	96	**127**	92	101	137	155	**201**	181	113	75	50	30	26	9
14	9	3	2	10	20	79	65	84	83	82	102	**114**	86	111	139	152	**198**	150	108	66	56	29	19	8
13	5	7	10	15	28	77	78	108	81	111	**104**	114	98	98	127	175	**190**	107	105	60	33	24	24	16

AM Peak 1145 - 1245 (438), AM PHF=0.87 PM Peak 1700 - 1800 (790), PM PHF=0.98

* Wednesday, January 6, 2021=6904, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
51	**36**	**21**	**26**	**25**	**92**	**235**	**248**	**309**	**368**	**329**	**371**	**434**	**404**	**358**	**476**	**632**	**742**	**587**	**426**	**298**	**204**	**140**	**98**	
18	10	5	8	6	8	46	51	53	93	79	90	**97**	103	98	107	132	**185**	170	112	90	56	42	33	26
9	8	6	5	4	27	54	59	70	96	75	105	**123**	101	87	132	153	**188**	133	123	90	61	29	24	9
8	10	7	8	4	23	65	69	90	90	82	80	**102**	95	90	98	181	**204**	159	105	49	44	35	26	15
16	8	3	5	11	35	70	70	96	90	94	**97**	113	105	84	140	**166**	166	125	86	70	43	35	16	17

AM Peak 1145 - 1245 (418), AM PHF=0.85 PM Peak 1645 - 1745 (743), PM PHF=0.91

* Thursday, January 7, 2021=7051, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
66	**45**	**39**	**47**	**37**	**90**	**250**	**276**	**324**	**350**	**345**	**405**	**401**	**373**	**385**	**513**	**592**	**736**	**627**	**430**	**300**	**201**	**131**	**95**	
26	12	13	7	4	9	40	71	74	96	79	99	**120**	93	92	122	148	**181**	173	116	80	56	43	24	15
9	13	13	11	6	27	61	60	67	88	81	90	**104**	88	117	135	126	**218**	157	102	89	60	41	26	19
15	5	6	23	14	24	74	56	85	91	81	**111**	102	91	87	117	160	**184**	160	105	69	37	27	26	15
17	16	7	7	13	31	76	90	98	76	105	**106**	76	102	89	139	**158**	154	138	108	62	48	20	19	14

AM Peak 1130 - 1230 (440), AM PHF=0.92 PM Peak 1645 - 1745 (740), PM PHF=0.85

* Friday, January 8, 2021=367, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
63	**34**	**28**	**29**	**27**	**80**	**106**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
15	6	5	11	5	10	**39**	1	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0
19	5	14	5	5	18	**62**	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0
15	15	4	4	6	**20**	5	0	0	0	0	0	0	0	0	0	**2**	0	0	0	0	0	0	0	0
14	8	5	9	11	**32**	1	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0

AM Peak 0530 - 0630 (152), AM PHF=0.62 PM Peak 1545 - 1645 (2), PM PHF=0.25

* Saturday, January 9, 2021=4 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

MetroCount Traffic Executive
Event Counts

EventCount-1 -- English (ENU)

Datasets:

Site:	**[Gandy & 4th St] On South Frontage // West of 4th St. // B// Eastbound // A//XXX**
Attribute:	Pinellas
Input A:	0 - Unused or unknown. - Lane= 0, Excluded from totals.
Input B:	2 - East bound. - Lane= 2, Added to totals. (/2.000)
Survey Duration:	14:07 Sunday, January 3, 2021 => 9:46 Saturday, January 9, 2021,
Zone:	
File:	Gandy _ 4th St 0 2021-01-09 0946.EC0 (Plus)
Identifier:	TF34X2TW MC5900-X13 (c)MetroCount 09Nov16
Algorithm:	Event Count (v5.08)
Data type:	Axle sensors - Split (Count)

Profile:

Filter time:	**14:08 Sunday, January 3, 2021 => 9:46 Saturday, January 9, 2021 (5.81845)**
Separation:	GapX > 0 sec
Name:	Factory Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Events = 39677 / 39677 (100.00%)

* Sunday, January 3, 2021=4 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	1	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	0	0	0	0	0	0	0	0	0	0

* Monday, January 4, 2021=9339, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**88**	**208**	**361**	**434**	**451**	**501**	**583**	**642**	**518**	**608**	**745**	**921**	**1001**	**773**	**573**	**410**	**267**	**153**	**108**	
0	0	0	0	0	0	30	72	114	111	108	122	**174**	157	133	186	229	**240**	209	142	101	68	42	30	28
0	0	0	0	0	15	53	87	88	118	127	**161**	139	108	160	178	226	**250**	188	163	127	71	39	40	23
0	0	0	0	0	29	55	111	125	128	137	**158**	168	141	151	158	213	**283**	213	132	104	67	38	21	15
0	0	0	0	0	44	71	91	108	95	129	**143**	161	113	165	225	**255**	228	163	137	78	62	35	17	10

AM Peak 1115 - 1215 (635), AM PHF=0.91 PM Peak 1645 - 1745 (1028), PM PHF=0.91

* Tuesday, January 5, 2021=9959, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
76	**49**	**31**	**36**	**29**	**90**	**215**	**402**	**519**	**500**	**527**	**569**	**640**	**581**	**663**	**769**	**861**	**1058**	**791**	**630**	**361**	**268**	**181**	**117**	
28	17	12	7	1	9	29	76	134	133	117	123	**175**	146	153	184	198	**264**	207	184	107	80	52	36	24
23	17	4	16	7	27	46	95	110	108	118	128	**149**	142	176	177	232	**267**	241	172	93	69	47	41	12
15	9	8	4	7	28	68	120	119	127	139	**174**	164	151	185	206	206	**271**	181	153	96	67	53	14	12
10	6	7	9	15	27	73	112	157	132	154	**145**	152	142	150	203	226	**257**	163	121	65	52	30	27	17

AM Peak 1130 - 1230 (642), AM PHF=0.92 PM Peak 1700 - 1800 (1058), PM PHF=0.98

* Wednesday, January 6, 2021=9941, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
65	**46**	**34**	**31**	**22**	**89**	**234**	**448**	**488**	**504**	**494**	**573**	**690**	**623**	**590**	**738**	**902**	**1045**	**811**	**575**	**400**	**246**	**187**	**110**	
24	12	7	7	5	11	34	82	105	124	118	136	**188**	175	147	167	199	**260**	244	162	103	72	46	35	27
12	15	12	7	6	16	65	116	102	119	126	141	**168**	159	134	190	217	**280**	200	154	133	70	37	27	17
12	10	7	15	2	33	53	127	147	136	126	156	**176**	148	158	183	219	**287**	200	141	75	59	50	28	20
17	10	8	3	9	30	83	124	134	125	124	**142**	159	143	151	199	**267**	218	168	119	90	46	55	21	19

AM Peak 1145 - 1245 (673), AM PHF=0.89 PM Peak 1645 - 1745 (1094), PM PHF=0.95

* Thursday, January 7, 2021=10086, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
82	**60**	**44**	**48**	**32**	**118**	**238**	**437**	**523**	**525**	**496**	**605**	**613**	**594**	**659**	**795**	**864**	**1015**	**812**	**594**	**385**	**277**	**161**	**114**	
27	21	17	8	5	20	38	83	141	160	115	135	**154**	149	158	182	207	**270**	212	179	103	74	50	25	20
17	11	13	8	7	26	61	111	125	123	125	152	**158**	157	162	219	210	**280**	202	158	115	81	41	40	18
20	10	11	27	9	36	63	135	134	125	125	157	**171**	133	155	186	216	**251**	224	147	91	69	42	24	18
19	18	4	7	12	37	76	109	123	119	132	**162**	130	156	184	208	**232**	214	174	111	77	54	28	25	18

AM Peak 1145 - 1245 (645), AM PHF=0.94 PM Peak 1645 - 1745 (1032), PM PHF=0.92

* Friday, January 8, 2021=340, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
74	**51**	**28**	**30**	**33**	**84**	**42**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
20	18	3	8	7	8	**42**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	9	13	7	12	**20**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	10	3	12	3	**22**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	14	9	3	11	**34**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0515 - 0615 (117), AM PHF=0.70 PM Peak 0000 - 0100 (0), PM PHF=-nan(ind)

* Saturday, January 9, 2021=3 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

MetroCount Traffic Executive
Event Counts

EventCount-548 -- English (ENU)

Datasets:

Site:	**[Gandy Brghton] North of Gandy on Brighten Bay A---North B--South**
Attribute:	Pinellas
Input A:	1 - North bound. - Lane= 2, Added to totals. (/2.000)
Input B:	3 - South bound. - Lane= 2, Excluded from totals.
Survey Duration:	18:47 Sunday, December 13, 2020 => 15:50 Sunday, December 20, 2020,
Zone:	
File:	Gandy Brghton 0 2020-12-20 1551.EC2 (Plus)
Identifier:	JE356JET MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**18:48 Sunday, December 13, 2020 => 15:50 Sunday, December 20, 2020 (6.87662)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 23025 / 23026 (100.00%)

* Sunday, December 13, 2020=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0	0

* Monday, December 14, 2020=3234, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**1**	**108**	**119**	**118**	**120**	**160**	**180**	**178**	**243**	**255**	**296**	**432**	**350**	**253**	**170**	**128**	**89**	**41**	
0	0	0	0	0	0	0	15	29	26	36	24	**47**	55	66	68	47	**115**	81	70	46	25	27	6	5
0	0	0	0	0	0	0	27	20	34	29	**40**	39	35	49	60	86	**95**	112	78	55	40	21	16	10
0	0	0	0	0	0	0	29	28	30	28	**51**	51	44	51	73	70	**116**	98	58	46	37	20	8	14
0	0	0	0	0	0	1	38	42	28	27	**45**	44	45	77	55	94	**106**	60	48	23	27	22	11	2

AM Peak 1115 - 1215 (183), AM PHF=0.89 PM Peak 1700 - 1800 (432), PM PHF=0.93

* Tuesday, December 15, 2020=3376, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
30	**11**	**8**	**8**	**4**	**14**	**46**	**101**	**135**	**116**	**132**	**155**	**185**	**158**	**214**	**225**	**284**	**411**	**309**	**269**	**216**	**163**	**123**	**65**	
5	5	2	3	3	2	15	23	32	35	35	33	**41**	32	60	55	62	**102**	67	68	64	39	45	8	13
10	1	4	0	0	1	9	20	24	27	27	37	**62**	41	57	68	67	**106**	88	62	51	53	28	24	1
14	4	2	2	1	2	14	20	44	23	42	37	**47**	45	40	53	79	**91**	86	77	45	29	27	11	9
2	2	1	3	0	9	9	38	35	32	29	**49**	35	40	58	49	76	**113**	68	63	57	43	24	23	3

AM Peak 1145 - 1245 (198), AM PHF=0.80 PM Peak 1700 - 1800 (411), PM PHF=0.91

* Wednesday, December 16, 2020=3229, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
26	**24**	**7**	**9**	**4**	**16**	**44**	**114**	**137**	**107**	**134**	**171**	**195**	**179**	**234**	**239**	**239**	**320**	**332**	**261**	**173**	**147**	**80**	**44**	
13	7	2	2	0	2	14	22	35	21	23	43	**59**	40	51	64	60	75	**83**	75	50	42	31	11	10
1	5	0	2	2	3	14	17	26	36	41	38	**39**	53	56	66	52	75	**87**	73	49	45	11	11	10
9	7	3	3	1	1	7	29	44	25	29	**50**	48	44	56	49	54	**84**	84	64	37	34	24	10	14
3	6	2	2	1	10	9	46	33	26	42	**41**	49	43	72	61	74	**86**	79	51	38	27	14	12	5

AM Peak 1130 - 1230 (189), AM PHF=0.81 PM Peak 1730 - 1830 (339), PM PHF=0.98

* Thursday, December 17, 2020=3416, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
38	**22**	**10**	**4**	**7**	**25**	**46**	**94**	**130**	**126**	**133**	**155**	**172**	**191**	**211**	**239**	**273**	**366**	**310**	**289**	**230**	**175**	**103**	**72**	
10	5	2	3	0	0	8	20	27	34	26	33	**54**	57	48	59	79	**81**	78	79	72	42	22	18	11
10	5	2	1	2	0	11	16	26	26	38	**36**	35	39	51	44	56	**91**	66	70	53	35	37	21	11
14	6	4	0	5	7	14	23	38	31	36	**41**	41	39	62	61	72	**107**	94	77	48	33	20	16	3
5	6	3	0	1	18	13	36	39	35	33	**46**	43	56	50	76	68	**87**	73	64	58	66	25	18	10

AM Peak 1115 - 1215 (176), AM PHF=0.82 PM Peak 1700 - 1800 (366), PM PHF=0.86

* Friday, December 18, 2020=120, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
34	**21**	**19**	**8**	**12**	**14**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
11	8	3	0	2	3	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	9	6	3	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2	4	4	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2	6	1	2	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (34), AM PHF=0.77 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, December 19, 2020=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=-1.#J PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Sunday, December 20, 2020=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	**1**	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–

AM Peak 0700 - 0800 (1), AM PHF=0.25

MetroCount Traffic Executive
Event Counts

EventCount-549 -- English (ENU)

Datasets:

Site:	**[Gandy Brghton] North of Gandy on Brighten Bay A---North B--South**
Attribute:	Pinellas
Input A:	1 - North bound. - Lane= 2, Excluded from totals.
Input B:	3 - South bound. - Lane= 2, Added to totals. (/2.000)
Survey Duration:	18:47 Sunday, December 13, 2020 => 15:50 Sunday, December 20, 2020,
Zone:	
File:	Gandy Brghton 0 2020-12-20 1551.EC2 (Plus)
Identifier:	JE356JET MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**18:48 Sunday, December 13, 2020 => 15:50 Sunday, December 20, 2020 (6.87662)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 23025 / 23026 (100.00%)

* Sunday, December 13, 2020=3 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**3**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	0	0	0	0	0

* Monday, December 14, 2020=2225, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**1**	**303**	**255**	**128**	**123**	**110**	**129**	**153**	**135**	**128**	**147**	**171**	**167**	**110**	**64**	**50**	**35**	**19**	
0	0	0	0	0	0	0	61	**101**	37	37	33	29	36	32	20	32	**44**	41	22	17	15	10	4	0
0	0	0	0	0	0	0	**68**	53	39	28	20	42	37	38	33	37	**52**	36	39	21	13	8	7	4
0	0	0	0	0	0	0	**96**	58	28	28	24	27	41	37	33	**37**	36	52	22	10	14	7	5	3
0	0	0	0	0	0	1	**78**	43	25	31	33	31	39	28	43	**41**	40	39	27	16	8	10	4	3

AM Peak 0715 - 0815 (343), AM PHF=0.85 PM Peak 1630 - 1730 (174), PM PHF=0.83

* Tuesday, December 15, 2020=2468, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
10	**5**	**8**	**8**	**13**	**34**	**133**	**281**	**213**	**154**	**101**	**126**	**155**	**133**	**130**	**139**	**168**	**214**	**144**	**104**	**82**	**56**	**31**	**29**	
0	0	2	1	1	7	22	52	**55**	41	26	25	24	28	34	26	33	**60**	43	26	26	14	8	6	1
4	3	3	0	3	6	26	**73**	63	33	25	40	44	38	22	41	32	**56**	36	26	25	15	10	8	2
3	0	2	3	3	9	44	**86**	56	46	28	35	44	41	40	40	48	**52**	26	31	17	14	9	10	1
3	2	1	4	6	12	42	**71**	39	35	22	26	43	27	34	32	**55**	47	39	21	14	13	4	5	7

AM Peak 0715 - 0815 (284), AM PHF=0.83 PM Peak 1645 - 1745 (222), PM PHF=0.93

* Wednesday, December 16, 2020=2369, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
11	**8**	**4**	**9**	**12**	**34**	**134**	**285**	**234**	**128**	**131**	**156**	**139**	**124**	**138**	**120**	**139**	**141**	**173**	**99**	**74**	**41**	**19**	**20**	
1	1	1	2	0	6	24	48	**75**	37	31	39	47	36	30	28	39	29	**48**	25	20	10	2	4	1
2	3	1	2	3	6	29	**89**	52	27	27	35	27	23	38	30	28	43	**38**	18	16	12	7	3	3
1	2	0	3	4	11	38	**83**	61	34	32	36	39	31	32	29	29	34	**45**	32	13	8	6	5	3
7	2	2	2	5	11	43	**66**	46	30	41	47	26	34	39	33	44	36	**42**	24	25	11	4	8	1

AM Peak 0715 - 0815 (313), AM PHF=0.88 PM Peak 1800 - 1900 (173), PM PHF=0.90

* Thursday, December 17, 2020=2473, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
8	**12**	**5**	**11**	**14**	**39**	**134**	**280**	**206**	**144**	**126**	**128**	**131**	**151**	**152**	**116**	**162**	**192**	**170**	**111**	**67**	**56**	**35**	**28**	
1	2	3	1	0	8	19	**42**	41	38	29	27	43	35	38	29	39	**64**	48	30	21	20	12	5	6
3	5	0	3	3	5	35	**75**	55	34	26	38	28	33	46	22	36	**36**	47	28	9	13	12	15	3
3	2	1	5	6	11	39	**75**	64	45	33	33	33	40	31	31	30	**36**	37	33	15	14	8	3	2
1	3	1	2	5	15	41	**88**	47	27	38	30	27	43	37	34	**57**	56	38	20	22	9	3	5	4

AM Peak 0700 - 0800 (280), AM PHF=0.80 PM Peak 1645 - 1745 (192), PM PHF=0.75

* Friday, December 18, 2020=109, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
15	**7**	**6**	**14**	**14**	**41**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
6	2	0	1	1	**13**	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2	1	5	5	**5**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	4	5	3	**10**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1	1	3	5	**13**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0500 - 0600 (41), AM PHF=0.79 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, December 19, 2020=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=-1.#J PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Sunday, December 20, 2020=2 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	**1**	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–

AM Peak 0700 - 0800 (1), AM PHF=0.25

MetroCount Traffic Executive
Event Counts

EventCount-550 -- English (ENU)

Datasets:

Site:	**[Gandy on Brighten] South of Gandy on Brighten Bay--A--North --- B;;;South**
Attribute:	Pinellas
Input A:	1 - North bound. - Lane= 2, Added to totals. (/2.000)
Input B:	3 - South bound. - Lane= 2, Excluded from totals.
Survey Duration:	18:58 Sunday, December 13, 2020 => 15:45 Sunday, December 20, 2020,
Zone:	
File:	Gandy on Brighten 0 2020-12-20 1546.EC2 (Plus)
Identifier:	JH712202 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**18:59 Sunday, December 13, 2020 => 15:45 Sunday, December 20, 2020 (6.86579)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 19208 / 19208 (100.00%)

* Sunday, December 13, 2020=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0

* Monday, December 14, 2020=3460, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**1**	**0**	**75**	**119**	**303**	**241**	**204**	**297**	**154**	**177**	**333**	**291**	**334**	**266**	**283**	**162**	**108**	**58**	**58**	
0	0	0	0	0	0	0	0	27	82	41	24	**98**	49	44	37	**73**	98	83	89	42	50	21	8	9
0	0	0	0	0	0	0	14	6	70	59	39	**65**	37	38	69	**85**	67	57	55	49	24	18	19	13
0	0	0	0	0	1	0	7	29	49	73	**69**	67	44	47	**153**	56	87	58	79	29	28	7	18	14
0	0	0	0	0	0	0	54	58	103	68	**73**	68	25	49	**74**	77	82	68	61	43	7	12	14	9

AM Peak 1130 - 1230 (304), AM PHF=0.78 PM Peak 1530 - 1630 (384), PM PHF=0.63

* Tuesday, December 15, 2020=4086, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
44	**33**	**18**	**28**	**33**	**8**	**253**	**199**	**156**	**294**	**258**	**229**	**297**	**183**	**196**	**314**	**320**	**317**	**297**	**252**	**188**	**73**	**51**	**51**	
9	12	5	7	17	0	67	84	42	65	37	11	**97**	46	58	55	**72**	84	80	91	52	26	19	15	9
13	5	0	5	5	2	102	46	14	53	60	48	**53**	60	53	51	**87**	74	73	70	69	14	12	11	13
14	10	6	8	7	2	43	15	36	63	83	**71**	64	43	44	**139**	75	75	61	53	38	10	13	13	20
9	7	7	9	4	4	41	55	65	113	79	**99**	84	36	42	**70**	87	85	84	39	30	24	8	13	15

AM Peak 1130 - 1230 (319), AM PHF=0.81 PM Peak 1530 - 1630 (367), PM PHF=0.66

* Wednesday, December 16, 2020=4372, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
57	**43**	**38**	**48**	**31**	**20**	**250**	**191**	**128**	**339**	**230**	**219**	**287**	**211**	**262**	**393**	**290**	**312**	**288**	**323**	**210**	**105**	**38**	**66**	
9	14	7	8	14	3	59	73	37	**68**	24	25	93	52	83	63	**88**	84	74	72	58	34	9	17	8
13	14	17	14	15	0	96	49	6	**99**	71	62	48	80	77	66	**86**	122	87	90	56	28	9	29	7
20	8	5	5	2	4	41	18	50	**48**	66	52	67	35	39	**139**	56	60	60	76	46	28	15	12	13
15	9	11	21	0	13	54	52	35	**124**	70	81	79	45	63	**125**	61	46	68	86	51	16	6	9	8

AM Peak 0900 - 1000 (339), AM PHF=0.68 PM Peak 1530 - 1630 (438), PM PHF=0.79

* Thursday, December 17, 2020=4160, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
35	**34**	**36**	**24**	**34**	**9**	**265**	**195**	**143**	**320**	**248**	**225**	**250**	**158**	**193**	**381**	**353**	**289**	**252**	**300**	**200**	**86**	**68**	**67**	
8	8	4	2	16	2	63	90	30	**85**	29	18	84	46	41	64	**99**	65	55	83	67	34	18	35	16
7	10	7	12	11	0	127	32	18	**72**	70	68	45	60	42	66	**83**	79	54	70	57	25	10	13	24
13	8	10	7	4	5	34	14	37	**48**	74	66	61	38	58	91	**95**	112	74	72	39	10	14	5	8
8	9	15	4	4	2	42	60	59	**115**	76	74	61	15	53	**161**	77	34	70	76	37	18	26	15	3

AM Peak 0900 - 1000 (320), AM PHF=0.69 PM Peak 1545 - 1645 (437), PM PHF=0.68

* Friday, December 18, 2020=391, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
50	**40**	**31**	**47**	**36**	**4**	**184**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
16	14	10	7	15	0	**68**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	11	9	18	14	2	**110**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	6	7	7	4	2	**6**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	10	6	15	3	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0600 - 0700 (184), AM PHF=0.42 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, December 19, 2020=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=-1.#J PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Sunday, December 20, 2020=0 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–

AM Peak 0000 - 0100 (0), AM PHF=-1.#J

MetroCount Traffic Executive
Event Counts

EventCount-551 -- English (ENU)

Datasets:

Site:	**[Gandy on Brighten] South of Gandy on Brighten Bay--A--North --- B;;;South**
Attribute:	Pinellas
Input A:	1 - North bound. - Lane= 2, Excluded from totals.
Input B:	3 - South bound. - Lane= 2, Added to totals. (/2.000)
Survey Duration:	18:58 Sunday, December 13, 2020 => 15:45 Sunday, December 20, 2020,
Zone:	
File:	Gandy on Brighten 0 2020-12-20 1546.EC2 (Plus)
Identifier:	JH712202 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**18:59 Sunday, December 13, 2020 => 15:45 Sunday, December 20, 2020 (6.86579)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 19208 / 19208 (100.00%)

* Sunday, December 13, 2020=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0	0

* Monday, December 14, 2020=624, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**1**	**0**	**29**	**49**	**38**	**20**	**88**	**55**	**22**	**12**	**33**	**55**	**74**	**65**	**52**	**21**	**12**	**1**	**2**	
0	0	0	0	0	0	0	0	6	6	7	10	**21**	10	2	9	8	**16**	9	16	8	7	1	0	0
0	0	0	0	0	0	0	13	14	9	4	**32**	13	5	1	7	13	**18**	20	12	7	3	0	2	0
0	0	0	0	0	1	0	12	21	15	4	**26**	17	4	5	10	14	**20**	10	18	3	0	0	0	0
0	0	0	0	0	0	0	4	8	8	5	**20**	4	3	4	7	20	**20**	27	7	3	2	0	0	1

AM Peak 1115 - 1215 (99), AM PHF=0.77 PM Peak 1700 - 1800 (74), PM PHF=0.92

* Tuesday, December 15, 2020=703, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
1	**0**	**1**	**1**	**1**	**13**	**61**	**34**	**46**	**47**	**15**	**83**	**58**	**19**	**19**	**26**	**61**	**78**	**62**	**58**	**17**	**4**	**2**	**2**	
0	0	0	0	0	0	16	5	3	5	6	12	**17**	8	1	1	11	**16**	15	19	9	2	0	0	1
0	0	0	0	0	0	9	13	11	8	0	**23**	20	5	1	4	14	**15**	16	15	3	1	2	0	0
0	0	0	1	1	2	21	12	26	18	2	**37**	11	1	9	8	19	**25**	16	16	1	1	0	2	0
1	0	1	0	0	11	16	4	7	16	7	**11**	10	5	8	13	18	**23**	16	9	4	0	0	0	0

AM Peak 1115 - 1215 (88), AM PHF=0.59 PM Peak 1700 - 1800 (78), PM PHF=0.78

* Wednesday, December 16, 2020=688, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
1	**4**	**1**	**0**	**0**	**8**	**65**	**40**	**39**	**33**	**18**	**86**	**60**	**18**	**17**	**31**	**53**	**62**	**48**	**60**	**41**	**3**	**2**	**2**	
1	0	1	0	0	0	21	8	4	2	6	14	**26**	9	3	5	16	16	9	12	**17**	0	0	0	1
0	0	0	0	0	0	7	10	11	8	2	**24**	13	4	4	10	12	18	12	**15**	14	1	1	1	2
0	0	0	0	0	1	23	22	19	16	3	**36**	12	2	3	6	16	12	10	**15**	8	1	1	1	1
0	4	0	0	0	7	15	0	5	7	7	**12**	9	3	7	10	10	17	17	**18**	2	1	0	0	0

AM Peak 1115 - 1215 (98), AM PHF=0.68 PM Peak 1915 - 2015 (65), PM PHF=0.90

* Thursday, December 17, 2020=681, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
4	**0**	**1**	**0**	**0**	**7**	**56**	**39**	**40**	**44**	**19**	**76**	**49**	**15**	**21**	**30**	**67**	**57**	**56**	**70**	**21**	**4**	**5**	**2**	
1	0	0	0	0	1	15	9	8	9	5	**13**	11	6	3	7	9	11	8	**21**	6	4	1	1	0
2	0	0	0	0	1	9	9	9	7	1	**29**	19	5	9	6	22	21	15	**21**	6	0	1	0	0
1	0	1	0	0	2	18	18	19	20	3	**20**	9	2	7	10	11	10	13	**18**	5	0	3	0	1
0	0	1	0	0	3	14	3	4	8	10	**15**	10	2	2	7	25	15	**21**	11	4	0	0	1	2

AM Peak 1100 - 1200 (76), AM PHF=0.66 PM Peak 1845 - 1945 (81), PM PHF=0.96

* Friday, December 18, 2020=42, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
3	**1**	**1**	**0**	**1**	**9**	**27**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	1	0	0	0	0	**12**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	**9**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	0	0	4	**6**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	**4**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0545 - 0645 (30), AM PHF=0.65 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, December 19, 2020=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=-1.#J PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Sunday, December 20, 2020=0 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–

AM Peak 0000 - 0100 (0), AM PHF=-1.#J

MetroCount Traffic Executive
Event Counts

EventCount-553 -- English (ENU)

Datasets:

Site:	**[Gandy Brighten] East of Brighten Bay on Gandy A--West ;;; B--East**
Attribute:	Pinellas
Input A:	4 - West bound. - Lane= 3, Excluded from totals.
Input B:	2 - East bound. - Lane= 3, Added to totals. (/2.000)
Survey Duration:	19:04 Sunday, December 13, 2020 => 15:46 Sunday, December 20, 2020,
Zone:	
File:	Gandy Brighten 0 2020-12-20 1547.EC3 (Plus)
Identifier:	JF85HVS6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**19:05 Sunday, December 13, 2020 => 15:46 Sunday, December 20, 2020 (6.8623)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 136950 / 136950 (100.00%)

* Sunday, December 13, 2020=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0

* Monday, December 14, 2020=12877, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**82**	**985**	**867**	**770**	**796**	**905**	**874**	**965**	**1150**	**1314**	**1480**	**920**	**594**	**434**	**311**	**234**	**200**	
0	0	0	0	0	0	0	0	241	**242**	216	203	208	226	251	258	288	**416**	253	155	130	91	78	63	31
0	0	0	0	0	0	0	0	**235**	205	205	172	230	210	208	275	328	**359**	288	151	110	74	61	50	32
0	0	0	0	0	0	0	0	**270**	206	170	194	234	218	225	319	347	**399**	215	144	99	80	52	44	28
0	0	0	0	0	0	0	82	**240**	214	180	227	234	221	282	299	**353**	306	164	144	95	67	44	44	20

AM Peak 0815 - 0915 (986), AM PHF=0.91 PM Peak 1645 - 1745 (1526), PM PHF=0.92

* Tuesday, December 15, 2020=17123, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
110	**84**	**54**	**59**	**110**	**375**	**964**	**1262**	**1097**	**868**	**878**	**973**	**974**	**965**	**1025**	**1237**	**1577**	**1544**	**1086**	**615**	**436**	**389**	**279**	**167**	
31	21	14	8	16	40	172	**318**	296	186	230	223	235	230	238	308	**376**	373	356	151	109	104	73	50	44
32	14	9	15	26	106	229	**326**	242	247	204	245	253	232	274	275	**404**	400	307	160	123	97	74	44	32
28	29	14	13	25	103	259	**337**	289	222	240	262	245	272	258	340	**385**	388	238	167	102	89	72	48	33
20	21	17	23	44	127	**305**	282	270	213	205	243	242	231	256	315	**413**	384	186	137	102	100	60	26	27

AM Peak 0645 - 0745 (1285), AM PHF=0.95 PM Peak 1600 - 1700 (1577), PM PHF=0.96

* Wednesday, December 16, 2020=16801, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
135	**91**	**52**	**87**	**105**	**392**	**929**	**1146**	**1008**	**896**	**850**	**920**	**996**	**946**	**1082**	**1638**	**1623**	**1313**	**838**	**559**	**400**	**338**	**277**	**186**	
44	21	19	34	20	53	148	245	**265**	224	230	215	251	254	222	381	**421**	363	243	165	109	108	70	55	22
32	25	13	17	27	89	259	**296**	239	226	194	221	250	253	257	402	**406**	340	220	150	127	84	84	54	32
33	18	11	17	30	119	238	**298**	289	209	217	225	238	207	290	**426**	405	338	198	114	83	60	77	39	29
27	28	9	20	29	132	285	**307**	216	238	210	260	257	233	314	**430**	392	273	177	131	82	88	46	39	24

AM Peak 0715 - 0815 (1166), AM PHF=0.95 PM Peak 1530 - 1630 (1682), PM PHF=0.98

* Thursday, December 17, 2020=17238, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
107	**74**	**62**	**71**	**106**	**379**	**938**	**1091**	**1029**	**917**	**876**	**973**	**1028**	**998**	**1120**	**1316**	**1552**	**1421**	**1047**	**715**	**485**	**405**	**300**	**234**	
22	29	12	12	18	46	169	**248**	247	251	202	224	260	255	235	283	355	**373**	264	195	130	98	78	76	40
32	9	16	20	24	97	214	**285**	254	203	198	254	297	208	292	333	393	**410**	294	183	151	94	92	62	34
29	17	17	16	37	121	251	**271**	267	260	252	244	221	262	283	307	**408**	345	243	202	104	97	75	56	31
24	20	17	23	28	116	**305**	287	261	205	225	252	250	273	311	394	**397**	294	247	136	100	117	55	40	16

AM Peak 0645 - 0745 (1109), AM PHF=0.91 PM Peak 1630 - 1730 (1588), PM PHF=0.97

* Friday, December 18, 2020=1267, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
121	**88**	**64**	**81**	**117**	**365**	**432**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
40	21	17	21	25	41	**131**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	22	15	16	36	100	**201**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	25	18	20	26	**105**	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	20	14	25	31	**119**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0530 - 0630 (556), AM PHF=0.69 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, December 19, 2020=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=-1.#J PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Sunday, December 20, 2020=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–

AM Peak 0000 - 0100 (0), AM PHF=-1.#J

MetroCount Traffic Executive
Event Counts

EventCount-552 -- English (ENU)

Datasets:

Site:	**[Gandy Brighten] East of Brighten Bay on Gandy A--West ;;; B--East**
Attribute:	Pinellas
Input A:	4 - West bound. - Lane= 3, Added to totals. (/2.000)
Input B:	2 - East bound. - Lane= 3, Excluded from totals.
Survey Duration:	19:04 Sunday, December 13, 2020 => 15:46 Sunday, December 20, 2020,
Zone:	
File:	Gandy Brighten 0 2020-12-20 1547.EC3 (Plus)
Identifier:	JF85HVS6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**19:05 Sunday, December 13, 2020 => 15:46 Sunday, December 20, 2020 (6.8623)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 136950 / 136950 (100.00%)

* Sunday, December 13, 2020=2 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**2**	**1**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0

* Monday, December 14, 2020=14509, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**128**	**1261**	**1004**	**832**	**973**	**1148**	**1060**	**1275**	**1334**	**1484**	**1453**	**987**	**493**	**358**	**280**	**266**	**176**	
0	0	0	0	0	0	0	0	**318**	271	227	233	259	271	289	305	359	**403**	294	128	111	67	75	62	33
0	0	0	0	0	0	0	0	**272**	245	207	214	319	258	297	299	352	**355**	278	147	86	89	81	38	33
0	0	0	0	0	0	0	0	**342**	216	180	258	253	258	322	384	**378**	357	225	114	77	81	65	34	38
0	0	0	0	0	0	0	128	**329**	273	218	268	319	274	367	347	**395**	339	190	105	85	44	45	44	33

AM Peak 0800 - 0900 (1261), AM PHF=0.92 PM Peak 1630 - 1730 (1531), PM PHF=0.95

* Tuesday, December 15, 2020=18587, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
136	**85**	**70**	**66**	**100**	**243**	**749**	**1308**	**1340**	**1045**	**927**	**1136**	**1162**	**1180**	**1255**	**1441**	**1676**	**1609**	**1166**	**618**	**417**	**342**	**329**	**194**	
33	20	17	19	17	31	115	247	**347**	262	217	293	284	289	303	339	353	**398**	433	168	110	71	85	59	34
33	19	9	11	18	53	165	**356**	332	260	232	312	282	306	316	360	**447**	409	287	110	111	99	95	56	38
38	29	26	19	24	73	233	**344**	332	284	265	250	294	319	307	384	**425**	437	254	52	103	96	80	46	50
33	18	18	18	43	86	237	**362**	330	240	214	281	304	267	329	358	**452**	365	193	288	94	76	69	33	28

AM Peak 0715 - 0815 (1408), AM PHF=0.97 PM Peak 1615 - 1715 (1721), PM PHF=0.95

* Wednesday, December 16, 2020=18001, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
149	**92**	**66**	**57**	**96**	**279**	**717**	**1228**	**1262**	**1062**	**998**	**1020**	**1184**	**1112**	**1384**	**1614**	**1626**	**1507**	**879**	**556**	**416**	**259**	**256**	**189**	
34	28	18	13	22	37	121	241	**316**	279	260	225	272	290	325	367	341	**373**	276	157	131	66	77	56	32
38	13	15	18	25	52	148	314	**301**	252	220	263	297	269	312	399	387	**419**	220	126	110	68	57	38	14
50	18	18	10	19	98	201	328	**357**	243	250	273	326	282	340	453	**488**	364	213	151	91	76	69	56	36
28	33	15	16	30	93	248	**345**	288	289	268	261	290	271	407	396	**410**	351	170	123	84	50	54	40	47

AM Peak 0745 - 0845 (1319), AM PHF=0.92 PM Peak 1630 - 1730 (1690), PM PHF=0.87

* Thursday, December 17, 2020=19450, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
128	**70**	**80**	**51**	**93**	**258**	**714**	**1260**	**1364**	**1065**	**975**	**1161**	**1209**	**1213**	**1396**	**1572**	**1594**	**1599**	**1295**	**793**	**576**	**427**	**330**	**232**	
32	22	28	10	24	36	129	242	**344**	275	218	262	301	304	321	360	367	**389**	365	211	192	122	81	75	37
14	20	17	8	21	64	159	303	**342**	297	275	255	288	309	347	387	**422**	364	384	206	133	109	92	54	27
36	13	14	14	21	81	224	**362**	340	246	237	324	301	303	359	445	**406**	407	264	182	141	98	93	56	36
47	15	22	20	27	79	203	**353**	338	248	245	321	319	297	370	381	**400**	440	283	195	112	99	65	47	36

AM Peak 0730 - 0830 (1401), AM PHF=0.97 PM Peak 1615 - 1715 (1616), PM PHF=0.96

* Friday, December 18, 2020=1095, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
135	**84**	**67**	**63**	**106**	**256**	**385**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
37	30	23	14	17	39	**136**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	11	13	19	22	57	**174**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	26	14	16	33	**85**	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	17	18	15	35	**76**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0530 - 0630 (471), AM PHF=0.68 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, December 19, 2020=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=-1.#J PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Sunday, December 20, 2020=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–

AM Peak 0000 - 0100 (0), AM PHF=-1.#J

MetroCount Traffic Executive
Event Counts

EventCount-555 -- English (ENU)

Datasets:

Site:	**[Gandy Brighten] West of Brighten Bay on Gandy---A--westbounb---B--eastbound**
Attribute:	Pinellas
Input A:	4 - West bound. - Lane= 2, Excluded from totals.
Input B:	2 - East bound. - Lane= 2, Added to totals. (/2.000)
Survey Duration:	18:52 Sunday, December 13, 2020 => 15:51 Sunday, December 20, 2020,
Zone:	
File:	Gandy Brighten 0 2020-12-20 1552.EC2 (Plus)
Identifier:	JE42AZ9K MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**18:53 Sunday, December 13, 2020 => 15:51 Sunday, December 20, 2020 (6.87394)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 156105 / 156106 (100.00%)

* Sunday, December 13, 2020=2 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**2**	**1**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	1	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0	0	0	0	0

* Monday, December 14, 2020=15539, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**366**	**1116**	**906**	**1047**	**1222**	**1053**	**1129**	**1370**	**1627**	**1848**	**1245**	**926**	**682**	**469**	**324**	**214**	
0	0	0	0	0	0	0	0	0	260	260	237	**327**	293	284	325	332	**462**	340	247	202	135	97	58	43
0	0	0	0	0	0	0	0	0	273	234	233	**296**	264	244	336	386	**487**	344	238	175	120	82	57	36
0	0	0	0	0	0	0	0	74	270	195	292	**302**	219	292	367	428	**474**	307	247	149	115	66	48	38
0	0	0	0	0	0	0	0	292	313	217	**286**	298	278	309	343	**481**	425	255	195	157	100	79	52	23

AM Peak 1145 - 1245 (1210), AM PHF=0.93 PM Peak 1645 - 1745 (1904), PM PHF=0.98

* Tuesday, December 15, 2020=20943, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
140	**91**	**69**	**63**	**104**	**435**	**1078**	**1328**	**1210**	**1062**	**1089**	**1189**	**1225**	**1118**	**1186**	**1441**	**1891**	**1960**	**1497**	**965**	**723**	**521**	**367**	**198**	
43	28	19	10	17	44	198	**320**	300	252	307	240	309	278	273	347	444	**455**	454	256	196	136	106	51	54
36	16	14	16	23	95	240	**344**	285	267	258	308	347	257	323	332	465	**508**	416	248	200	134	91	47	36
38	26	18	11	25	115	311	**349**	310	269	287	329	278	290	296	390	498	**485**	338	262	168	122	101	51	36
23	22	19	26	39	182	**330**	316	316	275	237	313	292	294	295	372	485	**512**	290	200	160	130	70	49	26

AM Peak 0645 - 0745 (1342), AM PHF=0.96 PM Peak 1700 - 1800 (1960), PM PHF=0.96

* Wednesday, December 16, 2020=20666, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
151	**89**	**50**	**84**	**104**	**441**	**1025**	**1230**	**1137**	**1146**	**1012**	**1163**	**1334**	**1121**	**1294**	**1851**	**1856**	**1677**	**1259**	**957**	**653**	**473**	**354**	**210**	
54	23	19	31	21	52	198	267	267	265	260	252	**371**	302	278	422	**444**	460	347	263	178	133	93	53	34
36	22	10	16	28	84	254	303	287	256	249	284	**354**	303	306	474	**494**	429	325	270	207	123	100	64	44
36	23	11	17	25	131	283	339	299	288	263	**316**	310	255	342	455	**470**	411	313	202	131	102	97	47	43
26	22	11	21	30	175	290	321	284	338	242	**312**	299	262	370	**501**	449	377	275	223	137	116	64	47	28

AM Peak 1130 - 1230 (1353), AM PHF=0.91 PM Peak 1545 - 1645 (1908), PM PHF=0.95

* Thursday, December 17, 2020=21206, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
148	**85**	**62**	**66**	**104**	**432**	**1067**	**1174**	**1182**	**1122**	**1053**	**1252**	**1254**	**1203**	**1292**	**1534**	**1835**	**1830**	**1409**	**1143**	**752**	**553**	**397**	**263**	
34	28	12	11	15	44	214	267	263	278	257	280	**291**	319	285	347	427	**455**	351	339	209	153	110	83	45
44	14	20	16	24	94	245	287	269	263	266	311	**385**	253	329	362	441	**513**	371	273	222	122	108	70	45
43	20	18	16	36	138	294	323	330	299	274	**301**	279	321	339	395	**500**	463	350	289	157	128	99	65	35
28	24	13	24	29	156	316	298	321	282	257	**361**	300	310	340	432	**469**	400	338	243	165	151	80	45	21

AM Peak 1130 - 1230 (1337), AM PHF=0.87 PM Peak 1630 - 1730 (1936), PM PHF=0.94

* Friday, December 18, 2020=1133, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
146	**105**	**72**	**79**	**113**	**424**	**195**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
45	28	15	17	22	44	**170**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	28	19	18	33	**99**	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	29	22	18	31	**120**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	21	17	27	27	**161**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0515 - 0615 (550), AM PHF=0.81 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, December 19, 2020=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=-1.#J PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Sunday, December 20, 2020=0 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–

AM Peak 0000 - 0100 (0), AM PHF=-1.#J

MetroCount Traffic Executive
Event Counts

EventCount-554 -- English (ENU)

Datasets:

Site:	**[Gandy Brighten] West of Brighten Bay on Gandy---A--westbounb---B--eastbound**
Attribute:	Pinellas
Input A:	4 - West bound. - Lane= 2, Added to totals. (/2.000)
Input B:	2 - East bound. - Lane= 2, Excluded from totals.
Survey Duration:	18:52 Sunday, December 13, 2020 => 15:51 Sunday, December 20, 2020,
Zone:	
File:	Gandy Brighten 0 2020-12-20 1552.EC2 (Plus)
Identifier:	JE42AZ9K MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**18:53 Sunday, December 13, 2020 => 15:51 Sunday, December 20, 2020 (6.87394)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 156105 / 156106 (100.00%)

* Sunday, December 13, 2020=2 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**2**	**1**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	1	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	0	0	0	0	0	0

* Monday, December 14, 2020=14681, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**433**	**1121**	**938**	**1010**	**1158**	**1065**	**1239**	**1397**	**1506**	**1539**	**1111**	**749**	**518**	**372**	**325**	**204**	
0	0	0	0	0	0	0	0	0	**314**	256	249	270	273	289	297	411	**441**	293	203	138	106	88	72	62
0	0	0	0	0	0	0	0	0	**271**	238	211	308	264	280	307	326	**376**	313	201	142	105	92	46	32
0	0	0	0	0	0	0	0	82	**234**	215	262	266	270	312	393	**394**	361	262	166	117	107	85	37	41
0	0	0	0	0	0	0	0	**352**	302	230	288	315	259	359	400	**375**	361	244	180	122	54	60	50	34

AM Peak 0845 - 0945 (1171), AM PHF=0.83 PM Peak 1630 - 1730 (1586), PM PHF=0.90

* Tuesday, December 15, 2020=20176, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
168	**101**	**94**	**93**	**117**	**257**	**886**	**1539**	**1437**	**1148**	**1034**	**1097**	**1146**	**1176**	**1262**	**1452**	**1720**	**1688**	**1341**	**805**	**609**	**430**	**357**	**223**	
62	29	27	26	22	39	142	319	**365**	277	255	244	266	288	310	329	349	**423**	470	237	177	106	95	64	48
32	26	17	13	24	54	220	**408**	354	285	259	287	263	312	305	372	**482**	419	327	185	166	117	102	60	48
41	29	31	27	29	69	247	**401**	370	303	265	274	302	303	324	385	**419**	478	283	102	131	125	86	58	43
34	17	20	27	42	96	277	**412**	349	284	256	294	315	274	324	368	**471**	369	262	282	136	82	75	42	36

AM Peak 0715 - 0815 (1585), AM PHF=0.96 PM Peak 1615 - 1715 (1794), PM PHF=0.93

* Wednesday, December 16, 2020=19536, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
175	**112**	**77**	**102**	**116**	**285**	**860**	**1435**	**1352**	**1185**	**1027**	**1089**	**1193**	**1106**	**1372**	**1549**	**1644**	**1529**	**1111**	**763**	**572**	**361**	**303**	**224**	
48	34	16	24	30	43	135	290	**337**	284	275	232	284	286	325	370	375	**371**	323	190	183	102	76	69	43
48	25	21	26	31	50	208	**399**	326	310	234	296	277	268	310	381	376	**425**	280	196	134	91	85	51	25
43	22	20	21	28	92	232	**340**	375	266	244	266	309	279	335	424	**464**	377	262	209	136	94	81	61	36
36	31	21	32	28	101	286	**407**	315	326	275	296	324	274	402	374	**429**	357	247	169	120	75	62	44	44

AM Peak 0715 - 0815 (1482), AM PHF=0.91 PM Peak 1630 - 1730 (1688), PM PHF=0.91

* Thursday, December 17, 2020=21176, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
147	**94**	**98**	**100**	**122**	**273**	**875**	**1485**	**1428**	**1192**	**1098**	**1155**	**1182**	**1229**	**1408**	**1560**	**1679**	**1709**	**1474**	**991**	**724**	**509**	**380**	**269**	
43	21	36	19	34	41	149	317	**364**	314	253	246	280	314	317	320	403	**424**	386	251	220	158	97	86	42
25	31	18	30	26	62	207	344	**352**	312	276	282	301	316	339	387	429	**404**	429	271	171	126	107	70	37
36	18	21	27	31	87	287	**419**	364	276	277	324	303	315	366	425	403	**434**	308	238	183	130	103	54	42
44	24	24	25	31	84	233	**406**	349	290	294	303	299	284	386	429	445	**447**	352	231	151	96	74	60	38

AM Peak 0730 - 0830 (1540), AM PHF=0.92 PM Peak 1700 - 1800 (1709), PM PHF=0.96

* Friday, December 18, 2020=1046, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
159	**114**	**91**	**102**	**129**	**278**	**175**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
42	39	25	23	28	51	**146**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	23	19	29	28	**57**	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	30	25	22	39	**88**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	22	23	29	35	**82**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0515 - 0615 (373), AM PHF=0.64 PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Saturday, December 19, 2020=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=-1.#J PM Peak 0000 - 0100 (0), PM PHF=-1.#J

* Sunday, December 20, 2020=0 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–

AM Peak 0000 - 0100 (0), AM PHF=-1.#J

MetroCount Traffic Executive
Event Counts

EventCount-8 -- English (ENU)

Datasets:

Site:	**[Gandy & San Mart] East of San Martin , On Grandy ..A--westbound ,,B eastbound**
Attribute:	Pinellas
Input A:	4 - West bound. - Lane= 2, Excluded from totals.
Input B:	2 - East bound. - Lane= 2, Added to totals. (/2.000)
Survey Duration:	11:28 Saturday, January 9, 2021 => 13:02 Friday, January 15, 2021,
Zone:	
File:	Gandy _ San Mart 0 2021-01-15 1302.EC2 (Plus)
Identifier:	JE32D7JE MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v5.08)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**11:29 Saturday, January 9, 2021 => 13:02 Friday, January 15, 2021 (6.06469)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 126321 / 126323 (100.00%)

* Saturday, January 9, 2021=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**0**	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**0**	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**1**	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**0**	0	0	0	0	0	0	0

PM Peak 1645 - 1745 (1), PM PHF=0.25

* Sunday, January 10, 2021=1, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**17**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**25**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	14

AM Peak 0000 - 0100 (0), AM PHF=-nan(ind) PM Peak 2345 - 2445 (42), PM PHF=0.42

* Monday, January 11, 2021=14865, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
56	**58**	**71**	**56**	**118**	**353**	**872**	**1101**	**1019**	**812**	**723**	**821**	**874**	**860**	**899**	**1116**	**1366**	**1377**	**820**	**558**	**353**	**269**	**181**	**138**	
0	20	21	14	27	53	159	244	**253**	195	187	197	193	220	228	269	334	**357**	206	146	110	64	49	34	23
17	16	21	10	22	75	213	**287**	255	196	177	197	210	226	213	248	316	**354**	247	140	97	100	46	37	29
25	12	16	20	32	103	239	**289**	249	206	182	218	257	202	228	307	342	**346**	201	136	71	58	49	34	36
14	10	14	12	37	123	262	**282**	262	215	178	209	215	213	231	292	**375**	320	167	137	76	48	38	34	19

AM Peak 0715 - 0815 (1110), AM PHF=0.96 PM Peak 1645 - 1745 (1432), PM PHF=0.95

* Tuesday, January 12, 2021=15336, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
106	**68**	**56**	**73**	**128**	**378**	**841**	**1115**	**1017**	**873**	**803**	**826**	**874**	**781**	**866**	**1166**	**1432**	**1495**	**947**	**505**	**376**	**287**	**195**	**134**	
23	19	6	18	23	48	149	265	**296**	255	206	191	228	192	193	254	313	**352**	279	135	100	72	64	37	24
29	23	13	14	30	89	203	**283**	257	192	203	196	204	210	227	289	401	**391**	270	122	100	61	51	48	25
36	11	18	29	26	105	274	**294**	248	231	214	216	228	201	241	332	338	**410**	230	141	73	91	40	26	20
19	16	20	13	50	138	215	**273**	218	196	181	223	215	179	206	292	**381**	343	169	108	104	63	40	24	14

AM Peak 0715 - 0815 (1145), AM PHF=0.97 PM Peak 1645 - 1745 (1533), PM PHF=0.93

* Wednesday, January 13, 2021=15486, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
82	**77**	**54**	**100**	**111**	**336**	**877**	**1133**	**1045**	**846**	**834**	**840**	**892**	**943**	**880**	**1150**	**1528**	**1295**	**892**	**596**	**369**	**255**	**209**	**146**	
24	30	10	21	23	44	180	**265**	259	233	219	201	190	204	208	249	**353**	321	300	146	100	69	46	52	30
25	15	17	22	29	79	188	**262**	256	202	210	210	222	239	204	270	**408**	381	228	163	85	71	66	39	27
20	15	11	26	30	91	243	**321**	276	223	196	219	248	226	247	294	**402**	341	208	145	109	54	49	29	33
14	18	17	31	29	122	266	**285**	254	189	210	210	233	276	222	338	**367**	252	156	143	76	62	49	28	24

AM Peak 0700 - 0800 (1133), AM PHF=0.88 PM Peak 1600 - 1700 (1528), PM PHF=0.94

* Thursday, January 14, 2021=16606, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
113	**61**	**51**	**75**	**101**	**371**	**853**	**1129**	**1072**	**855**	**859**	**871**	**923**	**918**	**960**	**1362**	**1653**	**1473**	**1091**	**619**	**418**	**324**	**266**	**193**	
30	13	11	19	19	42	134	229	**281**	213	208	192	229	238	218	285	**451**	408	327	161	118	69	82	61	28
27	14	14	17	20	84	220	**297**	261	229	223	234	250	244	258	333	**399**	335	292	165	100	83	60	68	29
33	20	13	22	29	111	249	**300**	301	218	233	229	220	231	228	418	**385**	363	270	144	115	93	53	24	31
24	15	14	18	34	134	251	**304**	229	195	196	217	225	205	256	327	**418**	368	203	150	86	79	72	40	22

AM Peak 0715 - 0815 (1181), AM PHF=0.97 PM Peak 1600 - 1700 (1653), PM PHF=0.92

* Friday, January 15, 2021=930 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
109	**63**	**49**	**89**	**122**	**294**	**201**	**0**	**0**	**0**	**0**	**0**	**2**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
28	25	13	24	20	49	**133**	0	0	0	0	0	0	3	–	–	–	–	–	–	–	–	–	–	–
29	13	5	15	21	67	**69**	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
31	10	21	30	37	**81**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
22	16	11	21	45	**97**	0	0	0	0	0	0	2	–	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0530 - 0630 (379), AM PHF=0.72

MetroCount Traffic Executive
Event Counts

EventCount-7 -- English (ENU)

Datasets:

Site:	**[Gandy & San Mart] East of San Martin , On Grandy ..A--westbound ,,B eastbound**
Attribute:	Pinellas
Input A:	4 - West bound. - Lane= 2, Added to totals. (/2.000)
Input B:	2 - East bound. - Lane= 2, Excluded from totals.
Survey Duration:	11:28 Saturday, January 9, 2021 => 13:02 Friday, January 15, 2021,
Zone:	
File:	Gandy _ San Mart 0 2021-01-15 1302.EC2 (Plus)
Identifier:	JE32D7JE MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v5.08)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**11:29 Saturday, January 9, 2021 => 13:02 Friday, January 15, 2021 (6.06469)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 126321 / 126323 (100.00%)

* Saturday, January 9, 2021=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**0**	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**0**	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**1**	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**0**	0	0	0	0	0	0	0

PM Peak 1645 - 1745 (1), PM PHF=0.25

* Sunday, January 10, 2021=1, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**14**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**20**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	15

AM Peak 0000 - 0100 (0), AM PHF=-nan(ind) PM Peak 2345 - 2445 (34), PM PHF=0.43

* Monday, January 11, 2021=14690, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
49	**44**	**49**	**48**	**66**	**259**	**618**	**1121**	**1129**	**880**	**753**	**789**	**878**	**916**	**991**	**1232**	**1366**	**1256**	**873**	**493**	**333**	**196**	**215**	**142**	
0	13	9	3	13	43	118	197	**286**	208	174	186	195	240	207	279	323	**337**	240	148	105	48	64	57	31
14	11	14	13	11	53	153	**294**	291	218	185	207	217	230	257	293	**335**	305	256	129	100	60	45	36	19
20	12	15	15	18	78	175	**308**	283	231	192	196	220	204	266	355	**351**	304	195	112	74	45	71	22	20
15	9	11	18	25	87	172	**323**	270	224	203	201	247	243	261	305	**357**	311	183	105	55	44	36	28	22

AM Peak 0715 - 0815 (1209), AM PHF=0.94 PM Peak 1615 - 1715 (1379), PM PHF=0.97

* Tuesday, January 12, 2021=15433, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
91	**57**	**53**	**48**	**71**	**260**	**653**	**1131**	**1126**	**860**	**769**	**772**	**866**	**870**	**947**	**1242**	**1421**	**1512**	**1127**	**531**	**370**	**286**	**225**	**152**	
31	18	10	7	12	46	116	210	**286**	236	220	183	200	203	209	295	343	**409**	359	163	96	85	58	51	27
19	10	15	8	15	62	142	279	**285**	209	172	179	264	225	228	315	338	**397**	328	153	102	78	61	38	20
20	14	19	19	15	67	180	289	**308**	224	201	191	194	213	240	315	**328**	301	250	95	93	61	58	31	21
22	15	10	14	30	86	216	**354**	248	191	177	220	209	230	270	317	**413**	406	191	121	80	63	49	33	14

AM Peak 0745 - 0845 (1232), AM PHF=0.87 PM Peak 1630 - 1730 (1546), PM PHF=0.94

* Wednesday, January 13, 2021=15690, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
81	**65**	**52**	**51**	**91**	**250**	**665**	**1197**	**1221**	**853**	**771**	**777**	**874**	**909**	**1080**	**1278**	**1410**	**1369**	**1111**	**565**	**371**	**278**	**216**	**159**	
27	17	12	12	17	33	119	217	**327**	197	190	197	202	235	229	268	296	**342**	305	169	104	82	60	44	24
20	16	8	8	17	59	155	**302**	288	213	209	191	213	233	261	322	356	**365**	327	135	119	65	63	34	20
21	15	14	10	29	79	192	**325**	309	244	175	185	218	209	299	376	**358**	349	239	152	85	63	44	36	19
14	18	19	21	29	79	200	**353**	298	199	199	204	242	233	293	313	**401**	314	241	110	64	69	50	46	21

AM Peak 0715 - 0815 (1307), AM PHF=0.93 PM Peak 1630 - 1730 (1465), PM PHF=0.91

* Thursday, January 14, 2021=16496, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
84	**53**	**50**	**57**	**96**	**242**	**647**	**1162**	**1195**	**930**	**807**	**869**	**938**	**1003**	**1137**	**1312**	**1451**	**1647**	**1041**	**630**	**422**	**305**	**248**	**176**	
24	20	13	9	17	34	110	209	**314**	234	210	201	207	221	256	313	318	**422**	313	163	114	76	71	70	23
20	13	15	24	18	50	154	**305**	302	239	191	244	237	252	278	311	359	**420**	296	189	135	84	67	50	22
19	12	17	14	35	65	198	**299**	300	218	203	209	260	245	301	332	338	**396**	212	151	94	71	58	26	34
21	10	5	11	27	93	186	**349**	280	240	204	216	234	286	303	357	**437**	410	221	128	80	75	53	31	24

AM Peak 0715 - 0815 (1266), AM PHF=0.91 PM Peak 1645 - 1745 (1674), PM PHF=0.96

* Friday, January 15, 2021=788 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
102	**60**	**62**	**57**	**99**	**228**	**178**	**0**	**0**	**0**	**0**	**0**	**1**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
23	14	8	14	20	29	**114**	0	0	0	0	0	0	3	–	–	–	–	–	–	–	–	–	–	–
22	18	13	14	14	50	**64**	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
34	9	24	19	30	**73**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
24	20	18	10	36	**76**	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0530 - 0630 (327), AM PHF=0.72

MetroCount Traffic Executive
Event Counts

EventCount-3 -- English (ENU)

Datasets:

Site:	**[Gandy & Mangrove] North of Gandy on Mangrove Cay.. A..North ... B..south**
Attribute:	Pinellas
Input A:	1 - North bound. - Lane= 1, Added to totals. (/2.000)
Input B:	3 - South bound. - Lane= 1, Subtracted from totals. (/-2.000)
Survey Duration:	11:15 Saturday, January 9, 2021 => 12:59 Friday, January 15, 2021,
Zone:	
File:	Gandy _ Mangrove 0 2021-01-15 1259.EC1 (Plus)
Identifier:	JE42AZ9K MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v5.08)
Data type:	Axle sensors - Split (Count)

Profile:

Filter time:	**11:16 Saturday, January 9, 2021 => 12:59 Friday, January 15, 2021 (6.07167)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 1602 / 1602 (100.00%)

* Saturday, January 9, 2021=0 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PM Peak 0000 - 0100 (0), PM PHF=-nan(ind)

* Sunday, January 10, 2021=3, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0

AM Peak 0000 - 0100 (0), AM PHF=-nan(ind) PM Peak 2245 - 2345 (3), PM PHF=0.42

* Monday, January 11, 2021=107, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**1**	**0**	**0**	**1**	**2**	**4**	**8**	**13**	**10**	**4**	**5**	**11**	**8**	**11**	**11**	**6**	**7**	**2**	**0**	**2**	**2**	
0	0	0	0	0	0	0	0	1	2	**6**	5	0	0	2	1	3	**2**	3	3	1	0	0	1	0
0	0	0	0	0	0	0	0	0	2	**4**	0	1	0	2	4	2	**5**	1	2	0	0	1	0	0
0	0	0	0	0	0	0	2	1	**1**	1	4	2	0	3	2	2	**4**	1	0	1	0	0	1	0
0	0	0	1	0	0	1	0	2	**3**	2	1	1	5	4	1	**4**	1	1	2	0	0	1	0	0

AM Peak 0930 - 1030 (14), AM PHF=0.58 PM Peak 1645 - 1745 (14), PM PHF=0.78

* Tuesday, January 12, 2021=99, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**8**	**2**	**5**	**9**	**13**	**5**	**14**	**5**	**7**	**10**	**8**	**3**	**2**	**1**	**1**	**0**	
0	0	0	0	0	0	0	1	2	0	4	0	**6**	1	**3**	2	3	4	2	1	1	0	0	0	0
0	0	0	0	0	0	0	1	4	0	1	2	**3**	2	**1**	0	2	3	1	0	0	0	0	0	0
0	0	0	0	0	0	0	3	1	0	0	0	**2**	1	**5**	2	1	3	1	0	0	0	0	0	0
0	0	0	0	0	0	0	3	1	2	0	**7**	2	1	**5**	1	1	0	4	2	1	1	1	0	0

AM Peak 1145 - 1245 (18), AM PHF=0.64 PM Peak 1400 - 1500 (14), PM PHF=0.68

* Wednesday, January 13, 2021=101, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**2**	**1**	**1**	**5**	**16**	**6**	**6**	**8**	**11**	**6**	**6**	**9**	**12**	**5**	**1**	**5**	**1**	**2**	**0**	
0	0	0	0	0	1	0	0	1	**5**	2	0	3	0	**3**	3	2	3	1	0	2	1	0	0	0
0	0	0	0	0	1	0	1	3	**6**	1	2	0	**4**	1	1	2	4	0	0	0	0	1	0	0
0	0	0	0	0	0	0	0	0	**4**	1	3	2	**4**	0	0	2	2	2	1	0	0	0	0	0
0	0	0	0	0	0	1	0	**2**	1	2	1	3	**3**	2	2	3	3	2	0	3	0	1	0	0

AM Peak 0845 - 0945 (17), AM PHF=0.71 PM Peak 1315 - 1415 (14), PM PHF=0.84

* Thursday, January 14, 2021=127, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**6**	**12**	**22**	**9**	**10**	**6**	**7**	**9**	**9**	**9**	**3**	**5**	**11**	**4**	**0**	
0	0	0	0	0	0	0	2	0	1	3	**6**	2	1	2	2	0	**4**	4	0	1	6	2	0	0
0	0	0	0	0	0	0	0	−1	1	3	**7**	3	5	1	2	**1**	0	2	2	2	3	0	0	−1
0	0	0	0	0	0	0	4	1	2	3	**7**	2	1	1	1	**4**	3	1	1	2	2	1	0	1
0	0	0	0	0	0	0	1	0	2	**3**	2	2	3	2	2	**4**	3	2	0	0	0	1	0	0

AM Peak 1045 - 1145 (23), AM PHF=0.82 PM Peak 1615 - 1715 (13), PM PHF=0.78

* Friday, January 15, 2021=0 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	**0**	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
−1	**0**	0	0	0	0	1	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
1	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0030 - 0130 (1), AM PHF=0.25

MetroCount Traffic Executive
Event Counts

EventCount-4 -- English (ENU)

Datasets:

Site:	**[Gandy & Mangrove] North of Gandy on Mangrove Cay.. A..North ... B..south**
Attribute:	Pinellas
Input A:	1 - North bound. - Lane= 1, Excluded from totals.
Input B:	3 - South bound. - Lane= 1, Added to totals. (/2.000)
Survey Duration:	11:15 Saturday, January 9, 2021 => 12:59 Friday, January 15, 2021,
Zone:	
File:	Gandy _ Mangrove 0 2021-01-15 1259.EC1 (Plus)
Identifier:	JE42AZ9K MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v5.08)
Data type:	Axle sensors - Split (Count)

Profile:

Filter time:	**11:16 Saturday, January 9, 2021 => 12:59 Friday, January 15, 2021 (6.07167)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 1602 / 1602 (100.00%)

* Saturday, January 9, 2021=1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**0**	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	2	0	0	0	0	0	**0**	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**1**	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**0**	0	0	0	0	0	0	0

PM Peak 1645 - 1745 (1), PM PHF=0.25

* Sunday, January 10, 2021=15, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0

AM Peak 0000 - 0100 (0), AM PHF=-nan(ind) PM Peak 2245 - 2345 (15), PM PHF=0.26

* Monday, January 11, 2021=145, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**1**	**0**	**0**	**2**	**5**	**9**	**11**	**15**	**12**	**11**	**8**	**10**	**13**	**11**	**9**	**11**	**8**	**6**	**2**	**1**	**0**	**1**	
0	0	0	0	0	0	1	2	5	2	**7**	2	1	1	**4**	3	3	1	1	2	1	1	0	0	0
0	0	0	0	0	0	1	1	4	**3**	2	3	2	4	**6**	2	2	3	1	1	1	0	0	0	0
0	0	0	0	0	1	1	5	1	**2**	2	2	4	**3**	0	3	1	4	3	2	0	0	0	1	0
0	0	1	0	0	1	2	1	1	**8**	1	4	1	**3**	4	3	3	3	3	1	0	0	0	0	0

AM Peak 0915 - 1015 (20), AM PHF=0.61 PM Peak 1330 - 1430 (15), PM PHF=0.63

* Tuesday, January 12, 2021=138, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**1**	**4**	**9**	**8**	**8**	**9**	**18**	**16**	**13**	**12**	**11**	**9**	**3**	**11**	**6**	**1**	**1**	**0**	**0**	
0	0	0	0	0	0	1	0	2	5	1	3	**7**	2	3	4	2	1	3	1	1	0	0	0	0
0	0	0	0	0	0	0	5	2	1	2	1	**3**	3	3	0	4	0	3	3	0	0	0	0	0
0	0	0	0	0	0	2	3	4	1	4	**6**	**2**	3	2	6	1	0	2	0	0	1	0	0	0
0	0	0	0	0	1	1	1	0	1	2	**8**	**4**	5	4	1	2	2	3	2	0	0	0	0	0

AM Peak 1130 - 1230 (24), AM PHF=0.75 PM Peak 1200 - 1300 (16), PM PHF=0.57

* Wednesday, January 13, 2021=123, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**1**	**2**	**7**	**14**	**11**	**15**	**11**	**9**	**7**	**8**	**9**	**7**	**6**	**7**	**3**	**3**	**3**	**1**	**0**	**0**	
0	0	0	0	1	0	3	2	**5**	4	3	1	1	**2**	1	1	2	1	0	1	1	1	0	0	0
0	0	0	0	0	0	0	**4**	2	6	2	0	0	**3**	2	1	1	3	1	2	0	0	0	0	0
0	0	0	0	0	1	2	**6**	2	4	2	3	**4**	2	3	3	2	1	0	0	0	0	0	0	0
0	0	0	0	0	1	2	**2**	2	1	4	5	**2**	1	3	2	1	2	2	0	2	0	0	0	0

AM Peak 0715 - 0815 (17), AM PHF=0.69 PM Peak 1230 - 1330 (11), PM PHF=0.69

* Thursday, January 14, 2021=148, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**1**	**5**	**12**	**7**	**10**	**17**	**24**	**8**	**10**	**10**	**4**	**10**	**8**	**8**	**3**	**1**	**9**	**2**	**0**	
0	0	0	0	0	0	3	2	2	2	1	**5**	1	2	0	1	2	2	**2**	0	0	1	1	0	0
0	0	0	0	0	0	0	1	2	1	3	**13**	5	5	4	1	1	0	**3**	1	1	6	0	0	3
0	0	0	0	0	0	2	7	0	3	**5**	5	1	1	2	2	3	**3**	0	2	0	2	0	0	0
0	0	0	0	0	1	0	2	3	4	**8**	1	1	2	4	0	4	**4**	3	0	0	0	1	0	0

AM Peak 1030 - 1130 (31), AM PHF=0.60 PM Peak 1730 - 1830 (12), PM PHF=0.82

* Friday, January 15, 2021=14 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
3	**0**	**0**	**0**	**0**	**2**	**8**	**0**	**0**	**0**	**0**	**0**	**1**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	**1**	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
3	0	0	0	0	1	**5**	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	**2**	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	**1**	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0545 - 0645 (9), AM PHF=0.45

MetroCount Traffic Executive
Event Counts

EventCount-5 -- English (ENU)

Datasets:

Site:	**[Gandy & San Mart] South of Gandy on San Martin--A--North --- B;;;South**
Attribute:	Pinellas
Input A:	1 - North bound. - Lane= 2, Added to totals. (/2.000)
Input B:	3 - South bound. - Lane= 2, Subtracted from totals. (/-2.000)
Survey Duration:	11:20 Saturday, January 9, 2021 => 13:07 Friday, January 15, 2021,
Zone:	
File:	Gandy _ San Mart 0 2021-01-15 1307.EC2 (Plus)
Identifier:	JH712202 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v5.08)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**11:21 Saturday, January 9, 2021 => 13:07 Friday, January 15, 2021 (6.07381)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 27582 / 27582 (100.00%)

* Saturday, January 9, 2021=-1 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0**	**0**	**0**	**0**	**0**	**–1**	**0**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	–1	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PM Peak 0000 - 0100 (0), PM PHF=-nan(ind)

* Sunday, January 10, 2021=2, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	1

AM Peak 0000 - 0100 (0), AM PHF=-nan(ind) PM Peak 2345 - 2445 (9), PM PHF=0.56

* Monday, January 11, 2021=1522, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
8	**0**	**5**	**4**	**4**	**22**	**78**	**100**	**111**	**91**	**69**	**112**	**119**	**85**	**107**	**102**	**139**	**158**	**72**	**63**	**36**	**30**	**11**	**4**	
4	0	1	1	1	2	13	23	34	19	17	25	**36**	26	36	16	40	**40**	24	14	9	9	4	2	3
1	0	2	1	1	7	22	29	24	18	22	29	**31**	24	26	28	33	**42**	26	9	6	9	6	1	1
2	0	0	1	1	3	19	23	31	22	14	25	**27**	18	15	32	23	**39**	12	21	12	8	–2	1	5
1	0	2	1	2	11	26	26	24	33	17	**34**	25	18	30	27	**43**	38	10	20	9	5	3	0	3

AM Peak 1145 - 1245 (127), AM PHF=0.88 PM Peak 1645 - 1745 (163), PM PHF=0.95

* Tuesday, January 12, 2021=1625, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
11	**6**	**1**	**6**	**9**	**39**	**70**	**106**	**104**	**95**	**98**	**89**	**101**	**85**	**121**	**122**	**119**	**190**	**110**	**38**	**43**	**37**	**16**	**14**	
3	1	0	3	1	4	6	19	**31**	29	26	27	27	23	31	34	25	**47**	46	9	16	12	9	4	2
1	3	0	2	1	9	21	23	**25**	23	21	17	26	20	25	35	30	**60**	23	10	8	6	4	5	4
5	1	1	1	5	9	20	**32**	22	34	34	20	22	22	39	31	35	**54**	26	5	12	8	3	5	3
3	1	0	1	2	18	23	**33**	27	10	18	26	26	20	26	22	**30**	30	16	15	8	12	0	1	2

AM Peak 0730 - 0830 (120), AM PHF=0.92 PM Peak 1645 - 1745 (191), PM PHF=0.80

* Wednesday, January 13, 2021=1632, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
10	**11**	**7**	**6**	**8**	**30**	**71**	**104**	**122**	**103**	**96**	**121**	**107**	**106**	**98**	**131**	**105**	**144**	**85**	**76**	**42**	**28**	**16**	**12**	
2	2	1	0	1	2	15	23	28	**30**	26	21	20	45	30	28	21	**28**	23	14	15	1	5	6	3
4	9	3	1	1	4	7	25	**34**	19	22	38	23	17	29	32	26	**51**	26	25	14	11	7	3	4
3	0	2	0	5	13	21	32	**29**	27	22	39	31	20	18	36	24	**40**	23	28	10	6	1	1	3
2	0	1	5	2	11	29	25	**31**	27	27	24	33	25	22	35	**35**	26	14	10	4	11	3	3	6

AM Peak 0815 - 0915 (124), AM PHF=0.92 PM Peak 1645 - 1745 (152), PM PHF=0.75

* Thursday, January 14, 2021=1729, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
15	**4**	**5**	**5**	**6**	**32**	**53**	**105**	**140**	**83**	**92**	**95**	**101**	**96**	**112**	**150**	**189**	**156**	**135**	**69**	**42**	**27**	**12**	**12**	
3	1	0	2	3	1	10	14	**27**	24	23	18	17	27	28	50	31	**45**	56	15	10	6	4	4	5
4	3	1	2	1	9	8	29	**38**	21	26	21	27	26	28	28	**54**	45	22	20	12	8	1	4	4
3	0	3	1	1	7	14	28	**41**	21	15	30	29	20	25	44	**48**	27	29	18	12	5	3	2	0
6	1	1	0	1	16	22	35	**36**	19	28	27	28	24	31	28	**56**	40	28	17	8	8	5	3	0

AM Peak 0800 - 0900 (140), AM PHF=0.86 PM Peak 1615 - 1715 (203), PM PHF=0.90

* Friday, January 15, 2021=71 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
9	**8**	**9**	**4**	**7**	**22**	**14**	**0**	**0**	**0**	**0**	**0**	**–1**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
5	2	0	0	1	2	**14**	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–	–	–
4	1	0	0	0	**4**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
0	6	8	3	3	**9**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
0	0	1	2	4	**7**	0	0	0	0	0	0	–1	–	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0515 - 0615 (33), AM PHF=0.61

MetroCount Traffic Executive
Event Counts

EventCount-6 -- English (ENU)

Datasets:

Site:	**[Gandy & San Mart] South of Gandy on San Martin--A--North --- B;;;South**
Attribute:	Pinellas
Input A:	1 - North bound. - Lane= 2, Excluded from totals.
Input B:	3 - South bound. - Lane= 2, Added to totals. (/2.000)
Survey Duration:	11:20 Saturday, January 9, 2021 => 13:07 Friday, January 15, 2021,
Zone:	
File:	Gandy _ San Mart 0 2021-01-15 1307.EC2 (Plus)
Identifier:	JH712202 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v5.08)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**11:21 Saturday, January 9, 2021 => 13:07 Friday, January 15, 2021 (6.07381)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 27582 / 27582 (100.00%)

* Saturday, January 9, 2021=2 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**0**	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	3	0	0	0	0	**0**	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**2**	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	–	0	0	0	0	0	**0**	0	0	0	0	0	0	0

PM Peak 1645 - 1745 (2), PM PHF=0.25

* Sunday, January 10, 2021=6, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**	2

AM Peak 0000 - 0100 (0), AM PHF=-nan(ind) PM Peak 2345 - 2445 (18), PM PHF=0.75

* Monday, January 11, 2021=2522, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
14	**7**	**8**	**6**	**11**	**43**	**74**	**126**	**138**	**149**	**139**	**149**	**189**	**187**	**216**	**199**	**273**	**249**	**136**	**89**	**51**	**33**	**26**	**14**	
6	2	3	3	0	6	8	16	35	37	37	27	**38**	43	62	31	44	**65**	51	34	16	13	7	8	4
3	3	4	1	1	8	18	33	37	36	33	33	**46**	48	42	46	**64**	59	37	21	10	14	6	4	2
3	3	1	2	6	14	26	38	31	29	36	39	**49**	41	57	65	**78**	70	22	16	16	3	11	0	2
2	0	0	0	4	16	23	39	35	48	35	**52**	57	56	55	57	**88**	56	27	19	10	4	3	3	3

AM Peak 1145 - 1245 (184), AM PHF=0.89 PM Peak 1615 - 1715 (295), PM PHF=0.84

* Tuesday, January 12, 2021=2477, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
10	**6**	**2**	**5**	**12**	**34**	**82**	**135**	**153**	**144**	**125**	**137**	**151**	**185**	**166**	**211**	**232**	**270**	**175**	**86**	**72**	**40**	**27**	**23**	
4	4	0	2	3	4	11	26	35	30	38	23	**46**	56	45	37	37	**63**	56	24	9	13	7	7	8
2	0	0	0	0	5	17	33	33	38	28	35	**43**	39	36	47	73	**76**	53	25	19	7	6	4	2
2	2	2	1	4	13	25	36	43	31	27	**35**	30	40	45	71	58	**59**	36	15	21	7	9	3	0
3	0	0	2	6	13	30	40	42	47	33	**45**	33	51	41	57	64	**73**	30	22	24	13	5	9	0

AM Peak 1130 - 1230 (168), AM PHF=0.92 PM Peak 1700 - 1800 (270), PM PHF=0.89

* Wednesday, January 13, 2021=2653, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
10	**6**	**6**	**6**	**15**	**36**	**83**	**138**	**147**	**159**	**136**	**173**	**156**	**219**	**215**	**209**	**244**	**274**	**167**	**105**	**66**	**46**	**25**	**17**	
8	1	3	0	2	1	17	35	36	35	31	**48**	39	58	36	45	46	**66**	54	30	19	15	5	6	6
2	2	0	1	5	11	23	29	30	41	30	**43**	31	58	51	71	71	**71**	37	36	21	12	9	2	1
0	1	3	1	7	15	19	37	39	49	35	**38**	44	45	57	42	57	**81**	37	25	16	13	0	2	3
0	2	0	4	2	10	25	38	42	34	42	**45**	43	58	71	52	**71**	57	40	15	10	7	11	7	6

AM Peak 1100 - 1200 (173), AM PHF=0.90 PM Peak 1645 - 1745 (288), PM PHF=0.89

* Thursday, January 14, 2021=2736, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
16	**13**	**8**	**7**	**6**	**32**	**98**	**137**	**138**	**165**	**161**	**142**	**188**	**188**	**189**	**228**	**264**	**311**	**159**	**109**	**72**	**46**	**39**	**25**	
6	6	0	5	0	4	8	26	30	32	**49**	26	36	31	45	54	63	**80**	53	29	23	19	12	9	3
1	4	3	1	0	16	27	40	27	**44**	35	39	51	52	42	63	75	**74**	43	32	21	11	12	7	7
3	0	2	1	4	4	23	28	48	**33**	33	38	49	53	44	53	58	**77**	28	17	13	10	7	5	5
6	4	3	0	2	9	40	44	34	**56**	45	40	52	52	58	59	68	**81**	36	32	16	7	9	4	1

AM Peak 0915 - 1015 (182), AM PHF=0.81 PM Peak 1700 - 1800 (311), PM PHF=0.96

* Friday, January 15, 2021=106 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
15	**10**	**9**	**8**	**13**	**34**	**13**	**0**	**0**	**0**	**0**	**0**	**4**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
3	1	2	3	3	10	**10**	0	0	0	0	0	0	2	–	–	–	–	–	–	–	–	–	–	–
7	5	0	2	2	1	**3**	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
5	4	4	2	6	**8**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
1	0	3	1	2	**15**	0	0	0	0	0	0	4	–	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0530 - 0630 (36), AM PHF=0.60

MetroCount Traffic Executive
Event Counts

EventCount-535 -- English (ENU)

Datasets:

Site:	**[Gandy Westsh] Eastside of Westshore on Gandy ---A--westbounb---B--eastbound**
Attribute:	Hills.
Input A:	4 - West bound. - Lane= 2, Excluded from totals.
Input B:	2 - East bound. - Lane= 2, Added to totals. (/2.000)
Survey Duration:	9:54 Monday, December 7, 2020 => 14:05 Friday, December 11, 2020,
Zone:	
File:	Gandy Westsh 0 2020-12-11 1405.EC2 (Plus)
Identifier:	JE42AZ9K MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**9:55 Monday, December 7, 2020 => 14:05 Friday, December 11, 2020 (4.17388)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 149026 / 149029 (100.00%)

* Monday, December 7, 2020=9673 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**470**	**824**	**872**	**856**	**844**	**1002**	**1166**	**1227**	**1221**	**609**	**434**	**151**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	0	199	207	194	186	213	275	322	**329**	179	110	110	0	0	0
–	–	–	–	–	–	–	–	–	–	86	216	206	227	219	288	302	256	**330**	146	118	31	0	0	0
–	–	–	–	–	–	–	–	–	–	206	211	201	217	209	249	316	**342**	327	147	118	7	0	0	0
–	–	–	–	–	–	–	–	–	0	178	199	259	218	231	253	275	**308**	237	138	88	3	0	0	0

PM Peak 1730 - 1830 (1308), PM PHF=0.96

* Tuesday, December 8, 2020=16447, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**5**	**0**	**0**	**75**	**282**	**766**	**1097**	**1053**	**1027**	**995**	**944**	**1061**	**951**	**1035**	**1060**	**1698**	**1442**	**1004**	**698**	**443**	**340**	**266**	**211**	
0	0	0	0	0	38	144	238	**257**	253	257	175	274	249	244	252	382	**411**	313	190	118	100	62	56	37
0	0	0	0	15	43	156	259	**272**	247	250	259	262	260	273	258	**405**	350	289	188	98	102	61	66	29
0	5	0	0	25	103	226	**316**	252	279	233	255	241	230	224	255	**490**	362	232	161	121	66	73	38	24
0	0	0	0	35	98	240	**285**	273	249	256	255	284	212	295	296	**422**	320	171	160	107	73	70	52	19

AM Peak 0730 - 0830 (1129), AM PHF=0.89 PM Peak 1615 - 1715 (1727), PM PHF=0.88

* Wednesday, December 9, 2020=20334, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
107	**67**	**66**	**89**	**110**	**323**	**745**	**1101**	**1085**	**953**	**988**	**1056**	**1099**	**1072**	**1312**	**1409**	**1538**	**1894**	**2025**	**1172**	**827**	**596**	**391**	**314**	
37	35	34	17	22	45	128	261	**266**	207	243	226	302	285	256	354	384	486	**648**	327	260	155	110	88	62
29	11	8	20	24	78	154	248	**275**	229	223	286	253	276	315	364	359	481	**576**	348	197	166	99	111	45
24	7	12	24	21	88	226	**281**	251	235	246	253	256	282	330	335	422	**515**	465	262	178	123	113	62	40
19	15	14	29	43	114	239	**312**	293	283	276	292	289	230	412	356	374	**412**	336	236	193	152	70	54	23

AM Peak 0730 - 0830 (1133), AM PHF=0.91 PM Peak 1730 - 1830 (2151), PM PHF=0.83

* Thursday, December 10, 2020=31351, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
169	**123**	**109**	**110**	**152**	**556**	**1383**	**1862**	**1838**	**1800**	**1786**	**1749**	**1823**	**1797**	**1913**	**2188**	**2934**	**3057**	**2102**	**1333**	**840**	**600**	**661**	**472**	
62	36	29	40	25	63	235	412	**437**	458	422	386	464	417	434	488	696	**932**	695	411	225	155	117	121	109
45	22	30	12	23	127	320	387	**485**	472	399	465	457	538	484	477	674	**761**	609	353	196	173	157	159	54
40	25	30	38	45	169	444	**566**	519	393	494	443	477	436	437	577	**785**	746	412	302	209	131	231	114	72
23	41	20	21	60	198	385	**498**	397	477	472	455	425	407	559	647	**779**	619	387	268	210	142	157	79	73

AM Peak 0730 - 0830 (1986), AM PHF=0.88 PM Peak 1630 - 1730 (3257), PM PHF=0.87

* Friday, December 11, 2020=1607 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
307	**173**	**220**	**230**	**283**	**392**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
109	56	47	37	75	**111**	1	0	0	0	0	0	0	0	3	–	–	–	–	–	–	–	–	–	–
54	67	47	51	50	**92**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
72	22	71	80	83	**142**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
73	28	55	63	**76**	47	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0445 - 0545 (421), AM PHF=0.74

MetroCount Traffic Executive
Event Counts

EventCount-534 -- English (ENU)

Datasets:

Site:	**[Gandy Westsh] Eastside of Westshore on Gandy ---A--westbounb---B--eastbound**
Attribute:	Hills.
Input A:	4 - West bound. - Lane= 2, Added to totals. (/2.000)
Input B:	2 - East bound. - Lane= 2, Excluded from totals.
Survey Duration:	9:54 Monday, December 7, 2020 => 14:05 Friday, December 11, 2020,
Zone:	
File:	Gandy Westsh 0 2020-12-11 1405.EC2 (Plus)
Identifier:	JE42AZ9K MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Separate (Count)

Profile:

Filter time:	**9:55 Monday, December 7, 2020 => 14:05 Friday, December 11, 2020 (4.17388)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 149026 / 149029 (100.00%)

* Monday, December 7, 2020=13012 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**599**	**949**	**1094**	**1076**	**1087**	**1294**	**1397**	**1369**	**1170**	**827**	**585**	**657**	**547**	**364**	
–	–	–	–	–	–	–	–	–	–	1	226	290	251	269	282	**360**	323	344	232	157	128	179	106	61
–	–	–	–	–	–	–	–	–	–	119	265	274	291	283	353	**364**	355	296	234	155	150	144	107	51
–	–	–	–	–	–	–	–	–	–	235	240	273	293	286	329	**347**	377	301	198	170	177	135	72	56
–	–	–	–	–	–	–	–	–	0	245	219	257	242	249	**331**	326	315	231	164	104	202	90	80	74

PM Peak 1545 - 1645 (1402), PM PHF=0.96

* Tuesday, December 8, 2020=18914, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
241	**141**	**126**	**167**	**134**	**350**	**828**	**1212**	**1209**	**1019**	**955**	**1102**	**1168**	**1108**	**1222**	**1384**	**1406**	**1577**	**1159**	**877**	**564**	**442**	**317**	**212**	
61	32	42	32	32	36	172	283	**309**	254	262	255	262	276	348	329	349	**389**	352	251	164	134	100	80	51
51	39	41	32	35	77	168	269	**324**	275	225	276	295	296	280	297	286	**409**	299	233	127	123	81	45	40
56	33	14	52	23	108	234	**340**	308	248	218	277	323	261	303	371	396	**422**	253	192	148	95	85	46	40
74	37	30	52	44	129	254	**321**	268	243	251	295	289	275	291	388	**376**	357	255	203	126	90	51	42	36

AM Peak 0730 - 0830 (1293), AM PHF=0.95 PM Peak 1645 - 1745 (1596), PM PHF=0.95

* Wednesday, December 9, 2020=18643, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
167	**87**	**72**	**119**	**113**	**358**	**816**	**1163**	**1197**	**972**	**944**	**993**	**1169**	**1056**	**1154**	**1395**	**1459**	**1545**	**1272**	**856**	**606**	**514**	**405**	**215**	
51	24	15	22	32	37	165	266	**324**	267	241	235	276	265	290	325	346	**367**	355	247	172	181	133	65	38
40	18	20	14	17	85	172	235	**315**	251	220	252	277	282	290	340	380	**367**	332	227	154	122	108	54	37
40	24	21	21	27	94	219	**375**	312	200	245	256	311	248	267	377	364	**474**	327	191	154	112	100	53	27
36	21	17	63	38	143	261	**287**	247	256	239	250	306	262	307	354	**369**	338	259	192	126	100	65	44	18

AM Peak 0730 - 0830 (1300), AM PHF=0.87 PM Peak 1645 - 1745 (1576), PM PHF=0.83

* Thursday, December 10, 2020=18827, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
120	**81**	**77**	**83**	**112**	**333**	**836**	**1169**	**1245**	**1035**	**963**	**1051**	**1221**	**1158**	**1265**	**1436**	**1593**	**1614**	**1321**	**836**	**607**	**529**	**140**	**10**	
38	25	19	25	32	37	177	215	**325**	296	246	244	338	274	313	292	356	**403**	415	252	171	139	108	9	3
37	26	14	24	26	75	181	285	**308**	256	248	277	308	289	333	345	406	**408**	336	212	149	120	26	0	0
27	10	24	12	17	93	213	**350**	315	233	238	256	281	310	278	357	432	**472**	346	162	159	148	7	1	7
18	20	20	23	37	129	266	**320**	298	252	232	274	295	285	341	443	**400**	332	225	210	129	123	0	0	3

AM Peak 0730 - 0830 (1302), AM PHF=0.93 PM Peak 1645 - 1745 (1683), PM PHF=0.89

* Friday, December 11, 2020=221 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
12	**4**	**8**	**21**	**0**	**173**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
3	0	0	1	0	0	**1**	0	0	0	0	0	0	0	3	–	–	–	–	–	–	–	–	–	–
0	0	8	20	0	**56**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
7	0	0	0	0	**81**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
3	4	0	0	0	**37**	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0515 - 0615 (174), AM PHF=0.54

MetroCount Traffic Executive
Vehicle Counts

VehicleCount-538 -- English (ENU)

Datasets:

Site:	**[Gandy westsh] West sde of Westshore on Gandy --Eastbound--- A--west hose---B--east hose**
Attribute:	SV
Direction:	1 - North bound, A trigger first. **Lane:** 2
Survey Duration:	9:40 Monday, December 7, 2020 => 14:01 Friday, December 11, 2020,
Zone:	
File:	Gandy westsh 0 2020-12-11 1401.EC2 (Plus)
Identifier:	JH712202 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**9:41 Monday, December 7, 2020 => 14:01 Friday, December 11, 2020 (4.18066)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	AB
Separation:	Headway > 0 sec, Span 0 - 328.084 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F3)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 53124 / 55269 (96.12%)

* Monday, December 7, 2020 - Total=8792 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**626**	**707**	**698**	**700**	**746**	**892**	**1086**	**1195**	**1097**	**535**	**378**	**130**	**2**	**0**	
–	–	–	–	–	–	–	–	–	–	77	163	183	167	159	173	249	308	**315**	145	107	95	1	0	0
–	–	–	–	–	–	–	–	–	–	186	191	168	179	183	249	283	**289**	287	127	96	30	1	0	0
–	–	–	–	–	–	–	–	–	0	188	185	163	166	202	233	267	**302**	282	136	96	5	0	0	0
–	–	–	–	–	–	–	–	–	0	175	168	184	188	202	237	287	**296**	213	127	79	0	0	0	0

PM Peak 1715 - 1815 (1202), PM PHF=0.95

* Tuesday, December 8, 2020 - Total=14120, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**1**	**1**	**57**	**272**	**780**	**1110**	**988**	**866**	**818**	**740**	**850**	**818**	**848**	**954**	**1392**	**1304**	**950**	**552**	**359**	**315**	**137**	**8**	
0	0	1	0	0	29	130	263	**265**	234	199	166	208	211	196	200	313	**353**	317	158	100	92	50	4	2
0	0	0	0	1	59	157	**264**	250	194	229	200	213	218	208	235	**346**	324	267	150	92	92	53	0	0
0	0	0	1	25	88	240	**311**	223	229	178	188	189	192	214	253	**370**	323	215	129	93	61	33	3	0
0	0	0	0	31	96	253	**272**	250	209	212	186	240	197	230	266	**363**	304	151	115	74	70	1	1	0

AM Peak 0715 - 0815 (1112), AM PHF=0.89 PM Peak 1615 - 1715 (1432), PM PHF=0.97

* Wednesday, December 9, 2020 - Total=14593, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
2	**1**	**2**	**2**	**60**	**290**	**734**	**1062**	**929**	**838**	**787**	**774**	**777**	**831**	**1033**	**1158**	**1247**	**1527**	**1072**	**574**	**428**	**336**	**129**	**0**	
2	0	0	0	0	39	129	247	**256**	192	182	187	197	222	202	277	275	**372**	320	156	120	92	55	0	2
0	0	2	0	5	69	164	**266**	235	202	191	182	198	218	250	263	316	**383**	304	147	111	92	66	0	0
0	1	0	1	23	84	216	**256**	216	222	210	187	188	210	273	305	350	**409**	262	142	98	69	8	0	0
0	0	0	1	32	98	225	**293**	222	222	204	218	194	181	308	313	306	**363**	186	129	99	83	0	0	1

AM Peak 0715 - 0815 (1071), AM PHF=0.91 PM Peak 1700 - 1800 (1527), PM PHF=0.93

* Thursday, December 10, 2020 - Total=14997, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
3	**1**	**0**	**1**	**81**	**291**	**768**	**1064**	**958**	**845**	**800**	**841**	**847**	**868**	**904**	**1077**	**1405**	**1390**	**1044**	**659**	**411**	**337**	**223**	**179**	
2	0	0	0	3	36	111	**256**	255	230	203	210	209	216	221	214	326	**376**	328	191	113	83	55	47	23
0	0	0	0	22	63	180	**249**	247	217	182	218	215	217	219	242	335	**377**	278	167	101	86	67	48	21
0	0	0	1	21	84	235	**306**	250	199	206	212	221	211	227	297	**381**	356	235	172	96	79	51	46	31
1	1	0	0	35	108	242	**253**	206	199	209	201	202	224	237	324	**363**	281	203	129	101	89	50	38	17

AM Peak 0700 - 0800 (1064), AM PHF=0.87 PM Peak 1630 - 1730 (1497), PM PHF=0.98

* Friday, December 11, 2020 - Total=622 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
92	**49**	**73**	**69**	**87**	**252**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
23	20	25	16	15	**28**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
21	10	12	16	21	**61**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
31	14	17	21	26	**77**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
17	5	19	16	25	**86**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0500 - 0600 (252), AM PHF=0.73

MetroCount Traffic Executive
Daily Classes

DailyClass-540 -- English (ENU)

Datasets:

Site:	**[Gandy westsh] West sde of Westshore on Gandy --Eastbound--- A--west hose---B--east hose**
Attribute:	SV
Direction:	1 - North bound, A trigger first. **Lane:** 2
Survey Duration:	9:40 Monday, December 7, 2020 => 14:01 Friday, December 11, 2020,
Zone:	
File:	Gandy westsh 0 2020-12-11 1401.EC2 (Plus)
Identifier:	JH712202 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**9:41 Monday, December 7, 2020 => 14:01 Friday, December 11, 2020 (4.18066)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	AB
Separation:	Headway > 0 sec, Span 0 - 328.084 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F3)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 53124 / 55269 (96.12%)

Daily Classes

DailyClass-540
Site: Gandy westsh.2.0N
Description: **West sde of Westshore on Gandy --Eastbound--- A--west hose---B--east hose**
Filter time: **9:41 Monday, December 7, 2020 => 14:01 Friday, December 11, 2020**
Scheme: Vehicle classification (Scheme F3)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(AB) Sp(6,99) Headway(>0) Span(0 - 328.084)

Monday, December 7, 2020

	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
Mon*	58	5625	2105	107	669	64	52	51	43	5	1	2	10	8792
(%)	0.7	64.0	23.9	1.2	7.6	0.7	0.6	0.6	0.5	0.1	0.0	0.0	0.1	
Tue	108	9157	3269	163	1016	102	113	89	58	12	1	0	32	14120
(%)	0.8	64.9	23.2	1.2	7.2	0.7	0.8	0.6	0.4	0.1	0.0	0.0	0.2	
Wed	111	9876	3124	140	867	111	126	104	94	12	4	0	24	14593
(%)	0.8	67.7	21.4	1.0	5.9	0.8	0.9	0.7	0.6	0.1	0.0	0.0	0.2	
Thu	114	10502	3095	120	747	93	101	79	96	18	3	3	26	14997
(%)	0.8	70.0	20.6	0.8	5.0	0.6	0.7	0.5	0.6	0.1	0.0	0.0	0.2	
Fri*	3	376	151	4	62	12	0	1	12	0	1	0	0	622
(%)	0.5	60.5	24.3	0.6	10.0	1.9	0.0	0.2	1.9	0.0	0.2	0.0	0.0	
Sat*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sun*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Average daily volume

Entire week														
	111	9845	3162	141	876	102	113	90	82	14	2	1	27	14570
(%)	0.8	67.6	21.7	1.0	6.0	0.7	0.8	0.6	0.6	0.1	0.0	0.0	0.2	
Weekdays														
	111	9845	3162	141	876	102	113	90	82	14	2	1	27	14570
(%)	0.8	67.6	21.7	1.0	6.0	0.7	0.8	0.6	0.6	0.1	0.0	0.0	0.2	

Weekend No complete days.

*** - Incomplete**

MetroCount Traffic Executive
Vehicle Counts

VehicleCount-536 -- English (ENU)

Datasets:

Site:	**[gandy westsh] West of Westshore --- west bound----A west hose ----B east hose**
Attribute:	Hills.
Direction:	2 - East bound, A trigger first. **Lane:** 2
Survey Duration:	9:36 Monday, December 7, 2020 => 14:10 Friday, December 11, 2020,
Zone:	
File:	gandy westsh 0 2020-12-11 1410.EC2 (Plus)
Identifier:	JE356JET MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**9:37 Monday, December 7, 2020 => 14:10 Friday, December 11, 2020 (4.18973)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	BA
Separation:	Headway > 0 sec, Span 0 - 328.084 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F3)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 33731 / 38478 (87.66%)

* Monday, December 7, 2020 - Total=6115 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**419**	**485**	**531**	**528**	**595**	**594**	**611**	**558**	**540**	**384**	**305**	**248**	**189**	**128**
–	–	–	–	–	–	–	–	–	–	69	115	137	131	150	138	**157**	135	151	108	83	63	55	40	22
–	–	–	–	–	–	–	–	–	–	113	122	136	132	153	146	**145**	127	137	103	77	64	59	30	17
–	–	–	–	–	–	–	–	–	0	125	116	140	149	169	139	**145**	153	126	95	82	59	38	33	17
–	–	–	–	–	–	–	–	–	0	112	132	118	116	123	**171**	164	143	126	78	63	62	37	25	15

PM Peak 1545 - 1645 (618), PM PHF=0.90

* Tuesday, December 8, 2020 - Total=9100, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2300	
71	**51**	**42**	**41**	**64**	**232**	**414**	**536**	**608**	**511**	**516**	**537**	**555**	**555**	**598**	**640**	**643**	**646**	**556**	**421**	**288**	**232**	**198**	**145**
22	7	8	11	13	38	85	122	**165**	125	143	127	135	142	160	142	**181**	164	171	121	70	73	66	48	19
17	15	19	9	19	53	85	131	**143**	138	113	143	158	157	124	**155**	154	161	150	98	66	52	44	39	17
17	11	5	9	14	72	127	150	**151**	121	118	125	125	137	166	**174**	156	168	116	99	80	55	59	36	17
15	18	10	12	18	69	117	133	**149**	127	142	142	137	119	148	**169**	152	153	119	103	72	52	29	22	18

AM Peak 0800 - 0900 (608), AM PHF=0.92 PM Peak 1515 - 1615 (679), PM PHF=0.94

* Wednesday, December 9, 2020 - Total=9198, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2300	
71	**43**	**38**	**34**	**82**	**213**	**440**	**551**	**611**	**558**	**517**	**516**	**531**	**528**	**591**	**628**	**614**	**660**	**588**	**414**	**327**	**242**	**255**	**146**
19	12	8	5	14	35	86	150	**168**	150	124	122	128	126	149	151	165	162	**164**	117	99	66	81	51	24
17	10	10	6	16	50	104	132	**158**	146	128	129	126	149	154	150	139	153	**157**	108	73	63	55	33	26
17	10	10	12	21	52	126	154	**146**	126	144	121	150	121	134	163	155	**184**	148	99	82	64	65	34	13
18	11	10	11	31	76	124	115	**139**	136	121	144	127	132	154	164	155	**161**	119	90	73	49	54	28	16

AM Peak 0800 - 0900 (611), AM PHF=0.91 PM Peak 1730 - 1830 (666), PM PHF=0.90

* Thursday, December 10, 2020 - Total=9126, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
79	**59**	**55**	**55**	**84**	**203**	**455**	**589**	**647**	**548**	**501**	**521**	**573**	**494**	**556**	**667**	**661**	**660**	**609**	**409**	**334**	**269**	**96**	**2**
24	22	14	11	25	32	99	126	**150**	137	129	130	145	123	125	145	150	147	**177**	119	100	83	66	0	0
26	14	9	13	18	38	115	134	**177**	135	135	138	144	118	141	190	162	**176**	151	89	82	62	30	0	2
13	8	17	19	14	66	120	157	**169**	143	132	118	154	123	153	167	181	**171**	155	94	84	63	0	1	1
16	15	15	12	27	67	121	**172**	151	133	105	135	130	130	137	165	168	**166**	126	107	68	61	0	1	0

AM Peak 0745 - 0845 (668), AM PHF=0.94 PM Peak 1715 - 1815 (690), PM PHF=0.97

* Friday, December 11, 2020 - Total=192 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
3	**1**	**0**	**1**	**0**	**176**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
0	0	0	0	0	0	**11**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
2	0	0	0	0	**50**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
1	0	0	1	0	**51**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
0	1	0	0	0	**75**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0515 - 0615 (187), AM PHF=0.62

MetroCount Traffic Executive
Daily Classes

DailyClass-542 -- English (ENU)

Datasets:

Site:	**[gandy westsh] West of Westshore --- west bound----A west hose ----B east hose**
Attribute:	Hills.
Direction:	2 - East bound, A trigger first. **Lane:** 2
Survey Duration:	9:36 Monday, December 7, 2020 => 14:10 Friday, December 11, 2020,
Zone:	
File:	gandy westsh 0 2020-12-11 1410.EC2 (Plus)
Identifier:	JE356JET MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**9:37 Monday, December 7, 2020 => 14:10 Friday, December 11, 2020 (4.18973)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	BA
Separation:	Headway > 0 sec, Span 0 - 328.084 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F3)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 33731 / 38478 (87.66%)

Daily Classes

DailyClass-542
Site: gandy westsh.2.0E
Description: **West of Westshore --- west bound----A west hose ----B east hose**
Filter time: **9:37 Monday, December 7, 2020 => 14:10 Friday, December 11, 2020**
Scheme: Vehicle classification (Scheme F3)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(BA) Sp(6,99) Headway(>0) Span(0 - 328.084)

Monday, December 7, 2020

	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
Mon*	3994	1091	38	5	3	41	635	3	32	12	0	0	261	6115
(%)	65.3	17.8	0.6	0.1	0.0	0.7	10.4	0.0	0.5	0.2	0.0	0.0	4.3	
Tue	5846	1619	77	4	2	71	923	9	59	23	0	0	467	9100
(%)	64.2	17.8	0.8	0.0	0.0	0.8	10.1	0.1	0.6	0.3	0.0	0.0	5.1	
Wed	5780	1718	58	5	5	75	943	7	88	23	0	0	496	9198
(%)	62.8	18.7	0.6	0.1	0.1	0.8	10.3	0.1	1.0	0.3	0.0	0.0	5.4	
Thu	5668	1706	58	4	5	76	905	17	89	30	1	0	567	9126
(%)	62.1	18.7	0.6	0.0	0.1	0.8	9.9	0.2	1.0	0.3	0.0	0.0	6.2	
Fri*	106	52	3	0	0	2	16	0	9	0	0	0	4	192
(%)	55.2	27.1	1.6	0.0	0.0	1.0	8.3	0.0	4.7	0.0	0.0	0.0	2.1	
Sat*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sun*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Average daily volume

Entire week														
	5764	1681	64	4	4	74	923	11	78	25	0	0	510	9141
(%)	63.1	18.4	0.7	0.0	0.0	0.8	10.1	0.1	0.9	0.3	0.0	0.0	5.6	
Weekdays														
	5764	1681	64	4	4	74	923	11	78	25	0	0	510	9141
(%)	63.1	18.4	0.7	0.0	0.0	0.8	10.1	0.1	0.9	0.3	0.0	0.0	5.6	

Weekend No complete days.

*** - Incomplete**

MetroCount Traffic Executive
Event Counts

EventCount-546 -- English (ENU)

Datasets:

Site:	**[Westshore gandy] North side of Gandy- A-northbound--B-southbound**
Attribute:	Hills.
Input A:	1 - North bound. - Lane= 1, Added to totals. (/2.000)
Input B:	3 - South bound. - Lane= 3, Excluded from totals.
Survey Duration:	9:59 Monday, December 7, 2020 => 13:56 Friday, December 11, 2020,
Zone:	
File:	Westshore gandy 0 2020-12-11 1357.EC1 (Plus)
Identifier:	JF85HVS6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Split (Count)

Profile:

Filter time:	**10:00 Monday, December 7, 2020 => 13:56 Friday, December 11, 2020 (4.16412)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 88993 / 88999 (99.99%)

* Monday, December 7, 2020=4815 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**124**	**414**	**435**	**419**	**445**	**469**	**495**	**485**	**463**	**339**	**242**	**204**	**159**	**124**	
–	–	–	–	–	–	–	–	–	–	1	86	109	96	93	115	128	**113**	122	84	68	61	42	31	24
–	–	–	–	–	–	–	–	–	–	1	106	97	102	124	109	111	**135**	147	83	66	52	46	48	30
–	–	–	–	–	–	–	–	–	–	5	110	122	110	111	110	116	**121**	90	103	54	65	36	27	16
–	–	–	–	–	–	–	–	–	–	118	113	108	111	117	135	**141**	116	105	70	55	27	36	18	12

PM Peak 1645 - 1745 (510), PM PHF=0.91

* Tuesday, December 8, 2020=7836, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
82	**42**	**36**	**30**	**49**	**115**	**217**	**471**	**526**	**427**	**462**	**501**	**509**	**526**	**530**	**561**	**572**	**590**	**524**	**348**	**257**	**208**	**160**	**98**	
24	10	9	5	10	17	48	102	92	**110**	103	128	112	142	131	134	138	**143**	138	99	86	60	52	32	25
30	11	10	8	8	25	42	124	**145**	106	124	103	128	108	124	145	132	**149**	142	86	67	60	44	24	17
16	14	11	11	16	41	69	128	**144**	102	127	143	117	137	146	149	**164**	143	120	96	57	47	38	22	18
12	7	7	6	15	34	59	119	**145**	110	109	127	153	140	130	133	**139**	156	125	67	48	42	27	21	14

AM Peak 0815 - 0915 (543), AM PHF=0.94 PM Peak 1630 - 1730 (594), PM PHF=0.91

* Wednesday, December 9, 2020=7735, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
74	**39**	**26**	**26**	**44**	**95**	**250**	**400**	**467**	**415**	**435**	**441**	**491**	**509**	**546**	**595**	**567**	**580**	**535**	**380**	**269**	**246**	**194**	**116**	
25	6	7	7	9	7	43	79	117	102	104	100	**119**	123	124	**164**	153	143	130	99	84	66	57	31	10
17	10	8	6	10	22	60	104	128	90	97	107	**135**	117	122	**166**	132	146	150	93	66	60	45	29	21
18	13	4	10	13	28	72	96	121	118	112	97	**112**	138	**160**	127	142	139	139	114	56	54	46	22	9
14	11	7	3	13	38	76	121	102	106	123	**137**	126	131	**141**	139	141	154	116	75	63	66	46	34	14

AM Peak 1145 - 1245 (501), AM PHF=0.92 PM Peak 1430 - 1530 (631), PM PHF=0.95

* Thursday, December 10, 2020=7207, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
54	**41**	**22**	**28**	**55**	**98**	**216**	**395**	**449**	**393**	**360**	**426**	**479**	**454**	**486**	**471**	**526**	**555**	**517**	**382**	**303**	**254**	**145**	**102**	
10	10	10	7	13	15	43	84	95	100	89	110	**107**	118	108	122	140	125	**143**	85	78	57	34	26	12
21	16	3	7	15	21	54	107	121	93	89	94	**131**	115	132	128	134	**135**	120	92	94	67	41	34	18
9	8	3	8	12	33	54	92	104	107	90	113	**116**	126	134	118	126	**149**	121	102	70	76	38	25	17
14	8	7	6	15	31	66	113	130	93	93	**110**	125	96	113	104	127	**146**	133	103	63	54	33	18	8

AM Peak 1145 - 1245 (464), AM PHF=0.88 PM Peak 1715 - 1815 (573), PM PHF=0.96

* Friday, December 11, 2020=242 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
54	**25**	**45**	**31**	**39**	**48**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
12	8	11	7	6	**14**	1	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
18	3	23	10	4	**21**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
17	12	7	11	**18**	13	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
8	3	4	5	**11**	0	0	0	0	0	0	0	0	1	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0430 - 0530 (64), AM PHF=0.76

MetroCount Traffic Executive
Event Counts

EventCount-547 -- English (ENU)

Datasets:

Site:	**[Westshore gandy] North side of Gandy- A-northbound--B-southbound**
Attribute:	Hills.
Input A:	1 - North bound. - Lane= 1, Subtracted from totals. (/-2.000)
Input B:	3 - South bound. - Lane= 3, Added to totals. (/2.000)
Survey Duration:	9:59 Monday, December 7, 2020 => 13:56 Friday, December 11, 2020,
Zone:	
File:	Westshore gandy 0 2020-12-11 1357.EC1 (Plus)
Identifier:	JF85HVS6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Split (Count)

Profile:

Filter time:	**10:00 Monday, December 7, 2020 => 13:56 Friday, December 11, 2020 (4.16412)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 88993 / 88999 (99.99%)

* Monday, December 7, 2020=5864 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**95**	**508**	**492**	**519**	**591**	**592**	**586**	**550**	**532**	**466**	**379**	**238**	**203**	**115**
–	–	–	–	–	–	–	–	–	–	0	149	95	118	148	**158**	169	140	117	131	114	60	46	33	17
–	–	–	–	–	–	–	–	–	–	0	111	130	122	138	**173**	143	140	153	120	115	62	54	37	15
–	–	–	–	–	–	–	–	–	–	–1	109	133	142	**160**	141	140	115	122	110	88	67	65	30	17
–	–	–	–	–	–	–	–	–	–	96	140	135	138	**146**	121	135	156	142	106	63	50	39	16	11

PM Peak 1430 - 1530 (636), PM PHF=0.92

* Tuesday, December 8, 2020=9311, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2300	
59	**50**	**27**	**26**	**66**	**220**	**548**	**553**	**528**	**551**	**598**	**580**	**696**	**670**	**631**	**533**	**565**	**510**	**488**	**512**	**347**	**239**	**177**	**145**
17	9	6	7	13	22	90	132	137	122	142	138	**194**	156	144	134	148	136	102	138	90	76	53	51	18
15	16	10	8	20	42	148	158	123	138	145	117	**186**	179	183	151	136	133	161	141	92	46	44	35	17
17	15	4	7	13	72	163	109	133	170	150	154	**158**	187	152	128	134	109	112	106	90	55	44	35	24
11	10	7	4	21	84	148	155	136	122	161	**171**	**158**	149	152	120	147	133	114	128	76	62	37	25	9

AM Peak 1145 - 1245 (709), AM PHF=0.92 PM Peak 1200 - 1300 (696), PM PHF=0.90

* Wednesday, December 9, 2020=9070, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2300	
67	**50**	**40**	**29**	**65**	**235**	**500**	**512**	**554**	**562**	**581**	**600**	**617**	**583**	**607**	**507**	**552**	**458**	**499**	**484**	**363**	**272**	**201**	**139**
18	16	9	2	12	23	96	124	121	134	147	131	**154**	125	**152**	123	171	123	147	142	110	62	59	45	27
17	18	7	8	13	56	144	130	169	129	157	114	**149**	161	**171**	146	125	127	129	158	108	74	41	42	23
24	11	9	7	15	86	130	115	135	150	140	**172**	162	**166**	143	145	141	106	95	98	71	63	54	24	22
9	6	15	13	26	70	131	144	130	150	137	**183**	153	**131**	142	93	115	103	128	87	75	75	48	29	15

AM Peak 1130 - 1230 (657), AM PHF=0.90 PM Peak 1330 - 1430 (620), PM PHF=0.91

* Thursday, December 10, 2020=8701, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2300	
87	**45**	**43**	**41**	**67**	**218**	**509**	**554**	**578**	**470**	**507**	**537**	**547**	**477**	**500**	**476**	**462**	**486**	**528**	**507**	**400**	**306**	**219**	**144**
27	12	9	6	20	27	93	137	**135**	119	118	131	134	99	128	113	137	120	103	**134**	106	89	59	53	32
23	9	10	3	12	44	138	136	**162**	100	142	132	152	134	111	138	107	126	**173**	134	94	69	61	39	27
22	8	12	16	10	71	130	131	**142**	121	130	146	163	109	132	90	102	101	**120**	128	107	79	51	30	23
15	18	13	17	25	76	148	**151**	140	130	118	129	98	136	129	136	117	140	**133**	111	95	69	49	23	19

AM Peak 0745 - 0845 (589), AM PHF=0.91 PM Peak 1815 - 1915 (559), PM PHF=0.81

* Friday, December 11, 2020=379 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2300	
100	**36**	**36**	**53**	**74**	**81**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
32	11	6	9	17	**19**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
27	9	8	17	16	**31**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
23	8	16	16	19	**32**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
19	9	7	11	**23**	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0445 - 0545 (104), AM PHF=0.81

MetroCount Traffic Executive
Event Counts

EventCount-544 -- English (ENU)

Datasets:

Site:	**[Westsh Gandy] South side of Gandy on Westshore A--Northbound --B-- Southbound**
Attribute:	Hills
Input A:	1 - North bound. - Lane= 2, Added to totals. (/2.000)
Input B:	3 - South bound. - Lane= 2, Excluded from totals.
Survey Duration:	9:45 Monday, December 7, 2020 => 13:53 Friday, December 11, 2020,
Zone:	
File:	Westsh Gandy 0 2020-12-11 1353.EC2 (Plus)
Identifier:	JE32D7JE MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Split (Count)

Profile:

Filter time:	**9:46 Monday, December 7, 2020 => 13:53 Friday, December 11, 2020 (4.17182)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 81042 / 81045 (100.00%)

* Monday, December 7, 2020=5757 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**238**	**599**	**622**	**597**	**560**	**473**	**433**	**442**	**473**	**450**	**330**	**258**	**178**	**105**	
–	–	–	–	–	–	–	–	–	–	0	149	**143**	132	113	113	117	97	93	130	110	84	47	25	21
–	–	–	–	–	–	–	–	–	–	1	140	**172**	135	160	141	86	124	136	101	91	52	47	38	21
–	–	–	–	–	–	–	–	–	–	125	158	**148**	171	153	109	107	108	105	133	62	60	40	20	20
–	–	–	–	–	–	–	–	–	1	113	153	**160**	159	134	112	124	115	140	86	68	63	46	23	16

PM Peak 1200 - 1300 (622), PM PHF=0.91

* Tuesday, December 8, 2020=8961, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
77	**46**	**46**	**41**	**85**	**224**	**452**	**558**	**563**	**535**	**609**	**671**	**657**	**601**	**625**	**501**	**506**	**465**	**423**	**417**	**302**	**236**	**206**	**122**	
21	12	9	6	8	44	114	141	127	126	151	148	**178**	163	151	130	126	116	85	117	65	58	72	46	35
21	19	23	15	25	45	121	163	138	136	163	**186**	**170**	149	152	155	112	124	143	91	76	48	60	29	13
20	8	8	10	17	77	106	121	137	150	139	**165**	**150**	143	168	120	144	102	84	116	98	69	43	21	18
16	8	7	11	36	59	112	133	161	124	157	**173**	**159**	146	154	96	124	124	112	95	65	62	31	26	17

AM Peak 1115 - 1215 (701), AM PHF=0.94 PM Peak 1200 - 1300 (657), PM PHF=0.92

* Wednesday, December 9, 2020=8686, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
82	**34**	**58**	**54**	**91**	**220**	**499**	**486**	**557**	**523**	**603**	**636**	**614**	**567**	**507**	**494**	**420**	**465**	**454**	**452**	**326**	**245**	**193**	**111**	
35	5	9	9	10	27	139	102	137	149	142	**151**	156	**157**	96	128	113	110	85	121	107	68	54	26	18
13	7	9	13	16	68	106	144	144	115	162	**171**	**156**	108	140	159	75	114	130	111	70	48	55	30	19
18	16	27	16	30	56	143	130	140	139	124	**146**	**148**	149	141	96	118	111	126	125	75	64	52	24	10
17	8	14	17	36	69	112	111	137	120	**176**	168	**154**	154	131	112	115	130	114	95	74	65	33	31	26

AM Peak 1045 - 1145 (644), AM PHF=0.91 PM Peak 1215 - 1315 (615), PM PHF=0.98

* Thursday, December 10, 2020=9004, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
72	**51**	**42**	**45**	**102**	**277**	**496**	**563**	**522**	**564**	**575**	**587**	**599**	**499**	**622**	**510**	**436**	**474**	**458**	**472**	**357**	**281**	**257**	**148**	
18	14	9	12	23	50	122	135	127	155	127	131	**132**	133	142	**145**	98	102	116	111	89	68	58	38	18
19	21	17	11	21	54	113	132	139	129	150	161	**177**	119	**175**	153	114	136	110	106	108	91	69	42	13
10	11	10	13	24	88	145	145	149	170	148	143	**158**	143	**165**	120	96	107	94	132	87	68	86	41	31
26	6	7	10	35	86	117	151	107	110	151	**152**	133	104	**141**	92	129	130	139	123	74	54	44	28	21

AM Peak 1145 - 1245 (619), AM PHF=0.87 PM Peak 1415 - 1515 (625), PM PHF=0.90

* Friday, December 11, 2020=730 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
83	**48**	**53**	**55**	**106**	**262**	**122**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
18	13	9	8	14	51	**76**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
13	6	14	26	36	**55**	47	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
31	16	16	11	40	**83**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
21	13	14	11	18	**73**	0	0	0	0	0	0	0	2	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0515 - 0615 (287), AM PHF=0.86

MetroCount Traffic Executive
Event Counts

EventCount-545 -- English (ENU)

Datasets:

Site:	**[Westsh Gandy] South side of Gandy on Westshore A--Northbound --B-- Southbound**
Attribute:	Hills
Input A:	1 - North bound. - Lane= 2, Subtracted from totals. (/-2.000)
Input B:	3 - South bound. - Lane= 2, Added to totals. (/2.000)
Survey Duration:	9:45 Monday, December 7, 2020 => 13:53 Friday, December 11, 2020,
Zone:	
File:	Westsh Gandy 0 2020-12-11 1353.EC2 (Plus)
Identifier:	JE32D7JE MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Event Count (v4.06)
Data type:	Axle sensors - Split (Count)

Profile:

Filter time:	**9:46 Monday, December 7, 2020 => 13:53 Friday, December 11, 2020 (4.17182)**
Separation:	GapX > 0 sec
Name:	Default Profile
Scheme:	Count events divided by setup divisor
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Events = 81042 / 81045 (100.00%)

* Monday, December 7, 2020=496 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**108**	**254**	**237**	**244**	**305**	**286**	**379**	**338**	**–334**	**–449**	**–330**	**–258**	**–178**	**–104**	
–	–	–	–	–	–	–	–	–	–	0	55	61	61	73	76	**106**	80	46	–130	–109	–84	–46	–25	–21
–	–	–	–	–	–	–	–	–	–	0	62	60	74	77	99	**120**	108	–136	–101	–90	–51	–46	–37	–20
–	–	–	–	–	–	–	–	–	–	41	69	57	54	76	59	**83**	57	–104	–132	–62	–59	–39	–19	–19
–	–	–	–	–	–	–	–	–	0	67	69	60	55	79	53	**71**	94	–139	–86	–68	–63	–45	–22	–15

PM Peak 1600 - 1700 (379), PM PHF=0.79

* Tuesday, December 8, 2020=-2016, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–76	**–43**	**–46**	**–41**	**–85**	**–223**	**–445**	**–555**	**–551**	**–492**	**–606**	**–664**	**–626**	**–592**	**–20**	**463**	**398**	**424**	**473**	**419**	**320**	**242**	**177**	**136**	
–21	–11	–8	–6	–8	–43	–110	–141	–121	–125	–150	–144	–174	–159	–149	114	105	90	**134**	120	94	81	44	59	35
–20	–17	–23	–15	–24	–45	–120	–160	–135	–124	–162	–182	–151	–144	–84	127	116	91	**101**	113	90	57	52	29	22
–19	–7	–7	–9	–17	–76	–105	–120	–137	–136	–136	–164	–143	–143	127	101	105	95	**124**	86	58	51	35	28	23
–15	–7	–7	–10	–35	–58	–109	–133	–157	–106	–156	–173	–157	–146	87	121	73	**149**	114	101	79	53	46	21	19

AM Peak 0000 - 0100 (0), AM PHF=-1.#J PM Peak 1745 - 1845 (507), PM PHF=0.85

* Wednesday, December 9, 2020=7921, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
99	**73**	**46**	**73**	**70**	**199**	**499**	**566**	**509**	**436**	**449**	**454**	**430**	**446**	**452**	**452**	**469**	**419**	**449**	**406**	**335**	**264**	**192**	**140**	
35	21	9	14	18	19	86	**172**	109	119	133	112	93	94	109	115	100	**111**	102	106	103	73	52	43	21
22	24	9	12	13	51	126	**128**	167	89	85	88	105	117	115	113	**155**	106	129	128	89	64	48	42	28
23	11	18	18	15	62	**144**	127	112	111	135	130	108	144	112	128	**113**	89	97	84	75	67	58	29	26
19	17	10	30	25	68	**144**	140	121	118	97	124	125	92	117	97	**102**	113	122	88	69	61	36	27	12

AM Peak 0630 - 0730 (587), AM PHF=0.85 PM Peak 1615 - 1715 (480), PM PHF=0.77

* Thursday, December 10, 2020=7798, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
86	**66**	**47**	**65**	**70**	**182**	**493**	**508**	**478**	**385**	**388**	**483**	**549**	**468**	**476**	**453**	**365**	**456**	**445**	**445**	**317**	**283**	**154**	**141**	
21	18	11	17	10	23	67	**119**	99	105	95	140	**151**	101	129	115	86	96	85	122	93	63	49	39	34
28	14	6	15	17	39	120	**166**	135	75	103	105	**148**	119	118	118	64	122	131	128	71	66	43	43	37
26	15	10	12	11	54	**121**	111	118	83	96	112	**120**	131	107	97	107	98	129	91	72	88	26	35	19
12	20	20	21	33	66	**186**	113	127	122	95	128	**130**	119	122	124	109	141	102	105	82	66	37	25	17

AM Peak 0630 - 0730 (591), AM PHF=0.79 PM Peak 1200 - 1300 (549), PM PHF=0.91

* Friday, December 11, 2020=570 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
106	**49**	**58**	**71**	**81**	**167**	**39**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
34	9	16	14	14	16	**59**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
37	13	15	19	8	**27**	–20	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
19	10	18	28	36	**51**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–
17	18	10	11	23	**74**	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0515 - 0615 (210), AM PHF=0.71

MetroCount Traffic Executive
Daily Classes

DailyClass-560 -- English (ENU)

Datasets:

Site:	**[Gandy Bridge] Gandy Bridge Westside;; A--West Hose -- B --East Hose**
Attribute:	Pinellas
Direction:	2 - East bound, A trigger first. **Lane:** 4
Survey Duration:	8:59 Monday, December 14, 2020 => 15:40 Sunday, December 20, 2020,
Zone:	
File:	Gandy Bridge 0 2020-12-20 1540.EC4 (Plus)
Identifier:	JE32D7JE MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**9:00 Monday, December 14, 2020 => 15:40 Sunday, December 20, 2020 (6.27795)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 328.084 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F3)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 92870 / 94798 (97.97%)

Daily Classes

DailyClass-560
Site: Gandy Bridge.4.0E
Description: **Gandy Bridge Westside;; A--West Hose -- B --East Hose**
Filter time: **9:00 Monday, December 14, 2020 => 15:40 Sunday, December 20, 2020**
Scheme: Vehicle classification (Scheme F3)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NESW) Sp(6,99) Headway(>0) Span(0 - 328.084)

Monday, December 14, 2020

	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
Mon*	50	10505	4106	200	888	52	78	94	99	8	6	0	42	16128
(%)	0.3	65.1	25.5	1.2	5.5	0.3	0.5	0.6	0.6	0.0	0.0	0.0	0.3	
Tue	97	17065	6021	237	1256	116	122	149	175	19	10	4	87	25358
(%)	0.4	67.3	23.7	0.9	5.0	0.5	0.5	0.6	0.7	0.1	0.0	0.0	0.3	
Wed	58	17069	5461	245	1094	98	123	151	132	14	13	2	87	24547
(%)	0.2	69.5	22.2	1.0	4.5	0.4	0.5	0.6	0.5	0.1	0.1	0.0	0.4	
Thu	91	17388	5438	244	1176	88	89	105	162	16	13	0	111	24921
(%)	0.4	69.8	21.8	1.0	4.7	0.4	0.4	0.4	0.7	0.1	0.1	0.0	0.4	
Fri	5	1225	469	20	130	6	10	19	26	0	1	0	5	1916
(%)	0.3	63.9	24.5	1.0	6.8	0.3	0.5	1.0	1.4	0.0	0.1	0.0	0.3	
Sat	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sun*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Average daily volume

Entire week

	50	10548	3477	148	730	61	68	84	98	9	7	0	57	15348
(%)	0.3	68.7	22.7	1.0	4.8	0.4	0.4	0.5	0.6	0.1	0.0	0.0	0.4	

Weekdays

	62	13186	4347	186	914	77	85	105	123	11	9	1	71	19185
(%)	0.3	68.7	22.7	1.0	4.8	0.4	0.4	0.5	0.6	0.1	0.0	0.0	0.4	

Weekend

	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

*** - Incomplete**

MetroCount Traffic Executive
Vehicle Counts

VehicleCount-558 -- English (ENU)

Datasets:

Site:	**[Gandy Bridge] Gandy Bridge Westside;; A--West Hose -- B --East Hose**
Attribute:	Pinellas
Direction:	2 - East bound, A trigger first. **Lane:** 4
Survey Duration:	8:59 Monday, December 14, 2020 => 15:40 Sunday, December 20, 2020,
Zone:	
File:	Gandy Bridge 0 2020-12-20 1540.EC4 (Plus)
Identifier:	JE32D7JE MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**9:00 Monday, December 14, 2020 => 15:40 Sunday, December 20, 2020 (6.27795)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	AB
Separation:	Headway > 0 sec, Span 0 - 328.084 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F3)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 45389 / 94798 (47.88%)

* Monday, December 14, 2020 - Total=7772 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**193**	**513**	**542**	**595**	**584**	**656**	**823**	**926**	**1045**	**644**	**439**	**317**	**211**	**154**	**130**	
–	–	–	–	–	–	–	–	–	0	133	126	161	136	148	162	203	**263**	170	130	96	61	47	35	12
–	–	–	–	–	–	–	–	–	0	132	133	134	155	158	188	243	**282**	192	118	79	51	31	32	21
–	–	–	–	–	–	–	–	–	34	132	134	147	147	173	239	219	**273**	174	97	78	55	41	38	14
–	–	–	–	–	–	–	–	–	159	116	149	153	146	177	234	**261**	227	108	94	64	44	35	25	12

PM Peak 1645 - 1745 (1079), PM PHF=0.96

* Tuesday, December 15, 2020 - Total=12420, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
59	**41**	**32**	**33**	**75**	**289**	**727**	**996**	**811**	**663**	**635**	**608**	**675**	**663**	**755**	**882**	**1128**	**1200**	**809**	**454**	**310**	**266**	**207**	**102**	
12	8	8	2	15	31	130	**265**	215	163	164	131	141	158	177	178	288	**291**	250	130	82	64	56	27	20
21	8	7	8	15	71	157	**245**	202	172	153	158	200	149	205	228	290	**314**	242	118	85	70	53	27	25
14	12	9	15	13	89	229	**259**	201	177	142	163	173	175	167	242	295	**273**	168	101	76	63	51	29	15
12	13	8	8	32	98	211	**227**	193	151	176	156	161	181	206	234	255	**322**	149	105	67	69	47	19	22

AM Peak 0700 - 0800 (996), AM PHF=0.94 PM Peak 1700 - 1800 (1200), PM PHF=0.93

* Wednesday, December 16, 2020 - Total=12014, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
82	**50**	**26**	**50**	**73**	**293**	**661**	**877**	**754**	**655**	**574**	**571**	**661**	**648**	**796**	**1206**	**1181**	**976**	**633**	**398**	**285**	**241**	**199**	**124**	
20	18	5	14	20	40	118	**216**	189	178	169	148	155	164	174	265	**337**	267	188	109	80	70	55	28	16
25	12	5	10	16	69	166	**210**	189	167	125	146	166	178	198	**297**	284	250	168	112	77	76	57	35	17
15	12	8	15	17	86	161	**227**	216	149	138	122	167	141	197	**339**	280	265	137	80	74	40	52	29	22
22	8	8	11	20	98	216	**224**	160	161	142	155	173	165	227	**305**	280	194	140	97	54	55	35	32	13

AM Peak 0700 - 0800 (877), AM PHF=0.97 PM Peak 1515 - 1615 (1278), PM PHF=0.94

* Thursday, December 17, 2020 - Total=12074, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
68	**41**	**34**	**46**	**75**	**267**	**704**	**746**	**733**	**700**	**618**	**699**	**670**	**716**	**769**	**948**	**1051**	**992**	**776**	**523**	**327**	**248**	**189**	**134**	
16	13	12	7	12	28	115	179	**131**	185	154	183	153	179	163	200	**244**	250	202	167	99	63	51	41	23
17	10	6	10	14	61	172	145	**212**	166	135	153	194	158	206	226	**275**	280	203	119	78	47	50	36	21
22	9	5	16	20	97	198	182	**209**	192	167	196	149	189	189	241	**294**	254	184	140	83	67	47	34	16
13	9	11	13	29	81	219	**240**	181	157	162	167	174	190	211	**281**	238	208	187	97	67	71	41	23	17

AM Peak 0745 - 0845 (792), AM PHF=0.82 PM Peak 1545 - 1645 (1094), PM PHF=0.93

* Friday, December 18, 2020 - Total=1109, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
77	**50**	**41**	**58**	**85**	**283**	**515**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
23	6	9	10	21	32	**106**	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
21	15	8	16	21	66	**141**	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
16	14	14	15	23	86	**173**	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
17	15	10	17	20	**99**	95	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0545 - 0645 (519), AM PHF=0.75 PM Peak 1200 - 1300 (0), PM PHF=1.00

* Saturday, December 19, 2020 - Total=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=1.00 PM Peak 1200 - 1300 (0), PM PHF=1.00

* Sunday, December 20, 2020 - Total=0 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–

AM Peak 0000 - 0100 (0), AM PHF=1.00

MetroCount Traffic Executive
Vehicle Counts

VehicleCount-559 -- English (ENU)

Datasets:

Site:	**[Gandy Bridge] Gandy Bridge Westside;; A--West Hose -- B --East Hose**
Attribute:	Pinellas
Direction:	2 - East bound, A trigger first. **Lane:** 4
Survey Duration:	8:59 Monday, December 14, 2020 => 15:40 Sunday, December 20, 2020,
Zone:	
File:	Gandy Bridge 0 2020-12-20 1540.EC4 (Plus)
Identifier:	JE32D7JE MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**9:00 Monday, December 14, 2020 => 15:40 Sunday, December 20, 2020 (6.27795)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	BA
Separation:	Headway > 0 sec, Span 0 - 328.084 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F3)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 47481 / 94798 (50.09%)

* Monday, December 14, 2020 - Total=8356 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**221**	**571**	**597**	**681**	**646**	**823**	**990**	**1023**	**1019**	**676**	**403**	**241**	**199**	**163**	**103**	
–	–	–	–	–	–	–	–	–	0	157	141	161	165	189	221	247	**288**	207	89	78	55	53	42	19
–	–	–	–	–	–	–	–	–	0	133	148	188	156	186	245	**253**	248	177	128	50	61	50	22	16
–	–	–	–	–	–	–	–	–	38	147	152	170	159	205	237	**274**	259	160	95	53	46	36	18	16
–	–	–	–	–	–	–	–	–	183	134	156	162	166	243	287	**249**	224	132	91	60	37	24	21	9

PM Peak 1615 - 1715 (1064), PM PHF=0.92

* Tuesday, December 15, 2020 - Total=12938, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
60	**43**	**35**	**36**	**61**	**209**	**584**	**971**	**978**	**744**	**624**	**689**	**675**	**771**	**827**	**1012**	**1214**	**1244**	**856**	**435**	**300**	**253**	**199**	**118**	
19	13	9	10	10	22	108	208	**267**	175	142	176	159	192	190	266	275	**314**	303	115	78	73	57	36	26
16	10	8	3	9	56	130	245	**257**	217	147	190	180	183	207	246	333	**331**	220	78	81	61	57	31	17
16	11	11	13	12	60	184	**270**	203	194	171	151	171	202	212	252	321	**343**	188	152	75	62	41	32	15
9	9	7	10	30	71	162	**248**	251	158	164	172	165	194	218	248	**285**	256	145	90	66	57	44	19	16

AM Peak 0730 - 0830 (1042), AM PHF=0.96 PM Peak 1645 - 1745 (1273), PM PHF=0.93

* Wednesday, December 16, 2020 - Total=12533, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
74	**45**	**37**	**40**	**63**	**227**	**551**	**912**	**942**	**743**	**619**	**643**	**739**	**699**	**978**	**1119**	**1171**	**1054**	**628**	**426**	**297**	**217**	**184**	**125**	
26	16	6	15	18	29	96	184	**232**	185	160	159	155	183	218	269	252	**255**	203	123	93	59	52	40	22
17	6	9	8	16	51	132	**253**	246	200	153	165	207	169	228	277	**324**	271	142	98	80	49	57	37	12
15	10	8	7	12	66	165	**241**	239	191	159	167	179	176	258	296	**303**	304	165	105	57	58	45	32	13
16	13	14	10	17	81	158	**234**	225	167	147	152	198	171	274	277	**292**	224	118	100	67	51	30	16	14

AM Peak 0715 - 0815 (960), AM PHF=0.95 PM Peak 1615 - 1715 (1174), PM PHF=0.91

* Thursday, December 17, 2020 - Total=12847, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
61	**39**	**30**	**33**	**57**	**214**	**580**	**749**	**935**	**763**	**654**	**719**	**781**	**813**	**953**	**1081**	**1169**	**1105**	**999**	**604**	**290**	**114**	**70**	**34**	
22	12	9	9	6	33	96	120	**225**	200	165	157	182	198	226	234	**292**	252	297	141	104	37	19	12	4
12	9	7	4	16	46	152	147	**247**	206	193	185	201	193	225	264	**293**	271	232	166	64	24	18	9	4
13	9	6	6	19	67	177	225	**236**	188	132	200	210	216	251	316	**309**	317	243	147	71	34	18	10	4
14	9	8	14	16	68	155	**257**	227	169	164	177	188	206	251	267	**275**	265	227	150	51	19	15	3	4

AM Peak 0745 - 0845 (965), AM PHF=0.94 PM Peak 1600 - 1700 (1169), PM PHF=0.95

* Friday, December 18, 2020 - Total=807, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
16	**7**	**16**	**36**	**77**	**216**	**439**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
4	3	4	9	13	35	**92**	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
4	1	2	11	16	55	**121**	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
4	1	1	10	28	59	**153**	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
4	2	9	6	20	67	**73**	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0600 - 0700 (439), AM PHF=0.72 PM Peak 1200 - 1300 (0), PM PHF=1.00

* Saturday, December 19, 2020 - Total=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=1.00 PM Peak 1200 - 1300 (0), PM PHF=1.00

* Sunday, December 20, 2020 - Total=0 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–

AM Peak 0000 - 0100 (0), AM PHF=1.00

MetroCount Traffic Executive
Daily Classes

DailyClass-15 -- English (ENU)

Datasets:

Site:	**[Gandy 4th] Gandy on 4th st, --Clasification// East bound ;; A -- Hose west side --B hose eastside**
Attribute:	Pinellas
Direction:	4 - West bound, A trigger first. **Lane:** 2
Survey Duration:	11:08 Saturday, January 9, 2021 => 13:10 Friday, January 15, 2021,
Zone:	
File:	Gandy 4th 0 2021-01-15 1310.EC2 (Plus)
Identifier:	JF85HVS6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v5.08)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:09 Saturday, January 9, 2021 => 13:10 Friday, January 15, 2021 (6.08422)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	North, East, South, West (bound), P = West, Lane = 0-16
Separation:	Headway > 0 sec, Span 0 - 328.084 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F3)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 55467 / 56238 (98.63%)

Daily Classes

DailyClass-15
Site: Gandy 4th.2.0W
Description: **Gandy on 4th st, --Clasification// East bound ;; A -- Hose west side --B hose eastside**
Filter time: **11:09 Saturday, January 9, 2021 => 13:10 Friday, January 15, 2021**
Scheme: Vehicle classification (Scheme F3)
Filter: Cls(1-13) Dir(NESW) Sp(6,99) Headway(>0) Span(0 - 328.084) Lane(0-16)

Monday, January 11, 2021

	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
Mon	32	11938	333	7	10	531	24	14	47	34	0	0	48	13018
(%)	0.2	91.7	2.6	0.1	0.1	4.1	0.2	0.1	0.4	0.3	0.0	0.0	0.4	
Tue	21	12506	357	7	5	547	23	8	55	38	0	0	45	13612
(%)	0.2	91.9	2.6	0.1	0.0	4.0	0.2	0.1	0.4	0.3	0.0	0.0	0.3	
Wed	14	12423	379	10	6	610	22	9	53	39	0	0	49	13614
(%)	0.1	91.3	2.8	0.1	0.0	4.5	0.2	0.1	0.4	0.3	0.0	0.0	0.4	
Thu	20	13320	343	12	9	663	26	12	54	53	0	0	52	14564
(%)	0.1	91.5	2.4	0.1	0.1	4.6	0.2	0.1	0.4	0.4	0.0	0.0	0.4	
Fri*	2	596	19	0	0	35	0	1	4	2	0	0	0	659
(%)	0.3	90.4	2.9	0.0	0.0	5.3	0.0	0.2	0.6	0.3	0.0	0.0	0.0	
Sat*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sun*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Average daily volume

Entire week

	22	12547	353	9	8	588	24	11	52	41	0	0	49	13702
(%)	0.2	91.6	2.6	0.1	0.1	4.3	0.2	0.1	0.4	0.3	0.0	0.0	0.4	

Weekdays

	22	12547	353	9	8	588	24	11	52	41	0	0	49	13702
(%)	0.2	91.6	2.6	0.1	0.1	4.3	0.2	0.1	0.4	0.3	0.0	0.0	0.4	

Weekend No complete days.

*** - Incomplete**

MetroCount Traffic Executive
Vehicle Counts

VehicleCount-14 -- English (ENU)

Datasets:

Site:	**[Gandy 4th] Gandy on 4th st, --Clasification// East bound ;; A -- Hose west side --B hose eastside**
Attribute:	Pinellas
Direction:	4 - West bound, A trigger first. **Lane:** 2
Survey Duration:	11:08 Saturday, January 9, 2021 => 13:10 Friday, January 15, 2021,
Zone:	
File:	Gandy 4th 0 2021-01-15 1310.EC2 (Plus)
Identifier:	JF85HVS6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v5.08)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:09 Saturday, January 9, 2021 => 13:10 Friday, January 15, 2021 (6.08422)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	AB , Lane = 0-16
Separation:	Headway > 0 sec, Span 0 - 328.084 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F3)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 55467 / 56238 (98.63%)

* Saturday, January 9, 2021 - Total=0 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0

PM Peak 1200 - 1300 (0), PM PHF=1.00

* Sunday, January 10, 2021 - Total=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=1.00 PM Peak 1200 - 1300 (0), PM PHF=1.00

* Monday, January 11, 2021 - Total=13018, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**29**	**49**	**42**	**92**	**288**	**651**	**781**	**756**	**725**	**645**	**727**	**736**	**738**	**810**	**922**	**1182**	**1267**	**863**	**643**	**401**	**280**	**219**	**172**	
0	0	10	9	20	48	110	178	**188**	132	161	159	170	175	197	213	276	**329**	201	159	124	71	52	47	30
0	5	9	11	16	50	155	192	**187**	188	164	199	180	194	196	224	278	**361**	273	175	109	73	53	49	27
0	16	14	9	29	92	201	208	**214**	206	152	181	218	186	220	238	275	**323**	223	145	86	76	68	40	20
0	8	16	13	27	98	185	**203**	167	199	168	188	168	183	197	247	**353**	254	166	164	82	60	46	36	10

AM Peak 0745 - 0845 (792), AM PHF=0.93 PM Peak 1645 - 1745 (1366), PM PHF=0.95

* Tuesday, January 12, 2021 - Total=13612, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
87	**52**	**47**	**55**	**118**	**328**	**744**	**895**	**848**	**728**	**723**	**717**	**760**	**713**	**745**	**950**	**1200**	**1316**	**820**	**611**	**455**	**342**	**211**	**147**	
30	16	9	11	16	45	138	196	**226**	202	196	170	195	190	149	202	301	**298**	228	141	135	66	66	39	30
27	12	11	14	28	82	170	**230**	225	162	179	196	164	199	229	243	301	**338**	236	155	109	95	64	43	23
20	20	14	24	25	88	239	**226**	226	175	185	185	208	162	197	234	302	**358**	216	163	94	106	47	33	19
10	4	13	6	49	113	197	**243**	171	189	163	166	193	162	170	271	296	**322**	140	152	117	75	34	32	19

AM Peak 0715 - 0815 (925), AM PHF=0.95 PM Peak 1700 - 1800 (1316), PM PHF=0.92

* Wednesday, January 13, 2021 - Total=13614, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
91	**70**	**46**	**68**	**84**	**274**	**715**	**830**	**789**	**714**	**761**	**747**	**774**	**830**	**735**	**967**	**1293**	**1210**	**827**	**647**	**445**	**302**	**258**	**137**	
30	20	11	23	21	41	128	**223**	181	195	179	192	173	207	166	218	**294**	288	224	176	147	83	62	56	42
23	23	11	13	22	59	192	**182**	187	156	178	208	206	237	170	227	**358**	321	240	168	96	71	87	34	31
19	19	9	18	20	72	203	**215**	231	189	191	178	203	192	187	260	**317**	285	191	170	105	89	65	25	28
19	8	15	14	21	102	192	**210**	190	174	213	169	192	194	212	262	**324**	316	172	133	97	59	44	22	14

AM Peak 0700 - 0800 (830), AM PHF=0.93 PM Peak 1600 - 1700 (1293), PM PHF=0.90

* Thursday, January 14, 2021 - Total=14564, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
115	**81**	**53**	**46**	**87**	**284**	**718**	**825**	**821**	**798**	**769**	**796**	**771**	**779**	**810**	**1088**	**1236**	**1376**	**1025**	**730**	**488**	**373**	**290**	**205**	
42	15	12	17	10	39	135	155	**204**	194	204	196	197	191	224	224	332	**353**	253	197	109	98	87	65	40
31	24	14	8	23	64	174	**222**	201	178	182	217	180	212	186	288	294	**317**	297	188	116	88	77	56	43
28	25	12	10	18	79	211	**229**	210	215	196	192	192	187	187	277	313	**353**	250	164	137	97	54	48	24
14	17	15	11	36	102	198	**219**	206	211	187	191	202	189	213	299	297	**353**	225	181	126	90	72	36	22

AM Peak 0715 - 0815 (874), AM PHF=0.95 PM Peak 1700 - 1800 (1376), PM PHF=0.97

* Friday, January 15, 2021 - Total=659 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
129	**76**	**49**	**67**	**92**	**234**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
40	32	14	19	12	**41**	12	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
43	17	8	9	15	**54**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
24	12	15	19	29	**64**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
22	15	12	20	36	**75**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–

AM Peak 0500 - 0600 (234), AM PHF=0.78

MetroCount Traffic Executive
Daily Classes

DailyClass-11 -- English (ENU)

Datasets:

Site:	**[Gandy & 4th] ON Gandy & 4th Classifications Weat bound // A--west hose**
Attribute:	Pinellas
Direction:	4 - West bound, A trigger first. **Lane:** 2
Survey Duration:	11:04 Saturday, January 9, 2021 => 12:54 Friday, January 15, 2021,
Zone:	
File:	Gandy _ 4th 0 2021-01-15 1254.EC2 (Plus)
Identifier:	JE356JET MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v5.08)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:05 Saturday, January 9, 2021 => 12:54 Friday, January 15, 2021 (6.07586)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	North, East, South, West (bound), P = West, Lane = 0-16
Separation:	Headway > 0 sec, Span 0 - 328.084 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F3)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 43294 / 44073 (98.23%)

Daily Classes

DailyClass-11
Site: Gandy & 4th.2.0W
Description: **ON Gandy & 4th Classifications Weat bound // A--west hose**
Filter time: **11:05 Saturday, January 9, 2021 => 12:54 Friday, January 15, 2021**
Scheme: Vehicle classification (Scheme F3)
Filter: Cls(1-13) Dir(NESW) Sp(6,99) Headway(>0) Span(0 - 328.084) Lane(0-16)

Monday, January 11, 2021

	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
Mon	34	3261	5104	205	1229	31	40	40	91	7	0	0	12	10054
(%)	0.3	32.4	50.8	2.0	12.2	0.3	0.4	0.4	0.9	0.1	0.0	0.0	0.1	
Tue	32	3136	5671	197	1284	45	47	56	97	11	0	0	14	10590
(%)	0.3	29.6	53.6	1.9	12.1	0.4	0.4	0.5	0.9	0.1	0.0	0.0	0.1	
Wed	32	3306	5692	220	1363	33	39	40	101	7	1	2	19	10855
(%)	0.3	30.5	52.4	2.0	12.6	0.3	0.4	0.4	0.9	0.1	0.0	0.0	0.2	
Thu	42	3769	5757	237	1283	37	40	46	100	8	1	0	16	11336
(%)	0.4	33.2	50.8	2.1	11.3	0.3	0.4	0.4	0.9	0.1	0.0	0.0	0.1	
Fri*	3	151	238	3	35	3	0	1	21	0	0	2	2	459
(%)	0.7	32.9	51.9	0.7	7.6	0.7	0.0	0.2	4.6	0.0	0.0	0.4	0.4	
Sat*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sun*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Average daily volume

Entire week

	35	3368	5556	215	1290	37	42	46	97	8	1	1	15	10709
(%)	0.3	31.5	51.9	2.0	12.0	0.3	0.4	0.4	0.9	0.1	0.0	0.0	0.1	

Weekdays

	35	3368	5556	215	1290	37	42	46	97	8	1	1	15	10709
(%)	0.3	31.5	51.9	2.0	12.0	0.3	0.4	0.4	0.9	0.1	0.0	0.0	0.1	

Weekend No complete days.

*** - Incomplete**

MetroCount Traffic Executive
Vehicle Counts

VehicleCount-10 -- English (ENU)

Datasets:

Site:	**[Gandy & 4th] ON Gandy & 4th Classifications Weat bound // A--west hose**
Attribute:	Pinellas
Direction:	4 - West bound, A trigger first. **Lane:** 2
Survey Duration:	11:04 Saturday, January 9, 2021 => 12:54 Friday, January 15, 2021,
Zone:	
File:	Gandy _ 4th 0 2021-01-15 1254.EC2 (Plus)
Identifier:	JE356JET MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v5.08)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:05 Saturday, January 9, 2021 => 12:54 Friday, January 15, 2021 (6.07586)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	BA , Lane = 0-16
Separation:	Headway > 0 sec, Span 0 - 328.084 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F3)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 43294 / 44073 (98.23%)

* Saturday, January 9, 2021 - Total=0 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
–	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
–	–	–	–	–	–	–	–	–	–	–	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
–	–	–	–	–	–	–	–	–	–	–	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0

PM Peak 1200 - 1300 (0), PM PHF=1.00

* Sunday, January 10, 2021 - Total=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	3

AM Peak 0000 - 0100 (0), AM PHF=1.00 PM Peak 1200 - 1300 (0), PM PHF=1.00

* Monday, January 11, 2021 - Total=10054, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
3	**31**	**35**	**46**	**60**	**163**	**486**	**779**	**773**	**578**	**503**	**543**	**592**	**577**	**657**	**819**	**893**	**827**	**625**	**349**	**285**	**163**	**155**	**112**	
0	5	1	13	19	24	84	155	**220**	143	108	120	146	158	147	192	212	**227**	173	87	75	34	40	42	18
0	12	11	7	9	30	111	184	**198**	156	141	148	138	144	167	213	**236**	179	173	100	84	47	47	28	17
0	7	14	11	16	49	127	**238**	192	138	117	123	143	142	168	210	**245**	202	148	89	79	48	38	23	16
3	7	9	15	16	60	164	**202**	163	141	137	152	165	133	175	204	**200**	219	131	73	47	34	30	19	22

AM Peak 0730 - 0830 (858), AM PHF=0.90 PM Peak 1615 - 1715 (908), PM PHF=0.93

* Tuesday, January 12, 2021 - Total=10590, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
73	**39**	**39**	**35**	**52**	**176**	**511**	**834**	**784**	**545**	**540**	**520**	**578**	**569**	**643**	**824**	**913**	**959**	**761**	**392**	**312**	**202**	**165**	**124**	
18	10	9	5	12	30	87	158	**201**	143	134	129	138	132	141	189	240	**287**	232	123	98	57	41	42	20
17	11	10	10	15	39	110	198	**205**	125	123	113	153	144	152	199	209	**228**	204	108	84	49	46	30	22
16	8	11	9	11	52	142	**242**	209	153	149	139	147	152	157	223	**220**	215	198	78	66	54	49	31	32
22	10	9	11	14	55	172	**236**	169	124	134	139	140	141	193	213	**244**	229	127	83	64	42	29	21	16

AM Peak 0730 - 0830 (884), AM PHF=0.91 PM Peak 1630 - 1730 (979), PM PHF=0.85

* Wednesday, January 13, 2021 - Total=10855, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
90	**64**	**47**	**47**	**65**	**168**	**537**	**837**	**865**	**532**	**532**	**518**	**619**	**588**	**696**	**827**	**930**	**876**	**829**	**401**	**282**	**216**	**175**	**114**	
20	20	10	21	15	18	67	153	**238**	131	122	135	153	156	154	172	203	**240**	263	128	68	64	58	41	25
22	18	7	9	13	39	134	204	**206**	124	147	127	123	152	179	222	**239**	224	229	98	79	52	48	22	20
32	16	6	8	17	53	160	**263**	216	150	125	130	163	148	180	239	**234**	223	193	96	82	44	35	19	23
16	10	24	9	20	58	176	**217**	205	127	138	126	180	132	183	194	**254**	189	144	79	53	56	34	32	18

AM Peak 0730 - 0830 (924), AM PHF=0.88 PM Peak 1615 - 1715 (967), PM PHF=0.95

* Thursday, January 14, 2021 - Total=11336, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
86	**53**	**57**	**52**	**66**	**139**	**503**	**828**	**867**	**589**	**532**	**555**	**599**	**665**	**768**	**845**	**963**	**1038**	**766**	**481**	**337**	**238**	**176**	**133**	
25	16	13	15	13	11	78	150	**220**	134	111	128	140	169	177	184	241	**269**	239	126	93	61	50	43	32
20	18	10	14	18	24	110	193	**209**	153	149	159	140	157	188	182	233	**263**	208	134	108	66	41	35	20
23	11	21	10	19	54	144	**239**	227	151	136	135	165	165	198	244	249	**250**	173	116	74	64	43	29	24
18	8	13	13	16	50	171	**246**	211	151	136	133	154	174	205	235	240	**256**	146	105	62	47	42	26	22

AM Peak 0730 - 0830 (914), AM PHF=0.93 PM Peak 1700 - 1800 (1038), PM PHF=0.96

* Friday, January 15, 2021 - Total=459 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
98	**61**	**54**	**53**	**77**	**116**	**0**	**0**	**0**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
32	14	6	14	21	**13**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
20	15	8	12	20	**34**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
24	13	17	11	17	**52**	0	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
22	19	23	16	**19**	17	0	0	0	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–

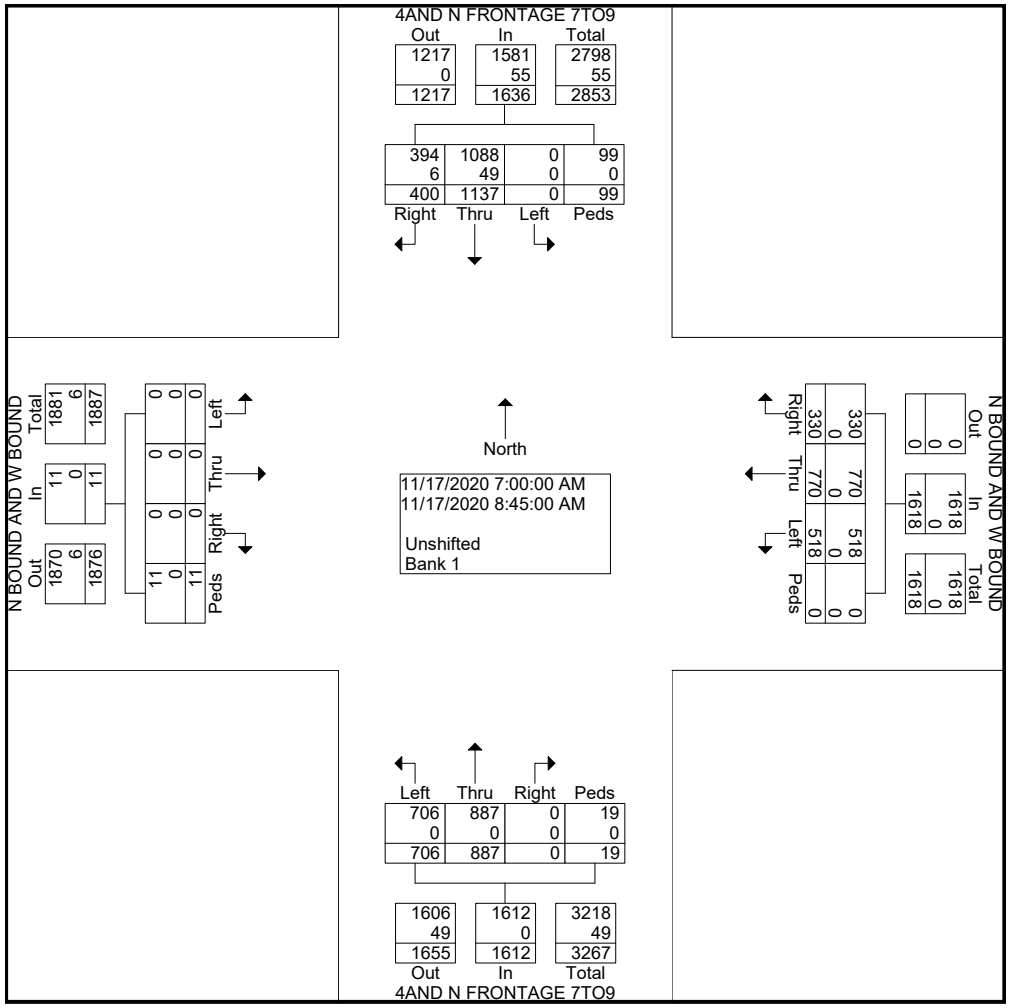
AM Peak 0445 - 0545 (118), AM PHF=0.57

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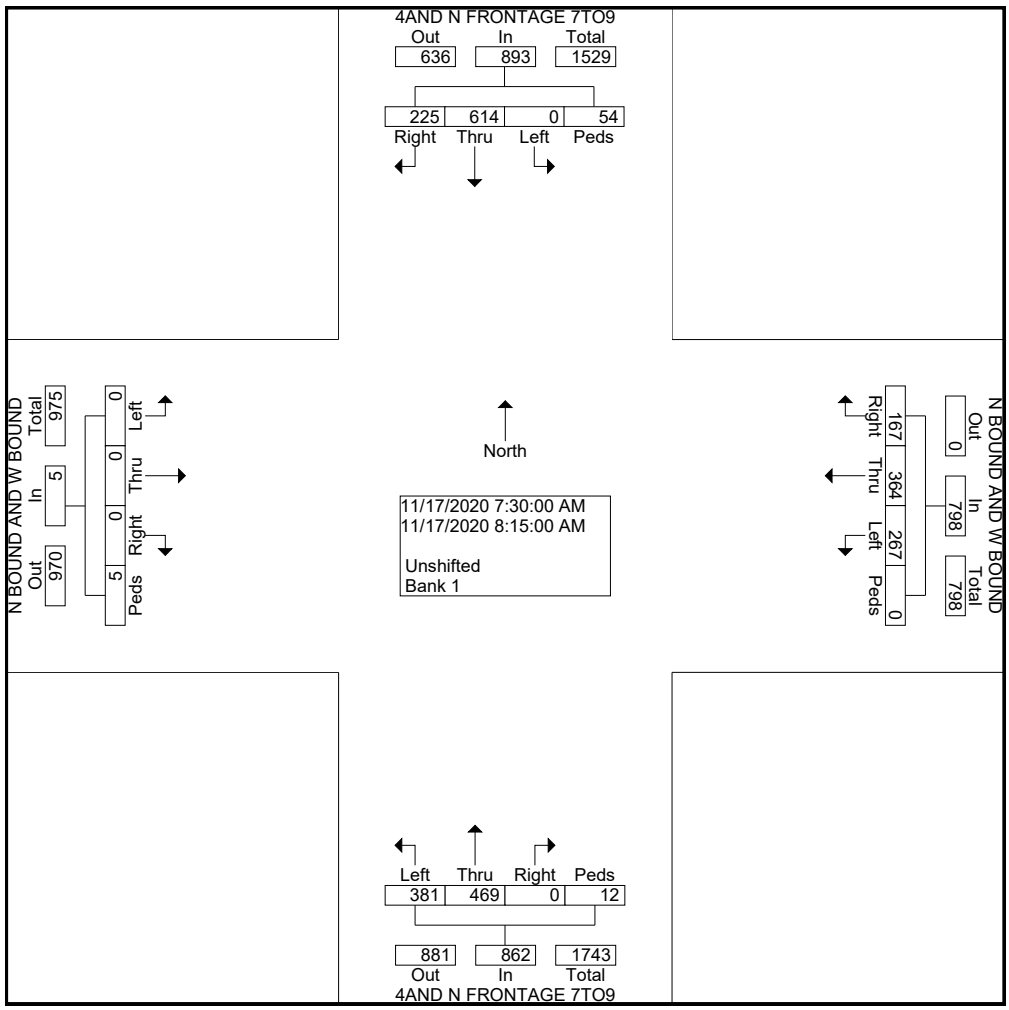
	4AND N FRONTAGE 7TO9 From North					N BOUND AND W BOUND From East					4AND N FRONTAGE 7TO9 From South					N BOUND AND W BOUND From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	47	120	0	8	175	30	118	45	0	193	0	96	78	1	175	0	0	0	1	1	544
07:15 AM	55	140	0	6	201	52	101	66	0	219	0	97	72	2	171	0	0	0	1	1	592
07:30 AM	68	158	0	10	236	33	92	70	0	195	0	104	86	1	191	0	0	0	2	2	624
07:45 AM	56	117	0	16	189	44	91	69	0	204	0	135	115	2	252	0	0	0	1	1	646
Total	226	535	0	40	801	159	402	250	0	811	0	432	351	6	789	0	0	0	5	5	2406
08:00 AM	51	169	0	11	231	45	96	64	0	205	0	123	97	3	223	0	0	0	1	1	660
08:15 AM	50	170	0	17	237	45	85	64	0	194	0	107	83	6	196	0	0	0	1	1	628
08:30 AM	42	126	0	15	183	44	91	68	0	203	0	115	81	1	197	0	0	0	1	1	584
08:45 AM	31	137	0	16	184	37	96	72	0	205	0	110	94	3	207	0	0	0	3	3	599
Total	174	602	0	59	835	171	368	268	0	807	0	455	355	13	823	0	0	0	6	6	2471
Grand Total	400	1137	0	99	1636	330	770	518	0	1618	0	887	706	19	1612	0	0	0	11	11	4877
Apprch %	24.4	69.5	0.0	6.1		20.4	47.6	32.0	0.0		0.0	55.0	43.8	1.2		0.0	0.0	0.0	100.0		
Total %	8.2	23.3	0.0	2.0	33.5	6.8	15.8	10.6	0.0	33.2	0.0	18.2	14.5	0.4	33.1	0.0	0.0	0.0	0.2	0.2	



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	4AND N FRONTAGE 7TO9 From North					N BOUND AND W BOUND From East					4AND N FRONTAGE 7TO9 From South					N BOUND AND W BOUND From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	225	614	0	54	893	167	364	267	0	798	0	469	381	12	862	0	0	0	5	5	2558
Percent	25.2	68.8	0.0	6.0		20.9	45.6	33.5	0.0		0.0	54.4	44.2	1.4		0.0	0.0	0.0	100.0		
08:00 Volume	51	169	0	11	231	45	96	64	0	205	0	123	97	3	223	0	0	0	1	1	660
Peak Factor																					0.969
High Int.	08:15 AM					08:00 AM					07:45 AM					07:30 AM					
Volume	50	170	0	17	237	45	96	64	0	205	0	135	115	2	252	0	0	0	2	2	
Peak Factor					0.942					0.973					0.855					0.625	



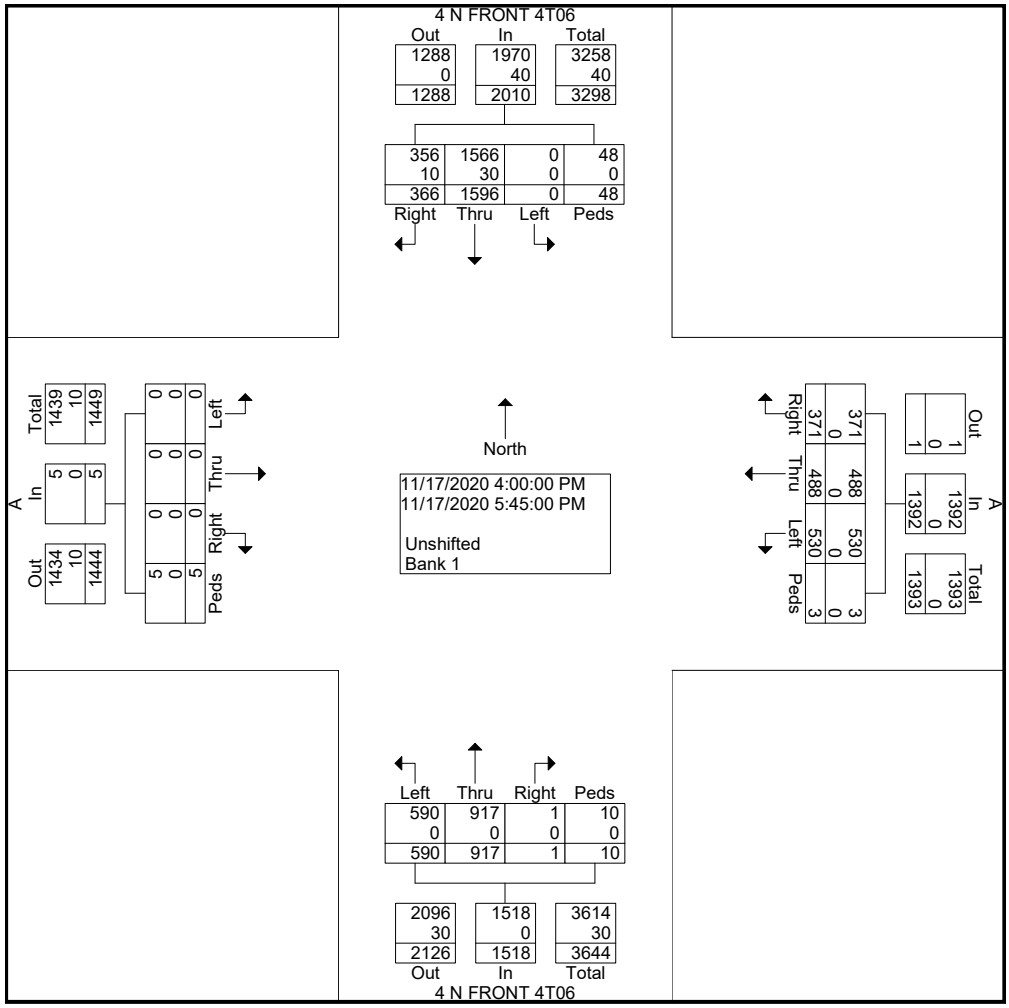
By Approach	07:30 AM					07:15 AM					07:45 AM					08:00 AM					
Volume	225	614	0	54	893	174	380	269	0	823	0	480	376	12	868	0	0	0	6	6	
Percent	25.2	68.8	0.0	6.0		21.1	46.2	32.7	0.0		0.0	55.3	43.3	1.4		0.0	0.0	0.0	100.0		
High Int.	08:15 AM					07:15 AM					07:45 AM					08:45 AM					
Volume	50	170	0	17	237	52	101	66	0	219	0	135	115	2	252	0	0	0	3	3	

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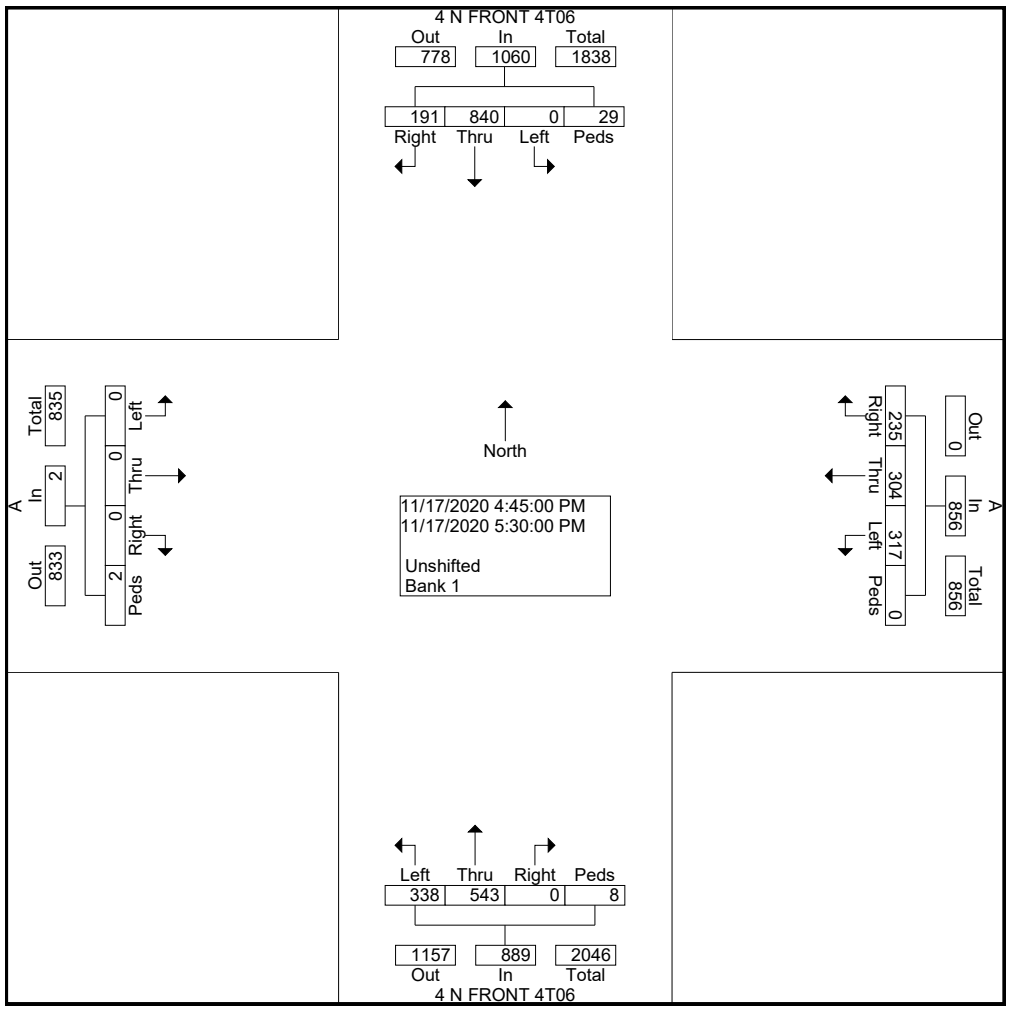
	4 N FRONT 4T06 From North					A From East					4 N FRONT 4T06 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	41	171	0	8	220	51	73	70	1	195	1	127	89	1	218	0	0	0	1	1	634
04:15 PM	37	202	0	4	243	42	68	72	2	184	0	115	69	1	185	0	0	0	1	1	613
04:30 PM	47	178	0	6	231	43	43	71	0	157	0	132	94	0	226	0	0	0	1	1	615
04:45 PM	50	225	0	10	285	53	86	82	0	221	0	116	65	2	183	0	0	0	0	0	689
Total	175	776	0	28	979	189	270	295	3	757	1	490	317	4	812	0	0	0	3	3	2551
05:00 PM	46	190	0	8	244	61	63	74	0	198	0	142	89	3	234	0	0	0	1	1	677
05:15 PM	51	245	0	6	302	61	73	97	0	231	0	149	108	2	259	0	0	0	1	1	793
05:30 PM	44	180	0	5	229	60	82	64	0	206	0	136	76	1	213	0	0	0	0	0	648
05:45 PM	50	205	0	1	256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	256
Total	191	820	0	20	1031	182	218	235	0	635	0	427	273	6	706	0	0	0	2	2	2374
Grand Total	366	1596	0	48	2010	371	488	530	3	1392	1	917	590	10	1518	0	0	0	5	5	4925
Apprch %	18.2	79.4	0.0	2.4		26.7	35.1	38.1	0.2		0.1	60.4	38.9	0.7		0.0	0.0	0.0	100.0		
Total %	7.4	32.4	0.0	1.0	40.8	7.5	9.9	10.8	0.1	28.3	0.0	18.6	12.0	0.2	30.8	0.0	0.0	0.0	0.1	0.1	



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File Name : North Frontage_N 4th St _PM
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Start Date : 11/17/2020

	4 N FRONT 4T06 From North					A From East					4 N FRONT 4T06 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	191	840	0	29	1060	235	304	317	0	856	0	543	338	8	889	0	0	0	2	2	2807
Percent	18.0	79.2	0.0	2.7		27.5	35.5	37.0	0.0		0.0	61.1	38.0	0.9		0.0	0.0	0.0	100.0		
05:15 Volume	51	245	0	6	302	61	73	97	0	231	0	149	108	2	259	0	0	0	1	1	793
Peak Factor																					0.885
High Int.	05:15 PM					05:15 PM					05:15 PM					05:00 PM					
Volume	51	245	0	6	302	61	73	97	0	231	0	149	108	2	259	0	0	0	1	1	
Peak Factor					0.877					0.926					0.858					0.500	



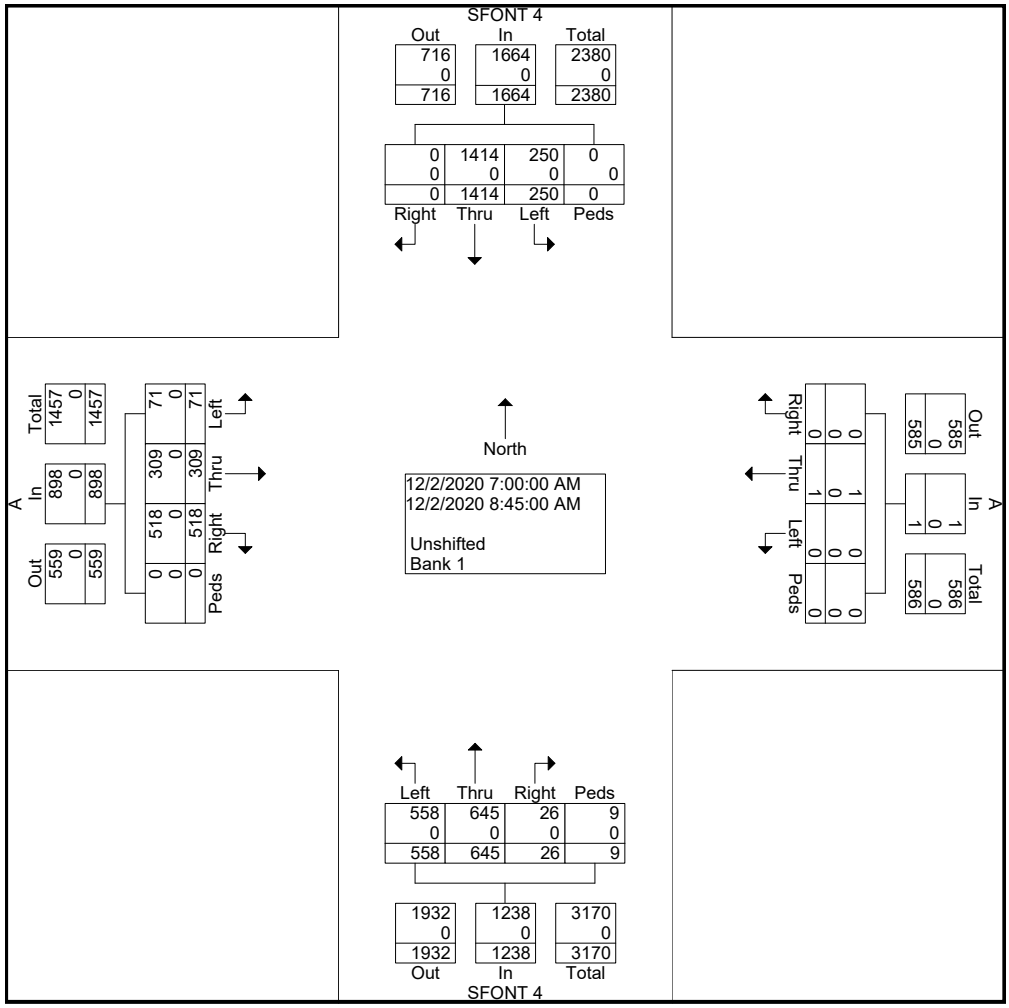
	4 N FRONT 4T06 From North					A From East					4 N FRONT 4T06 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
By Approach	04:30 PM					04:45 PM					04:30 PM					04:00 PM					
Volume	194	838	0	30	1062	235	304	317	0	856	0	539	356	7	902	0	0	0	3	3	
Percent	18.3	78.9	0.0	2.8		27.5	35.5	37.0	0.0		0.0	59.8	39.5	0.8		0.0	0.0	0.0	100.0		
High Int.	05:15 PM					05:15 PM					05:15 PM					04:00 PM					
Volume	51	245	0	6	302	61	73	97	0	231	0	149	108	2	259	0	0	0	1	1	

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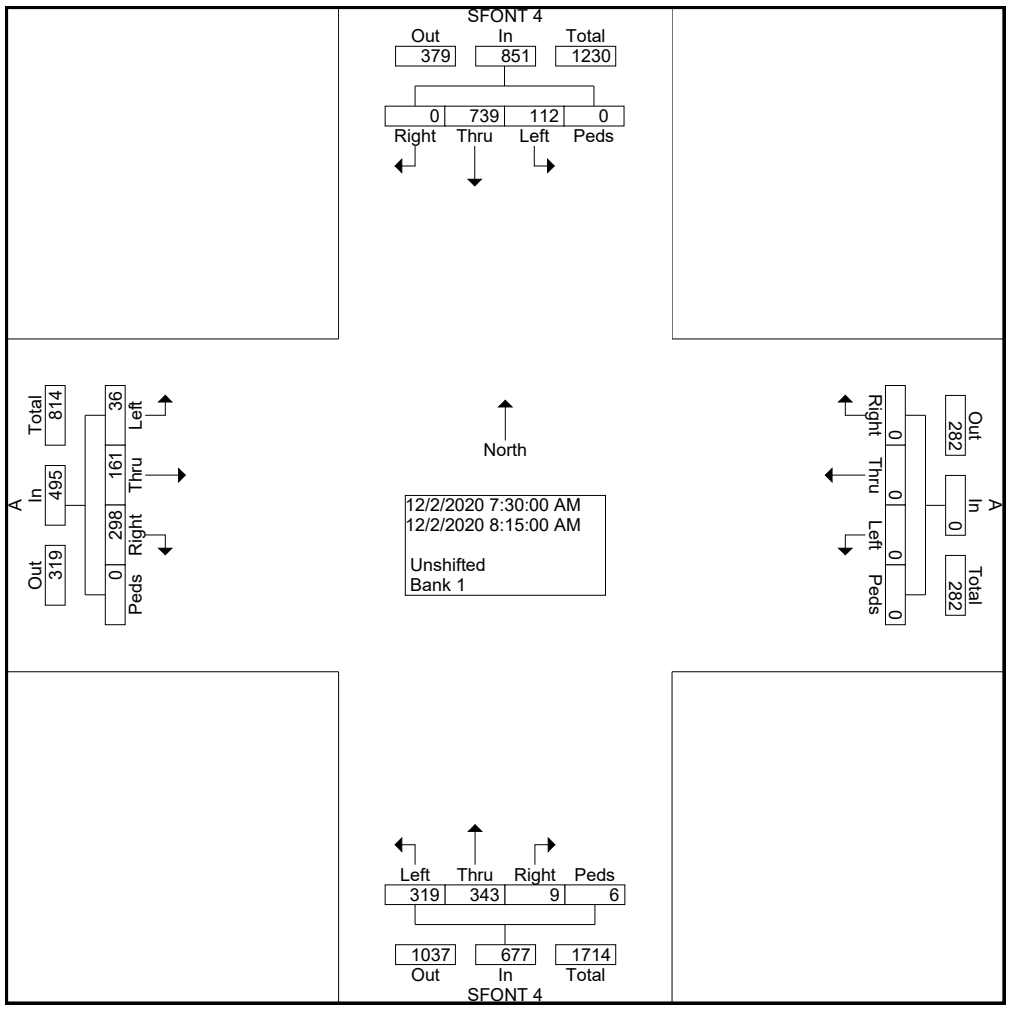
	SFONT 4 From North					A From East					SFONT 4 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	138	28	15	181	0	0	0	0	0	1	87	52	0	140	27	29	10	0	66	387
07:15 AM	0	188	27	24	239	0	0	0	0	0	4	68	67	0	139	32	25	4	0	61	439
07:30 AM	0	171	23	16	210	0	0	0	0	0	2	97	83	0	182	71	42	10	0	123	515
07:45 AM	0	221	26	23	270	0	0	0	0	0	1	97	102	1	201	83	48	8	0	139	610
Total	0	718	104	78	900	0	0	0	0	0	8	349	304	1	662	213	144	32	0	389	1951
08:00 AM	0	159	30	17	206	0	0	0	0	0	2	82	64	4	152	65	32	7	0	104	462
08:15 AM	0	188	33	22	243	0	0	0	0	0	4	67	70	1	142	79	39	11	0	129	514
08:30 AM	0	167	30	24	221	0	0	0	0	0	6	79	53	0	138	99	48	9	0	156	515
08:45 AM	0	182	53	20	255	0	1	0	0	1	6	68	67	3	144	62	46	12	0	120	520
Total	0	696	146	83	925	0	1	0	0	1	18	296	254	8	576	305	165	39	0	509	2011
Grand Total	0	1414	250	161	1825	0	1	0	0	1	26	645	558	9	1238	518	309	71	0	898	3962
Apprch %	0.0	77.5	13.7	8.8		0.0	100.0	0.0	0.0		2.1	52.1	45.1	0.7		57.7	34.4	7.9	0.0		
Total %	0.0	35.7	6.3	4.1	46.1	0.0	0.0	0.0	0.0	0.0	0.7	16.3	14.1	0.2	31.2	13.1	7.8	1.8	0.0	22.7	



Kisinger Campo & Associates
201 N Franklin St Ste 400
Tampa, FL

File Name : South Frontage_N 4th St _AM
Site Code : 00000000
Start Date : 12/2/2020

	SFONT 4 From North					A From East					SFONT 4 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	0	739	112	78	929	0	0	0	0	0	9	343	319	6	677	298	161	36	0	495	2101
Percent	0.0	79.5	12.1	8.4		0.0	0.0	0.0	0.0		1.3	50.7	47.1	0.9		60.2	32.5	7.3	0.0		
07:45 Volume	0	221	26	23	270	0	0	0	0	0	1	97	102	1	201	83	48	8	0	139	610
Peak Factor																					0.861
High Int.	07:45 AM					6:45:00 AM					07:45 AM					07:45 AM					
Volume	0	221	26	23	270	0	0	0	0	0	1	97	102	1	201	83	48	8	0	139	
Peak Factor					0.860										0.842					0.890	



Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1

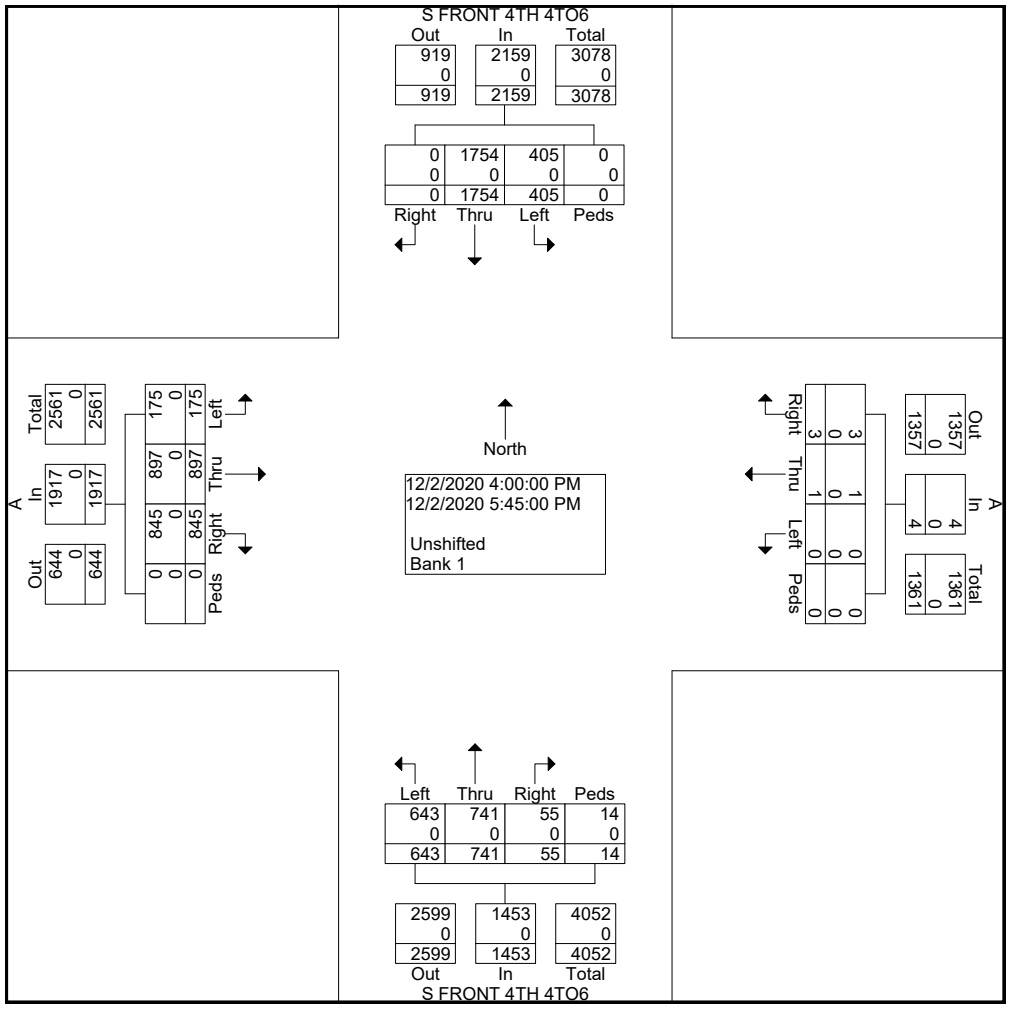
By Approach																					
	07:45 AM					08:00 AM					07:30 AM					07:45 AM					
Volume	0	735	119	86	940	0	1	0	0	1	9	343	319	6	677	326	167	35	0	528	
Percent	0.0	78.2	12.7	9.1		0.0	100.0	0.0	0.0		1.3	50.7	47.1	0.9		61.7	31.6	6.6	0.0		
High Int.	07:45 AM					08:45 AM					07:45 AM					08:30 AM					
Volume	0	221	26	23	270	0	1	0	0	1	1	97	102	1	201	99	48	9	0	156	
Peak Factor					0.870					0.250					0.842					0.846	

Kisinger Campo & Associates
201 N Franklin St Ste 400
Tampa, FL

File Name : South Frontage_N 4th St _PM
Site Code : 00000000
Start Date : 12/2/2020
Page No : 1

Groups Printed- Unshifted - Bank 1

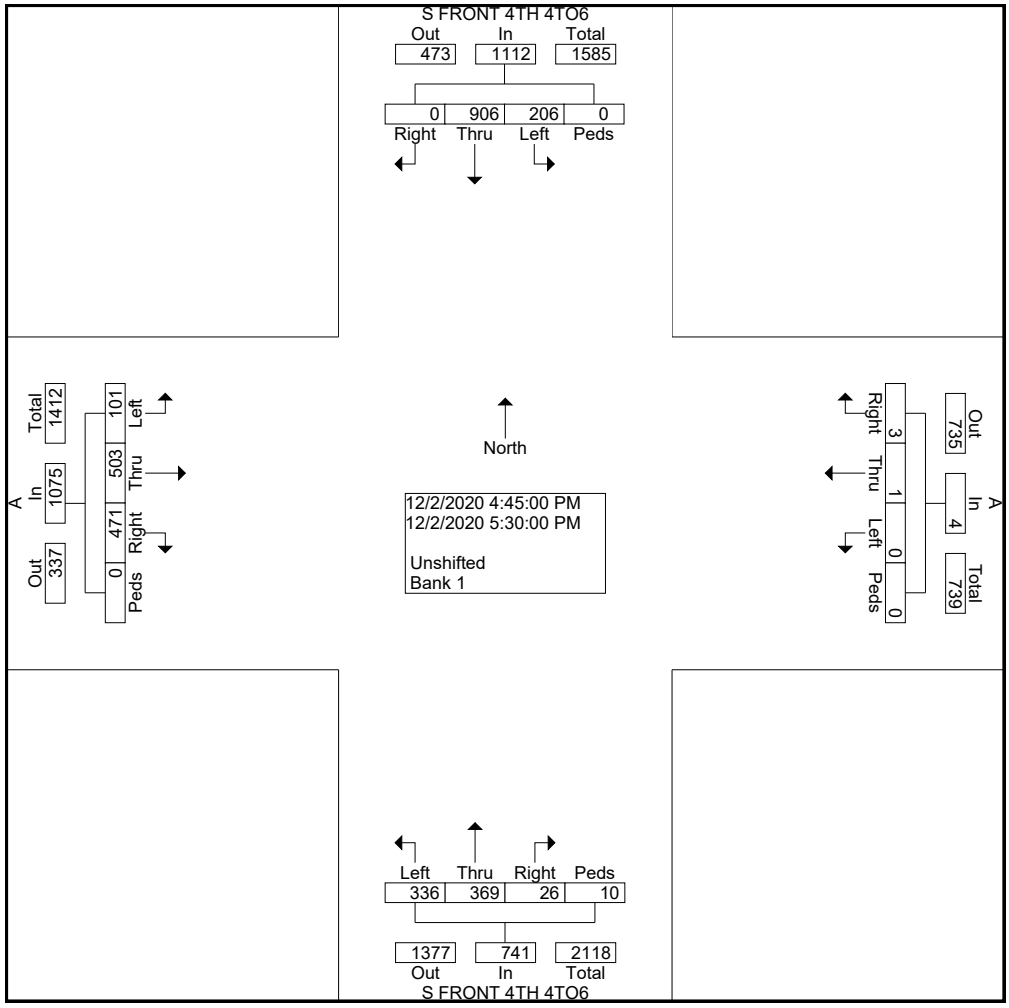
	S FRONT 4TH 4TO6 From North					A From East					S FRONT 4TH 4TO6 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	185	36	10	231	0	0	0	0	0	7	83	67	2	159	83	128	9	0	220	610
04:15 PM	0	218	43	14	275	0	0	0	0	0	8	88	79	1	176	95	59	23	0	177	628
04:30 PM	0	195	41	11	247	0	0	0	0	0	12	91	87	1	191	98	113	23	0	234	672
04:45 PM	0	252	55	14	321	1	1	0	0	2	6	89	77	4	176	102	111	19	0	232	731
Total	0	850	175	49	1074	1	1	0	0	2	33	351	310	8	702	378	411	74	0	863	2641
05:00 PM	0	200	53	13	266	2	0	0	0	2	11	103	84	3	201	125	125	30	0	280	749
05:15 PM	0	242	38	6	286	0	0	0	0	0	4	77	84	1	166	106	108	19	0	233	685
05:30 PM	0	212	60	16	288	0	0	0	0	0	5	100	91	2	198	138	159	33	0	330	816
05:45 PM	0	250	79	4	333	0	0	0	0	0	2	110	74	0	186	98	94	19	0	211	730
Total	0	904	230	39	1173	2	0	0	0	2	22	390	333	6	751	467	486	101	0	1054	2980
Grand Total	0	1754	405	88	2247	3	1	0	0	4	55	741	643	14	1453	845	897	175	0	1917	5621
Apprch %	0.0	78.1	18.0	3.9		75.0	25.0	0.0	0.0		3.8	51.0	44.3	1.0		44.1	46.8	9.1	0.0		
Total %	0.0	31.2	7.2	1.6	40.0	0.1	0.0	0.0	0.0	0.1	1.0	13.2	11.4	0.2	25.8	15.0	16.0	3.1	0.0	34.1	



Kisinger Campo & Associates
201 N Franklin St Ste 400
Tampa, FL

File Name : South Frontage_N 4th St _PM
Site Code : 00000000
Start Date : 12/2/2020

	S FRONT 4TH 4TO6 From North					A From East					S FRONT 4TH 4TO6 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	0	906	206	49	1161	3	1	0	0	4	26	369	336	10	741	471	503	101	0	1075	2981
Percent	0.0	78.0	17.7	4.2		75.0	25.0	0.0	0.0		3.5	49.8	45.3	1.3		43.8	46.8	9.4	0.0		
05:30 Volume	0	212	60	16	288	0	0	0	0	0	5	100	91	2	198	138	159	33	0	330	816
Peak Factor																					0.913
High Int.	04:45 PM					04:45 PM					05:00 PM					05:30 PM					
Volume	0	252	55	14	321	1	1	0	0	2	11	103	84	3	201	138	159	33	0	330	
Peak Factor					0.904					0.500					0.922					0.814	



Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1

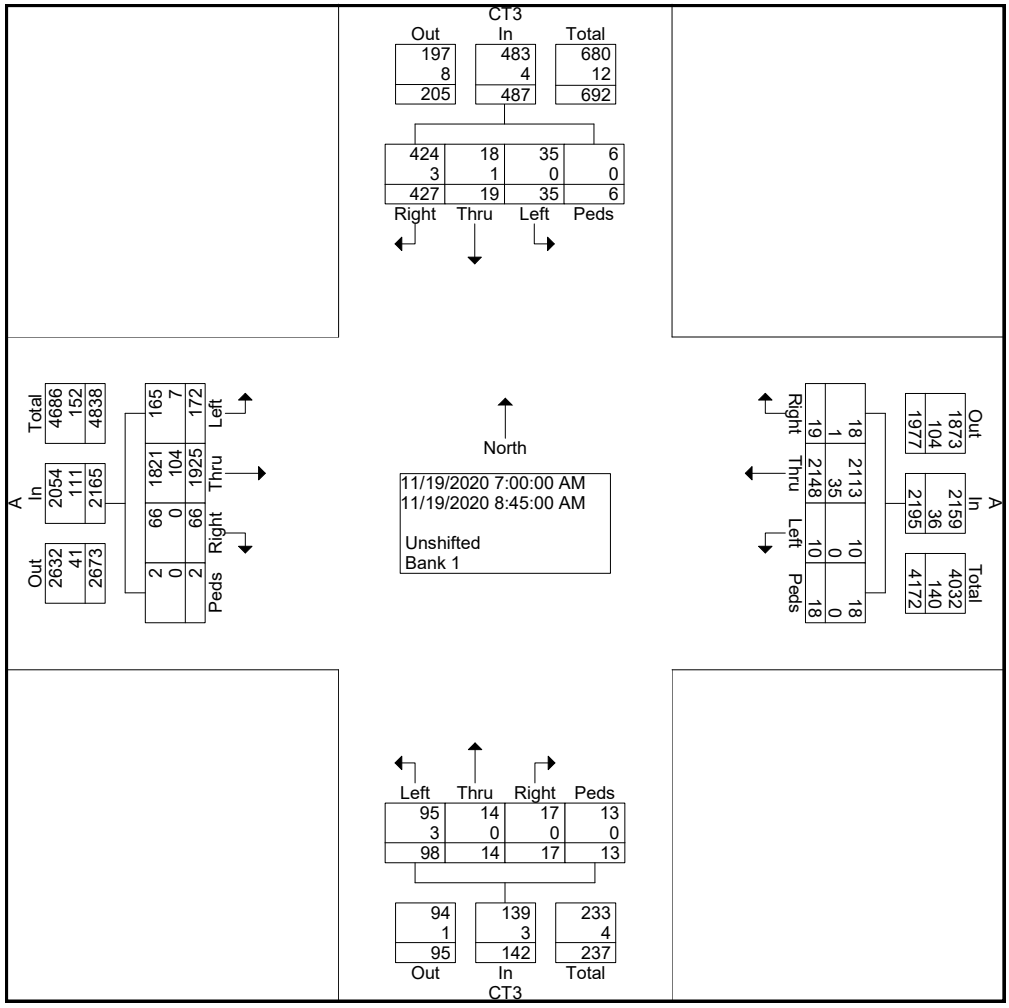
By Approach	05:00 PM					04:15 PM					05:00 PM					04:45 PM				
Volume	0	904	230	39	1173	3	1	0	0	4	22	390	333	6	751	471	503	101	0	1075
Percent	0.0	77.1	19.6	3.3		75.0	25.0	0.0	0.0		2.9	51.9	44.3	0.8		43.8	46.8	9.4	0.0	
High Int.	05:45 PM					04:45 PM					05:00 PM					05:30 PM				
Volume	0	250	79	4	333	1	1	0	0	2	11	103	84	3	201	138	159	33	0	330
Peak Factor					0.881					0.500					0.934					0.814

Kisinger Campo & Associates
201 N Franklin St Ste 400
Tampa, FL

File Name : Gandy Blvd at BrightonBay_AM
Site Code : 00000000
Start Date : 11/19/2020
Page No : 1

Groups Printed- Unshifted - Bank 1

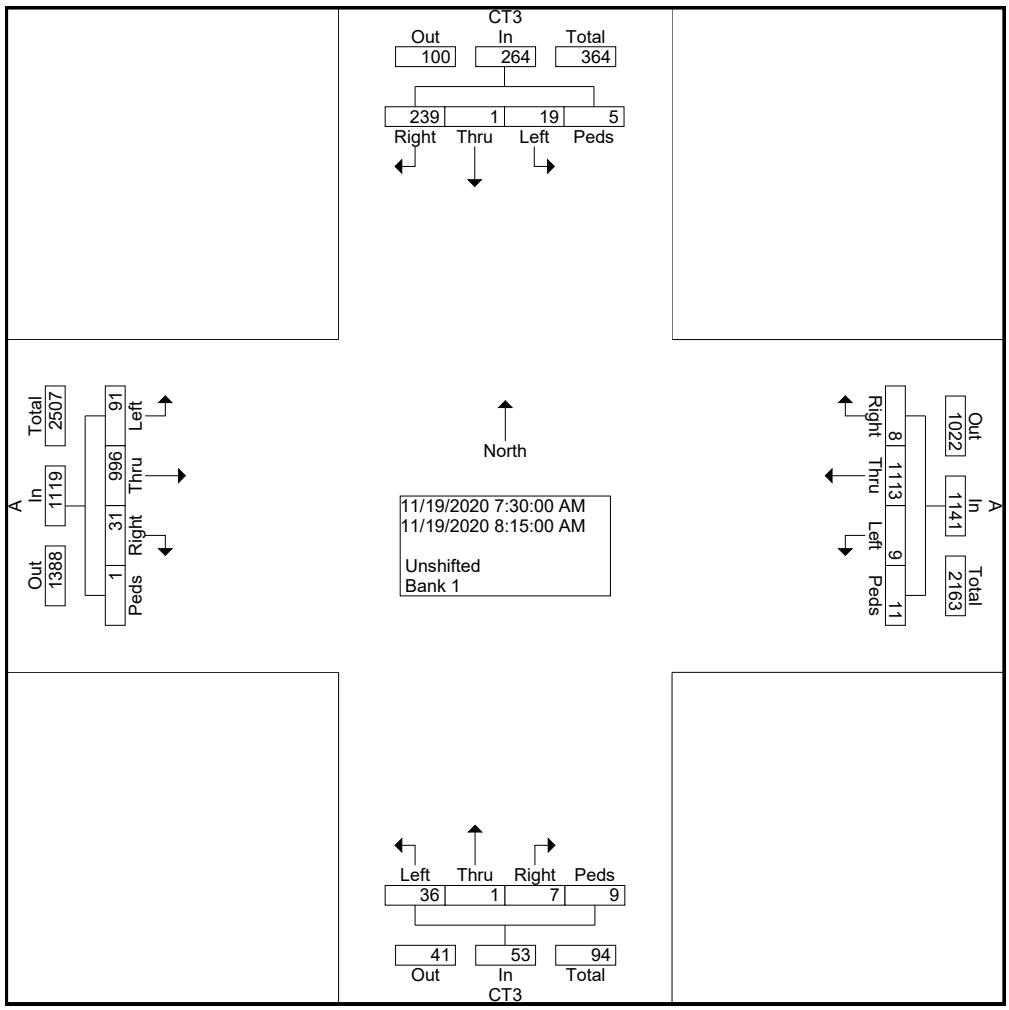
	CT3 From North					A From East					CT3 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	46	4	5	0	55	2	240	0	1	243	2	13	38	0	53	5	262	11	0	278	629
07:15 AM	64	14	0	0	78	2	254	1	0	257	1	0	3	2	6	11	241	15	1	268	609
07:30 AM	78	1	9	4	92	2	268	1	1	272	0	0	3	2	5	10	261	17	1	289	658
07:45 AM	50	0	3	0	53	3	293	0	5	301	2	0	19	2	23	3	269	18	0	290	667
Total	238	19	17	4	278	9	1055	2	7	1073	5	13	63	6	87	29	1033	61	2	1125	2563
08:00 AM	58	0	5	1	64	0	253	3	2	258	0	1	12	3	16	4	232	31	0	267	605
08:15 AM	53	0	2	0	55	3	299	5	3	310	5	0	2	2	9	14	234	25	0	273	647
08:30 AM	40	0	6	1	47	3	307	0	2	312	3	0	8	1	12	17	209	33	0	259	630
08:45 AM	38	0	5	0	43	4	234	0	4	242	4	0	13	1	18	2	217	22	0	241	544
Total	189	0	18	2	209	10	1093	8	11	1122	12	1	35	7	55	37	892	111	0	1040	2426
Grand Total	427	19	35	6	487	19	2148	10	18	2195	17	14	98	13	142	66	1925	172	2	2165	4989
Apprch %	87.7	3.9	7.2	1.2		0.9	97.9	0.5	0.8		12.0	9.9	69.0	9.2		3.0	88.9	7.9	0.1		
Total %	8.6	0.4	0.7	0.1	9.8	0.4	43.1	0.2	0.4	44.0	0.3	0.3	2.0	0.3	2.8	1.3	38.6	3.4	0.0	43.4	



Kisinger Campo & Associates
201 N Franklin St Ste 400
Tampa, FL

File Name : Gandy Blvd at BrightonBay_AM
Site Code : 00000000
Start Date : 11/19/2020

	CT3 From North					A From East					CT3 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	239	1	19	5	264	8	1113	9	11	1141	7	1	36	9	53	31	996	91	1	1119	2577
Percent	90.5	0.4	7.2	1.9		0.7	97.5	0.8	1.0		13.2	1.9	67.9	17.0		2.8	89.0	8.1	0.1		
07:45 Volume	50	0	3	0	53	3	293	0	5	301	2	0	19	2	23	3	269	18	0	290	667
Peak Factor																					0.966
High Int.	07:30 AM					08:15 AM					07:45 AM					07:45 AM					
Volume	78	1	9	4	92	3	299	5	3	310	2	0	19	2	23	3	269	18	0	290	
Peak Factor					0.717					0.920					0.576					0.965	



Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1

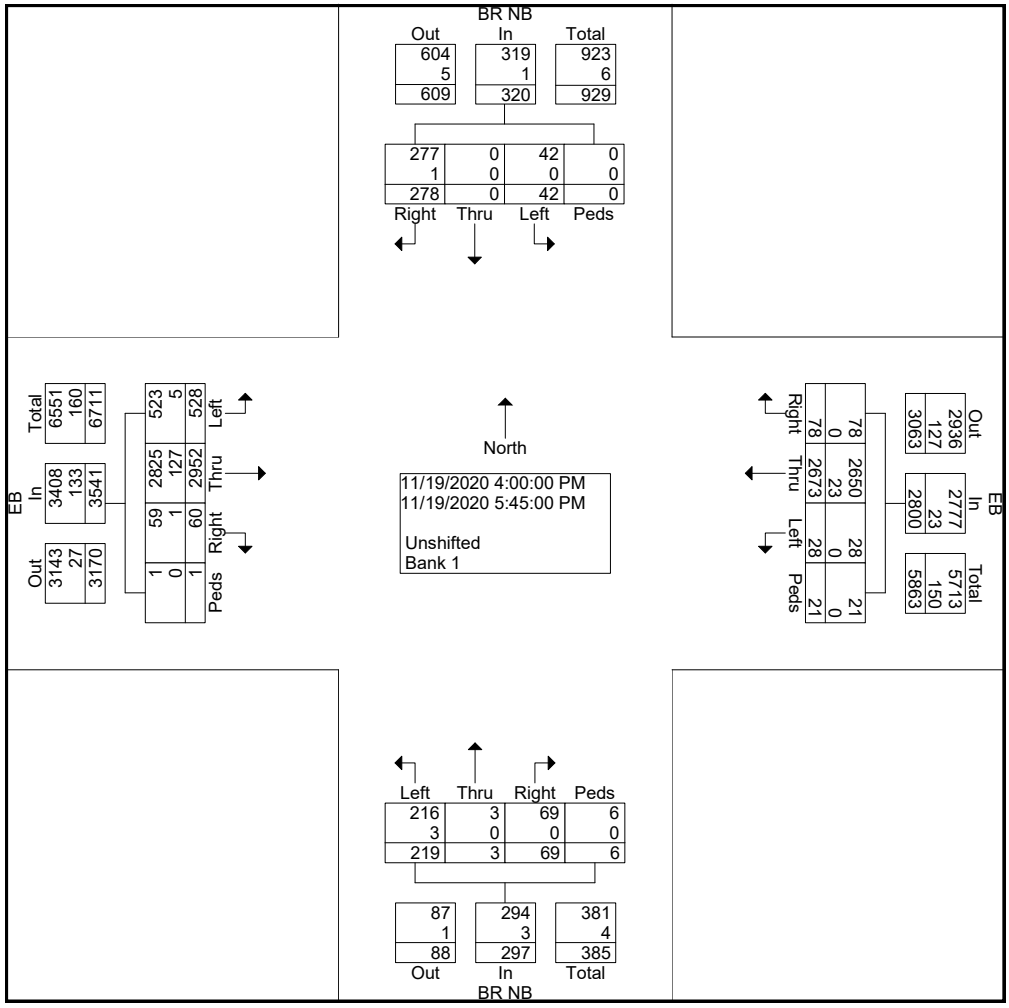
By Approach	07:15 AM					07:45 AM					07:00 AM					07:00 AM				
Volume	250	15	17	5	287	9	1152	8	12	1181	5	13	63	6	87	29	1033	61	2	1125
Percent	87.1	5.2	5.9	1.7		0.8	97.5	0.7	1.0		5.7	14.9	72.4	6.9		2.6	91.8	5.4	0.2	
High Int.	07:30 AM					08:30 AM					07:00 AM					07:45 AM				
Volume	78	1	9	4	92	3	307	0	2	312	2	13	38	0	53	3	269	18	0	290

Kisinger Campo & Associates
201 N Franklin St Ste 400
Tampa, FL

File Name : Gandy Blvd at BrightonBay_PM
Site Code : 00000000
Start Date : 11/19/2020
Page No : 1

Groups Printed- Unshifted - Bank 1

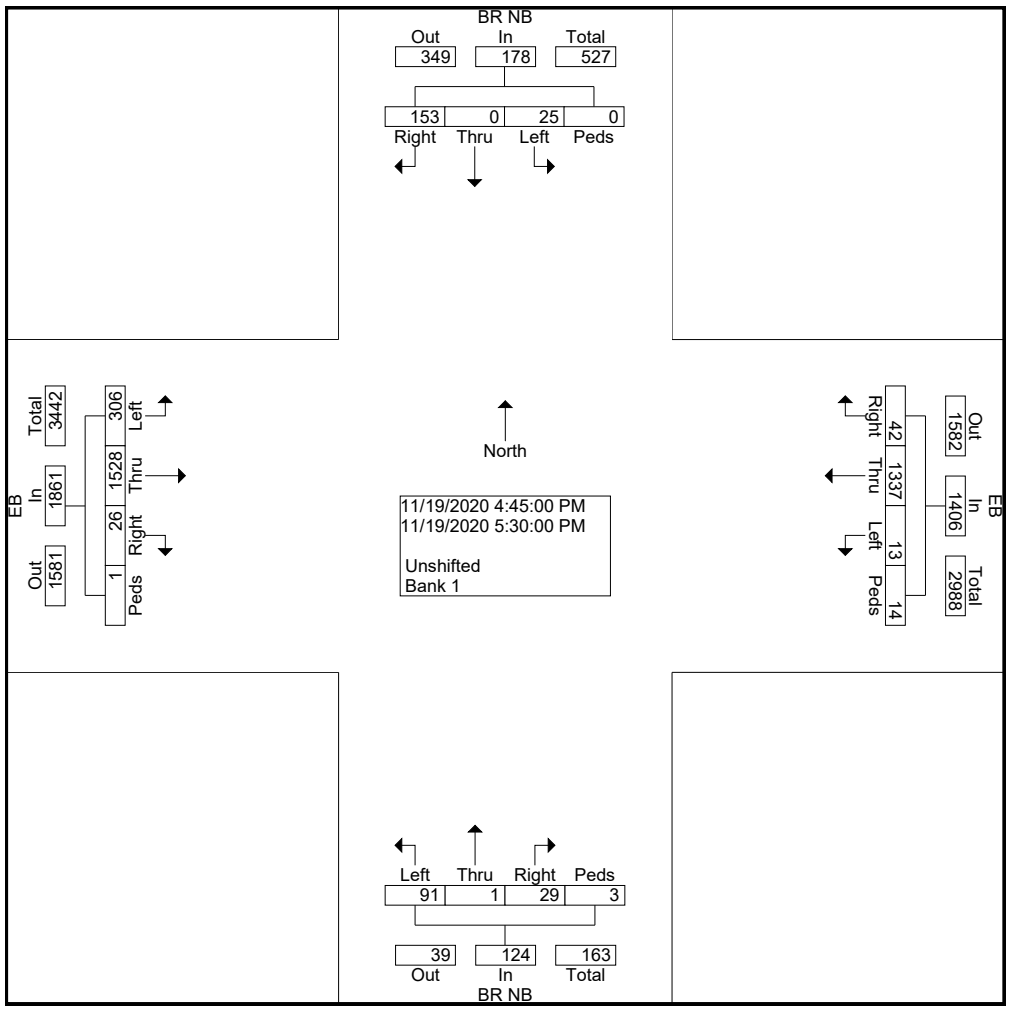
	BR NB From North					EB From East					BR NB From South					EB From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	25	0	3	0	28	8	266	1	1	276	8	0	40	0	48	12	360	52	0	424	776
04:15 PM	23	0	2	0	25	7	382	2	2	393	21	0	42	1	64	12	395	43	0	450	932
04:30 PM	36	0	6	0	42	14	326	10	1	351	6	1	31	2	40	7	350	64	0	421	854
04:45 PM	42	0	4	0	46	8	334	5	4	351	12	0	27	1	40	9	358	62	1	430	867
Total	126	0	15	0	141	37	1308	18	8	1371	47	1	140	4	192	40	1463	221	1	1725	3429
05:00 PM	29	0	8	0	37	8	332	3	3	346	4	0	29	2	35	11	378	75	0	464	882
05:15 PM	45	0	12	0	57	10	327	1	3	341	8	1	23	0	32	3	405	83	0	491	921
05:30 PM	37	0	1	0	38	16	344	4	4	368	5	0	12	0	17	3	387	86	0	476	899
05:45 PM	41	0	6	0	47	7	362	2	3	374	5	1	15	0	21	3	319	63	0	385	827
Total	152	0	27	0	179	41	1365	10	13	1429	22	2	79	2	105	20	1489	307	0	1816	3529
Grand Total	278	0	42	0	320	78	2673	28	21	2800	69	3	219	6	297	60	2952	528	1	3541	6958
Apprch %	86.9	0.0	13.1	0.0		2.8	95.5	1.0	0.8		23.2	1.0	73.7	2.0		1.7	83.4	14.9	0.0		
Total %	4.0	0.0	0.6	0.0	4.6	1.1	38.4	0.4	0.3	40.2	1.0	0.0	3.1	0.1	4.3	0.9	42.4	7.6	0.0	50.9	



Kisinger Campo & Associates
201 N Franklin St Ste 400
Tampa, FL

File Name : Gandy Blvd at BrightonBay_PM
Site Code : 00000000
Start Date : 11/19/2020

	BR NB From North					EB From East					BR NB From South					EB From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	153	0	25	0	178	42	1337	13	14	1406	29	1	91	3	124	26	1528	306	1	1861	3569
Percent	86.0	0.0	14.0	0.0		3.0	95.1	0.9	1.0		23.4	0.8	73.4	2.4		1.4	82.1	16.4	0.1		
05:15 Volume	45	0	12	0	57	10	327	1	3	341	8	1	23	0	32	3	405	83	0	491	921
Peak Factor																					0.969
High Int.	05:15 PM					05:30 PM					04:45 PM					05:15 PM					
Volume	45	0	12	0	57	16	344	4	4	368	12	0	27	1	40	3	405	83	0	491	
Peak Factor					0.781					0.955					0.775					0.948	

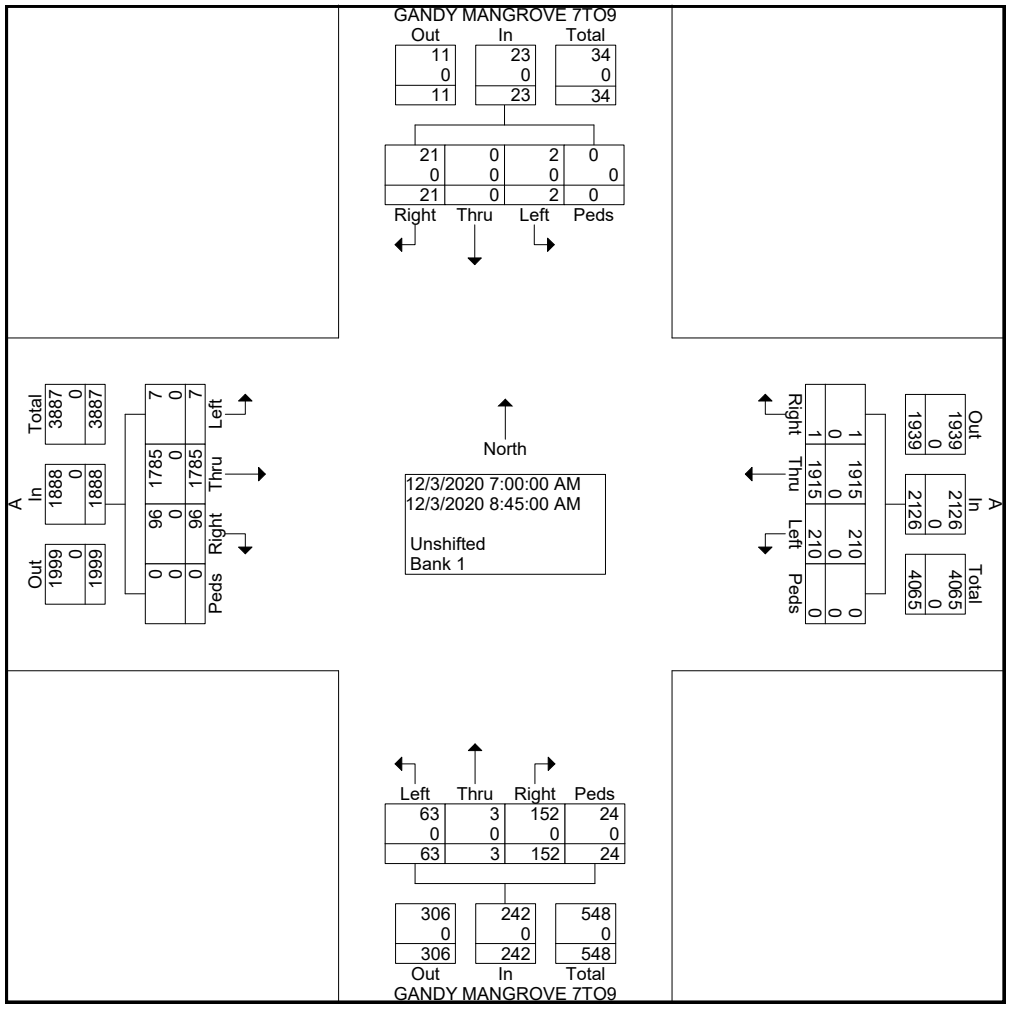


By Approach	04:30 PM					04:15 PM					04:00 PM					04:45 PM				
Volume	152	0	30	0	182	37	1374	20	10	1441	47	1	140	4	192	26	1528	306	1	1861
Percent	83.5	0.0	16.5	0.0		2.6	95.4	1.4	0.7		24.5	0.5	72.9	2.1		1.4	82.1	16.4	0.1	
High Int.	05:15 PM					04:15 PM					04:15 PM					05:15 PM				
Volume	45	0	12	0	57	7	382	2	2	393	21	0	42	1	64	3	405	83	0	491

Kisinger Campo & Associates
201 N Franklin St Ste 400
Tampa, FLFile Name : San Martin Blvd_Mangrove Cay Ln_AM
Site Code : 00000000
Start Date : 12/3/2020
Page No : 1

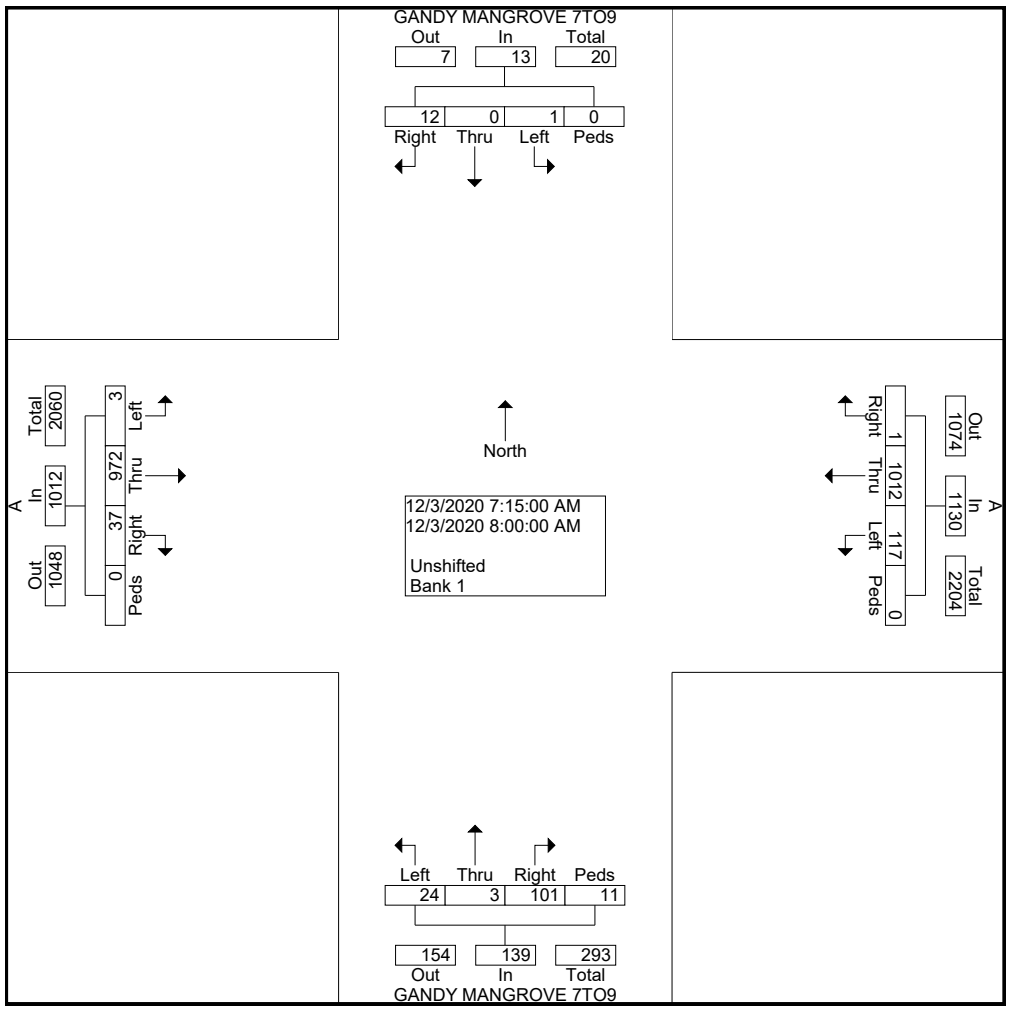
Groups Printed- Unshifted - Bank 1

	GANDY MANGROVE 7TO9 From North					A From East					GANDY MANGROVE 7TO9 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	1	0	0	14	15	0	193	18	0	211	15	0	8	5	28	12	207	3	0	222	476
07:15 AM	3	0	0	28	31	0	238	22	0	260	30	0	3	2	35	11	250	0	0	261	587
07:30 AM	4	0	0	20	24	0	236	33	0	269	23	2	6	2	33	10	289	2	0	301	627
07:45 AM	4	0	0	30	34	0	286	40	0	326	18	0	5	4	27	7	215	0	0	222	609
Total	12	0	0	92	104	0	953	113	0	1066	86	2	22	13	123	40	961	5	0	1006	2299
08:00 AM	1	0	1	22	24	1	252	22	0	275	30	1	10	3	44	9	218	1	0	228	571
08:15 AM	4	0	0	20	24	0	265	28	0	293	9	0	7	3	19	13	217	0	0	230	566
08:30 AM	1	0	0	16	17	0	213	23	0	236	18	0	12	3	33	14	188	1	0	203	489
08:45 AM	3	0	1	23	27	0	232	24	0	256	9	0	12	2	23	20	201	0	0	221	527
Total	9	0	2	81	92	1	962	97	0	1060	66	1	41	11	119	56	824	2	0	882	2153
Grand Total	21	0	2	173	196	1	1915	210	0	2126	152	3	63	24	242	96	1785	7	0	1888	4452
Apprch %	10.7	0.0	1.0	88.3		0.0	90.1	9.9	0.0		62.8	1.2	26.0	9.9		5.1	94.5	0.4	0.0		
Total %	0.5	0.0	0.0	3.9	4.4	0.0	43.0	4.7	0.0	47.8	3.4	0.1	1.4	0.5	5.4	2.2	40.1	0.2	0.0	42.4	



Kisinger Campo & Associates
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Site Code : 00000000
Start Date : 12/3/2020

	GANDY MANGROVE 7TO9 From North					A From East					GANDY MANGROVE 7TO9 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	12	0	1	100	113	1	1012	117	0	1130	101	3	24	11	139	37	972	3	0	1012	2394
Percent	10.6	0.0	0.9	88.5		0.1	89.6	10.4	0.0		72.7	2.2	17.3	7.9		3.7	96.0	0.3	0.0		
07:30 Volume	4	0	0	20	24	0	236	33	0	269	23	2	6	2	33	10	289	2	0	301	627
Peak Factor																					0.955
High Int.	07:45 AM					07:45 AM					08:00 AM					07:30 AM					
Volume	4	0	0	30	34	0	286	40	0	326	30	1	10	3	44	10	289	2	0	301	
Peak Factor					0.831					0.867					0.790					0.841	

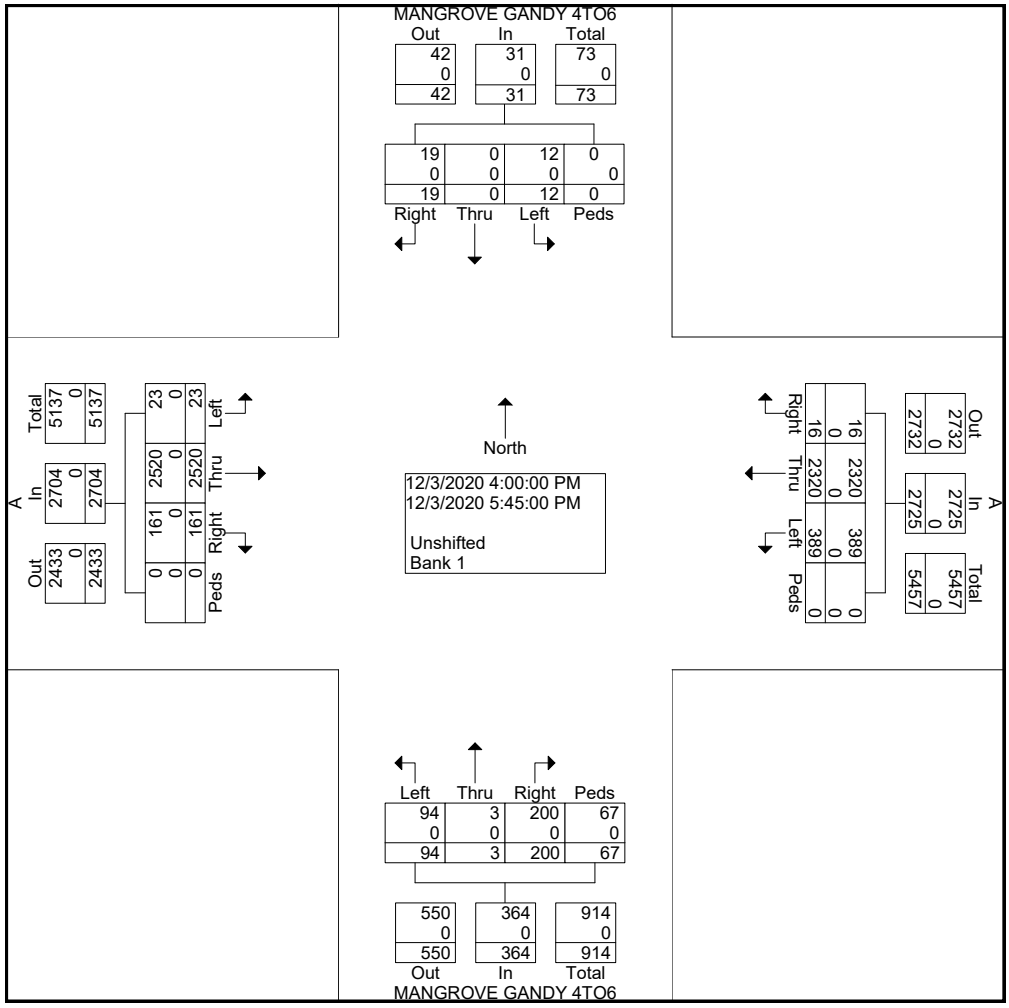


Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
By Approach	07:15 AM					07:30 AM					07:15 AM					07:15 AM					
Volume	12	0	1	100	113	1	1039	123	0	1163	101	3	24	11	139	37	972	3	0	1012	
Percent	10.6	0.0	0.9	88.5		0.1	89.3	10.6	0.0		72.7	2.2	17.3	7.9		3.7	96.0	0.3	0.0		
High Int.	07:45 AM					07:45 AM					08:00 AM					07:30 AM					
Volume	4	0	0	30	34	0	286	40	0	326	30	1	10	3	44	10	289	2	0	301	

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Tampa, FL File Name : San Martin Blvd_Mangrove Cay Ln_PM
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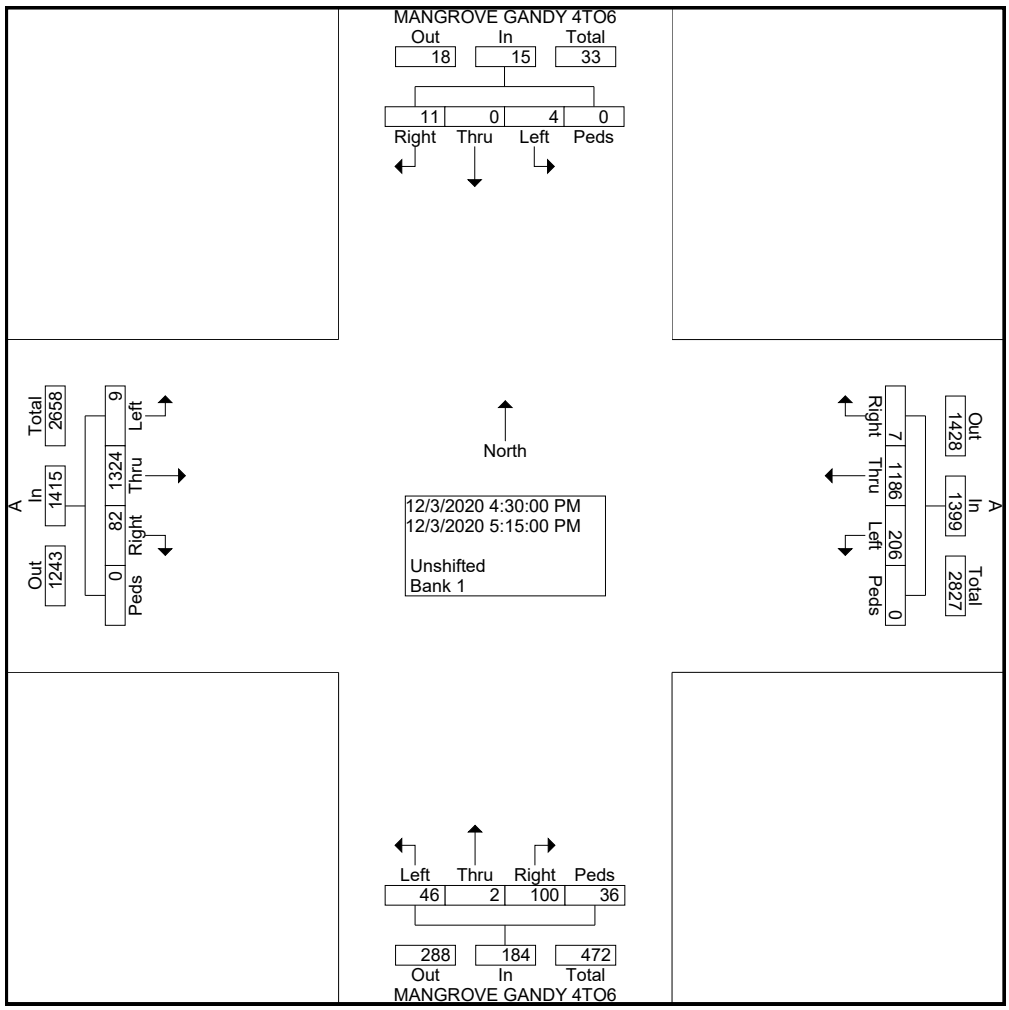
Groups Printed- Unshifted - Bank 1

	MANGROVE GANDY 4TO6 From North					A From East					MANGROVE GANDY 4TO6 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	3	0	3	28	34	0	285	59	0	344	28	0	10	9	47	27	320	3	0	350	775
04:15 PM	2	0	1	22	25	3	289	42	0	334	21	0	6	5	32	24	310	5	0	339	730
04:30 PM	2	0	2	30	34	2	315	42	0	359	25	0	18	13	56	26	350	2	0	378	827
04:45 PM	4	0	0	27	31	1	296	55	0	352	17	0	8	3	28	15	314	1	0	330	741
Total	11	0	6	107	124	6	1185	198	0	1389	91	0	42	30	163	92	1294	11	0	1397	3073
05:00 PM	0	0	0	12	12	1	299	49	0	349	30	1	11	8	50	21	333	2	0	356	767
05:15 PM	5	0	2	14	21	3	276	60	0	339	28	1	9	12	50	20	327	4	0	351	761
05:30 PM	2	0	0	19	21	5	293	38	0	336	34	0	16	10	60	12	313	4	0	329	746
05:45 PM	1	0	4	18	23	1	267	44	0	312	17	1	16	7	41	16	253	2	0	271	647
Total	8	0	6	63	77	10	1135	191	0	1336	109	3	52	37	201	69	1226	12	0	1307	2921
Grand Total	19	0	12	170	201	16	2320	389	0	2725	200	3	94	67	364	161	2520	23	0	2704	5994
Apprch %	9.5	0.0	6.0	84.6		0.6	85.1	14.3	0.0		54.9	0.8	25.8	18.4		6.0	93.2	0.9	0.0		
Total %	0.3	0.0	0.2	2.8	3.4	0.3	38.7	6.5	0.0	45.5	3.3	0.1	1.6	1.1	6.1	2.7	42.0	0.4	0.0	45.1	



Kisinger Campo & Associates
201 N Franklin St Ste 400
Tampa, FLFile Name : San Martin Blvd_Mangrove Cay Ln_PM
Site Code : 00000000
Start Date : 12/3/2020

	MANGROVE GANDY 4TO6 From North					A From East					MANGROVE GANDY 4TO6 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	11	0	4	83	98	7	1186	206	0	1399	100	2	46	36	184	82	1324	9	0	1415	3096
Percent	11.2	0.0	4.1	84.7		0.5	84.8	14.7	0.0		54.3	1.1	25.0	19.6		5.8	93.6	0.6	0.0		
04:30 Volume	2	0	2	30	34	2	315	42	0	359	25	0	18	13	56	26	350	2	0	378	827
Peak Factor																					0.936
High Int.	04:30 PM					04:30 PM					04:30 PM					04:30 PM					
Volume	2	0	2	30	34	2	315	42	0	359	25	0	18	13	56	26	350	2	0	378	
Peak Factor					0.721					0.974					0.821					0.936	



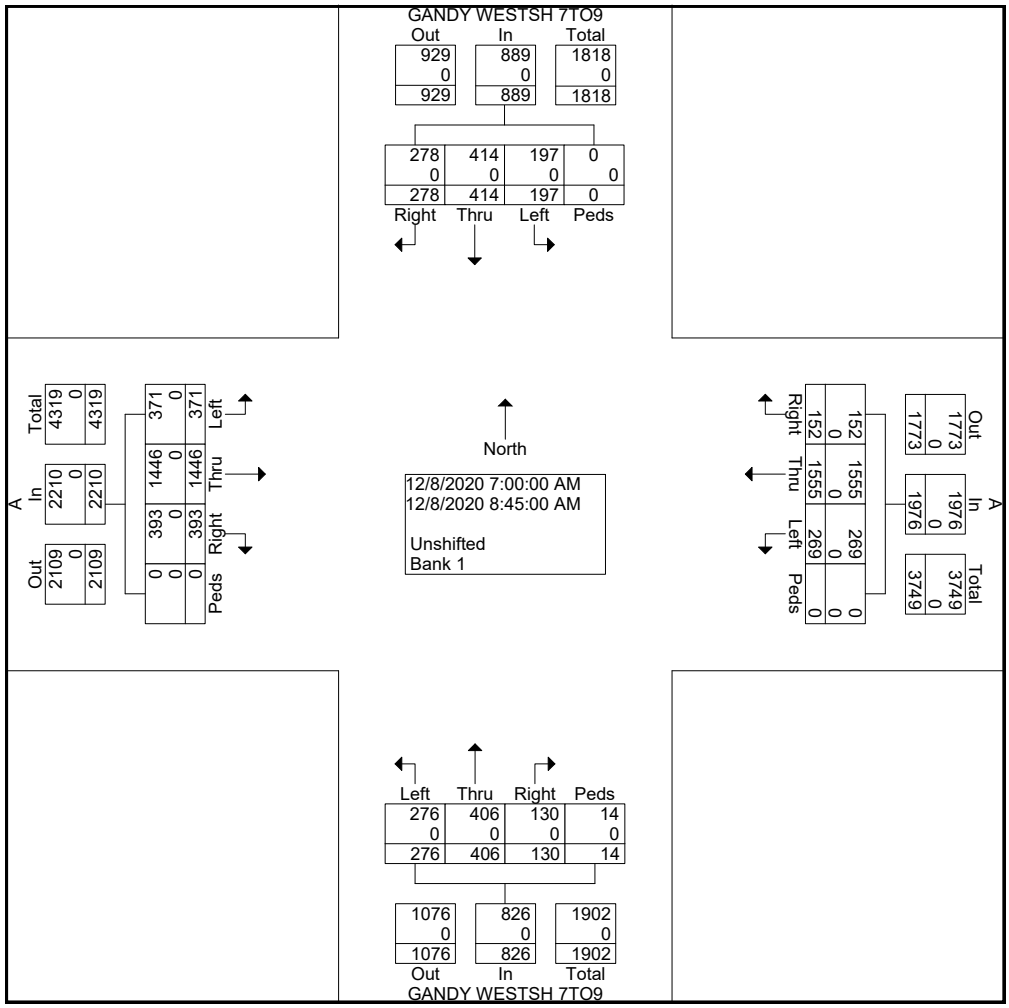
By Approach	04:00 PM					04:30 PM					05:00 PM					04:30 PM				
Volume	11	0	6	107	124	7	1186	206	0	1399	109	3	52	37	201	82	1324	9	0	1415
Percent	8.9	0.0	4.8	86.3		0.5	84.8	14.7	0.0		54.2	1.5	25.9	18.4		5.8	93.6	0.6	0.0	
High Int.	04:00 PM					04:30 PM					05:30 PM					04:30 PM				
Volume	3	0	3	28	34	2	315	42	0	359	34	0	16	10	60	26	350	2	0	378

Kisinger Campo & Associates
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Tampa, FL

File Name : Gandy Blvd at WestshoreBlvd_AM
Site Code : 00000000
Start Date : 12/8/2020

Groups Printed- Unshifted - Bank 1

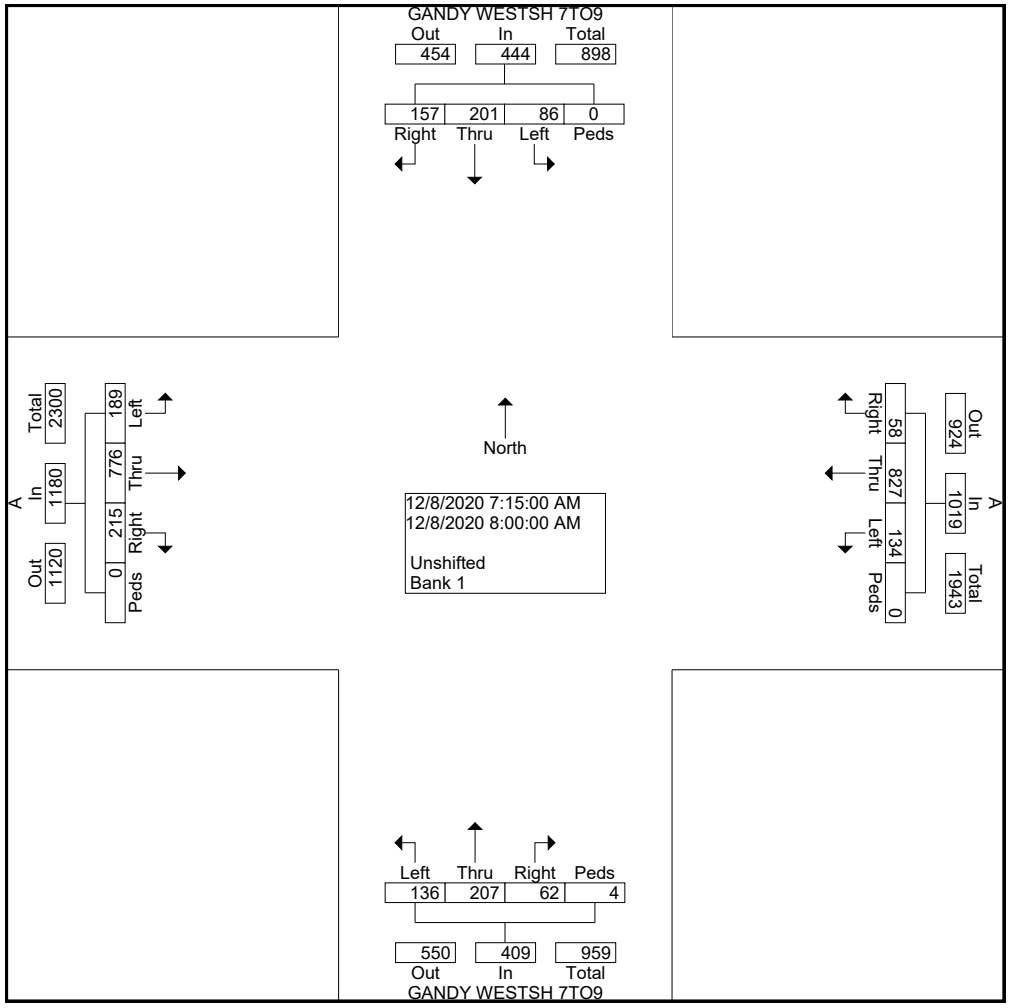
	GANDY WESTSH 7TO9 From North					A From East					GANDY WESTSH 7TO9 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	16	58	20	29	123	12	187	35	0	234	16	46	29	1	92	57	180	33	0	270	719
07:15 AM	32	58	26	30	146	13	188	28	0	229	25	62	37	0	124	64	186	42	0	292	791
07:30 AM	54	39	15	33	141	19	242	26	0	287	10	51	33	3	97	68	231	64	0	363	888
07:45 AM	28	59	26	33	146	13	191	49	0	253	16	61	31	0	108	40	170	40	0	250	757
Total	130	214	87	125	556	57	808	138	0	1003	67	220	130	4	421	229	767	179	0	1175	3155
08:00 AM	43	45	19	30	137	13	206	31	0	250	11	33	35	1	80	43	189	43	0	275	742
08:15 AM	26	47	27	31	131	22	170	34	0	226	13	69	35	6	123	52	161	55	0	268	748
08:30 AM	43	47	34	33	157	35	216	36	0	287	17	30	28	3	78	39	161	49	0	249	771
08:45 AM	36	61	30	32	159	25	155	30	0	210	22	54	48	0	124	30	168	45	0	243	736
Total	148	200	110	126	584	95	747	131	0	973	63	186	146	10	405	164	679	192	0	1035	2997
Grand Total	278	414	197	251	1140	152	1555	269	0	1976	130	406	276	14	826	393	1446	371	0	2210	6152
Apprch %	24.4	36.3	17.3	22.0		7.7	78.7	13.6	0.0		15.7	49.2	33.4	1.7		17.8	65.4	16.8	0.0		
Total %	4.5	6.7	3.2	4.1	18.5	2.5	25.3	4.4	0.0	32.1	2.1	6.6	4.5	0.2	13.4	6.4	23.5	6.0	0.0	35.9	



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Tampa, FL

File Name : Gandy Blvd at WestshoreBlvd_AM
Site Code : 00000000
Start Date : 12/8/2020

	GANDY WESTSH 7TO9 From North					A From East					GANDY WESTSH 7TO9 From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	157	201	86	126	570	58	827	134	0	1019	62	207	136	4	409	215	776	189	0	1180	3178
Percent	27.5	35.3	15.1	22.1		5.7	81.2	13.2	0.0		15.2	50.6	33.3	1.0		18.2	65.8	16.0	0.0		
07:30 Volume	54	39	15	33	141	19	242	26	0	287	10	51	33	3	97	68	231	64	0	363	888
Peak Factor																					0.895
High Int.	07:15 AM					07:30 AM					07:15 AM					07:30 AM					
Volume	32	58	26	30	146	19	242	26	0	287	25	62	37	0	124	68	231	64	0	363	
Peak Factor					0.976					0.888					0.825					0.813	



Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1

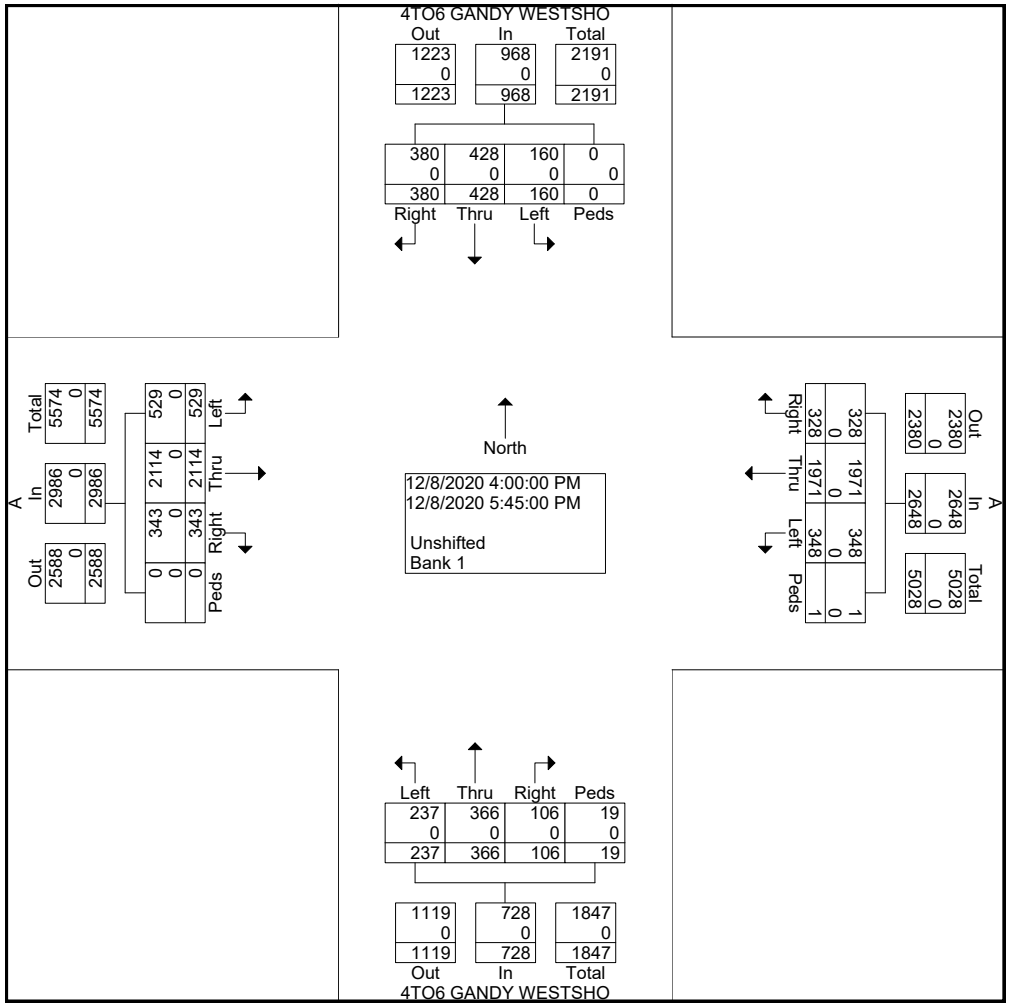
By Approach	08:00 AM					07:15 AM					07:00 AM					07:15 AM				
Volume	148	200	110	126	584	58	827	134	0	1019	67	220	130	4	421	215	776	189	0	1180
Percent	25.3	34.2	18.8	21.6		5.7	81.2	13.2	0.0		15.9	52.3	30.9	1.0		18.2	65.8	16.0	0.0	
High Int.	08:45 AM					07:30 AM					07:15 AM					07:30 AM				
Volume	36	61	30	32	159	19	242	26	0	287	25	62	37	0	124	68	231	64	0	363
Peak Factor					0.918					0.888					0.849					0.813

Kisinger Campo & Associates
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File Name : Gandy Blvd at WestshoreBlvd_PM
Site Code : 00000000
Start Date : 12/8/2020

Groups Printed- Unshifted - Bank 1

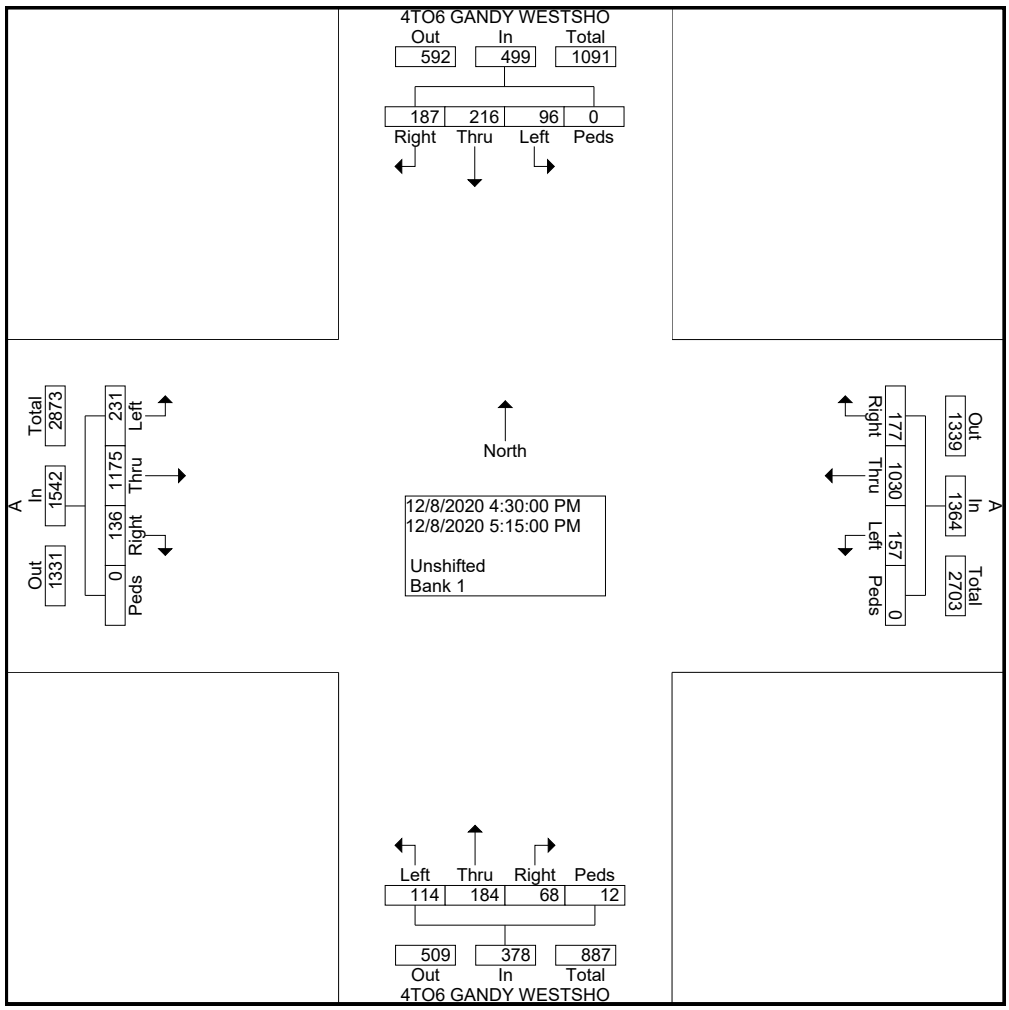
	4TO6 GANDY WESTSHO From North					A From East					4TO6 GANDY WESTSHO From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	52	59	16	35	162	44	203	57	1	305	10	47	39	2	98	28	204	63	0	295	860
04:15 PM	41	45	21	29	136	39	245	34	0	318	8	37	32	1	78	64	276	65	0	405	937
04:30 PM	45	59	24	43	171	51	242	44	0	337	33	59	22	2	116	29	295	60	0	384	1008
04:45 PM	39	42	33	30	144	43	263	29	0	335	7	39	30	2	78	36	324	36	0	396	953
Total	177	205	94	137	613	177	953	164	1	1295	58	182	123	7	370	157	1099	224	0	1480	3758
05:00 PM	62	60	17	17	156	39	246	41	0	326	15	41	28	3	87	33	292	71	0	396	965
05:15 PM	41	55	22	30	148	44	279	43	0	366	13	45	34	5	97	38	264	64	0	366	977
05:30 PM	40	47	12	21	120	29	256	54	0	339	8	45	18	2	73	65	261	68	0	394	926
05:45 PM	60	61	15	20	156	39	237	46	0	322	12	53	34	2	101	50	198	102	0	350	929
Total	203	223	66	88	580	151	1018	184	0	1353	48	184	114	12	358	186	1015	305	0	1506	3797
Grand Total	380	428	160	225	1193	328	1971	348	1	2648	106	366	237	19	728	343	2114	529	0	2986	7555
Apprch %	31.9	35.9	13.4	18.9		12.4	74.4	13.1	0.0		14.6	50.3	32.6	2.6		11.5	70.8	17.7	0.0		
Total %	5.0	5.7	2.1	3.0	15.8	4.3	26.1	4.6	0.0	35.0	1.4	4.8	3.1	0.3	9.6	4.5	28.0	7.0	0.0	39.5	



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File Name : Gandy Blvd at WestshoreBlvd_PM
Site Code : 00000000
Start Date : 12/8/2020

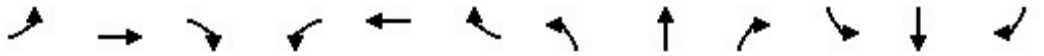
	4TO6 GANDY WESTSHO From North					A From East					4TO6 GANDY WESTSHO From South					A From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	187	216	96	120	619	177	1030	157	0	1364	68	184	114	12	378	136	1175	231	0	1542	3903
Percent	30.2	34.9	15.5	19.4		13.0	75.5	11.5	0.0		18.0	48.7	30.2	3.2		8.8	76.2	15.0	0.0		
04:30 Volume	45	59	24	43	171	51	242	44	0	337	33	59	22	2	116	29	295	60	0	384	1008
Peak Factor																					0.968
High Int.	04:30 PM					05:15 PM					04:30 PM					04:45 PM					
Volume	45	59	24	43	171	44	279	43	0	366	33	59	22	2	116	36	324	36	0	396	
Peak Factor					0.905					0.932					0.815					0.973	



Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1

By Approach	04:30 PM					04:45 PM					04:30 PM					04:15 PM				
Volume	187	216	96	120	619	155	1044	167	0	1366	68	184	114	12	378	162	1187	232	0	1581
Percent	30.2	34.9	15.5	19.4		11.3	76.4	12.2	0.0		18.0	48.7	30.2	3.2		10.2	75.1	14.7	0.0	
High Int.	04:30 PM					05:15 PM					04:30 PM					04:15 PM				
Volume	45	59	24	43	171	44	279	43	0	366	33	59	22	2	116	64	276	65	0	405

Appendix D:
Existing Year (2020) Results and Signal Timing Information

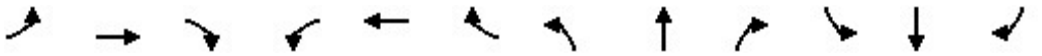


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	370	630	300	510	630	0	0	770	330
Future Volume (vph)	0	0	0	370	630	300	510	630	0	0	770	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Lane Util. Factor				0.97	0.91	1.00	0.97	0.91			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3400	5036	1568	3400	5036			6346	1568
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3400	5036	1568	3400	5036			6346	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	389	663	316	537	663	0	0	811	347
RTOR Reduction (vph)	0	0	0	0	0	230	0	0	0	0	0	193
Lane Group Flow (vph)	0	0	0	389	663	86	537	663	0	0	811	154
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				52.0	52.0	52.0	46.7	97.3			43.5	43.5
Effective Green, g (s)				52.0	52.0	52.0	46.7	97.3			43.5	43.5
Actuated g/C Ratio				0.27	0.27	0.27	0.25	0.51			0.23	0.23
Clearance Time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				930	1378	429	835	2578			1452	358
v/s Ratio Prot				0.11	c0.13		c0.16	0.13			c0.13	
v/s Ratio Perm						0.06						0.10
v/c Ratio				0.42	0.48	0.20	0.64	0.26			0.56	0.43
Uniform Delay, d1				56.6	57.7	53.0	64.2	26.0			64.8	62.7
Progression Factor				1.00	1.00	1.00	0.83	1.67			1.00	1.00
Incremental Delay, d2				0.3	0.3	0.2	3.2	0.2			1.6	3.8
Delay (s)				56.9	58.0	53.3	56.5	43.7			66.3	66.4
Level of Service				E	E	D	E	D			E	E
Approach Delay (s)		0.0			56.6			49.4			66.3	
Approach LOS		A			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	57.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: 4th Street N & South Frontage Rd/South Frontage Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	300	460	0	0	0	0	1050	50	120	1020	0
Future Volume (vph)	90	300	460	0	0	0	0	1050	50	120	1020	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Lane Util. Factor	0.97	0.95	0.88					0.81		1.00	0.91	
Frt	1.00	1.00	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3400	3505	2760					7420		1752	5036	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3400	3505	2760					7420		1752	5036	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	316	484	0	0	0	0	1105	53	126	1074	0
RTOR Reduction (vph)	0	0	36	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	95	316	448	0	0	0	0	1154	0	126	1074	0
Turn Type	Prot	NA	Perm					NA		Prot	NA	
Protected Phases	5	2						8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	46.7	97.3	97.3					52.0		18.4	77.8	
Effective Green, g (s)	46.7	97.3	97.3					52.0		18.4	77.8	
Actuated g/C Ratio	0.25	0.51	0.51					0.27		0.10	0.41	
Clearance Time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	835	1794	1413					2030		169	2062	
v/s Ratio Prot	0.03	0.09						c0.16		c0.07	0.21	
v/s Ratio Perm			c0.16									
v/c Ratio	0.11	0.18	0.32					0.57		0.75	0.52	
Uniform Delay, d1	55.6	24.9	27.0					59.3		83.5	42.1	
Progression Factor	1.00	1.00	1.00					1.00		0.53	0.74	
Incremental Delay, d2	0.3	0.2	0.6					0.4		13.9	0.2	
Delay (s)	55.9	25.1	27.6					59.7		57.8	31.5	
Level of Service	E	C	C					E		E	C	
Approach Delay (s)		29.7			0.0			59.7			34.3	
Approach LOS		C			A			E			C	

Intersection Summary			
HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	1650	160	40	1950	10	50	0	10	40	0	310
Future Volume (vph)	190	1650	160	40	1950	10	50	0	10	40	0	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	1737	168	42	2053	11	53	0	11	42	0	326
RTOR Reduction (vph)	0	0	53	0	0	4	0	0	11	0	0	96
Lane Group Flow (vph)	200	1737	115	42	2053	7	26	27	0	0	42	230
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	7.6	146.1	146.1	5.9	144.4	144.4	8.3	8.3	8.3		22.0	22.0
Effective Green, g (s)	7.6	146.1	146.1	5.9	144.4	144.4	8.3	8.3	8.3		22.0	22.0
Actuated g/C Ratio	0.04	0.69	0.69	0.03	0.68	0.68	0.04	0.04	0.04		0.10	0.10
Clearance Time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Vehicle Extension (s)	3.0	8.0	8.0	3.0	8.0	8.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	121	2403	1075	94	2375	1062	64	64	61		180	161
v/s Ratio Prot	c0.06	0.50		0.01	c0.59		0.02	c0.02			0.02	
v/s Ratio Perm			0.07			0.00			0.00			c0.15
v/c Ratio	1.65	0.72	0.11	0.45	0.86	0.01	0.41	0.42	0.01		0.23	1.43
Uniform Delay, d1	102.8	20.9	11.4	102.0	26.7	11.1	100.0	100.1	98.4		87.8	95.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	327.6	1.9	0.2	3.4	4.5	0.0	4.2	4.4	0.0		0.7	224.9
Delay (s)	430.3	22.8	11.6	105.4	31.2	11.1	104.2	104.5	98.5		88.5	320.5
Level of Service	F	C	B	F	C	B	F	F	F		F	F
Approach Delay (s)		60.6			32.6			103.3			294.0	
Approach LOS		E			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	67.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	213.1	Sum of lost time (s)	30.8
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	16.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1410	70	150	1650	0	45	5	150	0	0	10
Future Vol, veh/h	5	1410	70	150	1650	0	45	5	150	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	215	-	250	225	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	1484	74	158	1737	0	47	5	158	0	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1737	0	-	1484	0	0	2679	3547	742	2808	3547	869
Stage 1	-	-	-	-	-	-	1494	1494	-	2053	2053	-
Stage 2	-	-	-	-	-	-	1185	2053	-	755	1494	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	354	-	0	444	-	-	~ 10	6	356	8	6	293
Stage 1	-	-	0	-	-	-	128	183	-	56	96	-
Stage 2	-	-	0	-	-	-	199	96	-	365	183	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	354	-	-	444	-	-	~ 7	~ 4	356	3	4	293
Mov Cap-2 Maneuver	-	-	-	-	-	-	59	41	-	21	16	-
Stage 1	-	-	-	-	-	-	126	180	-	55	62	-
Stage 2	-	-	-	-	-	-	124	62	-	194	180	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.5	260.5	17.7
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	153	354	-	444	-	-	293
HCM Lane V/C Ratio	1.376	0.015	-	0.356	-	-	0.036
HCM Control Delay (s)	260.5	15.3	-	17.5	-	-	17.7
HCM Lane LOS	F	C	-	C	-	-	C
HCM 95th %tile Q(veh)	13.2	0	-	1.6	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Signalized Intersection Summary
24: Westshore Blvd & Gandy Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	1390	80	240	1600	160	190	450	160	180	330	190
Future Volume (veh/h)	130	1390	80	240	1600	160	190	450	160	180	330	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	137	1463	84	253	1684	168	200	474	168	189	347	200
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	169	1104	492	276	1211	119	182	378	134	93	443	375
Arrive On Green	0.07	0.31	0.31	0.13	0.37	0.37	0.10	0.29	0.29	0.05	0.24	0.24
Sat Flow, veh/h	1767	3526	1572	1767	3242	319	1767	1308	464	1767	1856	1572
Grp Volume(v), veh/h	137	1463	84	253	905	947	200	0	642	189	347	200
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1798	1767	0	1772	1767	1856	1572
Q Serve(g_s), s	7.3	43.8	5.4	15.7	52.3	52.3	14.4	0.0	40.4	7.4	24.5	15.5
Cycle Q Clear(g_c), s	7.3	43.8	5.4	15.7	52.3	52.3	14.4	0.0	40.4	7.4	24.5	15.5
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	169	1104	492	276	659	672	182	0	511	93	443	375
V/C Ratio(X)	0.81	1.33	0.17	0.92	1.37	1.41	1.10	0.00	1.26	2.02	0.78	0.53
Avail Cap(c_a), veh/h	207	1104	492	308	659	672	182	0	511	93	443	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	48.1	34.9	43.1	43.8	43.8	62.8	0.0	49.8	66.3	49.9	46.5
Incr Delay (d2), s/veh	14.8	152.8	0.8	27.9	177.9	193.2	96.1	0.0	130.2	495.9	8.9	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	61.9	3.9	16.2	80.5	86.8	17.3	0.0	52.1	26.4	18.2	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	200.9	35.6	71.0	221.7	237.1	158.9	0.0	180.0	562.2	58.8	48.0
LnGrp LOS	D	F	D	E	F	F	F	A	F	F	E	D
Approach Vol, veh/h		1684			2105			842			736	
Approach Delay, s/veh		180.4			210.5			175.0			185.1	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	60.0	15.0	48.0	25.5	51.5	22.0	41.0
Change Period (Y+Rc), s	* 7.7	* 7.7	* 7.6	* 7.6	* 7.7	* 7.7	* 7.6	* 7.6
Max Green Setting (Gmax), s	* 12	* 49	* 7.4	* 40	* 20	* 41	* 14	* 33
Max Q Clear Time (g_c+I1), s	9.3	54.3	9.4	42.4	17.7	45.8	16.4	26.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	192.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Queues
3: Derby Lane/Brighton Bay Blvd & Gandy Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	200	1737	168	42	2053	11	26	27	11	42	326
v/c Ratio	1.63	0.71	0.15	0.36	0.86	0.01	0.31	0.33	0.06	0.23	1.25
Control Delay	367.9	23.0	1.7	109.6	31.8	0.0	108.2	108.7	0.7	91.5	186.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	367.9	23.0	1.7	109.6	31.8	0.0	108.2	108.7	0.7	91.5	186.5
Queue Length 50th (ft)	~208	811	0	30	1167	0	37	40	0	55	~432
Queue Length 95th (ft)	#311	917	30	56	1312	0	80	83	0	105	#664
Internal Link Dist (ft)		937			926			325		356	
Turn Bay Length (ft)	560		780	300		500					
Base Capacity (vph)	123	2439	1142	123	2384	1099	134	134	217	183	260
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.63	0.71	0.15	0.34	0.86	0.01	0.19	0.20	0.05	0.23	1.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	389	663	316	537	663	811	347
v/c Ratio	0.42	0.48	0.48	0.64	0.26	0.56	0.63
Control Delay	58.1	59.0	7.3	57.5	44.8	66.5	23.4
Queue Delay	0.0	0.0	0.0	59.3	53.7	52.3	0.0
Total Delay	58.1	59.0	7.3	116.9	98.5	118.7	23.4
Queue Length 50th (ft)	203	250	0	364	313	263	108
Queue Length 95th (ft)	264	304	85	428	362	302	231
Internal Link Dist (ft)		612			159	361	
Turn Bay Length (ft)	500		500				300
Base Capacity (vph)	949	1406	665	834	2577	1452	551
Starvation Cap Reductn	0	0	0	549	2008	0	0
Spillback Cap Reductn	0	0	0	0	0	796	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.47	0.48	1.88	1.17	1.24	0.63

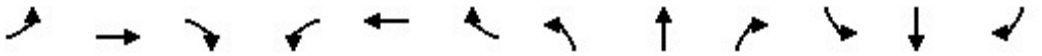
Intersection Summary



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	95	316	484	1158	126	1074
v/c Ratio	0.11	0.18	0.33	0.57	0.74	0.52
Control Delay	57.7	25.9	24.1	60.3	65.2	32.0
Queue Delay	0.0	0.0	0.0	5.2	19.4	30.3
Total Delay	57.7	25.9	24.1	65.5	84.6	62.3
Queue Length 50th (ft)	48	114	175	302	166	338
Queue Length 95th (ft)	78	147	224	346	244	370
Internal Link Dist (ft)		460		372		159
Turn Bay Length (ft)	350		350			
Base Capacity (vph)	834	1794	1448	2075	213	2149
Starvation Cap Reductn	0	0	0	0	73	1126
Spillback Cap Reductn	93	0	0	841	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.18	0.33	0.94	0.90	1.05

Intersection Summary

HCM Signalized Intersection Capacity Analysis
11: 4th Street N & North Frontage Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	300	280	220	460	720	0	0	910	190
Future Volume (vph)	0	0	0	300	280	220	460	720	0	0	910	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Lane Util. Factor				0.97	0.91	1.00	0.97	0.91			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3400	5036	1568	3400	5036			6346	1568
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3400	5036	1568	3400	5036			6346	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	316	295	232	484	758	0	0	958	200
RTOR Reduction (vph)	0	0	0	0	0	177	0	0	0	0	0	161
Lane Group Flow (vph)	0	0	0	316	295	55	484	758	0	0	958	40
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				47.8	47.8	47.8	50.7	97.3			39.5	39.5
Effective Green, g (s)				47.8	47.8	47.8	50.7	97.3			39.5	39.5
Actuated g/C Ratio				0.24	0.24	0.24	0.25	0.49			0.20	0.20
Clearance Time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				812	1203	374	861	2450			1253	309
v/s Ratio Prot				c0.09	0.06		c0.14	0.15			c0.15	
v/s Ratio Perm						0.04						0.03
v/c Ratio				0.39	0.25	0.15	0.56	0.31			0.76	0.13
Uniform Delay, d1				63.9	61.5	60.0	65.0	31.0			75.9	66.1
Progression Factor				1.00	1.00	1.00	0.74	1.25			1.00	1.00
Incremental Delay, d2				0.3	0.1	0.2	2.1	0.3			4.5	0.9
Delay (s)				64.2	61.6	60.2	50.1	39.1			80.3	66.9
Level of Service				E	E	E	D	D			F	E
Approach Delay (s)		0.0			62.2			43.4			78.0	
Approach LOS		A			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	60.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	200.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: 4th Street N & South Frontage Rd/South Frontage Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	640	610	0	0	0	0	1030	70	230	980	0
Future Volume (vph)	150	640	610	0	0	0	0	1030	70	230	980	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Lane Util. Factor	0.97	0.95	0.88					0.81		1.00	0.91	
Frt	1.00	1.00	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3400	3505	2760					7399		1752	5036	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3400	3505	2760					7399		1752	5036	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	674	642	0	0	0	0	1084	74	242	1032	0
RTOR Reduction (vph)	0	0	58	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	158	674	584	0	0	0	0	1152	0	242	1032	0
Turn Type	Prot	NA	Perm					NA		Prot	NA	
Protected Phases	5	2						8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	50.7	97.3	97.3					47.8		32.6	87.8	
Effective Green, g (s)	50.7	97.3	97.3					47.8		32.6	87.8	
Actuated g/C Ratio	0.25	0.49	0.49					0.24		0.16	0.44	
Clearance Time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	861	1705	1342					1768		285	2210	
v/s Ratio Prot	0.05	0.19						c0.16		c0.14	0.20	
v/s Ratio Perm			c0.21									
v/c Ratio	0.18	0.40	0.44					0.65		0.85	0.47	
Uniform Delay, d1	58.4	32.6	33.5					68.6		81.3	39.6	
Progression Factor	1.00	1.00	1.00					1.00		0.55	0.77	
Incremental Delay, d2	0.5	0.7	1.0					0.9		14.0	0.1	
Delay (s)	58.9	33.3	34.5					69.5		59.0	30.8	
Level of Service	E	C	C					E		E	C	
Approach Delay (s)		36.6			0.0			69.5			36.2	
Approach LOS		D			A			E			D	

Intersection Summary			
HCM 2000 Control Delay	46.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	200.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	1900	50	10	1650	40	170	0	30	20	0	130
Future Volume (vph)	350	1900	50	10	1650	40	170	0	30	20	0	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	368	2000	53	11	1737	42	179	0	32	21	0	137
RTOR Reduction (vph)	0	0	9	0	0	10	0	0	31	0	0	114
Lane Group Flow (vph)	368	2000	44	11	1737	32	89	90	1	0	21	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	22.6	234.0	234.0	4.1	215.5	215.5	7.0	7.0	7.0		7.0	7.0
Effective Green, g (s)	22.6	234.0	234.0	4.1	215.5	215.5	7.0	7.0	7.0		7.0	7.0
Actuated g/C Ratio	0.08	0.83	0.83	0.01	0.76	0.76	0.02	0.02	0.02		0.02	0.02
Clearance Time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Vehicle Extension (s)	3.0	8.0	8.0	3.0	8.0	8.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	271	2899	1296	49	2669	1194	41	41	38		43	38
v/s Ratio Prot	c0.11	c0.57		0.00	0.50		0.05	c0.05			0.01	
v/s Ratio Perm			0.03			0.02			0.00			c0.01
v/c Ratio	1.36	0.69	0.03	0.22	0.65	0.03	2.17	2.20	0.02		0.49	0.60
Uniform Delay, d1	130.1	9.8	4.3	137.8	15.9	8.2	137.9	137.9	134.6		136.2	136.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	183.2	1.4	0.0	2.3	1.2	0.0	598.5	609.0	0.2		8.5	24.0
Delay (s)	313.4	11.2	4.4	140.2	17.2	8.2	736.4	747.0	134.8		144.7	160.6
Level of Service	F	B	A	F	B	A	F	F	F		F	F
Approach Delay (s)		57.0			17.7			649.7			158.5	
Approach LOS		E			B			F			F	

Intersection Summary			
HCM 2000 Control Delay	72.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	282.9	Sum of lost time (s)	30.8
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	26.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1570	50	140	1350	10	65	5	130	5	0	5
Future Vol, veh/h	5	1570	50	140	1350	10	65	5	130	5	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	215	-	250	225	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	1653	53	147	1421	11	68	5	137	5	0	5

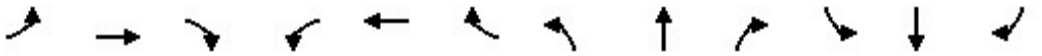
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1432	0	-	1653	0	0	2668	3389	827	2560	3384	716
Stage 1	-	-	-	-	-	-	1663	1663	-	1721	1721	-
Stage 2	-	-	-	-	-	-	1005	1726	-	839	1663	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	465	-	0	382	-	-	~ 11	7	313	13	7	370
Stage 1	-	-	0	-	-	-	100	151	-	92	141	-
Stage 2	-	-	0	-	-	-	257	140	-	324	151	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	465	-	-	382	-	-	~ 8	~ 4	313	~ 5	4	370
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 58	50	-	21	2	-
Stage 1	-	-	-	-	-	-	99	149	-	91	87	-
Stage 2	-	-	-	-	-	-	156	86	-	174	149	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.9	$ 420.4	124.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	122	465	-	382	-	-	40
HCM Lane V/C Ratio	1.726	0.011	-	0.386	-	-	0.263
HCM Control Delay (s)	$ 420.4	12.8	-	20.2	-	-	124.5
HCM Lane LOS	F	B	-	C	-	-	F
HCM 95th %tile Q(veh)	16	0	-	1.8	-	-	0.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Signalized Intersection Summary
24: Westshore Blvd & Gandy Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1640	120	250	1360	190	180	350	170	190	410	200
Future Volume (veh/h)	140	1640	120	250	1360	190	180	350	170	190	410	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	147	1726	126	263	1432	200	189	368	179	200	432	211
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	164	1410	629	280	1448	200	118	262	127	154	449	381
Arrive On Green	0.07	0.40	0.40	0.14	0.47	0.47	0.07	0.22	0.22	0.09	0.24	0.24
Sat Flow, veh/h	1767	3526	1572	1767	3111	430	1767	1179	573	1767	1856	1572
Grp Volume(v), veh/h	147	1726	126	263	805	827	189	0	547	200	432	211
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1778	1767	0	1752	1767	1856	1572
Q Serve(g_s), s	12.4	80.0	10.5	25.4	89.7	93.0	13.4	0.0	44.4	17.4	46.0	23.5
Cycle Q Clear(g_c), s	12.4	80.0	10.5	25.4	89.7	93.0	13.4	0.0	44.4	17.4	46.0	23.5
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	164	1410	629	280	821	828	118	0	389	154	449	381
V/C Ratio(X)	0.90	1.22	0.20	0.94	0.98	1.00	1.60	0.00	1.41	1.30	0.96	0.55
Avail Cap(c_a), veh/h	251	1410	629	374	821	828	118	0	389	154	449	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.3	60.0	39.2	71.1	52.5	53.4	93.3	0.0	77.8	91.3	74.9	66.4
Incr Delay (d2), s/veh	16.6	107.5	0.7	23.9	27.0	31.1	304.2	0.0	197.6	174.6	32.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.0	78.4	7.6	21.6	55.8	58.9	25.8	0.0	61.1	24.0	34.4	14.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.9	167.5	39.9	95.0	79.5	84.6	397.5	0.0	275.4	265.9	107.6	68.1
LnGrp LOS	F	F	D	F	E	F	F	A	F	F	F	E
Approach Vol, veh/h		1999			1895			736			843	
Approach Delay, s/veh		153.1			83.9			306.7			135.3	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.2	100.8	25.0	52.0	35.3	87.7	21.0	56.0
Change Period (Y+Rc), s	* 7.7	* 7.7	* 7.6	* 7.6	* 7.7	* 7.7	* 7.6	* 7.6
Max Green Setting (Gmax), s	* 24	* 83	* 17	* 44	* 38	* 69	* 13	* 48
Max Q Clear Time (g_c+I1), s	14.4	95.0	19.4	46.4	27.4	82.0	15.4	48.0
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	147.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	368	2000	53	11	1737	42	89	90	32	21	137
v/c Ratio	1.34	0.68	0.04	0.14	0.65	0.03	2.17	2.20	0.23	0.49	0.90
Control Delay	259.6	10.8	0.2	137.6	17.5	0.1	642.3	652.2	3.6	170.2	71.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	259.6	10.8	0.2	137.6	17.5	0.1	642.3	652.2	3.6	170.2	71.4
Queue Length 50th (ft)	~456	768	0	10	773	0	~274	~278	0	39	38
Queue Length 95th (ft)	#584	825	2	26	816	0	#444	#444	0	82	#195
Internal Link Dist (ft)		937			926			335		356	
Turn Bay Length (ft)	560		780	300		500					
Base Capacity (vph)	274	2929	1323	92	2661	1216	41	41	142	43	153
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.68	0.04	0.12	0.65	0.03	2.17	2.20	0.23	0.49	0.90

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	316	295	232	484	758	958	200
v/c Ratio	0.39	0.25	0.42	0.56	0.31	0.76	0.43
Control Delay	65.0	61.6	8.4	51.8	40.8	80.5	10.1
Queue Delay	0.0	0.0	0.0	58.3	34.1	51.6	0.0
Total Delay	65.0	61.6	8.4	110.1	74.8	132.2	10.1
Queue Length 50th (ft)	177	113	0	344	375	351	0
Queue Length 95th (ft)	233	149	78	407	428	395	79
Internal Link Dist (ft)		612			159	361	
Turn Bay Length (ft)	500		500				300
Base Capacity (vph)	852	1262	566	862	2450	1253	470
Starvation Cap Reductn	0	0	0	541	1730	0	0
Spillback Cap Reductn	0	0	0	0	0	625	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.23	0.41	1.51	1.05	1.53	0.43

Intersection Summary



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	158	674	642	1158	242	1032
v/c Ratio	0.18	0.40	0.46	0.65	0.85	0.47
Control Delay	61.7	34.9	29.9	69.9	62.4	30.8
Queue Delay	0.0	0.0	0.0	30.7	66.6	45.3
Total Delay	61.7	34.9	29.9	100.6	129.0	76.1
Queue Length 50th (ft)	87	308	272	331	335	371
Queue Length 95th (ft)	129	382	353	374	436	407
Internal Link Dist (ft)		460		372		159
Turn Bay Length (ft)	350		350			
Base Capacity (vph)	862	1705	1400	1860	360	2444
Starvation Cap Reductn	0	0	0	0	204	1495
Spillback Cap Reductn	88	0	0	760	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.40	0.46	1.05	1.55	1.09

Intersection Summary

HCS7 Multilane Highway Report

Project Information

Analyst	RC	Date	11/14/2022
Agency	Jacobs	Analysis Year	2020
Jurisdiction	FDOT D7	Time Period Analyzed	AM Peak Hour
Project Description	4th Street Ramps to Brighton Bay	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2154	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1162
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1134	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.35
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	RC	Date	11/14/2022
Agency	Jacobs	Analysis Year	2020
Jurisdiction	FDOT D7	Time Period Analyzed	AM Peak Hour
Project Description	4th Street Ramps to Brighton Bay	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	18.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2195	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1184
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2008
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2008
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.4
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	4.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1155	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.36
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	RC	Date	11/14/2022
Agency	Jacobs	Analysis Year	2020
Jurisdiction	FDOT D7	Time Period Analyzed	PM Peak Hour
Project Description	4th Street Ramps to Brighton Bay	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2673	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1442
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1407	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.46
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	RC	Date	11/14/2022
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Jurisdiction	FDOT D7	Time Period Analyzed	PM Peak Hour
Project Description	4th Street Ramps to Brighton Bay	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	18.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1777	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	958
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2008
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2008
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.4
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	4.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	935	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.25
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	RC	Date	11/14/2022
Agency	Jacobs	Analysis Year	2020
Jurisdiction	FDOT D7	Time Period Analyzed	AM Peak Hour
Project Description	Gandy Blvd bet Brighton Bay and west end of Bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.9
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1727	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	932
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	909	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.24
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	RC	Date	11/14/2022
Agency	Jacobs	Analysis Year	2020
Jurisdiction	FDOT D7	Time Period Analyzed	AM Peak Hour
Project Description	Gandy Blvd bet Brighton Bay and west end of Bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	2.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1846	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	996
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2088
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2088
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	54.4
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	972	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.27
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	RC	Date	11/14/2022
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Jurisdiction	FDOT D7	Time Period Analyzed	PM Peak Hour
Project Description	Gandy Blvd bet Brighton Bay and west end of Bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.9
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1998	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1078
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1052	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.31
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Analyst	RC	Date	11/14/2022
Agency	Jacobs	Analysis Year	2020
Jurisdiction	FDOT D7	Time Period Analyzed	PM Peak Hour
Project Description	Gandy Blvd bet Brighton Bay and west end of Bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	2.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1569	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	846
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2088
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2088
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	54.4
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	826	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.19
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	RC	Date	11/14/2022
Agency	Jacobs	Analysis Year	2020
Jurisdiction	FDOT D7	Time Period Analyzed	AM Peak Hour
Project Description	Gandy Bet east end of Bridge to Westshore Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	5.4
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.7		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1680	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	906
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1972
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1972
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	884	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.23
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	RC	Date	11/14/2022
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Jurisdiction	FDOT D7	Time Period Analyzed	AM Peak Hour
Project Description	Gandy Bet east end of Bridge to Westshore Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	8.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	47.9		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1920	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1036
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1956
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1956
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	47.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	2.2		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1011	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.29
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

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Jurisdiction	FDOT D7	Time Period Analyzed	PM Peak Hour
Project Description	Gandy Bet east end of Bridge to Westshore Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	5.4
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.7		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1917	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1034
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1972
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1972
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1009	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.29
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Jurisdiction	FDOT D7	Time Period Analyzed	PM Peak Hour
Project Description	Gandy Bet east end of Bridge to Westshore Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	8.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	47.9		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1647	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	888
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1956
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1956
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	47.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	2.2		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	867	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.22
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	RC	Date	11/14/2022
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Jurisdiction	FDOT D7	Time Period Analyzed	AM Peak Hour
Project Description	Gandy Bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1611	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	868
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	848	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.21
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	RC	Date	11/14/2022
Agency	Jacobs	Analysis Year	2020
Jurisdiction	FDOT D7	Time Period Analyzed	AM Peak Hour
Project Description	Gandy Bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1801	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	971
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	948	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.26
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	RC	Date	11/14/2022
Agency	Jacobs	Analysis Year	2020
Jurisdiction	FDOT D7	Time Period Analyzed	PM Peak Hour
Project Description	Gandy Bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1797	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	969
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	946	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.26
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	RC	Date	11/14/2022
Agency	Jacobs	Analysis Year	2020
Jurisdiction	FDOT D7	Time Period Analyzed	PM Peak Hour
Project Description	Gandy Bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1480	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	798
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	779	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.16
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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ST. PETERSBURG TRAFFIC ENGINEERING
CONTROLLER TIMINGS

LOCATION: 4TH ST & FRONTAGE RD

EFFECTIVE DATE: 05/24/2022

2. CONTROLLER 1. TIMING DATA	**MOVE-MENT 1**	**MOVE-MENT 2**	**MOVE-MENT 3**	**MOVE-MENT 4**	**MOVE-MENT 5**						
MIN GREEN	8	20	10	8	10						
DELAY GREEN	3	3	3	3	3						
WALK	7	7	7	7	7						
PED CLEAR	27	32	13	26	26						
YELLOW	4.9	4.4	4.9	4.9	4.9						
RED CLR	2.5	3.0	3.0	2.6	2.1						
VEH EXT.	3.0	3.0	3.0	3.0	3.0						
MAX 1	45	45	50	0	65						
MAX 2	30	30	30	0	35						
2. CONTROLLER 8. RECALL DATA PRESS 0 (TOGGLE) TO CHANGE DATA											
LOCK DET	X		X	X	X						
VE RCALL		X									
PD RCALL											
MX RCALL											
2. CONTROLLER 5. START-FLASH DATA PRESS 0 (TOGGLE) TO CHANGE DATA											
START-UP - - -

CONTROLLER - CONTINUED

MM 2-2	VEH/PED OVERLAPS															
VEHICLE OVERLAP A TYPE: OTHER/ECONOLITE																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED	X	.	X	X	X	.	.	.	.	.	.	.	.	.	.	.
VEHICLE OVERLAP B TYPE: OTHER/ECONOLITE																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEHICLE OVERLAP C TYPE: OTHER/ECONOLITE																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
VEHICLE OVERLAP D TYPE: OTHER/ECONOLITE																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED	X	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.
VEHICLE OVERLAP E TYPE: OTHER/ECONOLITE																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEHICLE OVERLAP F TYPE: OTHER/ECONOLITE																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEHICLE OVERLAP G TYPE: OTHER/ECONOLITETYPE																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.
VEHICLE OVERLAP H TYPE: OTHER/ECONOLITE																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED	.	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.
VEHICLE OVERLAP I TYPE: OTHER/ECONOLITE																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.
VEHICLE OVERLAP J TYPE: OTHER/ECONOLITE																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.
VEHICLE OVERLAP K TYPE: OTHER/ECONOLITE																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.

MM 2-3	VEH/PED OVERLAPS (PED)															
INCLUDED	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
1	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.
5	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.

NOTES

COORDINATION DATA

3. COORDINATOR 1. OPTIONS	PRESS 0 (TOGGLE) TO CHANGE DATA
MANUAL PATTERN …... AUTO	ECPI COORD …….…. YES
SYSTEM SOURCE …… SYS	SYSTEM FORMAT ……. STD
SPLIT IN ..…… SECONDS	OFFSET IN …….. SECONDS
TRANSITION ...…….. SMOOTH	MAX SELECT …….. MAXINH
DWELL/ADD TIME ...…….…. 0	FORCE OFF ...…… FLOAT
OFFSET REF ..…… LEAD	CAL USE PED TM ……. YES
PED RECALL …… NO	PED RESERVICE ……. NO

3. COORDINATOR 2. COORDINATOR PATTERNS PATTERN 1								
CYCLE …….…..…… 190s	SPLIT SUM ……..……190s							
OFFSET VAL ……..…….. 46s	STD (COS) ……..…….…… 111							
ACTUATED COORD ……... NO	DWELL/ADD TIME …….…….... 0							
ACT WALK REST ……..…... NO	PHASE RESRVCE ……..…….. NO							
SPLIT VALUES:								
PHASE [s]	1	2	3	4	5	6	7	8
SPT [1]	31	50	40		69			
PHASE [s]	1	2	3	4	5	6	7	8
COORD ……..…...		X				X		
MX RCALL		X						
OMIT				X				

3. COORDINATOR 2. COORDINATOR PATTERNS PATTERN 2								
CYCLE …….…..……0s	SPLIT SUM ……..……...0s							
OFFSET VAL ……..…….0s	STD (COS) ……..…….…… 121							
ACTUATED COORD ……... NO	DWELL/ADD TIME …….…….... 0							
ACT WALK REST ……..…... NO	PHASE RESRVCE ……..…….. NO							
SPLIT VALUES:								
PHASE [s]	1	2	3	4	5	6	7	8
SPT [1]								
PHASE [s]	1	2	3	4	5	6	7	8
COORD ……..…...								

3. COORDINATOR 2. COORDINATOR PATTERNS PATTERN 3								
CYCLE …….…..…… 200s	SPLIT SUM …….…… 200s							
OFFSET VAL ……..……..108s	STD (COS) ……..…….…… 131							
ACTUATED COORD ……... NO	DWELL/ADD TIME …….…….... 0							
ACT WALK REST ……..…... NO	PHASE RESRVCE ……..…….. NO							
SPLIT VALUES:								
PHASE [s]	1	2	3	4	5	6	7	8
SPT [1]	49	48	56		47			
PHASE [s]	1	2	3	4	5	6	7	8
COORD ……..…...		X						
MX RCALL		X						
OMIT				X				

NOTES

NIC/TOD FUNCTIONS

5. TIME BASE 1. CLOCK/CALENDAR DATA	
CURRENT DATE	CURRENT TIME
ENA ACTION PLAN …….. 0	
SYNC REF TIME ……. 00:00	SYNC REF ..... REF TIME
TIME FROM GMT …….. +00	DAY LIGHT SAVE …… NO
TIME RESET INPUT SET TIME ……..…….. 03:30:00	

NOTES

5. TIME BASE 2. ACTION PLAN																
ACTION PLAN ……[1] [2] [3]																
PATTERN ……1 2 3							SYS OVERRIDE ……..…….. NO									
TIMING PLAN ……..1 1 1							SEQUENCE …… 0									
VEH DETECTOR PLAN ……..…… 0							DET LOG …… NONE									
FLASH …… - -							RED REST …….. NO									
VEH DET DIAG PLN…… 0							PED DET DIAG PLN …… 0									
DIMMING ENABLE …… NO							PRIORITY RETURN ……..…… NO									
PED PR RETURN ……..…….. NO							QUEUE DELAY ……..…….. NO									
PMT COND DELAY …… NO																
PHASE	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
PED RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
WALK 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEX 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEH RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

5. TIME BASE 4. SCHEDULE NUMBER											
SCHEDULE NUMBER ……..[1]											
DAY PLAN NO ……..…… 1							CLEAR ALL FIELDS…….. .				
SELECT ALL MONTHS ……..... .							DOW……... . DOM …… .				
MONTH	J F M A M J J A S O N D										
	X X X X X X X X X X X X										
DAY (DOW) :		SUN	MON	TUE	WED	THU	FRI	SAT			
			X	X	X	X	X				
DAY (DOM) :	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

5 . TIME BASE 3. DAY PLAN/EVENT DAY PLAN 1	ACTION PLAN	TIME
EVENT 1	1	06:00
EVENT 2	98	09:00
EVENT 3	3	16:00
EVENT 4	98	19:00
EVENT 5		

5. TIME BASE 4. SCHEDULE NUMBER											
SCHEDULE NUMBER ……..[2]											
DAY PLAN NO ……..…… 2							CLEAR ALL FIELDS…….. .				
SELECT ALL MONTHS ……..... .							DOW……... . DOM …… .				
MONTH	J F M A M J J A S O N D										
	X X X X X X X X X X X X										
DAY (DOW) :		SUN	MON	TUE	WED	THU	FRI	SAT			
		X						X			
DAY (DOM) :	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

5 . TIME BASE 3. DAY PLAN/EVENT DAY PLAN 2	ACTION PLAN	TIME
EVENT 1	98	00:00
EVENT 2		
EVENT 3		
EVENT 4		
EVENT 5		

LDSW & DET ASSIGNMENTS

LD SWITCH ASSIGN MM: 1, 3									
	PHASE		DIMMING				- - - FLASH - - -		
	/OVLP	TYPE	R	Y	G	D	PWR	AUT	TGR
1	1	O	.	.	.	+	A	R	.
2	2	O	.	.	.	+	A	R	X
3	3	O	.	.	.	+	A	R	.
4	4	O	.	.	.	+	A	R	X
5	5	O	.	.	.	-	A	R	.
6	6	O	.	.	.	-	A	R	X
7	7	O	.	.	.	-	A	R	.
8	8	O	.	.	.	-	A	R	X
9	1	P	.	.	.	+	A	.	.
10	9	O	.	.	.	+	A	.	.
11	10	O	.	.	.	-	A	.	.
12	11	O	.	.	.	-	A	.	.
13	2	P	.	.	.	+	A	R	.
14	3	P	.	.	.	-	A	R	X
15	4	P	.	.	.	+	A	R	.
16	5	P	.	.	.	-	A	R	X

6. DETECTOR 2. VEHICLE OPTION								
DET	1	2	3	4	5	6	7	8
PH	1	2	3	4	5	6	7	8
LOCK IN	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
EXT OPTION	PASSAGE	PASSAGE	PASSAGE	PASSAGE	PASSAGE	PASSAGE	PASSAGE	PASSAGE
CALL OPTION	YES	YES	YES	YES	YES	YES	YES	YES
TS2 DET	YES	YES	YES	YES	YES	YES	YES	YES
DELAY TIME	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CROSS SWITCH PH								

NOTES

LDSW & DET ASSIGNMENTS - CONTINUED

Vehicle Det Phase Assignment (MM) 6 - 1			
Vehicle Detector	Assigned Phase	Called Phase	Type
1	3		N
2	3		N
3	3		N
4	3		N
5	3		N
6	2		N
7	2		N
8	2		N
9	2		N
10	2		N
11	2		N
12	1		N
13	1		N
14	1		N
15	1		N
16	1		N
17	5		N
18	5		N
19	5		N
20	5		N
21	5		N
22	1		N

Vehicle Det Phase Assignment (MM) 6 - 1			
Vehicle Detector	Assigned Phase	Called Phase	Type
23	1		N
24	1		N
25	1		N
26	1		N
27	1		N
28	3		N
29	3		N
30	3		N
31	3		N
32	5		N
33	5		N
34	5		N
35	2		N
36	2		N
37	5		N
38	5		N
39	5		N
40	2		N
41	2		N
42	2		N
43	2		N
44	0		N

NOTES

LDSW & DET ASSIGNMENTS - CONTINUED

PED DETECTOR PHASE ASSIGNMENT (MM) 6-3																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	.	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.
9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.
16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X

NOTES

VEH & PED DET DIAGNOSTICS

6. DETECTOR 5. VEH DIAGNOSTIC						
VEHICLE DIAGNOSTIC PLAN NUMBER [1]						
DET	COUNT	ACT	PRES	X's	TIME	DELAY
1	0	0		1	255	0
2	0	0		1	255	0
3	0	0		1	255	0
4	0	0		1	255	0
5	0	0		1	255	0
6	0	0		1	255	0
7	0	0		1	255	0
8	0	0		1	255	0
9	0	0		1	255	0
10	0	0		1	255	0
11	0	0		1	255	0
12	0	0		1	255	0
13	0	0		1	255	0
14	0	0		1	255	0
15	0	0		1	255	0
16	0	0		1	255	0

6. DETECTOR 6. PED DIAGNOSTIC				
PED DETECTOR DIAGNOSTIC PLAN [1]				
DET	COUNTS	ACT	PRES	MULTIPLIER
1	0	0		1
2	0	0		1
3	0	0		1
4	0	0		1
5	0	0		1
6	0	0		1
7	0	0		1
8	0	0		1
9	0	0		1
10	0	0		1
11	0	0		1
12	0	0		1
13	0	0		1
14	0	0		1
15	0	0		1
16	0	0		1

CONTROLLER SEQUENCE

1. CONFIGURATION 1. CONTROLLER SEQ 1. PHASE RING	01	02	03	04	05	06	07	08
	B	B	B	B	B	B		
R1	1	2	3	4	5			
R2								
R3								
R4								

1. CONFIGURATION 4. PORT 1 (SDLC) 3. COLOR CHECK ENABLE
COLOR CHECK ENABLE
ENABLE COLOR CHECK . . .

1. CONFIGURATION 2. PHASES IN USE	PHASE NUMBER 1	2	3	4	5	6	7	8
PHASE IN USE	X	X	X	X	X			
EXCLUSIVE PED								

NOTES

ST. PETERSBURG TRAFFIC ENGINEERING
CONTROLLER TIMINGS

LOCATION: BRIGHTON & GANDY BLVD

EFFECTIVE DATE: 03/25/2022

2. CONTROLLER 1. TIMING DATA TIMING PLAN 1	**EBLT** PHASE 1	**WB** PHASE 2	**SB/ SBLT** PHASE 3	**NB/ NBLT** PHASE 4	**WBLT** PHASE 5	**EB** PHASE 6	**BLT** PHASE 7	**B** PHASE 8
MIN GREEN	5	60	10	10	5	60		
WALK		7	7	7		7		
PED CLEAR		27	32	35		27		
YELLOW	5.2	5.2	3.4	3.4	5.2	5.2		
RED CLR	2.2	2.2	4.6	4.5	2.2	2.2		
VEH EXT.	3.0	5.0	3.0	3.0	3.0	5.0		
MAX 1	20	160	15	30	20	160		
MAX 2	15	180	30	25	15	180		
MAX 3	30	255	15	15	15	255		
2. CONTROLLER 8. RECALL DATA PRESS 0 (TOGGLE) TO CHANGE DATA								
LOCK DET								
VE RCALL		X				X		
PD RCALL		X				X		
MX RCALL								
2. CONTROLLER 5. START-FLASH DATA PRESS 0 (TOGGLE) TO CHANGE DATA								
START-UP - - -

ST. PETERSBURG TRAFFIC ENGINEERING
CONTROLLER TIMINGS

LOCATION: BRIGHTON & GANDY BLVD

EFFECTIVE DATE: 03/15/2022

2. CONTROLLER 1. TIMING DATA TIMING PLAN 2	**EBLT** PHASE 1	**WB** PHASE 2	**SB/ SBLT** PHASE 3	**NB/ NBLT** PHASE 4	**WBLT** PHASE 5	**EB** PHASE 6	**BLT** PHASE 7	**B** PHASE 8
MIN GREEN	5	60	10	10	5	60		
WALK		7	7	7		7		
PED CLEAR		27	32	35		27		
YELLOW	5.2	5.2	3.4	3.4	5.2	5.2		
RED CLR	2.2	2.2	4.6	4.5	2.2	2.2		
VEH EXT.	3.0	8.0	3.0	3.0	3.0	8.0		
MAX 1	20	130	15	30	20	130		
MAX 2	15	150	30	25	15	150		
MAX 3	30	220	15	15	15	235		
2. CONTROLLER 8. RECALL DATA PRESS 0 (TOGGLE) TO CHANGE DATA								
LOCK DET								
VE RCALL								
PD RCALL		X				X		
MX RCALL		X				X		
2. CONTROLLER 5. START-FLASH DATA PRESS 0 (TOGGLE) TO CHANGE DATA								
START-UP - - -

CONTROLLER

1. CONFIGURATION 4. PORT 1 (SDLC) 1. SDLC OPTIONS								
BIU	1	2	3	4	5	6	7	8
TERM & FACILITY								
DETECTOR RACK								
ENABLE TS2/MMU TYPE CABINET	..... NO							
ENABLE MMU EXTENDED STATUS	..... NO							
ENABLE SDLC STOP TIME	..... NO							
ENABLE 3 CRITICAL RFEs LOCKUP	..... NO							
MMU TO CU SDLC EXTERNAL START	..... ENABLED							

2. CONTROLLER 6. OPTION DATA SUBMENU 1. CONTROLLER OPTIONS	1	2	3	4	5	6	7	8
FLASHING GRN PH								
GUAR PASSAGE								
NON-ACT I								
NON-ACT II								
DUAL ENTRY								
COND SERVICE								
COND RESERVICE								
PED RESERVICE								
REST IN WALK								

1. CONFIGURATION 5. COMMUNICATIONS 1. ETHERNET
ETHERNET
CONTROLLER IP 192.168.13.100
SUBNET MASK 255.255.255.0
DEFAULT GATEWAY IP 192.168.13.31
SERVER I P 10.80.10.20
LINK SPEED/DUPLEX ..... 100\FULL
DROP-OUT TIME 300

NOTES

COORDINATION

3. COORDINATOR 1. OPTIONS	PRESS 0 (TOGGLE) TO CHANGE DATA
MANUAL PATTERN .....FREE	ECPI COORD ..... YES
SYSTEM SOURCE ..... SYS	SYSTEM FORMAT ..... STD
SPLIT IN ..... SECONDS	OFFSET IN ..... SECONDS
TRANSITION ..... SMOOTH	MAX SELECT ..... MAXINH
DWELL/ADD TIME 0	FORCE OFF ..... FLOAT
OFFSET REF ..... LEAD	CAL USE PED TM ..... YES
PED RECALL ..... NO	PED RESERVICE ..... NO

3. COORDINATOR 2. COORDINATOR PATTERNS PATTERN 1								
CYCLE 0s	SPLIT SUM 0s							
OFFSET VAL 0s	STD (COS) 111							
ACTUATED COORD ..... NO	DWELL/ADD TIME 0							
ACT WALK REST ..... NO	PHASE RESRVCE ..... NO							
SPLIT VALUES:								
PHASE [s]	1	2	3	4	5	6	7	8
SPT [1]								
PHASE [s]	1	2	3	4	5	6	7	8
COORD								

NIC/TOD FUNCTIONS

5. TIME BASE 1. CLOCK/CALENDAR DATA	
CURRENT DATE	CURRENT TIME
ENA ACTION PLAN …….. 0	
SYNC REF TIME ……. 00:00	SYNC REF .....REF TIME
TIME FROM GMT …….. +00	DAY LIGHT SAVE ……. NO
TIME RESET INPUT SET TIME ……..……. 03:30:00	

5. TIME BASE 4. SCHEDULE NUMBER											
SCHEDULE NUMBER ……..[1]											
DAY PLAN NO ……..…… 1							CLEAR ALL FIELDS…….. .				
SELECT ALL MONTHS ……... .							DOW……... . DOM …… .				
MONTH	J F M A M J J A S O N D										
	X X X X X X X X X X X X										
DAY (DOW) :		SUN	MON	TUE	WED	THU	FRI	SAT			
			X	X	X	X	X				
DAY (DOM) :	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

5 . TIME BASE 3. DAY PLAN/ EVENT DAY PLAN 1	ACTION PLAN	TIME
EVENT 1	2	06:00
EVENT 2	99	09:30
EVENT 3	3	15:30
EVENT 4	99	19:00
EVENT 5		

5. TIME BASE 4. SCHEDULE NUMBER											
SCHEDULE NUMBER ……..[2]											
DAY PLAN NO ……..…… 2							CLEAR ALL FIELDS…….. .				
SELECT ALL MONTHS ……... .							DOW……... . DOM …… .				
MONTH	J F M A M J J A S O N D										
	X X X X X X X X X X X X										
DAY (DOW) :		SUN	MON	TUE	WED	THU	FRI	SAT			
		X						X			
DAY (DOM) :	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

5 . TIME BASE 3. DAY PLAN/ EVENT DAY PLAN 2	ACTION PLAN	TIME
EVENT 1	99	00:00
EVENT 2		
EVENT 3		
EVENT 4		
EVENT 5		

NOTES

NIC/TOD FUNCTIONS - CONTINUED

5. TIME BASE 2. ACTION PLAN																
ACTION PLAN .....[1]																
PATTERN 1							SYS OVERRIDE ..... NO									
TIMING PLAN 1							SEQUENCE 0									
VEH DETECTOR PLAN 0							DET LOG ..... NONE									
FLASH ..... - -							RED REST ..... NO									
VEH DET DIAG PLN..... 0							PED DET DIAG PLN 0									
DIMMING ENABLE ..... NO							PRIORITY RETURN ..... NO									
PED PR RETURN ..... NO							QUEUE DELAY ..... NO									
PMT COND DELAY ..... NO																
PHASE	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
PED RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
WALK 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEX 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEH RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

5. TIME BASE 2. ACTION PLAN																
ACTION PLAN .....[2]																
PATTERN 1							SYS OVERRIDE ..... NO									
TIMING PLAN 2							SEQUENCE 0									
VEH DETECTOR PLAN 0							DET LOG ..... NONE									
FLASH ..... - -							RED REST ..... NO									
VEH DET DIAG PLN..... 0							PED DET DIAG PLN 0									
DIMMING ENABLE ..... NO							PRIORITY RETURN ..... NO									
PED PR RETURN ..... NO							QUEUE DELAY ..... NO									
PMT COND DELAY ..... NO																
PHASE	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
PED RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
WALK 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEX 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEH RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX 2	X	X	X	X	X	X	.	.	.	.	.	.	.	.	.	.
MAX 3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

5. TIME BASE 2. ACTION PLAN																
ACTION PLAN .....[3]																
PATTERN 1							SYS OVERRIDE ..... NO									
TIMING PLAN 1							SEQUENCE 0									
VEH DETECTOR PLAN 0							DET LOG ..... NONE									
FLASH ..... - -							RED REST ..... NO									
VEH DET DIAG PLN..... 0							PED DET DIAG PLN 0									
DIMMING ENABLE ..... NO							PRIORITY RETURN ..... NO									
PED PR RETURN ..... NO							QUEUE DELAY ..... NO									
PMT COND DELAY ..... NO																
PHASE	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
PED RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
WALK 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEX 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEH RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX RCL	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
MAX 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX 3	X	X	X	X	X	X	.	.	.	.	.	.	.	.	.	.

LDSW & DET ASSIGNMENTS

LD SWITCH ASSIGN MM: 1, 3									
	PHASE		DIMMING				- - - FLASH - - -		
	/OVLP	TYPE	R	Y	G	D	PWR	AUT	TGR
1	1	V	.	.	.	+	A	R	.
2	2	V	.	.	.	+	A	R	X
3	3	V	.	.	.	+	A	R	.
4	4	V	.	.	.	+	A	R	X
5	5	V	.	.	.	-	A	R	.
6	6	V	.	.	.	-	A	R	X
7	7	V	.	.	.	-	A	R	.
8	8	V	.	.	.	-	A	R	X
9	2	P	.	.	.	+	A	.	.
10	4	P	.	.	.	+	A	.	.
11	6	P	.	.	.	-	A	.	.
12	8	P	.	.	.	-	A	.	.
13	13	.	.	.	.	+	A	R	.
14	14	.	.	.	.	-	A	R	X
15	15	.	.	.	.	+	A	R	.
16	16	.	.	.	.	-	A	R	X

Vehicle Det Phase Assignment (MM) 6 - 1			
Vehicle Detector	Assigned Phase	Called Phase	Type
1	1		N
2	2		N
3	3		N
4	4		N
5	5		N
6	6		N
7	7		N
8	8		N
9	9		N
10	10		N
11	11		N
12	12		N
13	13		N
14	14		N
15	15		N
16	16		N

6. DETECTOR 2. VEHICLE OPTION								
DET	1	2	3	4	5	6	7	8
PH	1	2	3	4	5	6	7	8
LOCK IN	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
EXT OPTION	PASSAGE	PASSAGE	PASSAGE	PASSAGE	PASSAGE	PASSAGE	PASSAGE	PASSAGE
CALL OPTION	YES	YES	YES	YES	YES	YES	YES	YES
TS2 DET	NO	NO	NO	NO	NO	NO	NO	NO
DELAY TIME	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0
CROSS SWITCH PH								

NOTES
IN CONTROLLER VEH DET 3 SET FOR SEVEN SEC DELAY.

VEH & PED DET DIAGNOSTICS

6. DETECTOR 5. VEH DIAGNOSTIC						
VEHICLE DIAGNOSTIC PLAN NUMBER [1]						
DET	COUNT	ACT	PRES	X's	TIME	DELAY
1	0	0	5	1	255	0
2	0	0		1	255	0
3	0	0	5	1	255	0
4	0	0	5	1	255	0
5	0	0	5	1	255	0
6	0	0		1	255	0
7	0	0		1	255	0
8	0	0		1	255	0
9	0	0		1	255	0
10	0	0		1	255	0
11	0	0		1	255	0
12	0	0		1	255	0
13	0	0		1	255	0
14	0	0		1	255	0
15	0	0		1	255	0
16	0	0		1	255	0

6. DETECTOR 6. PED DIAGNOSTIC				
PED DETECTOR DIAGNOSTIC PLAN [1]				
DET	COUNTS	ACT	PRES	MULTIPLIER
1	0	0		1
2	0	0		1
3	0	0		1
4	0	0	5	1
5	0	0		1
6	0	0		1
7	0	0		1
8	0	0		1
9	0	0		1
10	0	0		1
11	0	0		1
12	0	0		1
13	0	0		1
14	0	0		1
15	0	0		1
16	0	0		1

CONTROLLER CONFIGURATION

1. CONFIGURATION 1. CONTROLLER SEQ 1. PHASE RING	01	02	03	04	05	06	07	08
	B -	B -	B					
R1	1	2	3	4				
R2	5	6	7	8				
R3								
R4								

1. CONFIGURATION 4. PORT 1 (SDLC) 3. COLOR CHECK ENABLE
COLOR CHECK ENABLE
ENABLE COLOR CHECK . . .

1. CONFIGURATION 2. PHASES IN USE	PHASE NUMBER 1	2	3	4	5	6	7	8
PHASE IN USE	X	X	X	X	X	X		
EXCLUSIVE PED								

NOTES

Designed By:	***BMH***
Date:	***05/09/22***
Checked By:	***DJP***
Date:	***05/09/22***

Location Details			
Section:	***10130000***	Mile Post:	***3.748***
Major Street:	***US 92 (Gandy Boulevard)***	Orientation:	***East-West***
Minor Street:	***Westshore Boulevard***	Orientation:	***North-South***
Sig ID:	***1901***	System ID:	***10130***

Controller Timings (seconds)

Movement # (Controller Phase Ø)	1	2	3	4	5	6	7	8	Notes
Direction	*EBL*	*WB*	*SBL*	*NB*	*WBL*	*EB*	*NBL*	*SB*	
Turn Type	*Prot/Perm*		*Prot*		*Prot/Perm*		*Prot*		
Min Green	*5*	*15*	*5*	*15*	*5*	*15*	*5*	*15*	
Ext	*2.0*	*3.0*	*2.0*	*3.0*	*2.0*	*3.0*	*3.0*	*3.0*	
Yellow	*5.5*	*5.5*	*4.8*	*4.8*	*5.5*	*5.5*	*4.8*	*4.8*	
All Red	*2.2*	*2.2*	*2.8*	*2.8*	*2.2*	*2.2*	*2.8*	*2.8*	
Max I	*25*	*90*	*25*	*40*	*25*	*90*	*25*	*40*	
Max II	*30*	*85*	*25*	*40*	*30*	*85*	*25*	*40*	
Walk		*7*		*7*		*7*		*7*	
Flashing Don't Walk		*23*		*26*		*23*		*26*	
Detector Memory									
Det. Cross Switch.	*Ø6*				*Ø2*				
Dual Entry		*ON*		*ON*		*ON*		*ON*	
Vehicle Recall		*MIN*				*MIN*			
CNA									
Rest in Walk		*ON*				*ON*			

Coordination Timings (seconds)

Pattern	C/O/S	Cycle Length	Splits								Offset	Sequence	Coord Ø
1	-	*140*	*20*	*57*	*15*	*48*	*28*	*49*	*22*	*41*	*135*	*1*	*2 & 6*
3	-	*140*	*27*	*57*	*17*	*39*	*42*	*42*	*21*	*35*	*138*	*1*	*2 & 6*
5	-	*200*	*32*	*91*	*21*	*56*	*46*	*77*	*25*	*52*	*184*	*1*	*2 & 6*
6	-	*120*	*19*	*54*	*17*	*30*	*33*	*40*	*17*	*30*	*102*	*1*	*2 & 6*
7	-	*100*	*15*	*44*	*15*	*26*	*18*	*41*	*15*	*26*	*97*	*1*	*2 & 6*
9	-	*120*	*23*	*47*	*18*	*32*	*28*	*42*	*18*	*32*	*113*	*1*	*2 & 6*

Offset Reference Point
Beginning of First Main Street Green

SOP 10 (Sequence 1)

Ring - 1	1	2	3	4
Ring - 2	5	6	7	8

Notes:

1) Use 'Max I' during FREE operation and 'Inhibit Max' during coordination.
2) Use Floating Force Offs.
3) Max recall Ø2 and Ø6 during coordination.
4) Sequence 1 used during FREE operation.
5) Backup prevention programmed for Phases 2 and 6.
6) Controller Brand: Econolite ASC/3

Time of Day Plan

Designed By:	***BMH***
Date:	***05/09/22***
Checked By:	***DJP***
Date:	***05/09/22***

Arterial: US 92 (Gandy Boulevard)
Section: 10130000
From: Westshore Boulevard
To: Dale Mabry Highway

ALL SEASON PLAN

(Westshore Boulevard through Lois Avenue)

Day	Time	Pattern	Cycle Length
Monday Thru Friday	0000 - 0630	7*	100
	0630 - 1000	1	140
	1000 - 1530	3	140
	1530 - 1900	5	200
	1900 - 2130	6	120
	2130 - 2400	7*	100
Saturday	0000 - 0830	7*	100
	0830 - 2130	9*	120
	2130 - 2400	7*	100
Sunday	0000 - 0830	7*	100
	0830 - 2130	9*	120
	2130 - 2400	7*	100

*Dale Mabry Highway is not coordinated with Westshore Boulevard through Lois Avenue during these patterns.

Appendix E:
Crash Data Heat Maps


Lincoln Shrs
115th Ave N
114th Ave N
112th Ave N
4th St N
Poplar St NE
Walnut St NE
Oak St NE
1st Ln N
1st Way N
1st St NE
1st St NE
600
92
Gandy Blvd N
Savona
6 crashes
11 crashes
10 crashes
6 crashes
23 crashes
N Frontage Rd
Gandy Blvd N
S Frontage
Gandy Blvd N
4th St N
2nd St N
Derby Lane
San Martin Blvd NE
Sun Isle Dr NE
Rattlesnak
2015 Crashes
Sparse
Dense
US 92/SR 600/GANDY BLVD (SWAT)
2015 Crashes
0
500
1,000
Feet
Data Source:
ESRI, FDOT SSOGis
N
W
E
S


Lincoln Shrs
115th Ave N
114th Ave N
112th Ave N
4th St N
Poplar St NE
Walnut St NE
Oak St NE
1st Ln N
1st Way N
1st St NE
Bay St NE
Gandy
600
Savona Dr
San Martin Blvd NE
Derby Lane
N Frontage Rd
Gandy Blvd N
S Frontage
2nd St N
Sun Isle Dr NE
Rattlesnak
6 crashes
19 crashes
8 crashes
9 crashes
9 crashes
2016 Crashes
Sparse
Dense
US 92/SR 600/GANDY BLVD (SWAT)
2016 Crashes
0 500 1,000
Feet
Data Source:
ESRI, FDOT SSOGis
N
W
E
S


Lincoln Shrs
115th Ave N
114th Ave N
112th Ave N
4th St N
1st Ln N
1st Way N
1st St NE
Bay St NE
Oak St NE
Poplar St NE
Walnut St NE
10 crashes
24 crashes
11 crashes
10 crashes
4 crashes
Gandy Blvd N
600
92
Savona Dr
N Frontage Rd
S Frontage
Gandy Blvd N
4th St N
Derby Lane
San Martin Blvd NE
2nd St N
Sun Isle Dr NE
Rattlesnak
2017 Crashes
Sparse
Dense
US 92/SR 600/GANDY BLVD (SWAT)
2017 Crashes
0 500 1,000
Feet
Data Source:
ESRI, FDOT SSOGis
N
W
E
S



FDOT

2018 Crashes
Sparse
Dense

US 92/SR 600/GANDY BLVD (SWAT)
2018 Crashes

0 500 1,000
Feet

Data Source:
ESRI, FDOT SSOGis

N
W E
S



FDOT

2019 Crashes

Sparse

Dense

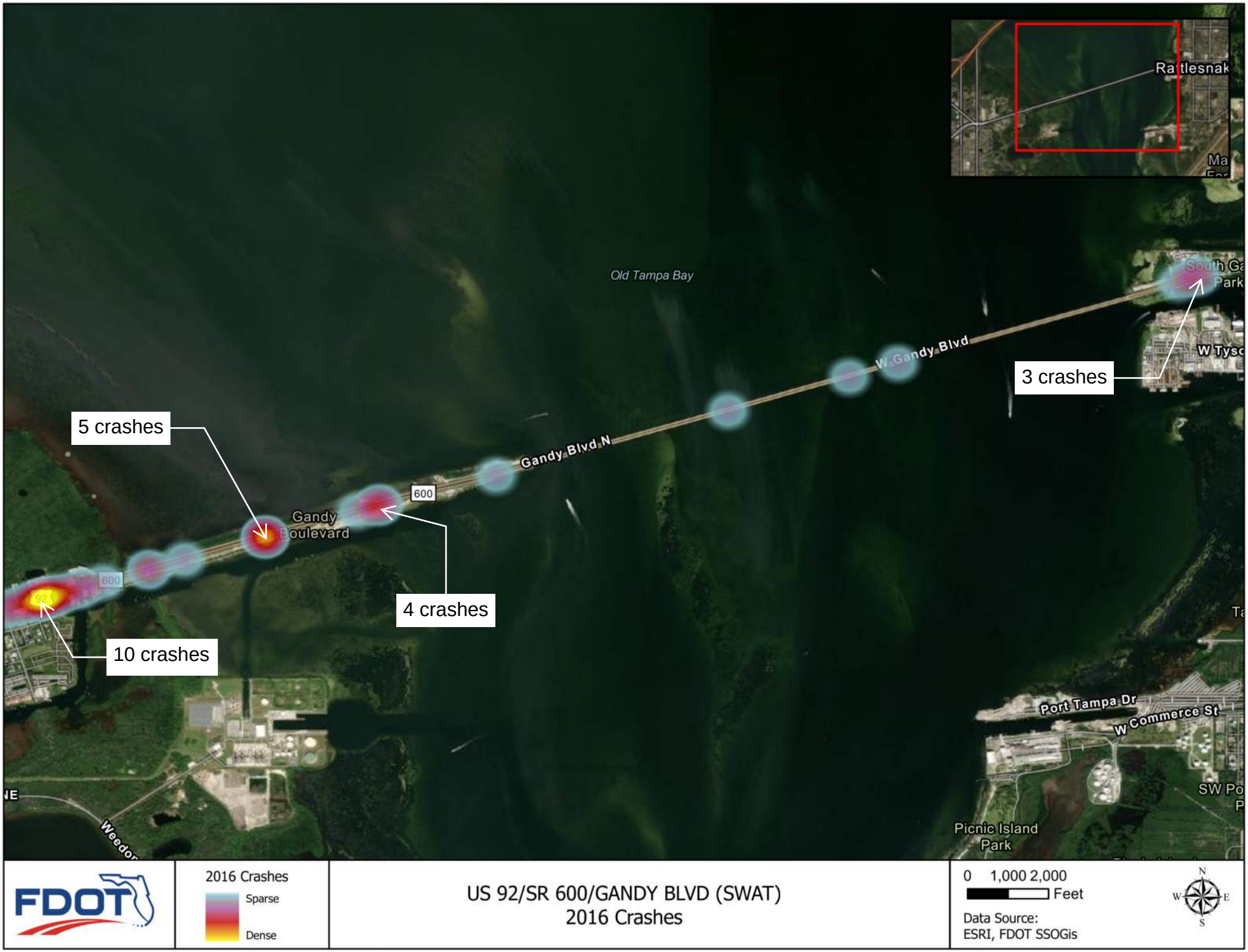
US 92/SR 600/GANDY BLVD (SWAT)
2019 Crashes

0 500 1,000 Feet

Data Source:
ESRI, FDOT SSOGis

N W E S


6 crashes
6 crashes
Old Tampa Bay
W Gandy Blvd
Gandy Blvd N
Gandy Boulevard
600
92
Port Tampa Dr
W Commerce St
Picnic Island Park
Weedon
2015 Crashes
Sparse
Dense
US 92/SR 600/GANDY BLVD (SWAT)
2015 Crashes
0 1,000 2,000
Feet
Data Source:
ESRI, FDOT SSOGis
N
W
E
S


Old Tampa Bay
W Gandy Blvd
Gandy Blvd N
600
Gandy Boulevard
Port Tampa Dr
W Commerce St
Picnic Island Park
3 crashes
5 crashes
4 crashes
10 crashes
2016 Crashes
Sparse
Dense
US 92/SR 600/GANDY BLVD (SWAT)
2016 Crashes
0 1,000 2,000
Feet
Data Source:
ESRI, FDOT SSOGis


3 crashes
3 crashes
3 crashes
Old Tampa Bay
Gandy Blvd N
Gandy Boulevard
600
92
Port Tampa Dr
W Commerce St
Picnic Island Park
Rattlesnak
2017 Crashes
Sparse
Dense
US 92/SR 600/GANDY BLVD (SWAT)
2017 Crashes
0 1,000 2,000
Feet
Data Source:
ESRI, FDOT SSOGis
N
W
E
S


5 crashes
5 crashes
8 crashes
Old Tampa Bay
W Gandy Blvd
Gandy Blvd N
600
600
Port Tampa Dr
W Commerce St
Picnic Island Park
Rattlesnak
South Ga Park
W Tysc
SW Po
Weedon
FDOT
2018 Crashes
Sparse
Dense
US 92/SR 600/GANDY BLVD (SWAT)
2018 Crashes
0 1,000 2,000
Feet
Data Source:
ESRI, FDOT SSOGis
N
W
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S



FDOT

2019 Crashes

Sparse

Dense

US 92/SR 600/GANDY BLVD (SWAT)
2019 Crashes

0 1,000 2,000

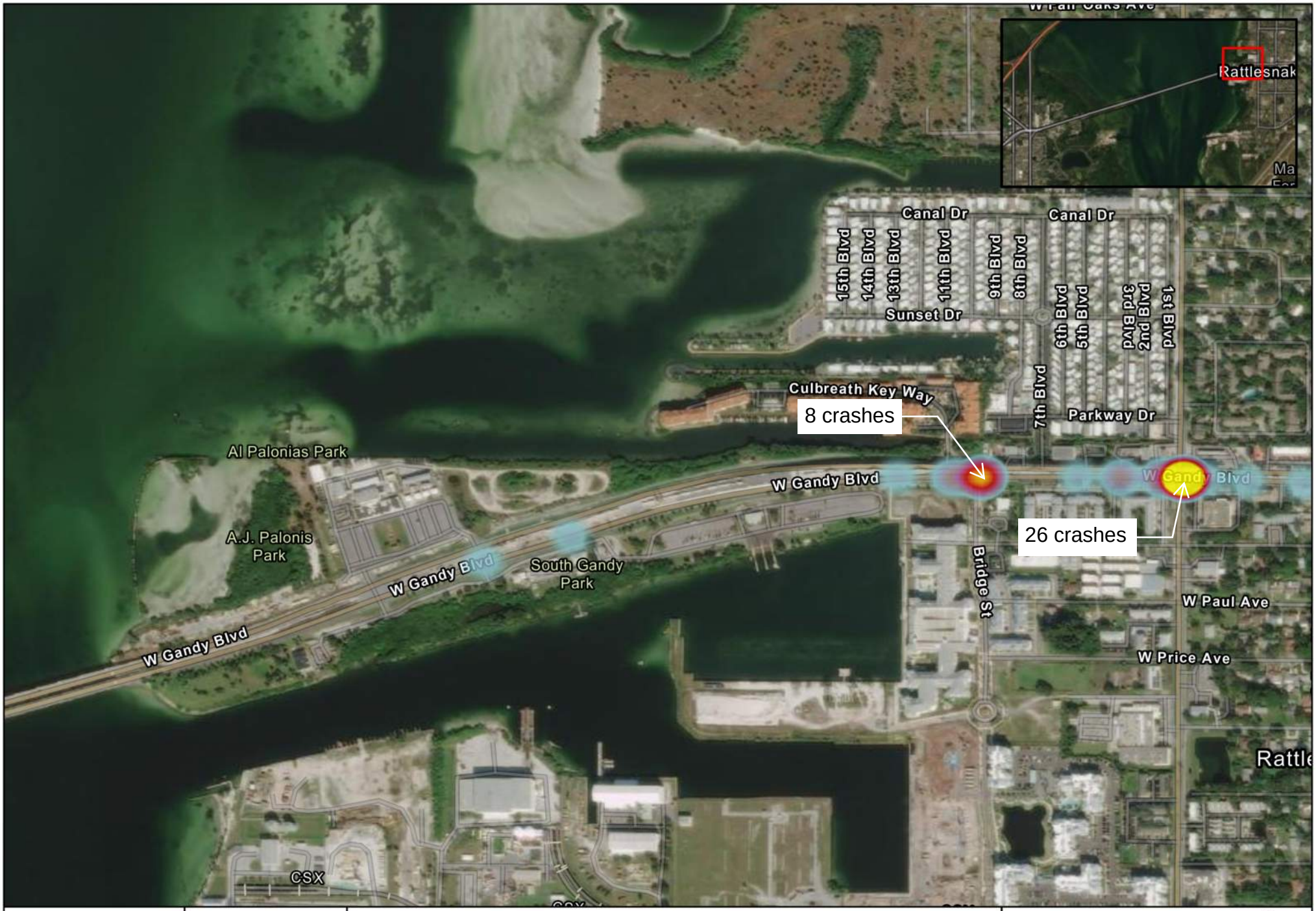
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FDOT

2015 Crashes

Sparse

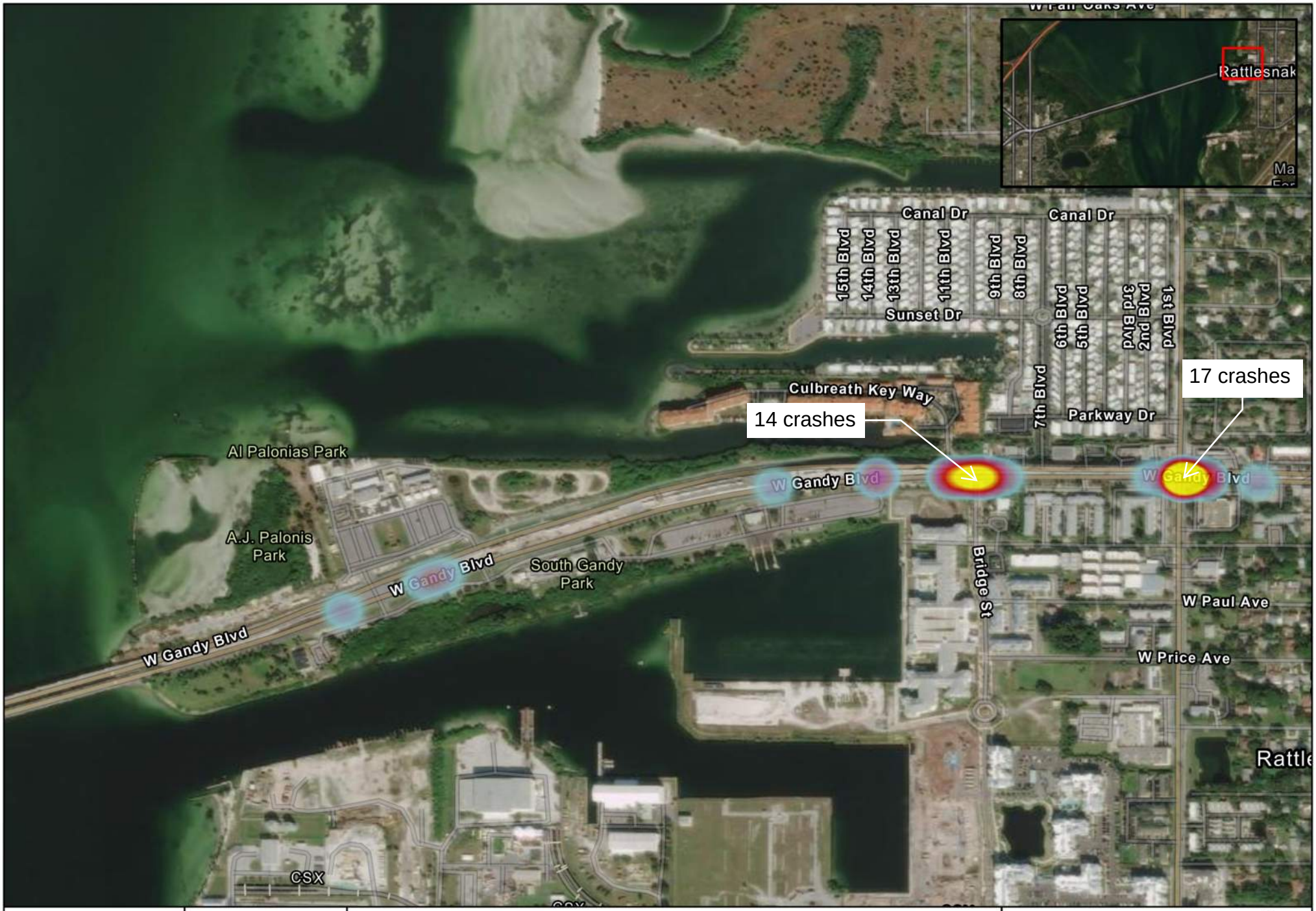
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US 92/SR 600/GANDY BLVD (SWAT)
2015 Crashes

0 250 500
Feet

Data Source:
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N
W E
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FDOT

2016 Crashes

Sparse

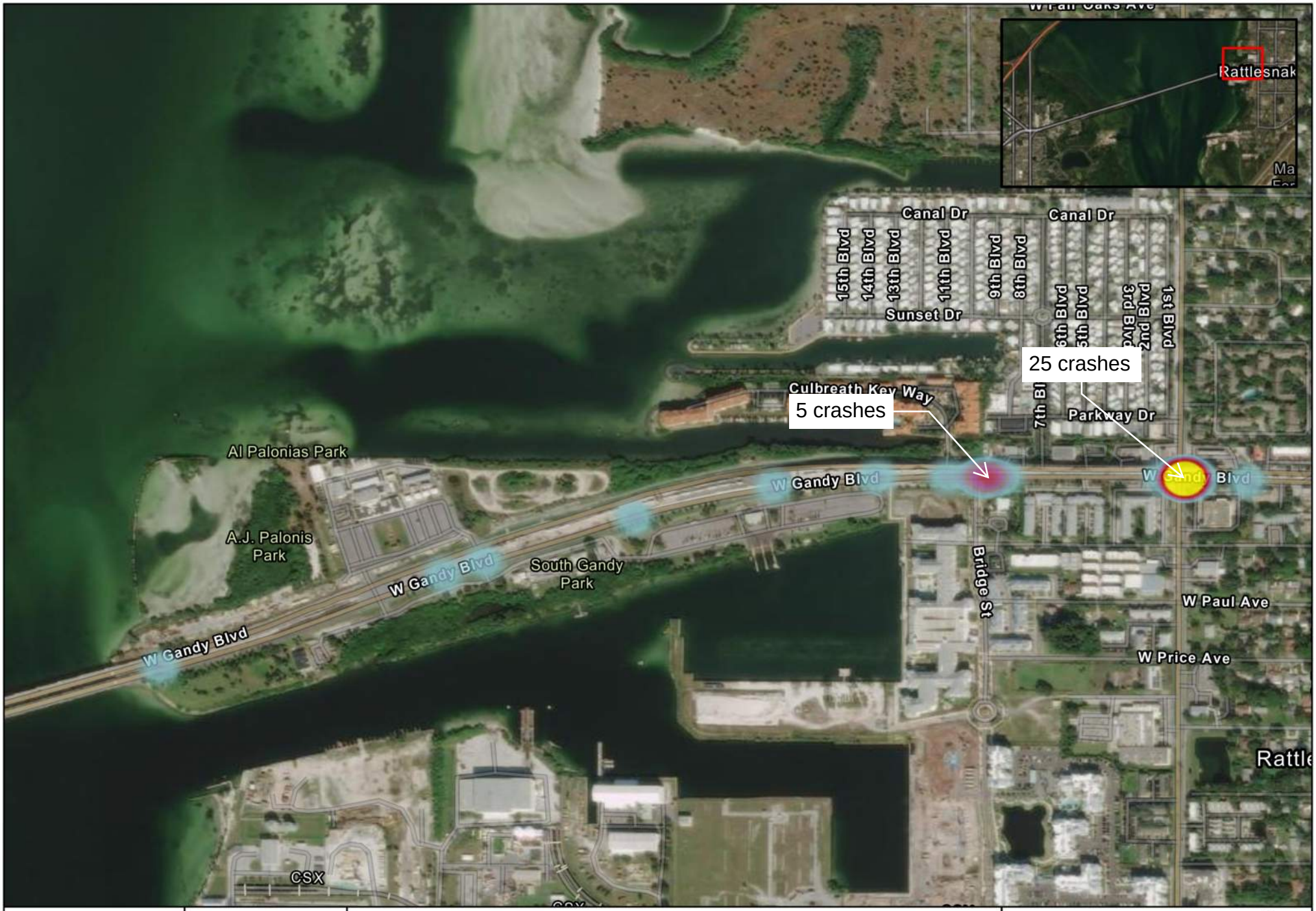
Dense

US 92/SR 600/GANDY BLVD (SWAT)
2016 Crashes

0 250 500
Feet

Data Source:
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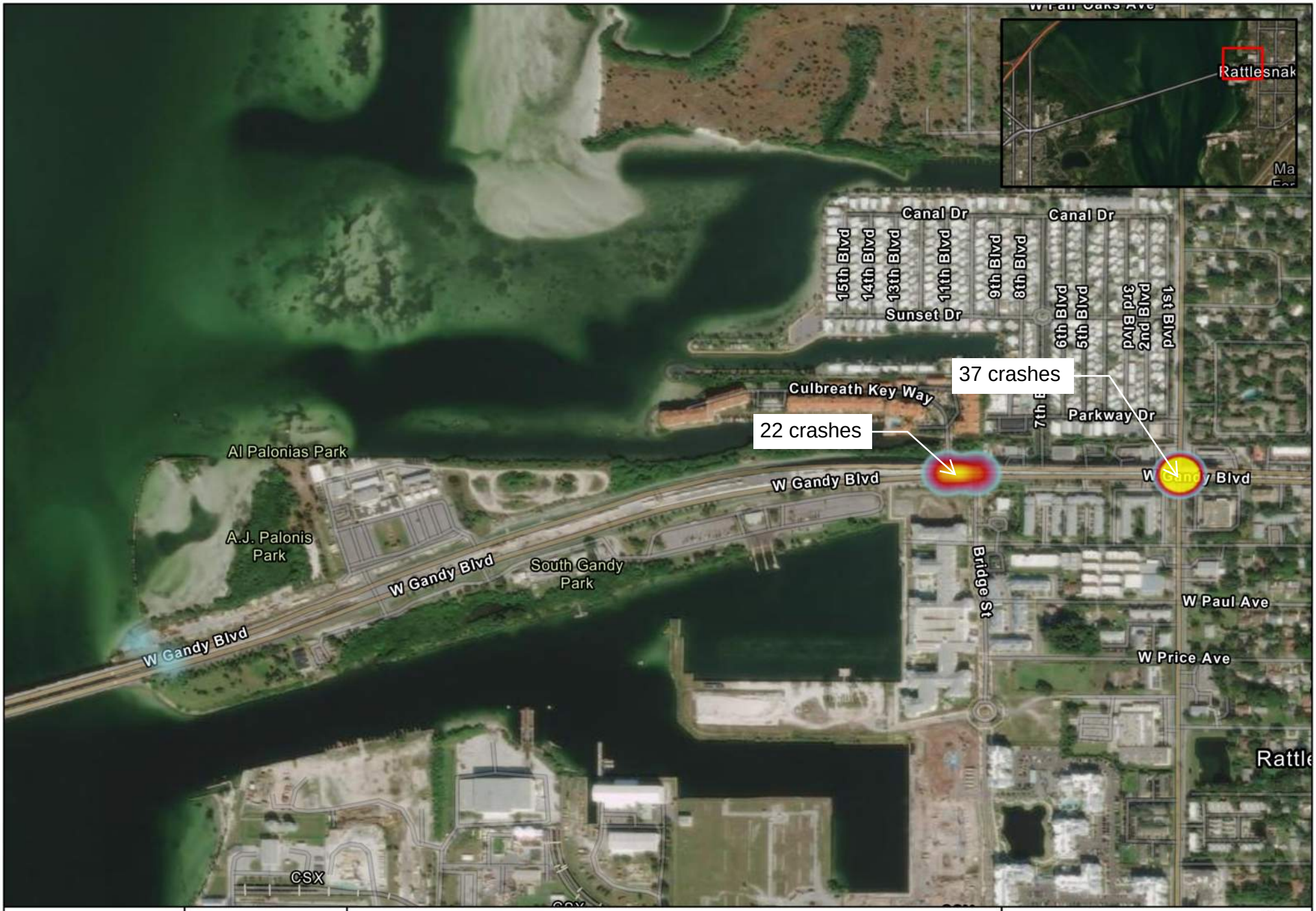
FDOT

2017 Crashes
Sparse
Dense

US 92/SR 600/GANDY BLVD (SWAT)
2017 Crashes

0 250 500
Feet

Data Source:
ESRI, FDOT SSOGis



FDOT

2018 Crashes

Sparse

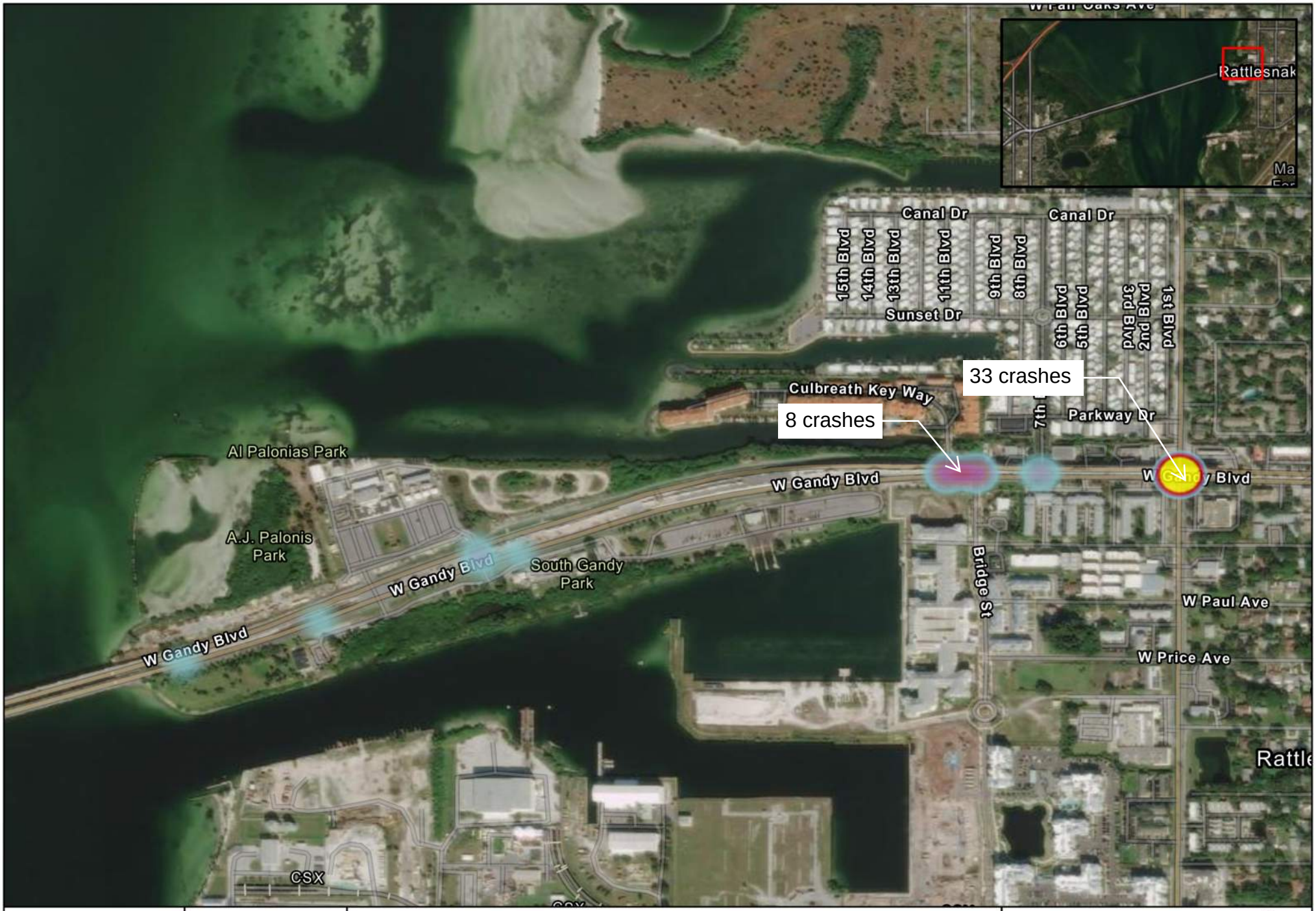
Dense

US 92/SR 600/GANDY BLVD (SWAT)
2018 Crashes

0 250 500 Feet

Data Source:
ESRI, FDOT SSOGis

N W E S


Rattlesnak
Canal Dr
Canal Dr
15th Blvd
14th Blvd
13th Blvd
11th Blvd
9th Blvd
8th Blvd
6th Blvd
5th Blvd
3rd Blvd
2nd Blvd
1st Blvd
Sunset Dr
33 crashes
8 crashes
Culbreath Key Way
7th
Parkway Dr
Al Palonias Park
W Gandy Blvd
A.J. Palonis Park
W Gandy Blvd
South Gandy Park
W Gandy Blvd
Bridge St
W Paul Ave
W Price Ave
CSX
2019 Crashes
Sparse
Dense
US 92/SR 600/GANDY BLVD (SWAT)
2019 Crashes
0 250 500
Feet
Data Source:
ESRI, FDOT SSOGis
N
W
E
S

Appendix F:
FDOT FDM Table 122.6.2

When utilizing predictive methods or crash severity distributions for analysis, the following crash severity level costs should be used:

Table 122.6.2 FDOT KABCO Crash Costs

Crash Severity	Comprehensive Crash Cost
Fatal (K)	$10,890,000
Severe Injury (A)	$888,030
Moderate Injury (B)	$180,180
Minor Injury (C)	$103,950
Property Damage Only (O)	$7,700

Note:

(1) Source: Florida Department of Transportation State Safety Office's Crash Analysis Reporting (CAR) System, analysis years 2015 through 2019. Published by FDOT State Safety Office on 2/23/2022.

122.6.2 Roadside Safety Analysis Program (RSAP)

This method complements the ***AASHTO Roadside Design Guide***, dated June 2011. When hazards cannot be removed or relocated, designers need to determine if a safety device, such as a guardrail or a crash cushion, is warranted to protect motorists from the roadside obstacle. This method can be used to perform a benefit/cost analysis comparing a potential safety treatment with the existing or baseline conditions (i.e., the do-nothing option) or alternative safety treatments. Based on the input of information available to the user (e.g., offsets, traffic, slopes, crash history, traffic accident severity levels), the program will offer results which can be used in comparing design alternatives.

122.6.3 Highway Safety Manual

The ***AASHTO Highway Safety Manual (HSM)*** provides analytical tools and techniques for quantifying the potential effects on crashes as a result of decisions made in planning, design, operations, and maintenance. The new techniques and knowledge in the HSM reflect the evolution in safety analysis from descriptive (historical) methods to quantitative, predictive analyses. In the ***HSM***, crash frequency is the fundamental basis for safety analysis and is used to reduce crashes and severities through the selection of alternative treatments.

Appendix G:

Project Traffic Forecasting Memorandum

Project Traffic Forecasting Memorandum

Gandy Boulevard (US 92/SR 600)
from 4th Street to Westshore Boulevard
Project Development and Environment Study

Pinellas & Hillsborough Counties, Florida

Financial Project ID: 441250-1-22-01
Federal Aid Project No. TBD

ETDM #14335

Prepared for:

Florida Department of Transportation
District Seven

January 2023

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D – TBRPM Assignment Growth
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1 Introduction

1.1 Project Description

The Florida Department of Transportation (FDOT), District 7, is conducting a Project Development and Environment (PD&E) study to evaluate improvements to US 92/SR 600/Gandy Boulevard including roadway widening, bridge widening and replacement, new stormwater management facilities, and pedestrian and bicycle accommodations. The limits of the study are from 4th Street in St. Petersburg (Pinellas County) to Westshore Boulevard in Tampa (Hillsborough County), a distance of approximately 7.0 miles. The project study area and project limits are shown in **Figure 1-1**. The project is located in Sections 7 and 8 of Township 30 South, Range 18 East, and Sections 15, 16, 17, 18, and 19 of Township 30 South, Range 17 East. The results of the study will aid FDOT District 7 and the FDOT Office of Environmental Management (OEM) in deciding the location and design concept for the proposed improvements.

The project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process as project #14335. An ETDM *Programming Screen Summary Report* containing comments from the Environmental Technical Advisory Team (ETAT) was published on November 8, 2018. The ETAT evaluated the project's effects on various natural, physical, and social resources.

1.2 Project Purpose and Need

The purpose of this project is to reduce traffic congestion and improve pedestrian and bicycle accommodations on Gandy Boulevard. This project is intended to address current and future traffic demand by improving roadway capacity and to address pedestrian and bicycle accommodations with potential connectivity over Old Tampa Bay. According to the Pinellas Metropolitan Planning Organizations Bicycle Pedestrian Master Plan, construction of bike lanes and a trail from 4th Street to west of San Martin Boulevard is planned. The Duke Energy/Pinellas Loop from 28th Street to San Martin Boulevard is also planned.

1.3 Proposed Action

The proposed action is to reduce traffic congestion and improve pedestrian and bicycle accommodations by reconstructing Gandy Boulevard to provide a controlled access roadway mainline separated from local traffic in frontage roads with multi-use trails on both sides of the corridor for pedestrians and bicyclists. The proposed action will also widen the existing westbound Gandy bridge to accommodate a third travel lane and construct a new bridge to provide a wider structure for three travel lanes and a multi-use trail.

1.4 Existing Facility and Project Segments

Gandy Boulevard is part of FDOT's Strategic Intermodal System (SIS) and a designated hurricane evacuation route. FDOT's functional classification for Gandy Boulevard is an urban principal arterial-other roadway. The following five (5) study intersections have been defined for the project:

- 4th Street and North Frontage Road
- 4th Street and South Frontage Road
- Gandy Boulevard and Brighton Bay Boulevard
- Gandy Boulevard and San Martin Boulevard/Mangrove Cay Lane
- Gandy Boulevard and Westshore Boulevard

There are differences in existing roadway typical sections along the project, which merited the division of the project into three segments for the purpose of evaluating future traffic capacity needs. These segments are shown in **Figure 1-1**, and their characteristics described below.

Segment 1

Segment 1 (Pinellas Segment) begins at the western project limit at 4th Street and extends 3.5 miles to the west end of the Gandy Bridges over Old Tampa Bay in Pinellas County. Within Segment 1, the existing facility consists of a four-lane divided roadway with a varying median width (40 feet minimum), four 12-foot travel lanes, paved outside shoulders (four-foot minimum) designated for bicycle use, intermittent sidewalk segments, a 12-foot multi-use trail on the north side, and open ditches along the outside. The existing right-of-way (ROW) width varies in Segment 1 with a minimum width of 172 feet. There are numerous side street and driveway connections to the residential and business land uses between 4th Street and San Fernando Drive. The surrounding land use changes to an undeveloped causeway section for the remaining limits of Segment 1.

Segment 2

Segment 2 (Bay Segment) includes the Gandy Bridges over Old Tampa Bay. The existing eastbound bridge (#100300), constructed in 1975, and existing westbound bridge (#100585), constructed in 1996, extend approximately 2.5 miles. Both the existing eastbound and westbound bridges consist of two 12-foot travel lanes, a six-foot inside shoulder, and a ten-foot outside shoulder. The westbound bridge was designed to accommodate an additional travel lane by widening on both sides of the bridge. Currently, neither the eastbound or westbound bridge provides pedestrian or bicycle accommodations.

Segment 3

Segment 3 (Hillsborough Segment) begins at the east end of the Gandy Bridges over Old Tampa Bay and extends for approximately one mile to Westshore Boulevard in Hillsborough County. Within Segment 3, the existing facility consists of a four-lane divided roadway with a varying median width, and it consists of two typical sections. The first existing typical section extends from the east end of the bridges to the Gandy Boat Ramp turnout and has 11-foot travel lanes, varying paved inside shoulder widths, and ten-foot paved outside shoulders with open ditches on the outside and a 12-foot multi-use trail on the south side. For the rest of Segment 3, the typical

section transitions from open ditches to an urban curb and gutter section with ten-foot inside travel lanes, 11-foot outside travel lanes, and two six-foot sidewalks on the outside. The median width varies along the segment. The existing ROW also varies within Segment 3 with a minimum width of 100 feet.

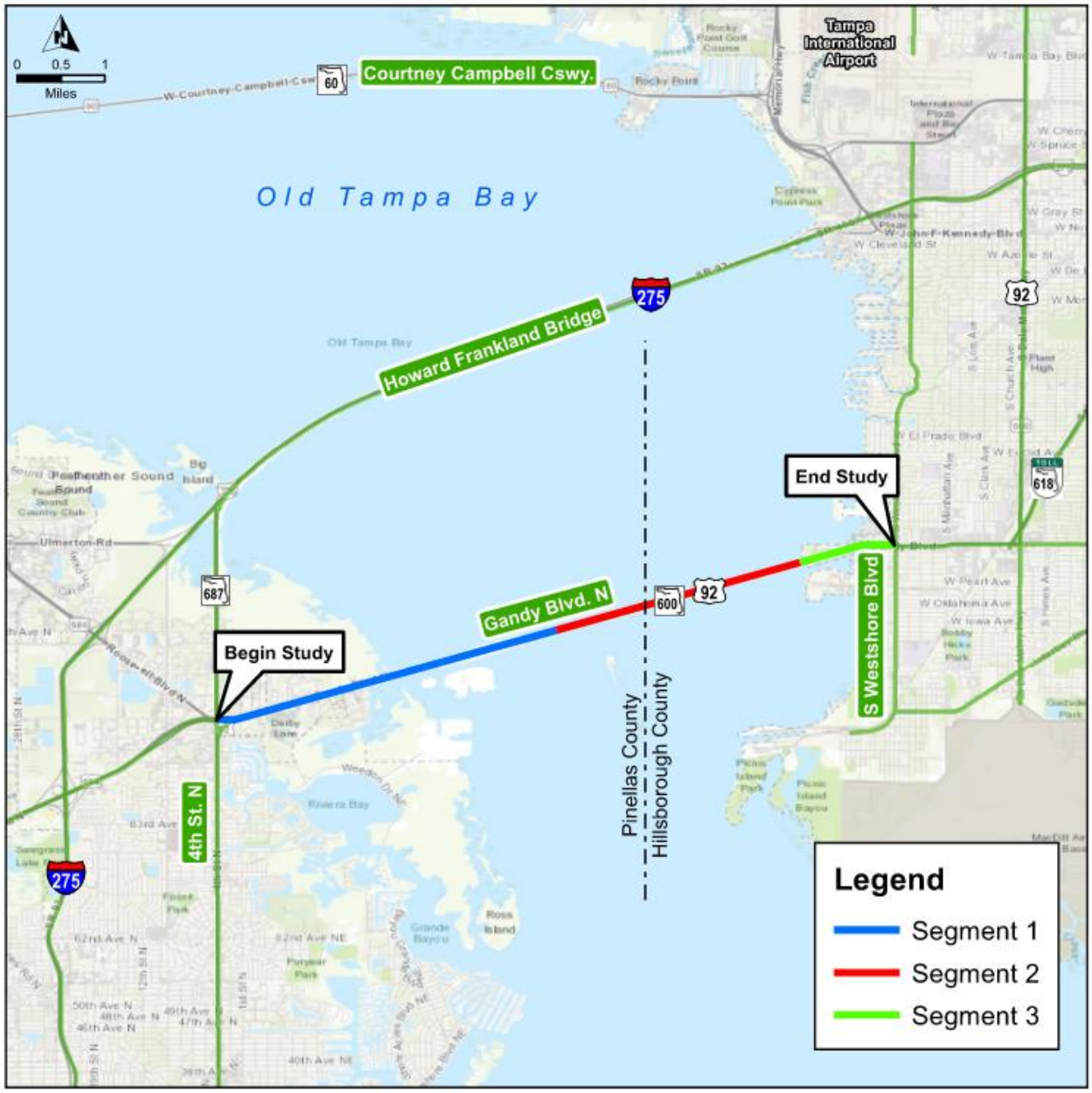


Figure 1-1 Project Location Map

1.5 Analyzed Alternatives

1.5.1 No Build Alternative

Throughout this study, a "no build" or "no action" alternative is also considered in addition to the build alternatives. The "no build" alternative proposes no capacity or operational improvements to the existing Gandy Boulevard. Only routine roadway and bridge maintenance activities would be conducted along the limits of the project.

The no build alternative results in no additional ROW, thus avoiding environmental impacts, and no new construction costs. However, it does not accomplish the purpose and need for this project.

1.5.2 Build Alternative

Consistently with the differences in existing roadway geometry along the project, which merited the division of the project into three segments, typical sections were developed for each specific segment as detailed in the following sections.

1.5.2.1 Segment 1

Typical Section 1

The Build Alternative for Segment 1 (Pinellas Segment) includes three typical sections. Typical Section 1 is proposed from 4th Street to west of Brighton Bay Boulevard and from east of San Martin Boulevard to approximately 3,000 feet east of San Fernando Drive. Typical Section 1 consists of a controlled access facility with two 12-foot travel lanes in each direction, varying inside shoulders widths (four feet to eight feet paved), ten-foot paved outside shoulders, and a 46-foot depressed median separated by guardrail. The proposed median width allows for future widening to the inside if additional travel lanes are needed. The local traffic will be accommodated along eastbound and westbound one-way frontage roads consisting of two 11-foot travel lanes with curb and gutter. Twelve-foot multi-use trails are proposed along the outside of the frontage roads on both sides of the corridor as shown in **Figure 1-2**. Typical Section 1 will require ROW acquisition to the south side of Gandy Boulevard approaching Brighton Bay Boulevard, which varies from zero to 119 feet. The alignment shifts from the south to the north through the San Martin Boulevard intersection heading east where the ROW acquisition varies from zero to 80 feet.

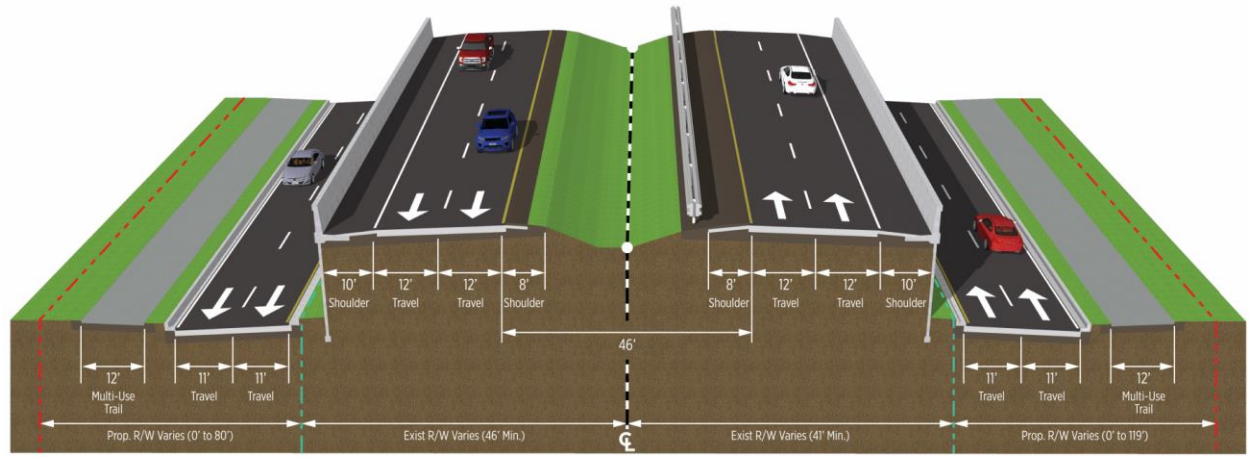


Figure 1-2 Segment 1: Typical Section 1

Typical Section 2

Typical Section 2 is proposed from west of Brighton Bay Boulevard to east of San Martin Boulevard and consists of a centered elevated viaduct with frontage roads on both sides. The viaduct consists of four 12-foot travel lanes separated by a concrete barrier wall with six-foot inside shoulders and ten-foot outside shoulders. The bridge concept would be widened to the outside if additional lanes are needed in the future. The eastbound and westbound frontage roads consist of two 11-foot travel lanes with curb and gutter. Twelve-foot multi-use trails are proposed along the outside of the frontage roads on both sides of the corridor as shown in **Figure 1-3**. Typical Section 2 will require ROW acquisition along the north side of Gandy Boulevard varying from zero to 119 feet.

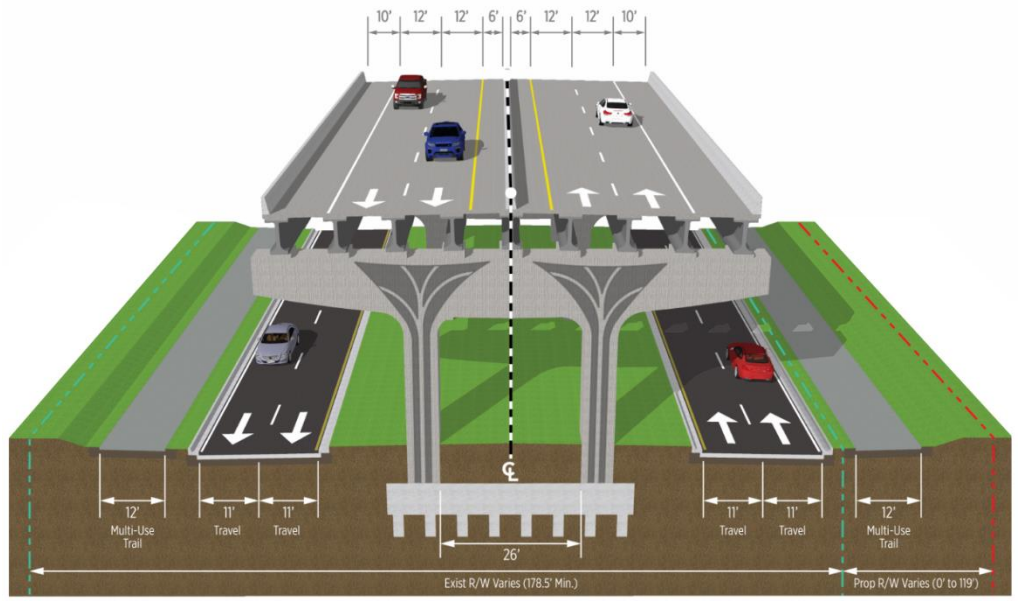


Figure 1-3 Segment 1: Typical Section 2

Typical Section 3

Typical Section 3 is proposed from approximately 3,000 feet east of San Fernando Drive to the west end of the Gandy Bridges. An additional travel lane in either direction is developed from the direct connect access ramps from the local frontage roads creating a six-lane typical section throughout the causeway which continues east over the Gandy Bridges. Typical Section 3 consists of a controlled access roadway with three 12-foot travel lanes in each direction, ten-foot paved inside shoulders, and ten-foot paved outside shoulders with barrier wall in each direction The median transitions from 46 feet to 22 feet with opposing travel lanes separated by median barrier wall. One-lane frontage roads are proposed on the outside of the controlled access roadway in each direction with a 15-foot travel lane, varying outside shoulder widths (sever feet to nine feet paved), curb and gutter, and a 12-foot multi-use trail. Typical Section 3 is proposed within the existing ROW as shown in **Figure 1-4.**

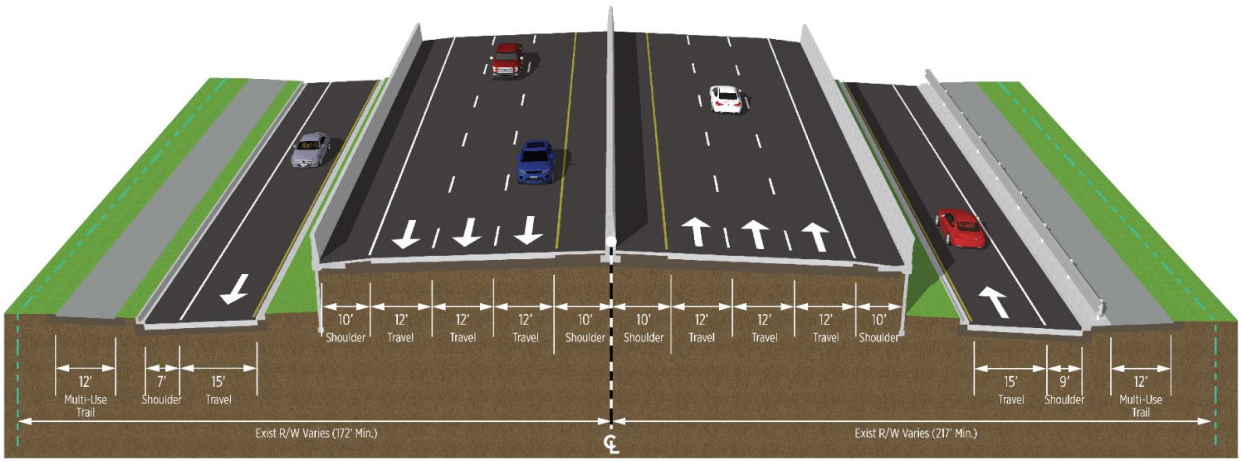


Figure 1-4 Segment 1: Typical Section 3

1.5.2.2 Segment 2

Typical Section 4

The Build Alternative for Segment 2 (Bay Segment) includes Typical Section 4 with three eastbound travel lanes, three westbound travel lanes, and a multi-use trail on the north side of the westbound bridge. As part of the Build Alternative, the existing eastbound bridge (#100300) will be demolished. The existing westbound bridge (#100585) will be widened to both the north and south sides and placed into service as the eastbound bridge. The widened bridge (#100585) will consist of three 12-foot travel lanes and ten-foot inside and outside shoulders. A new westbound bridge will be constructed on the north side of the widened bridge. The new westbound bridge will consist of three 12-foot travel lanes, ten-foot inside and outside shoulders, and a 16-foot multi-use trail separated by barrier wall as shown in **Figure 1-5**. The typical section includes an 88-foot median with approximately 65 feet of separation between the two bridges for constructability. The proposed bridge improvements over Old Tampa Bay are within the existing sovereign submerged lands authorized by Tampa Port Authority.

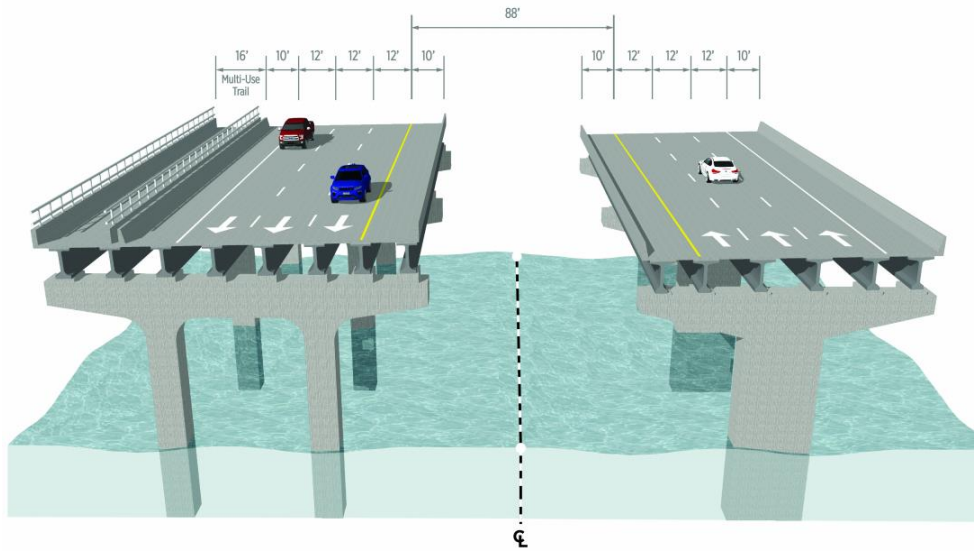


Figure 1-5 Segment 2: Typical Section 4

1.5.2.3 Segment 3

Typical Section 5

The Build Alternative for Segment 3 (Hillsborough Segment) provides a four-lane and six-lane divided typical section. Typical Section 5 is proposed between the east end of the Gandy Bridges and approximately 1,800 feet west of Bridge Street where the Selmon Expressway (SR 618) two-lane elevated viaduct begins in the median. Typical Section 5 consists of three 12-foot travel lanes in each direction, ten-foot paved inside shoulders bordered with guardrail and barrier wall, and ten-foot paved outside shoulders with barrier wall. The inside travel lanes become auxiliary lanes and serve as the entrance and exit lanes for the Selmon Expressway viaduct in the median which function as general use lanes across the Gandy Bridges. A 12-foot-wide multi-use trail is proposed on both sides of the roadway. A two-lane, two-way frontage road, with 12-foot travel lanes and curb and gutter is proposed on the north side of Gandy Boulevard as shown in **Figure 1-6**.

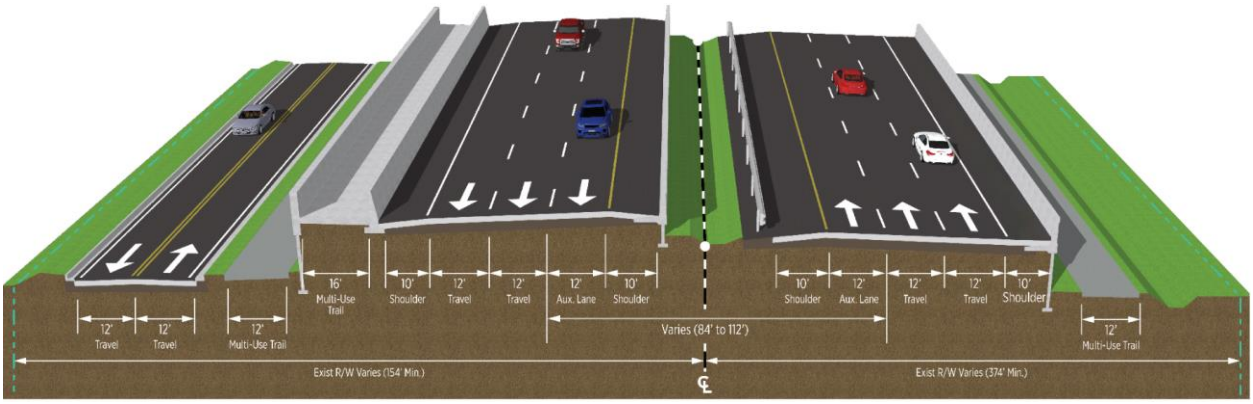


Figure 1-6 Segment 3: Typical Section 5

Typical Section 6

Typical Section 6 is proposed from approximately 1,800 feet west of Bridge Street to Westshore Boulevard. The proposed improvements within the limits of Typical Section 6 are limited to intersection and access management improvements, and auxiliary lane development to connect the proposed relocated Gandy Boat Ramp turnout approximately 800 feet west of Bridge Street. The proposed typical section will match the existing roadway with a four-lane divided roadway, ten-foot inside travel lanes, and 11-foot outside travel lanes in each direction. Typical Section 6 will accommodate the existing Selmon Expressway two-lane viaduct within the median with intermittent bridge piers. (**Figure 1-7**). The Segment 3 improvements are proposed within the existing roadway ROW.

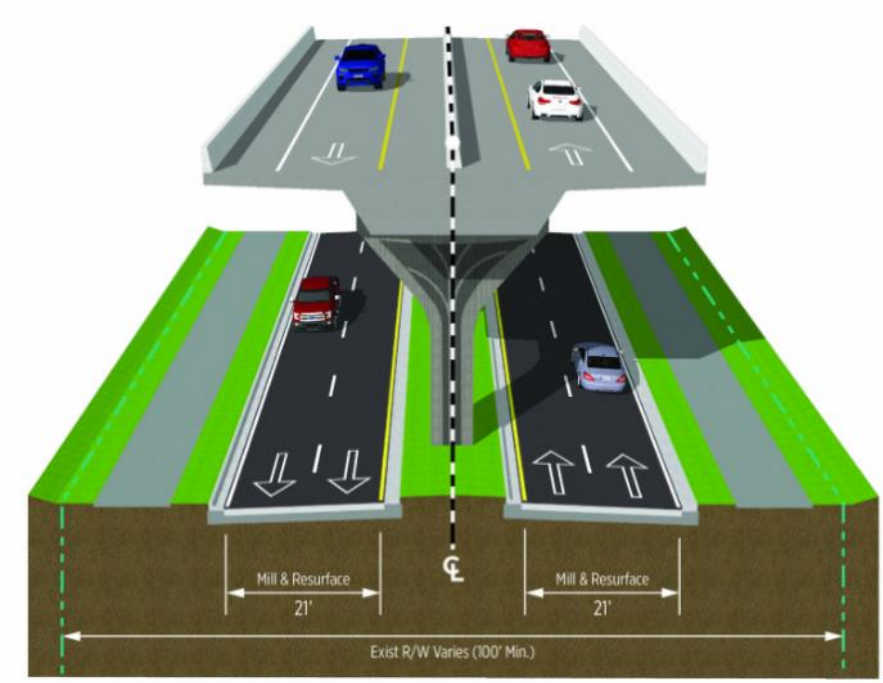


Figure 1-7 Segment 3: Typical Section 6

The Build Alternative concept is included in Appendix A.

1.6 Purpose of Report

The purpose of this memorandum is to present the project traffic forecasting for the US 92/SR 600/Gandy Boulevard PD&E Study, which is being conducted according to the Statewide Acceleration Transformation (SWAT) process. This memorandum includes the Opening Year (2030) and Design Year (2050) Annual Average Daily Traffic (AADT) and Directional Design Hour Volumes (DDHVs) for the No Build and Build alternatives. The Turning Movement Volumes (TMVs) for the study intersections, as well as the methodology followed to develop the traffic forecast are also provided herein. All volumes have been rounded in accordance with standards published in FDOT's *2019 Project Traffic Forecasting Handbook*.

2 Travel Demand Model Subarea Validation

The Tampa Bay Regional Planning Model (TBRPM) Version 9.1 (v9.1) was the adopted travel demand model for this study area. The TBRPM v9.1 is a time-of-day based four-step model with Base Year 2015 and Horizon Year (Cost Affordable Year) 2045.

2.1 Base Year Model Review and Update

To assess the TBRPM's performance and adequacy for the Gandy Boulevard PD&E Study, a project subarea was defined as shown in **Figure 2-1**. The subarea extends to include I-275 in the west, the Howard Frankland Bridge to the north, and in the southeast the limits capture the peninsula that divides Old Tampa Bay from Hillsborough Bay and includes MacDill Air Force Base and the southern portion of the Selmon Expressway.

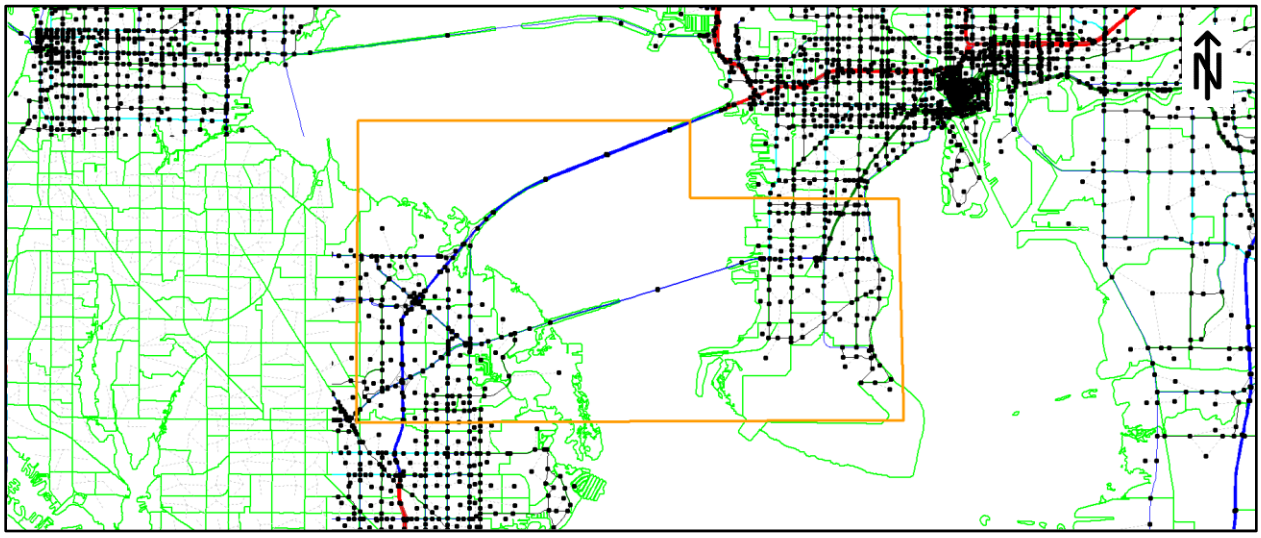


Figure 2-1 TBRPM V9.1 Subarea

The highway network within the subarea was reviewed, particularly along the project corridor and cross streets. While the Base Year model highway network was determined to be generally consistent with the Year 2015 geometry, an improvement was identified to more accurately represent the highway network, and more specifically the connectivity between Gandy Boulevard from/to the south on the Pinellas County side of the bridge east of San Martin Boulevard NE. **Figure 2-2** shows the location of the connector that was added between the centroid of TAZ 1556 and Gandy Boulevard. The added connector represents the network of minor access roadways and driveways within the Traffic Analysis Zone (TAZ) that provide access to Gandy Boulevard including Snug Harbor Road and San Fernando Drive.

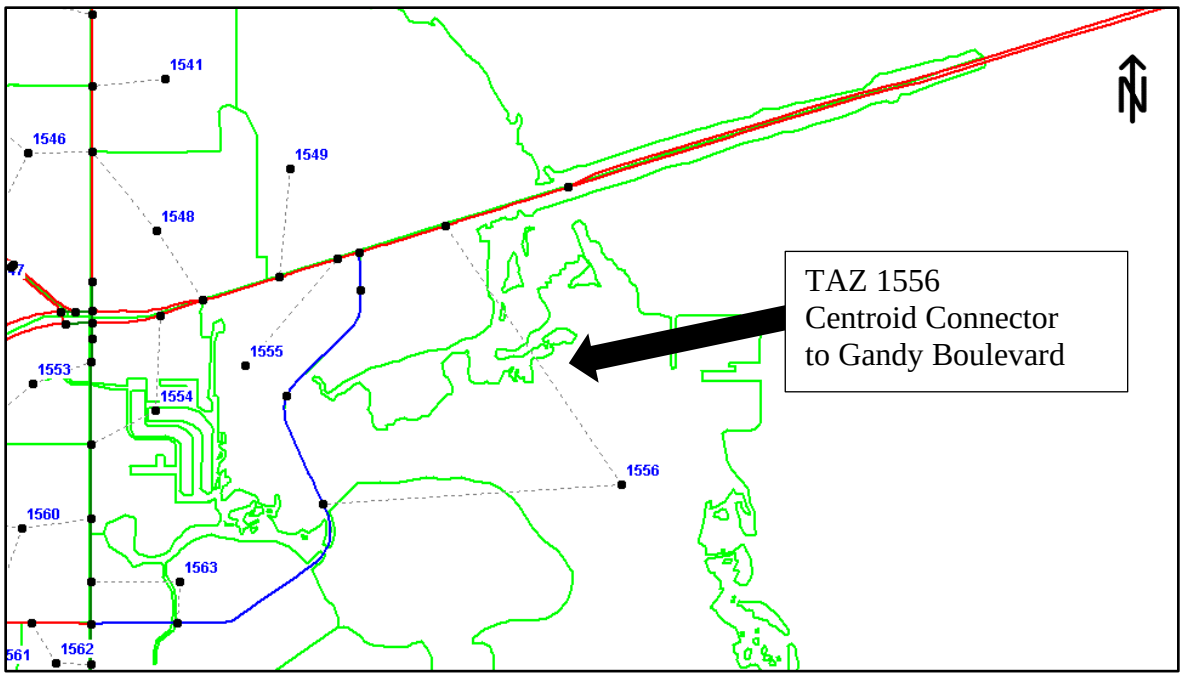


Figure 2-2 TAZ 1556 Centroid Connector to Gandy Boulevard.

To assess the reasonableness of the TBRPM v9.1 Base Year 2015 highway assignment output, the 2015 Peak Season Weekday Average Daily Traffic (PSWADT) volumes generated by the model were compared with 2015 PSWADT counts using scatterplots and standard validation measures such as the Coefficient of Determination (R^2), Volume-over-Count ratio (V/C), and Root Mean Squared Error Percent (RMSE%). The validation for the subarea was performed on a daily basis and for different facility types, as follows:

- Freeways (FT1x, FT9x)
- Divided and Undivided Arterials (FT2x, FT3x)
- Collectors (FT4x)
- Ramps (FT7x)
- All Facility Types

The scatterplot comparing the 2015 Base Year model highway assignment and PSWADT counts for all facility types is shown in **Figure 2-3**, while the rest of the facility type scatterplots are included in Appendix B. A summary of the additional validation measures by facility type is included in **Table 2-1**.

Table 2-1 Year 2015 Base Model Subarea Validation Results

Facility Type Group	Number of Count Locations	Y = (a)X	Coefficient of Determination (R^2)	Volume-over-Count Ratio	Root Mean Squared Error (RMSE) %
Freeways (FT1x, FT9x)	12	1	0.97	0.99	0.12
Divided and Undivided Arterials[1] (FT2x, FT3x)	24	0.96	0.83	0.96	0.21
Collectors (FT4x)	28	0.71	0.39	0.79	0.55
Ramps (FT7x)	29	0.89	0.8	0.95	0.32
All	**93**	**0.98**	**0.97**	**0.95**	**0.24**

[1] *Divided and Undivided Arterials were grouped together due to the insufficient sample size of count locations for undivided arterials in the subarea (namely 2).*

The subarea validation results were compared to corridor level standards published in FDOT's *2019 Project Traffic Forecasting Handbook* and the *FSUTMS-Cube Framework Phase II Model Calibration and Validation Standards*. The results show the model meets the preferable volume-over-count standards for the major facility types of freeways and arterials, namely (+ / - 5% and +/ - 7%). However, for collector facilities the model does not meet either the preferable (+ / - 10%) or acceptable (+ / - 15%) volume-over-count standards. In addition, it should be noted that validation standards are not specifically defined for ramps; however, they are included due to the significant number of count locations for this facility type within the subarea.

The other validation statistics shown in **Table 2-1**—Coefficient of Determination (R^2) and Percent Root Mean Squared Error (RMSE)—fall within equivalent acceptance levels by each facility group. Freeway and arterials are validated very well in the subarea, while collectors fall short. It is also noteworthy that this is typical behavior of many travel demand models, in that the higher the hierarchy of the facility, the better the fit in the validation process.

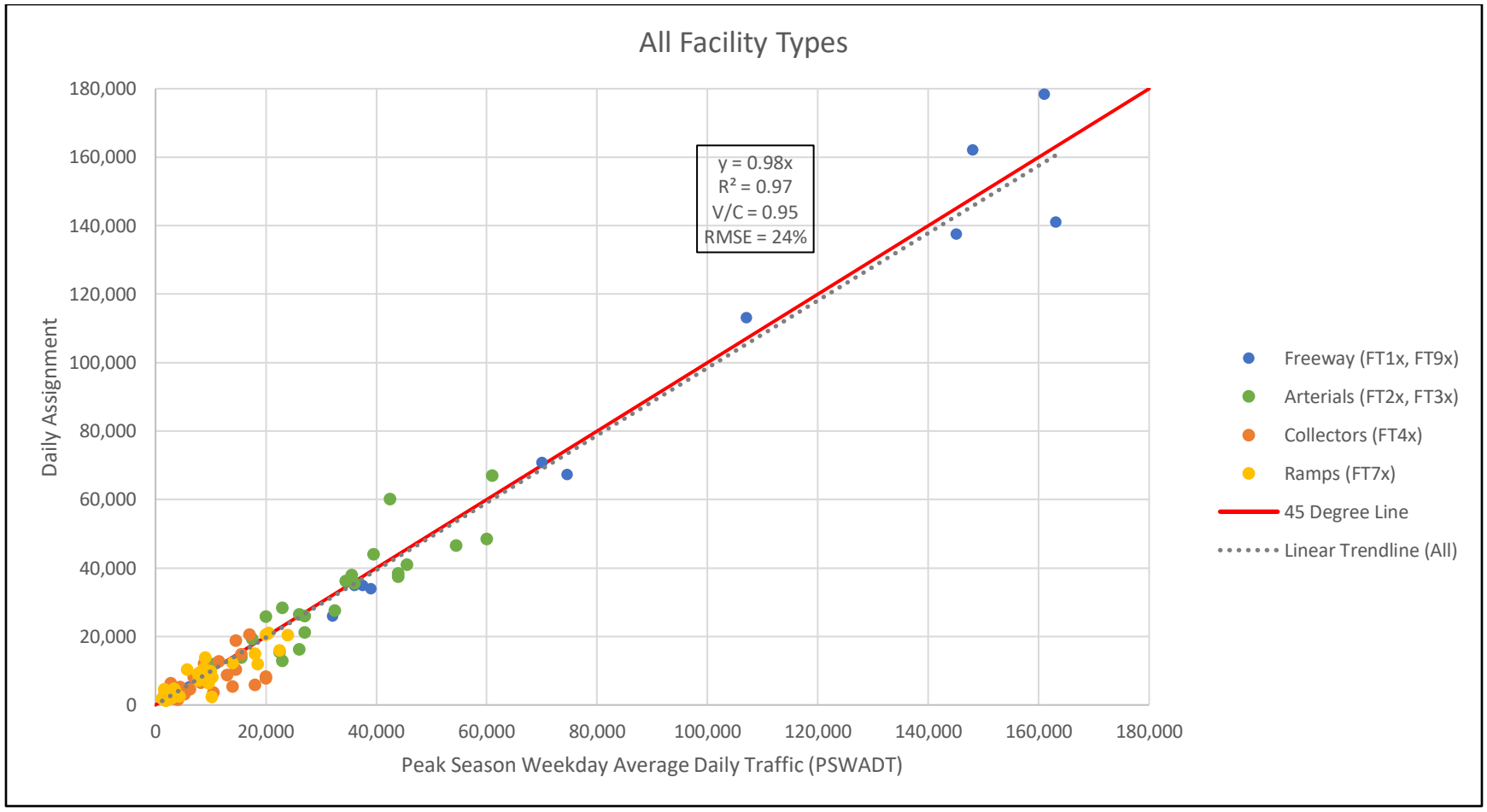


Figure 2-3 Year 2015 Base Model Highway Assignment (PSWADT) vs PSWADT Counts Scatterplot - All Facility Types

2.2 Horizon Year 2045 Model Review

For the Horizon Year 2045 Model, the model inputs and loaded highway network output were reviewed and assessed for reasonableness.

2.2.1 Socio-Economic Data

Recent committed development information was received from FDOT District 7 with public hearing dates in 2019/2020. **Table 2-2** shows the committed development information within the subarea.

Table 2-2 Committed Developments within the Subarea

Development	Address	Land Use	Structure Size	Additional Comments
Woodfield PD	5301 W Tyson Ave. Tampa, FL 33611	multifamily, specialty retail	332,884 SF / 299 units	1,000 SF retail (10-seat café), dock / pier with 15 marina slips
Tyson Ave	5105 W Tyson Ave. Tampa, FL 33611	residential	358 units (assume condos)	per traffic study: 80 townhomes, 350 multifamily dwelling units
Total: Approximately 700 new dwelling units in TAZ 527				

Both developments were determined to be in Traffic Analysis Zone (TAZ) 527 of the TBRPM v9.1. The location of TAZ 527 is shown in **Figure 2-4**.

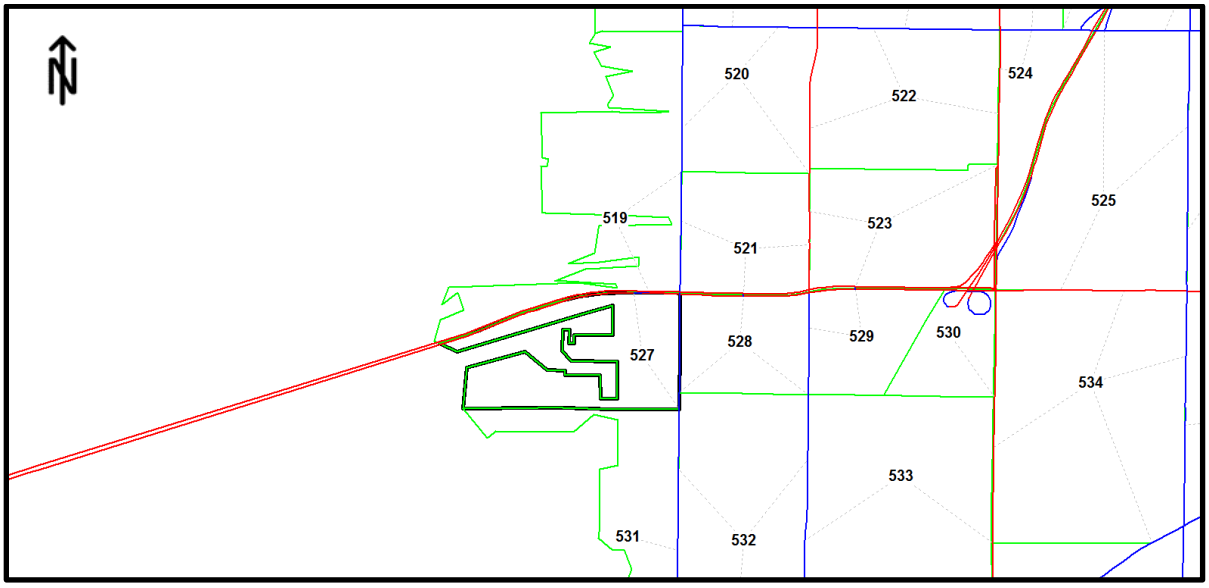


Figure 2-4 TAZ 527

In order to determine if the committed developments are included in the TBRPM v9.1, the socio-economic data of TAZ 527 was reviewed and compared for Base Year 2015 and Horizon Year 2045. **Table 2-3** shows a summary of the socio-economic data for TAZ 527.

Table 2-3 TBRPM v9.1 Socio-Economic Data for TAZ 527

Zonal Data (TAZ 527)		2015	2045	Increase 2015-2045
zdata1_{yr}{alt}.dbf	Dwelling Units	244	1,789	*1,545*
	Population	276	3,511	*3,235*
zdata2_{yr}{alt}.dbf	Employment	755	715	*(40)*

While approximately 700 new dwelling units are proposed in TAZ 527 for these two developments, an increase of 1,545 dwelling units are proposed in the subject TAZ in 2045 in comparison to Base Year 2015. In line with the dwelling units anticipated in the future horizon years of the TBRPM v9.1, increases in population are projected as well, while employment estimates are anticipated to remain similar to the 2015 Base Year. Therefore, no adjustments are warranted to the socio-economic data in the TBRPM v9.1 within the project study area, and the socio-economic data as contained in the TBRPM v9.1 was determined to be adequate as-is for the project traffic forecasting purposes.

2.2.2 Highway Network

The Base Year 2015 highway network refinement of adding TAZ 1556 Centroid Connector to Gandy Boulevard was carried over to the Horizon Year 2045 highway network. The updated 2045 model network was then re-run, reviewed for improvements, and visually assessed for reasonableness.

The Horizon Year 2045 model includes the recent improvements of implementing the uninterrupted facilities along Gandy Boulevard adjacent to the project corridor on either side – the 4th Street interchange in the west and the Selmon Extension in the east.

Upon review of the updated 2045 loaded highway network, it was discovered that a turn penalty carried over from the Base Year 2015 model network was causing a disproportion in the trips assigned between the new Selmon Extension and the existing at-grade facility of Gandy Boulevard near Westshore Boulevard in the project study area. This phenomenon was therefore brought to the attention of the TBRPM maintenance staff and taken into consideration during project traffic development.

At the conclusion of this validation process, the model was deemed acceptable for the forecast of travel demand in the project study area.

3 Project Traffic Development

3.1 Existing Year (2020) AADTs

The initial development of Annual Average Daily Traffic (AADT) from the project counts followed the procedures published in FDOT's *2019 Project Traffic Forecasting Handbook*. Daily traffic counts collected for the project were filtered down to include only typical weekdays (Tuesday/Wednesday/Thursday). Then, a Quality Assurance/Quality Control (QA/QC) process was performed to eliminate any days with atypical volumes, as compared to the count data from other days. Subsequently, 2020 AADTs were developed by averaging the daily counts and applying the appropriate traffic factors, namely the Seasonal Factor (SF) and Axle Correction Factor (ACF). It is important to note that the counts collected do not reflect the opening of the elevated section of the Selmon Expressway. This facility was under construction at the time data collection was performed.

In order to detect any effects that the Covid-19 pandemic had over the traffic volumes, the developed 2020 AADTs were compared to 2019 AADTs obtained from FDOT's *Florida Traffic Online (FTO)* at available locations within the study area. After discussions with FDOT, the volumes were assumed to be similar to pre-pandemic levels for a more conservative approach. It was also determined that no further adjustment was needed to the 2020 AADTs along the side streets included in the study area. The *2020 AADT Development and Recommended Traffic Factors Memorandum* is included in Appendix C, and the Existing Year (2020) AADTs are also provided in **Figure 3-1**.

3.2 Growth Rate Analysis

The annual growth rates recommended for the study area were developed from the travel demand highway assignment growth forecasted by TBRPM. Two sets of growth rates were determined from the loaded highway networks – one from the Base Year 2015 to the Horizon Year 2045 No Build scenario model and the other from the Base Year 2015 to the Horizon Year 2045 Build scenario model. The links along Gandy Boulevard adjacent to the main intersections and on the Gandy Boulevard bridge were grouped to obtain a growth rate for the study corridor, and the cross-street growth rate was calculated. Given the fact that traffic is expected to grow differently based on location within the study area, different growth rates were calculated for each of the counties (namely, Pinellas and Hillsborough) and the segment constituted by the Gandy Boulevard Bridge.

Configuration inconsistencies between the 2015, 2045 No Build, and 2045 Build models presented a challenge to develop comparable growth rates, specifically near SR 687/4th Street where the frontage road is not a part of the 2015 network, and only a portion of it is included in the 2045 No Build model. To overcome this issue the growth rates were calculated using the cross-section highway assignment between Gandy Boulevard and the frontage road. This means that the 2045 No Build and 2045 Build volumes used in the calculation of the growth rates are the result of adding together the traffic along both facilities. Tables showing the linear annual growth rate from the model highway assignment for the No Build and Build scenarios is provided in Appendix D.

Table 3-1 shows the recommended linear annual growth rates. Following the methodology

described above, linear annual growth rates of 1.6%, 2.4% and 2.0% are recommended to develop No Build volumes for future years along Gandy Boulevard in Pinellas County, the Gandy Boulevard Bridge, and Gandy Boulevard in Hillsborough County, respectively. For the Build alternative, the growth rate for the Gandy Boulevard bridge is 3.1%, and 2.7% and 2.5% are recommended for Gandy Boulevard in Pinellas County and in Hillsborough County, respectively.

In the case of the cross streets in Pinellas County, a linear growth rate of 0.3% is recommended, while the growth rate recommended for the cross streets in Hillsborough is 1.1%. The same growth rates are recommended for the No Build and Build scenarios for the cross streets.

Table 3-1 Recommended Annual Growth Rates (Linear)

Roadway		Annual Growth Rates (%)	
		No Build	Build
Gandy Blvd	Segment 1 - Pinellas County	1.6	2.7
	Segment 2 - Bridge	2.4	3.1
	Segment 3 - Hillsborough County	2.0	2.5
Side Streets	West - Pinellas County	0.3	0.3
	East - Hillsborough County	1.1	1.1

Historical AADT trend and socioeconomic growth rate analyses using the TBRPM 2015 and 2045 Traffic Analysis Zones (TAZs) were also performed; however, they were not considered in determining the recommended growth rates. The findings of these analyses are provided in Appendix E.

3.3 Future Year AADTs

No Build and Build AADTs were developed for Opening Year (2030) and Design Year (2050). The volumes were obtained by applying the respective recommended annual growth rates to the Existing Year (2020) recommended AADTs for both No Build and Build alternatives.

The horizon year traffic volumes along the new facilities were calculated using engineering judgment and the TBRPM as reference to determine a reasonable percentage of traffic split between Gandy Boulevard (uninterrupted facility) and the frontage road, as well as percentages of ramp utilization for the proposed interchange locations. The AADTs were then balanced and rounded in accordance with the American Association of State Highway and Transportation Officials (AASHTO) standards published in the *2019 Project Traffic Forecasting Handbook*. **Figure 3-1** shows the Existing and No Build AADTs for Existing Year (2020), Opening Year (2030), and Design Year (2050), and the Opening Year (2030) and Design Year (2050) traffic volumes for the Build alternative are provided in **Figure 3-2**. For further reference, the 2030 and 2050 Build volume balancing spreadsheets are included in Appendix F, which show the splits between the uninterrupted and interrupted facilities from the TBRPM output.

It is important to mention that the frontage road was treated as a two-way roadway; consequently, bi-directional AADTs were calculated for this facility. However, and for easier graphical representation purposes only, the AADT volumes shown in the figures are the result of an even

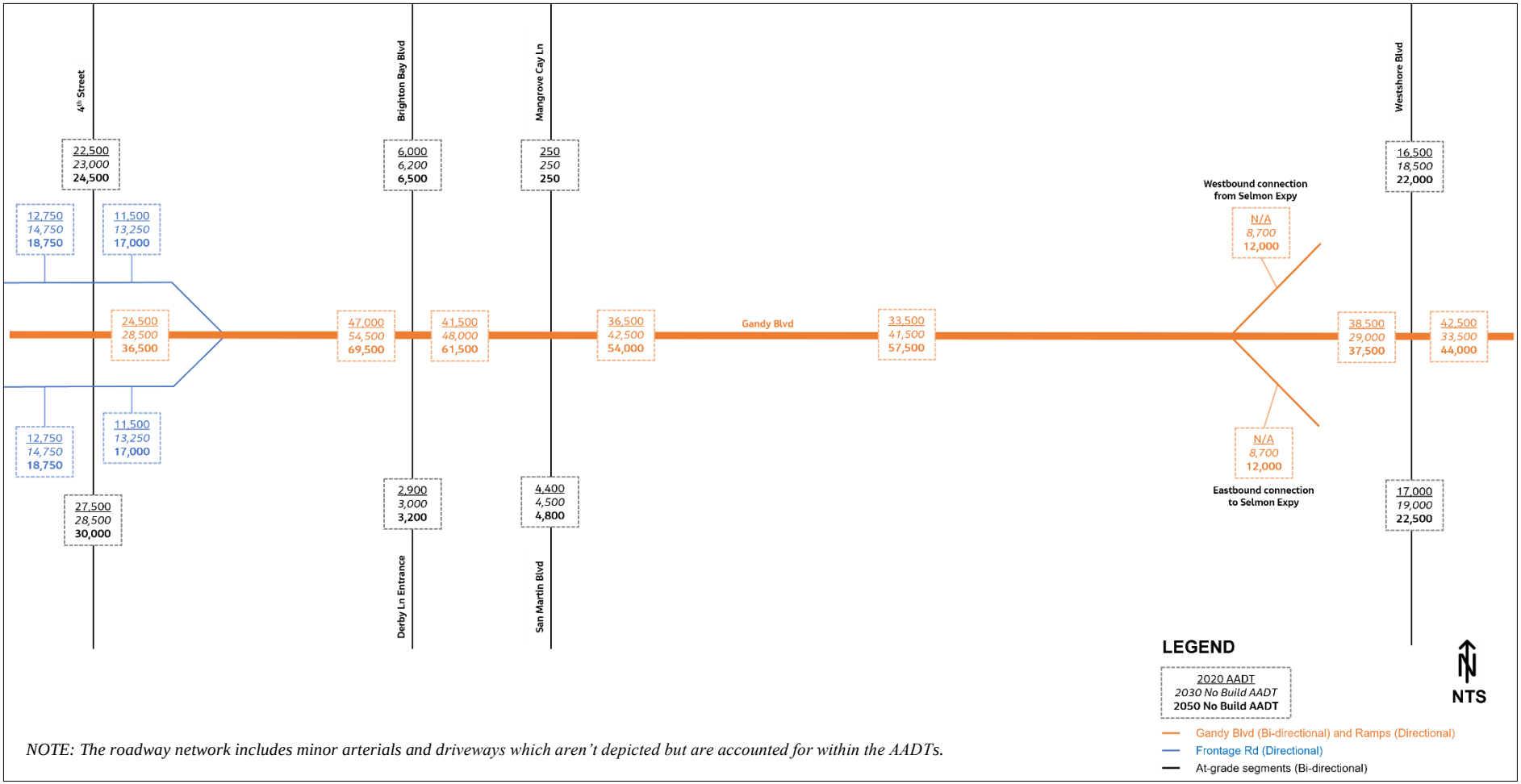
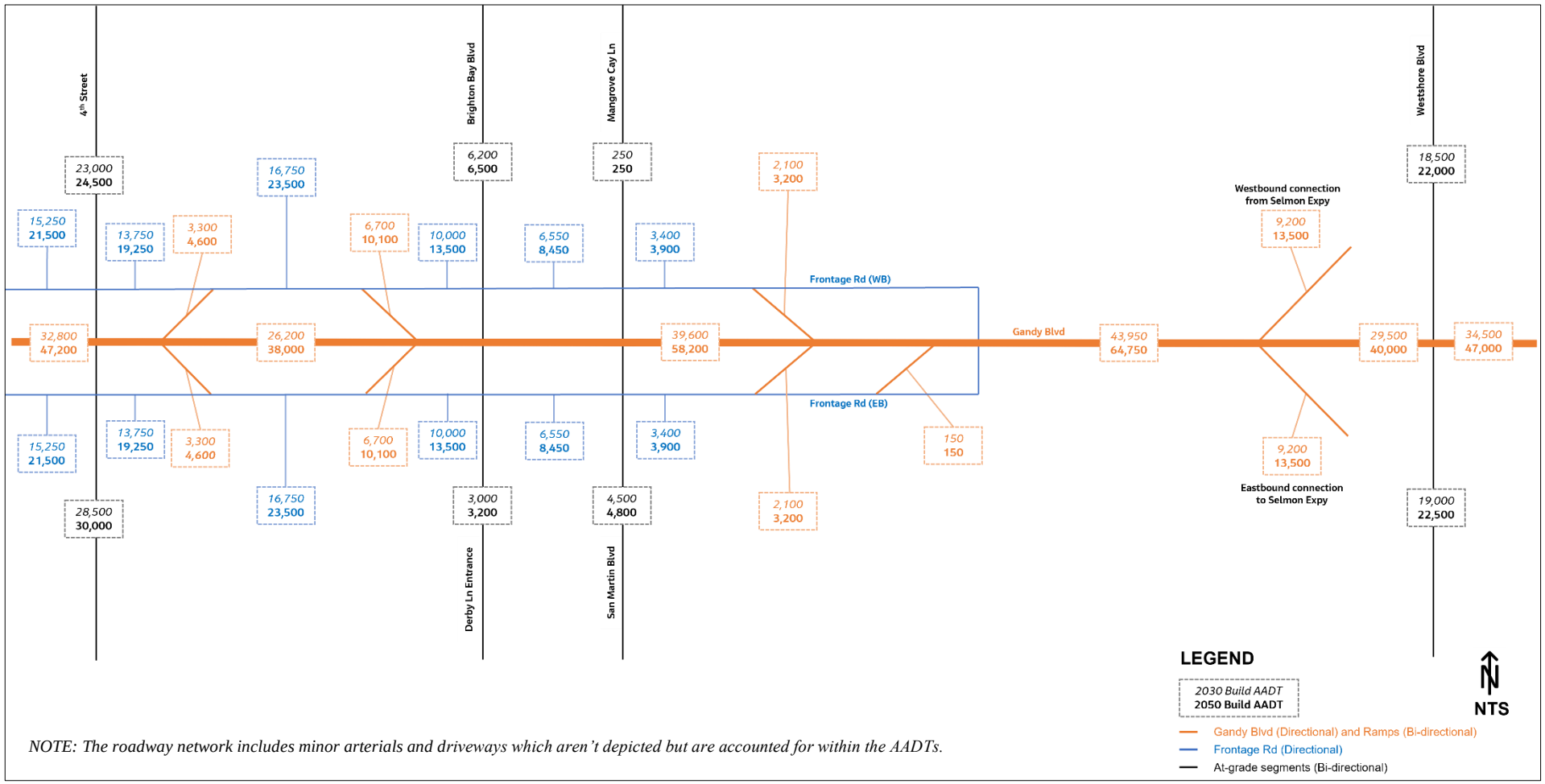


Figure 3-1 Existing Year (2020), Opening Year (2030), and Design Year (2050) AADTs – No Build Alternative



NOTE: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the AADTs.

Figure 3-2 Opening Year (2030) and Design Year (2050) AADTs – Build Alternative

split of daily traffic between eastbound and westbound.

3.4 Traffic Factors

The traffic factors were previously submitted and reviewed as part of the *2020 AADT Development and Recommended Traffic Factors Memorandum* (see Appendix C) and summarized herein for documentation purposes.

3.4.1 Standard K Factor

The K factor is defined as the proportion of AADT occurring in the peak hour, also known as the peak-to-daily ratio or design hour factor. Per *Table 2-1* of the *2019 Project Traffic and Forecasting Handbook*, a standardized K of 9% is recommended for arterials and highways in urbanized areas, and therefore was used for this project.

3.4.2 D Factor

The Directional Distribution (D) is the percentage of the total, two-way design hour traffic (DHV) traveling in the peak direction. Based on the calculations using an average of all available count data along Gandy Boulevard within the project corridor, the recommended D factor is 53.4%, which is within the allowable range for urban arterials included in *Table 2-2* of the *2019 Project Traffic and Forecasting Handbook*. The recommended D factor is also comparable to the most recently reported (pre-COVID) 2019 D factor for the permanent count station located on the Gandy Boulevard bridge, which was 53.0%. The recommended D factor of 53.4% is also applicable for the majority of side streets with the exception of Brighton Bay Boulevard and the Frontage Road. As shown in the counts performed during the peak periods, there is more directionality along these side streets and therefore the following localized D factors are recommended, respectively:

- Brighton Bay Boulevard North of Gandy Boulevard: 69.1%
- Brighton Bay Boulevard South of Gandy Boulevard (Derby Lane entrance): 77.7%
- Frontage Road: 62.0% (as One-Way Pair)

While the D factor of 62.0% for the Frontage Road falls within the recommended range for an urban arterial, the recommended D factors for Brighton Bay Boulevard do not. However, it should be noted that Brighton Bay Boulevard functions more as a driveway providing access to the residential and commercial land uses and therefore is not considered a thoroughfare roadway. As such, the higher D factors of 69.1% and 77.7% are recommended.

3.4.3 Percent Trucks (T)

The recommended T factor is 5% and the recommended Design Hour Truck (DHT) percentage is 2.5%. Back up calculations and further details are included in Appendix C.

3.5 Peak Hour Volumes

3.5.1 Existing Year (2020) Turning Movement Demand

The turning movement demand for the AM and PM peak hours were obtained by applying the

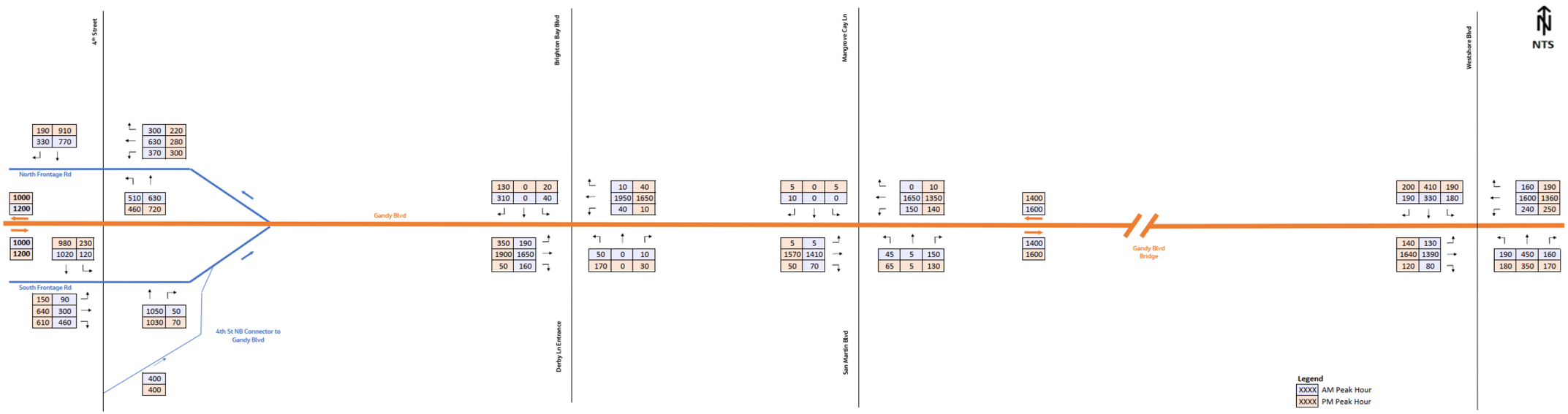
Standard K and D factors to the Existing AADT volumes and then multiplying by the turning movement volume percentages from the traffic counts collected at the study intersections. This procedure was employed in accordance with District 7 practices and directives. **Figure 3-3** depicts the Existing Year (2020) turning movement demand for the AM and PM peak hours.

3.5.2 Horizon Year (2030 and 2050) Directional Design Hourly Volumes (DDHVs)

Horizon Year (2030 and 2050) Directional Design Hourly Volumes (DDHVs) were obtained by multiplying the AADTs by the design hour factor (K) and directional distribution factor (D). **Table 3-2** and **Table 3-3** provide the traffic factors used as well as the calculated DDHVs for the No Build and Build scenarios, respectively, for both Opening Year (2030) and Design Year (2050). The one-way volumes along the frontage road and ramps were combined in order to develop the DDHVs along these facilities.

Table 3-2 Opening Year (2030) and Design Year (2050) DDHVs – No Build Alternative

Roadway	K Factor	D Factor	No Build DDHVs			
			Peak Direction		Off-Peak Direction	
			Opening Year (2030)	Design Year (2050)	Opening Year (2030)	Design Year (2050)
Gandy Blvd Overpass (4th Street)	9%	53.4%	1,400	1,800	1,200	1,500
Frontage Road west of 4th Street	9%	62.0%	1,600	2,100	1,000	1,300
Frontage Road east of 4th Street	9%	62.0%	1,500	1,900	900	1,200
4th St North of Gandy Blvd	9%	53.4%	1,100	1,200	950	1,000
4th St South of Gandy Blvd	9%	53.4%	1,400	1,400	1,200	1,300
Gandy Blvd west of Brighton Bay Blvd	9%	53.4%	2,600	3,300	2,300	2,900
Gandy Blvd east of Brighton Bay Blvd	9%	53.4%	2,300	3,000	2,000	2,600
Brighton Bay Blvd north of Gandy Blvd	9%	69.1%	400	400	150	200
Derby Ln entrance south of Gandy Blvd	9%	77.7%	200	200	60	60
Gandy Blvd east of San Martin Blvd	9%	53.4%	2,000	2,600	1,800	2,300
Mangrove Cay Ln north of Gandy Blvd	9%	53.4%	10	10	10	10
San Martin Blvd south of Gandy Blvd	9%	53.4%	200	250	200	200
Gandy Blvd Bridge	9%	53.4%	2,000	2,800	1,700	2,400
Selmon Expy ramps	9%	53.4%	850	1,200	750	1,000
Gandy Blvd west of Westshore Blvd	9%	53.4%	1,400	1,800	1,200	1,600
Gandy Blvd east of Westshore Blvd	9%	53.4%	1,600	2,100	1,400	1,800
Westshore Blvd north of Gandy Blvd	9%	53.4%	900	1,100	800	900
Westshore Blvd south of Gandy Blvd	9%	53.4%	900	1,100	800	950



NOTE: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes.

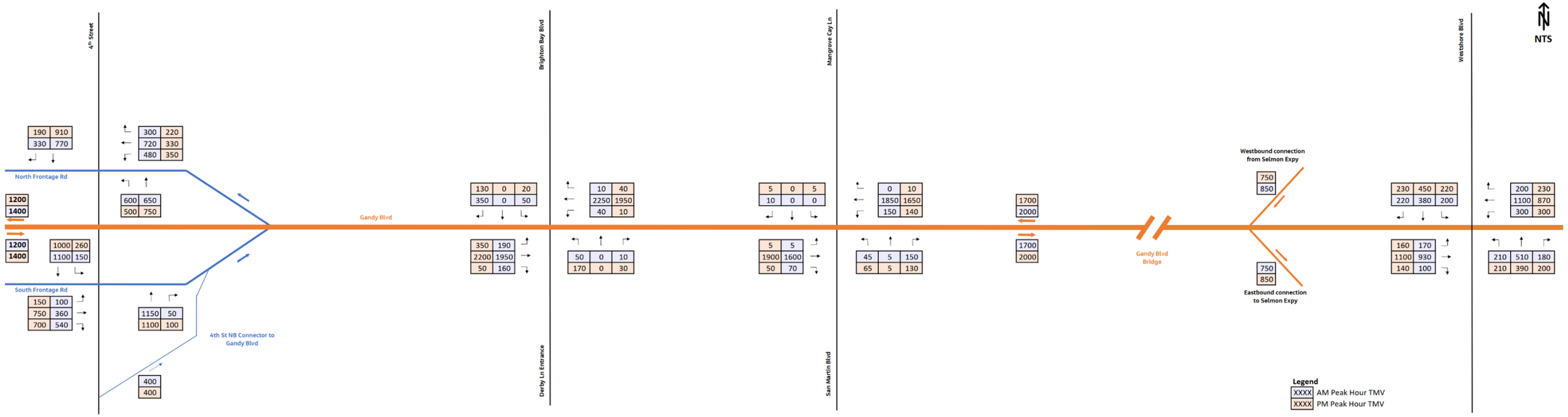
Figure 3-3 Existing Year (2020) Peak Hour Turning Movement Volumes

Table 3-3 Opening Year (2030) and Design Year (2050) DDHVs – Build Alternative

Roadway	K Factor	D Factor	Build DDHVs			
			Peak Direction		Off-Peak Direction	
			Opening Year (2030)	Design Year (2050)	Opening Year (2030)	Design Year (2050)
Gandy Blvd Overpass (4th Street)	9%	53.4%	1,600	2,300	1,400	2,000
Frontage Road west of 4th Street	9%	62.0%	1,700	2,400	1,000	1,500
Frontage Road east of 4th Street	9%	62.0%	1,500	2,100	950	1,300
4th St North of Gandy Blvd	9%	53.4%	1,100	1,200	950	1,000
4th St South of Gandy Blvd	9%	53.4%	1,400	1,400	1,200	1,300
Ramps west of Oak Street	9%	53.4%	300	400	300	400
Ramps west of Brighton Bay Blvd	9%	53.4%	600	900	600	800
Gandy Blvd west of Brighton Bay Blvd	9%	53.4%	1,900	2,800	1,700	2,400
Frontage Rd west of Brighton Bay Blvd	9%	62.0%	1,100	1,500	700	900
Frontage Rd east of Brighton Bay Blvd	9%	62.0%	750	950	450	600
Brighton Bay Blvd north of Gandy Blvd	9%	69.1%	400	400	150	200
Derby Ln entrance south of Gandy Blvd	9%	77.7%	200	200	60	60
Frontage Rd east of San Martin Blvd	9%	62.0%	400	450	250	250
Mangrove Cay Ln north of Gandy Blvd	9%	53.4%	10	10	10	10
San Martin Blvd south of Gandy Blvd	9%	53.4%	200	250	200	200
Ramps east of San Martin Blvd	9%	53.4%	200	300	100	300
Gandy Blvd Bridge	9%	53.4%	2,100	3,100	1,800	2,700
Selmon Expy ramps	9%	53.4%	900	1,300	750	1,100
Gandy Blvd west of Westshore Blvd	9%	53.4%	1,400	1,900	1,200	1,700
Gandy Blvd east of Westshore Blvd	9%	53.4%	1,700	2,300	1,400	2,000
Westshore Blvd north of Gandy Blvd	9%	53.4%	900	1,100	800	900
Westshore Blvd south of Gandy Blvd	9%	53.4%	900	1,100	800	950

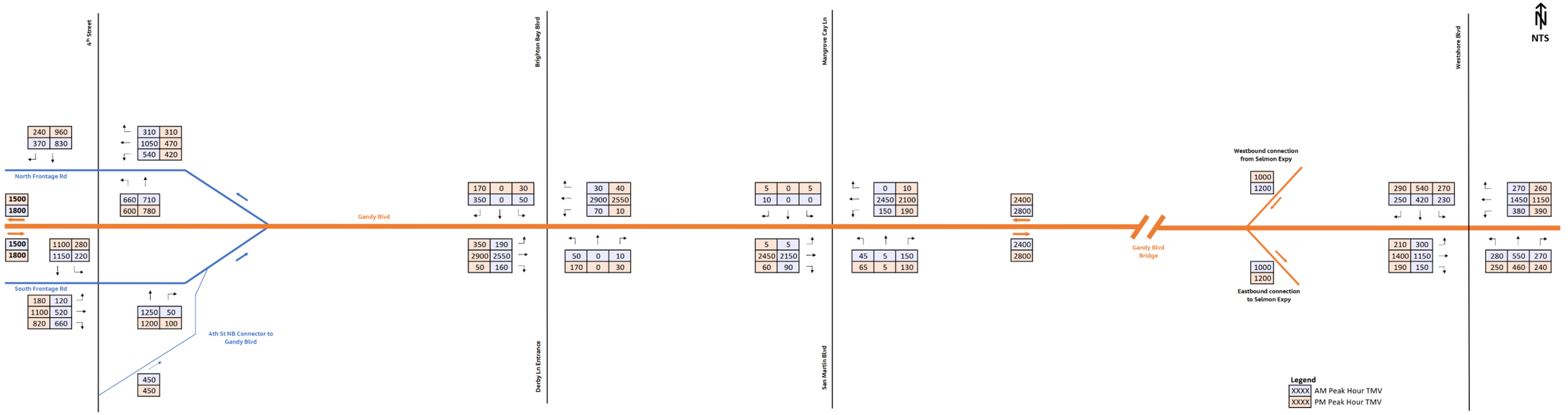
3.5.3 Horizon Year (2030 and 2050) Turning Movement Volumes

For the development of Horizon Year (2030 and 2050) turning movement volumes for the No Build alternative, minor adjustments were necessary to the Existing Year AM and PM peak hour turning movement percentages at the study intersections in accordance with the calculated DDHVs. The anticipated development on the Hillsborough County side (Westshore Boulevard) was also considered. The AM and PM peak hour No Build TMVs for Opening Year (2030) are shown in **Figure 3-4**, and **Figure 3-5** provides the AM and PM peak hour No Build TMVs for Design Year (2050) at the study intersections.



NOTE: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes.

Figure 3-4 Opening Year (2030) Peak Hour Turning Movement Volumes - No Build Alternative



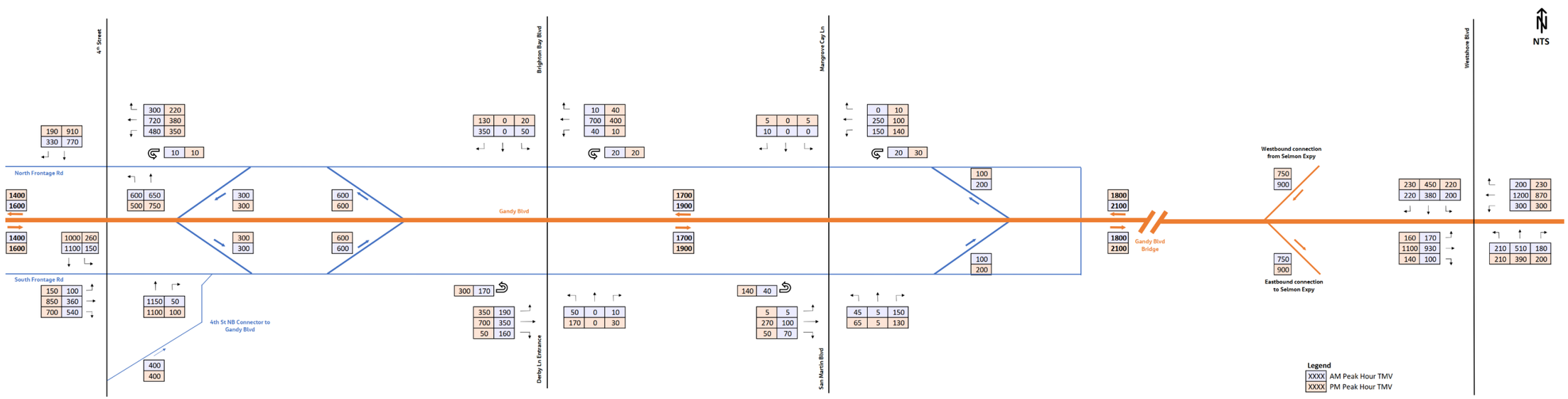
NOTE: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes.

Figure 3-5 Design Year (2050) Peak Hour Turning Movement Volumes - No Build Alternative

As reflected in the growth rates, AADTs, DDHVs, and now TMVs, the additional demand from the project is anticipated to be generated from outside of the study area, and therefore isolated to the eastbound and westbound "thru" movements. As such, all other movements at the study intersections are anticipated to remain fairly constant between No Build and Build alternatives.

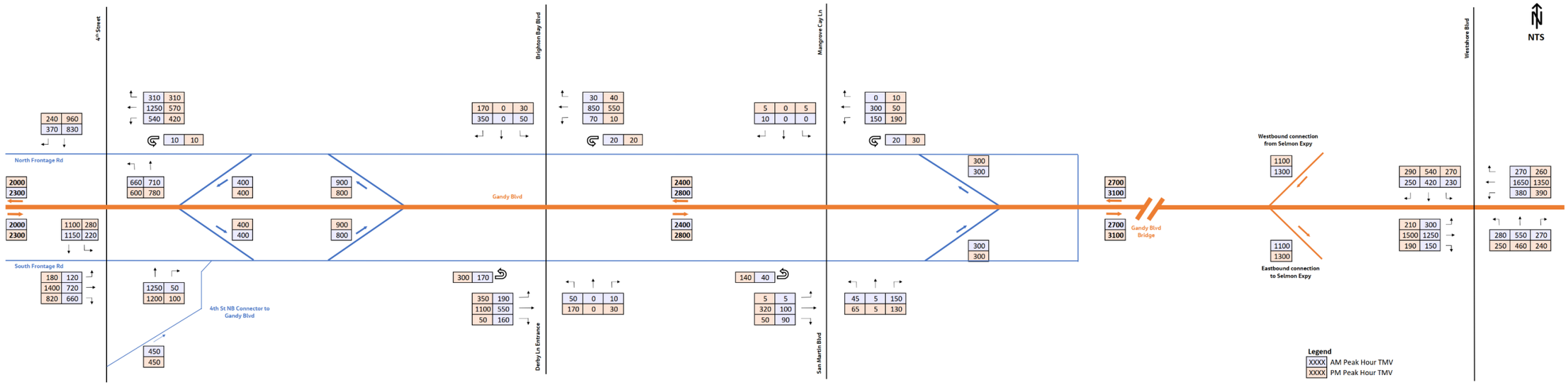
Additionally, under the Build alternative, left-turn movements are proposed to be restricted at minor roadways and driveways along the Gandy Boulevard corridor. The proposed restrictions will result in the rerouting of these movements to perform U-turns at the study intersections and other locations where access is anticipated to be provided under the design concept. The U-turn volumes were determined from the driveway counts summarized in Appendix G and used for estimation purposes only within the context of this PD&E study. In the case of the movements at Bridge Street, the annual side street growth for Hillsborough County, namely 1.1%, was applied to account for the growth anticipated in the area.

All movements at the study intersections for the Build alternative are shown in **Figure 3-6** for Opening Year (2030) and **Figure 3-7** for Design Year (2050).



NOTE: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes.

Figure 3-6 Opening Year (2030) Peak Hour Turning Movement Volumes - Build Alternative



NOTE: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes.

Figure 3-7 Design Year (2050) Peak Hour Turning Movement Volumes - Build Alternative

Appendix A

Build Alternative Concept

PROJECT DEVELOPMENT & ENVIRONMENT STUDY

US 92 / SR 600 / GANDY BLVD. FROM 4TH ST. TO WESTSHORE BLVD.

FDOT DISTRICT 7

PINELLAS WEST / CAUSEWAY SEGMENT PREFERRED ALTERNATIVE

FINANCIAL PROJECT ID NUMBER: WPI SEG. 441250-1



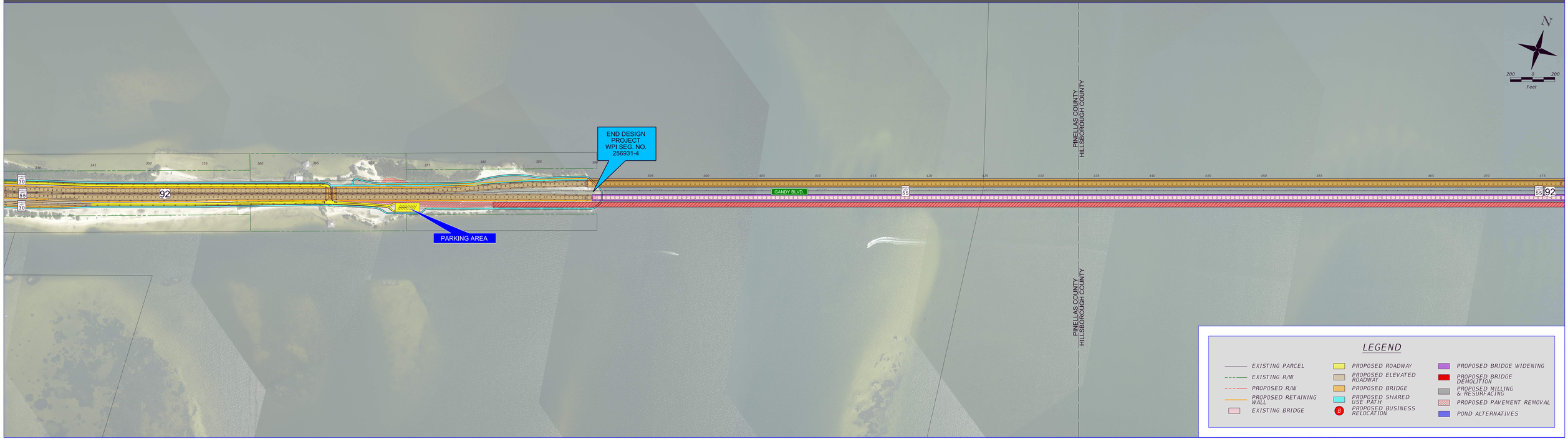
PROJECT DEVELOPMENT & ENVIRONMENT STUDY

US 92 / SR 600 / GANDY BLVD. FROM 4TH ST. TO WESTSHORE BLVD.

FDOT DISTRICT 7

PINELLAS WEST / CAUSEWAY SEGMENT PREFERRED ALTERNATIVE

FINANCIAL PROJECT ID NUMBER: WPI SEG. 441250-1



PROJECT DEVELOPMENT & ENVIRONMENT STUDY

US 92 / SR 600 / GANDY BLVD. FROM 4TH ST. TO WESTSHORE BLVD.

FDOT DISTRICT 7

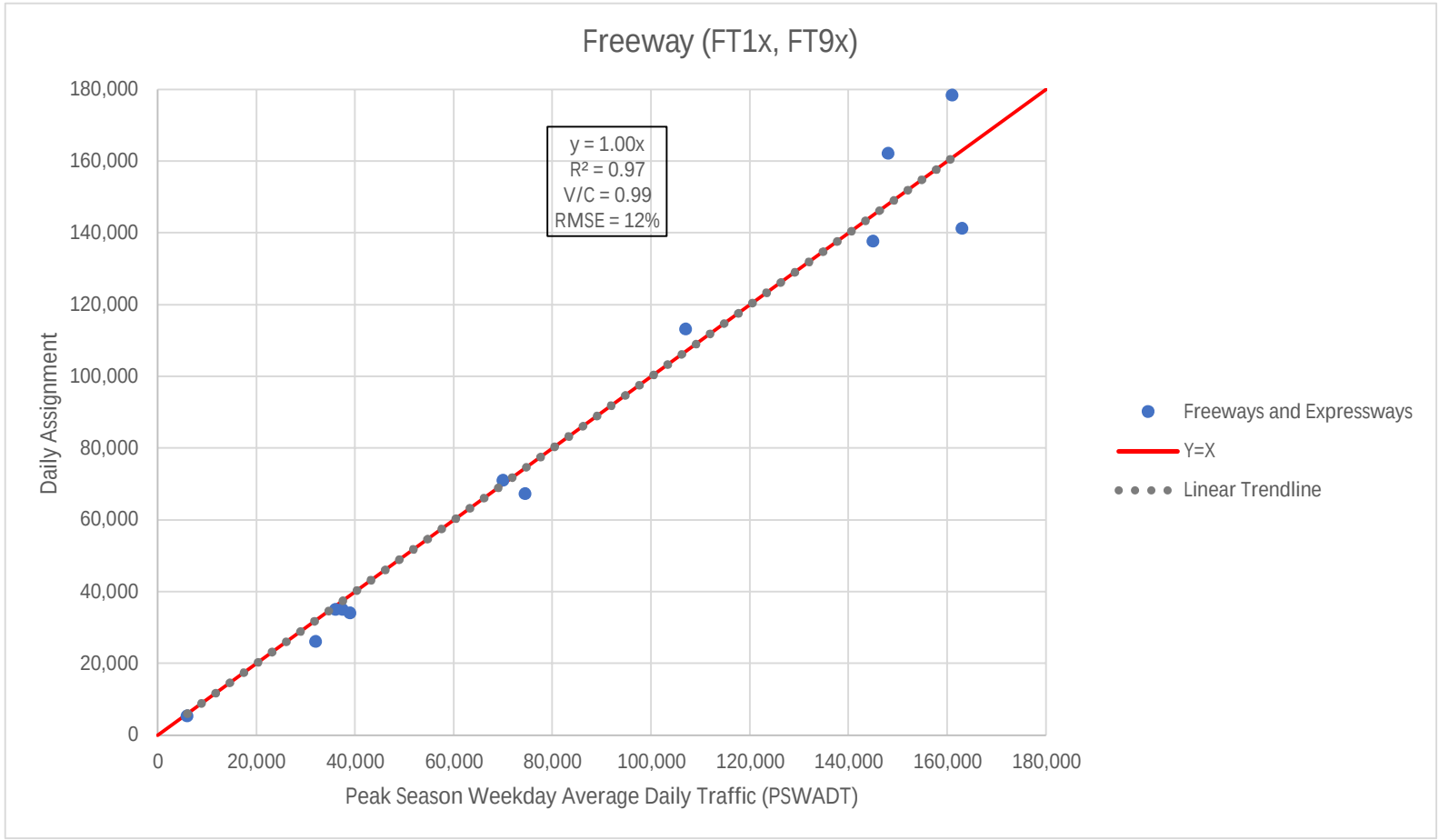
PINELLAS WEST / CAUSEWAY SEGMENT PREFERRED ALTERNATIVE

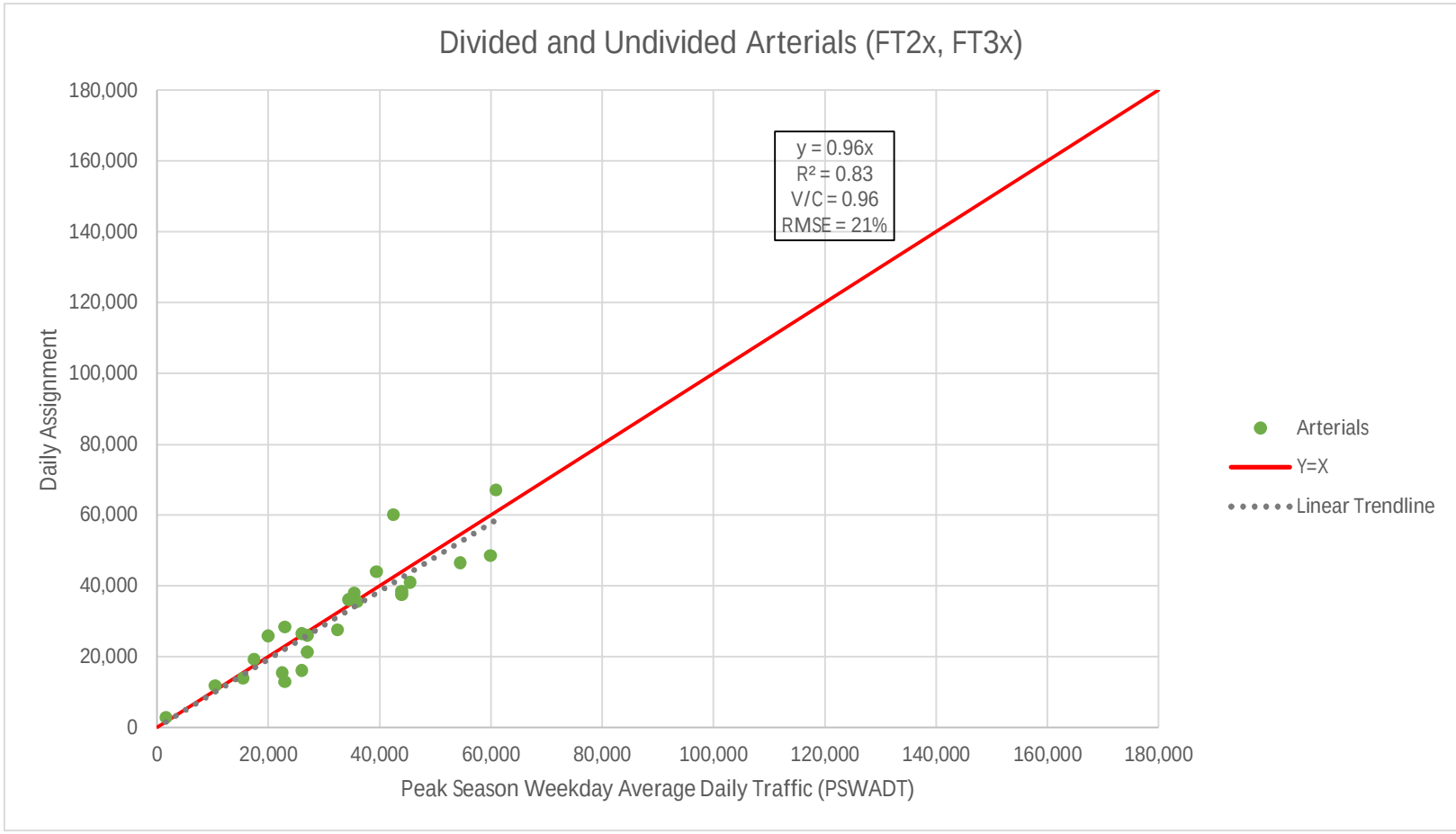
FINANCIAL PROJECT ID NUMBER: WPI SEG. 441250-1

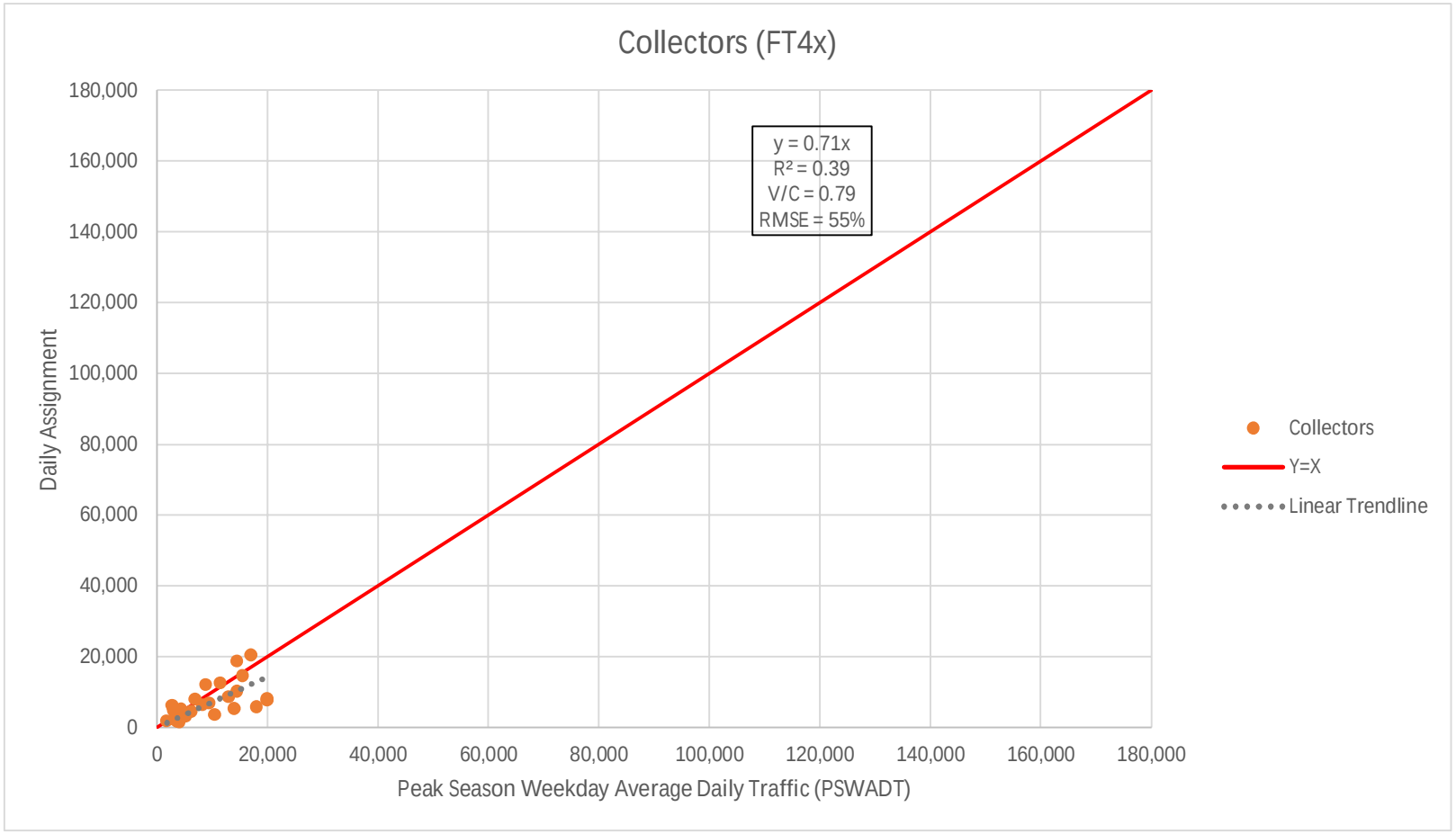


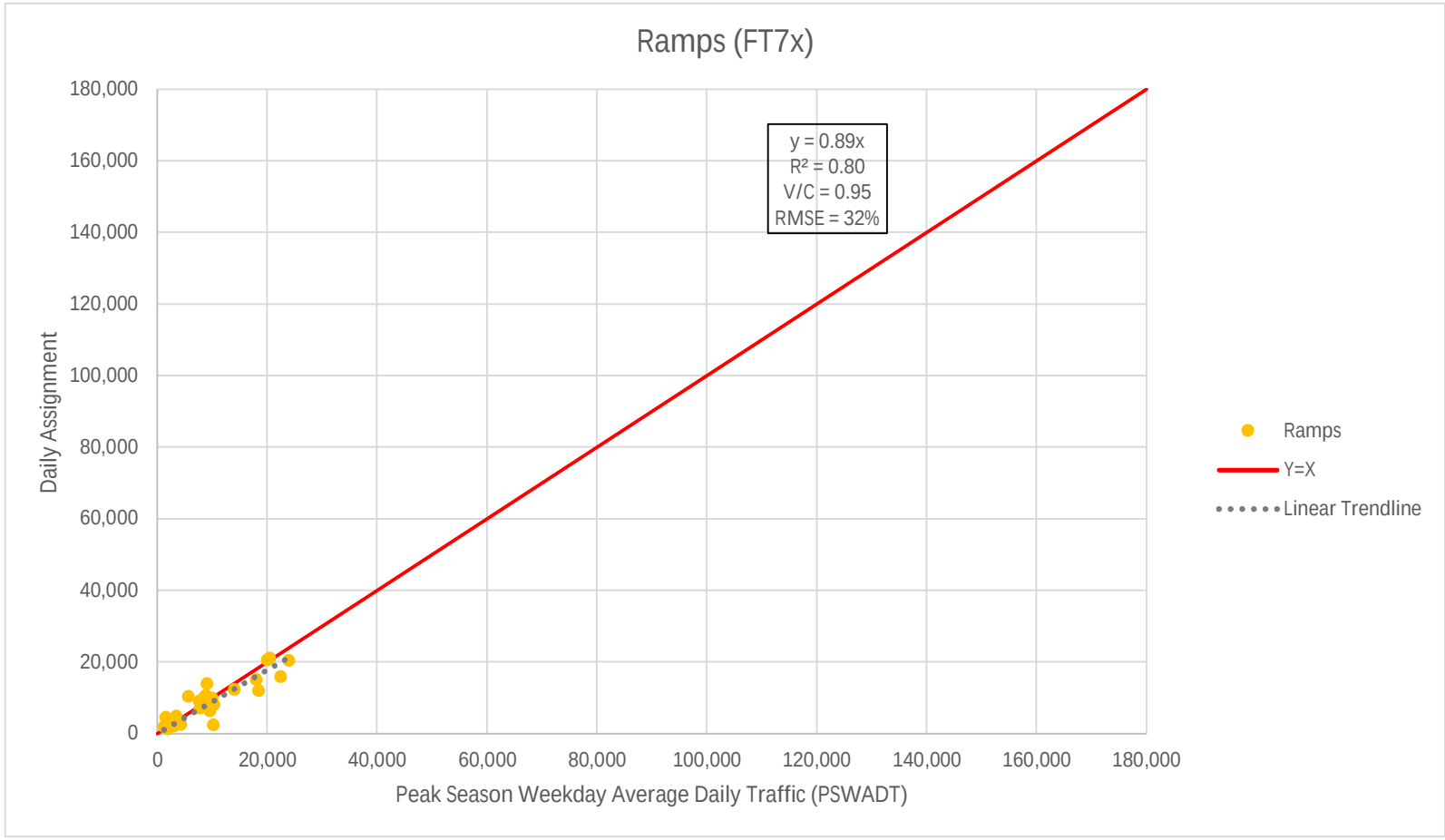
Appendix B

Facility Type Scatterplots


Freeway (FT1x, FT9x)
y = 1.00x
R² = 0.97
V/C = 0.99
RMSE = 12%
Daily Assignment
Peak Season Weekday Average Daily Traffic (PSWADT)
0
20,000
40,000
60,000
80,000
100,000
120,000
140,000
160,000
180,000
Freeways and Expressways
Y=X
Linear Trendline


Divided and Undivided Arterials (FT2x, FT3x)
y = 0.96x
R² = 0.83
V/C = 0.96
RMSE = 21%
Daily Assignment
Peak Season Weekday Average Daily Traffic (PSWADT)
0
20,000
40,000
60,000
80,000
100,000
120,000
140,000
160,000
180,000
Arterials
Y=X
Linear Trendline


Collectors (FT4x)
y = 0.71x
R² = 0.39
V/C = 0.79
RMSE = 55%
Daily Assignment
Peak Season Weekday Average Daily Traffic (PSWADT)
0
20,000
40,000
60,000
80,000
100,000
120,000
140,000
160,000
180,000
Collectors
Y=X
Linear Trendline


Ramps (FT7x)
y = 0.89x
R² = 0.80
V/C = 0.95
RMSE = 32%
Daily Assignment
Peak Season Weekday Average Daily Traffic (PSWADT)
0
20,000
40,000
60,000
80,000
100,000
120,000
140,000
160,000
180,000
Ramps
Y=X
Linear Trendline

Appendix C

Existing (Year 2020) AADT Development and Recommended Traffic Factors Memorandum

US 92/SR 600/GANDY BLVD (SWAT) – 2020 AADT Development and Recommended Traffic Factors

TO: Craig Fox, PE, FDOT D7 Project Manager

FROM: Jacobs

DATE: May 6, 2021

RE: 2020 AADT Development and Recommended Traffic Factors
US 92/SR 600/Gandy Blvd from 4th Street to West Shore Blvd (SWAT)

As part of the US 92/SR 600/Gandy Blvd (SWAT), Jacobs was requested to develop annual average daily traffic (AADT) estimates based on the counts taken for the project in December 2020 – January 2021. The development of these estimates has presented a unique challenge given the unusual circumstances of the counts being performed during the COVID-19 pandemic, in which many within the community are now working from home and are no longer commuting to and from work. This has caused atypical drops in AADTs, as compared to previous years, and additionally produces the question of whether this trend will continue in the future or if things will gradually return to normal.

The initial development of AADTs from the project counts followed the usual procedures. Daily traffic counts taken for the project were filtered down to include only typical weekdays (Tuesday / Wednesday / Thursday) and from there a QA/QC review was performed to additionally filter out any days that may include atypical volumes, as compared to the count data from other days. The daily counts were then averaged and appropriate traffic factors, namely the Seasonal Factor (SF) and Axle Correction Factor (ACF), were applied to develop 2020 AADTs, shown in **Attachment A**.

A map was then developed to visually compare the 2020 AADTs to 2019 AADTs at locations available from Florida Traffic Online (FTO) within the project area, in order to discern what affects, if any, the pandemic was having on traffic volumes. This map can be seen in **Attachment B**. After studying the map, it was observed for most locations directly on the project corridor, the 2020 AADTs were approximately 5,000 vehicles per day (vpd) less than the 2019 AADTs. After internal discussion it was decided the most conservative approach would be to assume volumes similarly to pre-pandemic levels along the traffic corridor. Therefore, 5,000 vpd was added to develop the recommended 2020 AADTs along Gandy Boulevard. The one exception to this is the count located west of West Shore Boulevard. The count data for this location appeared to be considerably lower than expected, when compared with other count data available. Therefore, for this location the 2019 AADT obtained from the FTO for the location east of the Gandy Boulevard bridge, was used in its place. Additionally, for all side streets along the corridor, it was determined no further adjustment was needed to the 2020 AADTs. A comparison map showing the recommended 2020 AADT volumes and 2019 AADTs is presented in **Attachment C** and the final recommended 2020 AADTs are presented in **Attachment D**.

K Factor

Per Table 2-1 of the *2019 Project Traffic and Forecasting Handbook*, a standardized K of 9% is recommended for arterials and highways in urbanized areas, and therefore will be used for the subject project.

D Factor

Based on the calculations using an average of all available count data along Gandy Boulevard within the project corridor, the recommended D factor is 53.4%, which is within the allowable range for urban arterials included in Table 2-2 of the *2019 Project Traffic and Forecasting Handbook*. The recommended D factor is also comparable to the most recently reported 2019 D factor for the permanent count station located on the Gandy Boulevard bridge, which was 53.0%. The recommended D factor of 53.4% is also applicable for the majority of side streets with the exception of Brighton Bay Blvd and the Frontage Road. As shown in the counts performed during the peak periods, there is more directionality along these side streets and therefore the following D factors are recommended, respectively:

- Brighton Bay Blvd North of Gandy Blvd: 69.1%
- Brighton Bay Blvd South of Gandy Blvd: 77.7%
- Frontage Road: 62.0% (as One-Way Pair)

While the D factor of 62.0% for the Frontage Road fails within the recommended range for an urban arterial, the recommended D factors for Brighton Bay Blvd do not. However, it should be noted that Brighton Bay Blvd functions more as a driveway providing access to the residential and commercial land uses and therefore is not considered a thoroughfare roadway. As such, the higher D factors of 69.1% and 77.7% are recommended, pending any substantial land uses changes in the future.

It should be noted the D factors identified herein have been determined from counts and therefore, as new facilities and land use are incorporated into the study area for the future horizon years, adjustments may be made accordingly. Any adjustments to the D factors identified herein, as well as those identified for new facilities will be documented as part of the project traffic forecasting effort.

T Factor

The recommended T factor is 5% and the recommended Peak Hour T factor is 2.5%.

The calculations used to determine the recommended traffic factors can be found in **Attachment E**.

Turning Movement Volumes

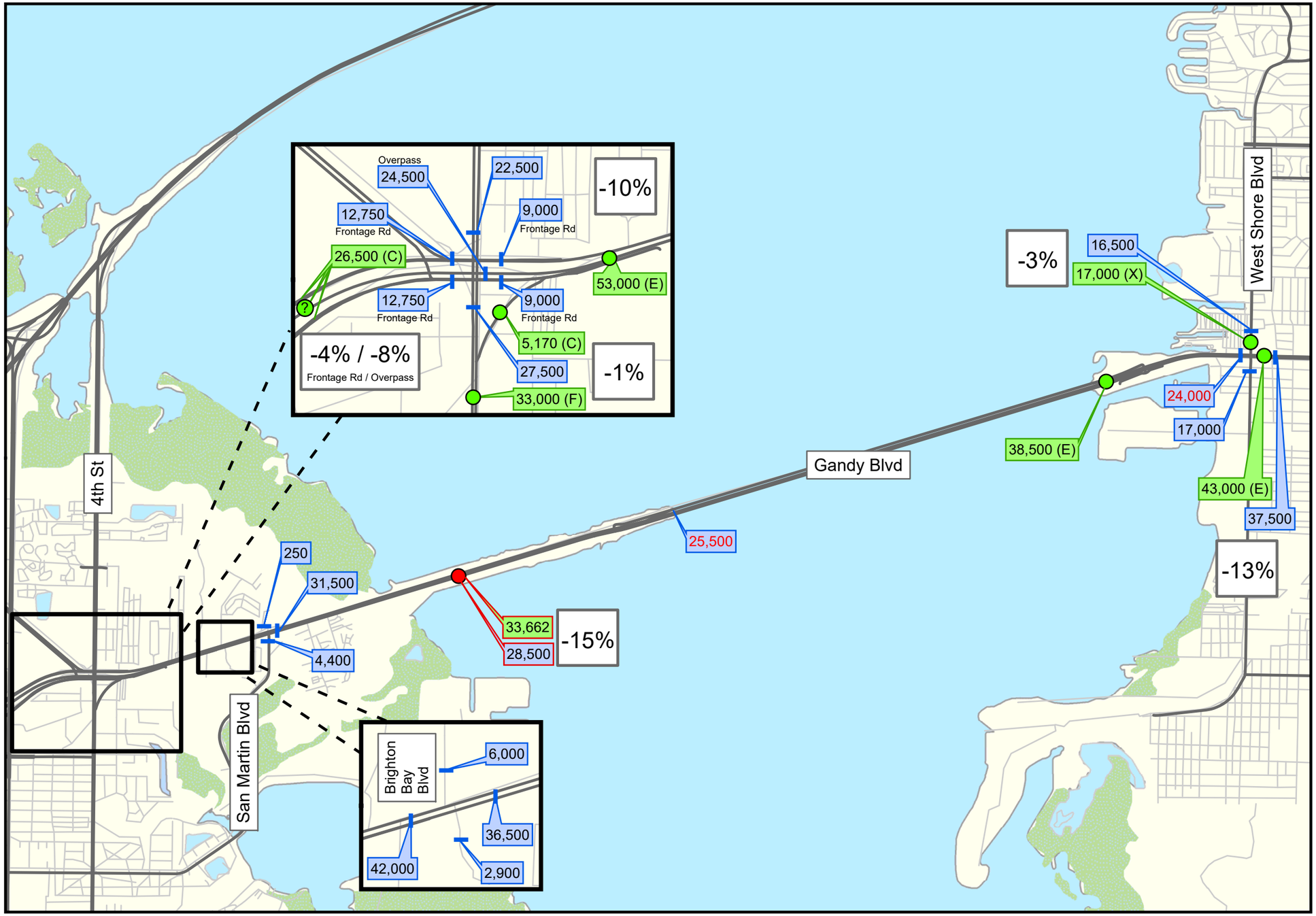
For the development of future turning movement volumes, minor adjustments may be necessary to the existing AM and PM peak turning movement percentages at the study intersections. Based upon a preliminary comparison analysis with turning movement percentages from counts collected during previous years, turning percentages as collected during peak hours in the field from December 2020 to January 2021 varied slightly in the eastbound and westbound directions. This is expected to be due to the decrease in the number of commuters caused by the pandemic. Comparison analysis results and recommended turning movement percentages will be presented as part of the traffic forecasting effort for the project.

ATTACHMENT A

Street Name: Location	Date	County	Tues	Weds	Thurs	Tues	Weds	Thurs	Daily			SF	ACF	2020 AADT	
			SB/WB			NB/EB			SB/WB	NB/EB	Total			Unrounded	Rounded
Gandy Blvd: West of 4th St N (Frontage Rd)	January 5th-7th	Pinellas	15,199	15,143	15,048	9,977	9,962	10,107	15,130	10,015	25,145	1.03	0.98	25,382	25,500
Gandy Blvd: East of 4th St N (Overpass)	January 12th-14th		10,590	10,855	11,336	13,612	13,614	14,564	10,927	13,930	24,857	1.02	0.97	24,594	24,500
Gandy Blvd: East of 4th St N (Frontage Rd)	January 5th-7th		10,728	10,863	10,973	7,063	6,922	7,072	10,855	7,019	17,874	1.03	0.98	18,042	18,000
Gandy Blvd: West of Brighton Blvd	December 15th-17th		20,200	19,561	21,198	20,967	20,689	21,233	20,320	20,963	41,283	1.04	0.98	42,075	42,000
Gandy Blvd: East of Bighton Blvd	December 15th-17th		18,610	18,020	19,473	17,143	16,827	17,259	18,701	17,076	35,777	1.04	0.98	36,464	36,500
Gandy Blvd: East of San Martin Blvd	January 12th-14th		15,459	15,715	16,522	15,363	15,508	16,627	15,899	15,833	31,731	1.02	0.97	31,395	31,500
Gandy Blvd: Permanent Station Counts	December 2-17										28,554	1.04	0.98	29,102	29,000
Gandy Blvd: Permanent Station Counts	January 13-21										28,418	1.01	0.97	27,841	28,000
Gandy Blvd West of the Bridge	December 15th-17th		12,938	12,533	12,847	12,420	12,014	12,074	12,773	12,169	24,942	1.04	0.98	25,421	25,500
Gandy Blvd West of Westshore Blvd	December 8th-10th	Hillsborough	9,100	9,198	9,400	14,120	14,593	14,997	9,233	14,570	23,803	1.03	0.97	23,781	24,000
Gandy Blvd East of Westshore Blvd	December 8th-10th		18,934	18,665	19,276	16,466	20,360	-	18,958	18,413	37,371	1.03	0.97	37,338	37,500
4th St N: North of Gandy Blvd	January 5th-7th	Pinellas	11,982	11,790	11,936	10,365	10,230	10,434	11,903	10,343	22,246	1.03	0.99	22,684	22,500
4th St N: South of Gandy Blvd	January 5th-7th		14,893	14,972	15,238	11,963	11,980	12,216	15,034	12,053	27,087	1.03	0.99	27,621	27,500
Brighton Bay Blvd: North of Gandy Blvd	December 15th-17th		2,476	2,378	2,479	3,396	3,250	3,436	2,444	3,361	5,805	1.04	0.99	5,977	6,000
Brighton Bay Blvd: South of Gandy Blvd [1]	December 15th-17th		715	695	687	2,056	2,197	2,092	699	2,115	2,814	1.04	0.99	2,897	2,900
Mangrove Cay: North of Gandy Blvd	January 12th-14th		140	124	150	101	104	130	125	112	237	1.02	0.99	239	250
San Martin Blvd South of Gandy Blvd	January 12th-14th		2,497	2,672	2,754	1,645	1,654	1,751	2,641	1,683	4,324	1.02	0.99	4,367	4,400
West Shore Blvd North of Gandy Blvd	December 8th-10th	Hillsborough	9,332	9,094	8,725	7,859	7,753	7,228	9,050	7,613	16,664	1.03	0.97	16,649	16,500
West Shore Blvd South of Gandy Blvd	December 8th-10th		-	7,945	7,823	8,985	8,707	9,024	7,884	8,905	16,789	1.03	0.97	16,774	17,000

[1] The daily loop count for the Northbound approach was adjusted by half to account for double counting of vehicles approaching the red signal. Adjustment was determined by comparing the loop counts taken during the peak period with the manual turning movement counts. Even after adjustment of the Northbound approach only, the daily volumes are highly directional which is due to the majority of delivery drivers using the adjacent joining driveway to the west (DeLane) to turn in to access the lot, and then exit the lot via the traffic signal at Brighton Bay Blvd.

ATTACHMENT B



LEGEND

- FDOT Portable Site
- FDOT Telemetered Site
- 72 Hour Count Location
- 10,000 — FDOT Portable Site 2019 AADT
- 10,000 — 2020 AADT
- 10,000 — 2020 AADT - Possible Bad Count
- 10,000 — FDOT Telemetered Site 2019 AADT
- 10,000 — FDOT Telemetered Site 2020 AADT Dec 2020 & Jan 2021

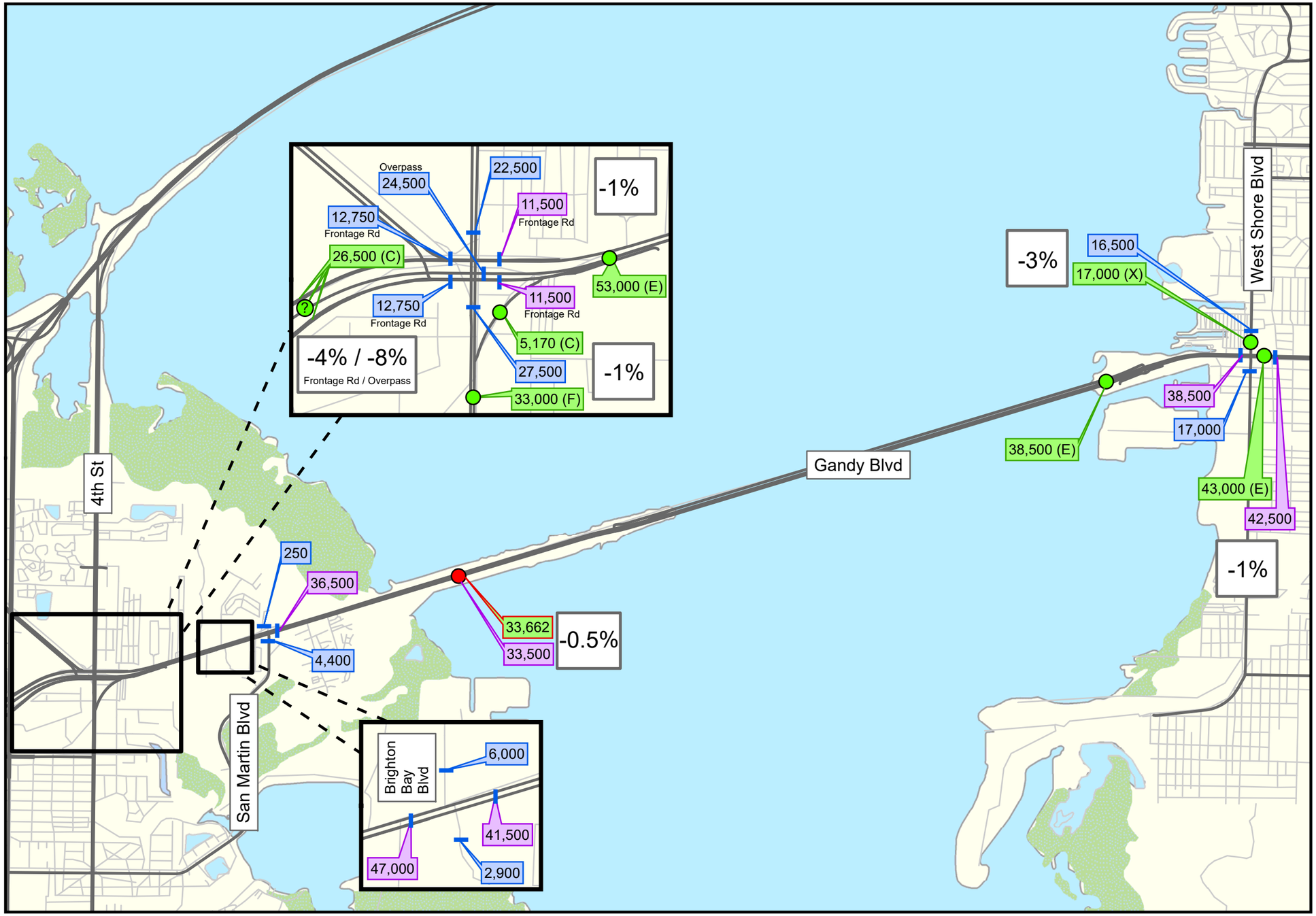
FDOT AADT FLAGS

(C) = Computed
(E) = Manual Estimate
(F) = First Year Estimate
(X) = Unknown

US 92/SR 600/GANDY BLVD (SWAT)
From 4th Street to West Shore Boulevard
Hillsborough County, FL
Financial Project Number: 441250-1-22-01

COMPARISON MAP: 2020 AADTs vs FDOT AADT Data

ATTACHMENT C



LEGEND

- FDOT Portable Site
- FDOT Telemetered Site
- 72 Hour Count Location
- 10,000 FDOT Portable Site 2019 AADT
- 10,000 2020 AADT
- 10,000 Recommended 2020 AADT
- 10,000 FDOT Telemetered Site 2019 AADT

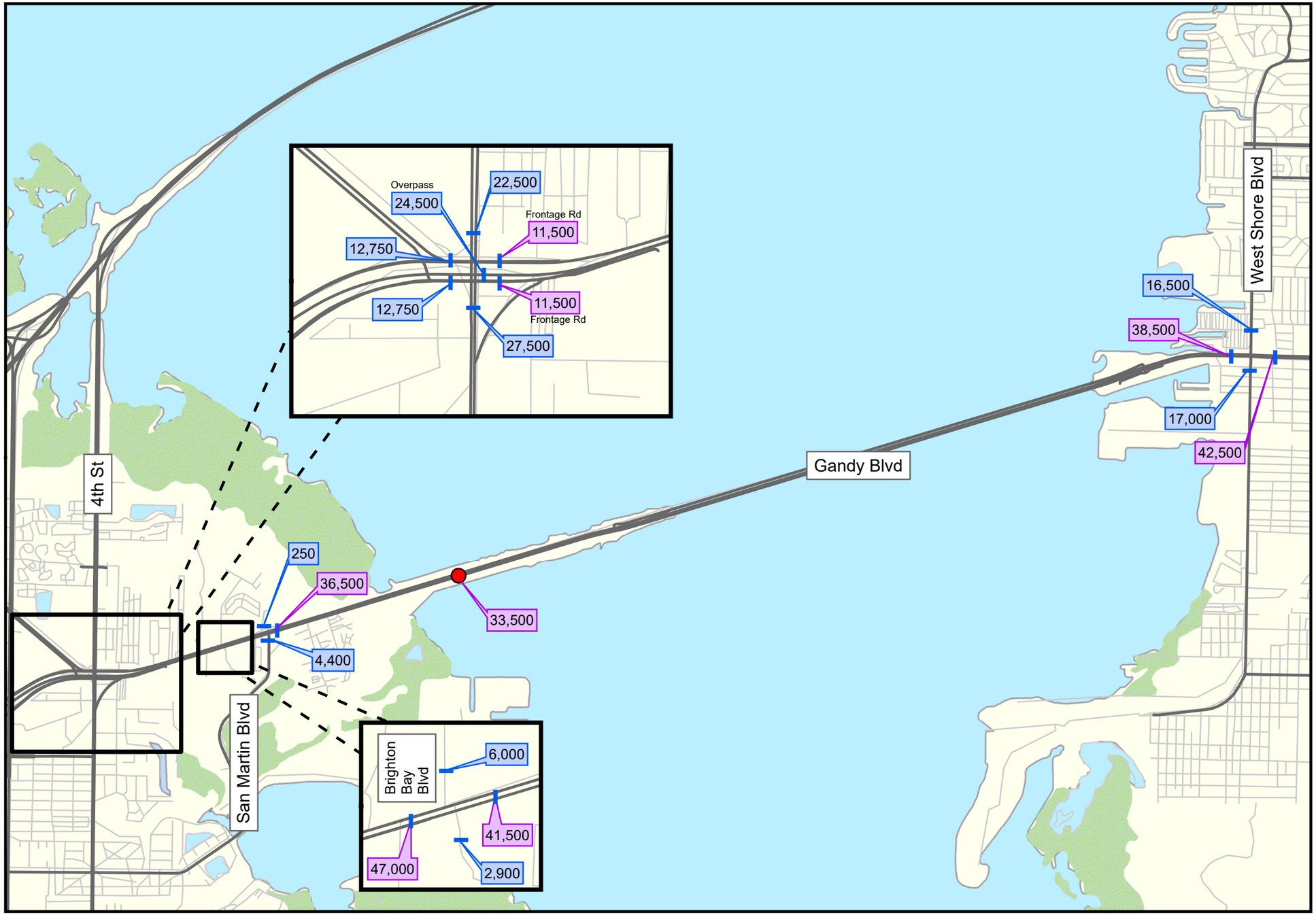
FDOT AADT FLAGS

(C) = Computed
(E) = Manual Estimate
(F) = First Year Estimate
(X) = Unknown

US 92/SR 600/GANDY BLVD (SWAT)
From 4th Street to West Shore Boulevard
Hillsborough County, FL
Financial Project Number: 441250-1-22-01

COMPARISON MAP: Recommended 2020 AADTs vs FDOT AADT Data

ATTACHMENT D



LEGEND

- FDOT Telemetered Site
- 72 Hour Count Location
- 10,000 2020 AADT
- 10,000 Recommended 2020 AADT

US 92/SR 600/GANDY BLVD (SWAT)
From 4th Street to West Shore Boulevard
Hillsborough County, FL
Financial Project Number: 441250-1-22-01

Recommended 2020 AADTs

ATTACHMENT E

Gandy Boulevard SWAT Traffic Factors:

A. Gandy Boulevard:

a. **D Factor Calculations based on Traffic Counts**

Location/Date	**12/8/2020**		**12/9/2020**		**12/10/2020**	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:30 to 8:30	4:30 to 5:30	7:30 to 8:30		7:30 to 8:30	4:30 to 5:30
Gandy Blvd E of Westshore Blvd EB	1130	**1673**	1134	**2151**	1986	3218
Gandy Blvd E of Westshore Blvd WB	**1294**	1570	**1301**	1499	1303	1683
	53.4%	51.6%	53.4%	58.9%	39.6%	65.7%

Location/Date	**1/12/2021**		**1/13/2021**		**1/14/2021**	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:00 to 8:00	4:30 to 5:30	7:15 to 8:15	4:15 to 5:15	7:15 to 8:15	4:45 to 5:45
Gandy Blvd E of San Martin Blvd EB	1146	**1534**	1127	**1498**	1182	1524
Gandy Blvd E of San Martin Blvd WB	**1208**	1520	**1307**	1457	**1267**	**1675**
	51.3%	50.2%	53.7%	50.7%	51.7%	47.6%

Location/Date	**12/15/2020**		**12/16/2020**		**12/17/2020**	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:15 to 8:15	4:15 to 5:15	7:15 to 8:15	3:30 to 4:30	7:30 to 8:30	4:15 to 5:15
Gandy Blvd E of Brighton Bay EB	1241	1575	1166	**1683**	1059	1571
Gandy Blvd E of Brighton Bay WB	**1409**	**1722**	**1303**	1577	**1401**	**1617**
	53.2%	47.8%	52.8%	51.6%	57.0%	49.3%

Location/Date	**12/15/2020**		**12/16/2020**		**12/17/2020**	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:15 to 8:15	4:45 to 5:45	7:15 to 8:15	4:15 to 5:15	7:15 to 8:15	4:30 to 5:30
Gandy Blvd W of Brighton Bay EB	1309	**1993**	1230	**1873**	1171	**1937**
Gandy Blvd W of Brighton Bay WB	**1586**	1791	**1483**	1640	**1533**	1676
	54.8%	52.7%	54.7%	53.3%	56.7%	53.6%

Location/Date	1/12/2021		1/13/2021		1/14/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:30 to 8:30	5:00 to 6:00	7:30 to 8:30	4:15 to 5:15	7:15 to 8:15	5:00 to 6:00
Gandy Blvd over 4th Street EB	**920**	**1316**	793	**1287**	874	**1376**
Gandy Blvd over 4th Street WB	884	959	**924**	967	**898**	1038
	51.0%	57.8%	53.8%	57.1%	50.7%	57.0%

Location/Date	12/15/2020		12/16/2020		12/17/2020	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:15 to 8:15	5:00 to 6:00	7:15 to 8:15	3:30 to 4:30	7:45 to 8:45	3:45 to 4:45
Gandy Blvd Bridge EB	946	1200	850	**1265**	792	**1094**
Gandy Blvd Bridge WB	**1030**	**1244**	**960**	1149	**965**	1161
	52.1%	49.1%	53.0%	52.4%	54.9%	48.5%

b. D Factor based on Historical Data

Site: 100028 - SR 600/US 92, EAST OF GANDY BRIDGE				
Year	AADT	K Factor	D Factor	T Factor
2019	38500	9.00	58.90	4.90
2018	38000	9.00	59.70	6.80
2017	37000	9.00	59.60	6.80
2016	36000	9.00	57.00	6.80
2015	36500	9.00	56.80	5.70
	Average	**9.00**	**58.40**	**6.20**

Site: 105158 - SR 600/US 92/W GANDY BLVD, EAST OF WESTSHORE BLVD				
Year	AADT	K Factor	D Factor	T Factor
2019	43000	9.00	58.90	4.90
2018	42000	9.00	59.70	5.20
2017	41000	9.00	59.60	5.20
2016	40000	9.00	57.00	5.20
2015	42500	9.00	56.80	4.70
	Average	**9.00**	**58.40**	**5.04**

Site: 150010 - SR 600/US 92/GANDY BLVD, E OF SR 687/4TH ST N				
Year	AADT	K Factor	D Factor	T Factor
2019	26000	9.00	55.70	4.60
2018	53000	9.00	55.50	4.60
2017	53000	9.00	54.50	4.90
2016	52000	9.00	55.90	4.20
2015	51000	9.00	55.00	4.20
	Average	9.00	55.32	4.50

Notes:

Gandy Blvd:

- AM Peak Direction – Westbound
- PM Peak Direction – Eastbound

Recommendation:

- Based on Traffic Counts: (taking an average of AM and PM): **D Factor = 53.4% along Gandy Blvd.**

The recommended D Factor also applies to the majority of side streets.

B. Side Streets D Factor Calculation

	12/8/2020		12/9/2020		12/10/2020	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	8:15 to 9:15	4:30 to 5:30	7:45 to 8:45	4:00 to 5:00	8:00 to 9:00	4:30 to 5:30
Westshore Blvd North of Gandy Blvd NB	**544**	**595**	487	**568**	450	**558**
Westshore Blvd North of Gandy Blvd SB	514	550	**569**	552	**579**	517
	51.4%	52.0%	53.9%	50.7%	56.3%	51.9%

	12/8/2020		12/9/2020		12/10/2020	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	8:00 to 9:00	5:45 to 6:45	8:15 to 9:15	5:45 to 6:45	6:30 to 7:30	5:45 to 6:45
Westshore Blvd South of Gandy Blvd NB	**563**	436	**570**	**469**	529	450
Westshore Blvd South of Gandy Blvd SB	N/A	**508**	519	441	**592**	**486**
	#VALUE!	53.8%	52.3%	51.5%	52.8%	51.9%

	1/12/2021		1/13/2021		1/14/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:30 to 8:30	4:30 to 5:30	8:15 to 9:15	4:45 to 5:45	7:45 to 8:45	4:15 to 5:15
San Martin Blvd South of Gandy Blvd NB	121	191	124	154	141	203
San Martin Blvd South of Gandy Blvd SB	**144**	**271**	**146**	**289**	**149**	**281**
	54.3%	58.7%	54.1%	65.2%	51.4%	58.1%

	1/12/2021		1/13/2021		1/14/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:15 to 8:15	3:30 to 4:30	8:15 to 9:15	4:45 to 5:45	7:00 to 8:00	4:15 to 5:15
Mangrove Cay Lane North of Gandy Blvd NB	9	8	13	**12**	7	**13**
Mangrove Cay Lane North of Gandy Blvd SB	**11**	**13**	**14**	7	**12**	10
	55.0%	61.9%	51.9%	63.2%	63.2%	56.5%

	12/15/2020		12/16/2020		12/17/2020	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:15 to 8:15	4:45 to 5:45	7:15 to 8:15	5:45 to 6:45	7:15 to 8:15	5:00 to 6:00
Brighton Bay North of Gandy Blvd NB	110	**412**	127	**340**	102	**366**
Brighton Bay North of Gandy Blvd SB	**285**	215	**313**	167	**279**	192
	72.2%	65.7%	71.1%	67.1%	73.2%	65.6%

	12/15/2020		12/16/2020		12/17/2020	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	6:30 to 7:30	3:30 to 4:30	8:30 to 9:30	3:30 to 4:30	8:30 to 9:30	3:45 to 4:45
Brighton Bay South of Gandy Blvd NB	**107**	**184**	**126**	**219**	**127**	**219**
Brighton Bay South of Gandy Blvd SB	55	46	34	44	39	49
	66.0%	80.0%	78.8%	83.3%	76.4%	81.7%

	1/5/2021		1/6/2021		1/7/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:45 to 8:45	5:00 to 6:00	7:30 to 8:30	4:15 to 5:15	7:30to 8:30	4:45 to 5:45
4th Street North of Gandy Blvd NB	632	860	665	773	696	786
4th Street North of Gandy Blvd SB	**793**	**1013**	**776**	**1039**	**771**	**1039**
	55.6%	54.1%	53.9%	57.3%	52.6%	56.9%

	1/5/2021		1/6/2021		1/7/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:45 to 8:45	5:00 to 6:00	7:30 to 8:30	4:15 to 5:15	7:30to 8:30	4:45 to 5:45
4th Street South of Gandy Blvd NB	845	932	823	850	846	883
4th Street South of Gandy Blvd SB	**968**	**1331**	**948**	**1374**	**995**	**1354**
	53.4%	58.8%	53.5%	61.8%	54.0%	60.5%

	1/5/2021		1/6/2021		1/7/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:30 to 8:30	5:00 to 6:00	7:30 to 8:30	4:15 to 5:15	7:45to 8:45	5:00 to 6:00
N Frontage Road East of 4th Street WB	**790**	**897**	**790**	**847**	**852**	**818**
S Frontage Road East of 4th Street EB	262	791	283	743	316	737
	75.1%	53.1%	73.6%	53.3%	72.9%	52.6%

	1/5/2021		1/6/2021		1/7/2021	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	7:30 to 8:30	5:00 to 6:00	7:45 to 8:45	4:45 to 5:45	7:45to 8:45	4:45 to 5:45
N Frontage Road West of 4th Street WB	**1160**	**1105**	**1171**	1053	**1265**	1013
S Frontage Road West of 4th Street EB	475	1059	478	**1094**	510	**1033**
	70.9%	51.1%	71.0%	51.0%	71.3%	50.5%

Recommendation: The D Factor of 53.4% can be used for the majority of side streets, with the exception of Brighton Bay Blvd North of Gandy Blvd (69.1%), Brighton Bay Blvd South of Gandy Blvd (77.7%), and the Frontage Road (62.0%).

C. DHT Factor Calculation

Based on Vehicle Classification Counts:

Gandy Blvd Bridge (Class 6 to Class 13)	12/15/2020	12/16/2020	12/17/2020	**Average**
	2.7	2.6	2.5	**2.60**
Gandy Blvd over 4th Street EB (Class 6 to Class 13)	12/15/2020	12/16/2020	12/17/2020	**Average**
	5.3	5.9	6.1	**5.77**
Gandy Blvd over 4th Street WB (Class 6 to Class 13)	12/15/2020	12/16/2020	12/17/2020	**Average**
	2.4	2.3	2.2	**2.30**

Based on Historical Data:

Gandy Boulevard:

Site: 100028 - SR 600/US 92, EAST OF GANDY BRIDGE				
Year	AADT	K Factor	D Factor	T Factor
2019	38500	9.00	58.90	4.90
2018	38000	9.00	59.70	6.80
2017	37000	9.00	59.60	6.80
2016	36000	9.00	57.00	6.80
2015	36500	9.00	56.80	5.70
	Average	**9.00**	**58.40**	**6.20**

Site: 105158 - SR 600/US 92/W GANDY BLVD, EAST OF WESTSHOR					
Year	AADT	K Factor	D Factor	T Factor	
2019	43000	9.00	58.90	4.90	
2018	42000	9.00	59.70	5.20	
2017	41000	9.00	59.60	5.20	
2016	40000	9.00	57.00	5.20	
2015	42500	9.00	56.80	4.70	
	Average	**9.00**	**58.40**	**5.04**	

Site: 150010 - SR 600/US 92/GANDY BLVD, E OF SR 687/4TH ST N					
Year	AADT	K Factor	D Factor	T Factor	
2019	26000	9.00	55.70	4.60	
2018	53000	9.00	55.50	4.60	
2017	53000	9.00	54.50	4.90	
2016	52000	9.00	55.90	4.20	
2015	51000	9.00	55.00	4.20	
	Average	**9.00**	**55.32**	**4.50**	

Side Streets:

Site: 109183 - WESTSHORE BLVD, N OF W GANDY BLVD				
Year	AADT	K Factor	D Factor	T Factor
2019	43000	9.00	58.90	7.20
2018	42000	9.00	59.70	5.70
2017	41000	9.00	59.60	7.90
2016	40000	9.00	57.00	6.80
2015	42500	9.00	56.80	6.90
	Average	**9.00**	**58.40**	**6.90**

Site: 150059 - SR 687/4TH ST N, NORTH OF GANDY BLVD				
Year	AADT	K Factor	D Factor	T Factor
2019	25500	9.00	55.70	5.40
2018	25500	9.00	55.50	4.10
2017	25500	9.00	54.50	4.90
2016	25000	9.00	55.90	4.00
2015	24500	9.00	55.00	3.50
	Average	**9.00**	**55.32**	**4.38**

Site: 155141 - SR 687/US 92/4TH ST N, SOUTH OF GANDY				
Year	AADT	K Factor	D Factor	T Factor
2019	33000	9.00	55.70	2.70
2018	33000	9.00	55.50	2.70
2017	36000	9.00	54.50	2.30
2016	35000	9.00	55.90	2.30
2015	34000	9.00	55.00	2.30
	Average	**9.00**	**55.32**	**2.46**

Site: 155173 - SAN MARTIN BLVD NE, SOUTH OF GANDY (HPMS)					
Year	AADT	K Factor	D Factor	T Factor	
2019	3500	9.00	55.70	3.50	
2018	3500	9.00	55.50	2.60	
2017	3500	9.00	54.50	5.40	
2016	3400	9.00	55.90	2.50	
2015	3400	9.00	55.00	3.40	
	Average	**9.00**	**55.32**	**3.48**	

Site: 151259 - SR 687 TO SR 600 CONNECTOR (ramp)				
Year	AADT	K Factor	D Factor	T Factor
2019	5170	9.00	55.70	3.80
2018	6400	9.00	55.50	3.70
2017	6350	9.00	54.50	3.90
2016	6250	9.00	55.90	3.90
2015	6090	9.00	55.00	3.90
	Average	**9.00**	**55.32**	**3.84**

Recommendation: T Factor of 5% and Peak Hour T factor of 2.5%

Appendix D

TBRPM Assignment Growth

Travel Demand Model Highway Assignment (2015-2045) No Build					
Location		Two-Way Model Output (Daily)		Linear Annual Growth (%)	Average Linear Annual Growth (%)
		2015	2045		
Pinellas County	Gandy Blvd West of 4th St *	53,282	75,589	1.4%	1.6%
	Gandy Blvd East of 4th St *	46,620	59,282	0.9%	
	Gandy Blvd West of San Martin Blvd	31,551	48,036	1.7%	
	Gandy Blvd East of San Martin Blvd	35,814	60,790	2.3%	
Bridge	Gandy Blvd Bridge	35,071	60,574	2.4%	2.4%
Hillsborough County	Gandy Blvd West of West Shore Blvd	37,848	64,230	2.3%	2.0%
	Gandy Blvd East of West Shore Blvd	37,499	55,852	1.6%	
Side Streets - Pinellas County	4th St South of Gandy Blvd	38,444	35,881	-0.2%	0.3%
	4th St North of Gandy Blvd	26,623	29,388	0.3%	
Side Streets - Hillsborough County	West Shore Blvd South of Gandy Blvd	14,088	17,723	0.9%	1.1%
	West Shore Blvd North of Gandy Blvd	13,844	18,881	1.2%	

Source: TBRPM v9.1

Note:

** Due to the fact that the Gandy Boulevard overpass at 4th Street was not part of the network in 2015, the volumes reported for 2015 represent the traffic assigned to the Frontage Road. For 2045, the volumes include both the Frontage Road and Gandy Boulevard.*

Appendix E

Historical and Assignment Growth

Historical Trend Analysis Summary						
Location		Station No.	Description	Linear Growth Rate (%) - Station	R^2	Linear Growth Rate (%) - Location
Gandy Blvd	West (Pinellas County)	155087	SR 694/Gandy Blvd East of 9th St	1.8	37.3	2.7
		150010 *	SR 600 East of SR 687/4th St	2.7	93.9	
	Gandy Bridge	150086	SR 600 1 Mi East of San Martin Blvd	2.3	80.39	2.3
	East (Hillsborough County)	100028	SR 600 East of Gandy Bridge	2.1	92.09	1.7
		105158	SR 600 East of Westshore Blvd	1.2	75.76	
Side Streets	West (Pinellas County)	150014	SR 686/Roosevelt Blvd South of MLK St	0.4	7.92	1.5
		155141	SR 687/4th St South of Gandy Blvd	0.1	0.29	
		150059	SR 687 North of Gandy Blvd	1.6	82.58	
		151259	SR 687 to SR 600 Connector	2.7	50.24	
		155713	San Martin Blvd South of Gandy Blvd	1.3	90.37	
	East (Hillsborough County)	109196 *	Westshore Blvd North of Interbay Blvd	0.9	86.93	1.2
		109183 *	Westshore Blvd North of Gandy Blvd	1.5	79.41	

Notes:

Source: Florida Traffic Online (2019)

** Only 9 years of data avaiable during the last 10 years.*

Station was discarded since R^2 values obtained from trend analysis indicated the data did not have a statistically acceptable correlation with the regression line (R^2<75%).

Socioeconomic Growth Rate Summary													
Location	Street	TAZ	Population					Employment					
			2015	2045	Linear Growth Rate			2015	2045	Linear Growth Rate			
West	4th Street - South of Gandy Blvd	1560	2,253	2,259	0.0%	0.1%	0.1%	1,191	1,195	0.0%	0.2%	0.3%	
		1563	1,546	1,557	0.0%			497	497	0.0%			
		1554	1,853	1,951	0.2%			1,713	1,891	0.3%			
		1553	344	345	0.0%			2,965	3,080	0.1%			
	4th Street - North of Gandy Blvd	1546	3,163	3,171	0.0%	0.0%		1,456	1,458	0.0%	0.4%		
		1547	726	728	0.0%			581	763	1.0%			
		1548	3,035	3,035	0.0%			458	559	0.7%			
		1540	2,074	2,079	0.0%			34	34	0.0%			
		1541	2,887	2,921	0.0%			38	38	0.0%			
	San Martin Blvd - South of Gandy Blvd	1555	275	299	0.3%	0.2%		846	1,000	0.6%	0.9%		
		1556	419	662	1.9%			228	268	0.6%			
		1563	1,546	1,557	0.0%			497	497	0.0%			
		1549	2,524	2,531	0.0%			344	664	3.1%			
East	West Shore Blvd - South of Gandy Blvd	527	276	3,511	39.1%	1.3%	1.2%	755	715	-0.2%	0.0%	0.0%	
		528	820	997	0.7%			471	471	0.0%			
		531	2,191	2,272	0.1%			351	351	0.0%			
		532	2,953	3,171	0.2%			365	365	0.0%			
		536	1,455	1,648	0.4%			199	199	0.0%			
		537	3,255	3,659	0.4%			648	648	0.0%			
	West Shore Blvd - North of Gandy Blvd	519	1,783	3,275	2.8%	1.0%		316	321	0.1%	0.1%		
		521	1,465	1,617	0.3%			1,156	1,157	0.0%			
		520	1,590	2,468	1.8%			333	333	0.0%			
		512	1,707	1,823	0.2%			306	340	0.4%			
		513	2,096	2,176	0.1%			521	537	0.1%			

Appendix F

Build AADT Balancing Spreadsheets

Cross Section Vol west of 4th Street	model	balanced	63500
Overpass	52%	52%	33000
Frontage Rd west of 4th Street	48%	48%	30500

Cross Section Vol east of 4th Street	model	balanced	60500
Overpass	59%	54%	33000
Frontage Rd east of 4th Street	41%	46%	27500

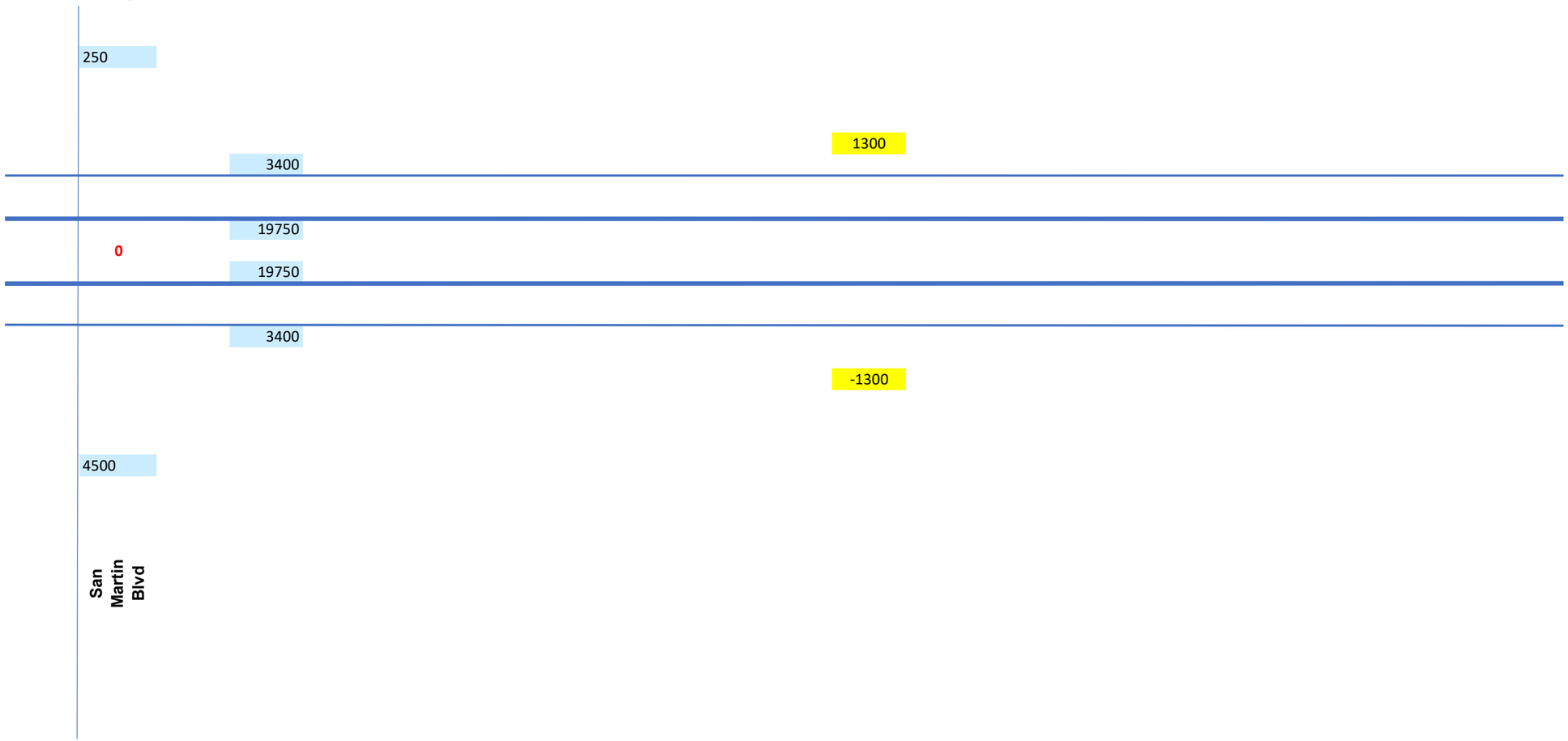


Cross Section Vol west of Brighton Bay Blvd	model	balanced	59500
Overpass west of Brighton Bay Blvd	83%	66%	39500
Frontage Rd west of Brighton Bay Blvd	17%	34%	20000

Cross Section Vol east of Brighton Bay Blvd	model	balanced	52500
Overpass east of Brighton Bay Blvd	88%	75%	39500
Frontage Rd east of Brighton Bay Blvd	12%	25%	13000

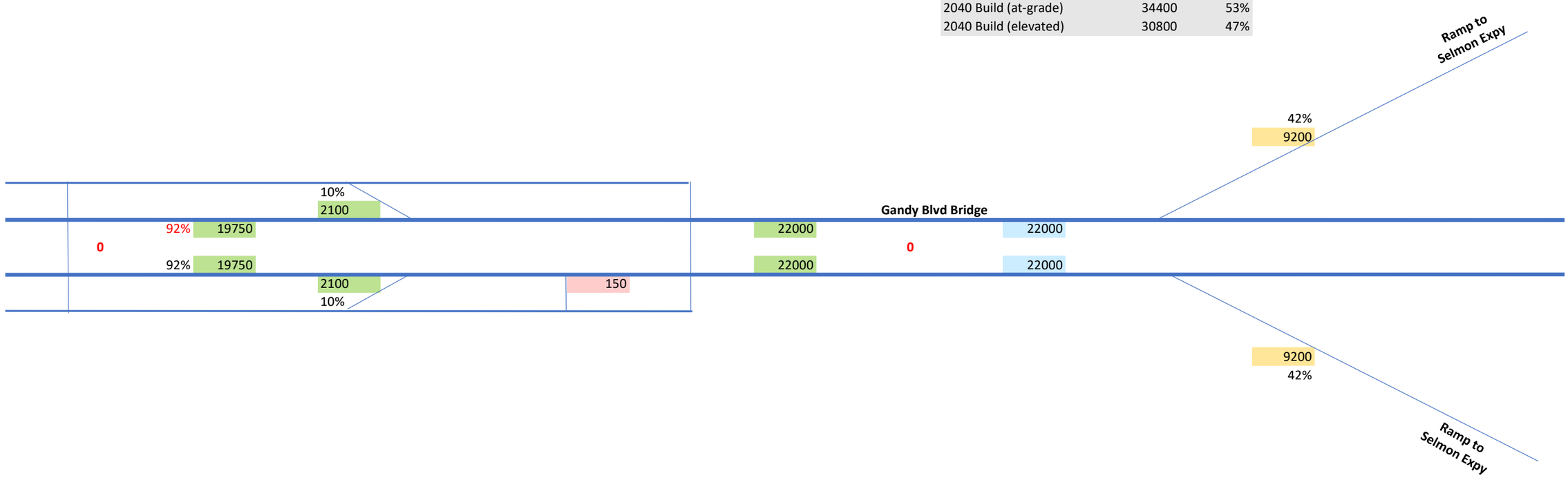


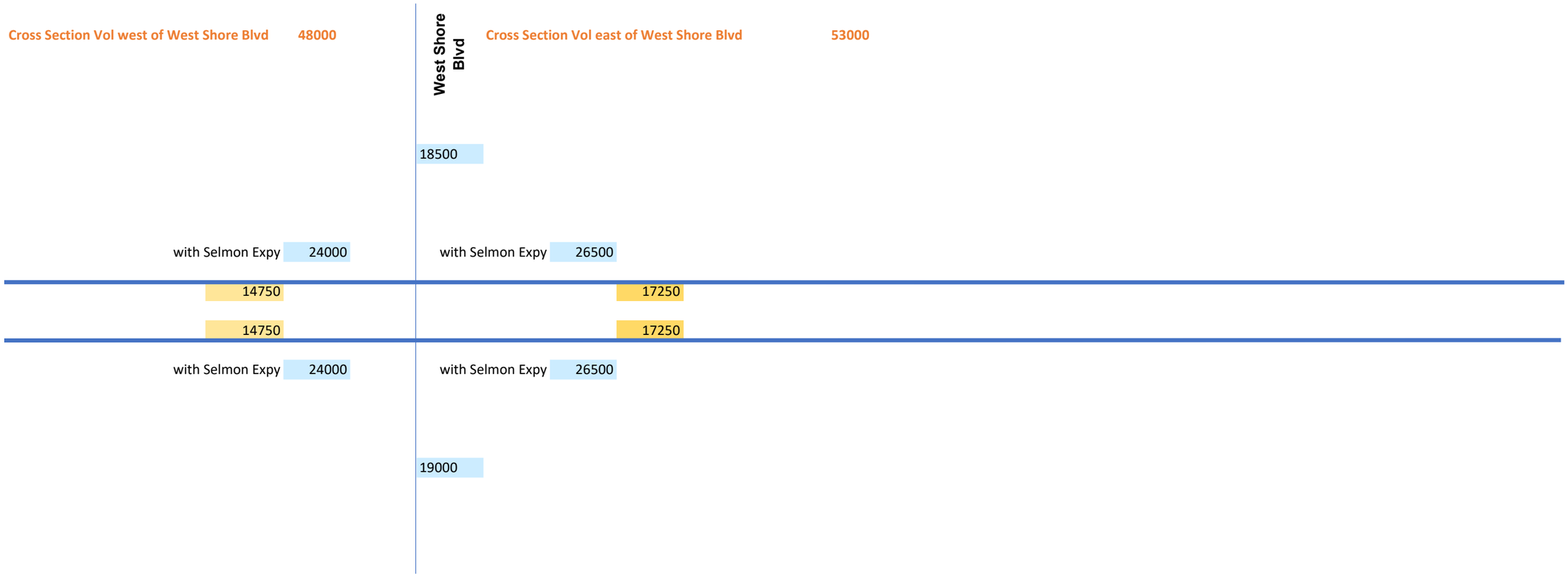
Cross Section Vol east of San Martin Blvd	model	balanced	46500
Overpass east of San Martin Blvd	90%	85%	39500
Frontage Rd east of San Martin Blvd	10%	15%	6800



Cross Section Vol Bridge 44000

Selmon Expy report for comparison purposes ONLY		
2040 Build (at-grade)	34400	53%
2040 Build (elevated)	30800	47%




Cross Section Vol west of West Shore Blvd
48000
West Shore Blvd
Cross Section Vol east of West Shore Blvd
53000
18500
with Selmon Expy
24000
with Selmon Expy
26500
14750
17250
14750
17250
with Selmon Expy
24000
with Selmon Expy
26500
19000

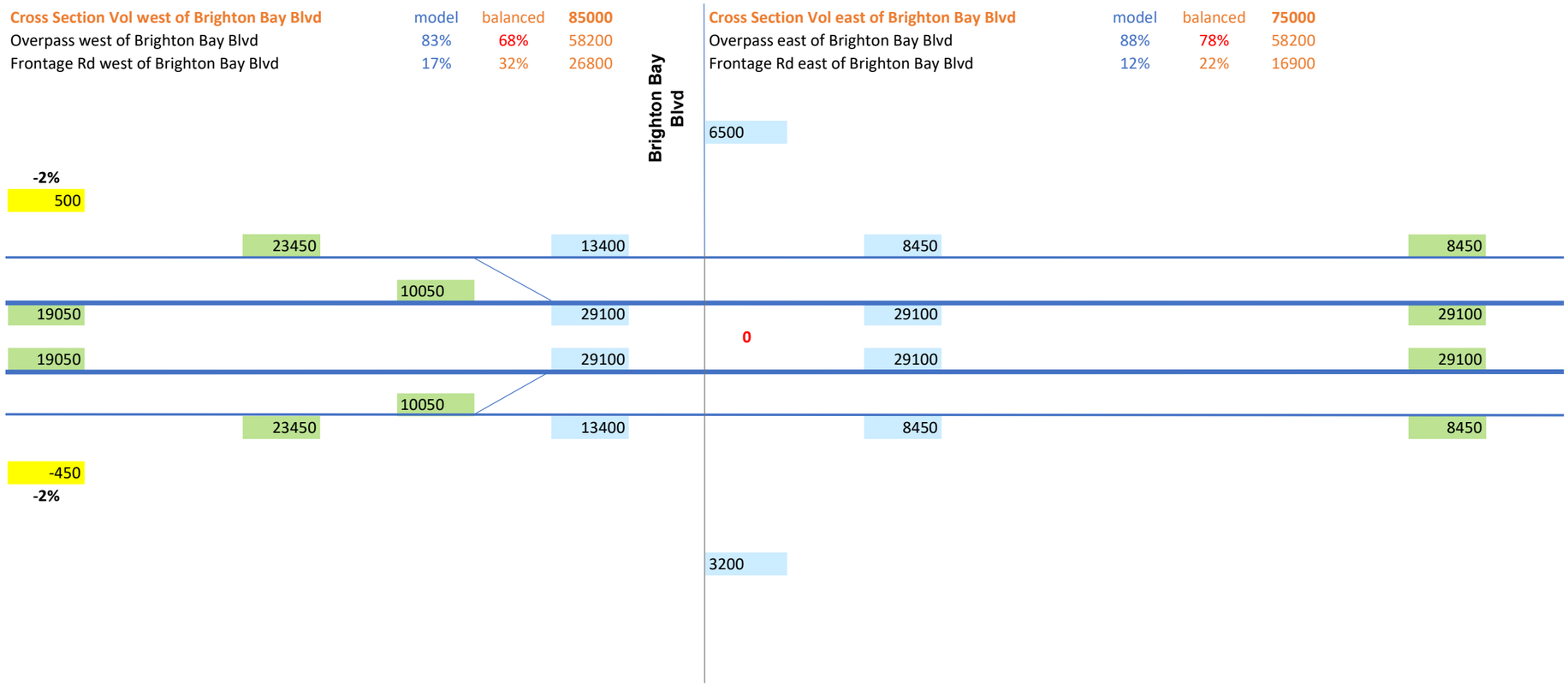
Cross Section Vol west of 4th Street	model	balanced	90500
Overpass	52%	52%	47300
Frontage Rd west of 4th Street	48%	48%	43200

Cross Section Vol east of 4th Street	model	balanced	86000
Overpass	59%	55%	47300
Frontage Rd east of 4th Street	41%	45%	38700

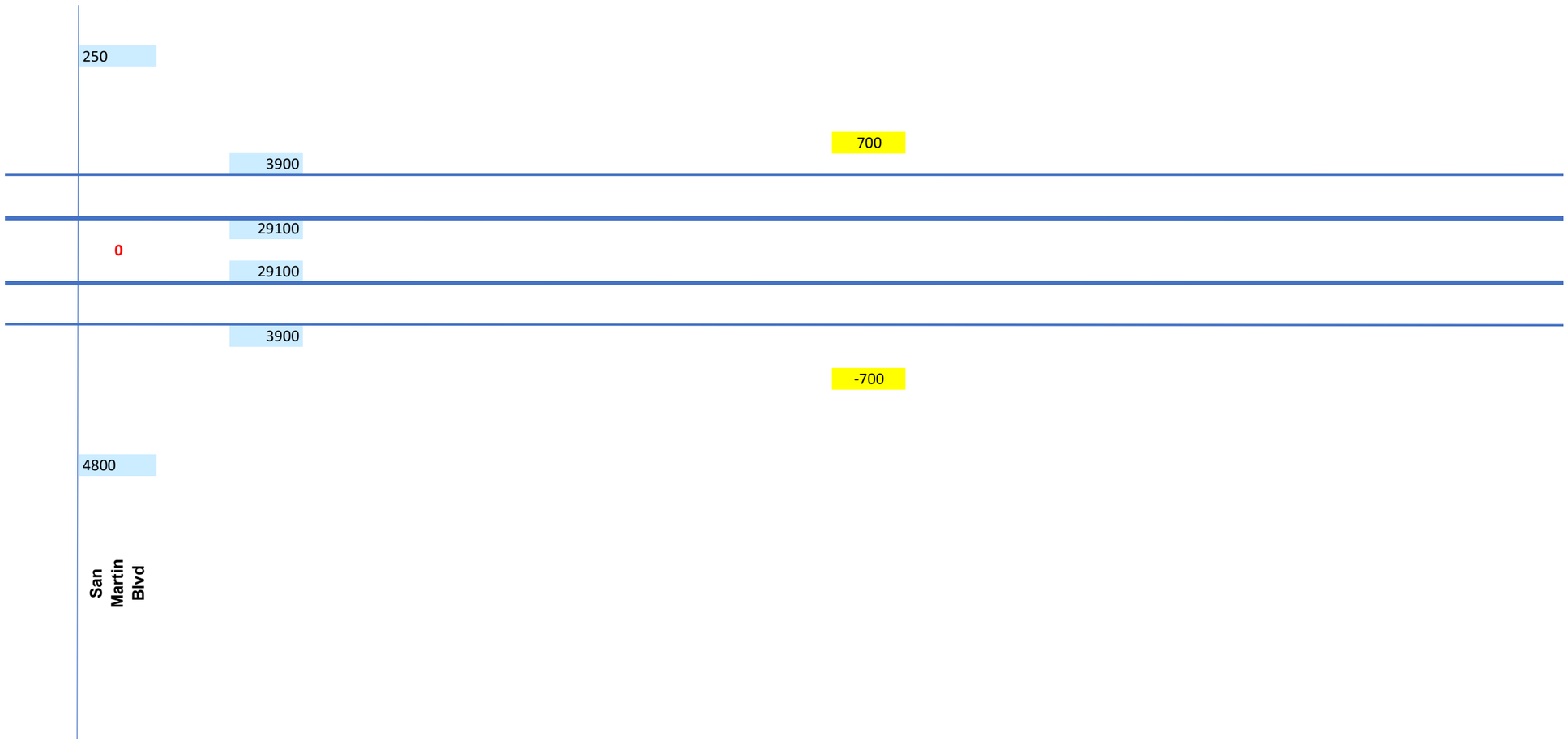


Cross Section Vol west of Brighton Bay Blvd	model	balanced	85000
Overpass west of Brighton Bay Blvd	83%	68%	58200
Frontage Rd west of Brighton Bay Blvd	17%	32%	26800

Cross Section Vol east of Brighton Bay Blvd	model	balanced	75000
Overpass east of Brighton Bay Blvd	88%	78%	58200
Frontage Rd east of Brighton Bay Blvd	12%	22%	16900

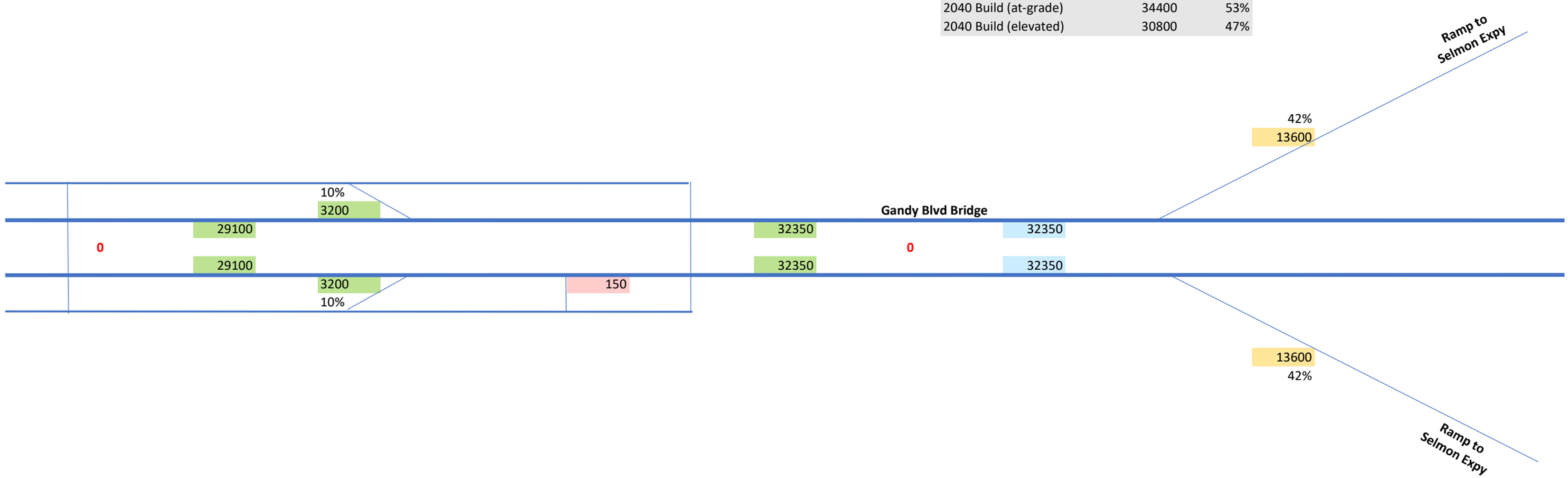


Cross Section Vol east of San Martin Blvd	model	balanced	66000
Overpass east of San Martin Blvd	90%	88%	58200
Frontage Rd east of San Martin Blvd	10%	12%	7800



Cross Section Vol Bridge 64500

Selmon Expy report for comparison purposes ONLY		
2040 Build (at-grade)	34400	53%
2040 Build (elevated)	30800	47%

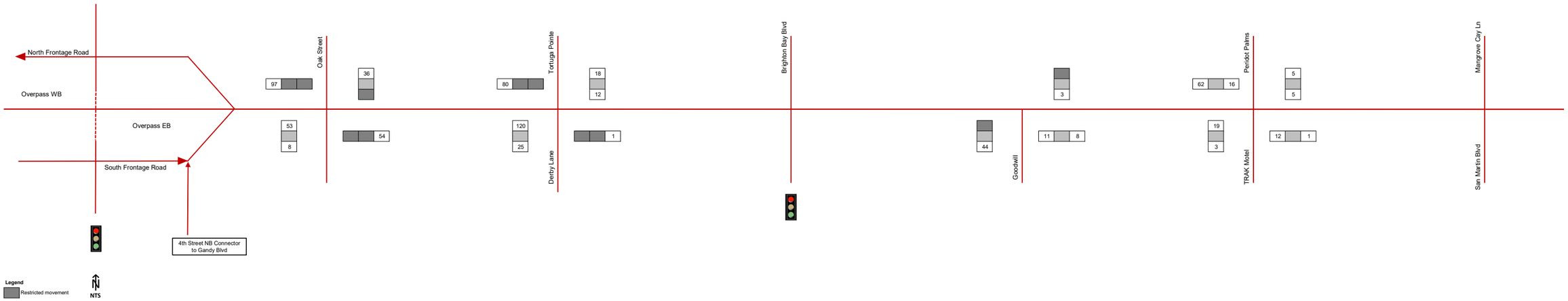


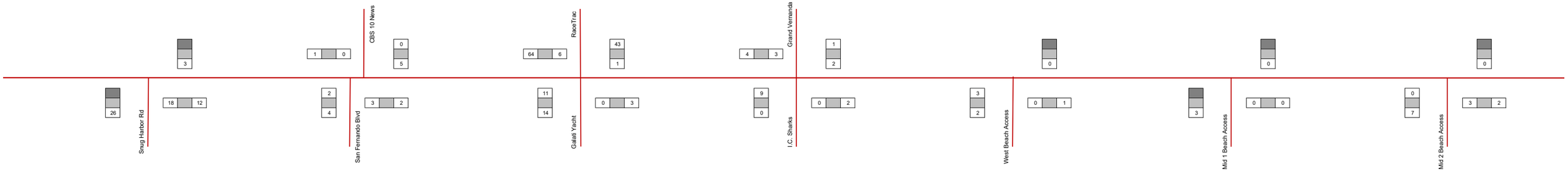

Cross Section Vol west of West Shore Blvd
67500
West Shore Blvd
Cross Section Vol east of West Shore Blvd
74500
21900
with Selmon Expy
33700
with Selmon Expy
37200
20100
23600
20100
23600
with Selmon Expy
33700
with Selmon Expy
37200
22600

Appendix G

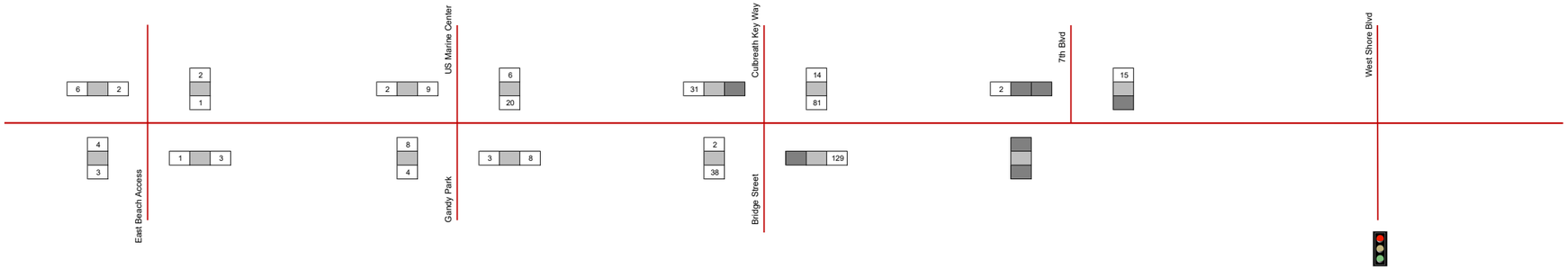
Driveway Turns

Existing Year Turning Movement Volumes
AM Peak Hour
Driveways Only

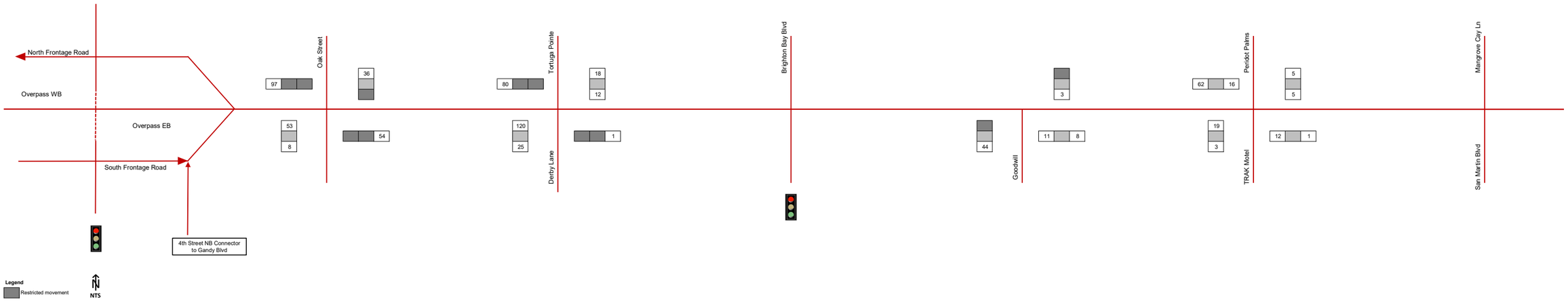



CBS 10 News
RaceTrac
Grand Vernanda
Snug Harbor Rd
San Fernando Blvd
Galati Yacht
I.C. Sharks
West Beach Access
Mid 1 Beach Access
Mid 2 Beach Access
3
1
0
0
5
64
6
43
1
4
3
1
2
0
0
0
26
18
12
2
4
3
2
11
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0
1
3
0
0
0
7
3
2

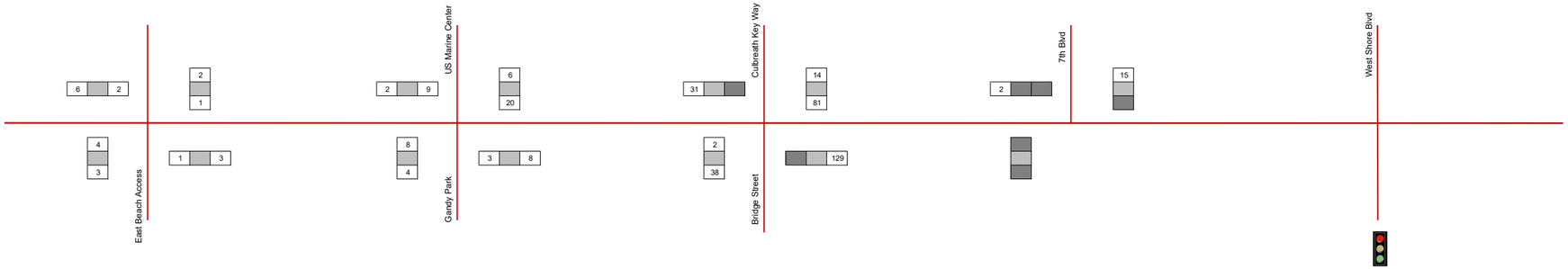
Existing Year Turning Movement Volumes
AM Peak Hour
Driveways Only



Existing Year Turning Movement Volumes
PM Peak Hour
Driveways Only

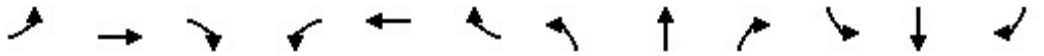


CBS 10 News
RaceTrac
Grand Vernanda
Snug Harbor Rd
San Fernando Blvd
Galati Yacht
I.C. Sharks
West Beach Access
Mid 1 Beach Access
Mid 2 Beach Access
3
1
0
5
64
6
43
1
4
3
1
2
0
0
0
0
26
18
12
2
4
3
2
11
14
0
3
9
0
0
2
3
2
0
1
3
0
0
0
7
3
2


East Beach Access
US Marine Center
Gandy Park
Cubreath Key Way
Bridge Street
7th Blvd
West Shore Blvd
6
2
4
3
2
1
1
3
2
9
8
4
6
20
3
8
31
2
38
14
81
129
2
15

Appendix H:
Opening Year (2030) No-Build Analysis Results

HCM Signalized Intersection Capacity Analysis
11: 4th Street N & North Frontage Rd

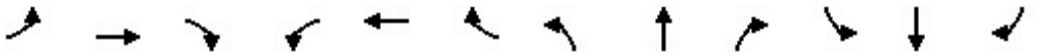


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	480	720	300	600	650	0	0	770	330
Future Volume (vph)	0	0	0	480	720	300	600	650	0	0	770	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Lane Util. Factor				0.97	0.91	1.00	0.97	0.91			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3400	5036	1568	3400	5036			6346	1568
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3400	5036	1568	3400	5036			6346	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	505	758	316	632	684	0	0	811	347
RTOR Reduction (vph)	0	0	0	0	0	229	0	0	0	0	0	181
Lane Group Flow (vph)	0	0	0	505	758	87	632	684	0	0	811	166
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				52.3	52.3	52.3	44.0	94.6			43.5	43.5
Effective Green, g (s)				52.3	52.3	52.3	44.0	94.6			43.5	43.5
Actuated g/C Ratio				0.28	0.28	0.28	0.23	0.50			0.23	0.23
Clearance Time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				935	1386	431	787	2507			1452	358
v/s Ratio Prot				0.15	c0.15		c0.19	0.14			c0.13	
v/s Ratio Perm						0.06						0.11
v/c Ratio				0.54	0.55	0.20	0.80	0.27			0.56	0.46
Uniform Delay, d1				58.6	58.7	52.8	68.9	27.7			64.8	63.2
Progression Factor				1.00	1.00	1.00	0.80	1.56			1.00	1.00
Incremental Delay, d2				0.6	0.4	0.2	6.8	0.2			1.6	4.3
Delay (s)				59.3	59.2	53.1	62.2	43.6			66.3	67.4
Level of Service				E	E	D	E	D			E	E
Approach Delay (s)		0.0			58.0			52.5			66.7	
Approach LOS		A			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	58.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

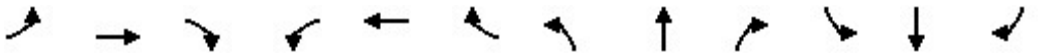
HCM Signalized Intersection Capacity Analysis
14: 4th Street N & South Frontage Rd/South Frontage Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	360	540	0	0	0	0	1150	50	150	1100	0
Future Volume (vph)	100	360	540	0	0	0	0	1150	50	150	1100	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Lane Util. Factor	0.97	0.95	0.88					0.81		1.00	0.91	
Frt	1.00	1.00	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3400	3505	2760					7424		1752	5036	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3400	3505	2760					7424		1752	5036	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	379	568	0	0	0	0	1211	53	158	1158	0
RTOR Reduction (vph)	0	0	37	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	105	379	531	0	0	0	0	1260	0	158	1158	0
Turn Type	Prot	NA	Perm					NA		Prot	NA	
Protected Phases	5	2						8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	44.0	94.6	94.6					52.3		20.8	80.5	
Effective Green, g (s)	44.0	94.6	94.6					52.3		20.8	80.5	
Actuated g/C Ratio	0.23	0.50	0.50					0.28		0.11	0.42	
Clearance Time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	787	1745	1374					2043		191	2133	
v/s Ratio Prot	0.03	0.11						c0.17		c0.09	0.23	
v/s Ratio Perm			c0.19									
v/c Ratio	0.13	0.22	0.39					0.62		0.83	0.54	
Uniform Delay, d1	57.9	26.9	29.7					60.1		82.8	41.0	
Progression Factor	1.00	1.00	1.00					1.00		0.57	0.67	
Incremental Delay, d2	0.4	0.3	0.8					0.6		21.2	0.2	
Delay (s)	58.2	27.1	30.5					60.7		68.7	27.8	
Level of Service	E	C	C					E		E	C	
Approach Delay (s)		32.0			0.0			60.7			32.7	
Approach LOS		C			A			E			C	

Intersection Summary			
HCM 2000 Control Delay	42.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	1950	160	40	2250	10	50	0	10	50	0	350
Future Volume (vph)	190	1950	160	40	2250	10	50	0	10	50	0	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	2053	168	42	2368	11	53	0	11	53	0	368
RTOR Reduction (vph)	0	0	53	0	0	4	0	0	11	0	0	91
Lane Group Flow (vph)	200	2053	115	42	2368	7	26	27	0	0	53	277
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	7.6	146.1	146.1	5.9	144.4	144.4	8.3	8.3	8.3		22.0	22.0
Effective Green, g (s)	7.6	146.1	146.1	5.9	144.4	144.4	8.3	8.3	8.3		22.0	22.0
Actuated g/C Ratio	0.04	0.69	0.69	0.03	0.68	0.68	0.04	0.04	0.04		0.10	0.10
Clearance Time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Vehicle Extension (s)	3.0	8.0	8.0	3.0	8.0	8.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	121	2403	1075	94	2375	1062	64	64	61		180	161
v/s Ratio Prot	c0.06	0.59		0.01	c0.68		0.02	c0.02			0.03	
v/s Ratio Perm			0.07			0.00			0.00			c0.18
v/c Ratio	1.65	0.85	0.11	0.45	1.00	0.01	0.41	0.42	0.01		0.29	1.72
Uniform Delay, d1	102.8	25.4	11.4	102.0	34.1	11.1	100.0	100.1	98.4		88.4	95.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	327.6	4.1	0.2	3.4	17.8	0.0	4.2	4.4	0.0		0.9	350.2
Delay (s)	430.3	29.6	11.6	105.4	51.9	11.1	104.2	104.5	98.5		89.3	445.7
Level of Service	F	C	B	F	D	B	F	F	F		F	F
Approach Delay (s)		61.4			52.7			103.3			400.9	
Approach LOS		E			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	84.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	213.1	Sum of lost time (s)	30.8
Intersection Capacity Utilization	111.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	24.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1600	70	150	1850	0	45	5	150	0	0	10
Future Vol, veh/h	5	1600	70	150	1850	0	45	5	150	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	215	-	250	225	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	1684	74	158	1947	0	47	5	158	0	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1947	0	-	1684	0	0	2984	3957	842	3118	3957	974
Stage 1	-	-	-	-	-	-	1694	1694	-	2263	2263	-
Stage 2	-	-	-	-	-	-	1290	2263	-	855	1694	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	293	-	0	371	-	-	~ 6	~ 3	306	5	3	250
Stage 1	-	-	0	-	-	-	95	146	-	41	75	-
Stage 2	-	-	0	-	-	-	171	75	-	317	146	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	293	-	-	371	-	-	~ 4	~ 2	306	1	2	250
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 43	28	-	~ -19	~ -22	-
Stage 1	-	-	-	-	-	-	93	144	-	40	43	-
Stage 2	-	-	-	-	-	-	94	43	-	145	144	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.6	$ 454.9	20
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	117	293	-	371	-	-	250
HCM Lane V/C Ratio	1.799	0.018	-	0.426	-	-	0.042
HCM Control Delay (s)	$ 454.9	17.5	-	21.7	-	-	20
HCM Lane LOS	F	C	-	C	-	-	C
HCM 95th %tile Q(veh)	16.5	0.1	-	2.1	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Signalized Intersection Summary
24: Westshore Blvd & Gandy Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	930	100	300	1100	200	210	510	180	200	380	220
Future Volume (veh/h)	170	930	100	300	1100	200	210	510	180	200	380	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	179	979	105	316	1158	211	221	537	189	211	400	232
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	226	1091	487	337	1323	590	274	557	472	225	531	450
Arrive On Green	0.08	0.31	0.31	0.15	0.38	0.38	0.08	0.30	0.30	0.07	0.29	0.29
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1856	1572	3428	1856	1572
Grp Volume(v), veh/h	179	979	105	316	1158	211	221	537	189	211	400	232
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	1856	1572	1714	1856	1572
Q Serve(g_s), s	9.6	37.2	6.9	18.8	42.8	13.6	8.9	39.9	13.4	8.6	27.5	17.3
Cycle Q Clear(g_c), s	9.6	37.2	6.9	18.8	42.8	13.6	8.9	39.9	13.4	8.6	27.5	17.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	1091	487	337	1323	590	274	557	472	225	531	450
V/C Ratio(X)	0.79	0.90	0.22	0.94	0.88	0.36	0.81	0.96	0.40	0.94	0.75	0.52
Avail Cap(c_a), veh/h	249	1091	487	346	1323	590	397	559	474	225	531	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	46.2	35.8	39.0	40.7	31.5	63.3	48.2	39.0	65.1	45.5	41.9
Incr Delay (d2), s/veh	12.9	11.5	1.0	31.7	8.3	1.7	7.7	29.0	0.5	42.1	6.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.4	24.4	5.1	16.2	26.6	9.3	7.4	30.1	9.0	8.7	19.5	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	57.7	36.8	70.6	49.0	33.2	71.0	77.3	39.5	107.2	51.5	42.9
LnGrp LOS	D	E	D	E	D	C	E	E	D	F	D	D
Approach Vol, veh/h		1263			1685			947			843	
Approach Delay, s/veh		54.6			51.1			68.3			63.1	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	59.0	15.0	47.8	27.3	49.8	17.0	45.8
Change Period (Y+Rc), s	6.5	6.5	5.8	5.8	6.5	6.5	5.8	5.8
Max Green Setting (Gmax), s	13.5	50.5	9.2	42.2	21.5	42.5	16.2	35.2
Max Q Clear Time (g_c+I1), s	11.6	44.8	10.6	41.9	20.8	39.2	10.9	29.5
Green Ext Time (p_c), s	0.0	3.7	0.0	0.1	0.0	2.0	0.3	1.6

Intersection Summary	
HCM 6th Ctrl Delay	57.6
HCM 6th LOS	E



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	505	758	316	632	684	811	347
v/c Ratio	0.54	0.55	0.48	0.80	0.27	0.56	0.64
Control Delay	61.5	60.8	7.3	62.6	43.8	66.5	26.5
Queue Delay	0.0	0.0	0.0	60.1	54.4	52.1	0.0
Total Delay	61.5	60.8	7.3	122.8	98.3	118.6	26.5
Queue Length 50th (ft)	282	301	0	428	323	263	128
Queue Length 95th (ft)	347	352	85	493	373	302	252
Internal Link Dist (ft)		612			159	361	
Turn Bay Length (ft)	500		500				300
Base Capacity (vph)	935	1386	660	787	2508	1452	540
Starvation Cap Reductn	0	0	0	549	1993	0	0
Spillback Cap Reductn	0	0	0	0	0	784	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.55	0.48	2.66	1.33	1.21	0.64

Intersection Summary



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	105	379	568	1264	158	1158
v/c Ratio	0.13	0.22	0.40	0.62	0.83	0.54
Control Delay	58.7	27.4	26.8	61.6	75.3	28.5
Queue Delay	0.0	0.0	0.0	9.2	68.5	18.4
Total Delay	58.8	27.4	26.8	70.9	143.7	46.9
Queue Length 50th (ft)	54	140	219	346	207	325
Queue Length 95th (ft)	84	176	275	381	#301	354
Internal Link Dist (ft)		460		372		159
Turn Bay Length (ft)	350		350			
Base Capacity (vph)	787	1746	1411	2047	213	2149
Starvation Cap Reductn	0	0	0	0	96	1009
Spillback Cap Reductn	93	0	0	756	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.22	0.40	0.98	1.35	1.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



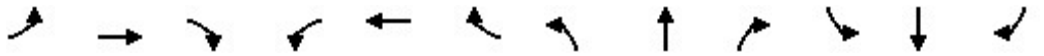
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	200	2053	168	42	2368	11	26	27	11	53	368
v/c Ratio	1.63	0.84	0.15	0.36	0.99	0.01	0.31	0.33	0.06	0.29	1.45
Control Delay	367.9	29.9	1.7	109.6	49.7	0.0	108.2	108.7	0.7	92.9	261.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	367.9	29.9	1.7	109.6	49.7	0.0	108.2	108.7	0.7	92.9	261.5
Queue Length 50th (ft)	~208	1167	0	30	~1768	0	37	40	0	70	~571
Queue Length 95th (ft)	#311	1312	30	56	#1954	0	80	83	0	126	#814
Internal Link Dist (ft)		937			926			325		356	
Turn Bay Length (ft)	560		780	300		500					
Base Capacity (vph)	123	2439	1142	123	2384	1099	134	134	217	183	254
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.63	0.84	0.15	0.34	0.99	0.01	0.19	0.20	0.05	0.29	1.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
11: 4th Street N & North Frontage Rd

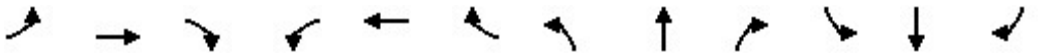


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	350	330	220	500	750	0	0	910	190
Future Volume (vph)	0	0	0	350	330	220	500	750	0	0	910	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Lane Util. Factor				0.97	0.91	1.00	0.97	0.91			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3400	5036	1568	3400	5036			6346	1568
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3400	5036	1568	3400	5036			6346	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	368	347	232	526	789	0	0	958	200
RTOR Reduction (vph)	0	0	0	0	0	174	0	0	0	0	0	161
Lane Group Flow (vph)	0	0	0	368	347	58	526	789	0	0	958	40
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				49.6	49.6	49.6	46.1	92.7			39.5	39.5
Effective Green, g (s)				49.6	49.6	49.6	46.1	92.7			39.5	39.5
Actuated g/C Ratio				0.25	0.25	0.25	0.23	0.46			0.20	0.20
Clearance Time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				843	1248	388	783	2334			1253	309
v/s Ratio Prot				c0.11	0.07		c0.15	0.16			c0.15	
v/s Ratio Perm						0.04						0.03
v/c Ratio				0.44	0.28	0.15	0.67	0.34			0.76	0.13
Uniform Delay, d1				63.4	60.7	58.7	70.1	34.1			75.9	66.1
Progression Factor				1.00	1.00	1.00	0.71	1.19			1.00	1.00
Incremental Delay, d2				0.4	0.1	0.2	3.4	0.3			4.5	0.9
Delay (s)				63.8	60.9	58.9	53.3	40.9			80.3	66.9
Level of Service				E	E	E	D	D			F	E
Approach Delay (s)		0.0			61.5			45.9			78.0	
Approach LOS		A			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	61.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	200.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: 4th Street N & South Frontage Rd/South Frontage Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	750	700	0	0	0	0	1100	100	260	1000	0
Future Volume (vph)	150	750	700	0	0	0	0	1100	100	260	1000	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Lane Util. Factor	0.97	0.95	0.88					0.81		1.00	0.91	
Frt	1.00	1.00	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3400	3505	2760					7378		1752	5036	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3400	3505	2760					7378		1752	5036	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	789	737	0	0	0	0	1158	105	274	1053	0
RTOR Reduction (vph)	0	0	56	0	0	0	0	8	0	0	0	0
Lane Group Flow (vph)	158	789	681	0	0	0	0	1255	0	274	1053	0
Turn Type	Prot	NA	Perm					NA		Prot	NA	
Protected Phases	5	2						8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	46.1	92.7	92.7					49.6		35.4	92.4	
Effective Green, g (s)	46.1	92.7	92.7					49.6		35.4	92.4	
Actuated g/C Ratio	0.23	0.46	0.46					0.25		0.18	0.46	
Clearance Time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	783	1624	1279					1829		310	2326	
v/s Ratio Prot	0.05	0.23						c0.17		c0.16	0.21	
v/s Ratio Perm			c0.25									
v/c Ratio	0.20	0.49	0.53					0.69		0.88	0.45	
Uniform Delay, d1	62.1	37.1	38.2					68.1		80.3	36.6	
Progression Factor	1.00	1.00	1.00					1.00		0.60	0.78	
Incremental Delay, d2	0.6	1.0	1.6					1.1		17.2	0.1	
Delay (s)	62.7	38.2	39.8					69.2		65.2	28.6	
Level of Service	E	D	D					E		E	C	
Approach Delay (s)		41.2			0.0			69.2			36.2	
Approach LOS		D			A			E			D	

Intersection Summary			
HCM 2000 Control Delay	47.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	200.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	2200	50	10	1950	40	170	0	30	20	0	130
Future Volume (vph)	350	2200	50	10	1950	40	170	0	30	20	0	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	368	2316	53	11	2053	42	179	0	32	21	0	137
RTOR Reduction (vph)	0	0	9	0	0	10	0	0	31	0	0	103
Lane Group Flow (vph)	368	2316	44	11	2053	32	89	90	1	0	21	34
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	22.6	234.0	234.0	4.1	215.5	215.5	7.0	7.0	7.0		7.0	7.0
Effective Green, g (s)	22.6	234.0	234.0	4.1	215.5	215.5	7.0	7.0	7.0		7.0	7.0
Actuated g/C Ratio	0.08	0.83	0.83	0.01	0.76	0.76	0.02	0.02	0.02		0.02	0.02
Clearance Time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Vehicle Extension (s)	3.0	8.0	8.0	3.0	8.0	8.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	271	2899	1296	49	2669	1194	41	41	38		43	38
v/s Ratio Prot	c0.11	c0.66		0.00	0.59		0.05	c0.05			0.01	
v/s Ratio Perm			0.03			0.02			0.00			c0.02
v/c Ratio	1.36	0.80	0.03	0.22	0.77	0.03	2.17	2.20	0.02		0.49	0.88
Uniform Delay, d1	130.1	12.5	4.3	137.8	19.4	8.2	137.9	137.9	134.6		136.2	137.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	183.2	2.4	0.0	2.3	2.2	0.0	598.5	609.0	0.2		8.5	100.2
Delay (s)	313.4	14.9	4.4	140.2	21.6	8.2	736.4	747.0	134.8		144.7	237.8
Level of Service	F	B	A	F	C	A	F	F	F		F	F
Approach Delay (s)		54.8			21.9			649.7			225.4	
Approach LOS		D			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	70.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	282.9	Sum of lost time (s)	30.8
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	49.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1900	50	140	1650	10	65	5	130	5	0	5
Future Vol, veh/h	5	1900	50	140	1650	10	65	5	130	5	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	215	-	250	225	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	2000	53	147	1737	11	68	5	137	5	0	5

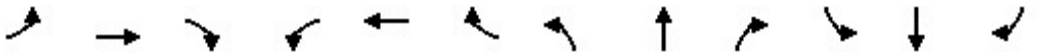
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1748	0	-	2000	0	0	3173	4052	1000	3050	4047	874
Stage 1	-	-	-	-	-	-	2010	2010	-	2037	2037	-
Stage 2	-	-	-	-	-	-	1163	2042	-	1013	2010	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	351	-	0	279	-	-	~ 4	~ 3	240	~ 5	3	291
Stage 1	-	-	0	-	-	-	~ 60	101	-	58	98	-
Stage 2	-	-	0	-	-	-	205	97	-	254	101	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	351	-	-	279	-	-	~ 2	~ 1	240	~ 1	1	291
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 33	27	-	~ -234	658	-
Stage 1	-	-	-	-	-	-	~ 59	100	-	57	46	-
Stage 2	-	-	-	-	-	-	95	46	-	102	100	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.4	$ 953.1	3.5
HCM LOS			F	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	74	351	-	279	-	-	+
HCM Lane V/C Ratio	2.845	0.015	-	0.528	-	-	-
HCM Control Delay (s)	$ 953.1	15.4	-	31.5	-	-	3.5
HCM Lane LOS	F	C	-	D	-	-	A
HCM 95th %tile Q(veh)	20.9	0	-	2.9	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Signalized Intersection Summary
24: Westshore Blvd & Gandy Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	1100	140	300	870	230	210	390	200	220	450	230
Future Volume (veh/h)	160	1100	140	300	870	230	210	390	200	220	450	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	168	1158	147	316	916	242	221	411	211	232	474	242
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	299	1460	651	333	1715	765	254	459	389	266	466	395
Arrive On Green	0.07	0.41	0.41	0.14	0.49	0.49	0.07	0.25	0.25	0.08	0.25	0.25
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1856	1572	3428	1856	1572
Grp Volume(v), veh/h	168	1158	147	316	916	242	221	411	211	232	474	242
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	1856	1572	1714	1856	1572
Q Serve(g_s), s	10.9	57.3	12.1	25.2	36.0	18.7	12.8	42.8	23.3	13.4	50.2	27.2
Cycle Q Clear(g_c), s	10.9	57.3	12.1	25.2	36.0	18.7	12.8	42.8	23.3	13.4	50.2	27.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	299	1460	651	333	1715	765	254	459	389	266	466	395
V/C Ratio(X)	0.56	0.79	0.23	0.95	0.53	0.32	0.87	0.90	0.54	0.87	1.02	0.61
Avail Cap(c_a), veh/h	409	1460	651	438	1715	765	261	459	389	329	466	395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	51.1	37.9	54.7	35.6	31.2	91.7	72.8	65.4	91.2	74.9	66.3
Incr Delay (d2), s/veh	0.6	4.5	0.8	23.9	1.2	1.1	25.5	19.8	1.5	16.2	46.3	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.3	34.2	8.6	25.2	22.2	12.0	10.7	30.6	14.7	10.8	39.3	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	55.6	38.7	78.6	36.8	32.2	117.1	92.6	67.0	107.5	121.2	69.1
LnGrp LOS	C	E	D	E	D	C	F	F	E	F	F	E
Approach Vol, veh/h		1473			1474			843			948	
Approach Delay, s/veh		51.3			45.0			92.6			104.5	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.6	103.8	21.3	55.2	34.1	89.3	20.6	56.0
Change Period (Y+Rc), s	6.5	6.5	5.8	5.8	6.5	6.5	5.8	5.8
Max Green Setting (Gmax), s	25.5	84.5	19.2	46.2	39.5	70.5	15.2	50.2
Max Q Clear Time (g_c+I1), s	12.9	38.0	15.4	44.8	27.2	59.3	14.8	52.2
Green Ext Time (p_c), s	0.2	8.2	0.2	0.5	0.4	6.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	67.3
HCM 6th LOS	E

Queues
11: 4th Street N & North Frontage Rd



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	368	347	232	526	789	958	200
v/c Ratio	0.44	0.28	0.41	0.67	0.34	0.76	0.43
Control Delay	65.3	61.4	8.3	54.4	41.9	80.5	10.1
Queue Delay	0.0	0.0	0.0	58.6	52.4	51.5	0.0
Total Delay	65.3	61.4	8.3	113.0	94.3	132.1	10.1
Queue Length 50th (ft)	208	133	0	375	393	351	0
Queue Length 95th (ft)	271	173	78	438	445	395	79
Internal Link Dist (ft)		612			159	361	
Turn Bay Length (ft)	500		500				300
Base Capacity (vph)	857	1269	568	784	2335	1253	470
Starvation Cap Reductn	0	0	0	487	1653	0	0
Spillback Cap Reductn	0	0	0	0	0	614	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.27	0.41	1.77	1.16	1.50	0.43

Intersection Summary



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	158	789	737	1263	274	1053
v/c Ratio	0.20	0.49	0.55	0.69	0.88	0.45
Control Delay	64.5	39.3	35.2	69.8	68.1	28.8
Queue Delay	0.1	0.0	0.0	49.3	67.6	50.4
Total Delay	64.6	39.3	35.2	119.1	135.8	79.2
Queue Length 50th (ft)	90	394	357	364	380	358
Queue Length 95th (ft)	129	460	432	412	485	391
Internal Link Dist (ft)		460		372		159
Turn Bay Length (ft)	350		350			
Base Capacity (vph)	784	1625	1336	1868	360	2444
Starvation Cap Reductn	0	0	0	0	224	1487
Spillback Cap Reductn	88	0	0	763	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.49	0.55	1.14	2.01	1.10

Intersection Summary

Queues
3: Derby Lane/Brighton Bay Blvd & Gandy Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	368	2316	53	11	2053	42	89	90	32	21	137
v/c Ratio	1.34	0.79	0.04	0.14	0.77	0.03	2.17	2.20	0.23	0.49	0.96
Control Delay	259.6	14.5	0.2	137.6	22.1	0.1	642.3	652.2	3.6	170.2	94.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	259.6	14.5	0.2	137.6	22.1	0.1	642.3	652.2	3.6	170.2	94.7
Queue Length 50th (ft)	~456	1126	0	10	1112	0	~274	~278	0	39	59
Queue Length 95th (ft)	#584	1195	2	26	1160	0	#444	#444	0	82	#236
Internal Link Dist (ft)		937			926			335		356	
Turn Bay Length (ft)	560		780	300		500					
Base Capacity (vph)	274	2929	1323	92	2661	1216	41	41	142	43	142
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.79	0.04	0.12	0.77	0.03	2.17	2.20	0.23	0.49	0.96

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 1 - 4th Street Ramps to Brighton Bay Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2300	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1240
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1211	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.39
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 1 - 4th Street Ramps to Brighton Bay Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	18.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2900	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1564
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2008
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2008
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.78

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	49.4
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	4.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1526	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.50
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 2 - From Brighton Bay Blvd to west end of Gandy Blvd bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.9
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2010	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1084
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1058	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.32
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 2 - From Brighton Bay Blvd to west end of Gandy Blvd bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	2.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2300	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1240
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2088
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2088
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	54.4
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1211	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.39
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 3 - Gandy Blvd bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	916
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	895	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.23
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 3 - Gandy Blvd bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2000	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1078
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1053	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.32
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 4 - East end of Gandy Blvd bridge to 600 ft west of US Marine ent	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	916
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	895	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.23
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 4 - East end of Gandy Blvd bridge to 600 ft west of US Marine ent	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2000	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1078
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1053	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.32
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 5 - From 600 ft west of US Marine entrance to Selmon Expwy ramps	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.2
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.2		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	611
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1964
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1964
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	596	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.03
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 5 - From 600 ft west of US Marine entrance to Selmon Expwy ramps	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.2
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.2		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2000	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	719
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1964
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1964
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	702	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 6 - From Selmon Expwy ramps to 1700 ft west of Bridge St	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	950	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	342
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	6.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	333	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 6 - From Selmon Expwy ramps to 1700 ft west of Bridge St	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1150	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	620
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	605	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.03
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 7 - From 1700 ft west of Bridge St to Westshore Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	48.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1200	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	647
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1962
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1962
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.1
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	13.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	632	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.06
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 7 - From 1700 ft west of Bridge St to Westshore Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	12.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	46.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1530	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	825
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1932
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1932
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	46.6
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	17.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	805	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.18
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 1 - 4th Street Ramps to Brighton Bay Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2600	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1402
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1368	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.45
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 1 - 4th Street Ramps to Brighton Bay Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	18.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2250	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1214
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2008
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2008
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.4
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	4.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1184	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.37
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 2 - From Brighton Bay Blvd to west end of Gandy Blvd bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.9
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2250	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1214
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1184	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.37
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 2 - From Brighton Bay Blvd to west end of Gandy Blvd bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	2.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2000	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1078
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2088
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2088
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	54.4
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1053	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.32
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 3 - Gandy Blvd bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2000	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1078
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1053	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.32
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 3 - Gandy Blvd bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	916
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	895	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.23
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 4 - East end of Gandy Blvd bridge to 600 ft west of US Marine ent	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2000	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1078
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1053	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.32
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 4 - East end of Gandy Blvd bridge to 600 ft west of US Marine ent	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	916
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	895	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.23
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 5 - From 600 ft west of US Marine entrance to Selmon Expwy ramps	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.2
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.2		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2000	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	719
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1964
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1964
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	702	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 5 - From 600 ft west of US Marine entrance to Selmon Expwy ramps	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.2
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.2		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	611
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1964
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1964
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	596	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.03
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 6 - From Selmon Expwy ramps to 1700 ft west of Bridge St	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1150	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	413
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	8.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	404	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 6 - From Selmon Expwy ramps to 1700 ft west of Bridge St	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	950	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	512
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	500	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.94
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 7 - From 1700 ft west of Bridge St to Westshore Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	48.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	755
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1962
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1962
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.38

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.1
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	15.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	737	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.13
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 7 - From 1700 ft west of Bridge St to Westshore Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	12.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	46.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1310	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	706
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1932
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1932
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	46.6
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	15.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.0		

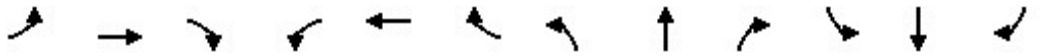
Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	689	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.10
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Appendix I:
Design Year (2050) No-Build Analysis Results

HCM Signalized Intersection Capacity Analysis
11: 4th Street N & North Frontage Rd

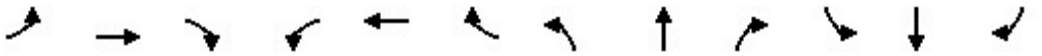


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	540	1050	310	660	710	0	0	830	370
Future Volume (vph)	0	0	0	540	1050	310	660	710	0	0	830	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Lane Util. Factor				0.97	0.91	1.00	0.97	0.91			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3400	5036	1568	3400	5036			6346	1568
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3400	5036	1568	3400	5036			6346	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	568	1105	326	695	747	0	0	874	389
RTOR Reduction (vph)	0	0	0	0	0	239	0	0	0	0	0	173
Lane Group Flow (vph)	0	0	0	568	1105	87	695	747	0	0	874	216
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				50.6	50.6	50.6	43.4	94.0			43.5	43.5
Effective Green, g (s)				50.6	50.6	50.6	43.4	94.0			43.5	43.5
Actuated g/C Ratio				0.27	0.27	0.27	0.23	0.49			0.23	0.23
Clearance Time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				905	1341	417	776	2491			1452	358
v/s Ratio Prot				0.17	c0.22		c0.20	0.15			0.14	
v/s Ratio Perm						0.06						c0.14
v/c Ratio				0.63	0.82	0.21	0.90	0.30			0.60	0.60
Uniform Delay, d1				61.4	65.5	54.1	71.1	28.5			65.5	65.5
Progression Factor				1.00	1.00	1.00	0.77	1.47			1.00	1.00
Incremental Delay, d2				1.4	4.2	0.2	11.4	0.2			1.9	7.4
Delay (s)				62.8	69.8	54.4	66.3	42.2			67.4	72.9
Level of Service				E	E	D	E	D			E	E
Approach Delay (s)		0.0			65.3			53.8			69.1	
Approach LOS		A			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	62.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

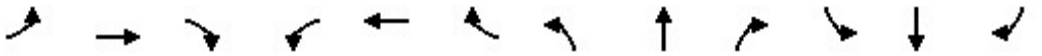
HCM Signalized Intersection Capacity Analysis
14: 4th Street N & South Frontage Rd/South Frontage Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	520	660	0	0	0	0	1250	50	220	1150	0
Future Volume (vph)	120	520	660	0	0	0	0	1250	50	220	1150	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Lane Util. Factor	0.97	0.95	0.88					0.81		1.00	0.91	
Frt	1.00	1.00	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3400	3505	2760					7427		1752	5036	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3400	3505	2760					7427		1752	5036	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	126	547	695	0	0	0	0	1316	53	232	1211	0
RTOR Reduction (vph)	0	0	37	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	126	547	658	0	0	0	0	1365	0	232	1211	0
Turn Type	Prot	NA	Perm					NA		Prot	NA	
Protected Phases	5	2						8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	43.4	94.0	94.0					50.6		23.1	81.1	
Effective Green, g (s)	43.4	94.0	94.0					50.6		23.1	81.1	
Actuated g/C Ratio	0.23	0.49	0.49					0.27		0.12	0.43	
Clearance Time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	776	1734	1365					1977		213	2149	
v/s Ratio Prot	0.04	0.16						c0.18		c0.13	0.24	
v/s Ratio Perm			c0.24									
v/c Ratio	0.16	0.32	0.48					0.69		1.09	0.56	
Uniform Delay, d1	58.7	28.7	31.8					62.7		83.5	41.1	
Progression Factor	1.00	1.00	1.00					1.00		0.58	0.63	
Incremental Delay, d2	0.4	0.5	1.2					1.1		81.2	0.3	
Delay (s)	59.2	29.2	33.1					63.7		129.9	26.0	
Level of Service	E	C	C					E		F	C	
Approach Delay (s)		33.9			0.0			63.7			42.7	
Approach LOS		C			A			E			D	

Intersection Summary			
HCM 2000 Control Delay	46.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	2550	160	70	2900	30	50	0	10	50	0	350
Future Volume (vph)	190	2550	160	70	2900	30	50	0	10	50	0	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	2684	168	74	3053	32	53	0	11	53	0	368
RTOR Reduction (vph)	0	0	54	0	0	10	0	0	11	0	0	88
Lane Group Flow (vph)	200	2684	114	74	3053	22	26	27	0	0	53	280
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	7.6	142.9	142.9	7.5	142.8	142.8	8.3	8.3	8.3		22.0	22.0
Effective Green, g (s)	7.6	142.9	142.9	7.5	142.8	142.8	8.3	8.3	8.3		22.0	22.0
Actuated g/C Ratio	0.04	0.68	0.68	0.04	0.68	0.68	0.04	0.04	0.04		0.10	0.10
Clearance Time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Vehicle Extension (s)	3.0	8.0	8.0	3.0	8.0	8.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	122	2368	1059	120	2366	1058	65	65	61		182	163
v/s Ratio Prot	c0.06	0.77		0.02	c0.87		0.02	c0.02			0.03	
v/s Ratio Perm			0.07			0.01			0.00			c0.18
v/c Ratio	1.64	1.13	0.11	0.62	1.29	0.02	0.40	0.42	0.01		0.29	1.72
Uniform Delay, d1	102.0	34.3	12.0	100.6	34.3	11.3	99.2	99.2	97.6		87.5	94.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	321.6	65.9	0.2	9.1	134.0	0.0	4.0	4.3	0.0		0.9	348.1
Delay (s)	423.5	100.2	12.2	109.7	168.3	11.3	103.2	103.5	97.7		88.4	442.8
Level of Service	F	F	B	F	F	B	F	F	F		F	F
Approach Delay (s)		116.6			165.3			102.4			398.2	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	157.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	211.5	Sum of lost time (s)	30.8
Intersection Capacity Utilization	129.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	92.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	2150	90	150	2450	0	45	5	150	0	0	10
Future Vol, veh/h	5	2150	90	150	2450	0	45	5	150	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	215	-	250	225	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	2263	95	158	2579	0	47	5	158	0	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2579	0	-	2263	0	0	3879	5168	1132	4039	5168	1290
Stage 1	-	-	-	-	-	-	2273	2273	-	2895	2895	-
Stage 2	-	-	-	-	-	-	1606	2895	-	1144	2273	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	164	-	0	220	-	-	~ 1	0	195	1	0	153
Stage 1	-	-	0	-	-	-	~ 40	74	-	16	34	-
Stage 2	-	-	0	-	-	-	109	34	-	211	74	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	164	-	-	220	-	-	0	0	195	0	0	153
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 14	~ 4	-	17	10	-
Stage 1	-	-	-	-	-	-	~ 39	72	-	16	10	-
Stage 2	-	-	-	-	-	-	~ 29	10	-	36	72	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	3.1	$ 2252.5	30.3
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	38	164	-	220	-	-	153
HCM Lane V/C Ratio	5.54	0.032	-	0.718	-	-	0.069
HCM Control Delay (s)	$ 2252.5	27.7	-	54.4	-	-	30.3
HCM Lane LOS	F	D	-	F	-	-	D
HCM 95th %tile Q(veh)	24.8	0.1	-	4.7	-	-	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Signalized Intersection Summary
24: Westshore Blvd & Gandy Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	1150	150	380	1450	270	280	550	270	230	420	250
Future Volume (veh/h)	300	1150	150	380	1450	270	280	550	270	230	420	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	316	1211	158	400	1526	284	295	579	284	242	442	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	222	1070	477	323	1272	567	345	559	474	225	494	419
Arrive On Green	0.10	0.30	0.30	0.15	0.36	0.36	0.10	0.30	0.30	0.07	0.27	0.27
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1856	1572	3428	1856	1572
Grp Volume(v), veh/h	316	1211	158	400	1526	284	295	579	284	242	442	263
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	1856	1572	1714	1856	1572
Q Serve(g_s), s	13.5	42.5	10.9	21.5	50.5	19.7	11.9	42.2	21.6	9.2	32.1	20.6
Cycle Q Clear(g_c), s	13.5	42.5	10.9	21.5	50.5	19.7	11.9	42.2	21.6	9.2	32.1	20.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	1070	477	323	1272	567	345	559	474	225	494	419
V/C Ratio(X)	1.42	1.13	0.33	1.24	1.20	0.50	0.85	1.04	0.60	1.07	0.89	0.63
Avail Cap(c_a), veh/h	222	1070	477	323	1272	567	397	559	474	225	494	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	48.7	37.7	45.7	44.8	34.9	61.9	48.9	41.7	65.4	49.4	45.2
Incr Delay (d2), s/veh	215.2	71.2	1.9	131.3	97.8	3.1	14.9	47.4	2.1	81.0	18.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	28.5	40.4	7.9	28.1	54.7	12.7	9.7	35.5	13.4	11.0	24.1	13.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	257.4	120.0	39.6	177.0	142.5	38.1	76.9	96.3	43.8	146.4	67.9	48.2
LnGrp LOS	F	F	D	F	F	D	E	F	D	F	E	D
Approach Vol, veh/h		1685			2210			1158			947	
Approach Delay, s/veh		138.2			135.4			78.5			82.5	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	57.0	15.0	48.0	28.0	49.0	19.9	43.1
Change Period (Y+Rc), s	6.5	6.5	5.8	5.8	6.5	6.5	5.8	5.8
Max Green Setting (Gmax), s	13.5	50.5	9.2	42.2	21.5	42.5	16.2	35.2
Max Q Clear Time (g_c+I1), s	15.5	52.5	11.2	44.2	23.5	44.5	13.9	34.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4

Intersection Summary	
HCM 6th Ctrl Delay	116.8
HCM 6th LOS	F

Queues
11: 4th Street N & North Frontage Rd



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	568	1105	326	695	747	874	389
v/c Ratio	0.63	0.82	0.50	0.90	0.30	0.60	0.73
Control Delay	65.0	71.7	7.5	66.4	42.3	67.5	36.9
Queue Delay	0.0	0.0	0.0	58.2	54.2	51.8	0.0
Total Delay	65.0	71.7	7.5	124.6	96.5	119.3	36.9
Queue Length 50th (ft)	325	480	0	472	352	287	202
Queue Length 95th (ft)	394	539	87	#555	402	327	341
Internal Link Dist (ft)		612			159	361	
Turn Bay Length (ft)	500		500				300
Base Capacity (vph)	905	1341	656	776	2491	1452	531
Starvation Cap Reductn	0	0	0	549	1962	0	0
Spillback Cap Reductn	0	0	0	0	0	759	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.82	0.50	3.06	1.41	1.26	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	126	547	695	1369	232	1211
v/c Ratio	0.16	0.32	0.50	0.69	1.09	0.56
Control Delay	59.4	29.4	29.8	64.6	127.1	26.7
Queue Delay	0.0	0.0	0.0	48.8	15.3	36.5
Total Delay	59.5	29.4	29.8	113.4	142.4	63.2
Queue Length 50th (ft)	65	213	293	382	~326	322
Queue Length 95th (ft)	98	258	358	418	#515	350
Internal Link Dist (ft)		460		372		159
Turn Bay Length (ft)	350		350			
Base Capacity (vph)	776	1734	1402	1981	213	2149
Starvation Cap Reductn	0	0	0	0	99	1015
Spillback Cap Reductn	93	0	0	745	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.32	0.50	1.11	2.04	1.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Derby Lane/Brighton Bay Blvd & Gandy Blvd



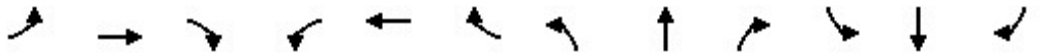
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	200	2684	168	74	3053	32	26	27	11	53	368
v/c Ratio	1.63	1.12	0.15	0.61	1.28	0.03	0.31	0.33	0.06	0.29	1.46
Control Delay	367.9	94.4	1.7	122.2	160.3	0.0	108.2	108.7	0.7	92.9	268.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	367.9	94.4	1.7	122.2	160.3	0.0	108.2	108.7	0.7	92.9	268.5
Queue Length 50th (ft)	~208	~2308	0	54	~2872	0	37	40	0	70	~579
Queue Length 95th (ft)	#311	#2423	30	89	#2970	0	80	83	0	126	#822
Internal Link Dist (ft)		937			926			325		356	
Turn Bay Length (ft)	560		780	300		500					
Base Capacity (vph)	123	2386	1121	123	2384	1099	134	134	217	183	252
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.63	1.12	0.15	0.60	1.28	0.03	0.19	0.20	0.05	0.29	1.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
11: 4th Street N & North Frontage Rd

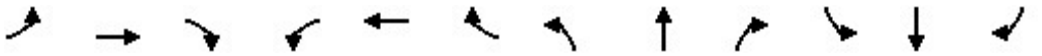


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	420	470	310	600	780	0	0	960	240
Future Volume (vph)	0	0	0	420	470	310	600	780	0	0	960	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Lane Util. Factor				0.97	0.91	1.00	0.97	0.91			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3400	5036	1568	3400	5036			6346	1568
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3400	5036	1568	3400	5036			6346	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	442	495	326	632	821	0	0	1011	253
RTOR Reduction (vph)	0	0	0	0	0	243	0	0	0	0	0	201
Lane Group Flow (vph)	0	0	0	442	495	83	632	821	0	0	1011	52
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				51.2	51.2	51.2	42.7	89.3			39.5	39.5
Effective Green, g (s)				51.2	51.2	51.2	42.7	89.3			39.5	39.5
Actuated g/C Ratio				0.26	0.26	0.26	0.21	0.45			0.20	0.20
Clearance Time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				870	1289	401	725	2248			1253	309
v/s Ratio Prot				c0.13	0.10		c0.19	0.16			c0.16	
v/s Ratio Perm						0.05						0.03
v/c Ratio				0.51	0.38	0.21	0.87	0.37			0.81	0.17
Uniform Delay, d1				63.6	61.4	58.5	76.0	36.6			76.6	66.6
Progression Factor				1.00	1.00	1.00	0.70	1.10			1.00	1.00
Incremental Delay, d2				0.5	0.2	0.3	9.8	0.4			5.6	1.2
Delay (s)				64.1	61.6	58.7	63.1	40.6			82.2	67.8
Level of Service				E	E	E	E	D			F	E
Approach Delay (s)		0.0			61.7			50.4			79.3	
Approach LOS		A			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	63.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	200.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: 4th Street N & South Frontage Rd/South Frontage Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	1100	820	0	0	0	0	1200	100	280	1100	0
Future Volume (vph)	180	1100	820	0	0	0	0	1200	100	280	1100	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Lane Util. Factor	0.97	0.95	0.88					0.81		1.00	0.91	
Frt	1.00	1.00	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3400	3505	2760					7385		1752	5036	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3400	3505	2760					7385		1752	5036	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	1158	863	0	0	0	0	1263	105	295	1158	0
RTOR Reduction (vph)	0	0	43	0	0	0	0	7	0	0	0	0
Lane Group Flow (vph)	189	1158	820	0	0	0	0	1361	0	295	1158	0
Turn Type	Prot	NA	Perm					NA		Prot	NA	
Protected Phases	5	2						8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	42.7	89.3	89.3					51.2		37.2	95.8	
Effective Green, g (s)	42.7	89.3	89.3					51.2		37.2	95.8	
Actuated g/C Ratio	0.21	0.45	0.45					0.26		0.19	0.48	
Clearance Time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	725	1564	1232					1890		325	2412	
v/s Ratio Prot	0.06	c0.33						c0.18		c0.17	0.23	
v/s Ratio Perm			0.30									
v/c Ratio	0.26	0.74	0.67					0.72		0.91	0.48	
Uniform Delay, d1	65.5	45.8	43.6					67.9		79.7	35.3	
Progression Factor	1.00	1.00	1.00					1.00		0.60	0.77	
Incremental Delay, d2	0.9	3.2	2.9					1.3		18.5	0.1	
Delay (s)	66.4	49.0	46.4					69.2		66.2	27.1	
Level of Service	E	D	D					E		E	C	
Approach Delay (s)		49.5			0.0			69.2			35.0	
Approach LOS		D			A			E			D	

Intersection Summary			
HCM 2000 Control Delay	50.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	200.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	2900	50	10	2550	40	170	0	30	30	0	170
Future Volume (vph)	350	2900	50	10	2550	40	170	0	30	30	0	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	1568	3400	3505	1568	1665	1665	1568		1752	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	368	3053	53	11	2684	42	179	0	32	32	0	179
RTOR Reduction (vph)	0	0	9	0	0	10	0	0	31	0	0	103
Lane Group Flow (vph)	368	3053	44	11	2684	32	89	90	1	0	32	76
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	22.6	234.0	234.0	4.1	215.5	215.5	7.0	7.0	7.0		7.0	7.0
Effective Green, g (s)	22.6	234.0	234.0	4.1	215.5	215.5	7.0	7.0	7.0		7.0	7.0
Actuated g/C Ratio	0.08	0.83	0.83	0.01	0.76	0.76	0.02	0.02	0.02		0.02	0.02
Clearance Time (s)	7.4	7.4	7.4	7.4	7.4	7.4	8.0	8.0	8.0		8.0	8.0
Vehicle Extension (s)	3.0	8.0	8.0	3.0	8.0	8.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	271	2899	1296	49	2669	1194	41	41	38		43	38
v/s Ratio Prot	c0.11	c0.87		0.00	0.77		0.05	c0.05			0.02	
v/s Ratio Perm			0.03			0.02			0.00			c0.05
v/c Ratio	1.36	1.05	0.03	0.22	1.01	0.03	2.17	2.20	0.02		0.74	1.99
Uniform Delay, d1	130.1	24.4	4.3	137.8	33.7	8.2	137.9	137.9	134.6		137.1	137.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	183.2	32.9	0.0	2.3	18.8	0.0	598.5	609.0	0.2		50.5	526.2
Delay (s)	313.4	57.3	4.4	140.2	52.5	8.2	736.4	747.0	134.8		187.5	664.1
Level of Service	F	E	A	F	D	A	F	F	F		F	F
Approach Delay (s)		83.6			52.2			649.7			591.8	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	104.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	282.9	Sum of lost time (s)	30.8
Intersection Capacity Utilization	114.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	2450	60	190	2100	10	65	5	130	5	0	5
Future Vol, veh/h	5	2450	60	190	2100	10	65	5	130	5	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	215	-	250	225	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	2579	63	200	2211	11	68	5	137	5	0	5

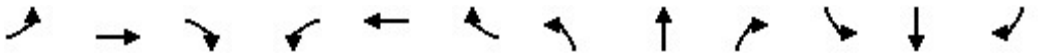
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2222	0	-	2579	0	0	4095	5211	1290	3919	5206	1111
Stage 1	-	-	-	-	-	-	2589	2589	-	2617	2617	-
Stage 2	-	-	-	-	-	-	1506	2622	-	1302	2589	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	228	-	0	~ 164	-	-	~ 1	0	153	~ 1	0	202
Stage 1	-	-	0	-	-	-	~ 25	50	-	24	49	-
Stage 2	-	-	0	-	-	-	125	48	-	168	50	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	228	-	-	~ 164	-	-	-	0	153	-	0	202
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ -7	~ -5	-	24	0	-
Stage 1	-	-	-	-	-	-	~ 24	49	-	23	0	-
Stage 2	-	-	-	-	-	-	-	0	-	15	49	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	16.2		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	228	-	~ 164	-	-	-
HCM Lane V/C Ratio	-	0.023	-	1.22	-	-	-
HCM Control Delay (s)	-	21.2	-	196.7	-	-	-
HCM Lane LOS	-	C	-	F	-	-	-
HCM 95th %tile Q(veh)	-	0.1	-	11.2	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Signalized Intersection Summary
24: Westshore Blvd & Gandy Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1400	190	390	1150	260	250	460	240	270	540	290
Future Volume (veh/h)	210	1400	190	390	1150	260	250	460	240	270	540	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	221	1474	200	411	1211	274	263	484	253	284	568	305
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	258	1243	554	385	1620	723	261	436	369	316	466	395
Arrive On Green	0.09	0.35	0.35	0.20	0.46	0.46	0.08	0.23	0.23	0.09	0.25	0.25
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1856	1572	3428	1856	1572
Grp Volume(v), veh/h	221	1474	200	411	1211	274	263	484	253	284	568	305
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	1856	1572	1714	1856	1572
Q Serve(g_s), s	15.9	70.5	18.9	39.5	56.6	22.8	15.2	46.9	29.3	16.4	50.2	36.0
Cycle Q Clear(g_c), s	15.9	70.5	18.9	39.5	56.6	22.8	15.2	46.9	29.3	16.4	50.2	36.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	1243	554	385	1620	723	261	436	369	316	466	395
V/C Ratio(X)	0.86	1.19	0.36	1.07	0.75	0.38	1.01	1.11	0.69	0.90	1.22	0.77
Avail Cap(c_a), veh/h	324	1243	554	385	1620	723	261	436	369	329	466	395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	64.7	48.0	70.2	44.5	35.4	92.4	76.5	69.8	89.8	74.9	69.6
Incr Delay (d2), s/veh	14.2	92.1	1.8	64.9	3.2	1.5	58.2	76.9	5.2	24.4	116.9	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.5	65.2	12.4	35.7	33.4	14.2	13.8	43.3	18.2	13.2	55.3	22.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	156.9	49.9	135.1	47.7	36.9	150.6	153.4	75.0	114.3	191.8	78.8
LnGrp LOS	E	F	D	F	D	D	F	F	E	F	F	E
Approach Vol, veh/h		1895			1896			1000			1157	
Approach Delay, s/veh		133.9			65.1			132.8			143.0	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.6	98.4	24.3	52.7	46.0	77.0	21.0	56.0
Change Period (Y+Rc), s	6.5	6.5	5.8	5.8	6.5	6.5	5.8	5.8
Max Green Setting (Gmax), s	25.5	84.5	19.2	46.2	39.5	70.5	15.2	50.2
Max Q Clear Time (g_c+I1), s	17.9	58.6	18.4	48.9	41.5	72.5	17.2	52.2
Green Ext Time (p_c), s	0.2	10.4	0.1	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	113.6
HCM 6th LOS	F

Queues
3: Derby Lane/Brighton Bay Blvd & Gandy Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	368	3053	53	11	2684	42	89	90	32	32	179
v/c Ratio	1.34	1.04	0.04	0.14	1.01	0.03	2.17	2.20	0.23	0.74	1.26
Control Delay	259.6	51.6	0.2	137.6	52.0	0.1	642.3	652.2	3.6	202.8	191.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	259.6	51.6	0.2	137.6	52.0	0.1	642.3	652.2	3.6	202.8	191.6
Queue Length 50th (ft)	~456	~3269	0	10	~2731	0	~274	~278	0	60	~213
Queue Length 95th (ft)	#584	#3262	2	26	#2745	0	#444	#444	0	#142	#418
Internal Link Dist (ft)		937			926			335		356	
Turn Bay Length (ft)	560		780	300		500					
Base Capacity (vph)	274	2929	1323	92	2661	1216	41	41	142	43	142
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.34	1.04	0.04	0.12	1.01	0.03	2.17	2.20	0.23	0.74	1.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	442	495	326	632	821	1011	253
v/c Ratio	0.51	0.38	0.51	0.87	0.37	0.81	0.50
Control Delay	66.5	62.9	8.0	63.3	40.9	82.5	10.3
Queue Delay	0.0	0.0	0.0	58.2	52.7	51.1	0.0
Total Delay	66.5	62.9	8.0	121.5	93.7	133.6	10.3
Queue Length 50th (ft)	261	200	0	452	407	375	2
Queue Length 95th (ft)	326	244	92	#536	457	419	91
Internal Link Dist (ft)		612			159	361	
Turn Bay Length (ft)	500		500				300
Base Capacity (vph)	869	1287	643	726	2248	1253	511
Starvation Cap Reductn	0	0	0	487	1607	0	0
Spillback Cap Reductn	0	0	0	0	0	613	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.38	0.51	2.64	1.28	1.58	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	189	1158	863	1368	295	1158
v/c Ratio	0.26	0.74	0.68	0.72	0.90	0.48
Control Delay	67.1	49.6	43.0	70.3	68.2	27.5
Queue Delay	0.1	0.0	0.0	48.7	68.8	49.3
Total Delay	67.2	49.6	43.0	119.0	137.1	76.8
Queue Length 50th (ft)	109	670	475	410	407	375
Queue Length 95th (ft)	152	758	564	451	m#505	408
Internal Link Dist (ft)		460		372		159
Turn Bay Length (ft)	350		350			
Base Capacity (vph)	726	1565	1276	1894	360	2444
Starvation Cap Reductn	0	0	0	0	242	1390
Spillback Cap Reductn	88	0	0	686	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.74	0.68	1.13	2.50	1.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 1 - 4th Street Ramps to Brighton Bay Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2900	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1564
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	52.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1526	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.50
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 1 - 4th Street Ramps to Brighton Bay Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	18.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	3700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1996
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2008
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2008
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.99

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	44.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	4.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1947	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.63
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 2 - From Brighton Bay Blvd to west end of Gandy Blvd bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.9
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2610	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1408
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1374	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.45
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 2 - From Brighton Bay Blvd to west end of Gandy Blvd bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	2.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	3000	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1618
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2088
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2088
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	52.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1579	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.52
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 3 - Gandy Blvd bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1294
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1263	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.41
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 3 - Gandy Blvd bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1510
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	59.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1474	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.49
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 4 - East end of Gandy Blvd bridge to 600 ft west of US Marine ent	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1294
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1263	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.41
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 4 - East end of Gandy Blvd bridge to 600 ft west of US Marine ent	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1510
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	59.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1474	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.49
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 5 - From 600 ft west of US Marine entrance to Selmon Expwy ramps	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.2
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.2		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	863
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1964
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1964
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	842	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.20
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 5 - From 600 ft west of US Marine entrance to Selmon Expwy ramps	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.2
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.2		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1007
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1964
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1964
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	982	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.28
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 6 - From Selmon Expwy ramps to 1700 ft west of Bridge St	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	503
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	491	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.93
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 6 - From Selmon Expwy ramps to 1700 ft west of Bridge St	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1600	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	863
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	842	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.20
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 7 - From 1700 ft west of Bridge St to Westshore Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	48.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1600	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	863
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1962
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1962
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.1
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	17.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	842	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.20
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - No Build Seg 7 - From 1700 ft west of Bridge St to Westshore Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	12.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	46.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1980	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1068
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1932
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1932
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	46.6
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	22.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1042	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.31
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 1 - 4th Street Ramps to Brighton Bay Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3300	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1780
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.86

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	35.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1737	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.57
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 1 - 4th Street Ramps to Brighton Bay Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	18.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2890	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1558
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2008
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2008
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.78

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	49.4
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	4.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1521	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.50
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 2 - From Brighton Bay Blvd to west end of Gandy Blvd bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	4.9
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2960	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1596
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2076
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2076
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	52.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.2		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1558	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.51
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 2 - From Brighton Bay Blvd to west end of Gandy Blvd bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	2.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.4		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2600	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1402
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2088
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2088
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.67

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	54.4
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.6		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1368	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.45
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 3 - Gandy Blvd bridge	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1510
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	59.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1474	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.49
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 3 - Gandy Blvd bridge	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1294
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1263	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.41
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 4 - East end of Gandy Blvd bridge to 600 ft west of US Marine ent	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1510
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	59.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1474	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.49
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 4 - East end of Gandy Blvd bridge to 600 ft west of US Marine ent	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	60.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1294
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1263	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.41
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 5 - From 600 ft west of US Marine entrance to Selmon Expwy ramps	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.2
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.2		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1007
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1964
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1964
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	982	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.28
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 5 - From 600 ft west of US Marine entrance to Selmon Expwy ramps	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.2
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.2		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	863
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1964
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1964
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	842	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.20
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 6 - From Selmon Expwy ramps to 1700 ft west of Bridge St	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1600	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	575
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	561	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.00
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 6 - From Selmon Expwy ramps to 1700 ft west of Bridge St	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	755
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.38

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	737	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.13
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 7 - From 1700 ft west of Bridge St to Westshore Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	48.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	970
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1962
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1962
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.1
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	20.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	947	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.26
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/14/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - No Build Seg 7 - From 1700 ft west of Bridge St to Westshore Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	12.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	46.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1690	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	912
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1932
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1932
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	46.6
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	19.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	889	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.23
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Appendix J:
Build Alternative Concept Plans

Appendix A

Build Alternative Concept

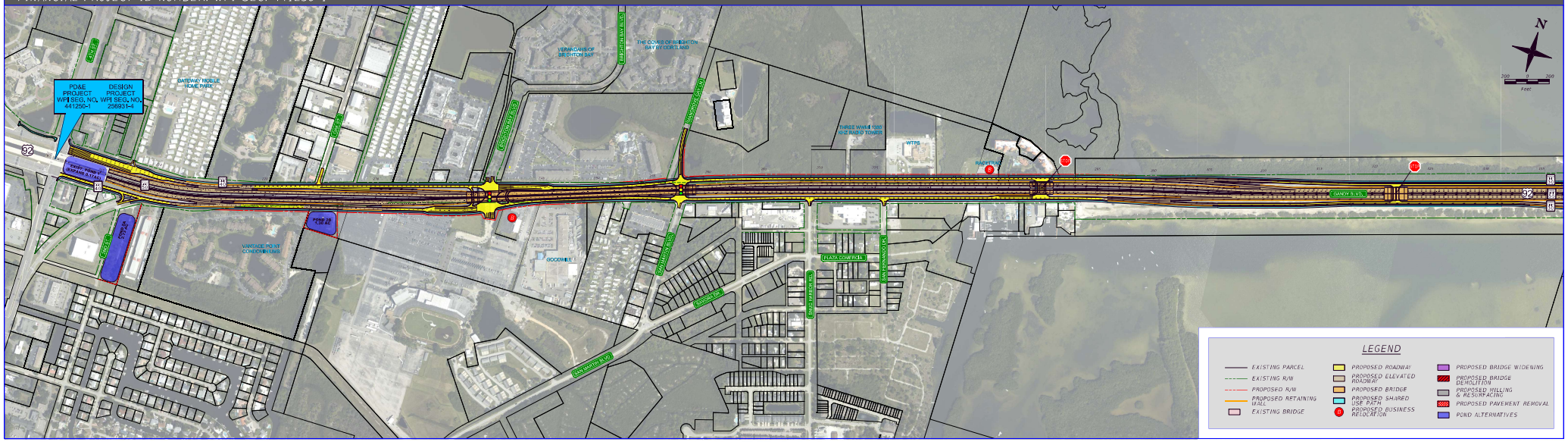
PROJECT DEVELOPMENT & ENVIRONMENT STUDY

US 92 / SR 600 / GANDY BLVD. FROM 4TH ST. TO WESTSHORE BLVD.

FDOT DISTRICT 7

PINELLAS WEST / CAUSEWAY SEGMENT PREFERRED ALTERNATIVE

FINANCIAL PROJECT ID NUMBER: WPI SEG. 441250-1



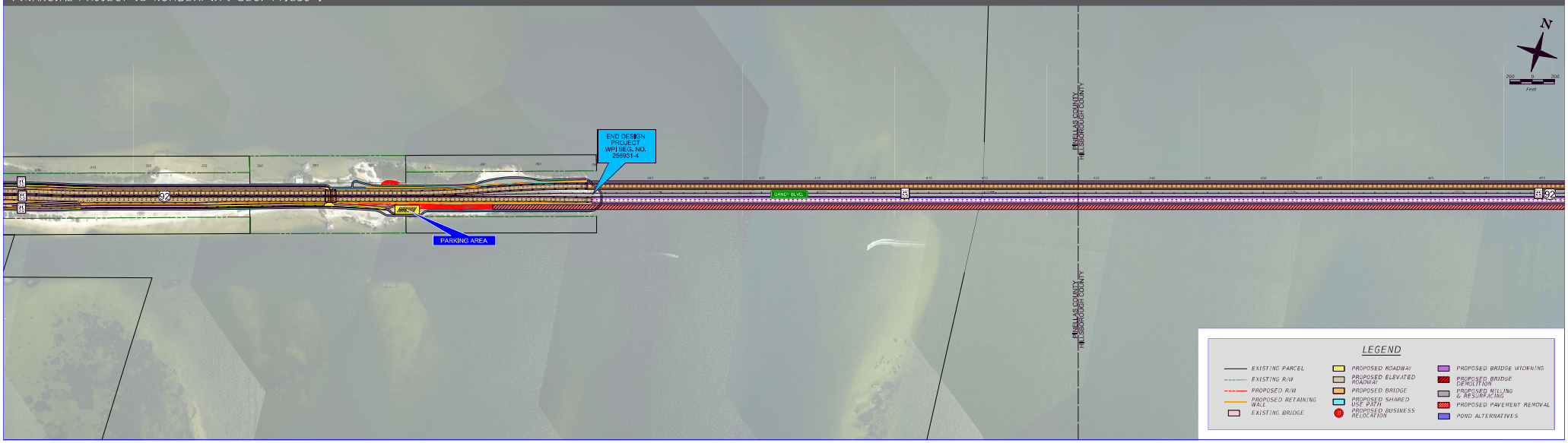
PROJECT DEVELOPMENT & ENVIRONMENT STUDY

US 92 / SR 600 / GANDY BLVD. FROM 4TH ST. TO WESTSHORE BLVD.

FDOT DISTRICT 7

PINELLAS WEST / CAUSEWAY SEGMENT
PREFERRED ALTERNATIVE

FINANCIAL PROJECT ID NUMBER: WPI SEG. 441250-1



PROJECT DEVELOPMENT & ENVIRONMENT STUDY

US 92 / SR 600 / GANDY BLVD. FROM 4TH ST. TO WESTSHORE BLVD.

FDOT DISTRICT 7

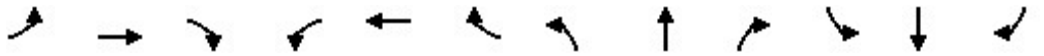
PINELLAS WEST / CAUSEWAY SEGMENT
PREFERRED ALTERNATIVE

FINANCIAL PROJECT ID NUMBER: WPI SEG. 441250-1



Appendix K:
Opening Year (2030) Build Analysis Results

HCM Signalized Intersection Capacity Analysis
11: 4th Street N & N Frontage Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	490	720	300	600	650	0	0	770	330
Future Volume (vph)	0	0	0	490	720	300	600	650	0	0	770	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Lane Util. Factor				0.97	0.91	1.00	0.97	0.91			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3400	5036	1568	3400	5036			6346	1568
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3400	5036	1568	3400	5036			6346	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	516	758	316	632	684	0	0	811	347
RTOR Reduction (vph)	0	0	0	0	0	225	0	0	0	0	0	223
Lane Group Flow (vph)	0	0	0	516	758	91	632	684	0	0	811	124
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				37.5	37.5	37.5	27.4	54.0			19.5	19.5
Effective Green, g (s)				37.5	37.5	37.5	27.4	54.0			19.5	19.5
Actuated g/C Ratio				0.29	0.29	0.29	0.21	0.42			0.15	0.15
Clearance Time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				980	1452	452	716	2091			951	235
v/s Ratio Prot				c0.15	0.15		c0.19	0.14			c0.13	
v/s Ratio Perm						0.06						0.08
v/c Ratio				0.53	0.52	0.20	0.88	0.33			0.85	0.53
Uniform Delay, d1				38.8	38.7	34.9	49.7	25.7			53.9	51.0
Progression Factor				1.00	1.00	1.00	0.81	1.23			1.00	1.00
Incremental Delay, d2				0.5	0.3	0.2	12.5	0.4			9.6	8.3
Delay (s)				39.3	39.1	35.2	52.7	31.9			63.4	59.3
Level of Service				D	D	D	D	C			E	E
Approach Delay (s)		0.0			38.4			41.9			62.2	
Approach LOS		A			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	46.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

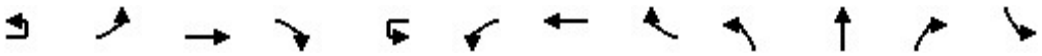
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: 4th Street N & S Frontage Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	360	540	0	0	0	0	1150	50	160	1100	0
Future Volume (vph)	100	360	540	0	0	0	0	1150	50	160	1100	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Lane Util. Factor	0.97	0.95	0.88					0.81		1.00	0.91	
Frt	1.00	1.00	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3400	3505	2760					7424		1752	5036	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3400	3505	2760					7424		1752	5036	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	379	568	0	0	0	0	1211	53	168	1158	0
RTOR Reduction (vph)	0	0	63	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	105	379	505	0	0	0	0	1258	0	168	1158	0
Turn Type	Prot	NA	Perm					NA		Prot	NA	
Protected Phases	5	2						8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	27.4	54.0	54.0					37.5		16.2	61.1	
Effective Green, g (s)	27.4	54.0	54.0					37.5		16.2	61.1	
Actuated g/C Ratio	0.21	0.42	0.42					0.29		0.12	0.47	
Clearance Time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	716	1455	1146					2141		218	2366	
v/s Ratio Prot	0.03	0.11						c0.17		c0.10	0.23	
v/s Ratio Perm			c0.18									
v/c Ratio	0.15	0.26	0.44					0.59		0.77	0.49	
Uniform Delay, d1	41.8	24.9	27.2					39.6		55.1	23.7	
Progression Factor	1.00	1.00	1.00					1.00		0.44	0.60	
Incremental Delay, d2	0.4	0.4	1.2					0.4		8.6	0.1	
Delay (s)	42.2	25.3	28.4					40.0		33.0	14.2	
Level of Service	D	C	C					D		C	B	
Approach Delay (s)		28.7			0.0			40.0			16.6	
Approach LOS		C			A			D			B	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	170	190	350	160	20	40	700	10	50	0	10	50
Future Volume (vph)	170	190	350	160	20	40	700	10	50	0	10	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.4	7.4	7.4		7.4	7.4	7.4	8.0	8.0		7.4
Lane Util. Factor		0.97	0.95	1.00		0.97	0.95	1.00	0.97	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.85		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3400	3505	1568		3400	3505	1568	3400	1568		1752
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (perm)		3400	3505	1568		3400	3505	1568	3400	1568		1752
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	200	368	168	21	42	737	11	53	0	11	53
RTOR Reduction (vph)	0	0	0	98	0	0	0	8	0	10	0	0
Lane Group Flow (vph)	0	379	368	70	0	63	737	3	53	1	0	53
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	NA		Prot
Protected Phases	1	1	6		5	5	2		3	8		7
Permitted Phases				6				2				
Actuated Green, G (s)		12.4	35.9	35.9		3.0	26.5	26.5	2.7	7.3		10.0
Effective Green, g (s)		12.4	35.9	35.9		3.0	26.5	26.5	2.7	7.3		10.0
Actuated g/C Ratio		0.14	0.42	0.42		0.03	0.31	0.31	0.03	0.08		0.12
Clearance Time (s)		7.4	7.4	7.4		7.4	7.4	7.4	8.0	8.0		7.4
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		487	1456	651		118	1075	480	106	132		202
v/s Ratio Prot		c0.11	0.10			0.02	c0.21		0.02	0.00		c0.03
v/s Ratio Perm				0.04				0.00				
v/c Ratio		0.78	0.25	0.11		0.53	0.69	0.01	0.50	0.01		0.26
Uniform Delay, d1		35.7	16.5	15.4		41.0	26.3	20.8	41.2	36.2		34.8
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		7.7	0.1	0.1		4.6	1.8	0.0	3.7	0.0		0.7
Delay (s)		43.4	16.6	15.5		45.6	28.1	20.8	44.9	36.3		35.5
Level of Service		D	B	B		D	C	C	D	D		D
Approach Delay (s)			27.5				29.4			43.4		
Approach LOS			C				C			D		

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	86.4	Sum of lost time (s)	30.2
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

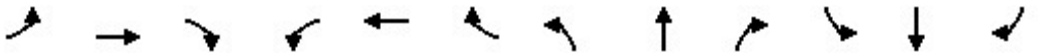
c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	350
Future Volume (vph)	0	350
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.4	
Lane Util. Factor	1.00	
Frt	0.85	
Flt Protected	1.00	
Satd. Flow (prot)	1568	
Flt Permitted	1.00	
Satd. Flow (perm)	1568	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	0	368
RTOR Reduction (vph)	274	0
Lane Group Flow (vph)	94	0
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	14.6	
Effective Green, g (s)	14.6	
Actuated g/C Ratio	0.17	
Clearance Time (s)	7.4	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	264	
v/s Ratio Prot	c0.06	
v/s Ratio Perm		
v/c Ratio	0.36	
Uniform Delay, d1	31.7	
Progression Factor	1.00	
Incremental Delay, d2	0.8	
Delay (s)	32.6	
Level of Service	C	
Approach Delay (s)	32.9	
Approach LOS	C	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
7: WB Gandy Frontage & Mangrove Cay



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	170	250	0	85	10	0	0	0	10
Future Volume (vph)	0	0	0	170	250	0	85	10	0	0	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					8.0			8.0			8.0	
Lane Util. Factor					0.95			1.00			1.00	
Frt					1.00			1.00			0.86	
Flt Protected					0.98			0.96			1.00	
Satd. Flow (prot)					3435			1766			1596	
Flt Permitted					0.98			0.74			1.00	
Satd. Flow (perm)					3435			1368			1596	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	179	263	0	89	11	0	0	0	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	0	0	442	0	0	100	0	0	3	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Actuated Green, G (s)					10.9			10.6			10.6	
Effective Green, g (s)					10.9			10.6			10.6	
Actuated g/C Ratio					0.29			0.28			0.28	
Clearance Time (s)					8.0			8.0			8.0	
Vehicle Extension (s)					3.0			3.0			3.0	
Lane Grp Cap (vph)					998			386			451	
v/s Ratio Prot											0.00	
v/s Ratio Perm					0.13			c0.07				
v/c Ratio					0.44			0.26			0.01	
Uniform Delay, d1					10.8			10.4			9.7	
Progression Factor					1.00			0.95			1.00	
Incremental Delay, d2					0.3			0.4			0.0	
Delay (s)					11.1			10.3			9.7	
Level of Service					B			B			A	
Approach Delay (s)		0.0			11.1			10.3			9.7	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	37.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

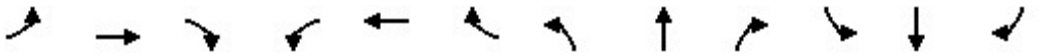
HCM Signalized Intersection Capacity Analysis
21: San Martin Blvd & EB Gandy Frontage

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	100	70	0	0	0	0	50	150	20	150	0
Future Volume (vph)	45	100	70	0	0	0	0	50	150	20	150	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0						8.0			8.0	
Lane Util. Factor		0.95						1.00			1.00	
Frt		0.95						0.90			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3298						1658			1834	
Flt Permitted		0.99						1.00			0.92	
Satd. Flow (perm)		3298						1658			1701	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	105	74	0	0	0	0	53	158	21	158	0
RTOR Reduction (vph)	0	52	0	0	0	0	0	113	0	0	0	0
Lane Group Flow (vph)	0	174	0	0	0	0	0	98	0	0	179	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						8			4	
Permitted Phases	2									4		
Actuated Green, G (s)		10.9						10.6			10.6	
Effective Green, g (s)		10.9						10.6			10.6	
Actuated g/C Ratio		0.29						0.28			0.28	
Clearance Time (s)		8.0						8.0			8.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		958						468			480	
v/s Ratio Prot								0.06				
v/s Ratio Perm		0.05									c0.11	
v/c Ratio		0.18						0.21			0.37	
Uniform Delay, d1		10.0						10.3			10.8	
Progression Factor		1.00						1.00			1.36	
Incremental Delay, d2		0.1						0.2			0.5	
Delay (s)		10.0						10.5			15.2	
Level of Service		B						B			B	
Approach Delay (s)		10.0			0.0			10.5			15.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	37.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
33: Westshore Blvd & Gandy Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	930	100	300	1200	200	210	510	180	200	380	220
Future Volume (veh/h)	170	930	100	300	1200	200	210	510	180	200	380	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	179	979	105	316	1263	211	221	537	189	211	400	232
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	202	1040	464	320	1251	558	272	535	454	181	486	412
Arrive On Green	0.09	0.29	0.29	0.14	0.35	0.35	0.08	0.29	0.29	0.05	0.26	0.26
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1856	1572	3428	1856	1572
Grp Volume(v), veh/h	179	979	105	316	1263	211	221	537	189	211	400	232
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	1856	1572	1714	1856	1572
Q Serve(g_s), s	9.9	37.9	7.1	19.9	49.7	14.0	8.9	40.4	13.6	7.4	28.4	17.9
Cycle Q Clear(g_c), s	9.9	37.9	7.1	19.9	49.7	14.0	8.9	40.4	13.6	7.4	28.4	17.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	1040	464	320	1251	558	272	535	454	181	486	412
V/C Ratio(X)	0.89	0.94	0.23	0.99	1.01	0.38	0.81	1.00	0.42	1.16	0.82	0.56
Avail Cap(c_a), veh/h	207	1040	464	320	1251	558	353	535	454	181	486	412
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	48.2	37.3	42.2	45.2	33.6	63.4	49.8	40.3	66.3	48.6	44.7
Incr Delay (d2), s/veh	33.4	16.9	1.1	46.7	27.8	1.9	10.5	39.6	0.6	118.1	10.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.2	26.2	5.2	21.7	35.0	9.6	7.7	32.7	9.2	10.8	20.9	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.2	65.1	38.4	88.9	72.9	35.6	73.9	89.4	40.9	184.4	59.5	46.5
LnGrp LOS	E	E	D	F	F	D	E	F	D	F	E	D
Approach Vol, veh/h		1263			1790			947			843	
Approach Delay, s/veh		63.6			71.3			76.1			87.2	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.6	57.4	15.0	48.0	28.0	49.0	18.7	44.3
Change Period (Y+Rc), s	* 7.7	* 7.7	* 7.6	* 7.6	* 7.7	* 7.7	* 7.6	* 7.6
Max Green Setting (Gmax), s	* 12	* 49	* 7.4	* 40	* 20	* 41	* 14	* 33
Max Q Clear Time (g_c+I1), s	11.9	51.7	9.4	42.4	21.9	39.9	10.9	30.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.9	0.2	1.0

Intersection Summary	
HCM 6th Ctrl Delay	73.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	105	379	568	1264	168	1158
v/c Ratio	0.15	0.26	0.47	0.59	0.77	0.49
Control Delay	42.5	25.5	23.4	41.0	37.7	14.7
Queue Delay	0.1	0.0	0.0	1.1	34.8	3.4
Total Delay	42.5	25.5	23.4	42.1	72.5	18.1
Queue Length 50th (ft)	37	108	157	228	151	220
Queue Length 95th (ft)	63	146	214	263	m179	249
Internal Link Dist (ft)		774		612		159
Turn Bay Length (ft)	350		350			
Base Capacity (vph)	716	1455	1209	2147	243	2366
Starvation Cap Reductn	0	0	0	0	76	1084
Spillback Cap Reductn	138	0	0	588	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.26	0.47	0.81	1.01	0.90

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

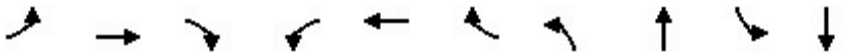
Queues
21: San Martin Blvd & EB Gandy Frontage



Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	226	211	179
v/c Ratio	0.22	0.36	0.37
Control Delay	7.7	6.1	18.1
Queue Delay	0.0	0.0	0.1
Total Delay	7.7	6.1	18.2
Queue Length 50th (ft)	11	8	45
Queue Length 95th (ft)	31	44	103
Internal Link Dist (ft)	422	1025	60
Turn Bay Length (ft)			
Base Capacity (vph)	1967	1038	998
Starvation Cap Reductn	0	0	298
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.11	0.20	0.26

Intersection Summary

Queues
3: Brighton Bay & EB Gandy Frontage/WB Gandy Frontage



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	379	368	168	63	737	11	53	11	53	368
v/c Ratio	0.69	0.22	0.19	0.25	0.71	0.02	0.24	0.02	0.18	0.71
Control Delay	39.8	15.9	1.1	40.4	29.6	0.0	41.1	0.1	32.0	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.8	15.9	1.1	40.4	29.6	0.0	41.1	0.1	32.0	14.4
Queue Length 50th (ft)	94	67	0	15	180	0	13	0	20	18
Queue Length 95th (ft)	#159	110	9	38	265	0	34	0	67	107
Internal Link Dist (ft)		1812			988			229		356
Turn Bay Length (ft)	250		300	350		300				
Base Capacity (vph)	615	1660	872	253	1193	756	225	602	300	586
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.22	0.19	0.25	0.62	0.01	0.24	0.02	0.18	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
7: WB Gandy Frontage & Mangrove Cay



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	442	100	11
v/c Ratio	0.44	0.26	0.01
Control Delay	12.6	12.4	0.0
Queue Delay	0.0	0.1	0.0
Total Delay	12.6	12.4	0.0
Queue Length 50th (ft)	36	17	0
Queue Length 95th (ft)	71	41	0
Internal Link Dist (ft)	1159	60	139
Turn Bay Length (ft)			
Base Capacity (vph)	2016	803	1115
Starvation Cap Reductn	0	152	0
Spillback Cap Reductn	235	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.25	0.15	0.01

Intersection Summary

Queues
11: 4th Street N & N Frontage Rd

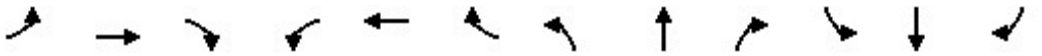


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	516	758	316	632	684	811	347
v/c Ratio	0.53	0.52	0.47	0.88	0.33	0.85	0.76
Control Delay	41.6	40.7	6.3	53.2	32.0	63.6	25.5
Queue Delay	0.0	0.0	0.0	53.5	46.6	49.3	0.0
Total Delay	41.6	40.7	6.3	106.7	78.6	112.9	25.5
Queue Length 50th (ft)	192	200	0	293	221	195	65
Queue Length 95th (ft)	250	245	72	#374	267	#236	184
Internal Link Dist (ft)		1299			159	458	
Turn Bay Length (ft)	500		500				
Base Capacity (vph)	981	1452	676	716	2091	951	457
Starvation Cap Reductn	0	0	0	384	1460	0	0
Spillback Cap Reductn	0	0	0	0	0	270	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.52	0.47	1.90	1.08	1.19	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
11: 4th Street N & N Frontage Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	360	380	220	500	750	0	0	910	190
Future Volume (vph)	0	0	0	360	380	220	500	750	0	0	910	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Lane Util. Factor				0.97	0.91	1.00	0.97	0.91			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3400	5036	1568	3400	5036			6346	1568
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3400	5036	1568	3400	5036			6346	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	379	400	232	526	789	0	0	958	200
RTOR Reduction (vph)	0	0	0	0	0	184	0	0	0	0	0	164
Lane Group Flow (vph)	0	0	0	379	400	48	526	789	0	0	958	36
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				24.7	24.7	24.7	22.1	50.6			21.4	21.4
Effective Green, g (s)				24.7	24.7	24.7	22.1	50.6			21.4	21.4
Actuated g/C Ratio				0.21	0.21	0.21	0.18	0.42			0.18	0.18
Clearance Time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				699	1036	322	626	2123			1131	279
v/s Ratio Prot				c0.11	0.08		c0.15	0.16			c0.15	
v/s Ratio Perm						0.03						0.02
v/c Ratio				0.54	0.39	0.15	0.84	0.37			0.85	0.13
Uniform Delay, d1				42.6	41.1	39.0	47.2	23.8			47.7	41.5
Progression Factor				1.00	1.00	1.00	0.57	0.92			1.00	1.00
Incremental Delay, d2				0.9	0.2	0.2	7.4	0.3			7.9	0.9
Delay (s)				43.5	41.3	39.2	34.2	22.1			55.6	42.4
Level of Service				D	D	D	C	C			E	D
Approach Delay (s)		0.0			41.7			27.0			53.3	
Approach LOS		A			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	40.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: 4th Street N & S Frontage Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	850	700	0	0	0	0	1100	100	270	1000	0
Future Volume (vph)	150	850	700	0	0	0	0	1100	100	270	1000	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Lane Util. Factor	0.97	0.95	0.88					0.81		1.00	0.91	
Frt	1.00	1.00	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3400	3505	2760					7378		1752	5036	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3400	3505	2760					7378		1752	5036	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	895	737	0	0	0	0	1158	105	284	1053	0
RTOR Reduction (vph)	0	0	67	0	0	0	0	14	0	0	0	0
Lane Group Flow (vph)	158	895	670	0	0	0	0	1249	0	284	1053	0
Turn Type	Prot	NA	Perm					NA		Prot	NA	
Protected Phases	5	2						8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	22.1	50.6	50.6					24.7		22.4	54.5	
Effective Green, g (s)	22.1	50.6	50.6					24.7		22.4	54.5	
Actuated g/C Ratio	0.18	0.42	0.42					0.21		0.19	0.45	
Clearance Time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	626	1477	1163					1518		327	2287	
v/s Ratio Prot	0.05	c0.26						c0.17		c0.16	0.21	
v/s Ratio Perm			0.24									
v/c Ratio	0.25	0.61	0.58					0.82		0.87	0.46	
Uniform Delay, d1	41.9	27.0	26.5					45.6		47.4	22.6	
Progression Factor	1.00	1.00	1.00					1.00		0.59	0.73	
Incremental Delay, d2	1.0	1.9	2.1					3.8		12.3	0.1	
Delay (s)	42.8	28.8	28.6					49.3		40.0	16.6	
Level of Service	D	C	C					D		D	B	
Approach Delay (s)		30.0			0.0			49.3			21.6	
Approach LOS		C			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	300	350	700	50	20	10	400	40	170	0	30	20
Future Volume (vph)	300	350	700	50	20	10	400	40	170	0	30	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.4	7.4	7.4		7.4	7.4	7.4	8.0	8.0		7.4
Lane Util. Factor		0.97	0.95	1.00		0.97	0.95	1.00	0.97	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.85		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3400	3505	1568		3400	3505	1568	3400	1568		1752
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (perm)		3400	3505	1568		3400	3505	1568	3400	1568		1752
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	316	368	737	53	21	11	421	42	179	0	32	21
RTOR Reduction (vph)	0	0	0	31	0	0	0	32	0	26	0	0
Lane Group Flow (vph)	0	684	737	22	0	32	421	10	179	6	0	21
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	NA		Prot
Protected Phases	1	1	6		5	5	2		3	8		7
Permitted Phases				6				2				
Actuated Green, G (s)		20.6	40.4	40.4		3.3	23.1	23.1	7.0	19.3		2.2
Effective Green, g (s)		20.6	40.4	40.4		3.3	23.1	23.1	7.0	19.3		2.2
Actuated g/C Ratio		0.22	0.42	0.42		0.03	0.24	0.24	0.07	0.20		0.02
Clearance Time (s)		7.4	7.4	7.4		7.4	7.4	7.4	8.0	8.0		7.4
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		734	1484	664		117	848	379	249	317		40
v/s Ratio Prot		c0.20	c0.21			0.01	0.12		c0.05	c0.00		0.01
v/s Ratio Perm				0.01				0.01				
v/c Ratio		0.93	0.50	0.03		0.27	0.50	0.03	0.72	0.02		0.53
Uniform Delay, d1		36.7	20.1	16.1		44.9	31.1	27.6	43.2	30.5		46.1
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		18.6	0.3	0.0		1.3	0.5	0.0	9.5	0.0		11.9
Delay (s)		55.3	20.3	16.1		46.2	31.6	27.6	52.8	30.5		58.0
Level of Service		E	C	B		D	C	C	D	C		E
Approach Delay (s)			36.4				32.2			49.4		
Approach LOS			D				C			D		

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	95.4	Sum of lost time (s)	30.2
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	130
Future Volume (vph)	0	130
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.4	
Lane Util. Factor	1.00	
Frt	0.85	
Flt Protected	1.00	
Satd. Flow (prot)	1568	
Flt Permitted	1.00	
Satd. Flow (perm)	1568	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	0	137
RTOR Reduction (vph)	116	0
Lane Group Flow (vph)	21	0
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	14.5	
Effective Green, g (s)	14.5	
Actuated g/C Ratio	0.15	
Clearance Time (s)	7.4	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	238	
v/s Ratio Prot	c0.01	
v/s Ratio Perm		
v/c Ratio	0.09	
Uniform Delay, d1	34.8	
Progression Factor	1.00	
Incremental Delay, d2	0.2	
Delay (s)	34.9	
Level of Service	C	
Approach Delay (s)	38.0	
Approach LOS	D	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	170	100	10	205	10	0	0	5	5
Future Volume (vph)	0	0	0	170	100	10	205	10	0	0	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					8.0			8.0			8.0	
Lane Util. Factor					0.95			1.00			1.00	
Frt					0.99			1.00			0.93	
Flt Protected					0.97			0.95			1.00	
Satd. Flow (prot)					3383			1761			1720	
Flt Permitted					0.97			0.73			1.00	
Satd. Flow (perm)					3383			1345			1720	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	179	105	11	216	11	0	0	5	5
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	290	0	0	227	0	0	7	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Actuated Green, G (s)					20.0			20.5			20.5	
Effective Green, g (s)					20.0			20.5			20.5	
Actuated g/C Ratio					0.35			0.36			0.36	
Clearance Time (s)					8.0			8.0			8.0	
Vehicle Extension (s)					3.0			3.0			3.0	
Lane Grp Cap (vph)					1197			488			624	
v/s Ratio Prot											0.00	
v/s Ratio Perm					0.09			c0.17				
v/c Ratio					0.24			0.47			0.01	
Uniform Delay, d1					12.9			13.8			11.5	
Progression Factor					1.00			1.35			1.00	
Incremental Delay, d2					0.1			0.7			0.0	
Delay (s)					13.0			19.2			11.5	
Level of Service					B			B			B	
Approach Delay (s)		0.0			13.0			19.2			11.5	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	56.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

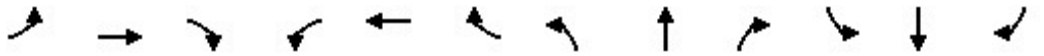
HCM Signalized Intersection Capacity Analysis
21: San Martin Blvd & EB Gandy Frontage

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	270	50	0	0	0	0	70	130	35	140	0
Future Volume (vph)	145	270	50	0	0	0	0	70	130	35	140	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0						8.0			8.0	
Lane Util. Factor		0.95						1.00			1.00	
Frt		0.98						0.91			1.00	
Flt Protected		0.98						1.00			0.99	
Satd. Flow (prot)		3395						1683			1826	
Flt Permitted		0.98						1.00			0.89	
Satd. Flow (perm)		3395						1683			1648	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	153	284	53	0	0	0	0	74	137	37	147	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	87	0	0	0	0
Lane Group Flow (vph)	0	474	0	0	0	0	0	124	0	0	184	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						8			4	
Permitted Phases	2									4		
Actuated Green, G (s)		20.0						20.5			20.5	
Effective Green, g (s)		20.0						20.5			20.5	
Actuated g/C Ratio		0.35						0.36			0.36	
Clearance Time (s)		8.0						8.0			8.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		1201						610			597	
v/s Ratio Prot								0.07				
v/s Ratio Perm		0.14									c0.11	
v/c Ratio		0.40						0.20			0.31	
Uniform Delay, d1		13.7						12.4			12.9	
Progression Factor		1.00						1.00			1.75	
Incremental Delay, d2		0.2						0.2			0.3	
Delay (s)		13.9						12.5			22.8	
Level of Service		B						B			C	
Approach Delay (s)		13.9			0.0			12.5			22.8	
Approach LOS		B			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	56.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
33: Westshore Blvd & Gandy Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	1100	140	300	870	230	210	390	200	220	450	230
Future Volume (veh/h)	160	1100	140	300	870	230	210	390	200	220	450	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	168	1158	147	316	916	242	221	411	211	232	474	242
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	275	1182	527	303	1413	630	238	450	382	261	463	392
Arrive On Green	0.08	0.34	0.34	0.14	0.40	0.40	0.07	0.24	0.24	0.08	0.25	0.25
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1856	1572	3428	1856	1572
Grp Volume(v), veh/h	168	1158	147	316	916	242	221	411	211	232	474	242
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	1856	1572	1714	1856	1572
Q Serve(g_s), s	9.3	48.8	10.3	21.3	31.5	16.3	9.6	32.3	17.6	10.1	37.4	20.5
Cycle Q Clear(g_c), s	9.3	48.8	10.3	21.3	31.5	16.3	9.6	32.3	17.6	10.1	37.4	20.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	1182	527	303	1413	630	238	450	382	261	463	392
V/C Ratio(X)	0.61	0.98	0.28	1.04	0.65	0.38	0.93	0.91	0.55	0.89	1.02	0.62
Avail Cap(c_a), veh/h	344	1182	527	303	1413	630	238	463	392	261	463	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	49.3	36.6	49.3	36.4	31.8	69.4	55.3	49.7	68.7	56.3	49.9
Incr Delay (d2), s/veh	2.2	21.7	1.3	63.1	2.3	1.8	39.6	22.1	1.6	29.2	48.2	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.5	33.1	7.6	24.1	20.3	10.8	9.4	24.8	11.5	9.3	32.2	13.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.3	71.0	37.9	112.4	38.7	33.6	109.0	77.3	51.3	97.9	104.5	52.9
LnGrp LOS	C	E	D	F	D	C	F	E	D	F	F	D
Approach Vol, veh/h		1473			1474			843			948	
Approach Delay, s/veh		63.4			53.7			79.1			89.7	
Approach LOS		E			D			E			F	

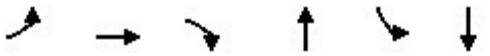
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	67.8	19.0	44.0	29.0	58.0	18.0	45.0
Change Period (Y+Rc), s	* 7.7	* 7.7	* 7.6	* 7.6	* 7.7	* 7.7	* 7.6	* 7.6
Max Green Setting (Gmax), s	* 17	* 53	* 11	* 37	* 21	* 49	* 10	* 37
Max Q Clear Time (g_c+I1), s	11.3	33.5	12.1	34.3	23.3	50.8	11.6	39.4
Green Ext Time (p_c), s	0.2	7.5	0.0	1.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	68.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Queues
14: 4th Street N & S Frontage Rd



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	158	895	737	1263	284	1053
v/c Ratio	0.25	0.61	0.60	0.82	0.87	0.46
Control Delay	43.1	29.1	24.6	50.6	44.2	17.1
Queue Delay	0.3	0.0	0.0	7.5	61.1	20.8
Total Delay	43.4	29.1	24.6	58.1	105.3	37.9
Queue Length 50th (ft)	54	278	208	234	236	213
Queue Length 95th (ft)	86	347	278	272	m280	245
Internal Link Dist (ft)		774		612		159
Turn Bay Length (ft)	350		350			
Base Capacity (vph)	626	1477	1230	1534	351	2287
Starvation Cap Reductn	0	0	0	0	172	1256
Spillback Cap Reductn	147	0	0	239	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.61	0.60	0.98	1.59	1.02

Intersection Summary

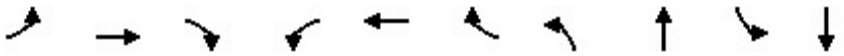
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	490	211	184
v/c Ratio	0.40	0.30	0.31
Control Delay	14.4	6.4	24.5
Queue Delay	0.7	0.1	17.7
Total Delay	15.1	6.6	42.3
Queue Length 50th (ft)	58	16	70
Queue Length 95th (ft)	100	53	129
Internal Link Dist (ft)	422	493	60
Turn Bay Length (ft)			
Base Capacity (vph)	1278	766	670
Starvation Cap Reductn	0	0	467
Spillback Cap Reductn	453	115	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.59	0.32	0.91

Intersection Summary

Queues
3: Brighton Bay & EB Gandy Frontage/WB Gandy Frontage



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	684	737	53	32	421	42	179	32	21	137
v/c Ratio	0.86	0.46	0.06	0.15	0.52	0.07	0.66	0.05	0.19	0.30
Control Delay	44.6	18.6	0.1	41.2	32.7	0.2	52.5	0.2	43.8	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	18.6	0.1	41.2	32.7	0.2	52.5	0.2	43.8	1.6
Queue Length 50th (ft)	187	159	0	8	110	0	51	0	11	0
Queue Length 95th (ft)	#275	213	0	23	156	0	#94	0	35	0
Internal Link Dist (ft)		1812			988			315		356
Turn Bay Length (ft)	250		300	350		300				
Base Capacity (vph)	835	1619	853	216	821	620	271	598	111	472
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.46	0.06	0.15	0.51	0.07	0.66	0.05	0.19	0.29

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
7: WB Gandy Frontage & Mangrove Cay



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	295	227	10
v/c Ratio	0.25	0.47	0.02
Control Delay	13.4	22.4	9.2
Queue Delay	0.3	6.9	0.0
Total Delay	13.7	29.3	9.2
Queue Length 50th (ft)	34	72	1
Queue Length 95th (ft)	62	142	9
Internal Link Dist (ft)	479	60	139
Turn Bay Length (ft)			
Base Capacity (vph)	1262	547	702
Starvation Cap Reductn	0	267	0
Spillback Cap Reductn	503	0	36
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.39	0.81	0.02

Intersection Summary

Queues
11: 4th Street N & N Frontage Rd



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	379	400	232	526	789	958	200
v/c Ratio	0.54	0.39	0.46	0.84	0.37	0.85	0.45
Control Delay	46.5	42.9	8.4	35.0	22.2	55.8	9.3
Queue Delay	0.0	0.0	0.0	53.6	49.1	48.7	0.0
Total Delay	46.5	42.9	8.4	88.6	71.3	104.6	9.3
Queue Length 50th (ft)	139	100	0	224	235	211	0
Queue Length 95th (ft)	190	134	68	m#275	282	252	64
Internal Link Dist (ft)		1299			159	458	
Turn Bay Length (ft)	500		500				
Base Capacity (vph)	700	1037	507	626	2123	1131	443
Starvation Cap Reductn	0	0	0	266	1401	0	0
Spillback Cap Reductn	0	0	0	0	0	303	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.39	0.46	1.46	1.09	1.16	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCS7 Freeway Facilities Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	9
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	7.13		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB Gandy Blvd btwn Martin Luther King Jr Off-ramp and Diverge Off-ramp east of 4th St	4685	2
2	Diverge	Diverge	EB Gandy Blvd Off-ramp east of 4th St	1500	2
3	Basic	Basic	EB Gandy Blvd btwn Off-ramp east of 4th St and On-ramp west of Brighton Bay Blvd	1500	2
4	Merge	Merge	EB Gandy Blvd On-ramp west of Brighton Bay Blvd	1500	2
5	Basic	Basic	EB Gandy Blvd btwn Merge On-ramp west of Brighton Bay Blvd to On-ramp east of San Fernando Dr	6150	2
6	Merge	Basic	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and west of Beach Access Frontage Rd On-ramp	1500	3
7	Basic	Basic	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and Beach Access Frontage Rd On-Ramp	2150	3
8	Merge	Merge	EB Gandy Blvd Beach Access Frontage Rd On-ramp	1500	3
9	Basic	Basic	EB Gandy Blvd btwn Beach Access Frontage Rd On-ramp Merge and east end of Gandy Blvd Bridge	17160	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	1510	4460	0.34	53.0	14.2	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.95	0.95	0.976	0.976	1510	324	4500	2000	0.34	0.16	49.9	49.9	15.1	10.8	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	1186	4460	0.27	52.7	11.2	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	1833	647	4500	2000	0.41	0.32	51.5	51.5	17.8	13.5	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	1833	4460	0.41	53.0	17.3	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	1941	108	6750	2000	0.29	0.05	55.0	55.0	11.8	11.8	B

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	1941	6840	0.28	57.8	11.2	B

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	1952	11	6900	2100	0.28	0.01	57.3	56.2	11.4	6.5	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	1952	6840	0.29	58.0	11.2	B

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	55.7	12.6	12.3	7.70	B

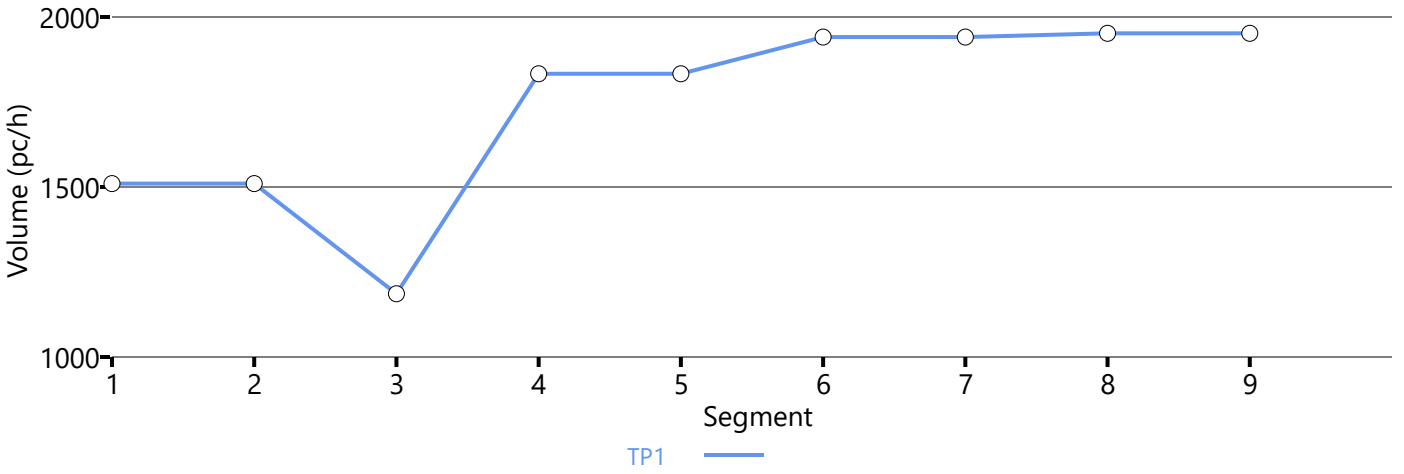
Facility Overall Results

Space Mean Speed, mi/h	55.7	Density, veh/mi/ln	12.3
Average Travel Time, min	7.70	Density, pc/mi/ln	12.6

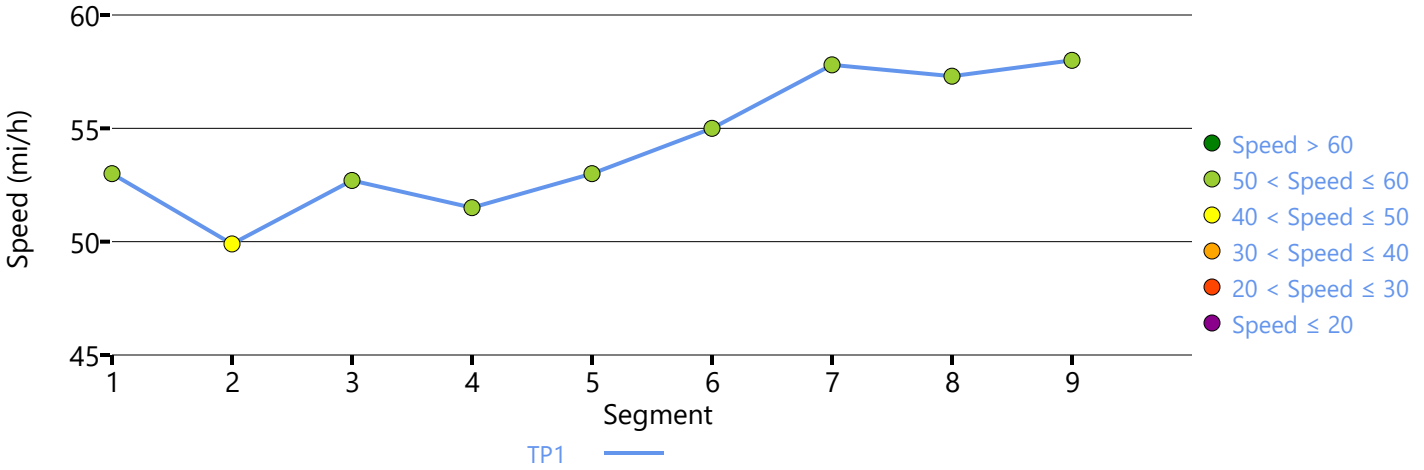
Messages

Comments

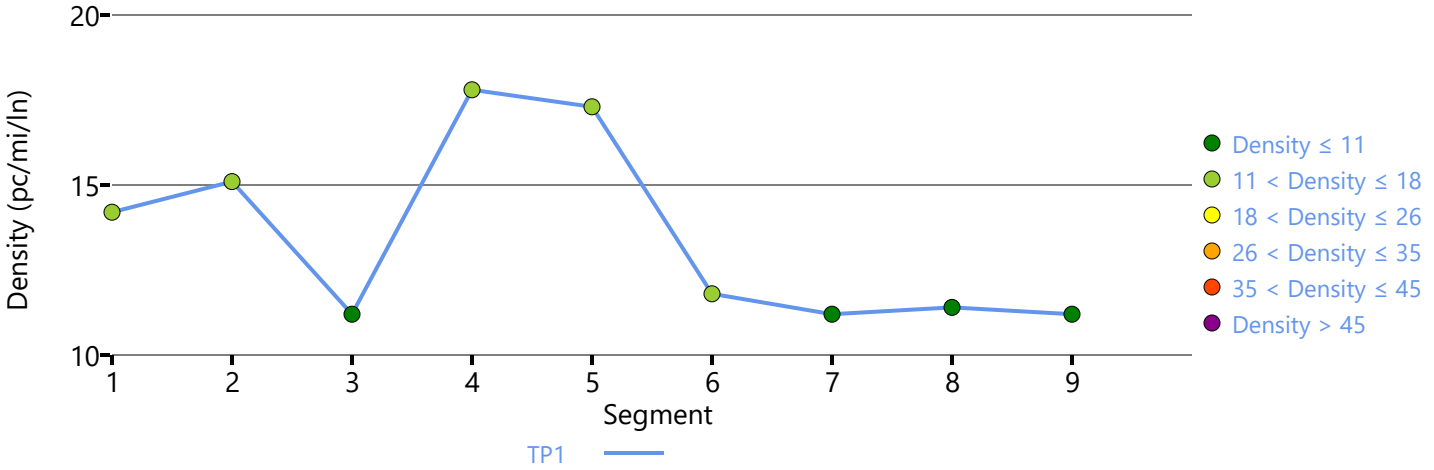
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Basic Freeway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary
Segment Number	1	Segment Name	EB Gandy Blvd btwn Martin Luther King Jr Off-ramp and Diverge Off-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	4685	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	755
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	14.2
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Freeway Diverge Report

Project Information

Segment Number	2	Segment Name	EB Gandy Blvd Off-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	714
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1400	300
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1510	324
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.34	0.16

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.392
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	49.9
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	60.3
Flow in Lanes 1 and 2 (v12), pc/h	1510	Ramp Junction Speed (S), mi/h	49.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	15.1
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	10.8

HCS7 Basic Freeway Report

Project Information

Segment Number	3	Segment Name	EB Gandy Blvd btwn Off-ramp east of 4th St and On-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	1500	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1100	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	593
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	52.7
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	11.2
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Freeway Merge Report

Project Information

Segment Number	4	Segment Name	EB Gandy Blvd On-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	970
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1100	600
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1186	647
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.41	0.32

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.268
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	51.5
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	55.0
Flow in Lanes 1 and 2 (v12), pc/h	1186	Ramp Junction Speed (S), mi/h	51.5
Flow Entering Ramp-Infl. Area (vR12), pc/h	1833	Average Density (D), pc/mi/ln	17.8
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	13.5

HCS7 Basic Freeway Report

Project Information

Segment Number	5	Segment Name	EB Gandy Blvd btwn Merge On-ramp west of Brighton Bay Blvd to On-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	6150	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	916
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	17.3
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Basic Freeway Report

Project Information

Segment Number	6	Segment Name	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and west of Beach Access Frontage Rd On-ramp
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	800
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1700	100
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1833	108
Capacity (c), pc/h	6750	2000
Volume-to-Capacity Ratio (v/c)	0.29	0.05

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	9999.0	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	55.000
Downstream Equilibrium Distance (LEQ), ft	9999.0	Flow Outer Lanes (vOA), pc/h/ln	0
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	55.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	75.0
Flow in Lanes 1 and 2 (v12), pc/h	0	Ramp Junction Speed (S), mi/h	55.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	0	Average Density (D), pc/mi/ln	11.8
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	11.8

HCS7 Basic Freeway Report

Project Information

Segment Number	7	Segment Name	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and Beach Access Frontage Rd On-Ramp
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	2150	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	647
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2280
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.8
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	11.2
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

HCS7 Freeway Merge Report

Project Information

Segment Number	8	Segment Name	EB Gandy Blvd Beach Access Frontage Rd On-ramp
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	60.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1345
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1800	10
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1941	11
Capacity (c), pc/h	6900	2100
Volume-to-Capacity Ratio (v/c)	0.28	0.01

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.213
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	747
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	56.2
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.615	Outer Lanes Freeway Speed (SO), mi/h	59.1
Flow in Lanes 1 and 2 (v12), pc/h	1194	Ramp Junction Speed (S), mi/h	57.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	1205	Average Density (D), pc/mi/ln	11.4
Level of Service (LOS)	A	Density in Ramp Influence Area (DR), pc/mi/ln	6.5

HCS7 Basic Freeway Report

Project Information

Segment Number	9	Segment Name	EB Gandy Blvd btwn Beach Access Frontage Rd On-ramp Merge and east end of Gandy Blvd Bridge
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	17160	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1810	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	651
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2280
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	11.2
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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HCS7 Freeway Facilities Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	7.04		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB Gandy Blvd btwn east end of Gandy Blvd Bridge and east of Off-ramp east of San Fernando Dr	20210	3
2	Diverge	Basic	WB Gandy Blvd btwn east of Off-ramp east of San Fernando Dr and Off-ramp east of San Fernando Dr	1500	3
3	Basic	Basic	WB Gandy Blvd btwn Off-ramp east of San Fernando Dr and Diverge Off-ramp west of Brighton Bay Blvd	5900	2
4	Diverge	Diverge	WB Gandy Blvd Off-ramp west of Brighton Bay Blvd	1500	2
5	Basic	Basic	WB Gandy Blvd btwn Off-ramp west of Brighton Bay Blvd and On-ramp east of 4th St	2130	2
6	Merge	Merge	WB Gandy Blvd On-ramp east of 4th St	1500	2
7	Basic	Basic	WB Gandy Blvd btwn Merge On-ramp east of 4th St and Martin Luther King Jr On-ramp	4420	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	2265	6852	0.33	58.4	12.9	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2265	216	6750	2000	0.34	0.11	55.0	55.0	13.7	13.7	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS

1	0.95		0.976		2049		4468		0.46		53.4		19.2		C

Segment 4: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2049	647	4500	2000	0.46	0.32	49.5	49.5	20.7	15.1	B

Segment 5: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.95		0.976		1402		4468		0.31		53.2		13.1		B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	1726	324	4500	2000	0.38	0.16	51.6	51.6	16.7	12.6	B

Segment 7: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.95		0.976		1726		4468		0.39		53.4		16.2		B

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	56.1	14.4	14.0	7.50	B

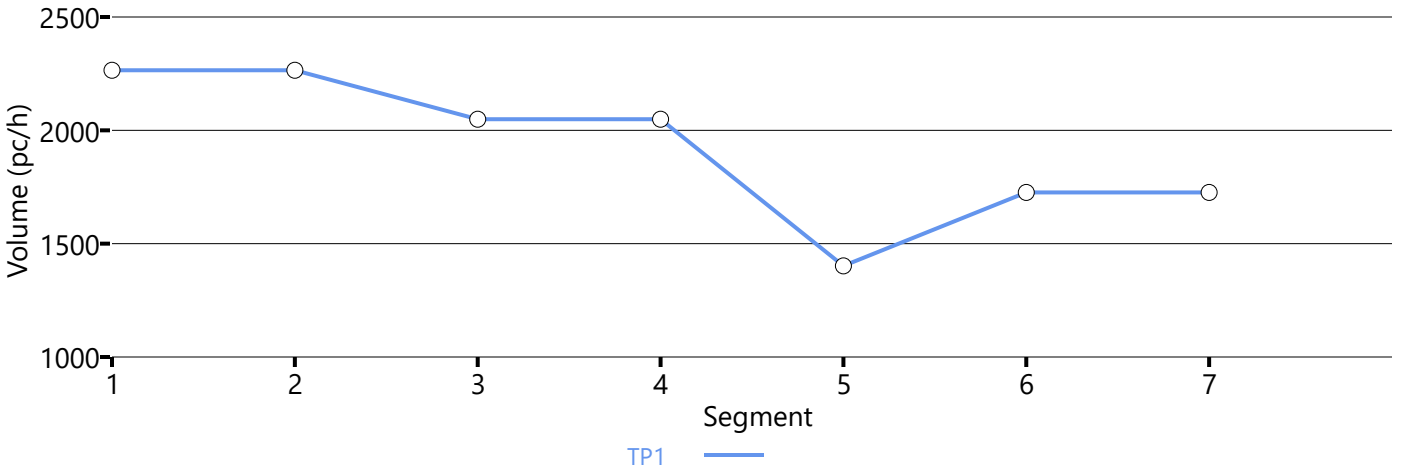
Facility Overall Results

Space Mean Speed, mi/h	56.1	Density, veh/mi/ln	14.0
Average Travel Time, min	7.50	Density, pc/mi/ln	14.4

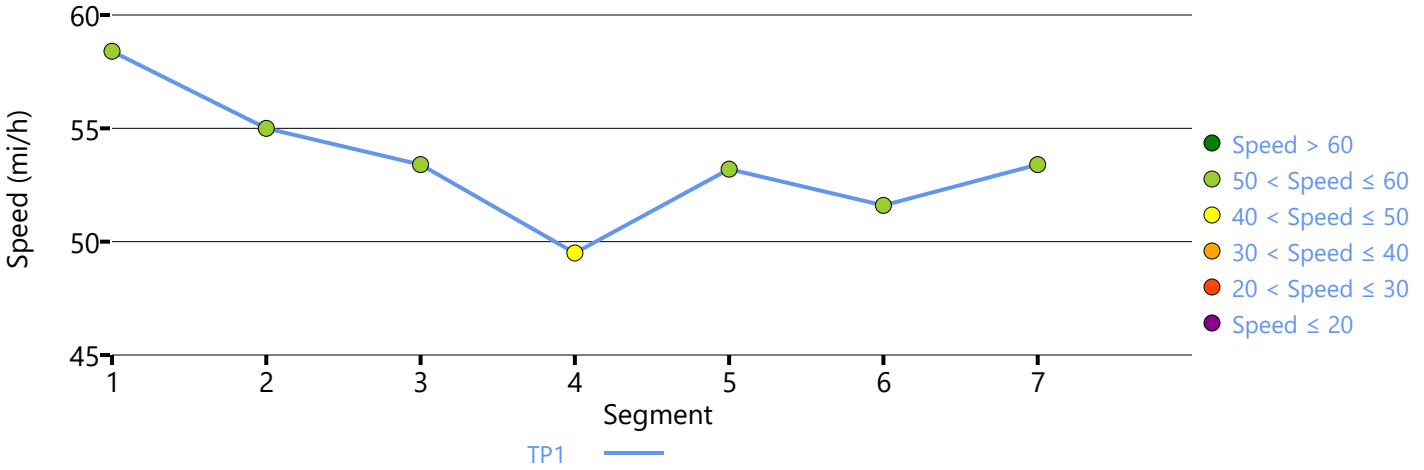
Messages

Comments

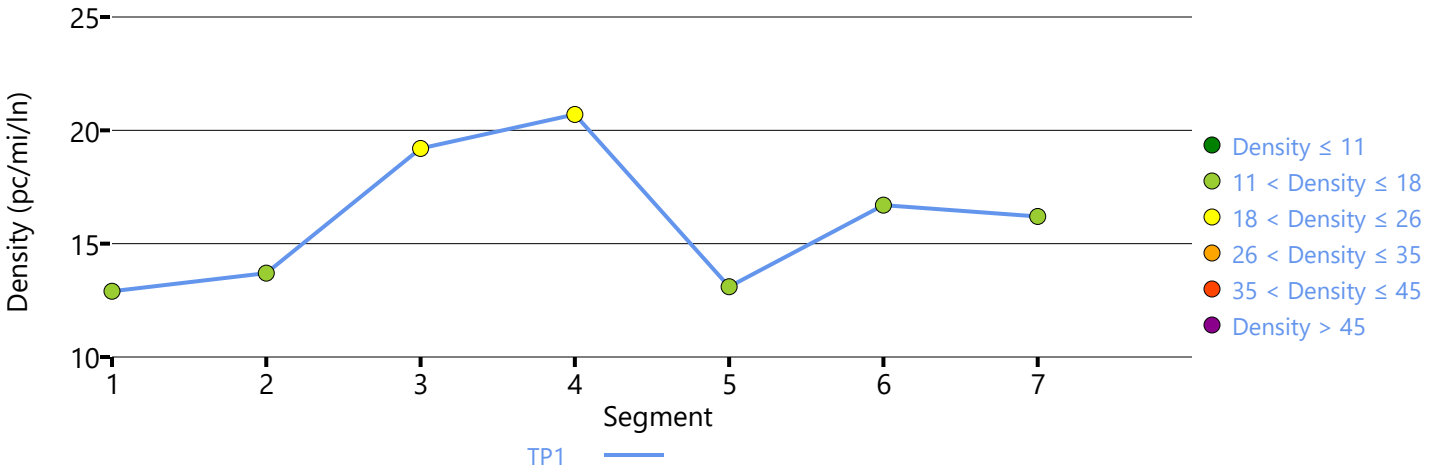
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Basic Freeway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary
Segment Number	1	Segment Name	WB Gandy Blvd btwn east end of Gandy Blvd Bridge and east of Off-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	20210	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2100	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	755
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2284
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2284
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	12.9
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.4		

HCS7 Basic Freeway Report

Project Information

Segment Number	2	Segment Name	WB Gandy Blvd btwn east of Off-ramp east of San Fernando Dr and Off-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	800
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2100	200
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2265	216
Capacity (c), pc/h	6750	2000
Volume-to-Capacity Ratio (v/c)	0.34	0.11

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	9999.0	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	55.000
Downstream Equilibrium Distance (LEQ), ft	9999.0	Flow Outer Lanes (vOA), pc/h/ln	0
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	75.0
Flow in Lanes 1 and 2 (v12), pc/h	0	Ramp Junction Speed (S), mi/h	55.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	0	Average Density (D), pc/mi/ln	13.7
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	13.7

HCS7 Basic Freeway Report

Project Information

Segment Number	3	Segment Name	WB Gandy Blvd btwn Off-ramp east of San Fernando Dr and Diverge Off-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	5900	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1900	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1024
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	19.2
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

HCS7 Freeway Diverge Report

Project Information

Segment Number	4	Segment Name	WB Gandy Blvd Off-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	750
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1900	600
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2049	647
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.46	0.32

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.421
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	49.5
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	60.3
Flow in Lanes 1 and 2 (v12), pc/h	2049	Ramp Junction Speed (S), mi/h	49.5
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	20.7
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	15.1

HCS7 Basic Freeway Report

Project Information

Segment Number	5	Segment Name	WB Gandy Blvd btwn Off-ramp west of Brighton Bay Blvd and On-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	2130	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1300	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	701
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	13.1
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

HCS7 Freeway Merge Report

Project Information

Segment Number	6	Segment Name	WB Gandy Blvd On-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1000
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1300	300
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1402	324
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.38	0.16

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.263
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	51.6
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	55.0
Flow in Lanes 1 and 2 (v12), pc/h	1402	Ramp Junction Speed (S), mi/h	51.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	1726	Average Density (D), pc/mi/ln	16.7
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	12.6

HCS7 Basic Freeway Report

Project Information

Segment Number	7	Segment Name	WB Gandy Blvd btwn Merge On-ramp east of 4th St and Martin Luther King Jr On-ramp
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	4420	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1600	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	863
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	16.2
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

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HCS7 Freeway Facilities Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	9
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	7.13		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB Gandy Blvd btwn Martin Luther King Jr Off-ramp and Diverge Off-ramp east of 4th St	4685	2
2	Diverge	Diverge	EB Gandy Blvd Off-ramp east of 4th St	1500	2
3	Basic	Basic	EB Gandy Blvd btwn Off-ramp east of 4th St and On-ramp west of Brighton Bay Blvd	1500	2
4	Merge	Merge	EB Gandy Blvd On-ramp west of Brighton Bay Blvd	1500	2
5	Basic	Basic	EB Gandy Blvd btwn Merge On-ramp west of Brighton Bay Blvd to On-ramp east of San Fernando Dr	6150	2
6	Merge	Basic	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and west of Beach Access Frontage Rd On-ramp	1500	3
7	Basic	Basic	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and Beach Access Frontage Rd On-Ramp	2150	3
8	Merge	Merge	EB Gandy Blvd Beach Access Frontage Rd On-ramp	1500	3
9	Basic	Basic	EB Gandy Blvd btwn Beach Access Frontage Rd On-ramp Merge and east end of Gandy Blvd Bridge	17160	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	1726	4460	0.39	53.0	16.3	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.95	0.95	0.976	0.976	1726	324	4500	2000	0.38	0.16	49.9	49.9	17.3	12.7	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	1402	4460	0.31	52.7	13.2	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2049	647	4500	2000	0.46	0.32	51.4	51.4	19.9	15.2	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	2049	4460	0.46	53.0	19.3	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2265	216	6750	2000	0.34	0.11	55.0	55.0	13.7	13.7	B

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	2265	6840	0.33	57.8	13.0	B

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2281	16	6900	2100	0.33	0.01	57.1	56.1	13.3	8.1	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	2281	6840	0.33	58.0	13.1	B

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	55.7	14.6	14.2	7.70	B

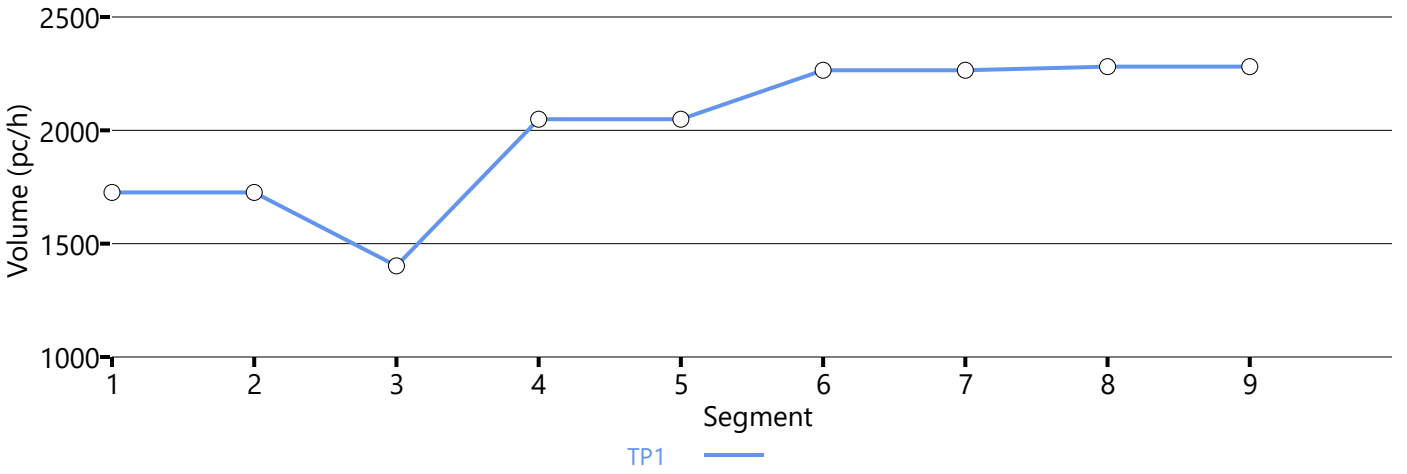
Facility Overall Results

Space Mean Speed, mi/h	55.7	Density, veh/mi/ln	14.2
Average Travel Time, min	7.70	Density, pc/mi/ln	14.6

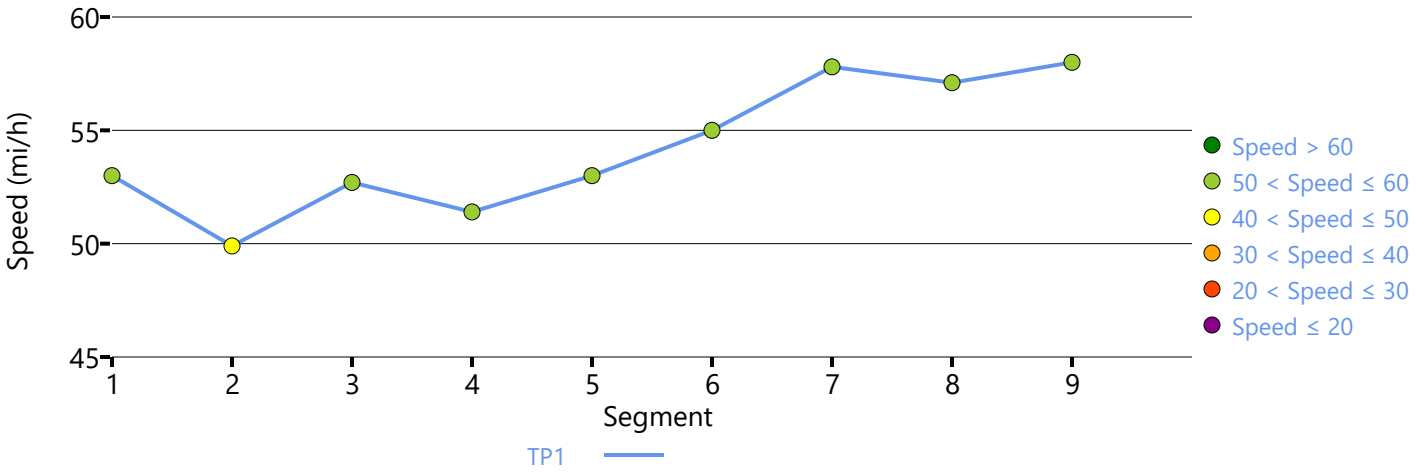
Messages

Comments

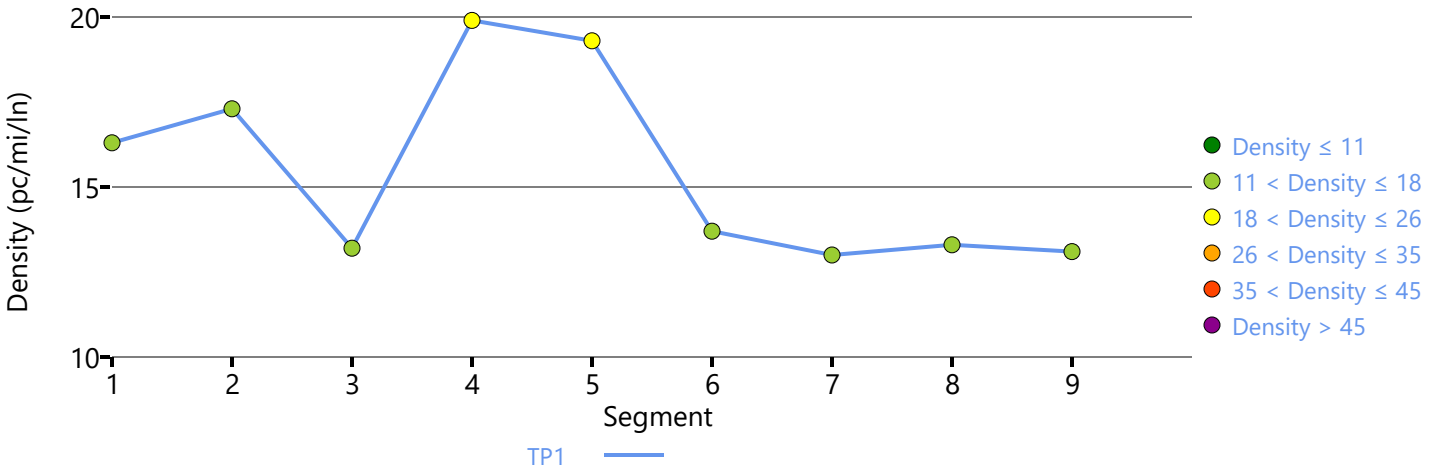
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Basic Freeway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary
Segment Number	1	Segment Name	EB Gandy Blvd btwn Martin Luther King Jr Off-ramp and Diverge Off-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	4685	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1600	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	863
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	16.3
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Freeway Diverge Report

Project Information

Segment Number	2	Segment Name	EB Gandy Blvd Off-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	714
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1600	300
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1726	324
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.38	0.16

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.392
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	49.9
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	60.3
Flow in Lanes 1 and 2 (v12), pc/h	1726	Ramp Junction Speed (S), mi/h	49.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	17.3
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	12.7

HCS7 Basic Freeway Report

Project Information

Segment Number	3	Segment Name	EB Gandy Blvd btwn Off-ramp east of 4th St and On-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	1500	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1300	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	701
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	52.7
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	13.2
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Freeway Merge Report

Project Information

Segment Number	4	Segment Name	EB Gandy Blvd On-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	970
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1300	600
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1402	647
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.46	0.32

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.274
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	51.4
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	55.0
Flow in Lanes 1 and 2 (v12), pc/h	1402	Ramp Junction Speed (S), mi/h	51.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	2049	Average Density (D), pc/mi/ln	19.9
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	15.2

HCS7 Basic Freeway Report

Project Information

Segment Number	5	Segment Name	EB Gandy Blvd btwn Merge On-ramp west of Brighton Bay Blvd to On-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	6150	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1900	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1024
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	19.3
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Basic Freeway Report

Project Information

Segment Number	6	Segment Name	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and west of Beach Access Frontage Rd On-ramp
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	800
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1900	200
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2049	216
Capacity (c), pc/h	6750	2000
Volume-to-Capacity Ratio (v/c)	0.34	0.11

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	9999.0	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	55.000
Downstream Equilibrium Distance (LEQ), ft	9999.0	Flow Outer Lanes (vOA), pc/h/ln	0
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	55.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	75.0
Flow in Lanes 1 and 2 (v12), pc/h	0	Ramp Junction Speed (S), mi/h	55.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	0	Average Density (D), pc/mi/ln	13.7
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	13.7

HCS7 Basic Freeway Report

Project Information

Segment Number	7	Segment Name	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and Beach Access Frontage Rd On-Ramp
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	2150	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2100	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	755
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2280
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.8
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	13.0
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

HCS7 Freeway Merge Report

Project Information

Segment Number	8	Segment Name	EB Gandy Blvd Beach Access Frontage Rd On-ramp
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	60.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1345
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2100	15
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2265	16
Capacity (c), pc/h	6900	2100
Volume-to-Capacity Ratio (v/c)	0.33	0.01

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.216
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	872
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	56.1
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.615	Outer Lanes Freeway Speed (SO), mi/h	58.7
Flow in Lanes 1 and 2 (v12), pc/h	1393	Ramp Junction Speed (S), mi/h	57.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	1409	Average Density (D), pc/mi/ln	13.3
Level of Service (LOS)	A	Density in Ramp Influence Area (DR), pc/mi/ln	8.1

HCS7 Basic Freeway Report

Project Information

Segment Number	9	Segment Name	EB Gandy Blvd btwn Beach Access Frontage Rd On-ramp Merge and east end of Gandy Blvd Bridge
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	17160	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2115	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	760
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2280
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	13.1
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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HCS7 Freeway Facilities Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	7.04		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB Gandy Blvd btwn east end of Gandy Blvd Bridge and east of Off-ramp east of San Fernando Dr	20210	3
2	Diverge	Basic	WB Gandy Blvd btwn east of Off-ramp east of San Fernando Dr and Off-ramp east of San Fernando Dr	1500	3
3	Basic	Basic	WB Gandy Blvd btwn Off-ramp east of San Fernando Dr and Diverge Off-ramp west of Brighton Bay Blvd	5900	2
4	Diverge	Diverge	WB Gandy Blvd Off-ramp west of Brighton Bay Blvd	1500	2
5	Basic	Basic	WB Gandy Blvd btwn Off-ramp west of Brighton Bay Blvd and On-ramp east of 4th St	2130	2
6	Merge	Merge	WB Gandy Blvd On-ramp east of 4th St	1500	2
7	Basic	Basic	WB Gandy Blvd btwn Merge On-ramp east of 4th St and Martin Luther King Jr On-ramp	4420	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	1941	6852	0.28	58.4	11.1	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	1941	108	6750	2000	0.29	0.05	55.0	55.0	11.8	11.8	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS

1	0.95		0.976		1833		4468		0.41		53.4		17.2		B

Segment 4: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	1833	647	4500	2000	0.41	0.32	49.5	49.5	18.5	13.3	B

Segment 5: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.95		0.976		1186		4468		0.27		53.2		11.1		B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	1510	324	4500	2000	0.34	0.16	51.6	51.6	14.6	10.9	B

Segment 7: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.95		0.976		1510		4468		0.34		53.4		14.1		B

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	56.0	12.5	12.2	7.50	B

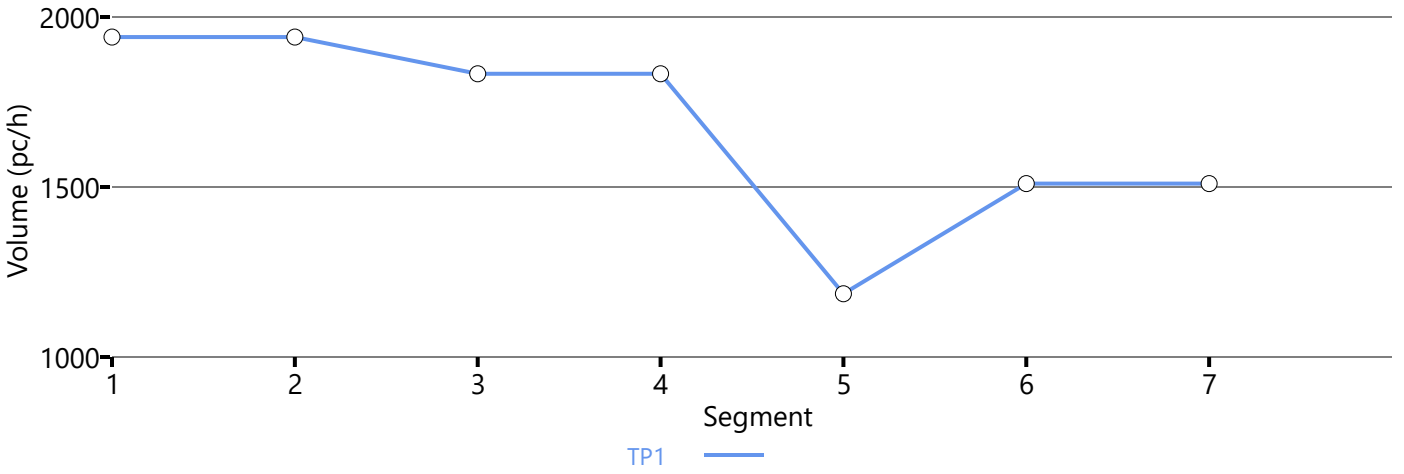
Facility Overall Results

Space Mean Speed, mi/h	56.0	Density, veh/mi/ln	12.2
Average Travel Time, min	7.50	Density, pc/mi/ln	12.5

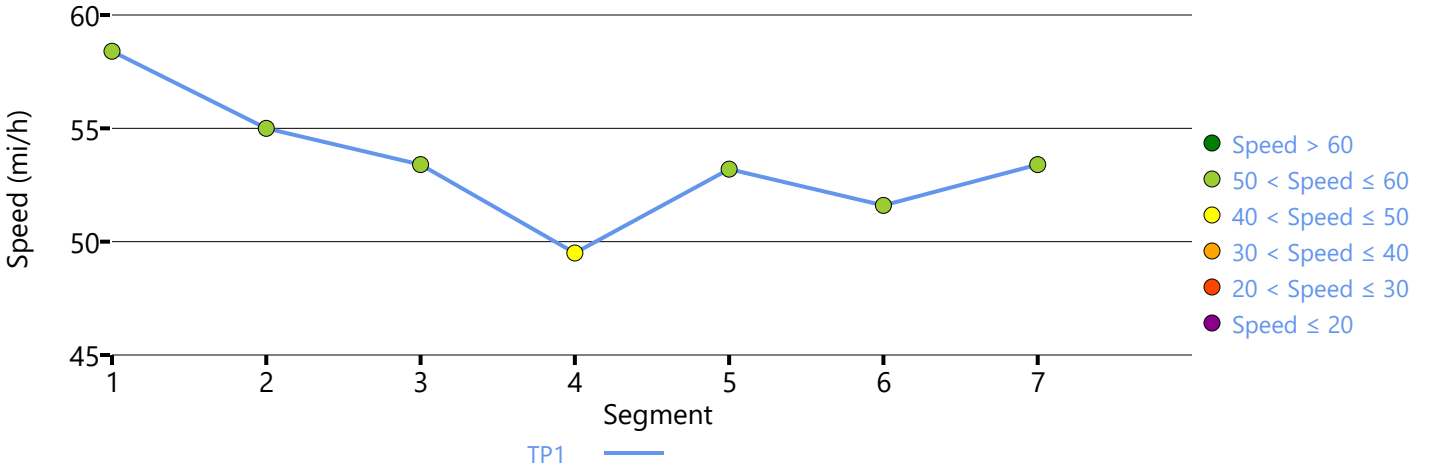
Messages

Comments

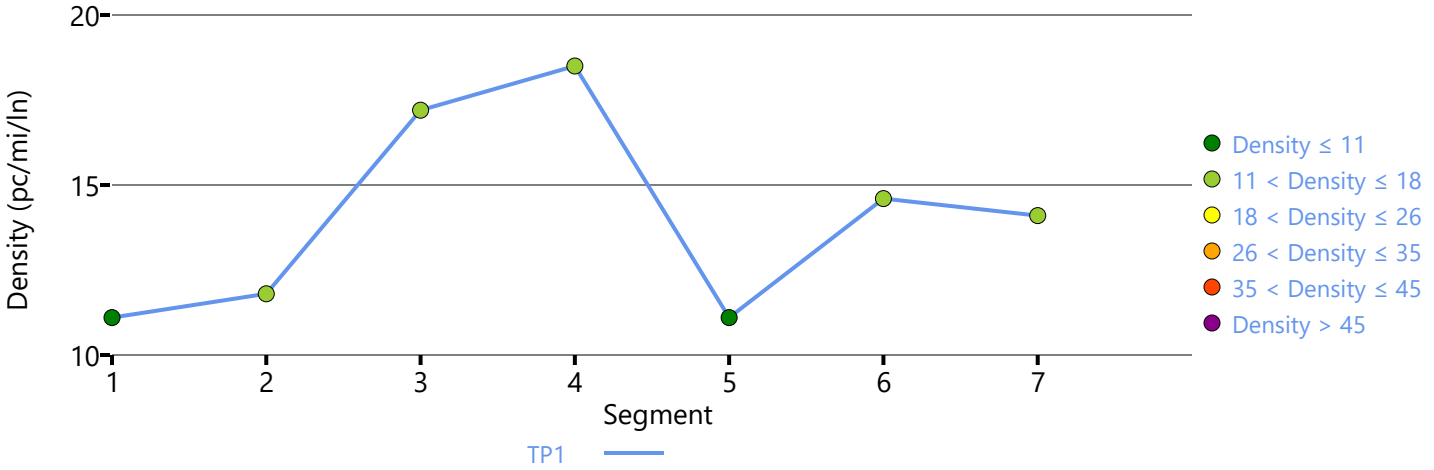
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Basic Freeway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary
Segment Number	1	Segment Name	WB Gandy Blvd btwn east end of Gandy Blvd Bridge and east of Off-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	20210	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	647
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2284
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2284
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	11.1
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.4		

HCS7 Basic Freeway Report

Project Information

Segment Number	2	Segment Name	WB Gandy Blvd btwn east of Off-ramp east of San Fernando Dr and Off-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	800
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1800	100
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1941	108
Capacity (c), pc/h	6750	2000
Volume-to-Capacity Ratio (v/c)	0.29	0.05

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	9999.0	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	55.000
Downstream Equilibrium Distance (LEQ), ft	9999.0	Flow Outer Lanes (vOA), pc/h/ln	0
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	75.0
Flow in Lanes 1 and 2 (v12), pc/h	0	Ramp Junction Speed (S), mi/h	55.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	0	Average Density (D), pc/mi/ln	11.8
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	11.8

HCS7 Basic Freeway Report

Project Information

Segment Number	3	Segment Name	WB Gandy Blvd btwn Off-ramp east of San Fernando Dr and Diverge Off-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	5900	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	916
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	17.2
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

HCS7 Freeway Diverge Report

Project Information

Segment Number	4	Segment Name	WB Gandy Blvd Off-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	750
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1700	600
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1833	647
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.41	0.32

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.421
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	49.5
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	60.3
Flow in Lanes 1 and 2 (v12), pc/h	1833	Ramp Junction Speed (S), mi/h	49.5
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	18.5
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	13.3

HCS7 Basic Freeway Report

Project Information

Segment Number	5	Segment Name	WB Gandy Blvd btwn Off-ramp west of Brighton Bay Blvd and On-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	2130	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1100	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	593
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	11.1
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

HCS7 Freeway Merge Report

Project Information

Segment Number	6	Segment Name	WB Gandy Blvd On-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1000
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1100	300
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1186	324
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.34	0.16

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.259
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	51.6
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	55.0
Flow in Lanes 1 and 2 (v12), pc/h	1186	Ramp Junction Speed (S), mi/h	51.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	1510	Average Density (D), pc/mi/ln	14.6
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	10.9

HCS7 Basic Freeway Report

Project Information

Segment Number	7	Segment Name	WB Gandy Blvd btwn Merge On-ramp east of 4th St and Martin Luther King Jr On-ramp
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	4420	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	755
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

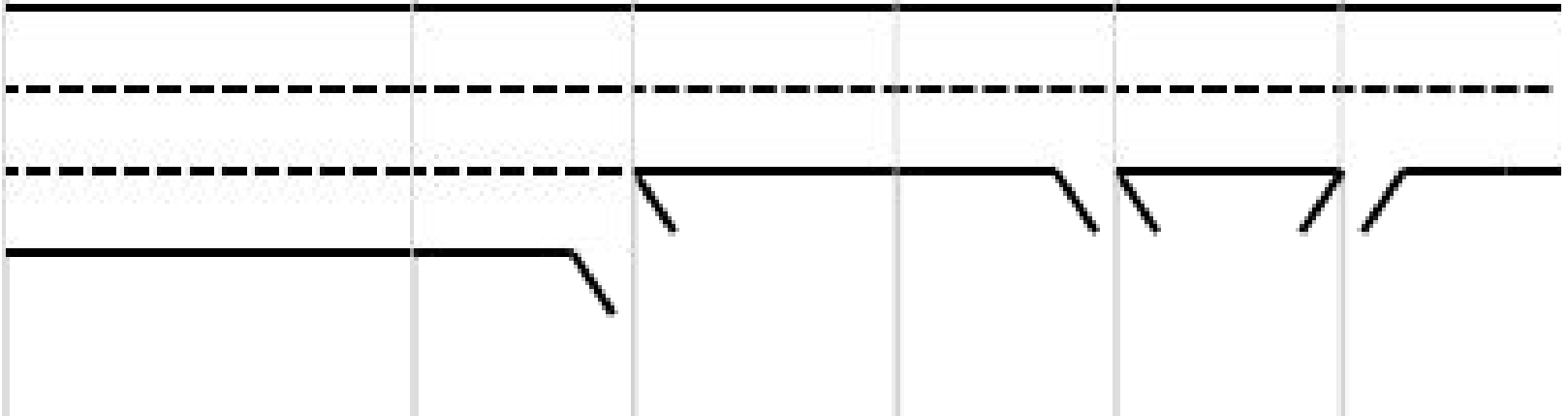
Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	14.1
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

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Type	Diverge	Basic	Merge	Basic	Merge	Basic	Merge	Basic
Length, ft	1250	1500	1500	6150	1500	2150	1500	18660
Segment ID	1	2	3	4	5	6	7	8
Lanes	2	2	2	2	3	3	3	3



Type	Basic	Diverge	Basic	Diverge	Basic	Merge
Length, ft	20210	1500	5900	1500	2130	1500
Segment ID	1	2	3	4	5	6
Lanes	3	3	2	2	2	2



HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build Seg 1 - From east end of Gandy Blvd bridge to EB Selmon Expy on-ramp	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	3.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.2		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	647
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1984
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1984
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	49.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	632	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.06
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
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Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build Seg 1 - From east end of Gandy Blvd bridge to EB Selmon Expy on-ramp	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1200	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	647
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	632	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.06
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Build Seg 1 - From east end of Gandy Blvd bridge to EB on-ramp to Selmon Expwy	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	3.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.2		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2100	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	755
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1984
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1984
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.38

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	49.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	737	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.13
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
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Project Description	Gandy Blvd PD&E - Build Seg 1 - From east end of Gandy Blvd bridge to EB on-ramp to Selmon Expwy	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1050	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	566
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	553	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Seg 2 - From EB Selmon Expy on-ramp to Westshore Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	6.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1200	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	647
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	13.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.6		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	632	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.06
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Seg 2 - From EB Selmon Expy on-ramp to Westshore Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	10.9
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	46.9		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1630	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	879
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1938
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1938
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	46.9
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	18.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	858	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.21
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2030
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Seg 2 - From EB Selmon Expy on-ramp to Westshore Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	6.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	755
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	15.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.6		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	737	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.13
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
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Project Description	Gandy Blvd PD&E - Seg 2 - From EB Selmon Expy on-ramp to Westshore Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	10.9
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	46.9		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1310	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	706
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1938
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1938
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	46.9
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	15.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	689	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.10
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd Off-Ramp east of 4 St
Analysis Year:	2030
Time Period Analyzed:	AM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	300 veh/h
PHF =	0.95
f_{HV} =	0.98
v_i =	324 pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd Off-Ramp east of 4 St	2,000	324	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd Off-Ramp east of 4 St
Analysis Year:	2030
Time Period Analyzed:	PM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	300 veh/h
PHF =	0.95
f_{HV} =	0.98
v_i =	324 pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd Off-Ramp east of 4 St	2,000	324	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd On-Ramp west of Brighton Bay Blvd
Analysis Year:	2030
Time Period Analyzed:	AM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	600 veh/h
PHF =	0.95
f_{HV} =	0.98
v_i =	647 pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd On-Ramp west of Brighton Bay Blvd	2,000	647	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd On-Ramp west of Brighton Bay Blvd
Analysis Year:	2030
Time Period Analyzed:	PM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	600	veh/h
PHF =	0.95	
f_{HV} =	0.98	
v_i =	647	pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd On-Ramp west of Brighton Bay Blvd	2,000	647	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd On-Ramp east of San Martin Blvd
Analysis Year:	2030
Time Period Analyzed:	AM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	100 veh/h
PHF =	0.95
f_{HV} =	0.98
v_i =	108 pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd On-Ramp east of San Martin Blvd	2,000	108	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd On-Ramp east of San Martin Blvd
Analysis Year:	2030
Time Period Analyzed:	PM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	200	veh/h
PHF =	0.95	
f_{HV} =	0.98	
v_i =	216	pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd On-Ramp east of San Martin Blvd	2,000	216	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd Off-Ramp east of San Martin Blvd
Analysis Year:	2030
Time Period Analyzed:	AM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	200 veh/h
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v_i =	216 pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
WB Gandy Blvd Off-Ramp east of San Martin Blvd	2,000	216	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd Off-Ramp east of San Martin Blvd
Analysis Year:	2030
Time Period Analyzed:	PM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	100	veh/h
PHF =	0.95	
f_{HV} =	0.98	
v_i =	108	pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
WB Gandy Blvd Off-Ramp east of San Martin Blvd	2,000	108	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd Off-Ramp west of Brighton Bay Blvd
Analysis Year:	2030
Time Period Analyzed:	AM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	600 veh/h
PHF =	0.95
f_{HV} =	0.98
v_i =	647 pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
WB Gandy Blvd Off-Ramp west of Brighton Bay Blvd	2,000	647	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd Off-Ramp west of Brighton Bay Blvd
Analysis Year:	2030
Time Period Analyzed:	PM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	600	veh/h
PHF =	0.95	
f_{HV} =	0.98	
v_i =	647	pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
WB Gandy Blvd Off-Ramp west of Brighton Bay Blvd	2,000	647	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd On-Ramp east of 4 St
Analysis Year:	2030
Time Period Analyzed:	AM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	300 veh/h
PHF =	0.95
f_{HV} =	0.98
v_i =	324 pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
WB Gandy Blvd On-Ramp east of 4 St	2,000	324	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd On-Ramp east of 4 St
Analysis Year:	2030
Time Period Analyzed:	PM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	300 veh/h
PHF =	0.95
f_{HV} =	0.98
v_i =	324 pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

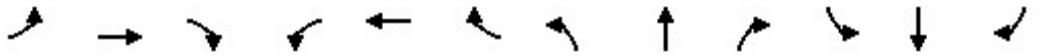
Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
WB Gandy Blvd On-Ramp east of 4 St	2,000	324	UC

Appendix L:

Design Year (2050) Build Analysis Results



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	550	1250	310	660	710	0	0	830	370
Future Volume (vph)	0	0	0	550	1250	310	660	710	0	0	830	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Lane Util. Factor				0.97	0.91	1.00	0.97	0.91			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3400	5036	1568	3400	5036			6346	1568
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3400	5036	1568	3400	5036			6346	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	579	1316	326	695	747	0	0	874	389
RTOR Reduction (vph)	0	0	0	0	0	237	0	0	0	0	0	213
Lane Group Flow (vph)	0	0	0	579	1316	89	695	747	0	0	874	177
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				35.6	35.6	35.6	27.4	54.0			19.5	19.5
Effective Green, g (s)				35.6	35.6	35.6	27.4	54.0			19.5	19.5
Actuated g/C Ratio				0.27	0.27	0.27	0.21	0.42			0.15	0.15
Clearance Time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				931	1379	429	716	2091			951	235
v/s Ratio Prot				0.17	c0.26		c0.20	0.15			c0.14	
v/s Ratio Perm						0.06						0.11
v/c Ratio				0.62	0.95	0.21	0.97	0.36			0.92	0.75
Uniform Delay, d1				41.3	46.4	36.3	50.9	26.1			54.5	52.9
Progression Factor				1.00	1.00	1.00	0.77	1.15			1.00	1.00
Incremental Delay, d2				1.3	14.6	0.2	22.5	0.4			15.2	19.7
Delay (s)				42.6	61.0	36.6	61.9	30.5			69.6	72.6
Level of Service				D	E	D	E	C			E	E
Approach Delay (s)		0.0			52.7			45.6			70.5	
Approach LOS		A			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	55.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		

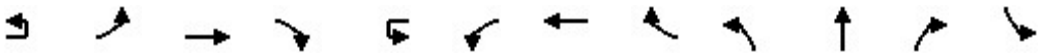
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: 4th Street N & S Frontage Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	720	660	0	0	0	0	1250	50	230	1150	0
Future Volume (vph)	120	720	660	0	0	0	0	1250	50	230	1150	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Lane Util. Factor	0.97	0.95	0.88					0.81		1.00	0.91	
Frt	1.00	1.00	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3400	3505	2760					7427		1752	5036	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3400	3505	2760					7427		1752	5036	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	126	758	695	0	0	0	0	1316	53	242	1211	0
RTOR Reduction (vph)	0	0	63	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	126	758	632	0	0	0	0	1364	0	242	1211	0
Turn Type	Prot	NA	Perm					NA		Prot	NA	
Protected Phases	5	2						8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	27.4	54.0	54.0					35.6		18.1	61.1	
Effective Green, g (s)	27.4	54.0	54.0					35.6		18.1	61.1	
Actuated g/C Ratio	0.21	0.42	0.42					0.27		0.14	0.47	
Clearance Time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	716	1455	1146					2033		243	2366	
v/s Ratio Prot	0.04	0.22						c0.18		c0.14	0.24	
v/s Ratio Perm			c0.23									
v/c Ratio	0.18	0.52	0.55					0.67		1.00	0.51	
Uniform Delay, d1	42.0	28.4	28.8					42.0		55.9	24.0	
Progression Factor	1.00	1.00	1.00					1.00		0.48	0.55	
Incremental Delay, d2	0.5	1.3	1.9					0.9		36.3	0.1	
Delay (s)	42.6	29.7	30.7					42.9		62.9	13.4	
Level of Service	D	C	C					D		E	B	
Approach Delay (s)		31.2			0.0			42.9			21.7	
Approach LOS		C			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	170	190	550	160	20	70	850	30	50	0	10	50
Future Volume (vph)	170	190	550	160	20	70	850	30	50	0	10	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.4	7.4	7.4		7.4	7.4	7.4	8.0	8.0		7.4
Lane Util. Factor		0.97	0.95	1.00		0.97	0.95	1.00	0.97	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.85		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3400	3505	1568		3400	3505	1568	3400	1568		1752
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (perm)		3400	3505	1568		3400	3505	1568	3400	1568		1752
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	200	579	168	21	74	895	32	53	0	11	53
RTOR Reduction (vph)	0	0	0	100	0	0	0	22	0	10	0	0
Lane Group Flow (vph)	0	379	579	68	0	95	895	10	53	1	0	53
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	NA		Prot
Protected Phases	1	1	6		5	5	2		3	8		7
Permitted Phases				6				2				
Actuated Green, G (s)		13.5	38.8	38.8		4.9	30.2	30.2	5.1	10.5		11.6
Effective Green, g (s)		13.5	38.8	38.8		4.9	30.2	30.2	5.1	10.5		11.6
Actuated g/C Ratio		0.14	0.40	0.40		0.05	0.31	0.31	0.05	0.11		0.12
Clearance Time (s)		7.4	7.4	7.4		7.4	7.4	7.4	8.0	8.0		7.4
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		478	1416	633		173	1102	493	180	171		211
v/s Ratio Prot		c0.11	0.17			0.03	c0.26		0.02	0.00		c0.03
v/s Ratio Perm				0.04				0.01				
v/c Ratio		0.79	0.41	0.11		0.55	0.81	0.02	0.29	0.01		0.25
Uniform Delay, d1		39.9	20.4	17.8		44.5	30.3	22.7	43.7	38.1		38.3
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		8.8	0.2	0.1		3.5	4.7	0.0	0.9	0.0		0.6
Delay (s)		48.7	20.6	17.9		48.0	34.9	22.7	44.6	38.1		38.9
Level of Service		D	C	B		D	C	C	D	D		D
Approach Delay (s)			29.6				35.8			43.5		
Approach LOS			C				D			D		

Intersection Summary			
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	30.2
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

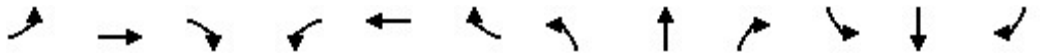
c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	350
Future Volume (vph)	0	350
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.4	
Lane Util. Factor	1.00	
Frt	0.85	
Flt Protected	1.00	
Satd. Flow (prot)	1568	
Flt Permitted	1.00	
Satd. Flow (perm)	1568	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	0	368
RTOR Reduction (vph)	244	0
Lane Group Flow (vph)	124	0
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	17.0	
Effective Green, g (s)	17.0	
Actuated g/C Ratio	0.18	
Clearance Time (s)	7.4	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	277	
v/s Ratio Prot	c0.08	
v/s Ratio Perm		
v/c Ratio	0.45	
Uniform Delay, d1	35.3	
Progression Factor	1.00	
Incremental Delay, d2	1.1	
Delay (s)	36.4	
Level of Service	D	
Approach Delay (s)	36.7	
Approach LOS	D	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
7: WB Gandy Frontage & Mangrove Cay



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	170	300	0	85	10	0	0	0	10
Future Volume (vph)	0	0	0	170	300	0	85	10	0	0	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					8.0			8.0			8.0	
Lane Util. Factor					0.95			1.00			1.00	
Frt					1.00			1.00			0.86	
Flt Protected					0.98			0.96			1.00	
Satd. Flow (prot)					3443			1766			1596	
Flt Permitted					0.98			0.74			1.00	
Satd. Flow (perm)					3443			1368			1596	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	179	316	0	89	11	0	0	0	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	0	495	0	0	100	0	0	4	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Actuated Green, G (s)					20.0			20.0			20.0	
Effective Green, g (s)					20.0			20.0			20.0	
Actuated g/C Ratio					0.36			0.36			0.36	
Clearance Time (s)					8.0			8.0			8.0	
Vehicle Extension (s)					3.0			3.0			3.0	
Lane Grp Cap (vph)					1229			488			570	
v/s Ratio Prot											0.00	
v/s Ratio Perm					0.14			c0.07				
v/c Ratio					0.40			0.20			0.01	
Uniform Delay, d1					13.5			12.5			11.6	
Progression Factor					1.00			1.05			1.00	
Incremental Delay, d2					0.2			0.2			0.0	
Delay (s)					13.7			13.4			11.6	
Level of Service					B			B			B	
Approach Delay (s)		0.0			13.7			13.4			11.6	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

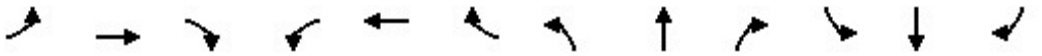
HCM Signalized Intersection Capacity Analysis
21: San Martin Blvd & EB Gandy Frontage

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	100	90	0	0	0	0	50	150	20	150	0
Future Volume (vph)	45	100	90	0	0	0	0	50	150	20	150	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0						8.0			8.0	
Lane Util. Factor		0.95						1.00			1.00	
Frt		0.94						0.90			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3272						1658			1834	
Flt Permitted		0.99						1.00			0.94	
Satd. Flow (perm)		3272						1658			1738	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	105	95	0	0	0	0	53	158	21	158	0
RTOR Reduction (vph)	0	61	0	0	0	0	0	102	0	0	0	0
Lane Group Flow (vph)	0	186	0	0	0	0	0	109	0	0	179	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						8			4	
Permitted Phases	2									4		
Actuated Green, G (s)		20.0						20.0			20.0	
Effective Green, g (s)		20.0						20.0			20.0	
Actuated g/C Ratio		0.36						0.36			0.36	
Clearance Time (s)		8.0						8.0			8.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		1168						592			620	
v/s Ratio Prot								0.07				
v/s Ratio Perm		0.06									c0.10	
v/c Ratio		0.16						0.18			0.29	
Uniform Delay, d1		12.3						12.4			12.9	
Progression Factor		1.00						1.00			1.69	
Incremental Delay, d2		0.1						0.2			0.2	
Delay (s)		12.3						12.5			22.0	
Level of Service		B						B			C	
Approach Delay (s)		12.3			0.0			12.5			22.0	
Approach LOS		B			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
33: Westshore Blvd & Gandy Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	1250	150	380	1650	270	280	550	270	230	420	250
Future Volume (veh/h)	300	1250	150	380	1650	270	280	550	270	230	420	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	316	1316	158	400	1737	284	295	579	284	242	442	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	228	1276	569	287	1394	622	238	450	382	192	426	361
Arrive On Green	0.10	0.36	0.36	0.14	0.40	0.40	0.07	0.24	0.24	0.06	0.23	0.23
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1856	1572	3428	1856	1572
Grp Volume(v), veh/h	316	1316	158	400	1737	284	295	579	284	242	442	263
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	1856	1572	1714	1856	1572
Q Serve(g_s), s	15.3	54.3	10.7	20.3	59.3	20.0	10.4	36.4	25.0	8.4	34.4	23.2
Cycle Q Clear(g_c), s	15.3	54.3	10.7	20.3	59.3	20.0	10.4	36.4	25.0	8.4	34.4	23.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	228	1276	569	287	1394	622	238	450	382	192	426	361
V/C Ratio(X)	1.38	1.03	0.28	1.39	1.25	0.46	1.24	1.29	0.74	1.26	1.04	0.73
Avail Cap(c_a), veh/h	228	1276	569	287	1394	622	238	450	382	192	426	361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	47.8	33.9	50.5	45.3	33.5	69.8	56.8	52.5	70.8	57.8	53.5
Incr Delay (d2), s/veh	197.8	33.5	1.2	196.8	117.0	2.4	138.9	144.6	7.7	152.2	54.0	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	32.5	39.4	7.8	40.2	69.1	12.8	15.1	51.3	16.1	13.2	31.0	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	246.7	81.4	35.1	247.3	162.4	35.9	208.7	201.4	60.2	223.0	111.8	60.8
LnGrp LOS	F	F	D	F	F	D	F	F	E	F	F	E
Approach Vol, veh/h		1790			2421			1158			947	
Approach Delay, s/veh		106.5			161.6			168.7			126.1	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	67.0	16.0	44.0	28.0	62.0	18.0	42.0
Change Period (Y+Rc), s	* 7.7	* 7.7	* 7.6	* 7.6	* 7.7	* 7.7	* 7.6	* 7.6
Max Green Setting (Gmax), s	* 15	* 59	* 8.4	* 36	* 20	* 54	* 10	* 34
Max Q Clear Time (g_c+I1), s	17.3	61.3	10.4	38.4	22.3	56.3	12.4	36.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	141.9
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Queues
14: 4th Street N & S Frontage Rd



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	126	758	695	1369	242	1211
v/c Ratio	0.18	0.52	0.57	0.67	1.00	0.51
Control Delay	42.8	30.0	26.5	43.7	66.7	13.9
Queue Delay	0.1	0.0	0.0	4.1	38.0	6.1
Total Delay	42.9	30.0	26.5	47.9	104.7	20.0
Queue Length 50th (ft)	45	247	213	253	217	220
Queue Length 95th (ft)	73	307	282	288	m#255	m244
Internal Link Dist (ft)		774		612		159
Turn Bay Length (ft)	350		350			
Base Capacity (vph)	716	1455	1209	2038	243	2366
Starvation Cap Reductn	0	0	0	0	78	1092
Spillback Cap Reductn	136	0	0	576	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.52	0.57	0.94	1.47	0.95

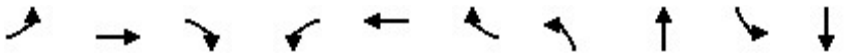
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	247	211	179
v/c Ratio	0.20	0.30	0.29
Control Delay	8.1	5.6	23.7
Queue Delay	0.0	0.0	24.7
Total Delay	8.1	5.7	48.4
Queue Length 50th (ft)	17	11	70
Queue Length 95th (ft)	38	49	125
Internal Link Dist (ft)	422	1025	60
Turn Bay Length (ft)			
Base Capacity (vph)	1343	747	682
Starvation Cap Reductn	0	0	493
Spillback Cap Reductn	0	15	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.18	0.29	0.95

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	379	579	168	95	895	32	53	11	53	368
v/c Ratio	0.73	0.38	0.21	0.38	0.80	0.05	0.21	0.02	0.18	0.77
Control Delay	46.7	19.9	1.6	47.7	35.1	0.1	44.7	0.1	36.1	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.7	19.9	1.6	47.7	35.1	0.1	44.7	0.1	36.1	20.8
Queue Length 50th (ft)	110	122	0	28	247	0	15	0	23	40
Queue Length 95th (ft)	#182	184	17	56	351	0	36	0	73	143
Internal Link Dist (ft)		1812			988			314		356
Turn Bay Length (ft)	250		300	350		300				
Base Capacity (vph)	579	1618	844	261	1291	769	277	556	304	543
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.36	0.20	0.36	0.69	0.04	0.19	0.02	0.17	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	495	100	11
v/c Ratio	0.40	0.20	0.01
Control Delay	14.7	14.6	0.0
Queue Delay	0.7	1.2	0.0
Total Delay	15.4	15.8	0.0
Queue Length 50th (ft)	63	25	0
Queue Length 95th (ft)	97	48	0
Internal Link Dist (ft)	479	60	139
Turn Bay Length (ft)			
Base Capacity (vph)	1352	537	844
Starvation Cap Reductn	0	286	0
Spillback Cap Reductn	508	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.59	0.40	0.01

Intersection Summary

Queues
11: 4th Street N & N Frontage Rd

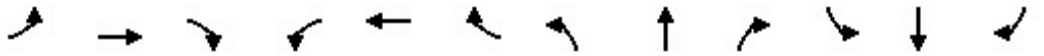


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	579	1316	326	695	747	874	389
v/c Ratio	0.62	0.95	0.49	0.97	0.36	0.92	0.87
Control Delay	44.8	62.0	6.5	62.7	30.6	69.7	39.5
Queue Delay	0.0	0.0	0.0	46.0	52.6	46.6	0.0
Total Delay	44.8	62.0	6.5	108.7	83.2	116.3	39.5
Queue Length 50th (ft)	220	400	0	323	241	213	121
Queue Length 95th (ft)	282	#498	73	#440	287	#275	#300
Internal Link Dist (ft)		1299			159	458	
Turn Bay Length (ft)	500		500				
Base Capacity (vph)	931	1379	666	716	2091	951	447
Starvation Cap Reductn	0	0	0	384	1434	0	0
Spillback Cap Reductn	0	0	0	0	0	244	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.95	0.49	2.09	1.14	1.24	0.87

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
11: 4th Street N & N Frontage Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	430	570	310	600	780	0	0	960	240
Future Volume (vph)	0	0	0	430	570	310	600	780	0	0	960	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Lane Util. Factor				0.97	0.91	1.00	0.97	0.91			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3400	5036	1568	3400	5036			6346	1568
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3400	5036	1568	3400	5036			6346	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	453	600	326	632	821	0	0	1011	253
RTOR Reduction (vph)	0	0	0	0	0	237	0	0	0	0	0	215
Lane Group Flow (vph)	0	0	0	453	600	89	632	821	0	0	1011	38
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				35.6	35.6	35.6	27.4	54.0			19.5	19.5
Effective Green, g (s)				35.6	35.6	35.6	27.4	54.0			19.5	19.5
Actuated g/C Ratio				0.27	0.27	0.27	0.21	0.42			0.15	0.15
Clearance Time (s)				7.4	7.4	7.4	6.6	7.0			7.5	7.5
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				931	1379	429	716	2091			951	235
v/s Ratio Prot				c0.13	0.12		c0.19	0.16			c0.16	
v/s Ratio Perm						0.06						0.02
v/c Ratio				0.49	0.44	0.21	0.88	0.39			1.06	0.16
Uniform Delay, d1				39.5	38.9	36.3	49.7	26.5			55.2	48.1
Progression Factor				1.00	1.00	1.00	0.77	1.08			1.00	1.00
Incremental Delay, d2				0.4	0.2	0.2	11.4	0.5			47.5	1.5
Delay (s)				39.9	39.1	36.6	49.7	29.1			102.7	49.6
Level of Service				D	D	D	D	C			F	D
Approach Delay (s)		0.0			38.8			38.0			92.1	
Approach LOS		A			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	55.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	107.0%	ICU Level of Service	G
Analysis Period (min)	15		

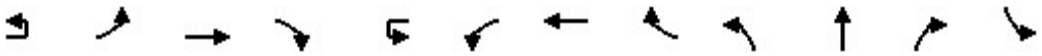
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: 4th Street N & S Frontage Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	1400	820	0	0	0	0	1200	100	290	1100	0
Future Volume (vph)	180	1400	820	0	0	0	0	1200	100	290	1100	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Lane Util. Factor	0.97	0.95	0.88					0.81		1.00	0.91	
Frt	1.00	1.00	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3400	3505	2760					7385		1752	5036	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3400	3505	2760					7385		1752	5036	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	1474	863	0	0	0	0	1263	105	305	1158	0
RTOR Reduction (vph)	0	0	63	0	0	0	0	12	0	0	0	0
Lane Group Flow (vph)	189	1474	800	0	0	0	0	1356	0	305	1158	0
Turn Type	Prot	NA	Perm					NA		Prot	NA	
Protected Phases	5	2						8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	27.4	54.0	54.0					35.6		18.1	61.1	
Effective Green, g (s)	27.4	54.0	54.0					35.6		18.1	61.1	
Actuated g/C Ratio	0.21	0.42	0.42					0.27		0.14	0.47	
Clearance Time (s)	6.6	7.0	7.0					7.4		7.9	7.9	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	716	1455	1146					2022		243	2366	
v/s Ratio Prot	0.06	c0.42						c0.18		c0.17	0.23	
v/s Ratio Perm			0.29									
v/c Ratio	0.26	1.01	0.70					0.67		1.26	0.49	
Uniform Delay, d1	42.9	38.0	31.3					42.0		56.0	23.7	
Progression Factor	1.00	1.00	1.00					1.00		0.45	0.64	
Incremental Delay, d2	0.9	26.9	3.5					0.9		118.0	0.1	
Delay (s)	43.8	64.9	34.8					42.9		143.1	15.3	
Level of Service	D	E	C					D		F	B	
Approach Delay (s)		53.0			0.0			42.9			41.9	
Approach LOS		D			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	47.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.4
Intersection Capacity Utilization	107.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	300	350	1100	50	20	10	550	40	170	0	30	30
Future Volume (vph)	300	350	1100	50	20	10	550	40	170	0	30	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.4	7.4	7.4		7.4	7.4	7.4	8.0	8.0		7.4
Lane Util. Factor		0.97	0.95	1.00		0.97	0.95	1.00	0.97	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.85		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3400	3505	1568		3400	3505	1568	3400	1568		1752
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (perm)		3400	3505	1568		3400	3505	1568	3400	1568		1752
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	316	368	1158	53	21	11	579	42	179	0	32	32
RTOR Reduction (vph)	0	0	0	28	0	0	0	31	0	26	0	0
Lane Group Flow (vph)	0	684	1158	25	0	32	579	11	179	6	0	32
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	NA		Prot
Protected Phases	1	1	6		5	5	2		3	8		7
Permitted Phases				6				2				
Actuated Green, G (s)		25.4	49.3	49.3		3.1	27.0	27.0	9.9	19.7		3.7
Effective Green, g (s)		25.4	49.3	49.3		3.1	27.0	27.0	9.9	19.7		3.7
Actuated g/C Ratio		0.24	0.47	0.47		0.03	0.25	0.25	0.09	0.19		0.03
Clearance Time (s)		7.4	7.4	7.4		7.4	7.4	7.4	8.0	8.0		7.4
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		814	1630	729		99	892	399	317	291		61
v/s Ratio Prot		c0.20	c0.33			0.01	0.17		c0.05	c0.00		0.02
v/s Ratio Perm				0.02				0.01				
v/c Ratio		0.84	0.71	0.03		0.32	0.65	0.03	0.56	0.02		0.52
Uniform Delay, d1		38.4	22.6	15.4		50.4	35.3	29.6	46.0	35.3		50.3
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		7.8	1.5	0.0		1.9	1.6	0.0	2.3	0.0		7.9
Delay (s)		46.2	24.1	15.4		52.3	36.9	29.7	48.3	35.3		58.2
Level of Service		D	C	B		D	D	C	D	D		E
Approach Delay (s)			31.8				37.2			46.3		
Approach LOS			C				D			D		

Intersection Summary			
HCM 2000 Control Delay	34.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	30.2
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

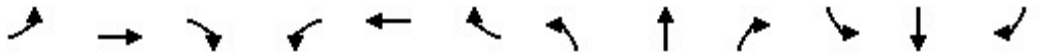
c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	170
Future Volume (vph)	0	170
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.4	
Lane Util. Factor	1.00	
Frt	0.85	
Flt Protected	1.00	
Satd. Flow (prot)	1568	
Flt Permitted	1.00	
Satd. Flow (perm)	1568	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	0	179
RTOR Reduction (vph)	156	0
Lane Group Flow (vph)	23	0
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	13.5	
Effective Green, g (s)	13.5	
Actuated g/C Ratio	0.13	
Clearance Time (s)	7.4	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	199	
v/s Ratio Prot	c0.01	
v/s Ratio Perm		
v/c Ratio	0.11	
Uniform Delay, d1	41.0	
Progression Factor	1.00	
Incremental Delay, d2	0.3	
Delay (s)	41.2	
Level of Service	D	
Approach Delay (s)	43.8	
Approach LOS	D	

Intersection Summary

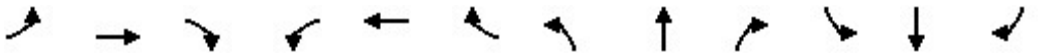
HCM Signalized Intersection Capacity Analysis
7: WB Gandy Frontage & Mangrove Cay



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	220	50	10	205	10	0	0	5	5
Future Volume (vph)	0	0	0	220	50	10	205	10	0	0	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					8.0			8.0			8.0	
Lane Util. Factor					0.95			1.00			1.00	
Frt					0.99			1.00			0.93	
Flt Protected					0.96			0.95			1.00	
Satd. Flow (prot)					3354			1761			1720	
Flt Permitted					0.96			0.73			1.00	
Satd. Flow (perm)					3354			1345			1720	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	232	53	11	216	11	0	0	5	5
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	291	0	0	227	0	0	7	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Actuated Green, G (s)					12.8			13.7			13.7	
Effective Green, g (s)					12.8			13.7			13.7	
Actuated g/C Ratio					0.30			0.32			0.32	
Clearance Time (s)					8.0			8.0			8.0	
Vehicle Extension (s)					3.0			3.0			3.0	
Lane Grp Cap (vph)					1010			433			554	
v/s Ratio Prot											0.00	
v/s Ratio Perm					0.09			c0.17				
v/c Ratio					0.29			0.52			0.01	
Uniform Delay, d1					11.4			11.7			9.8	
Progression Factor					1.00			1.23			1.00	
Incremental Delay, d2					0.2			1.1			0.0	
Delay (s)					11.5			15.6			9.8	
Level of Service					B			B			A	
Approach Delay (s)		0.0			11.5			15.6			9.8	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	42.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

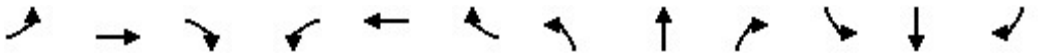


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	320	50	0	0	0	0	70	130	35	190	0
Future Volume (vph)	145	320	50	0	0	0	0	70	130	35	190	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0						8.0			8.0	
Lane Util. Factor		0.95						1.00			1.00	
Frt		0.99						0.91			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3406						1683			1830	
Flt Permitted		0.99						1.00			0.90	
Satd. Flow (perm)		3406						1683			1662	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	153	337	53	0	0	0	0	74	137	37	200	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	93	0	0	0	0
Lane Group Flow (vph)	0	529	0	0	0	0	0	118	0	0	237	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						8			4	
Permitted Phases	2									4		
Actuated Green, G (s)		12.8						13.7			13.7	
Effective Green, g (s)		12.8						13.7			13.7	
Actuated g/C Ratio		0.30						0.32			0.32	
Clearance Time (s)		8.0						8.0			8.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		1025						542			535	
v/s Ratio Prot								0.07				
v/s Ratio Perm		0.16									c0.14	
v/c Ratio		0.52						0.22			0.44	
Uniform Delay, d1		12.3						10.5			11.4	
Progression Factor		1.00						1.00			1.60	
Incremental Delay, d2		0.4						0.2			0.6	
Delay (s)		12.7						10.7			18.8	
Level of Service		B						B			B	
Approach Delay (s)		12.7			0.0			10.7			18.8	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	42.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
33: Westshore Blvd & Gandy Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	1250	150	380	1650	270	280	550	270	230	420	250
Future Volume (veh/h)	300	1250	150	380	1650	270	280	550	270	230	420	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	316	1316	158	400	1737	284	295	579	284	242	442	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	251	1222	545	374	1468	655	298	449	381	230	412	349
Arrive On Green	0.12	0.35	0.35	0.19	0.42	0.42	0.09	0.24	0.24	0.07	0.22	0.22
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1856	1572	3428	1856	1572
Grp Volume(v), veh/h	316	1316	158	400	1737	284	295	579	284	242	442	263
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	1856	1572	1714	1856	1572
Q Serve(g_s), s	24.3	69.3	14.6	38.3	83.3	25.7	17.2	48.4	33.4	13.4	44.4	31.3
Cycle Q Clear(g_c), s	24.3	69.3	14.6	38.3	83.3	25.7	17.2	48.4	33.4	13.4	44.4	31.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	1222	545	374	1468	655	298	449	381	230	412	349
V/C Ratio(X)	1.26	1.08	0.29	1.07	1.18	0.43	0.99	1.29	0.75	1.05	1.07	0.75
Avail Cap(c_a), veh/h	251	1222	545	374	1468	655	298	449	381	230	412	349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.8	65.3	47.5	70.3	58.3	41.6	91.2	75.8	70.1	93.3	77.8	72.7
Incr Delay (d2), s/veh	145.2	49.3	1.3	65.8	89.6	2.1	49.0	146.2	7.8	74.2	65.2	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	33.8	52.6	10.1	35.3	76.2	16.0	14.9	59.7	20.6	13.4	39.2	19.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	216.1	114.6	48.8	136.2	148.0	43.6	140.2	222.0	78.0	167.5	143.0	81.6
LnGrp LOS	F	F	D	F	F	D	F	F	E	F	F	F
Approach Vol, veh/h		1790			2421			1158			947	
Approach Delay, s/veh		126.7			133.8			165.8			132.2	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.0	91.0	21.0	56.0	46.0	77.0	25.0	52.0
Change Period (Y+Rc), s	* 7.7	* 7.7	* 7.6	* 7.6	* 7.7	* 7.7	* 7.6	* 7.6
Max Green Setting (Gmax), s	* 24	* 83	* 13	* 48	* 38	* 69	* 17	* 44
Max Q Clear Time (g_c+I1), s	26.3	85.3	15.4	50.4	40.3	71.3	19.2	46.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	137.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	453	600	326	632	821	1011	253
v/c Ratio	0.49	0.44	0.49	0.88	0.39	1.06	0.56
Control Delay	41.7	40.1	6.5	50.2	29.2	99.6	11.0
Queue Delay	0.0	0.0	0.0	53.5	51.8	16.4	0.0
Total Delay	41.7	40.1	6.5	103.8	81.0	116.0	11.0
Queue Length 50th (ft)	165	153	0	293	262	~272	0
Queue Length 95th (ft)	218	192	73	#378	309	#346	79
Internal Link Dist (ft)		1299			159	458	
Turn Bay Length (ft)	500		500				
Base Capacity (vph)	931	1379	666	716	2091	951	450
Starvation Cap Reductn	0	0	0	384	1349	0	0
Spillback Cap Reductn	0	0	0	0	0	260	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.44	0.49	1.90	1.11	1.46	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
14: 4th Street N & S Frontage Rd



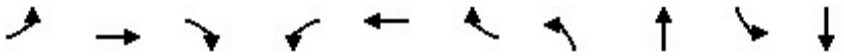
Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	189	1474	863	1368	305	1158
v/c Ratio	0.26	1.01	0.71	0.67	1.26	0.49
Control Delay	44.0	64.7	31.3	43.5	144.5	15.7
Queue Delay	0.2	0.0	0.0	4.5	6.0	4.8
Total Delay	44.2	64.7	31.3	47.9	150.5	20.5
Queue Length 50th (ft)	69	~665	300	251	~328	242
Queue Length 95th (ft)	104	#826	386	286	m#301	m246
Internal Link Dist (ft)		774		612		159
Turn Bay Length (ft)	350		350			
Base Capacity (vph)	716	1455	1209	2032	243	2366
Starvation Cap Reductn	0	0	0	0	78	1121
Spillback Cap Reductn	138	0	0	579	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	1.01	0.71	0.94	1.85	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	684	1158	53	32	579	42	179	32	32	179
v/c Ratio	0.79	0.67	0.06	0.17	0.70	0.07	0.53	0.06	0.29	0.48
Control Delay	42.1	22.2	0.1	51.2	40.4	0.2	50.7	0.2	55.6	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	22.2	0.1	51.2	40.4	0.2	50.7	0.2	55.6	6.1
Queue Length 50th (ft)	206	319	0	10	177	0	55	0	20	0
Queue Length 95th (ft)	298	394	0	29	264	0	104	0	57	21
Internal Link Dist (ft)		1812			988			313		356
Turn Bay Length (ft)	250		300	350		300				
Base Capacity (vph)	1194	2121	1020	193	1089	657	379	531	117	424
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.55	0.05	0.17	0.53	0.06	0.47	0.06	0.27	0.42

Intersection Summary



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	296	227	10
v/c Ratio	0.30	0.53	0.02
Control Delay	12.8	20.4	8.6
Queue Delay	0.2	0.3	0.0
Total Delay	13.0	20.7	8.6
Queue Length 50th (ft)	25	51	1
Queue Length 95th (ft)	63	140	9
Internal Link Dist (ft)	479	60	139
Turn Bay Length (ft)			
Base Capacity (vph)	1613	775	993
Starvation Cap Reductn	0	201	0
Spillback Cap Reductn	647	0	71
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.31	0.40	0.01

Intersection Summary



Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	543	211	237
v/c Ratio	0.53	0.34	0.45
Control Delay	14.7	6.4	22.4
Queue Delay	0.1	0.0	0.5
Total Delay	14.8	6.5	22.8
Queue Length 50th (ft)	49	11	64
Queue Length 95th (ft)	112	52	156
Internal Link Dist (ft)	422	493	60
Turn Bay Length (ft)			
Base Capacity (vph)	1645	1027	958
Starvation Cap Reductn	0	0	382
Spillback Cap Reductn	343	111	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.42	0.23	0.41

Intersection Summary

HCS7 Freeway Facilities Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	9
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	7.13		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB Gandy Blvd btwn Martin Luther King Jr Off-ramp and Diverge Off-ramp east of 4th St	4685	2
2	Diverge	Diverge	EB Gandy Blvd Off-ramp east of 4th St	1500	2
3	Basic	Basic	EB Gandy Blvd btwn Off-ramp east of 4th St and On-ramp west of Brighton Bay Blvd	1500	2
4	Merge	Merge	EB Gandy Blvd On-ramp west of Brighton Bay Blvd	1500	2
5	Basic	Basic	EB Gandy Blvd btwn Merge On-ramp west of Brighton Bay Blvd to On-ramp east of San Fernando Dr	6150	2
6	Merge	Basic	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and west of Beach Access Frontage Rd On-ramp	1500	3
7	Basic	Basic	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and Beach Access Frontage Rd On-Ramp	2150	3
8	Merge	Merge	EB Gandy Blvd Beach Access Frontage Rd On-ramp	1500	3
9	Basic	Basic	EB Gandy Blvd btwn Beach Access Frontage Rd On-ramp Merge and east end of Gandy Blvd Bridge	17160	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	2157	4460	0.48	53.0	20.3	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.95	0.95	0.976	0.976	2157	431	4500	2000	0.48	0.22	49.8	49.8	21.7	16.4	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	1726	4460	0.39	52.7	16.3	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2589	863	4500	2000	0.58	0.43	51.2	51.2	25.3	19.3	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	2588	4460	0.58	53.0	24.4	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2912	324	6750	2000	0.43	0.16	55.0	55.0	17.6	17.6	B

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	2912	6840	0.43	57.8	16.7	B

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2923	11	6900	2100	0.42	0.01	56.7	56.0	17.2	11.2	B

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	2923	6840	0.43	58.0	16.8	B

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	55.7	18.5	18.1	7.70	C

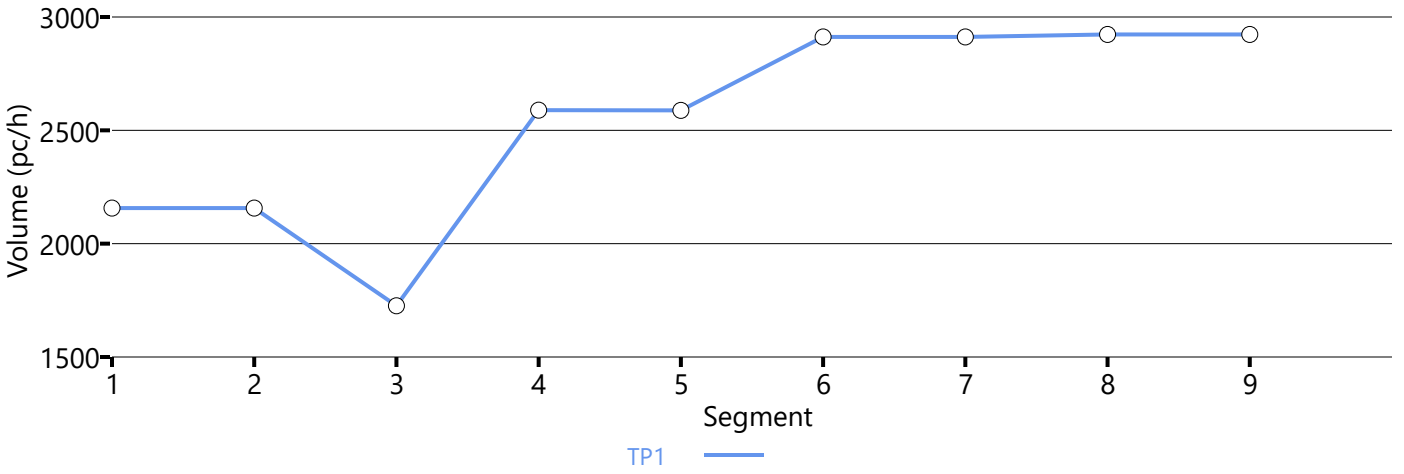
Facility Overall Results

Space Mean Speed, mi/h	55.7	Density, veh/mi/ln	18.1
Average Travel Time, min	7.70	Density, pc/mi/ln	18.5

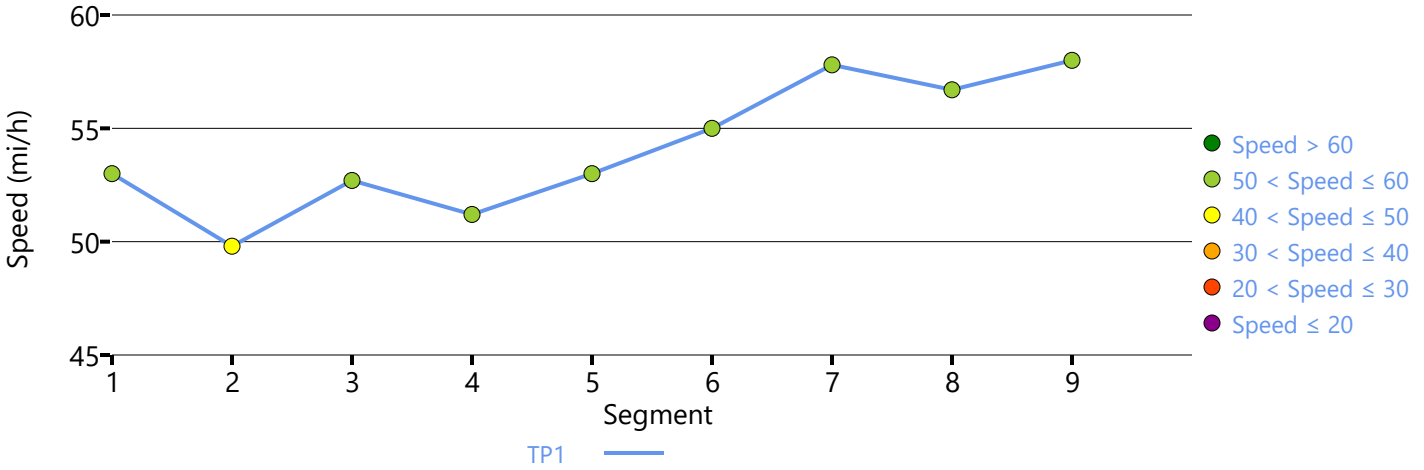
Messages

Comments

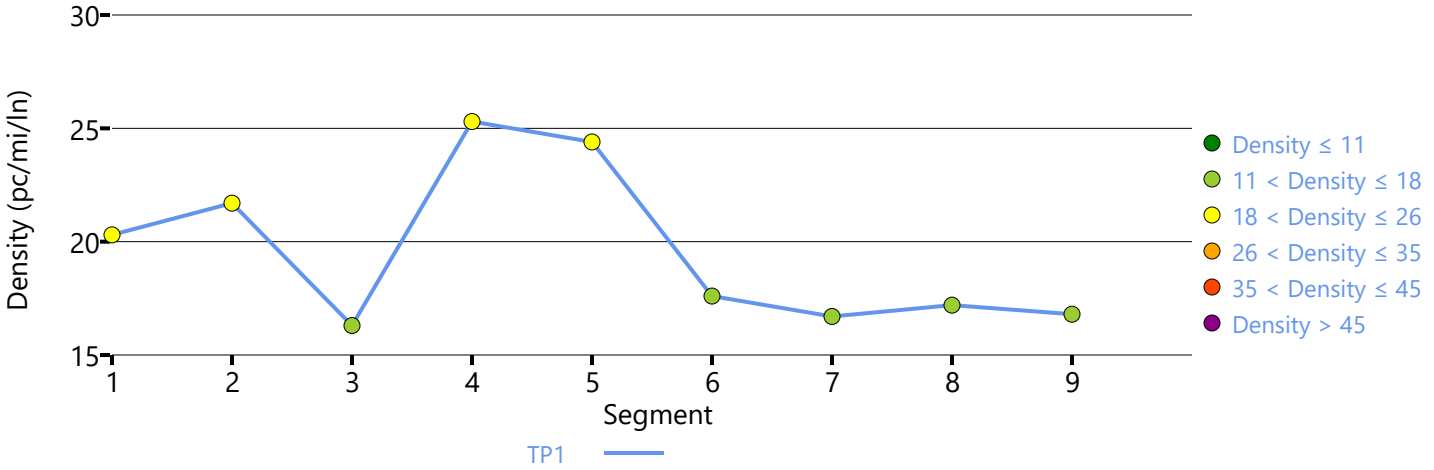
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Basic Freeway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary
Segment Number	1	Segment Name	EB Gandy Blvd btwn Martin Luther King Jr Off-ramp and Diverge Off-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	4685	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2000	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1078
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	20.3
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Freeway Diverge Report

Project Information

Segment Number	2	Segment Name	EB Gandy Blvd Off-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	714
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2000	400
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2157	431
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.48	0.22

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.402
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	49.8
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	60.3
Flow in Lanes 1 and 2 (v12), pc/h	2157	Ramp Junction Speed (S), mi/h	49.8
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	21.7
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	16.4

HCS7 Basic Freeway Report

Project Information

Segment Number	3	Segment Name	EB Gandy Blvd btwn Off-ramp east of 4th St and On-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	1500	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1600	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	863
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	52.7
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	16.3
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Freeway Merge Report

Project Information

Segment Number	4	Segment Name	EB Gandy Blvd On-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	970
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1600	800
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1726	863
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.58	0.43

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.295
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	51.2
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	55.0
Flow in Lanes 1 and 2 (v12), pc/h	1726	Ramp Junction Speed (S), mi/h	51.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	2589	Average Density (D), pc/mi/ln	25.3
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	19.3

HCS7 Basic Freeway Report

Project Information

Segment Number	5	Segment Name	EB Gandy Blvd btwn Merge On-ramp west of Brighton Bay Blvd to On-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	6150	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1294
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	24.4
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Basic Freeway Report

Project Information

Segment Number	6	Segment Name	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and west of Beach Access Frontage Rd On-ramp
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	800
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2400	300
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2588	324
Capacity (c), pc/h	6750	2000
Volume-to-Capacity Ratio (v/c)	0.43	0.16

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	9999.0	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	55.000
Downstream Equilibrium Distance (LEQ), ft	9999.0	Flow Outer Lanes (vOA), pc/h/ln	0
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	55.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	75.0
Flow in Lanes 1 and 2 (v12), pc/h	0	Ramp Junction Speed (S), mi/h	55.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	0	Average Density (D), pc/mi/ln	17.6
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	17.6

HCS7 Basic Freeway Report

Project Information

Segment Number	7	Segment Name	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and Beach Access Frontage Rd On-Ramp
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	2150	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	971
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2280
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.8
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	16.7
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

HCS7 Freeway Merge Report

Project Information

Segment Number	8	Segment Name	EB Gandy Blvd Beach Access Frontage Rd On-ramp
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	60.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1345
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2700	10
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2912	11
Capacity (c), pc/h	6900	2100
Volume-to-Capacity Ratio (v/c)	0.42	0.01

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.224
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1121
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	56.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.615	Outer Lanes Freeway Speed (SO), mi/h	57.8
Flow in Lanes 1 and 2 (v12), pc/h	1791	Ramp Junction Speed (S), mi/h	56.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	1802	Average Density (D), pc/mi/ln	17.2
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	11.2

HCS7 Basic Freeway Report

Project Information

Segment Number	9	Segment Name	EB Gandy Blvd btwn Beach Access Frontage Rd On-ramp Merge and east end of Gandy Blvd Bridge
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	17160	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2710	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	974
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2280
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	16.8
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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HCS7 Freeway Facilities Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	7.04		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB Gandy Blvd btwn east end of Gandy Blvd Bridge and east of Off-ramp east of San Fernando Dr	20210	3
2	Diverge	Basic	WB Gandy Blvd btwn east of Off-ramp east of San Fernando Dr and Off-ramp east of San Fernando Dr	1500	3
3	Basic	Basic	WB Gandy Blvd btwn Off-ramp east of San Fernando Dr and Diverge Off-ramp west of Brighton Bay Blvd	5900	2
4	Diverge	Diverge	WB Gandy Blvd Off-ramp west of Brighton Bay Blvd	1500	2
5	Basic	Basic	WB Gandy Blvd btwn Off-ramp west of Brighton Bay Blvd and On-ramp east of 4th St	2130	2
6	Merge	Merge	WB Gandy Blvd On-ramp east of 4th St	1500	2
7	Basic	Basic	WB Gandy Blvd btwn Merge On-ramp east of 4th St and Martin Luther King Jr On-ramp	4420	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	3343	6852	0.49	58.4	19.1	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	3343	324	6750	2000	0.50	0.16	55.0	55.0	20.3	20.3	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS

1	0.95		0.976		3020		4468		0.68		53.4		28.3		D

Segment 4: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	3020	971	4500	2000	0.67	0.49	49.2	49.2	30.7	23.5	C

Segment 5: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.95		0.976		2049		4468		0.46		53.2		19.2		C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2480	431	4500	2000	0.55	0.22	51.3	51.3	24.2	18.4	B

Segment 7: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.95		0.976		2481		4468		0.56		53.4		23.2		C

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	56.0	21.2	20.7	7.50	C

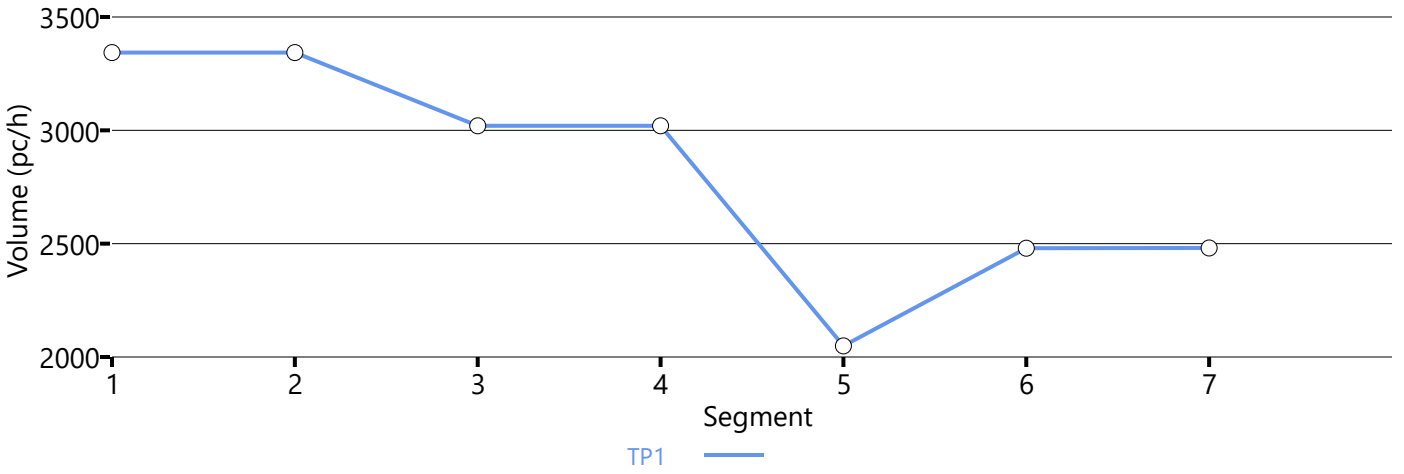
Facility Overall Results

Space Mean Speed, mi/h	56.0	Density, veh/mi/ln	20.7
Average Travel Time, min	7.50	Density, pc/mi/ln	21.2

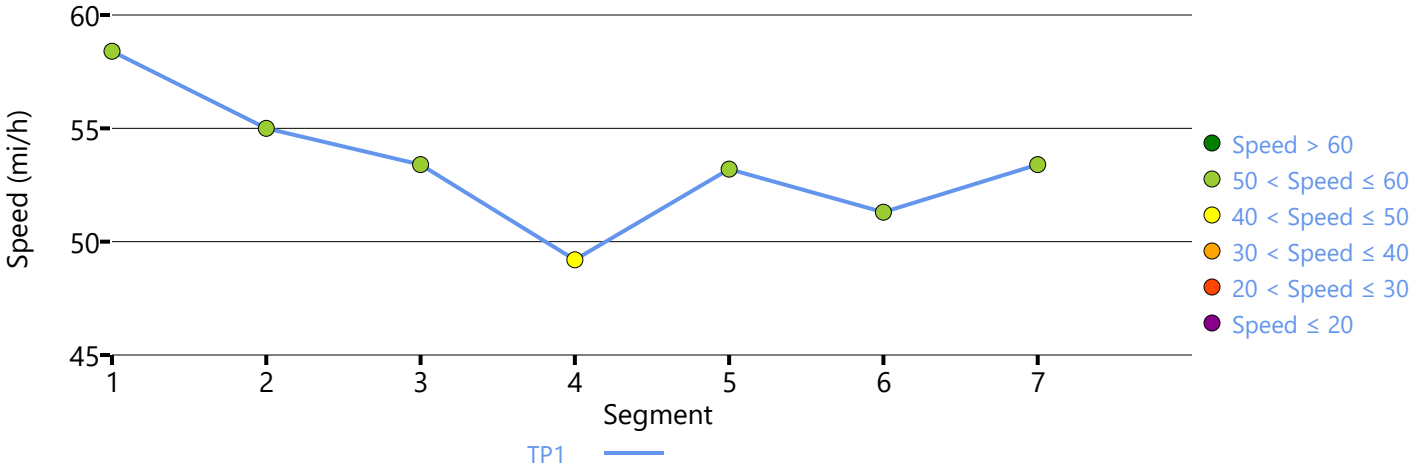
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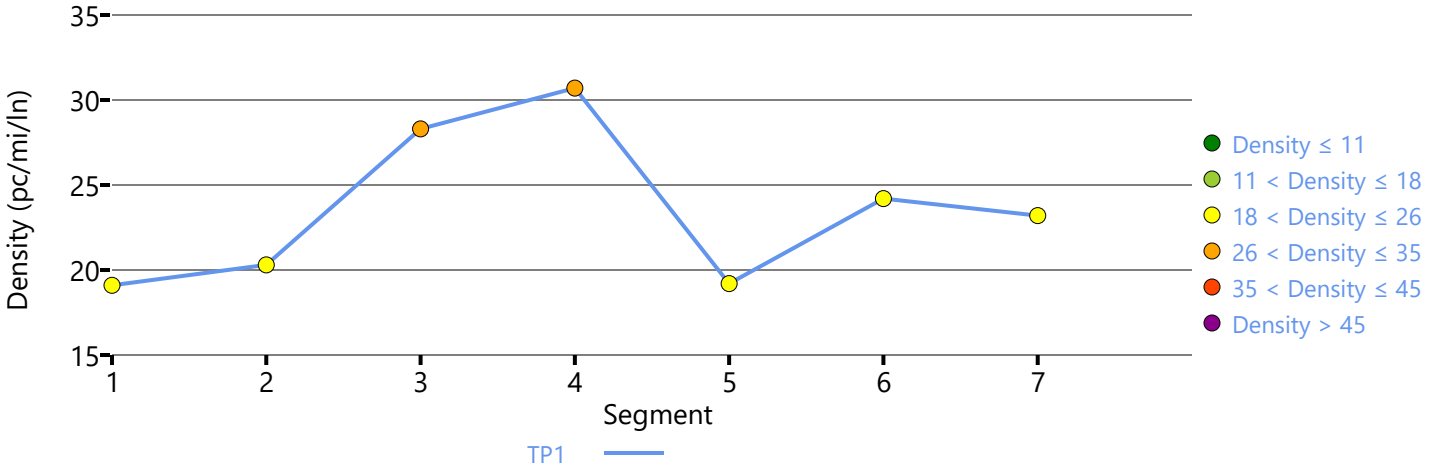
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Basic Freeway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary
Segment Number	1	Segment Name	WB Gandy Blvd btwn east end of Gandy Blvd Bridge and east of Off-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	20210	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3100	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1114
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2284
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2284
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	19.1
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.4		

HCS7 Basic Freeway Report

Project Information

Segment Number	2	Segment Name	WB Gandy Blvd btwn east of Off-ramp east of San Fernando Dr and Off-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	800
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3100	300
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	3343	324
Capacity (c), pc/h	6750	2000
Volume-to-Capacity Ratio (v/c)	0.50	0.16

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	9999.0	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	55.000
Downstream Equilibrium Distance (LEQ), ft	9999.0	Flow Outer Lanes (vOA), pc/h/ln	0
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	75.0
Flow in Lanes 1 and 2 (v12), pc/h	0	Ramp Junction Speed (S), mi/h	55.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	0	Average Density (D), pc/mi/ln	20.3
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	20.3

HCS7 Basic Freeway Report

Project Information

Segment Number	3	Segment Name	WB Gandy Blvd btwn Off-ramp east of San Fernando Dr and Diverge Off-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	5900	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1510
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	28.3
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

HCS7 Freeway Diverge Report

Project Information

Segment Number	4	Segment Name	WB Gandy Blvd Off-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	750
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2800	900
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	3020	971
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.67	0.49

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.450
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	49.2
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	60.3
Flow in Lanes 1 and 2 (v12), pc/h	3020	Ramp Junction Speed (S), mi/h	49.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	30.7
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	23.5

HCS7 Basic Freeway Report

Project Information

Segment Number	5	Segment Name	WB Gandy Blvd btwn Off-ramp west of Brighton Bay Blvd and On-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	2130	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1900	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1024
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	19.2
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

HCS7 Freeway Merge Report

Project Information

Segment Number	6	Segment Name	WB Gandy Blvd On-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1000
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1900	400
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2049	431
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.55	0.22

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.288
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	51.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	55.0
Flow in Lanes 1 and 2 (v12), pc/h	2049	Ramp Junction Speed (S), mi/h	51.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2480	Average Density (D), pc/mi/ln	24.2
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	18.4

HCS7 Basic Freeway Report

Project Information

Segment Number	7	Segment Name	WB Gandy Blvd btwn Merge On-ramp east of 4th St and Martin Luther King Jr On-ramp
Time Period Number	1	Segment Analysis Time Period	07:30-07:45

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	4420	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2300	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1240
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	23.2
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

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HCS7 Freeway Facilities Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	9
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	7.13		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB Gandy Blvd btwn Martin Luther King Jr Off-ramp and Diverge Off-ramp east of 4th St	4685	2
2	Diverge	Diverge	EB Gandy Blvd Off-ramp east of 4th St	1500	2
3	Basic	Basic	EB Gandy Blvd btwn Off-ramp east of 4th St and On-ramp west of Brighton Bay Blvd	1500	2
4	Merge	Merge	EB between on-ramp west of Brighton Bay Blvd and east of Brighton Bay Blvd	1500	2
5	Basic	Basic	EB Gandy Blvd btwn Merge On-ramp west of Brighton Bay Blvd to On-ramp east of San Fernando Dr	6150	2
6	Merge	Basic	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and west of Beach Access Frontage Rd On-ramp	1500	3
7	Basic	Basic	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and Beach Access Frontage Rd On-Ramp	2150	3
8	Merge	Merge	EB Gandy Blvd Beach Access Frontage Rd On-ramp	1500	3
9	Basic	Basic	EB Gandy Blvd btwn Beach Access Frontage Rd On-ramp Merge and east end of Gandy Blvd Bridge	17160	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	2481	4460	0.56	53.0	23.4	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.95	0.95	0.976	0.976	2481	431	4500	2000	0.55	0.22	49.8	49.8	24.9	19.2	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	2049	4460	0.46	52.7	19.3	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	3020	971	4500	2000	0.67	0.49	50.8	50.8	29.7	22.6	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	3020	4460	0.68	53.0	28.5	D

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	3344	324	6750	2000	0.50	0.16	55.0	55.0	20.3	20.3	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	3343	6840	0.49	57.8	19.2	C

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	3359	16	6900	2100	0.49	0.01	56.3	55.8	19.9	13.3	B

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	3360	6840	0.49	58.0	19.3	C

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	55.7	21.4	20.9	7.70	C

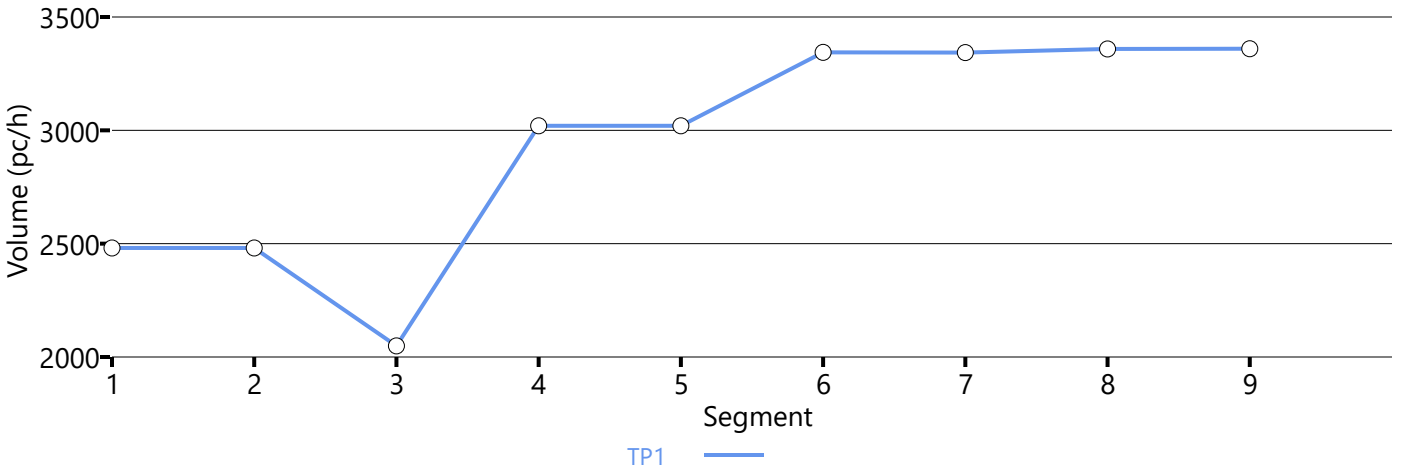
Facility Overall Results

Space Mean Speed, mi/h	55.7	Density, veh/mi/ln	20.9
Average Travel Time, min	7.70	Density, pc/mi/ln	21.4

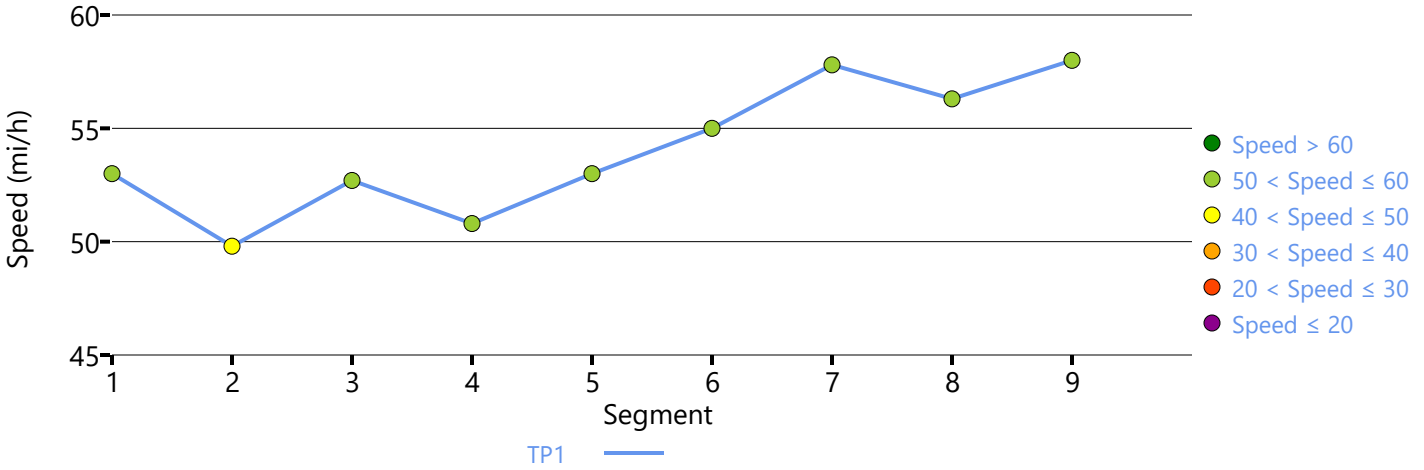
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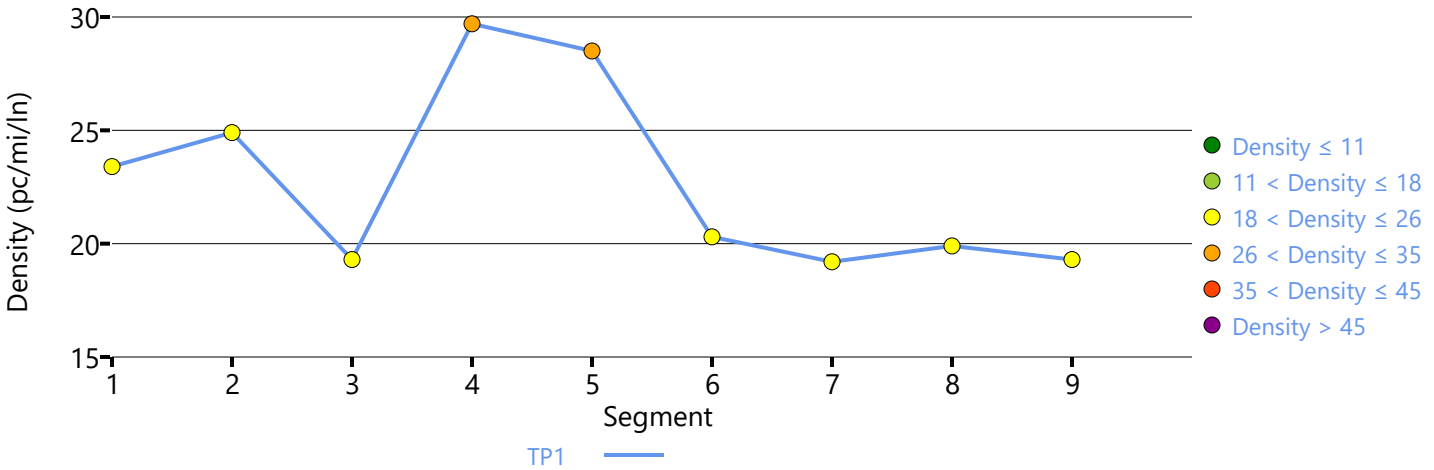
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Basic Freeway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary
Segment Number	1	Segment Name	EB Gandy Blvd btwn Martin Luther King Jr Off-ramp and Diverge Off-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	4685	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2300	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1240
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	23.4
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Freeway Diverge Report

Project Information

Segment Number	2	Segment Name	EB Gandy Blvd Off-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	714
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2300	400
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2481	431
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.55	0.22

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.402
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	49.8
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	60.3
Flow in Lanes 1 and 2 (v12), pc/h	2481	Ramp Junction Speed (S), mi/h	49.8
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	24.9
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	19.2

HCS7 Basic Freeway Report

Project Information

Segment Number	3	Segment Name	EB Gandy Blvd btwn Off-ramp east of 4th St and On-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	1500	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1900	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1024
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	52.7
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	19.3
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Freeway Merge Report

Project Information

Segment Number	4	Segment Name	EB between on-ramp west of Brighton Bay Blvd and east of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	970
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1900	900
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2049	971
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.67	0.49

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.323
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	50.8
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	55.0
Flow in Lanes 1 and 2 (v12), pc/h	2049	Ramp Junction Speed (S), mi/h	50.8
Flow Entering Ramp-Infl. Area (vR12), pc/h	3020	Average Density (D), pc/mi/ln	29.7
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	22.6

HCS7 Basic Freeway Report

Project Information

Segment Number	5	Segment Name	EB Gandy Blvd btwn Merge On-ramp west of Brighton Bay Blvd to On-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	6150	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1510
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2230
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2230
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	28.5
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.0		

HCS7 Basic Freeway Report

Project Information

Segment Number	6	Segment Name	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and west of Beach Access Frontage Rd On-ramp
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	800
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2800	300
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	3020	324
Capacity (c), pc/h	6750	2000
Volume-to-Capacity Ratio (v/c)	0.50	0.16

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	9999.0	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	55.000
Downstream Equilibrium Distance (LEQ), ft	9999.0	Flow Outer Lanes (vOA), pc/h/ln	0
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	55.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	75.0
Flow in Lanes 1 and 2 (v12), pc/h	0	Ramp Junction Speed (S), mi/h	55.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	0	Average Density (D), pc/mi/ln	20.3
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	20.3

HCS7 Basic Freeway Report

Project Information

Segment Number	7	Segment Name	EB Gandy Blvd btwn On-ramp east of San Fernando Dr and Beach Access Frontage Rd On-Ramp
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	2150	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3100	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1114
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2280
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.8
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	19.2
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

HCS7 Freeway Merge Report

Project Information

Segment Number	8	Segment Name	EB Gandy Blvd Beach Access Frontage Rd On-ramp
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	60.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1345
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3100	15
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	3343	16
Capacity (c), pc/h	6900	2100
Volume-to-Capacity Ratio (v/c)	0.49	0.01

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.231
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1287
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	55.8
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.615	Outer Lanes Freeway Speed (SO), mi/h	57.2
Flow in Lanes 1 and 2 (v12), pc/h	2056	Ramp Junction Speed (S), mi/h	56.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2072	Average Density (D), pc/mi/ln	19.9
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	13.3

HCS7 Basic Freeway Report

Project Information

Segment Number	9	Segment Name	EB Gandy Blvd btwn Beach Access Frontage Rd On-ramp Merge and east end of Gandy Blvd Bridge
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	17160	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.56
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3115	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1120
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2280
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	19.3
Total Ramp Density Adjustment	2.0	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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HCS7 Freeway Facilities Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	7.04		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB Gandy Blvd btwn east end of Gandy Blvd Bridge and east of Off-ramp east of San Fernando Dr	20210	3
2	Diverge	Basic	WB Gandy Blvd btwn east of Off-ramp east of San Fernando Dr and Off-ramp east of San Fernando Dr	1500	3
3	Basic	Basic	WB Gandy Blvd btwn Off-ramp east of San Fernando Dr and Diverge Off-ramp west of Brighton Bay Blvd	5900	2
4	Diverge	Diverge	WB Gandy Blvd Off-ramp west of Brighton Bay Blvd	1500	2
5	Basic	Basic	WB Gandy Blvd btwn Off-ramp west of Brighton Bay Blvd and On-ramp east of 4th St	2130	2
6	Merge	Merge	WB Gandy Blvd On-ramp east of 4th St	1500	2
7	Basic	Basic	WB Gandy Blvd btwn Merge On-ramp east of 4th St and Martin Luther King Jr On-ramp	4420	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.95	0.976	2912	6852	0.42	58.4	16.6	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2912	324	6750	2000	0.43	0.16	55.0	55.0	17.7	17.7	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS

1	0.95		0.976		2588		4468		0.58		53.4		24.2		C

Segment 4: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2588	863	4500	2000	0.58	0.43	49.3	49.3	26.2	19.8	B

Segment 5: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.95		0.976		1726		4468		0.39		53.2		16.2		B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.95	0.95	0.976	0.976	2157	431	4500	2000	0.48	0.22	51.4	51.4	21.0	15.9	B

Segment 7: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.95		0.976		2157		4468		0.48		53.4		20.2		C

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	56.1	18.3	17.9	7.50	C

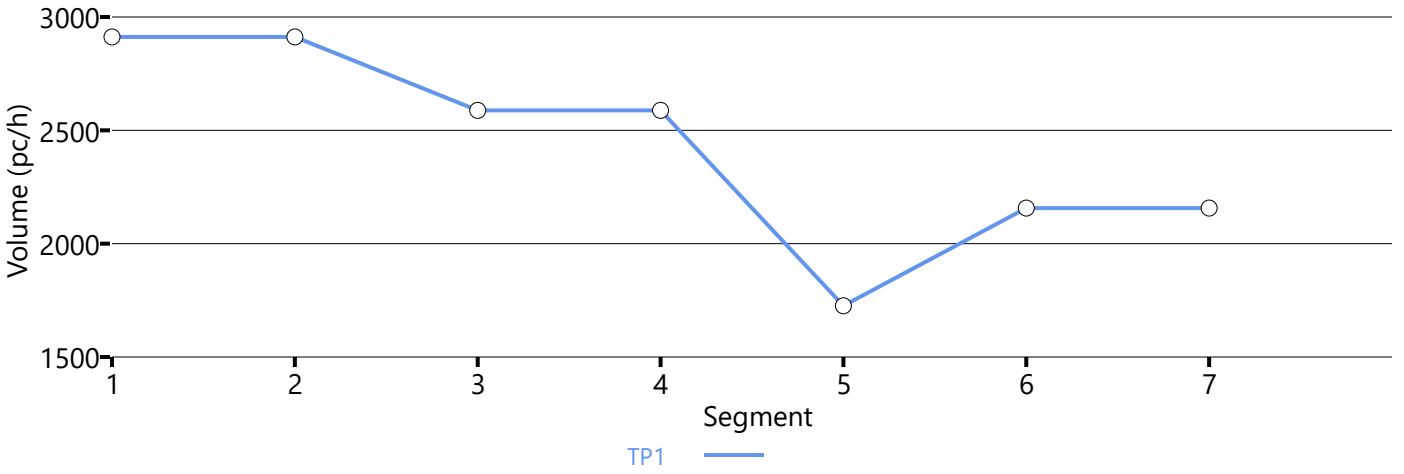
Facility Overall Results

Space Mean Speed, mi/h	56.1	Density, veh/mi/ln	17.9
Average Travel Time, min	7.50	Density, pc/mi/ln	18.3

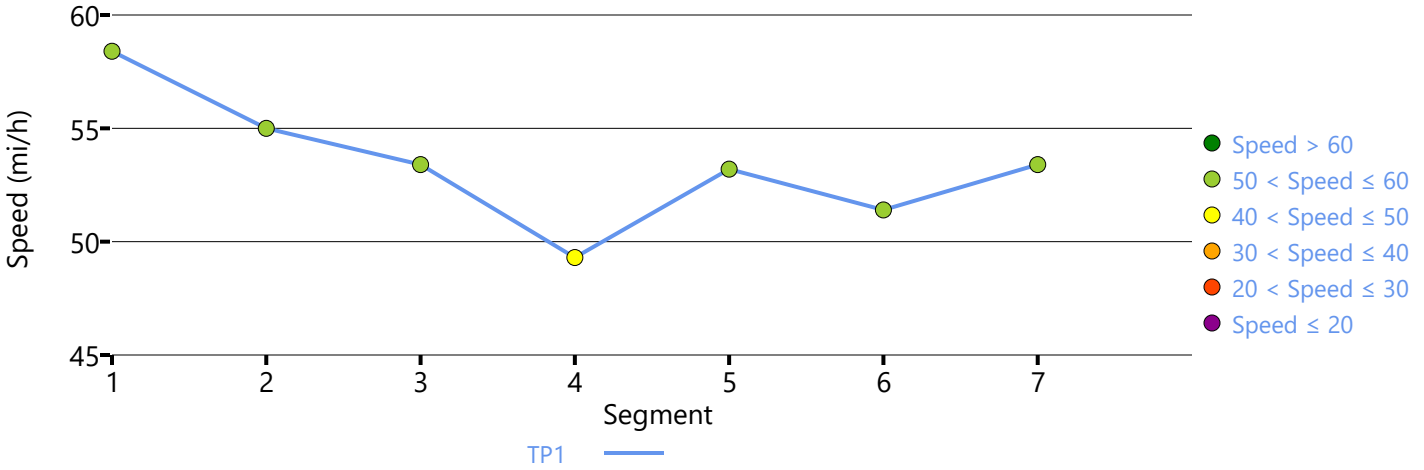
Messages

Comments

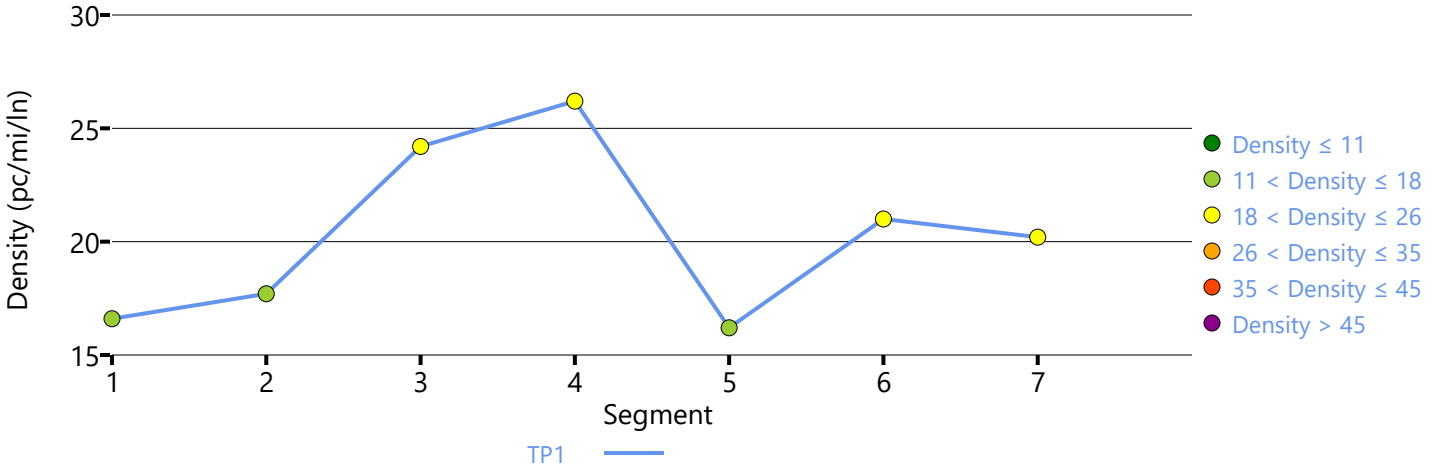
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Basic Freeway Report

Project Information

Analyst	KRG	Date	11/11/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Build	Unit	United States Customary
Segment Number	1	Segment Name	WB Gandy Blvd btwn east end of Gandy Blvd Bridge and east of Off-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	20210	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	971
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2284
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2284
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	16.6
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.4		

HCS7 Basic Freeway Report

Project Information

Segment Number	2	Segment Name	WB Gandy Blvd btwn east of Off-ramp east of San Fernando Dr and Off-ramp east of San Fernando Dr
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	800
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2700	300
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2912	324
Capacity (c), pc/h	6750	2000
Volume-to-Capacity Ratio (v/c)	0.43	0.16

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	9999.0	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	55.000
Downstream Equilibrium Distance (LEQ), ft	9999.0	Flow Outer Lanes (vOA), pc/h/ln	0
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	75.0
Flow in Lanes 1 and 2 (v12), pc/h	0	Ramp Junction Speed (S), mi/h	55.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	0	Average Density (D), pc/mi/ln	17.7
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	17.7

HCS7 Basic Freeway Report

Project Information

Segment Number	3	Segment Name	WB Gandy Blvd btwn Off-ramp east of San Fernando Dr and Diverge Off-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	5900	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2400	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1294
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	24.2
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

HCS7 Freeway Diverge Report

Project Information

Segment Number	4	Segment Name	WB Gandy Blvd Off-ramp west of Brighton Bay Blvd
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	750
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2400	800
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	2588	863
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.58	0.43

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.441
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	49.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	60.3
Flow in Lanes 1 and 2 (v12), pc/h	2588	Ramp Junction Speed (S), mi/h	49.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	26.2
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	19.8

HCS7 Basic Freeway Report

Project Information

Segment Number	5	Segment Name	WB Gandy Blvd btwn Off-ramp west of Brighton Bay Blvd and On-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	2130	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1600	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	863
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	16.2
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

HCS7 Freeway Merge Report

Project Information

Segment Number	6	Segment Name	WB Gandy Blvd On-ramp east of 4th St
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	55.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1000
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	1600	400
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	2.50	2.50
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.976	0.976
Flow Rate (vi),pc/h	1726	431
Capacity (c), pc/h	4500	2000
Volume-to-Capacity Ratio (v/c)	0.48	0.22

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.275
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	51.4
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	55.0
Flow in Lanes 1 and 2 (v12), pc/h	1726	Ramp Junction Speed (S), mi/h	51.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	2157	Average Density (D), pc/mi/ln	21.0
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	15.9

HCS7 Basic Freeway Report

Project Information

Segment Number	7	Segment Name	WB Gandy Blvd btwn Merge On-ramp east of 4th St and Martin Luther King Jr On-ramp
Time Period Number	1	Segment Analysis Time Period	04:45-05:00

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	4420	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Total Ramp Density (TRD), ramps/mi	0.43
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2000	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1078
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2234
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2234
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

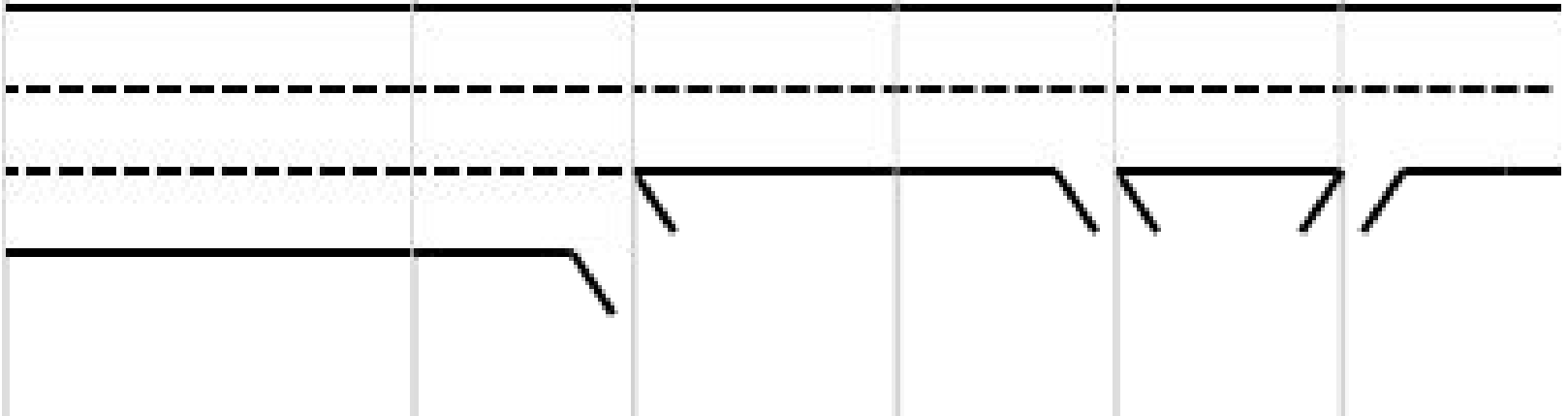
Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	20.2
Total Ramp Density Adjustment	1.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	53.4		

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Type	Diverge	Basic	Merge	Basic	Merge	Basic	Merge	Basic
Length, ft	1250	1500	1500	6150	1500	2150	1500	18660
Segment ID	1	2	3	4	5	6	7	8
Lanes	2	2	2	2	3	3	3	3



Type	Basic	Diverge	Basic	Diverge	Basic	Merge
Length, ft	20210	1500	5900	1500	2130	1500
Segment ID	1	2	3	4	5	6
Lanes	3	3	2	2	2	2



HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build Seg 1 - From east end of Gandy Blvd bridge to EB Selmon Expy on-ramp	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	3.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.2		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	971
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1984
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1984
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	49.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	947	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.26
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build Seg 1 - From east end of Gandy Blvd bridge to EB Selmon Expy on-ramp	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1800	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	970
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	947	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.26
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build Seg 1 - From east end of Gandy Blvd bridge to EB on-ramp to Selmon Expwy	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	3.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.2		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3100	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1114
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1984
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1984
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	49.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1088	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.33
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Build Seg 1 - From east end of Gandy Blvd bridge to EB on-ramp to Selmon Expwy	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1600	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	863
Total Trucks, %	2.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	842	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.20
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Seg 2 - From EB Selmon Expy on-ramp to Westshore Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	6.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1700	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	916
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	19.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.6		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	895	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.23
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	AM
Project Description	Gandy Blvd PD&E - Seg 2 - From EB Selmon Expy on-ramp to Westshore Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	10.9
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	46.9		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2180	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1176
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1938
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1938
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	46.9
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	25.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1147	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.36
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Seg 2 - From EB Selmon Expy on-ramp to Westshore Blvd	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	6.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1900	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1024
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	21.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.6		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1000	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.29
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	KRG	Date	11/15/2022
Agency	Jacobs	Analysis Year	2050
Jurisdiction	D7	Time Period Analyzed	PM
Project Description	Gandy Blvd PD&E - Seg 2 - From EB Selmon Expy on-ramp to Westshore Blvd	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	10.9
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	4
Median Type	Divided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	46.9		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1890	Heavy Vehicle Adjustment Factor (f_{HV})	0.976
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1019
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1938
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1938
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	46.9
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	21.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	995	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.29
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd Off-Ramp east of 4 St
Analysis Year:	2050
Time Period Analyzed:	AM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	400	veh/h
PHF =	0.95	
f_{HV} =	0.98	
v_i =	432	pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd Off-Ramp east of 4 St	2,000	432	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd Off-Ramp east of 4 St
Analysis Year:	2050
Time Period Analyzed:	PM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

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>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd Off-Ramp east of 4 St	2,000	432	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd On-Ramp west of Brighton Bay Blvd
Analysis Year:	2050
Time Period Analyzed:	AM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	800	veh/h
PHF =	0.95	
f_{HV} =	0.98	
v_i =	863	pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd On-Ramp west of Brighton Bay Blvd	2,000	863	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd On-Ramp west of Brighton Bay Blvd
Analysis Year:	2050
Time Period Analyzed:	PM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	900 veh/h
PHF =	0.95
f_{HV} =	0.98
v_i =	971 pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd On-Ramp west of Brighton Bay Blvd	2,000	971	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd On-Ramp east of San Martin Blvd
Analysis Year:	2050
Time Period Analyzed:	AM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	300 veh/h
PHF =	0.95
f_{HV} =	0.98
v_i =	324 pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
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Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd On-Ramp east of San Martin Blvd	2,000	324	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	EB Gandy Blvd On-Ramp east of San Martin Blvd
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Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
EB Gandy Blvd On-Ramp east of San Martin Blvd	2,000	324	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd Off-Ramp east of San Martin Blvd
Analysis Year:	2050
Time Period Analyzed:	AM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

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WB Gandy Blvd Off-Ramp east of San Martin Blvd	2,000	324	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd Off-Ramp east of San Martin Blvd
Analysis Year:	2050
Time Period Analyzed:	PM Peak Period

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Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd Off-Ramp west of Brighton Bay Blvd
Analysis Year:	2050
Time Period Analyzed:	AM Peak Period

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HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

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Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
WB Gandy Blvd Off-Ramp west of Brighton Bay Blvd	2,000	971	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd Off-Ramp west of Brighton Bay Blvd
Analysis Year:	2050
Time Period Analyzed:	PM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

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V_i =	800	veh/h
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>30-40	2,000	4,000
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Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
WB Gandy Blvd Off-Ramp west of Brighton Bay Blvd	2,000	863	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd On-Ramp east of 4 St
Analysis Year:	2050
Time Period Analyzed:	PM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

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V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	400	veh/h
PHF =	0.95	
f_{HV} =	0.98	
v_i =	432	pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

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>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
WB Gandy Blvd On-Ramp east of 4 St	2,000	432	UC

Ramp Capacity Check

Date:	11/8/2022
Agency:	Jacobs
Project Description:	WB Gandy Blvd On-Ramp east of 4 St
Analysis Year:	2050
Time Period Analyzed:	PM Peak Period

Demand Flow Rate

$$v_i = \frac{V_i}{PHF \times f_{HV}}$$

where

v_i = demand flow rate for movement i (pc/h),

V_i = demand volume for movement i (veh/h),

PHF = peak hour factor (decimal), and

f_{HV} = adjustment factor for heavy vehicle presence (decimal).

V_i =	400	veh/h
PHF =	0.95	
f_{HV} =	0.98	
v_i =	432	pc/h

HCM 6th Edition Exhibit 14-12: Capacity of Ramp Roadways (pc/h)

Ramp FFS, S_{FR} (mi/hr.)	Single-Lane Ramps	Two-Lane Ramps
>50	2,200	4,400
>40-50	2,100	4,200
>30-40	2,000	4,000
>20-30	1,900	3,800
>20	1,800	3,600

Check Ramp Capacity

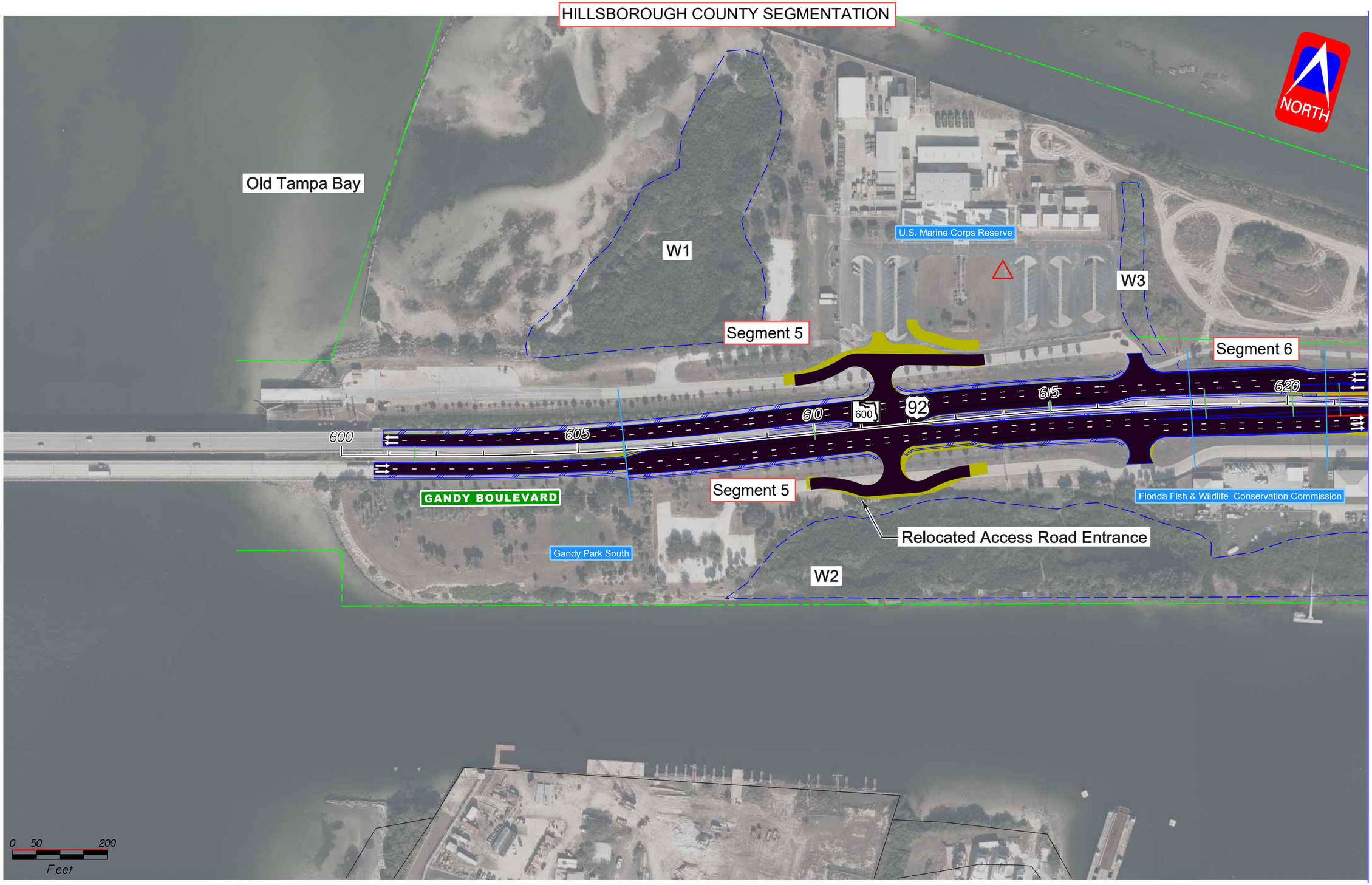
Ramp	Capacity (pc/h) HCM Exhibit 14-12	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)?
WB Gandy Blvd On-Ramp east of 4 St	2,000	432	UC

Appendix M:

Future Condition Safety Analysis Results


PINELLAS COUNTY SEGMENTATION
Segment 1
(Freeway)
Segment 1
(Arterial)
Segment 2
(Arterial)
Segment 3
(Arterial)

HILLSBOROUGH COUNTY SEGMENTATION



MATCH LINE SHEET 2

DATE OF PHOTOGRAPHY: January, 2016

LEGEND

- PROPOSED ROADWAY
- PREVIOUSLY PROPOSED R/W
- BRIDGE STRUCTURE/ RETAINING WALL
- DIRECTION OF TRAVEL
- PROPOSED SIDEWALK
- EXISTING R/W
- EXISTING PROPERTY LINE
- WETLAND/SURFACE WATERS
- POTENTIAL NOISE WALL
- BRIDGE PIER LOCATION
- POTENTIAL BRIDGE PIER LOCATION
- POTENTIAL CONTAMINATION SITE
- PREVIOUSLY PROPOSED BUSINESS RELOCATION
- PREVIOUSLY PROPOSED BUILD ALTERNATIVE
- PREFERRED BUILD ALTERNATIVE
- PREFERRED POND ALTERNATIVE

TAMPA-HILLSBOROUGH EXPRESSWAY AUTHORITY

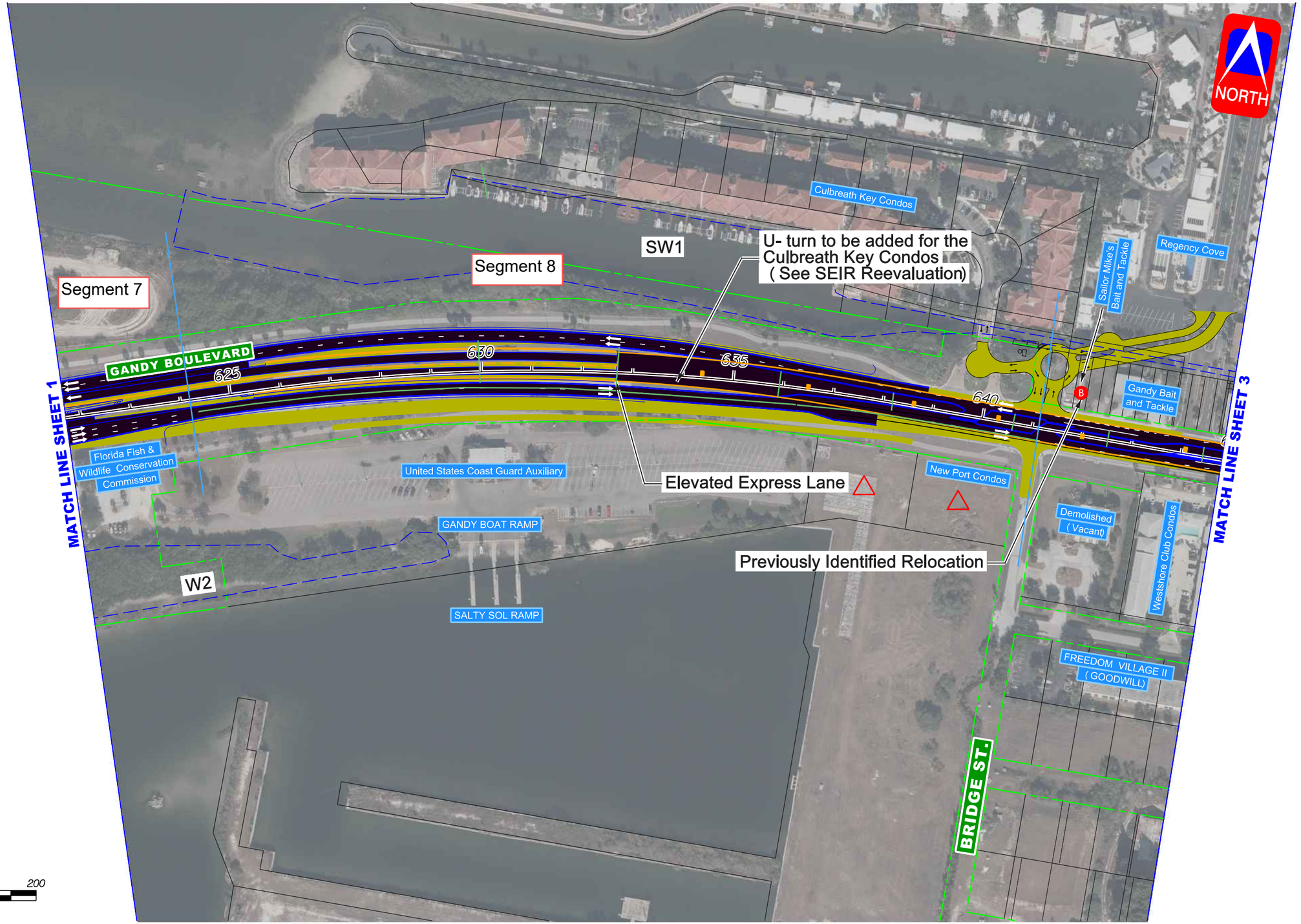
American Consulting Engineers of Florida, LLC
2818 Cypress Ridge Blvd, Suite 200
Wesley Chapel, Florida 33544
Phone: (813) 435-2600 Fax: (813) 435-2601
Certificate of Authorization No. 9302
Jeffrey S. Novotny, P.E. No. 51083

GANDY CONNECTOR PD&E STUDY

REEVALUATION BUILD ALTERNATIVE

SHEET NO. 1

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DATE OF PHOTOGRAPHY: January, 2016

LEGEND

- PROPOSED ROADWAY
- PREVIOUSLY PROPOSED R/W
- BRIDGE STRUCTURE/ RETAINING WALL
- DIRECTION OF TRAVEL
- PROPOSED SIDEWALK
- EXISTING R/W
- EXISTING PROPERTY LINE
- WETLAND/SURFACE WATERS
- POTENTIAL NOISE WALL
- BRIDGE PIER LOCATION
- POTENTIAL BRIDGE PIER LOCATION
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- PREVIOUSLY PROPOSED BUSINESS RELOCATION
- PREVIOUSLY PROPOSED BUILD ALTERNATIVE
- PREFERRED BUILD ALTERNATIVE
- PREFERRED POND ALTERNATIVE

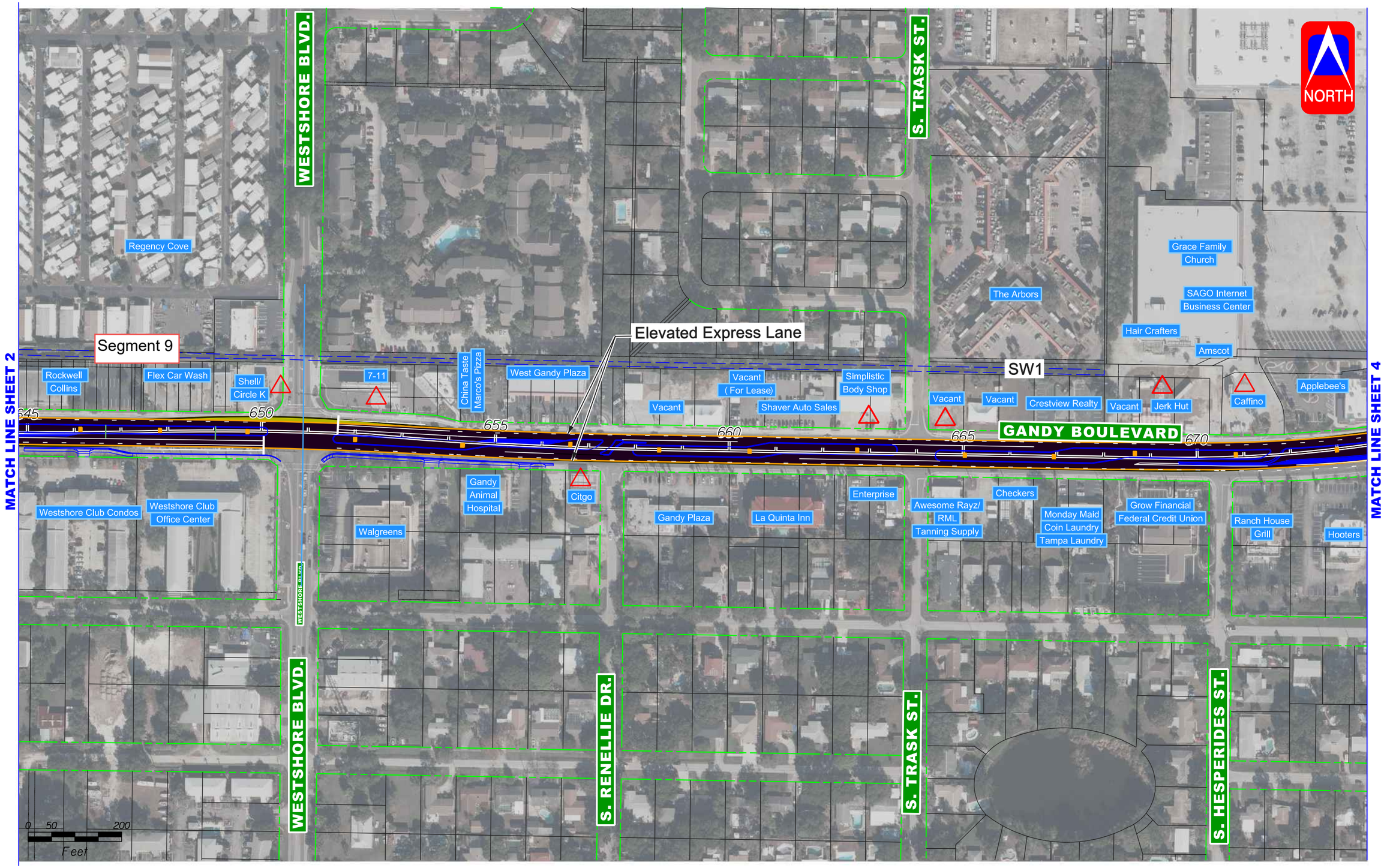
TAMPA-HILLSBOROUGH EXPRESSWAY AUTHORITY

American Consulting Engineers of Florida, LLC
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Wesley Chapel, Florida 33544
Phone: (813) 435-2600 Fax: (813) 435-2601
Certificate of Authorization No. 9302
Jeffrey S. Novotny, P.E. No. 51083

GANDY CONNECTOR PD&E STUDY
REEVALUATION BUILD ALTERNATIVE

SHEET NO. 2

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DATE OF PHOTOGRAPHY: January, 2016

LEGEND

- PROPOSED ROADWAY
- PREVIOUSLY PROPOSED R/W
- BRIDGE STRUCTURE/ RETAINING WALL
- DIRECTION OF TRAVEL
- PROPOSED SIDEWALK
- EXISTING R/W
- EXISTING PROPERTY LINE
- WETLAND/SURFACE WATERS
- POTENTIAL NOISE WALL
- BRIDGE PIER LOCATION
- POTENTIAL BRIDGE PIER LOCATION
- POTENTIAL CONTAMINATION SITE
- PREVIOUSLY PROPOSED BUSINESS RELOCATION
- PREVIOUSLY PROPOSED BUILD ALTERNATIVE
- PREFERRED BUILD ALTERNATIVE
- PREFERRED POND ALTERNATIVE

TAMPA-HILLSBOROUGH EXPRESSWAY AUTHORITY

American Consulting Engineers of Florida, LLC
2818 Cypress Ridge Blvd, Suite 200
Wesley Chapel, Florida 33544
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Certificate of Authorization No. 9302
Jeffrey S. Novotny, P.E. No. 51083

GANDY CONNECTOR PD&E STUDY

REEVALUATION BUILD ALTERNATIVE

SHEET NO. 3

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Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	From 4th St ramps to Brighton Bay Blvd
Date Performed	08/12/22	Jurisdiction	Pinellas County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.42
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	54,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	40
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	4
Minor commercial driveways (number)		--	4
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	5
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	128
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	24
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.20	0.97	0.91	1.00	1.06

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	5.076	1.000	5.076	1.06	1.00	5.389
Fatal and Injury (FI)	-12.76	1.28	1.31	1.394	$\frac{(4)_{FI}/((4)_{FI}+(4)_{PDO})}{0.261}$	1.325	1.06	1.00	1.407
Property Damage Only (PDO)	-12.81	1.38	1.34	3.946	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.739}$	3.751	1.06	1.00	3.982

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	1.407	1.000	3.982	5.389
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	1.170	0.662	2.636	3.806
Head-on collision	0.020	0.028	0.007	0.028	0.056
Angle collision	0.040	0.056	0.036	0.143	0.200
Sideswipe, same direction	0.050	0.070	0.223	0.888	0.958
Sideswipe, opposite direction	0.010	0.014	0.001	0.004	0.018
Other multiple-vehicle collision	0.048	0.068	0.071	0.283	0.350

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.453	1.000	0.453	1.06	1.00	0.481
Fatal and Injury (FI)	-8.71	0.66	0.28	0.093	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.201	0.091	1.06	1.00	0.097
Property Damage Only (PDO)	-5.04	0.45	1.06	0.368	$(5)_{TOTAL}-(5)_{FI}$ = 0.799	0.362	1.06	1.00	0.384

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.097	1.000	0.384	0.481
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.024	0.024
Collision with fixed object	0.500	0.048	0.813	0.312	0.361
Collision with other object	0.028	0.003	0.016	0.006	0.009
Other single-vehicle collision	0.471	0.046	0.108	0.041	0.087

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}** Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7		from Table 12-7
Major commercial	4	0.033	1.106	0.550	
Minor commercial	4	0.011	1.106	0.183	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	5	0.018	1.106	0.375	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	1.108	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}** $(5)_{TOTAL}$ from Worksheet 1G	**Proportion of total crashes (f_{dwy})** from Table 12-7	**Adjusted N_{brdwy}** $(2)_{TOTAL} * (3)$	**Combined CMFs** (6) from Worksheet 1B	**Calibration factor, C_r**	**Predicted N_{brdwy}** (4)*(5)*(6)
Total	1.108	1.000	1.108	1.06	1.00	1.176
Fatal and injury (FI)	--	0.284	0.315	1.06	1.00	0.334
Property damage only (PDO)	--	0.716	0.793	1.06	1.00	0.842

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{pedr}** from Table 12-8	**Predicted N_{pedr}** (5)*(6)
Total	5.389	0.481	1.176	7.046	0.019	0.134
Fatal and injury (FI)	--	--	--	--	--	0.134

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{biker}** from Table 12-9	**Predicted N_{biker}** (5)*(6)
Total	5.389	0.481	1.176	7.046	0.005	0.035
Fatal and injury (FI)	--	--	--	--	--	0.035

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	1.170	2.636	3.806
Head-on collisions (from Worksheet 1D)	0.028	0.028	0.056
Angle collisions (from Worksheet 1D)	0.056	0.143	0.200
Sideswipe, same direction (from Worksheet 1D)	0.070	0.888	0.958
Sideswipe, opposite direction (from Worksheet 1D)	0.014	0.004	0.018
Driveway-related collisions (from Worksheet 1H)	0.334	0.842	1.176
Other multiple-vehicle collision (from Worksheet 1D)	0.068	0.283	0.350
Subtotal	1.741	4.824	6.565
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.024	0.024
Collision with fixed object (from Worksheet 1F)	0.048	0.312	0.361
Collision with other object (from Worksheet 1F)	0.003	0.006	0.009
Other single-vehicle collision (from Worksheet 1F)	0.046	0.041	0.087
Collision with pedestrian (from Worksheet 1I)	0.134	0.000	0.134
Collision with bicycle (from Worksheet 1J)	0.035	0.000	0.035
Subtotal	0.266	0.384	0.650
Total	2.006	5.209	7.215

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	7.2	0.42	17.2
Fatal and injury (FI)	2.0	0.42	4.8
Property damage only (PDO)	5.2	0.42	12.4

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	From Brighton Bay Blvd to San Martin Blvd
Date Performed	08/12/22	Jurisdiction	Pinellas County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.33
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	48,000
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	
Median width (ft) - for divided only		15	40
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	4
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	1
Major residential driveways (number)		--	3
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	138
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	17
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.28	0.97	0.91	1.00	1.13

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	3.356	1.000	3.356	1.13	1.00	3.793
Fatal and Injury (FI)	-12.76	1.28	1.31	0.931	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.263	0.884	1.13	1.00	0.999
Property Damage Only (PDO)	-12.81	1.38	1.34	2.602	$(5)_{TOTAL}-(5)_{FI}$ = 0.737	2.472	1.13	1.00	2.794

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.999	1.000	2.794	3.793
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.832	0.662	1.849	2.681
Head-on collision	0.020	0.020	0.007	0.020	0.040
Angle collision	0.040	0.040	0.036	0.101	0.141
Sideswipe, same direction	0.050	0.050	0.223	0.623	0.673
Sideswipe, opposite direction	0.010	0.010	0.001	0.003	0.013
Other multiple-vehicle collision	0.048	0.048	0.071	0.198	0.246

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.335	1.000	0.335	1.13	1.00	0.379
Fatal and Injury (FI)	-8.71	0.66	0.28	0.067	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.197	0.066	1.13	1.00	0.075
Property Damage Only (PDO)	-5.04	0.45	1.06	0.273	$(5)_{TOTAL}-(5)_{FI}$ = 0.803	0.269	1.13	1.00	0.304

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.075	1.000	0.304	0.379
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.019	0.019
Collision with fixed object	0.500	0.037	0.813	0.248	0.285
Collision with other object	0.028	0.002	0.016	0.005	0.007
Other single-vehicle collision	0.471	0.035	0.108	0.033	0.068

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}** Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7		from Table 12-7
Major commercial	4	0.033	1.106	0.478	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	1	0.005	1.106	0.018	--
Major residential	3	0.018	1.106	0.195	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.691	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}** $(5)_{TOTAL}$ from Worksheet 1G	**Proportion of total crashes (f_{dwy})** from Table 12-7	**Adjusted N_{brdwy}** $(2)_{TOTAL} * (3)$	**Combined CMFs** (6) from Worksheet 1B	**Calibration factor, C_r**	**Predicted N_{brdwy}** (4)*(5)*(6)
Total	0.691	1.000	0.691	1.13	1.00	0.781
Fatal and injury (FI)	--	0.284	0.196	1.13	1.00	0.222
Property damage only (PDO)	--	0.716	0.495	1.13	1.00	0.560

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{pedr}** from Table 12-8	**Predicted N_{pedr}** (5)*(6)
Total	3.793	0.379	0.781	4.954	0.019	0.094
Fatal and injury (FI)	--	--	--	--	--	0.094

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{biker}** from Table 12-9	**Predicted N_{biker}** (5)*(6)
Total	3.793	0.379	0.781	4.954	0.005	0.025
Fatal and injury (FI)	--	--	--	--	--	0.025

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.832	1.849	2.681
Head-on collisions (from Worksheet 1D)	0.020	0.020	0.040
Angle collisions (from Worksheet 1D)	0.040	0.101	0.141
Sideswipe, same direction (from Worksheet 1D)	0.050	0.623	0.673
Sideswipe, opposite direction (from Worksheet 1D)	0.010	0.003	0.013
Driveway-related collisions (from Worksheet 1H)	0.222	0.560	0.781
Other multiple-vehicle collision (from Worksheet 1D)	0.048	0.198	0.246
Subtotal	1.221	3.353	4.575
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.019	0.019
Collision with fixed object (from Worksheet 1F)	0.037	0.248	0.285
Collision with other object (from Worksheet 1F)	0.002	0.005	0.007
Other single-vehicle collision (from Worksheet 1F)	0.035	0.033	0.068
Collision with pedestrian (from Worksheet 1I)	0.094	0.000	0.094
Collision with bicycle (from Worksheet 1J)	0.025	0.000	0.025
Subtotal	0.193	0.304	0.498
Total	1.415	3.658	5.073

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	5.1	0.33	15.4
Fatal and injury (FI)	1.4	0.33	4.3
Property damage only (PDO)	3.7	0.33	11.1

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	From San Martin Blvd to west end of Gandy Blvd bridge
Date Performed	08/12/22	Jurisdiction	Pinellas County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	2.42
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	42,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	50
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	9
Major industrial / institutional driveways (number)		--	4
Minor industrial / institutional driveways (number)		--	1
Major residential driveways (number)		--	4
Minor residential driveways (number)		--	0
Other driveways (number)		--	6
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	57
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	27
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.06	0.96	0.91	1.00	0.93

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	20.856	1.000	20.856	0.93	1.00	19.408
Fatal and Injury (FI)	-12.76	1.28	1.31	5.842	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.266	5.545	0.93	1.00	5.160
Property Damage Only (PDO)	-12.81	1.38	1.34	16.132	$(5)_{TOTAL}-(5)_{FI}$ = 0.734	15.311	0.93	1.00	14.249

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	5.160	1.000	14.249	19.408
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	4.293	0.662	9.433	13.726
Head-on collision	0.020	0.103	0.007	0.100	0.203
Angle collision	0.040	0.206	0.036	0.513	0.719
Sideswipe, same direction	0.050	0.258	0.223	3.177	3.435
Sideswipe, opposite direction	0.010	0.052	0.001	0.014	0.066
Other multiple-vehicle collision	0.048	0.248	0.071	1.012	1.259

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	2.323	1.000	2.323	0.93	1.00	2.161
Fatal and Injury (FI)	-8.71	0.66	0.28	0.453	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.193	0.448	0.93	1.00	0.417
Property Damage Only (PDO)	-5.04	0.45	1.06	1.896	$(5)_{TOTAL}-(5)_{FI}$ = 0.807	1.875	0.93	1.00	1.745

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.417	1.000	1.745	2.161
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.110	0.110
Collision with fixed object	0.500	0.208	0.813	1.418	1.627
Collision with other object	0.028	0.012	0.016	0.028	0.040
Other single-vehicle collision	0.471	0.196	0.108	0.188	0.385

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}** Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7		from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	9	0.011	1.106	0.313	
Major industrial/institutional	4	0.036	1.106	0.456	
Minor industrial/institutional	1	0.005	1.106	0.016	--
Major residential	4	0.018	1.106	0.228	
Minor residential	0	0.003	1.106	0.000	
Other	6	0.005	1.106	0.095	
Total	--	--	--	1.107	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}** $(5)_{TOTAL}$ from Worksheet 1G	**Proportion of total crashes (f_{dwy})** from Table 12-7	**Adjusted N_{brdwy}** $(2)_{TOTAL} * (3)$	**Combined CMFs** (6) from Worksheet 1B	**Calibration factor, C_r**	**Predicted N_{brdwy}** (4)*(5)*(6)
Total	1.107	1.000	1.107	0.93	1.00	1.031
Fatal and injury (FI)	--	0.284	0.315	0.93	1.00	0.293
Property damage only (PDO)	--	0.716	0.793	0.93	1.00	0.738

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{pedr}** from Table 12-8	**Predicted N_{pedr}** (5)*(6)
Total	19.408	2.161	1.031	22.600	0.019	0.429
Fatal and injury (FI)	--	--	--	--	--	0.429

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{biker}** from Table 12-9	**Predicted N_{biker}** (5)*(6)
Total	19.408	2.161	1.031	22.600	0.005	0.113
Fatal and injury (FI)	--	--	--	--	--	0.113

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	4.293	9.433	13.726
Head-on collisions (from Worksheet 1D)	0.103	0.100	0.203
Angle collisions (from Worksheet 1D)	0.206	0.513	0.719
Sideswipe, same direction (from Worksheet 1D)	0.258	3.177	3.435
Sideswipe, opposite direction (from Worksheet 1D)	0.052	0.014	0.066
Driveway-related collisions (from Worksheet 1H)	0.293	0.738	1.031
Other multiple-vehicle collision (from Worksheet 1D)	0.248	1.012	1.259
Subtotal	5.453	14.986	20.439
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.110	0.110
Collision with fixed object (from Worksheet 1F)	0.208	1.418	1.627
Collision with other object (from Worksheet 1F)	0.012	0.028	0.040
Other single-vehicle collision (from Worksheet 1F)	0.196	0.188	0.385
Collision with pedestrian (from Worksheet 1I)	0.429	0.000	0.429
Collision with bicycle (from Worksheet 1J)	0.113	0.000	0.113
Subtotal	0.959	1.745	2.704
Total	6.412	16.731	23.143

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	23.1	2.42	9.6
Fatal and injury (FI)	6.4	2.42	2.6
Property damage only (PDO)	16.7	2.42	6.9

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	West end of Gandy Blvd bridge to west of US Marine Corps
Date Performed	08/12/22	Jurisdiction	Pinellas/Hillsborough County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	2.68
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	41,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	30
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	0
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	0
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	30
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.00	0.98	0.91	1.00	0.90

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	22.361	1.000	22.361	0.90	1.00	20.026
Fatal and Injury (FI)	-12.76	1.28	1.31	6.275	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.266	5.955	0.90	1.00	5.334
Property Damage Only (PDO)	-12.81	1.38	1.34	17.287	$(5)_{TOTAL}-(5)_{FI}$ = 0.734	16.406	0.90	1.00	14.693

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	5.334	1.000	14.693	20.026
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	4.438	0.662	9.727	14.164
Head-on collision	0.020	0.107	0.007	0.103	0.210
Angle collision	0.040	0.213	0.036	0.529	0.742
Sideswipe, same direction	0.050	0.267	0.223	3.277	3.543
Sideswipe, opposite direction	0.010	0.053	0.001	0.015	0.068
Other multiple-vehicle collision	0.048	0.256	0.071	1.043	1.299

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	2.543	1.000	2.543	0.90	1.00	2.278
Fatal and Injury (FI)	-8.71	0.66	0.28	0.494	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.192	0.488	0.90	1.00	0.437
Property Damage Only (PDO)	-5.04	0.45	1.06	2.077	$(5)_{TOTAL}-(5)_{FI}$ = 0.808	2.055	0.90	1.00	1.841

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.437	1.000	1.841	2.278
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.116	0.116
Collision with fixed object	0.500	0.219	0.813	1.496	1.715
Collision with other object	0.028	0.012	0.016	0.029	0.042
Other single-vehicle collision	0.471	0.206	0.108	0.199	0.405

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	0	0.018	1.106	0.000	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.000	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.000	1.000	0.000	0.90	1.00	0.000
Fatal and injury (FI)	--	0.284	0.000	0.90	1.00	0.000
Property damage only (PDO)	--	0.716	0.000	0.90	1.00	0.000

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8	(5)*(6)
Total	20.026	2.278	0.000	22.304	0.019	0.424
Fatal and injury (FI)	--	--	--	--	--	0.424

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9	(5)*(6)
Total	20.026	2.278	0.000	22.304	0.005	0.112
Fatal and injury (FI)	--	--	--	--	--	0.112

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	4.438	9.727	14.164
Head-on collisions (from Worksheet 1D)	0.107	0.103	0.210
Angle collisions (from Worksheet 1D)	0.213	0.529	0.742
Sideswipe, same direction (from Worksheet 1D)	0.267	3.277	3.543
Sideswipe, opposite direction (from Worksheet 1D)	0.053	0.015	0.068
Driveway-related collisions (from Worksheet 1H)	0.000	0.000	0.000
Other multiple-vehicle collision (from Worksheet 1D)	0.256	1.043	1.299
Subtotal	5.334	14.693	20.026
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.116	0.116
Collision with fixed object (from Worksheet 1F)	0.219	1.496	1.715
Collision with other object (from Worksheet 1F)	0.012	0.029	0.042
Other single-vehicle collision (from Worksheet 1F)	0.206	0.199	0.405
Collision with pedestrian (from Worksheet 1I)	0.424	0.000	0.424
Collision with bicycle (from Worksheet 1J)	0.112	0.000	0.112
Subtotal	0.973	1.841	2.813
Total	6.306	16.533	22.840

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	22.8	2.68	8.5
Fatal and injury (FI)	6.3	2.68	2.4
Property damage only (PDO)	16.5	2.68	6.2

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	Approx 1500 ft west of Bridge St to Bridge St
Date Performed	08/12/22	Jurisdiction	Hillsborough County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.32
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	29,000
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	60
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	2
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	101
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	28
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.13	0.95	0.91	1.00	0.98

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	1.640	1.000	1.640	0.98	1.00	1.611
Fatal and Injury (FI)	-12.76	1.28	1.31	0.474	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.273	0.448	0.98	1.00	0.440
Property Damage Only (PDO)	-12.81	1.38	1.34	1.259	$(5)_{TOTAL}-(5)_{FI}$ = 0.727	1.192	0.98	1.00	1.171

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.440	1.000	1.171	1.611
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.366	0.662	0.775	1.141
Head-on collision	0.020	0.009	0.007	0.008	0.017
Angle collision	0.040	0.018	0.036	0.042	0.060
Sideswipe, same direction	0.050	0.022	0.223	0.261	0.283
Sideswipe, opposite direction	0.010	0.004	0.001	0.001	0.006
Other multiple-vehicle collision	0.048	0.021	0.071	0.083	0.104

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.257	1.000	0.257	0.98	1.00	0.252
Fatal and Injury (FI)	-8.71	0.66	0.28	0.047	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ / 0.181	0.046	0.98	1.00	0.046
Property Damage Only (PDO)	-5.04	0.45	1.06	0.211	$(5)_{TOTAL}-(5)_{FI}$ / 0.819	0.210	0.98	1.00	0.207

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.046	1.000	0.207	0.252
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.013	0.013
Collision with fixed object	0.500	0.023	0.813	0.168	0.191
Collision with other object	0.028	0.001	0.016	0.003	0.005
Other single-vehicle collision	0.471	0.021	0.108	0.022	0.044

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	2	0.018	1.106	0.075	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.075	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.075	1.000	0.075	0.98	1.00	0.073
Fatal and injury (FI)	--	0.284	0.021	0.98	1.00	0.021
Property damage only (PDO)	--	0.716	0.053	0.98	1.00	0.053

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8	(5)*(6)
Total	1.611	0.252	0.073	1.937	0.019	0.037
Fatal and injury (FI)	--	--	--	--	--	0.037

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9	(5)*(6)
Total	1.611	0.252	0.073	1.937	0.005	0.010
Fatal and injury (FI)	--	--	--	--	--	0.010

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.366	0.775	1.141
Head-on collisions (from Worksheet 1D)	0.009	0.008	0.017
Angle collisions (from Worksheet 1D)	0.018	0.042	0.060
Sideswipe, same direction (from Worksheet 1D)	0.022	0.261	0.283
Sideswipe, opposite direction (from Worksheet 1D)	0.004	0.001	0.006
Driveway-related collisions (from Worksheet 1H)	0.021	0.053	0.073
Other multiple-vehicle collision (from Worksheet 1D)	0.021	0.083	0.104
Subtotal	0.461	1.223	1.684
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.013	0.013
Collision with fixed object (from Worksheet 1F)	0.023	0.168	0.191
Collision with other object (from Worksheet 1F)	0.001	0.003	0.005
Other single-vehicle collision (from Worksheet 1F)	0.021	0.022	0.044
Collision with pedestrian (from Worksheet 1I)	0.037	0.000	0.037
Collision with bicycle (from Worksheet 1J)	0.010	0.000	0.010
Subtotal	0.092	0.207	0.299
Total	0.553	1.430	1.983

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	2.0	0.32	6.2
Fatal and injury (FI)	0.6	0.32	1.7
Property damage only (PDO)	1.4	0.32	4.5

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	Bridge St to West Shore Blvd
Date Performed	08/12/22	Jurisdiction	Hillsborough County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.18
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	29,000
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	30
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	1
Minor commercial driveways (number)		--	6
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	2
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	114
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	13
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.27	0.98	0.91	1.00	1.13

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	0.922	1.000	0.922	1.13	1.00	1.047
Fatal and Injury (FI)	-12.76	1.28	1.31	0.266	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.273	0.252	1.13	1.00	0.286
Property Damage Only (PDO)	-12.81	1.38	1.34	0.708	$(5)_{TOTAL}-(5)_{FI}$ = 0.727	0.670	1.13	1.00	0.761

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.286	1.000	0.761	1.047
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.238	0.662	0.503	0.742
Head-on collision	0.020	0.006	0.007	0.005	0.011
Angle collision	0.040	0.011	0.036	0.027	0.039
Sideswipe, same direction	0.050	0.014	0.223	0.170	0.184
Sideswipe, opposite direction	0.010	0.003	0.001	0.001	0.004
Other multiple-vehicle collision	0.048	0.014	0.071	0.054	0.068

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.144	1.000	0.144	1.13	1.00	0.164
Fatal and Injury (FI)	-8.71	0.66	0.28	0.026	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.181	0.026	1.13	1.00	0.030
Property Damage Only (PDO)	-5.04	0.45	1.06	0.119	$(5)_{TOTAL}-(5)_{FI}$ = 0.819	0.118	1.13	1.00	0.134

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.030	1.000	0.134	0.164
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.008	0.008
Collision with fixed object	0.500	0.015	0.813	0.109	0.124
Collision with other object	0.028	0.001	0.016	0.002	0.003
Other single-vehicle collision	0.471	0.014	0.108	0.014	0.028

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	1	0.033	1.106	0.068	
Minor commercial	6	0.011	1.106	0.137	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	2	0.018	1.106	0.075	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.280	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.280	1.000	0.280	1.13	1.00	0.318
Fatal and injury (FI)	--	0.284	0.079	1.13	1.00	0.090
Property damage only (PDO)	--	0.716	0.200	1.13	1.00	0.227

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8	(5)*(6)
Total	1.047	0.164	0.318	1.528	0.019	0.029
Fatal and injury (FI)	--	--	--	--	--	0.029

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9	(5)*(6)
Total	1.047	0.164	0.318	1.528	0.005	0.008
Fatal and injury (FI)	--	--	--	--	--	0.008

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.238	0.503	0.742
Head-on collisions (from Worksheet 1D)	0.006	0.005	0.011
Angle collisions (from Worksheet 1D)	0.011	0.027	0.039
Sideswipe, same direction (from Worksheet 1D)	0.014	0.170	0.184
Sideswipe, opposite direction (from Worksheet 1D)	0.003	0.001	0.004
Driveway-related collisions (from Worksheet 1H)	0.090	0.227	0.318
Other multiple-vehicle collision (from Worksheet 1D)	0.014	0.054	0.068
Subtotal	0.376	0.988	1.364
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.008	0.008
Collision with fixed object (from Worksheet 1F)	0.015	0.109	0.124
Collision with other object (from Worksheet 1F)	0.001	0.002	0.003
Other single-vehicle collision (from Worksheet 1F)	0.014	0.014	0.028
Collision with pedestrian (from Worksheet 1I)	0.029	0.000	0.029
Collision with bicycle (from Worksheet 1J)	0.008	0.000	0.008
Subtotal	0.066	0.134	0.200
Total	0.443	1.122	1.565

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	1.6	0.18	8.7
Fatal and injury (FI)	0.4	0.18	2.5
Property damage only (PDO)	1.1	0.18	6.2

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Intersection	Brighton Bay Blvd
Date Performed	08/12/22	Jurisdiction	Pinellas County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	54,500
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	6,200
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	0
Number of major-road approaches with right-turn lanes (0,1,2)		0	0
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	4
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	4
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	4
Type of left-turn signal phasing for Leg #1		Permissive	Protected
Type of left-turn signal phasing for Leg #2		--	Protected
Type of left-turn signal phasing for Leg #3		--	Protected
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Protected
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	8
Number of bus stops within 300 m (1,000 ft) of the intersection		0	3
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	3

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.66	0.78	0.85	1.00	0.91	1.00	0.40

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	14.699	1.000	14.699	0.40	1.00	5.859
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	5.208	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.366	5.379	0.40	1.00	2.144
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	9.023	$(5)_{TOTAL}-(5)_{FI}$ 0.634	9.320	0.40	1.00	3.715

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	2.144	1.000	3.715	5.859
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.965	0.483	1.794	2.759
Head-on collision	0.049	0.105	0.030	0.111	0.217
Angle collision	0.347	0.744	0.244	0.906	1.650
Sideswipe	0.099	0.212	0.032	0.119	0.331
Other multiple-vehicle collision	0.055	0.118	0.211	0.784	0.902

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.646	1.000	0.646	0.40	1.00	0.258
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.132	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.201	0.130	0.40	1.00	0.052
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.522	$(5)_{TOTAL}-(5)_{FI}$ 0.799	0.516	0.40	1.00	0.206

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.052	1.000	0.206	0.258
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.001
Collision with fixed object	0.744	0.039	0.870	0.179	0.218
Collision with other object	0.072	0.004	0.070	0.014	0.018
Other single-vehicle collision	0.040	0.002	0.023	0.005	0.007
Single-vehicle noncollision	0.141	0.007	0.034	0.007	0.014

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	--	--	--	--	--
Fatal and injury (FI)	--	--	--	--	--

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.00	1.12	4.65

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	#NUM!	4.65	1.00	#NUM!
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	#NUM!

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	5.859	0.258	6.117	0.015	0.092
Fatal and injury (FI)	--	--	--	--	0.092

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.965	1.794	2.759
Head-on collisions (from Worksheet 2D)	0.105	0.111	0.217
Angle collisions (from Worksheet 2D)	0.744	0.906	1.650
Sideswipe (from Worksheet 2D)	0.212	0.119	0.331
Other multiple-vehicle collision (from Worksheet 2D)	0.118	0.784	0.902
Subtotal	2.144	3.715	5.859
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.001
Collision with fixed object (from Worksheet 2F)	0.039	0.179	0.218
Collision with other object (from Worksheet 2F)	0.004	0.014	0.018
Other single-vehicle collision (from Worksheet 2F)	0.002	0.005	0.007
Single-vehicle noncollision (from Worksheet 2F)	0.007	0.007	0.014
Collision with pedestrian (from Worksheet 2G or 2I)	#NUM!	0.000	#NUM!
Collision with bicycle (from Worksheet 2J)	0.092	0.000	0.092
Subtotal	#NUM!	0.206	#NUM!
Total	#NUM!	3.921	#NUM!

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	#NUM!
Fatal and injury (FI)	#NUM!
Property damage only (PDO)	3.9

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Intersection	San Martin Blvd
Date Performed	08/12/22	Jurisdiction	Pinellas County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 45,700 (veh/day)	--	42,500
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 9,300 (veh/day)	--	4,500
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	2
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.45	1.00	0.86	1.00	0.91	1.00	0.35

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	6.810	1.000	6.810	0.35	1.00	2.405
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	2.401	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.305	2.078	0.35	1.00	0.734
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	5.467	$(5)_{TOTAL}-(5)_{FI}$ = 0.695	4.732	0.35	1.00	1.671

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.734	1.000	1.671	2.405
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.309	0.440	0.735	1.044
Head-on collision	0.045	0.033	0.023	0.038	0.071
Angle collision	0.343	0.252	0.262	0.438	0.690
Sideswipe	0.126	0.092	0.040	0.067	0.159
Other multiple-vehicle collision	0.065	0.048	0.235	0.393	0.440

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.443	1.000	0.443	0.35	1.00	0.156
Fatal and Injury (FI)	--	--	--	--	0.137	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.286	0.126	0.35	1.00	0.045
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.343	$(5)_{TOTAL}-(5)_{FI}$ = 0.714	0.316	0.35	1.00	0.112

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type$_{(FI)}$	(3) Predicted N $_{bisv\ (FI)}$ (crashes/year)	(4) Proportion of Collision Type $_{(PDO)}$	(5) Predicted N $_{bisv\ (PDO)}$ (crashes/year)	(6) Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.045	1.000	0.112	0.156
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.000	0.000
Collision with animal	0.003	0.000	0.018	0.002	0.002
Collision with fixed object	0.762	0.034	0.834	0.093	0.127
Collision with other object	0.090	0.004	0.092	0.010	0.014
Other single-vehicle collision	0.039	0.002	0.023	0.003	0.004
Single-vehicle noncollision	0.105	0.005	0.030	0.003	0.008

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1) Crash Severity Level	(2) Predicted N_{bimv}	(3) Predicted N_{bisv}	(4) Predicted N_{bi}	(5) f_{pedi}	(7)* Predicted N_{pedi}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	2.405	0.156	2.562	0.021	0.054
Fatal and injury (FI)	--	--	--	--	0.054

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1) CMF for Bus Stops	(2) CMF for Schools	(3) CMF for Alcohol Sales Establishments	(4) Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1) Crash Severity Level	(2) SPF Coefficients					(3) Overdispersion Parameter, k	(4) $N_{pedbase}$	(5) Combined CMF	(6) Calibration factor, C_i	(7) Predicted N_{pedi}
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	2.405	0.156	2.562	0.016	0.041
Fatal and injury (FI)	--	--	--	--	0.041

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.309	0.735	1.044
Head-on collisions (from Worksheet 2D)	0.033	0.038	0.071
Angle collisions (from Worksheet 2D)	0.252	0.438	0.690
Sideswipe (from Worksheet 2D)	0.092	0.067	0.159
Other multiple-vehicle collision (from Worksheet 2D)	0.048	0.393	0.440
Subtotal	0.734	1.671	2.405
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.034	0.093	0.127
Collision with other object (from Worksheet 2F)	0.004	0.010	0.014
Other single-vehicle collision (from Worksheet 2F)	0.002	0.003	0.004
Single-vehicle noncollision (from Worksheet 2F)	0.005	0.003	0.008
Collision with pedestrian (from Worksheet 2G or 2I)	0.054	0.000	0.054
Collision with bicycle (from Worksheet 2J)	0.041	0.000	0.041
Subtotal	0.139	0.112	0.251
Total	0.873	1.783	2.656

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.7
Fatal and injury (FI)	0.9
Property damage only (PDO)	1.8

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Intersection	Bridge St
Date Performed	08/12/22	Jurisdiction	Hillsborough County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 45,700 (veh/day)	--	29,000
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 9,300 (veh/day)	--	4,500
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	
Number of major-road approaches with left-turn lanes (0,1,2)		0	2
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.45	1.00	0.86	1.00	0.91	1.00	0.35

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	4.456	1.000	4.456	0.35	1.00	1.573
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	1.541	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.308	1.374	0.35	1.00	0.485
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	3.456	$(5)_{TOTAL}-(5)_{FI}$ = 0.692	3.081	0.35	1.00	1.088

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.485	1.000	1.088	1.573
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.204	0.440	0.479	0.683
Head-on collision	0.045	0.022	0.023	0.025	0.047
Angle collision	0.343	0.166	0.262	0.285	0.452
Sideswipe	0.126	0.061	0.040	0.044	0.105
Other multiple-vehicle collision	0.065	0.032	0.235	0.256	0.287

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.416	1.000	0.416	0.35	1.00	0.147
Fatal and Injury (FI)	--	--	--	--	0.129	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.293	0.122	0.35	1.00	0.043
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.312	$(5)_{TOTAL}-(5)_{FI}$ = 0.707	0.295	0.35	1.00	0.104

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.043	1.000	0.104	0.147
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.000	0.000
Collision with animal	0.003	0.000	0.018	0.002	0.002
Collision with fixed object	0.762	0.033	0.834	0.087	0.120
Collision with other object	0.090	0.004	0.092	0.010	0.013
Other single-vehicle collision	0.039	0.002	0.023	0.002	0.004
Single-vehicle noncollision	0.105	0.005	0.030	0.003	0.008

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	1.573	0.147	1.720	0.021	0.036
Fatal and injury (FI)	--	--	--	--	0.036

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	1.573	0.147	1.720	0.016	0.028
Fatal and injury (FI)	--	--	--	--	0.028

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.204	0.479	0.683
Head-on collisions (from Worksheet 2D)	0.022	0.025	0.047
Angle collisions (from Worksheet 2D)	0.166	0.285	0.452
Sideswipe (from Worksheet 2D)	0.061	0.044	0.105
Other multiple-vehicle collision (from Worksheet 2D)	0.032	0.256	0.287
Subtotal	0.485	1.088	1.573
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.033	0.087	0.120
Collision with other object (from Worksheet 2F)	0.004	0.010	0.013
Other single-vehicle collision (from Worksheet 2F)	0.002	0.002	0.004
Single-vehicle noncollision (from Worksheet 2F)	0.005	0.003	0.008
Collision with pedestrian (from Worksheet 2G or 2I)	0.036	0.000	0.036
Collision with bicycle (from Worksheet 2J)	0.028	0.000	0.028
Subtotal	0.107	0.104	0.211
Total	0.592	1.192	1.784

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	1.8
Fatal and injury (FI)	0.6
Property damage only (PDO)	1.2

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Intersection	West Shore Blvd
Date Performed	08/12/22	Jurisdiction	Hillsborough County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	33,500
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	19,000
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	
Number of major-road approaches with left-turn lanes (0,1,2)		0	0
Number of major-road approaches with right-turn lanes (0,1,2)		0	0
Data for signalized intersections only:		--	
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	4
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	4
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	4
Type of left-turn signal phasing for Leg #1		Permissive	Protected / Permissive
Type of left-turn signal phasing for Leg #2		--	Protected / Permissive
Type of left-turn signal phasing for Leg #3		--	Protected
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Protected
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			0
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	6
Number of bus stops within 300 m (1,000 ft) of the intersection		0	4
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	3

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.66	0.87	0.85	1.00	0.91	1.00	0.44

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	11.298	1.000	11.298	0.44	1.00	4.995
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	3.752	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.343	3.875	0.44	1.00	1.713
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	7.187	$(5)_{TOTAL}-(5)_{FI}$ = 0.657	7.423	0.44	1.00	3.282

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	1.713	1.000	3.282	4.995
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.771	0.483	1.585	2.356
Head-on collision	0.049	0.084	0.030	0.098	0.182
Angle collision	0.347	0.595	0.244	0.801	1.395
Sideswipe	0.099	0.170	0.032	0.105	0.275
Other multiple-vehicle collision	0.055	0.094	0.211	0.692	0.787

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.628	1.000	0.628	0.44	1.00	0.278
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.148	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.238	0.150	0.44	1.00	0.066
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.472	$(5)_{TOTAL}-(5)_{FI}$ = 0.762	0.479	0.44	1.00	0.212

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.066	1.000	0.212	0.278
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.001
Collision with fixed object	0.744	0.049	0.870	0.184	0.233
Collision with other object	0.072	0.005	0.070	0.015	0.020
Other single-vehicle collision	0.040	0.003	0.023	0.005	0.008
Single-vehicle noncollision	0.141	0.009	0.034	0.007	0.017

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	--	--	--	--	--
Fatal and injury (FI)	--	--	--	--	--

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.00	1.12	4.65

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	#NUM!	4.65	1.00	#NUM!
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	#NUM!

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	4.995	0.278	5.273	0.015	0.079
Fatal and injury (FI)	--	--	--	--	0.079

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.771	1.585	2.356
Head-on collisions (from Worksheet 2D)	0.084	0.098	0.182
Angle collisions (from Worksheet 2D)	0.595	0.801	1.395
Sideswipe (from Worksheet 2D)	0.170	0.105	0.275
Other multiple-vehicle collision (from Worksheet 2D)	0.094	0.692	0.787
Subtotal	1.713	3.282	4.995
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.001
Collision with fixed object (from Worksheet 2F)	0.049	0.184	0.233
Collision with other object (from Worksheet 2F)	0.005	0.015	0.020
Other single-vehicle collision (from Worksheet 2F)	0.003	0.005	0.008
Single-vehicle noncollision (from Worksheet 2F)	0.009	0.007	0.017
Collision with pedestrian (from Worksheet 2G or 2I)	#NUM!	0.000	#NUM!
Collision with bicycle (from Worksheet 2J)	0.079	0.000	0.079
Subtotal	#NUM!	0.212	#NUM!
Total	#NUM!	3.493	#NUM!

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	#NUM!
Fatal and injury (FI)	#NUM!
Property damage only (PDO)	3.5

Worksheet 3A -- Predicted Crashes by Severity and Site Type and Observed Crashes Using the Site-Specific EB Method for Urban and Suburban Arterials

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Collision type / Site type	**Predicted average crash frequency (crashes/year)**			**Observed crashes, $N_{observed}$** (crashes/year)	**Overdispersion Parameter, k**	**Weighted adjustment, w**	**Expected average crash frequency,**
	$N_{predicted}$ (TOTAL)	$N_{predicted}$ (FI)	$N_{predicted}$ (PDO)			Equation A-5 from Part C Appendix	Equation A-4 from Part C Appendix
ROADWAY SEGMENTS							
Multiple-vehicle nondriveway							
Segment_1	5.389	1.407	3.982	0.000	1.320	0.123	0.664
Segment_2	3.793	0.999	2.794	0.000	1.320	0.166	0.631
Segment_3	19.408	5.160	14.249	0.000	1.320	0.038	0.729
Segment_4	20.026	5.334	14.693	0.000	1.320	0.036	0.730
Segment_8	1.611	0.440	1.171	0.000	1.320	0.320	0.515
Segment_9	1.047	0.286	0.761	0.000	1.320	0.420	0.439
Segment_10	0.000	0.000	0.000	0.000	0.000	1.000	0.000
Single-vehicle							
Segment_1	0.481	0.097	0.384	0.000	0.860	0.707	0.340
Segment_2	0.379	0.075	0.304	0.000	0.860	0.754	0.286
Segment_3	2.161	0.417	1.745	0.000	0.860	0.350	0.756
Segment_4	2.278	0.437	1.841	0.000	0.860	0.338	0.770
Segment_8	0.252	0.046	0.207	0.000	0.860	0.822	0.207
Segment_9	0.164	0.030	0.134	0.000	0.860	0.877	0.144
Segment_10	0.000	0.000	0.000	0.000	0.000	1.000	0.000
Multiple-vehicle driveway-related							
Segment_1	1.176	0.334	0.842	0.000	1.390	0.380	0.446
Segment_2	0.781	0.222	0.560	0.000	1.390	0.479	0.375
Segment_3	1.031	0.293	0.738	0.000	1.390	0.411	0.424
Segment_4	0.000	0.000	0.000	0.000	1.390	1.000	0.000
Segment_8	0.073	0.021	0.053	0.000	1.390	0.908	0.067
Segment_9	0.318	0.090	0.227	0.000	1.390	0.694	0.220
Segment_10	0.000	0.000	0.000	0.000	0.000	1.000	0.000
Segment Totals:	60.369	15.686	44.683	0.000			7.744
INTERSECTIONS							
Multiple-vehicle							
Intersection_1	5.859	2.144	3.715	0.000	0.390	0.304	1.784
Intersection_2	2.405	0.734	1.671	0.000	0.800	0.342	0.823
Intersection_3	1.573	0.485	1.088	0.000	0.800	0.443	0.697
Intersection_4	4.995	1.713	3.282	0.000	0.390	0.339	1.694
Single-vehicle							
Intersection_1	0.258	0.052	0.206	0.000	0.360	0.915	0.236
Intersection_2	0.156	0.045	0.112	0.000	1.140	0.849	0.133
Intersection_3	0.147	0.043	0.104	0.000	1.140	0.856	0.126
Intersection_4	0.278	0.066	0.212	0.000	0.360	0.909	0.253
Intersection Totals:	15.672	5.282	10.389	0.000			5.744
COMBINED (sum of column)	76.041	20.969	55.072	0.000	--	--	13.488

Worksheet 3B -- Predicted Pedestrian and Bicycle Crashes for Urban and Suburban Arterials

(1) Site Type	(2) N_{ped}	(3) N_{bike}
ROADWAY SEGMENTS		
Segment_1	0.134	0.035
Segment_2	0.094	0.025
Segment_3	0.429	0.113
Segment_4	0.424	0.112
Segment_8	0.037	0.010
Segment_9	0.029	0.008
Segment_10	0.000	0.000
INTERSECTIONS		
Intersection_1	0.000	0.092
Intersection_2	0.054	0.041
Intersection_3	0.036	0.028
Intersection_4	0.000	0.079
COMBINED (sum of column)	1.237	0.541

Worksheet 3C -- Site-Specific EB Method Summary Results for Urban and Suburban Arterials

(1)	(2)	(3)	(4)	(5)	(6)
Crash severity level	**$N_{predicted}$**	**N_{ped}**	**N_{bike}**	$N_{expected\ (VEHICLE)}$	$N_{expected}$
Total	$(2)_{COMB}$ from Worksheet 3A	$(2)_{COMB}$ from Worksheet 3B	$(3)_{COMB}$ from Worksheet 3B	$(8)_{COMB}$ Worksheet 3A	(3)+(4)+(5)
	76.041	1.237	0.541	13.488	15.266
Fatal and injury (FI)	$(3)_{COMB}$ from Worksheet 3A	$(2)_{COMB}$ from Worksheet 3B	$(3)_{COMB}$ from Worksheet 3B	$(5)_{TOTAL} * (2)_{FI} / (2)_{TOTAL}$	(3)+(4)+(5)
	20.969	1.237	0.541	3.719	5.497
Property damage only (PDO)	$(4)_{COMB}$ from Worksheet 3A	--	--	$(5)_{TOTAL} * (2)_{PDO} / (2)_{TOTAL}$	(3)+(4)+(5)
	55.072	0.000	0.000	9.768	9.768

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	From 4th St ramps to Brighton Bay Blvd
Date Performed	08/12/22	Jurisdiction	Pinellas County
		Analysis Year	2050

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.42
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	66,000
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	40
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	4
Minor commercial driveways (number)		--	4
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	5
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	128
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	24
Calibration Factor, Cr		1.00	1.00

** Since the Segment AADT exceeds the maximum AADT for the applicable SPF, the maximum allowable AADT was used.*

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.20	0.97	0.91	1.00	1.06

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	6.586	1.000	6.586	1.06	1.00	6.991
Fatal and Injury (FI)	-12.76	1.28	1.31	1.781	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.257	1.695	1.06	1.00	1.799
Property Damage Only (PDO)	-12.81	1.38	1.34	5.139	$(5)_{TOTAL}-(5)_{FI}$ = 0.743	4.891	1.06	1.00	5.192

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	1.799	1.000	5.192	6.991
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	1.497	0.662	3.437	4.934
Head-on collision	0.020	0.036	0.007	0.036	0.072
Angle collision	0.040	0.072	0.036	0.187	0.259
Sideswipe, same direction	0.050	0.090	0.223	1.158	1.248
Sideswipe, opposite direction	0.010	0.018	0.001	0.005	0.023
Other multiple-vehicle collision	0.048	0.086	0.071	0.369	0.455

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.496	1.000	0.496	1.06	1.00	0.526
Fatal and Injury (FI)	-8.71	0.66	0.28	0.105	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.208	0.103	1.06	1.00	0.109
Property Damage Only (PDO)	-5.04	0.45	1.06	0.401	$(5)_{TOTAL}-(5)_{FI}$ = 0.792	0.393	1.06	1.00	0.417

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.109	1.000	0.417	0.526
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.026	0.026
Collision with fixed object	0.500	0.055	0.813	0.339	0.394
Collision with other object	0.028	0.003	0.016	0.007	0.010
Other single-vehicle collision	0.471	0.051	0.108	0.045	0.096

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}** Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7		from Table 12-7
Major commercial	4	0.033	1.106	0.680	
Minor commercial	4	0.011	1.106	0.227	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	5	0.018	1.106	0.463	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	1.369	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}** $(5)_{TOTAL}$ from Worksheet 1G	**Proportion of total crashes (f_{dwy})** from Table 12-7	**Adjusted N_{brdwy}** $(2)_{TOTAL} * (3)$	**Combined CMFs** (6) from Worksheet 1B	**Calibration factor, C_r**	**Predicted N_{brdwy}** (4)*(5)*(6)
Total	1.369	1.000	1.369	1.06	1.00	1.454
Fatal and injury (FI)	--	0.284	0.389	1.06	1.00	0.413
Property damage only (PDO)	--	0.716	0.981	1.06	1.00	1.041

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{pedr}** from Table 12-8	**Predicted N_{pedr}** (5)*(6)
Total	6.991	0.526	1.454	8.971	0.019	0.170
Fatal and injury (FI)	--	--	--	--	--	0.170

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{biker}** from Table 12-9	**Predicted N_{biker}** (5)*(6)
Total	6.991	0.526	1.454	8.971	0.005	0.045
Fatal and injury (FI)	--	--	--	--	--	0.045

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	1.497	3.437	4.934
Head-on collisions (from Worksheet 1D)	0.036	0.036	0.072
Angle collisions (from Worksheet 1D)	0.072	0.187	0.259
Sideswipe, same direction (from Worksheet 1D)	0.090	1.158	1.248
Sideswipe, opposite direction (from Worksheet 1D)	0.018	0.005	0.023
Driveway-related collisions (from Worksheet 1H)	0.413	1.041	1.454
Other multiple-vehicle collision (from Worksheet 1D)	0.086	0.369	0.455
Subtotal	2.212	6.233	8.445
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.026	0.026
Collision with fixed object (from Worksheet 1F)	0.055	0.339	0.394
Collision with other object (from Worksheet 1F)	0.003	0.007	0.010
Other single-vehicle collision (from Worksheet 1F)	0.051	0.045	0.096
Collision with pedestrian (from Worksheet 1I)	0.170	0.000	0.170
Collision with bicycle (from Worksheet 1J)	0.045	0.000	0.045
Subtotal	0.325	0.417	0.742
Total	2.537	6.650	9.187

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	9.2	0.42	21.9
Fatal and injury (FI)	2.5	0.42	6.0
Property damage only (PDO)	6.6	0.42	15.8

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	From Brighton Bay Blvd to San Martin Blvd
Date Performed	08/12/22	Jurisdiction	Pinellas County
		Analysis Year	2050

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.33
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	61,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	
Median width (ft) - for divided only		15	40
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	4
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	1
Major residential driveways (number)		--	3
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	138
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	17
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.28	0.97	0.91	1.00	1.13

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	4.701	1.000	4.701	1.13	1.00	5.314
Fatal and Injury (FI)	-12.76	1.28	1.31	1.278	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.259	1.216	1.13	1.00	1.375
Property Damage Only (PDO)	-12.81	1.38	1.34	3.663	$(5)_{TOTAL}-(5)_{FI}$ = 0.741	3.485	1.13	1.00	3.939

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	1.375	1.000	3.939	5.314
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	1.144	0.662	2.608	3.751
Head-on collision	0.020	0.027	0.007	0.028	0.055
Angle collision	0.040	0.055	0.036	0.142	0.197
Sideswipe, same direction	0.050	0.069	0.223	0.878	0.947
Sideswipe, opposite direction	0.010	0.014	0.001	0.004	0.018
Other multiple-vehicle collision	0.048	0.066	0.071	0.280	0.346

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.377	1.000	0.377	1.13	1.00	0.426
Fatal and Injury (FI)	-8.71	0.66	0.28	0.079	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ / 0.205	0.077	1.13	1.00	0.087
Property Damage Only (PDO)	-5.04	0.45	1.06	0.305	$(5)_{TOTAL}-(5)_{FI}$ / 0.795	0.299	1.13	1.00	0.339

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.087	1.000	0.339	0.426
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.021	0.021
Collision with fixed object	0.500	0.044	0.813	0.275	0.319
Collision with other object	0.028	0.002	0.016	0.005	0.008
Other single-vehicle collision	0.471	0.041	0.108	0.037	0.078

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	4	0.033	1.106	0.629	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	1	0.005	1.106	0.024	--
Major residential	3	0.018	1.106	0.257	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.909	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.909	1.000	0.909	1.13	1.00	1.028
Fatal and injury (FI)	--	0.284	0.258	1.13	1.00	0.292
Property damage only (PDO)	--	0.716	0.651	1.13	1.00	0.736

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8	(5)*(6)
Total	5.314	0.426	1.028	6.767	0.019	0.129
Fatal and injury (FI)	--	--	--	--	--	0.129

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9	(5)*(6)
Total	5.314	0.426	1.028	6.767	0.005	0.034
Fatal and injury (FI)	--	--	--	--	--	0.034

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	1.144	2.608	3.751
Head-on collisions (from Worksheet 1D)	0.027	0.028	0.055
Angle collisions (from Worksheet 1D)	0.055	0.142	0.197
Sideswipe, same direction (from Worksheet 1D)	0.069	0.878	0.947
Sideswipe, opposite direction (from Worksheet 1D)	0.014	0.004	0.018
Driveway-related collisions (from Worksheet 1H)	0.292	0.736	1.028
Other multiple-vehicle collision (from Worksheet 1D)	0.066	0.280	0.346
Subtotal	1.667	4.675	6.342
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.021	0.021
Collision with fixed object (from Worksheet 1F)	0.044	0.275	0.319
Collision with other object (from Worksheet 1F)	0.002	0.005	0.008
Other single-vehicle collision (from Worksheet 1F)	0.041	0.037	0.078
Collision with pedestrian (from Worksheet 1I)	0.129	0.000	0.129
Collision with bicycle (from Worksheet 1J)	0.034	0.000	0.034
Subtotal	0.250	0.339	0.588
Total	1.916	5.013	6.930

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	6.9	0.33	21.0
Fatal and injury (FI)	1.9	0.33	5.8
Property damage only (PDO)	5.0	0.33	15.2

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	From San Martin Blvd to west end of Gandy Blvd bridge
Date Performed	08/12/22	Jurisdiction	Pinellas County
		Analysis Year	2050

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	2.42
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	54,000
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	50
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	9
Major industrial / institutional driveways (number)		--	4
Minor industrial / institutional driveways (number)		--	1
Major residential driveways (number)		--	4
Minor residential driveways (number)		--	0
Other driveways (number)		--	6
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	57
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	27
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.06	0.96	0.91	1.00	0.93

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	28.885	1.000	28.885	0.93	1.00	26.881
Fatal and Injury (FI)	-12.76	1.28	1.31	7.937	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.261	7.545	0.93	1.00	7.022
Property Damage Only (PDO)	-12.81	1.38	1.34	22.449	$(5)_{TOTAL}-(5)_{FI}$ = 0.739	21.340	0.93	1.00	19.859

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	7.022	1.000	19.859	26.881
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	5.842	0.662	13.147	18.989
Head-on collision	0.020	0.140	0.007	0.139	0.279
Angle collision	0.040	0.281	0.036	0.715	0.996
Sideswipe, same direction	0.050	0.351	0.223	4.429	4.780
Sideswipe, opposite direction	0.010	0.070	0.001	0.020	0.090
Other multiple-vehicle collision	0.048	0.337	0.071	1.410	1.747

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	2.599	1.000	2.599	0.93	1.00	2.419
Fatal and Injury (FI)	-8.71	0.66	0.28	0.530	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.201	0.522	0.93	1.00	0.486
Property Damage Only (PDO)	-5.04	0.45	1.06	2.111	$(5)_{TOTAL}-(5)_{FI}$ = 0.799	2.078	0.93	1.00	1.933

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.486	1.000	1.933	2.419
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.122	0.122
Collision with fixed object	0.500	0.243	0.813	1.572	1.815
Collision with other object	0.028	0.014	0.016	0.031	0.045
Other single-vehicle collision	0.471	0.229	0.108	0.209	0.437

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}** Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7		from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	9	0.011	1.106	0.408	
Major industrial/institutional	4	0.036	1.106	0.594	
Minor industrial/institutional	1	0.005	1.106	0.021	--
Major residential	4	0.018	1.106	0.297	
Minor residential	0	0.003	1.106	0.000	
Other	6	0.005	1.106	0.124	
Total	--	--	--	1.443	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}** $(5)_{TOTAL}$ from Worksheet 1G	**Proportion of total crashes (f_{dwy})** from Table 12-7	**Adjusted N_{brdwy}** $(2)_{TOTAL} * (3)$	**Combined CMFs** (6) from Worksheet 1B	**Calibration factor, C_r**	**Predicted N_{brdwy}** (4)*(5)*(6)
Total	1.443	1.000	1.443	0.93	1.00	1.343
Fatal and injury (FI)	--	0.284	0.410	0.93	1.00	0.381
Property damage only (PDO)	--	0.716	1.033	0.93	1.00	0.962

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{pedr}** from Table 12-8	**Predicted N_{pedr}** (5)*(6)
Total	26.881	2.419	1.343	30.643	0.019	0.582
Fatal and injury (FI)	--	--	--	--	--	0.582

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{biker}** from Table 12-9	**Predicted N_{biker}** (5)*(6)
Total	26.881	2.419	1.343	30.643	0.005	0.153
Fatal and injury (FI)	--	--	--	--	--	0.153

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	5.842	13.147	18.989
Head-on collisions (from Worksheet 1D)	0.140	0.139	0.279
Angle collisions (from Worksheet 1D)	0.281	0.715	0.996
Sideswipe, same direction (from Worksheet 1D)	0.351	4.429	4.780
Sideswipe, opposite direction (from Worksheet 1D)	0.070	0.020	0.090
Driveway-related collisions (from Worksheet 1H)	0.381	0.962	1.343
Other multiple-vehicle collision (from Worksheet 1D)	0.337	1.410	1.747
Subtotal	7.403	20.821	28.224
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.122	0.122
Collision with fixed object (from Worksheet 1F)	0.243	1.572	1.815
Collision with other object (from Worksheet 1F)	0.014	0.031	0.045
Other single-vehicle collision (from Worksheet 1F)	0.229	0.209	0.437
Collision with pedestrian (from Worksheet 1I)	0.582	0.000	0.582
Collision with bicycle (from Worksheet 1J)	0.153	0.000	0.153
Subtotal	1.221	1.933	3.154
Total	8.624	22.754	31.378

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	31.4	2.42	13.0
Fatal and injury (FI)	8.6	2.42	3.6
Property damage only (PDO)	22.8	2.42	9.4

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	West end of Gandy Blvd bridge to west of US Marine Corps
Date Performed	08/12/22	Jurisdiction	Pinellas/Hillsborough County
		Analysis Year	2050

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	2.68
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	57,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	30
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	0
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	0
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	30
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.00	0.98	0.91	1.00	0.90

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	34.841	1.000	34.841	0.90	1.00	31.204
Fatal and Injury (FI)	-12.76	1.28	1.31	9.526	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.260	9.059	0.90	1.00	8.113
Property Damage Only (PDO)	-12.81	1.38	1.34	27.112	$(5)_{TOTAL}-(5)_{FI}$ = 0.740	25.782	0.90	1.00	23.091

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	8.113	1.000	23.091	31.204
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	6.750	0.662	15.286	22.036
Head-on collision	0.020	0.162	0.007	0.162	0.324
Angle collision	0.040	0.325	0.036	0.831	1.156
Sideswipe, same direction	0.050	0.406	0.223	5.149	5.555
Sideswipe, opposite direction	0.010	0.081	0.001	0.023	0.104
Other multiple-vehicle collision	0.048	0.389	0.071	1.639	2.029

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	2.965	1.000	2.965	0.90	1.00	2.655
Fatal and Injury (FI)	-8.71	0.66	0.28	0.612	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.203	0.601	0.90	1.00	0.539
Property Damage Only (PDO)	-5.04	0.45	1.06	2.405	$(5)_{TOTAL}-(5)_{FI}$ = 0.797	2.363	0.90	1.00	2.117

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.539	1.000	2.117	2.655
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.001	0.063	0.133	0.134
Collision with fixed object	0.500	0.269	0.813	1.721	1.990
Collision with other object	0.028	0.015	0.016	0.034	0.049
Other single-vehicle collision	0.471	0.254	0.108	0.229	0.482

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}** Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7		from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	0	0.018	1.106	0.000	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.000	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}** $(5)_{TOTAL}$ from Worksheet 1G	**Proportion of total crashes (f_{dwy})** from Table 12-7	**Adjusted N_{brdwy}** $(2)_{TOTAL} * (3)$	**Combined CMFs** (6) from Worksheet 1B	**Calibration factor, C_r**	**Predicted N_{brdwy}** (4)*(5)*(6)
Total	0.000	1.000	0.000	0.90	1.00	0.000
Fatal and injury (FI)	--	0.284	0.000	0.90	1.00	0.000
Property damage only (PDO)	--	0.716	0.000	0.90	1.00	0.000

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{pedr}** from Table 12-8	**Predicted N_{pedr}** (5)*(6)
Total	31.204	2.655	0.000	33.859	0.019	0.643
Fatal and injury (FI)	--	--	--	--	--	0.643

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{biker}** from Table 12-9	**Predicted N_{biker}** (5)*(6)
Total	31.204	2.655	0.000	33.859	0.005	0.169
Fatal and injury (FI)	--	--	--	--	--	0.169

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	6.750	15.286	22.036
Head-on collisions (from Worksheet 1D)	0.162	0.162	0.324
Angle collisions (from Worksheet 1D)	0.325	0.831	1.156
Sideswipe, same direction (from Worksheet 1D)	0.406	5.149	5.555
Sideswipe, opposite direction (from Worksheet 1D)	0.081	0.023	0.104
Driveway-related collisions (from Worksheet 1H)	0.000	0.000	0.000
Other multiple-vehicle collision (from Worksheet 1D)	0.389	1.639	2.029
Subtotal	8.113	23.091	31.204
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.001	0.133	0.134
Collision with fixed object (from Worksheet 1F)	0.269	1.721	1.990
Collision with other object (from Worksheet 1F)	0.015	0.034	0.049
Other single-vehicle collision (from Worksheet 1F)	0.254	0.229	0.482
Collision with pedestrian (from Worksheet 1I)	0.643	0.000	0.643
Collision with bicycle (from Worksheet 1J)	0.169	0.000	0.169
Subtotal	1.351	2.117	3.468
Total	9.464	25.207	34.672

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	34.7	2.68	12.9
Fatal and injury (FI)	9.5	2.68	3.5
Property damage only (PDO)	25.2	2.68	9.4

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	Approx 1500 ft west of Bridge St to Bridge St
Date Performed	08/12/22	Jurisdiction	Hillsborough County
		Analysis Year	2050

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.32
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	37,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	60
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	2
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	101
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	28
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.13	0.95	0.91	1.00	0.98

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	2.326	1.000	2.326	0.98	1.00	2.285
Fatal and Injury (FI)	-12.76	1.28	1.31	0.658	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.268	0.624	0.98	1.00	0.613
Property Damage Only (PDO)	-12.81	1.38	1.34	1.795	$(5)_{TOTAL}-(5)_{FI}$ = 0.732	1.702	0.98	1.00	1.672

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.613	1.000	1.672	2.285
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.510	0.662	1.107	1.617
Head-on collision	0.020	0.012	0.007	0.012	0.024
Angle collision	0.040	0.025	0.036	0.060	0.085
Sideswipe, same direction	0.050	0.031	0.223	0.373	0.404
Sideswipe, opposite direction	0.010	0.006	0.001	0.002	0.008
Other multiple-vehicle collision	0.048	0.029	0.071	0.119	0.148

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.290	1.000	0.290	0.98	1.00	0.284
Fatal and Injury (FI)	-8.71	0.66	0.28	0.055	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.189	0.055	0.98	1.00	0.054
Property Damage Only (PDO)	-5.04	0.45	1.06	0.237	$(5)_{TOTAL}-(5)_{FI}$ = 0.811	0.235	0.98	1.00	0.231

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.054	1.000	0.231	0.284
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.015	0.015
Collision with fixed object	0.500	0.027	0.813	0.188	0.214
Collision with other object	0.028	0.002	0.016	0.004	0.005
Other single-vehicle collision	0.471	0.025	0.108	0.025	0.050

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}** Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7		from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	2	0.018	1.106	0.099	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.099	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}** $(5)_{TOTAL}$ from Worksheet 1G	**Proportion of total crashes (f_{dwy})** from Table 12-7	**Adjusted N_{brdwy}** $(2)_{TOTAL} * (3)$	**Combined CMFs** (6) from Worksheet 1B	**Calibration factor, C_r**	**Predicted N_{brdwy}** (4)*(5)*(6)
Total	0.099	1.000	0.099	0.98	1.00	0.097
Fatal and injury (FI)	--	0.284	0.028	0.98	1.00	0.028
Property damage only (PDO)	--	0.716	0.071	0.98	1.00	0.070

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{pedr}** from Table 12-8	**Predicted N_{pedr}** (5)*(6)
Total	2.285	0.284	0.097	2.667	0.019	0.051
Fatal and injury (FI)	--	--	--	--	--	0.051

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{biker}** from Table 12-9	**Predicted N_{biker}** (5)*(6)
Total	2.285	0.284	0.097	2.667	0.005	0.013
Fatal and injury (FI)	--	--	--	--	--	0.013

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.510	1.107	1.617
Head-on collisions (from Worksheet 1D)	0.012	0.012	0.024
Angle collisions (from Worksheet 1D)	0.025	0.060	0.085
Sideswipe, same direction (from Worksheet 1D)	0.031	0.373	0.404
Sideswipe, opposite direction (from Worksheet 1D)	0.006	0.002	0.008
Driveway-related collisions (from Worksheet 1H)	0.028	0.070	0.097
Other multiple-vehicle collision (from Worksheet 1D)	0.029	0.119	0.148
Subtotal	0.641	1.742	2.383
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.015	0.015
Collision with fixed object (from Worksheet 1F)	0.027	0.188	0.214
Collision with other object (from Worksheet 1F)	0.002	0.004	0.005
Other single-vehicle collision (from Worksheet 1F)	0.025	0.025	0.050
Collision with pedestrian (from Worksheet 1I)	0.051	0.000	0.051
Collision with bicycle (from Worksheet 1J)	0.013	0.000	0.013
Subtotal	0.118	0.231	0.348
Total	0.759	1.973	2.731

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	2.7	0.32	8.5
Fatal and injury (FI)	0.8	0.32	2.4
Property damage only (PDO)	2.0	0.32	6.2

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	Bridge St to West Shore Blvd
Date Performed	08/12/22	Jurisdiction	Hillsborough County
		Analysis Year	2050

Input Data	Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)	--	4D
Length of segment, L (mi)	--	0.18
AADT (veh/day) — $AADT_{MAX}$ = 66,000 (veh/day)	--	37,500
Type of on-street parking (none/parallel/angle)	None	None
Proportion of curb length with on-street parking	--	0
Median width (ft) - for divided only	15	30
Lighting (present / not present)	Not Present	Present
Auto speed enforcement (present / not present)	Not Present	Not Present
Major commercial driveways (number)	--	1
Minor commercial driveways (number)	--	6
Major industrial / institutional driveways (number)	--	0
Minor industrial / institutional driveways (number)	--	0
Major residential driveways (number)	--	2
Minor residential driveways (number)	--	0
Other driveways (number)	--	0
Speed Category	--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)	0	114
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]	30	13
Calibration Factor, Cr	1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.27	0.98	0.91	1.00	1.13

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	1.308	1.000	1.308	1.13	1.00	1.485
Fatal and Injury (FI)	-12.76	1.28	1.31	0.370	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.268	0.351	1.13	1.00	0.398
Property Damage Only (PDO)	-12.81	1.38	1.34	1.010	$(5)_{TOTAL}-(5)_{FI}$ = 0.732	0.957	1.13	1.00	1.086

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.398	1.000	1.086	1.485
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.331	0.662	0.719	1.051
Head-on collision	0.020	0.008	0.007	0.008	0.016
Angle collision	0.040	0.016	0.036	0.039	0.055
Sideswipe, same direction	0.050	0.020	0.223	0.242	0.262
Sideswipe, opposite direction	0.010	0.004	0.001	0.001	0.005
Other multiple-vehicle collision	0.048	0.019	0.071	0.077	0.096

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.163	1.000	0.163	1.13	1.00	0.185
Fatal and Injury (FI)	-8.71	0.66	0.28	0.031	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.189	0.031	1.13	1.00	0.035
Property Damage Only (PDO)	-5.04	0.45	1.06	0.133	$(5)_{TOTAL}-(5)_{FI}$ = 0.811	0.132	1.13	1.00	0.150

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.035	1.000	0.150	0.185
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.009	0.009
Collision with fixed object	0.500	0.017	0.813	0.122	0.139
Collision with other object	0.028	0.001	0.016	0.002	0.003
Other single-vehicle collision	0.471	0.016	0.108	0.016	0.033

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}** Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7		from Table 12-7
Major commercial	1	0.033	1.106	0.091	
Minor commercial	6	0.011	1.106	0.182	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	2	0.018	1.106	0.099	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.372	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}** $(5)_{TOTAL}$ from Worksheet 1G	**Proportion of total crashes (f_{dwy})** from Table 12-7	**Adjusted N_{brdwy}** $(2)_{TOTAL} * (3)$	**Combined CMFs** (6) from Worksheet 1B	**Calibration factor, C_r**	**Predicted N_{brdwy}** (4)*(5)*(6)
Total	0.372	1.000	0.372	1.13	1.00	0.422
Fatal and injury (FI)	--	0.284	0.106	1.13	1.00	0.120
Property damage only (PDO)	--	0.716	0.266	1.13	1.00	0.302

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{pedr}** from Table 12-8	**Predicted N_{pedr}** (5)*(6)
Total	1.485	0.185	0.422	2.092	0.019	0.040
Fatal and injury (FI)	--	--	--	--	--	0.040

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{biker}** from Table 12-9	**Predicted N_{biker}** (5)*(6)
Total	1.485	0.185	0.422	2.092	0.005	0.010
Fatal and injury (FI)	--	--	--	--	--	0.010

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.331	0.719	1.051
Head-on collisions (from Worksheet 1D)	0.008	0.008	0.016
Angle collisions (from Worksheet 1D)	0.016	0.039	0.055
Sideswipe, same direction (from Worksheet 1D)	0.020	0.242	0.262
Sideswipe, opposite direction (from Worksheet 1D)	0.004	0.001	0.005
Driveway-related collisions (from Worksheet 1H)	0.120	0.302	0.422
Other multiple-vehicle collision (from Worksheet 1D)	0.019	0.077	0.096
Subtotal	0.518	1.389	1.907
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.009	0.009
Collision with fixed object (from Worksheet 1F)	0.017	0.122	0.139
Collision with other object (from Worksheet 1F)	0.001	0.002	0.003
Other single-vehicle collision (from Worksheet 1F)	0.016	0.016	0.033
Collision with pedestrian (from Worksheet 1I)	0.040	0.000	0.040
Collision with bicycle (from Worksheet 1J)	0.010	0.000	0.010
Subtotal	0.085	0.150	0.235
Total	0.603	1.538	2.142

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	2.1	0.18	11.9
Fatal and injury (FI)	0.6	0.18	3.4
Property damage only (PDO)	1.5	0.18	8.5

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Intersection	Brighton Bay Blvd
Date Performed	08/12/22	Jurisdiction	Pinellas County
		Analysis Year	2050

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	66,000
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	6,500
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	0
Number of major-road approaches with right-turn lanes (0,1,2)		0	0
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	4
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	4
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	4
Type of left-turn signal phasing for Leg #1		Permissive	Protected
Type of left-turn signal phasing for Leg #2		--	Protected
Type of left-turn signal phasing for Leg #3		--	Protected
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Protected
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	8
Number of bus stops within 300 m (1,000 ft) of the intersection		0	3
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	3

** Since the Segment AADT exceeds the maximum AADT for the applicable SPF, the maximum allowable AADT was used.*

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.66	0.78	0.85	1.00	0.91	1.00	0.40

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	18.238	1.000	18.238	0.40	1.00	7.269
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	6.596	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.373	6.800	0.40	1.00	2.710
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	11.095	$(5)_{TOTAL}-(5)_{FI}$ = 0.627	11.438	0.40	1.00	4.559

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	2.710	1.000	4.559	7.269
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	1.220	0.483	2.202	3.422
Head-on collision	0.049	0.133	0.030	0.137	0.270
Angle collision	0.347	0.941	0.244	1.112	2.053
Sideswipe	0.099	0.268	0.032	0.146	0.414
Other multiple-vehicle collision	0.055	0.149	0.211	0.962	1.111

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.746	1.000	0.746	0.40	1.00	0.297
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.145	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.191	0.143	0.40	1.00	0.057
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.613	$(5)_{TOTAL}-(5)_{FI}$ = 0.809	0.603	0.40	1.00	0.240

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.057	1.000	0.240	0.297
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.001
Collision with fixed object	0.744	0.042	0.870	0.209	0.251
Collision with other object	0.072	0.004	0.070	0.017	0.021
Other single-vehicle collision	0.040	0.002	0.023	0.006	0.008
Single-vehicle noncollision	0.141	0.008	0.034	0.008	0.016

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	--	--	--	--	--
Fatal and injury (FI)	--	--	--	--	--

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.00	1.12	4.65

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	#NUM!	4.65	1.00	#NUM!
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	#NUM!

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	7.269	0.297	7.567	0.015	0.114
Fatal and injury (FI)	--	--	--	--	0.114

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.220	2.202	3.422
Head-on collisions (from Worksheet 2D)	0.133	0.137	0.270
Angle collisions (from Worksheet 2D)	0.941	1.112	2.053
Sideswipe (from Worksheet 2D)	0.268	0.146	0.414
Other multiple-vehicle collision (from Worksheet 2D)	0.149	0.962	1.111
Subtotal	2.710	4.559	7.269
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.001
Collision with fixed object (from Worksheet 2F)	0.042	0.209	0.251
Collision with other object (from Worksheet 2F)	0.004	0.017	0.021
Other single-vehicle collision (from Worksheet 2F)	0.002	0.006	0.008
Single-vehicle noncollision (from Worksheet 2F)	0.008	0.008	0.016
Collision with pedestrian (from Worksheet 2G or 2I)	#NUM!	0.000	#NUM!
Collision with bicycle (from Worksheet 2J)	0.114	0.000	0.114
Subtotal	#NUM!	0.240	#NUM!
Total	#NUM!	4.799	#NUM!

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	#NUM!
Fatal and injury (FI)	#NUM!
Property damage only (PDO)	4.8

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections					
General Information				**Location Information**	
Analyst	KRG			Roadway	Gandy Blvd
Agency or Company	Jacobs			Intersection	San Martin Blvd
Date Performed	08/12/22			Jurisdiction	Pinellas County
				Analysis Year	2050
Input Data				**Base Conditions**	**Site Conditions**
Intersection type (3ST, 3SG, 4ST, 4SG)				--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ =	45,700	(veh/day)	--	45,700
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ =	9,300	(veh/day)	--	4,800
Intersection lighting (present/not present)				Not Present	Present
Calibration factor, C_i				1.00	1.00
Data for unsignalized intersections only:				--	--
Number of major-road approaches with left-turn lanes (0,1,2)				0	2
Number of major-road approaches with right-turn lanes (0,1,2)				0	1
Data for signalized intersections only:				--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]				0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]				0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]				--	
Type of left-turn signal phasing for Leg #1				Permissive	
Type of left-turn signal phasing for Leg #2				--	
Type of left-turn signal phasing for Leg #3				--	
Type of left-turn signal phasing for Leg #4 (if applicable)				--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]				0	
Intersection red light cameras (present/not present)				Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only					
Maximum number of lanes crossed by a pedestrian (n_{lanesx})				--	
Number of bus stops within 300 m (1,000 ft) of the intersection				0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)				Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection				0	

** Since the Segment AADT exceeds the maximum AADT for the applicable SPF, the maximum allowable AADT was used.*

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections						
(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.45	1.00	0.86	1.00	0.91	1.00	0.35

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	7.580	1.000	7.580	0.35	1.00	2.677
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	2.663	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.302	2.287	0.35	1.00	0.808
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	6.164	$(5)_{TOTAL}-(5)_{FI}$ 0.698	5.293	0.35	1.00	1.870

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.808	1.000	1.870	2.677
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.340	0.440	0.823	1.163
Head-on collision	0.045	0.036	0.023	0.043	0.079
Angle collision	0.343	0.277	0.262	0.490	0.767
Sideswipe	0.126	0.102	0.040	0.075	0.177
Other multiple-vehicle collision	0.065	0.053	0.235	0.439	0.492

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.463	1.000	0.463	0.35	1.00	0.164
Fatal and Injury (FI)	--	--	--	--	0.143	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.284	0.131	0.35	1.00	0.046
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.362	$(5)_{TOTAL}-(5)_{FI}$ 0.716	0.332	0.35	1.00	0.117

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type$_{(FI)}$	(3) Predicted N $_{bisv\ (FI)}$ (crashes/year)	(4) Proportion of Collision Type $_{(PDO)}$	(5) Predicted N $_{bisv\ (PDO)}$ (crashes/year)	(6) Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)
	from Table 12-13	(9)$_{FI}$ from Worksheet 2E	from Table 12-13	(9)$_{PDO}$ from Worksheet 2E	(9)$_{PDO}$ from Worksheet 2E
Total	1.000	0.046	1.000	0.117	0.164
		(2)*(3)$_{FI}$		(4)*(5)$_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.000	0.000
Collision with animal	0.003	0.000	0.018	0.002	0.002
Collision with fixed object	0.762	0.035	0.834	0.098	0.133
Collision with other object	0.090	0.004	0.092	0.011	0.015
Other single-vehicle collision	0.039	0.002	0.023	0.003	0.005
Single-vehicle noncollision	0.105	0.005	0.030	0.004	0.008

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1) Crash Severity Level	(2) Predicted N_{bimv}	(3) Predicted N_{bisv}	(4) Predicted N_{bi}	(5) f_{pedi}	(7)* Predicted N_{pedi}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	2.677	0.164	2.841	0.021	0.060
Fatal and injury (FI)	--	--	--	--	0.060

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1) CMF for Bus Stops	(2) CMF for Schools	(3) CMF for Alcohol Sales Establishments	(4) Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1) Crash Severity Level	(2) SPF Coefficients					(3) Overdispersion Parameter, k	(4) $N_{pedbase}$	(5) Combined CMF	(6) Calibration factor, C_i	(7) Predicted N_{pedi}
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	2.677	0.164	2.841	0.016	0.045
Fatal and injury (FI)	--	--	--	--	0.045

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.340	0.823	1.163
Head-on collisions (from Worksheet 2D)	0.036	0.043	0.079
Angle collisions (from Worksheet 2D)	0.277	0.490	0.767
Sideswipe (from Worksheet 2D)	0.102	0.075	0.177
Other multiple-vehicle collision (from Worksheet 2D)	0.053	0.439	0.492
Subtotal	0.808	1.870	2.677
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.035	0.098	0.133
Collision with other object (from Worksheet 2F)	0.004	0.011	0.015
Other single-vehicle collision (from Worksheet 2F)	0.002	0.003	0.005
Single-vehicle noncollision (from Worksheet 2F)	0.005	0.004	0.008
Collision with pedestrian (from Worksheet 2G or 2I)	0.060	0.000	0.060
Collision with bicycle (from Worksheet 2J)	0.045	0.000	0.045
Subtotal	0.152	0.117	0.269
Total	0.959	1.987	2.946

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.9
Fatal and injury (FI)	1.0
Property damage only (PDO)	2.0

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections					
General Information				**Location Information**	
Analyst	KRG			Roadway	Gandy Blvd
Agency or Company	Jacobs			Intersection	Bridge St
Date Performed	08/12/22			Jurisdiction	Hillsborough County
				Analysis Year	2050
Input Data				**Base Conditions**	**Site Conditions**
Intersection type (3ST, 3SG, 4ST, 4SG)				--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ =	45,700	(veh/day)	--	37,500
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ =	9,300	(veh/day)	--	5,500
Intersection lighting (present/not present)				Not Present	Present
Calibration factor, C_i				1.00	1.00
Data for unsignalized intersections only:				--	
Number of major-road approaches with left-turn lanes (0,1,2)				0	2
Number of major-road approaches with right-turn lanes (0,1,2)				0	1
Data for signalized intersections only:				--	
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]				0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]				0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]				--	
Type of left-turn signal phasing for Leg #1				Permissive	
Type of left-turn signal phasing for Leg #2				--	
Type of left-turn signal phasing for Leg #3				--	
Type of left-turn signal phasing for Leg #4 (if applicable)				--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]				0	
Intersection red light cameras (present/not present)				Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only					
Maximum number of lanes crossed by a pedestrian (n_{lanesx})				--	
Number of bus stops within 300 m (1,000 ft) of the intersection				0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)				Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection				0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections						
(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.45	1.00	0.86	1.00	0.91	1.00	0.35

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	6.435	1.000	6.435	0.35	1.00	2.273
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	2.206	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.297	1.914	0.35	1.00	0.676
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	5.212	$(5)_{TOTAL}-(5)_{FI}$ = 0.703	4.522	0.35	1.00	1.597

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.676	1.000	1.597	2.273
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.285	0.440	0.703	0.987
Head-on collision	0.045	0.030	0.023	0.037	0.067
Angle collision	0.343	0.232	0.262	0.418	0.650
Sideswipe	0.126	0.085	0.040	0.064	0.149
Other multiple-vehicle collision	0.065	0.044	0.235	0.375	0.419

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.481	1.000	0.481	0.35	1.00	0.170
Fatal and Injury (FI)	--	--	--	--	0.149	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.286	0.138	0.35	1.00	0.049
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.372	$(5)_{TOTAL}-(5)_{FI}$ = 0.714	0.343	0.35	1.00	0.121

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type$_{(FI)}$	(3) Predicted N $_{bisv\ (FI)}$ (crashes/year)	(4) Proportion of Collision Type $_{(PDO)}$	(5) Predicted N $_{bisv\ (PDO)}$ (crashes/year)	(6) Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.049	1.000	0.121	0.170
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.000	0.000
Collision with animal	0.003	0.000	0.018	0.002	0.002
Collision with fixed object	0.762	0.037	0.834	0.101	0.138
Collision with other object	0.090	0.004	0.092	0.011	0.016
Other single-vehicle collision	0.039	0.002	0.023	0.003	0.005
Single-vehicle noncollision	0.105	0.005	0.030	0.004	0.009

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1) Crash Severity Level	(2) Predicted N_{bimv}	(3) Predicted N_{bisv}	(4) Predicted N_{bi}	(5) f_{pedi}	(7)* Predicted N_{pedi}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	2.273	0.170	2.443	0.021	0.051
Fatal and injury (FI)	--	--	--	--	0.051

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1) CMF for Bus Stops	(2) CMF for Schools	(3) CMF for Alcohol Sales Establishments	(4) Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1) Crash Severity Level	(2) SPF Coefficients					(3) Overdispersion Parameter, k	(4) $N_{pedbase}$	(5) Combined CMF	(6) Calibration factor, C_i	(7) Predicted N_{pedi}
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	2.273	0.170	2.443	0.016	0.039
Fatal and injury (FI)	--	--	--	--	0.039

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.285	0.703	0.987
Head-on collisions (from Worksheet 2D)	0.030	0.037	0.067
Angle collisions (from Worksheet 2D)	0.232	0.418	0.650
Sideswipe (from Worksheet 2D)	0.085	0.064	0.149
Other multiple-vehicle collision (from Worksheet 2D)	0.044	0.375	0.419
Subtotal	0.676	1.597	2.273
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.037	0.101	0.138
Collision with other object (from Worksheet 2F)	0.004	0.011	0.016
Other single-vehicle collision (from Worksheet 2F)	0.002	0.003	0.005
Single-vehicle noncollision (from Worksheet 2F)	0.005	0.004	0.009
Collision with pedestrian (from Worksheet 2G or 2I)	0.051	0.000	0.051
Collision with bicycle (from Worksheet 2J)	0.039	0.000	0.039
Subtotal	0.139	0.121	0.260
Total	0.815	1.718	2.533

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.5
Fatal and injury (FI)	0.8
Property damage only (PDO)	1.7

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections					
General Information			**Location Information**		
Analyst	KRG		Roadway	Gandy Blvd	
Agency or Company	Jacobs		Intersection	Westshore Blvd	
Date Performed	08/12/22		Jurisdiction	Hillsborough County	
			Analysis Year	2050	
Input Data			**Base Conditions**	**Site Conditions**	
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG	
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ =	67,700 (veh/day)	--	44,000	
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ =	33,400 (veh/day)	--	22,500	
Intersection lighting (present/not present)			Not Present	Present	
Calibration factor, C_i			1.00	1.00	
Data for unsignalized intersections only:			--		
Number of major-road approaches with left-turn lanes (0,1,2)			0	0	
Number of major-road approaches with right-turn lanes (0,1,2)			0	0	
Data for signalized intersections only:			--		
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	4	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	4	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	4	
Type of left-turn signal phasing for Leg #1			Permissive	Protected / Permissive	
Type of left-turn signal phasing for Leg #2			--	Protected / Permissive	
Type of left-turn signal phasing for Leg #3			--	Protected	
Type of left-turn signal phasing for Leg #4 (if applicable)			--	Protected	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]			0	0	
Intersection red light cameras (present/not present)			Not Present	Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only				0	
Maximum number of lanes crossed by a pedestrian (n_{lanesx})			--	6	
Number of bus stops within 300 m (1,000 ft) of the intersection			0	4	
Schools within 300 m (1,000 ft) of the intersection (present/not present)			Not Present	Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection			0	3	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections						
(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.66	0.87	0.85	1.00	0.91	1.00	0.44

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	15.725	1.000	15.725	0.44	1.00	6.952
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	5.372	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.352	5.537	0.44	1.00	2.448
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	9.884	$(5)_{TOTAL}-(5)_{FI}$ 0.648	10.188	0.44	1.00	4.504

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	2.448	1.000	4.504	6.952
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	1.102	0.483	2.176	3.277
Head-on collision	0.049	0.120	0.030	0.135	0.255
Angle collision	0.347	0.849	0.244	1.099	1.949
Sideswipe	0.099	0.242	0.032	0.144	0.386
Other multiple-vehicle collision	0.055	0.135	0.211	0.950	1.085

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.792	1.000	0.792	0.44	1.00	0.350
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.174	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.222	0.176	0.44	1.00	0.078
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.610	$(5)_{TOTAL}-(5)_{FI}$ 0.778	0.615	0.44	1.00	0.272

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	(9)$_{FI}$ from Worksheet 2E	from Table 12-13	(9)$_{PDO}$ from Worksheet 2E	(9)$_{PDO}$ from Worksheet 2E
Total	1.000	0.078	1.000	0.272	0.350
		(2)*(3)$_{FI}$		(4)*(5)$_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.058	0.870	0.237	0.295
Collision with other object	0.072	0.006	0.070	0.019	0.025
Other single-vehicle collision	0.040	0.003	0.023	0.006	0.009
Single-vehicle noncollision	0.141	0.011	0.034	0.009	0.020

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	--	--	--	--	--
Fatal and injury (FI)	--	--	--	--	--

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.00	1.12	4.65

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	#NUM!	4.65	1.00	#NUM!
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	#NUM!

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	6.952	0.350	7.302	0.015	0.110
Fatal and injury (FI)	--	--	--	--	0.110

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.102	2.176	3.277
Head-on collisions (from Worksheet 2D)	0.120	0.135	0.255
Angle collisions (from Worksheet 2D)	0.849	1.099	1.949
Sideswipe (from Worksheet 2D)	0.242	0.144	0.386
Other multiple-vehicle collision (from Worksheet 2D)	0.135	0.950	1.085
Subtotal	2.448	4.504	6.952
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.058	0.237	0.295
Collision with other object (from Worksheet 2F)	0.006	0.019	0.025
Other single-vehicle collision (from Worksheet 2F)	0.003	0.006	0.009
Single-vehicle noncollision (from Worksheet 2F)	0.011	0.009	0.020
Collision with pedestrian (from Worksheet 2G or 2I)	#NUM!	0.000	#NUM!
Collision with bicycle (from Worksheet 2J)	0.110	0.000	0.110
Subtotal	#NUM!	0.272	#NUM!
Total	#NUM!	4.776	#NUM!

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	#NUM!
Fatal and injury (FI)	#NUM!
Property damage only (PDO)	4.8

Worksheet 3A -- Predicted Crashes by Severity and Site Type and Observed Crashes Using the Site-Specific EB Method for Urban and Suburban Arterials

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Collision type / Site type	**Predicted average crash frequency (crashes/year)**			**Observed crashes, $N_{observed}$** (crashes/year)	**Overdispersion Parameter, k**	**Weighted adjustment, w**	**Expected average crash frequency,**
	$N_{predicted}$ (TOTAL)	$N_{predicted}$ (FI)	$N_{predicted}$ (PDO)			Equation A-5 from Part C Appendix	Equation A-4 from Part C Appendix
ROADWAY SEGMENTS							
Multiple-vehicle nondriveway							
Segment_1	6.991	1.799	5.192	0.000	1.320	0.098	0.684
Segment_2	5.314	1.375	3.939	0.000	1.320	0.125	0.663
Segment_3	26.881	7.022	19.859	0.000	1.320	0.027	0.737
Segment_4	31.204	8.113	23.091	0.000	1.320	0.024	0.740
Segment_8	2.285	0.613	1.672	0.000	1.320	0.249	0.569
Segment_9	1.485	0.398	1.086	0.000	1.320	0.338	0.502
Segment_10	0.000	0.000	0.000	0.000	0.000	1.000	0.000
Single-vehicle							
Segment_1	0.526	0.109	0.417	0.000	0.860	0.688	0.362
Segment_2	0.426	0.087	0.339	0.000	0.860	0.732	0.312
Segment_3	2.419	0.486	1.933	0.000	0.860	0.325	0.785
Segment_4	2.655	0.539	2.117	0.000	0.860	0.305	0.809
Segment_8	0.284	0.054	0.231	0.000	0.860	0.803	0.229
Segment_9	0.185	0.035	0.150	0.000	0.860	0.863	0.159
Segment_10	0.000	0.000	0.000	0.000	0.000	1.000	0.000
Multiple-vehicle driveway-related							
Segment_1	1.454	0.413	1.041	0.000	1.390	0.331	0.481
Segment_2	1.028	0.292	0.736	0.000	1.390	0.412	0.423
Segment_3	1.343	0.381	0.962	0.000	1.390	0.349	0.468
Segment_4	0.000	0.000	0.000	0.000	1.390	1.000	0.000
Segment_8	0.097	0.028	0.070	0.000	1.390	0.881	0.086
Segment_9	0.422	0.120	0.302	0.000	1.390	0.630	0.266
Segment_10	0.000	0.000	0.000	0.000	0.000	1.000	0.000
Segment Totals:	84.999	21.863	63.136	0.000			8.274
INTERSECTIONS							
Multiple-vehicle							
Intersection_1	7.269	2.710	4.559	0.000	0.390	0.261	1.896
Intersection_2	2.677	0.808	1.870	0.000	0.800	0.318	0.852
Intersection_3	2.273	0.676	1.597	0.000	0.800	0.355	0.807
Intersection_4	6.952	2.448	4.504	0.000	0.390	0.269	1.873
Single-vehicle							
Intersection_1	0.297	0.057	0.240	0.000	0.360	0.903	0.269
Intersection_2	0.164	0.046	0.117	0.000	1.140	0.843	0.138
Intersection_3	0.170	0.049	0.121	0.000	1.140	0.838	0.142
Intersection_4	0.350	0.078	0.272	0.000	0.360	0.888	0.311
Intersection Totals:	20.153	6.872	13.281	0.000			6.287
COMBINED (sum of column)	105.152	28.735	76.417	0.000	--	--	14.561

Worksheet 3B -- Predicted Pedestrian and Bicycle Crashes for Urban and Suburban Arterials

(1) Site Type	(2) N_{ped}	(3) N_{bike}
ROADWAY SEGMENTS		
Segment_1	0.170	0.045
Segment_2	0.129	0.034
Segment_3	0.582	0.153
Segment_4	0.643	0.169
Segment_8	0.051	0.013
Segment_9	0.040	0.010
Segment_10	0.000	0.000
INTERSECTIONS		
Intersection_1	0.000	0.114
Intersection_2	0.060	0.045
Intersection_3	0.051	0.039
Intersection_4	0.000	0.110
COMBINED (sum of column)	1.726	0.733

Worksheet 3C -- Site-Specific EB Method Summary Results for Urban and Suburban Arterials

(1)	(2)	(3)	(4)	(5)	(6)
Crash severity level	$N_{predicted}$	N_{ped}	N_{bike}	$N_{expected\ (VEHICLE)}$	$N_{expected}$
Total	$(2)_{COMB}$ from Worksheet 3A	$(2)_{COMB}$ from Worksheet 3B	$(3)_{COMB}$ from Worksheet 3B	$(8)_{COMB}$ Worksheet 3A	(3)+(4)+(5)
	105.152	1.726	0.733	14.561	17.020
Fatal and injury (FI)	$(3)_{COMB}$ from Worksheet 3A	$(2)_{COMB}$ from Worksheet 3B	$(3)_{COMB}$ from Worksheet 3B	$(5)_{TOTAL} * (2)_{FI} / (2)_{TOTAL}$	(3)+(4)+(5)
	28.735	1.726	0.733	3.979	6.438
Property damage only (PDO)	$(4)_{COMB}$ from Worksheet 3A	--	--	$(5)_{TOTAL} * (2)_{PDO} / (2)_{TOTAL}$	(3)+(4)+(5)
	76.417	0.000	0.000	10.582	10.582

Input Worksheet for Freeway Segments		
Clear	Echo Input Values (View results in Column AV) / Check Input Values (View results in Advisory Messages)	Segment 1 Study Period
Basic Roadway Data		
Number of through lanes (n):		4
Freeway segment description:		Segment 1
Segment length (L), mi:		0.34
Alignment Data		
Horizontal Curve Data	←See note	
1	Horizontal curve in segment?:	Both Dir.
	Curve radius (R_1), ft:	2677
	Length of curve (L_{c1}), mi:	0.14
	Length of curve in segment ($L_{c1,seg}$), mi:	0.14
2	Horizontal curve in segment?:	No
	Curve radius (R_2), ft:	
	Length of curve (L_{c2}), mi:	
	Length of curve in segment ($L_{c2,seg}$), mi:	
3	Horizontal curve in segment?:	
	Curve radius (R_3), ft:	
	Length of curve (L_{c3}), mi:	
	Length of curve in segment ($L_{c3,seg}$), mi:	
Cross Section Data		
Lane width (W_l), ft:		12
Outside shoulder width (W_s), ft:		12
Inside shoulder width (W_{is}), ft:		8
Median width (W_m), ft:		49
Rumble strips on outside shoulders?:		No
	Length of rumble strips for travel in increasing milepost direction, mi:	
	Length of rumble strips for travel in decreasing milepost direction, mi:	
Rumble strips on inside shoulders?:		No
	Length of rumble strips for travel in increasing milepost direction, mi:	
	Length of rumble strips for travel in decreasing milepost direction, mi:	
Presence of barrier in median:		Offset
1	Length of barrier ($L_{ib,1}$), mi:	
	Distance from edge of traveled way to barrier face ($W_{off,in,1}$), ft:	
2	Length of barrier ($L_{ib,2}$), mi:	
	Distance from edge of traveled way to barrier face ($W_{off,in,2}$), ft:	
3	Length of barrier ($L_{ib,3}$), mi:	
	Distance from edge of traveled way to barrier face ($W_{off,in,3}$), ft:	
4	Length of barrier ($L_{ib,4}$), mi:	
	Distance from edge of traveled way to barrier face ($W_{off,in,4}$), ft:	
5	Length of barrier ($L_{ib,5}$), mi:	
	Distance from edge of traveled way to barrier face ($W_{off,in,5}$), ft:	
Median barrier width (W_{ib}), ft:		3
Nearest distance from edge of traveled way to barrier face (W_{near}), ft:		8

Roadside Data		
Clear zone width (W_{hc}), ft:		30
Presence of barrier on roadside:		Full
1	Length of barrier ($L_{ob,1}$), mi:	
	Distance from edge of traveled way to barrier face ($W_{off,o,1}$), ft:	
2	Length of barrier ($L_{ob,2}$), mi:	
	Distance from edge of traveled way to barrier face ($W_{off,o,2}$), ft:	
3	Length of barrier ($L_{ob,3}$), mi:	
	Distance from edge of traveled way to barrier face ($W_{off,o,3}$), ft:	
4	Length of barrier ($L_{ob,4}$), mi:	
	Distance from edge of traveled way to barrier face ($W_{off,o,4}$), ft:	
5	Length of barrier ($L_{ob,5}$), mi:	
	Distance from edge of traveled way to barrier face ($W_{off,o,5}$), ft:	
Distance from edge of traveled way to barrier face, increasing milepost ($W_{off,inc}$), ft:		12
Distance from edge of traveled way to barrier face, decreasing milepost ($W_{off,dec}$), ft:		12
Ramp Access Data		
Travel in Increasing Milepost Direction		
Entrance Ramp	Ramp entrance in segment? (If yes, indicate type.):	No
	Distance from begin milepost to upstream entrance ramp gore ($X_{b,ent}$), mi:	999
	Length of ramp entrance ($L_{en,inc}$), mi:	
	Length of ramp entrance in segment ($L_{en,seg,inc}$), mi:	
	Entrance side?:	
Exit Ramp	Ramp exit in segment? (If yes, indicate type.):	No
	Distance from end milepost to downstream exit ramp gore ($X_{e,ext}$), mi:	999
	Length of ramp exit ($L_{ex,inc}$), mi:	
	Length of ramp exit in segment ($L_{ex,seg,inc}$), mi:	
	Exit side?:	
Weave	Type B weave in segment?:	No
	Length of weaving section ($L_{wev,inc}$), mi:	
	Length of weaving section in segment ($L_{wev,seg,inc}$), mi:	
Travel in Decreasing Milepost Direction		
Entrance Ramp	Ramp entrance in segment? (If yes, indicate type.):	No
	Distance from end milepost to upstream entrance ramp gore ($X_{e,ent}$), mi:	999
	Length of ramp entrance ($L_{en,dec}$), mi:	
	Length of ramp entrance in segment ($L_{en,seg,dec}$), mi:	
	Entrance side?:	
Exit Ramp	Ramp exit in segment? (If yes, indicate type.):	No
	Distance from begin milepost to downstream exit ramp gore ($X_{b,ext}$), mi:	999
	Length of ramp exit ($L_{ex,dec}$), mi:	
	Length of ramp exit in segment ($L_{ex,seg,dec}$), mi:	
	Exit side?:	
Weave	Type B weave in segment?:	No
	Length of weaving section ($L_{wev,dec}$), mi:	
	Length of weaving section in segment ($L_{wev,seg,dec}$), mi:	

Traffic Data	**Year**	
Proportion of AADT during high-volume hours (P_{hv}):		
Freeway Segment Data	2030	28500
Average daily traffic ($AADT_{fs}$) by year, veh/d:	2031	
(enter data only for those years for which	2032	
it is available, leave other years blank)	2033	
	2034	
	2035	
	2036	
	2037	
	2038	
	2039	
	2040	
	2041	
	2042	
	2043	
	2044	
	2045	
	2046	
	2047	
	2048	
	2049	
	2050	36500
	2051	
	2052	
	2053	

Entrance Ramp Data for Travel in Increasing Milepost Dir.	**Year**	
Average daily traffic ($AADT_{b,ent}$) by year, veh/d:	2030	
(enter data only for those years for which	2031	
it is available, leave other years blank)	2032	
	2033	
	2034	
	2035	
	2036	
	2037	
	2038	
	2039	
	2040	
	2041	
	2042	
	2043	
	2044	
	2045	
	2046	
	2047	
	2048	
	2049	
	2050	
	2051	
	2052	
	2053	

Exit Ramp Data for Travel in Increasing Milepost Direction	**Year**	
Average daily traffic ($AADT_{e,ext}$) by year, veh/d:	2030	
(enter data only for those years for which	2031	
it is available, leave other years blank)	2032	
	2033	
	2034	
	2035	
	2036	
	2037	
	2038	
	2039	
	2040	
	2041	
	2042	
	2043	
	2044	
	2045	
	2046	
	2047	
	2048	
	2049	
	2050	
	2051	
	2052	
	2053	

Entrance Ramp Data for Travel in Decreasing Milepost Dir.	**Year**	
Average daily traffic ($AADT_{e,ent}$) by year, veh/d:	2030	
(enter data only for those years for which	2031	
it is available, leave other years blank)	2032	
	2033	
	2034	
	2035	
	2036	
	2037	
	2038	
	2039	
	2040	
	2041	
	2042	
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	2048	
	2049	
	2050	
	2051	
	2052	
	2053	

Exit Ramp Data for Travel in Decreasing Milepost Direction	**Year**	
Average daily traffic ($AADT_{b,ext}$) by year, veh/d:	2030	
(enter data only for those years for which	2031	
it is available, leave other years blank)	2032	
	2033	
	2034	
	2035	
	2036	
	2037	
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	2053	

Crash Data		**Year**		Segment C
Count of Fatal-and-Injury (FI) Crashes by Year				
	Multiple-vehicle crashes (not ramp related) ($N_{o,fs,n,mv,fi}$)	2030		
		2031		
		2032		
		2033		
		2034		
	Single-vehicle crashes (not ramp related) ($N_{o,fs,n,sv,fi}$)	2030		
		2031		
		2032		
		2033		
		2034		
	Ramp-entrance-related crashes ($N_{o,sc,EN,at,fi}$)	2030		
		2031		
		2032		
		2033		
		2034		
	Ramp-exit-related crashes ($N_{o,sc,EX,at,fi}$)	2030		
		2031		
		2032		
		2033		
		2034		

Count of Property-Damage-Only (PDO) Crashes by Year				
	Multiple-vehicle crashes (not ramp related) ($N_{o,fs,n,mv,pdo}$)	2030		
		2031		
		2032		
		2033		
		2034		
	Single-vehicle crashes (not ramp related) ($N_{o,fs,n,sv,pdo}$)	2030		
		2031		
		2032		
		2033		
		2034		
	Ramp-entrance-related crashes ($N_{o,sc,EN,at,pdo}$)	2030		
		2031		
		2032		
		2033		
		2034		
	Ramp-exit-related crashes ($N_{o,sc,EX,at,pdo}$)	2030		
		2031		
		2032		
		2033		
		2034		

Output Summary

General Information

Project description:	Gandy Blvd PD&E - No Build Elevated Gandy Blvd from 4th Street Overpass to 4th Street Ramps				
Analyst:	Jacobs	Date:	11/10/2022	Area type:	Urban
First year of analysis:	2030				
Last year of analysis:	2050				

Crash Data Description

Freeway segments	Segment crash data available?	No	First year of crash data:	
	Project-level crash data available?	No	Last year of crash data:	
Ramp segments	Segment crash data available?	No	First year of crash data:	
	Project-level crash data available?	No	Last year of crash data:	
Ramp terminals	Segment crash data available?	No	First year of crash data:	
	Project-level crash data available?	No	Last year of crash data:	

Estimated Crash Statistics

Crashes for Entire Facility	**Total**	**K**	**A**	**B**	**C**	**PDO**
Estimated number of crashes during Study Period, crashes:	54.9	0.3	0.8	5.4	10.7	37.7
Estimated average crash freq. during Study Period, crashes/yr:	2.6	0.0	0.0	0.3	0.5	1.8

Crashes by Facility Component	**Nbr. Sites**	**Total**	**K**	**A**	**B**	**C**	**PDO**
Freeway segments, crashes:	1	54.9	0.3	0.8	5.4	10.7	37.7
Ramp segments, crashes:	0	0.0	0.0	0.0	0.0	0.0	0.0
Crossroad ramp terminals, crashes:	0	0.0	0.0	0.0	0.0	0.0	0.0

Crashes for Entire Facility by Year	**Year**	**Total**	**K**	**A**	**B**	**C**	**PDO**
Estimated number of crashes during the Study Period, crashes:	2030	2.3	0.0	0.0	0.2	0.4	1.5
	2031	2.3	0.0	0.0	0.2	0.5	1.6
	2032	2.3	0.0	0.0	0.2	0.5	1.6
	2033	2.4	0.0	0.0	0.2	0.5	1.6
	2034	2.4	0.0	0.0	0.2	0.5	1.6
	2035	2.4	0.0	0.0	0.2	0.5	1.7
	2036	2.5	0.0	0.0	0.2	0.5	1.7
	2037	2.5	0.0	0.0	0.2	0.5	1.7
	2038	2.5	0.0	0.0	0.3	0.5	1.7
	2039	2.6	0.0	0.0	0.3	0.5	1.8
	2040	2.6	0.0	0.0	0.3	0.5	1.8
	2041	2.6	0.0	0.0	0.3	0.5	1.8
	2042	2.7	0.0	0.0	0.3	0.5	1.8
	2043	2.7	0.0	0.0	0.3	0.5	1.9
	2044	2.8	0.0	0.0	0.3	0.5	1.9
	2045	2.8	0.0	0.0	0.3	0.5	1.9
	2046	2.8	0.0	0.0	0.3	0.5	2.0
	2047	2.9	0.0	0.0	0.3	0.6	2.0
	2048	2.9	0.0	0.0	0.3	0.6	2.0
	2049	2.9	0.0	0.0	0.3	0.6	2.0
	2050	3.0	0.0	0.0	0.3	0.6	2.1
	2051						
	2052						
	2053						

Distribution of Crashes for Entire Facility

Crash Type	**Crash Type Category**	**Estimated Number of Crashes During the Study Period**					
		Total	**K**	**A**	**B**	**C**	**PDO**
Multiple vehicle	Head-on crashes:	0.1	0.0	0.0	0.0	0.0	0.0
	Right-angle crashes:	0.4	0.0	0.0	0.1	0.1	0.2
	Rear-end crashes:	13.0	0.1	0.2	1.6	3.2	7.9
	Sideswipe crashes:	4.3	0.0	0.1	0.4	0.8	3.1
	Other multiple-vehicle crashes:	0.5	0.0	0.0	0.1	0.1	0.3
	Total multiple-vehicle crashes:	18.3	0.1	0.3	2.1	4.2	11.5
Single vehicle	Crashes with animal:	0.6	0.0	0.0	0.0	0.0	0.6
	Crashes with fixed object:	26.3	0.1	0.3	2.4	4.7	18.8
	Crashes with other object:	4.2	0.0	0.0	0.2	0.3	3.6
	Crashes with parked vehicle:	0.6	0.0	0.0	0.0	0.1	0.4
	Other single-vehicle crashes	5.0	0.0	0.1	0.7	1.3	2.8
	Total single-vehicle crashes:	36.6	0.2	0.5	3.3	6.4	26.2
	Total crashes:	54.9	0.3	0.8	5.4	10.7	37.7

PROJECT DEVELOPMENT & ENVIRONMENT STUDY

US 92 / SR 600 / GANDY BLVD. FROM 4TH ST. TO WESTSHORE BLVD.

FDOT DISTRICT 7

PINELLAS WEST / CAUSEWAY SEGMENT PREFERRED ALTERNATIVE

FINANCIAL PROJECT ID NUMBER: WPI SEG. 441250-1



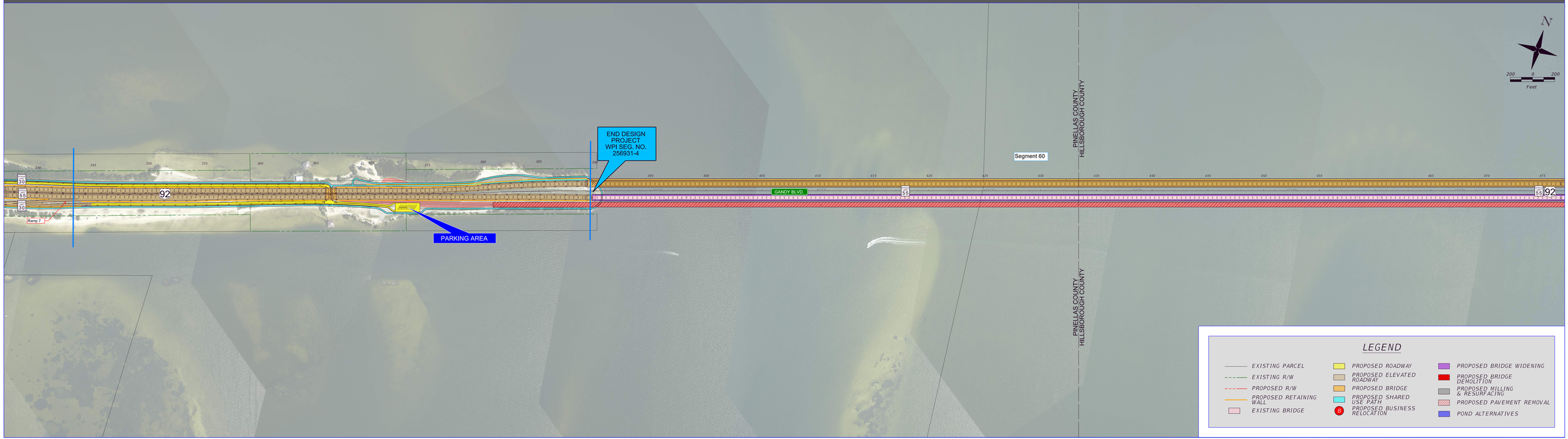
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Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	Approx. 2300 ft west of Bridge St to Bridge St
Date Performed	08/12/22	Jurisdiction	Hillsborough County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.44
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	29,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	90
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	1
Minor residential driveways (number)		--	0
Other driveways (number)		--	2
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	130
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	29
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.18	0.93	0.91	1.00	1.00

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	2.308	1.000	2.308	1.00	1.00	2.305
Fatal and Injury (FI)	-12.76	1.28	1.31	0.666	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.273	0.630	1.00	1.00	0.629
Property Damage Only (PDO)	-12.81	1.38	1.34	1.772	$(5)_{TOTAL}-(5)_{FI}$ = 0.727	1.678	1.00	1.00	1.676

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.629	1.000	1.676	2.305
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.524	0.662	1.109	1.633
Head-on collision	0.020	0.013	0.007	0.012	0.024
Angle collision	0.040	0.025	0.036	0.060	0.085
Sideswipe, same direction	0.050	0.031	0.223	0.374	0.405
Sideswipe, opposite direction	0.010	0.006	0.001	0.002	0.008
Other multiple-vehicle collision	0.048	0.030	0.071	0.119	0.149

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.356	1.000	0.356	1.00	1.00	0.355
Fatal and Injury (FI)	-8.71	0.66	0.28	0.065	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.181	0.064	1.00	1.00	0.064
Property Damage Only (PDO)	-5.04	0.45	1.06	0.292	$(5)_{TOTAL}-(5)_{FI}$ = 0.819	0.291	1.00	1.00	0.291

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.064	1.000	0.291	0.355
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.018	0.018
Collision with fixed object	0.500	0.032	0.813	0.237	0.269
Collision with other object	0.028	0.002	0.016	0.005	0.006
Other single-vehicle collision	0.471	0.030	0.108	0.031	0.062

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}** Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7		from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	1	0.018	1.106	0.038	
Minor residential	0	0.003	1.106	0.000	
Other	2	0.005	1.106	0.021	
Total	--	--	--	0.059	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}** $(5)_{TOTAL}$ from Worksheet 1G	**Proportion of total crashes (f_{dwy})** from Table 12-7	**Adjusted N_{brdwy}** $(2)_{TOTAL} * (3)$	**Combined CMFs** (6) from Worksheet 1B	**Calibration factor, C_r**	**Predicted N_{brdwy}** (4)*(5)*(6)
Total	0.059	1.000	0.059	1.00	1.00	0.059
Fatal and injury (FI)	--	0.284	0.017	1.00	1.00	0.017
Property damage only (PDO)	--	0.716	0.042	1.00	1.00	0.042

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{pedr}** from Table 12-8	**Predicted N_{pedr}** (5)*(6)
Total	2.305	0.355	0.059	2.719	0.019	0.052
Fatal and injury (FI)	--	--	--	--	--	0.052

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{biker}** from Table 12-9	**Predicted N_{biker}** (5)*(6)
Total	2.305	0.355	0.059	2.719	0.005	0.014
Fatal and injury (FI)	--	--	--	--	--	0.014

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.524	1.109	1.633
Head-on collisions (from Worksheet 1D)	0.013	0.012	0.024
Angle collisions (from Worksheet 1D)	0.025	0.060	0.085
Sideswipe, same direction (from Worksheet 1D)	0.031	0.374	0.405
Sideswipe, opposite direction (from Worksheet 1D)	0.006	0.002	0.008
Driveway-related collisions (from Worksheet 1H)	0.017	0.042	0.059
Other multiple-vehicle collision (from Worksheet 1D)	0.030	0.119	0.149
Subtotal	0.646	1.718	2.364
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.018	0.018
Collision with fixed object (from Worksheet 1F)	0.032	0.237	0.269
Collision with other object (from Worksheet 1F)	0.002	0.005	0.006
Other single-vehicle collision (from Worksheet 1F)	0.030	0.031	0.062
Collision with pedestrian (from Worksheet 1I)	0.052	0.000	0.052
Collision with bicycle (from Worksheet 1J)	0.014	0.000	0.014
Subtotal	0.130	0.291	0.421
Total	0.776	2.009	2.785

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	2.8	0.44	6.3
Fatal and injury (FI)	0.8	0.44	1.8
Property damage only (PDO)	2.0	0.44	4.6

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	Bridge St to Westshore Blvd
Date Performed	08/12/22	Jurisdiction	Hillsborough County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.18
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	29,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	30
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	1
Minor commercial driveways (number)		--	6
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	2
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	114
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	13
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.27	0.98	0.91	1.00	1.13

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	0.944	1.000	0.944	1.13	1.00	1.071
Fatal and Injury (FI)	-12.76	1.28	1.31	0.272	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.273	0.258	1.13	1.00	0.293
Property Damage Only (PDO)	-12.81	1.38	1.34	0.725	$(5)_{TOTAL}-(5)_{FI}$ = 0.727	0.686	1.13	1.00	0.779

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.293	1.000	0.779	1.071
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.243	0.662	0.516	0.759
Head-on collision	0.020	0.006	0.007	0.005	0.011
Angle collision	0.040	0.012	0.036	0.028	0.040
Sideswipe, same direction	0.050	0.015	0.223	0.174	0.188
Sideswipe, opposite direction	0.010	0.003	0.001	0.001	0.004
Other multiple-vehicle collision	0.048	0.014	0.071	0.055	0.069

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.146	1.000	0.146	1.13	1.00	0.165
Fatal and Injury (FI)	-8.71	0.66	0.28	0.026	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.181	0.026	1.13	1.00	0.030
Property Damage Only (PDO)	-5.04	0.45	1.06	0.120	$(5)_{TOTAL}-(5)_{FI}$ = 0.819	0.119	1.13	1.00	0.135

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.030	1.000	0.135	0.165
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.009	0.009
Collision with fixed object	0.500	0.015	0.813	0.110	0.125
Collision with other object	0.028	0.001	0.016	0.002	0.003
Other single-vehicle collision	0.471	0.014	0.108	0.015	0.029

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}** Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7		from Table 12-7
Major commercial	1	0.033	1.106	0.070	--
Minor commercial	6	0.011	1.106	0.139	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	
Major residential	2	0.018	1.106	0.076	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.285	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}** $(5)_{TOTAL}$ from Worksheet 1G	**Proportion of total crashes (f_{dwy})** from Table 12-7	**Adjusted N_{brdwy}** $(2)_{TOTAL} * (3)$	**Combined CMFs** (6) from Worksheet 1B	**Calibration factor, C_r**	**Predicted N_{brdwy}** (4)*(5)*(6)
Total	0.285	1.000	0.285	1.13	1.00	0.324
Fatal and injury (FI)	--	0.284	0.081	1.13	1.00	0.092
Property damage only (PDO)	--	0.716	0.204	1.13	1.00	0.232

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{pedr}** from Table 12-8	**Predicted N_{pedr}** (5)*(6)
Total	1.071	0.165	0.324	1.560	0.019	0.030
Fatal and injury (FI)	--	--	--	--	--	0.030

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}** (9) from Worksheet 1C	**Predicted N_{brsv}** (9) from Worksheet 1E	**Predicted N_{brdwy}** (7) from Worksheet 1H	**Predicted N_{br}** (2)+(3)+(4)	**f_{biker}** from Table 12-9	**Predicted N_{biker}** (5)*(6)
Total	1.071	0.165	0.324	1.560	0.005	0.008
Fatal and injury (FI)	--	--	--	--	--	0.008

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.243	0.516	0.759
Head-on collisions (from Worksheet 1D)	0.006	0.005	0.011
Angle collisions (from Worksheet 1D)	0.012	0.028	0.040
Sideswipe, same direction (from Worksheet 1D)	0.015	0.174	0.188
Sideswipe, opposite direction (from Worksheet 1D)	0.003	0.001	0.004
Driveway-related collisions (from Worksheet 1H)	0.092	0.232	0.324
Other multiple-vehicle collision (from Worksheet 1D)	0.014	0.055	0.069
Subtotal	0.384	1.011	1.395
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.009	0.009
Collision with fixed object (from Worksheet 1F)	0.015	0.110	0.125
Collision with other object (from Worksheet 1F)	0.001	0.002	0.003
Other single-vehicle collision (from Worksheet 1F)	0.014	0.015	0.029
Collision with pedestrian (from Worksheet 1I)	0.030	0.000	0.030
Collision with bicycle (from Worksheet 1J)	0.008	0.000	0.008
Subtotal	0.067	0.135	0.203
Total	0.452	1.146	1.598

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	1.6	0.18	8.9
Fatal and injury (FI)	0.5	0.18	2.5
Property damage only (PDO)	1.1	0.18	6.4

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Intersection	Bridge St
Date Performed	08/12/22	Jurisdiction	Pinellas County
		Analysis Year	2030

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 45,700 (veh/day)	--	29,500
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 9,300 (veh/day)	--	4,500
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	1
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.67	1.00	0.86	1.00	0.91	1.00	0.53

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	4.541	1.000	4.541	0.53	1.00	2.388
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	1.572	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.308	1.400	0.53	1.00	0.736
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	3.528	$(5)_{TOTAL}-(5)_{FI}$ = 0.692	3.141	0.53	1.00	1.652

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.736	1.000	1.652	2.388
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.310	0.440	0.727	1.037
Head-on collision	0.045	0.033	0.023	0.038	0.071
Angle collision	0.343	0.252	0.262	0.433	0.685
Sideswipe	0.126	0.093	0.040	0.066	0.159
Other multiple-vehicle collision	0.065	0.048	0.235	0.388	0.436

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.418	1.000	0.418	0.53	1.00	0.220
Fatal and Injury (FI)	--	--	--	--	0.129	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.292	0.122	0.53	1.00	0.064
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.313	$(5)_{TOTAL}-(5)_{FI}$ = 0.708	0.296	0.53	1.00	0.155

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.064	1.000	0.155	0.220
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.000	0.001
Collision with animal	0.003	0.000	0.018	0.003	0.003
Collision with fixed object	0.762	0.049	0.834	0.130	0.179
Collision with other object	0.090	0.006	0.092	0.014	0.020
Other single-vehicle collision	0.039	0.003	0.023	0.004	0.006
Single-vehicle noncollision	0.105	0.007	0.030	0.005	0.011

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	2.388	0.220	2.607	0.021	0.055
Fatal and injury (FI)	--	--	--	--	0.055

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	2.388	0.220	2.607	0.016	0.042
Fatal and injury (FI)	--	--	--	--	0.042

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.310	0.727	1.037
Head-on collisions (from Worksheet 2D)	0.033	0.038	0.071
Angle collisions (from Worksheet 2D)	0.252	0.433	0.685
Sideswipe (from Worksheet 2D)	0.093	0.066	0.159
Other multiple-vehicle collision (from Worksheet 2D)	0.048	0.388	0.436
Subtotal	0.736	1.652	2.388
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.001
Collision with animal (from Worksheet 2F)	0.000	0.003	0.003
Collision with fixed object (from Worksheet 2F)	0.049	0.130	0.179
Collision with other object (from Worksheet 2F)	0.006	0.014	0.020
Other single-vehicle collision (from Worksheet 2F)	0.003	0.004	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.007	0.005	0.011
Collision with pedestrian (from Worksheet 2G or 2I)	0.055	0.000	0.055
Collision with bicycle (from Worksheet 2J)	0.042	0.000	0.042
Subtotal	0.161	0.155	0.316
Total	0.897	1.807	2.704

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.7
Fatal and injury (FI)	0.9
Property damage only (PDO)	1.8

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections					
General Information			**Location Information**		
Analyst	KRG		Roadway	Gandy Blvd	
Agency or Company	Jacobs		Intersection	West Shore Blvd	
Date Performed	08/12/22		Jurisdiction	Pinellas County	
			Analysis Year	2030	
Input Data			**Base Conditions**	**Site Conditions**	
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG	
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ =	67,700 (veh/day)	--	34,500	
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ =	33,400 (veh/day)	--	19,000	
Intersection lighting (present/not present)			Not Present	Present	
Calibration factor, C_i			1.00	1.00	
Data for unsignalized intersections only:			--	--	
Number of major-road approaches with left-turn lanes (0,1,2)			0		
Number of major-road approaches with right-turn lanes (0,1,2)			0		
Data for signalized intersections only:			--	--	
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	4	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	4	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	4	
Type of left-turn signal phasing for Leg #1			Permissive	Protected / Permissive	
Type of left-turn signal phasing for Leg #2			--	Protected / Permissive	
Type of left-turn signal phasing for Leg #3			--	Protected	
Type of left-turn signal phasing for Leg #4 (if applicable)			--	Protected	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]			0	0	
Intersection red light cameras (present/not present)			Not Present	Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only				0	
Maximum number of lanes crossed by a pedestrian (n_{lanesx})			--	6	
Number of bus stops within 300 m (1,000 ft) of the intersection			0	4	
Schools within 300 m (1,000 ft) of the intersection (present/not present)			Not Present	Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection			0	3	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections						
(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.66	0.87	0.85	1.00	0.91	1.00	0.44

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	11.660	1.000	11.660	0.44	1.00	5.155
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	3.884	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.344	4.012	0.44	1.00	1.774
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	7.405	$(5)_{TOTAL}-(5)_{FI}$ = 0.656	7.648	0.44	1.00	3.381

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	1.774	1.000	3.381	5.155
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.798	0.483	1.633	2.431
Head-on collision	0.049	0.087	0.030	0.101	0.188
Angle collision	0.347	0.615	0.244	0.825	1.440
Sideswipe	0.099	0.176	0.032	0.108	0.284
Other multiple-vehicle collision	0.055	0.098	0.211	0.713	0.811

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.641	1.000	0.641	0.44	1.00	0.283
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.150	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.236	0.151	0.44	1.00	0.067
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.483	$(5)_{TOTAL}-(5)_{FI}$ = 0.764	0.489	0.44	1.00	0.216

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.067	1.000	0.216	0.283
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.001
Collision with fixed object	0.744	0.050	0.870	0.188	0.238
Collision with other object	0.072	0.005	0.070	0.015	0.020
Other single-vehicle collision	0.040	0.003	0.023	0.005	0.008
Single-vehicle noncollision	0.141	0.009	0.034	0.007	0.017

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	--	--	--	--	--
Fatal and injury (FI)	--	--	--	--	--

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.00	1.12	4.65

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	#NUM!	4.65	1.00	#NUM!
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	#NUM!

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	5.155	0.283	5.438	0.015	0.082
Fatal and injury (FI)	--	--	--	--	0.082

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.798	1.633	2.431
Head-on collisions (from Worksheet 2D)	0.087	0.101	0.188
Angle collisions (from Worksheet 2D)	0.615	0.825	1.440
Sideswipe (from Worksheet 2D)	0.176	0.108	0.284
Other multiple-vehicle collision (from Worksheet 2D)	0.098	0.713	0.811
Subtotal	1.774	3.381	5.155
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.001
Collision with fixed object (from Worksheet 2F)	0.050	0.188	0.238
Collision with other object (from Worksheet 2F)	0.005	0.015	0.020
Other single-vehicle collision (from Worksheet 2F)	0.003	0.005	0.008
Single-vehicle noncollision (from Worksheet 2F)	0.009	0.007	0.017
Collision with pedestrian (from Worksheet 2G or 2I)	#NUM!	0.000	#NUM!
Collision with bicycle (from Worksheet 2J)	0.082	0.000	0.082
Subtotal	#NUM!	0.216	#NUM!
Total	#NUM!	3.598	#NUM!

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	#NUM!
Fatal and injury (FI)	#NUM!
Property damage only (PDO)	3.6

Worksheet 3A -- Predicted Crashes by Severity and Site Type and Observed Crashes Using the Site-Specific EB Method for Urban and Suburban Arterials

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Collision type / Site type	**Predicted average crash frequency (crashes/year)**			**Observed crashes, $N_{observed}$** (crashes/year)	**Overdispersion Parameter, k**	**Weighted adjustment, w**	**Expected average crash frequency,**
	$N_{predicted}$ (TOTAL)	$N_{predicted}$ (FI)	$N_{predicted}$ (PDO)			Equation A-5 from Part C Appendix	Equation A-4 from Part C Appendix
ROADWAY SEGMENTS							
Multiple-vehicle nondriveway							
Segment_11	2.305	0.629	1.676	0.000	1.320	0.247	0.570
Segment_12	1.071	0.293	0.779	0.000	1.320	0.414	0.444
Single-vehicle							
Segment_11	0.355	0.064	0.291	0.000	0.860	0.766	0.272
Segment_12	0.165	0.030	0.135	0.000	0.860	0.876	0.145
Multiple-vehicle driveway-related							
Segment_11	0.059	0.017	0.042	0.000	1.390	0.924	0.055
Segment_12	0.324	0.092	0.232	0.000	1.390	0.690	0.223
Segment Totals:	4.279	1.125	3.155	0.000			1.708
INTERSECTIONS							
Multiple-vehicle							
Intersection_1	2.388	0.736	1.652	0.000	0.800	0.344	0.820
Intersection_2	5.155	1.774	3.381	0.000	0.390	0.332	1.712
Single-vehicle							
Intersection_1	0.220	0.064	0.155	0.000	1.140	0.800	0.176
Intersection_2	0.283	0.067	0.216	0.000	0.360	0.907	0.257
Intersection Totals:	8.045	2.641	5.405	0.000			2.966
COMBINED (sum of column)	12.325	3.766	8.559	0.000	--	--	4.674

Worksheet 3B -- Predicted Pedestrian and Bicycle Crashes for Urban and Suburban Arterials

(1)	(2)	(3)
Site Type	**N_{ped}**	**N_{bike}**
ROADWAY SEGMENTS		
Segment_11	0.052	0.014
Segment_12	0.030	0.008
INTERSECTIONS		
Intersection_1	0.055	0.042
Intersection_2	0.000	0.082
COMBINED (sum of column)	0.136	0.145

Worksheet 3C -- Site-Specific EB Method Summary Results for Urban and Suburban Arterials

(1)	(2)	(3)	(4)	(5)	(6)
Crash severity level	**$N_{predicted}$**	**N_{ped}**	**N_{bike}**	**$N_{expected\ (VEHICLE)}$**	**$N_{expected}$**
Total	$(2)_{COMB}$ from Worksheet 3A	$(2)_{COMB}$ from Worksheet 3B	$(3)_{COMB}$ from Worksheet 3B	$(8)_{COMB}$ Worksheet 3A	(3)+(4)+(5)
	12.325	0.136	0.145	4.674	4.955
Fatal and injury (FI)	$(3)_{COMB}$ from Worksheet 3A	$(2)_{COMB}$ from Worksheet 3B	$(3)_{COMB}$ from Worksheet 3B	$(5)_{TOTAL} * (2)_{FI} / (2)_{TOTAL}$	(3)+(4)+(5)
	3.766	0.136	0.145	1.428	1.709
Property damage only (PDO)	$(4)_{COMB}$ from Worksheet 3A	--	--	$(5)_{TOTAL} * (2)_{PDO} / (2)_{TOTAL}$	(3)+(4)+(5)
	8.559	0.000	0.000	3.246	3.246

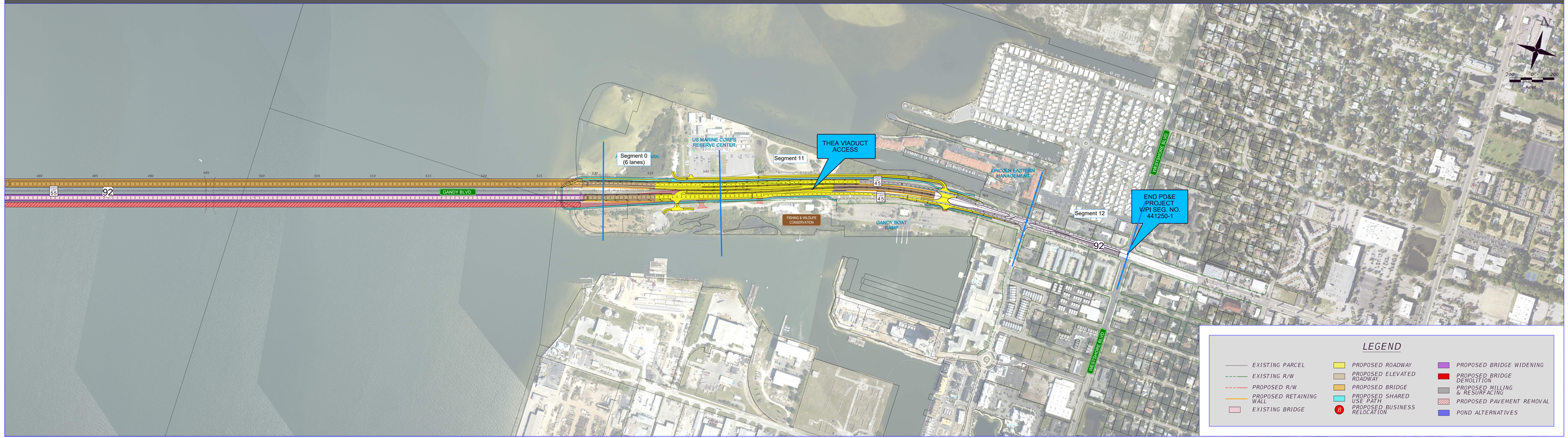
PROJECT DEVELOPMENT & ENVIRONMENT STUDY

US 92 / SR 600 / GANDY BLVD. FROM 4TH ST. TO WESTSHORE BLVD.

FDOT DISTRICT 7

PINELLAS WEST / CAUSEWAY SEGMENT PREFERRED ALTERNATIVE

FINANCIAL PROJECT ID NUMBER: WPI SEG. 441250-1



Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	Approx. 2300 ft west of Bridge St to Bridge St
Date Performed	08/12/22	Jurisdiction	Hillsborough County
		Analysis Year	2050

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.44
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	40,000
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	90
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	1
Minor residential driveways (number)		--	0
Other driveways (number)		--	2
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	130
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	29
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.18	0.93	0.91	1.00	1.00

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	3.492	1.000	3.492	1.00	1.00	3.487
Fatal and Injury (FI)	-12.76	1.28	1.31	0.983	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.267	0.932	1.00	1.00	0.931
Property Damage Only (PDO)	-12.81	1.38	1.34	2.698	$(5)_{TOTAL}-(5)_{FI}$ = 0.733	2.559	1.00	1.00	2.556

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.931	1.000	2.556	3.487
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.775	0.662	1.692	2.467
Head-on collision	0.020	0.019	0.007	0.018	0.037
Angle collision	0.040	0.037	0.036	0.092	0.129
Sideswipe, same direction	0.050	0.047	0.223	0.570	0.617
Sideswipe, opposite direction	0.010	0.009	0.001	0.003	0.012
Other multiple-vehicle collision	0.048	0.045	0.071	0.181	0.226

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.410	1.000	0.410	1.00	1.00	0.410
Fatal and Injury (FI)	-8.71	0.66	0.28	0.079	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.191	0.078	1.00	1.00	0.078
Property Damage Only (PDO)	-5.04	0.45	1.06	0.335	$(5)_{TOTAL}-(5)_{FI}$ = 0.809	0.332	1.00	1.00	0.332

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.078	1.000	0.332	0.410
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.021	0.021
Collision with fixed object	0.500	0.039	0.813	0.270	0.309
Collision with other object	0.028	0.002	0.016	0.005	0.007
Other single-vehicle collision	0.471	0.037	0.108	0.036	0.073

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	1	0.018	1.106	0.053	
Minor residential	0	0.003	1.106	0.000	
Other	2	0.005	1.106	0.030	
Total	--	--	--	0.083	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.083	1.000	0.083	1.00	1.00	0.083
Fatal and injury (FI)	--	0.284	0.024	1.00	1.00	0.023
Property damage only (PDO)	--	0.716	0.059	1.00	1.00	0.059

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8	(5)*(6)
Total	3.487	0.410	0.083	3.980	0.019	0.076
Fatal and injury (FI)	--	--	--	--	--	0.076

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9	(5)*(6)
Total	3.487	0.410	0.083	3.980	0.005	0.020
Fatal and injury (FI)	--	--	--	--	--	0.020

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.775	1.692	2.467
Head-on collisions (from Worksheet 1D)	0.019	0.018	0.037
Angle collisions (from Worksheet 1D)	0.037	0.092	0.129
Sideswipe, same direction (from Worksheet 1D)	0.047	0.570	0.617
Sideswipe, opposite direction (from Worksheet 1D)	0.009	0.003	0.012
Driveway-related collisions (from Worksheet 1H)	0.023	0.059	0.083
Other multiple-vehicle collision (from Worksheet 1D)	0.045	0.181	0.226
Subtotal	0.955	2.615	3.570
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.021	0.021
Collision with fixed object (from Worksheet 1F)	0.039	0.270	0.309
Collision with other object (from Worksheet 1F)	0.002	0.005	0.007
Other single-vehicle collision (from Worksheet 1F)	0.037	0.036	0.073
Collision with pedestrian (from Worksheet 1I)	0.076	0.000	0.076
Collision with bicycle (from Worksheet 1J)	0.020	0.000	0.020
Subtotal	0.174	0.332	0.505
Total	1.129	2.947	4.076

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	4.1	0.44	9.3
Fatal and injury (FI)	1.1	0.44	2.6
Property damage only (PDO)	2.9	0.44	6.7

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Roadway Section	Bridge St to Westshore Blvd
Date Performed	08/12/22	Jurisdiction	Hillsborough County
		Analysis Year	2050

Input Data	Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)	--	4D
Length of segment, L (mi)	--	0.18
AADT (veh/day) — $AADT_{MAX}$ = 66,000 (veh/day)	--	40,000
Type of on-street parking (none/parallel/angle)	None	None
Proportion of curb length with on-street parking	--	0
Median width (ft) - for divided only	15	30
Lighting (present / not present)	Not Present	Present
Auto speed enforcement (present / not present)	Not Present	Not Present
Major commercial driveways (number)	--	1
Minor commercial driveways (number)	--	6
Major industrial / institutional driveways (number)	--	0
Minor industrial / institutional driveways (number)	--	0
Major residential driveways (number)	--	2
Minor residential driveways (number)	--	0
Other driveways (number)	--	0
Speed Category	--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)	0	114
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]	30	13
Calibration Factor, Cr	1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.27	0.98	0.91	1.00	1.13

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	1.428	1.000	1.428	1.13	1.00	1.621
Fatal and Injury (FI)	-12.76	1.28	1.31	0.402	$\frac{(4)_{FI}/((4)_{FI}+(4)_{PDO})}{0.267}$	0.381	1.13	1.00	0.433
Property Damage Only (PDO)	-12.81	1.38	1.34	1.104	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.733}$	1.047	1.13	1.00	1.188

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.433	1.000	1.188	1.621
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.360	0.662	0.787	1.147
Head-on collision	0.020	0.009	0.007	0.008	0.017
Angle collision	0.040	0.017	0.036	0.043	0.060
Sideswipe, same direction	0.050	0.022	0.223	0.265	0.287
Sideswipe, opposite direction	0.010	0.004	0.001	0.001	0.006
Other multiple-vehicle collision	0.048	0.021	0.071	0.084	0.105

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.168	1.000	0.168	1.13	1.00	0.191
Fatal and Injury (FI)	-8.71	0.66	0.28	0.032	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.191	0.032	1.13	1.00	0.036
Property Damage Only (PDO)	-5.04	0.45	1.06	0.137	$(5)_{TOTAL}-(5)_{FI}$ = 0.809	0.136	1.13	1.00	0.154

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.036	1.000	0.154	0.191
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.010	0.010
Collision with fixed object	0.500	0.018	0.813	0.125	0.144
Collision with other object	0.028	0.001	0.016	0.002	0.003
Other single-vehicle collision	0.471	0.017	0.108	0.017	0.034

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	1	0.033	1.106	0.098	
Minor commercial	6	0.011	1.106	0.195	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	2	0.018	1.106	0.107	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.399	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.399	1.000	0.399	1.13	1.00	0.453
Fatal and injury (FI)	--	0.284	0.113	1.13	1.00	0.129
Property damage only (PDO)	--	0.716	0.286	1.13	1.00	0.325

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8	(5)*(6)
Total	1.621	0.191	0.453	2.265	0.019	0.043
Fatal and injury (FI)	--	--	--	--	--	0.043

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9	(5)*(6)
Total	1.621	0.191	0.453	2.265	0.005	0.011
Fatal and injury (FI)	--	--	--	--	--	0.011

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.360	0.787	1.147
Head-on collisions (from Worksheet 1D)	0.009	0.008	0.017
Angle collisions (from Worksheet 1D)	0.017	0.043	0.060
Sideswipe, same direction (from Worksheet 1D)	0.022	0.265	0.287
Sideswipe, opposite direction (from Worksheet 1D)	0.004	0.001	0.006
Driveway-related collisions (from Worksheet 1H)	0.129	0.325	0.453
Other multiple-vehicle collision (from Worksheet 1D)	0.021	0.084	0.105
Subtotal	0.562	1.513	2.074
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.010	0.010
Collision with fixed object (from Worksheet 1F)	0.018	0.125	0.144
Collision with other object (from Worksheet 1F)	0.001	0.002	0.003
Other single-vehicle collision (from Worksheet 1F)	0.017	0.017	0.034
Collision with pedestrian (from Worksheet 1I)	0.043	0.000	0.043
Collision with bicycle (from Worksheet 1J)	0.011	0.000	0.011
Subtotal	0.091	0.154	0.245
Total	0.652	1.667	2.319

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	2.3	0.18	12.9
Fatal and injury (FI)	0.7	0.18	3.6
Property damage only (PDO)	1.7	0.18	9.3

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	KRG	Roadway	Gandy Blvd
Agency or Company	Jacobs	Intersection	Bridge St
Date Performed	08/12/22	Jurisdiction	Pinellas County
		Analysis Year	2050

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 45,700 (veh/day)	--	40,000
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 9,300 (veh/day)	--	5,500
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	1
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.67	1.00	0.86	1.00	0.91	1.00	0.53

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	6.913	1.000	6.913	0.53	1.00	3.636
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	2.377	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.297	2.052	0.53	1.00	1.079
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	5.631	$(5)_{TOTAL}-(5)_{FI}$ = 0.703	4.861	0.53	1.00	2.557

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	1.079	1.000	2.557	3.636
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.454	0.440	1.125	1.579
Head-on collision	0.045	0.049	0.023	0.059	0.107
Angle collision	0.343	0.370	0.262	0.670	1.040
Sideswipe	0.126	0.136	0.040	0.102	0.238
Other multiple-vehicle collision	0.065	0.070	0.235	0.601	0.671

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.486	1.000	0.486	0.53	1.00	0.255
Fatal and Injury (FI)	--	--	--	--	0.151	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.285	0.138	0.53	1.00	0.073
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.378	$(5)_{TOTAL}-(5)_{FI}$ = 0.715	0.347	0.53	1.00	0.183

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.073	1.000	0.183	0.255
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.003	0.004
Collision with fixed object	0.762	0.055	0.834	0.152	0.208
Collision with other object	0.090	0.007	0.092	0.017	0.023
Other single-vehicle collision	0.039	0.003	0.023	0.004	0.007
Single-vehicle noncollision	0.105	0.008	0.030	0.005	0.013

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	3.636	0.255	3.891	0.021	0.082
Fatal and injury (FI)	--	--	--	--	0.082

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	3.636	0.255	3.891	0.016	0.062
Fatal and injury (FI)	--	--	--	--	0.062

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.454	1.125	1.579
Head-on collisions (from Worksheet 2D)	0.049	0.059	0.107
Angle collisions (from Worksheet 2D)	0.370	0.670	1.040
Sideswipe (from Worksheet 2D)	0.136	0.102	0.238
Other multiple-vehicle collision (from Worksheet 2D)	0.070	0.601	0.671
Subtotal	1.079	2.557	3.636
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.003	0.004
Collision with fixed object (from Worksheet 2F)	0.055	0.152	0.208
Collision with other object (from Worksheet 2F)	0.007	0.017	0.023
Other single-vehicle collision (from Worksheet 2F)	0.003	0.004	0.007
Single-vehicle noncollision (from Worksheet 2F)	0.008	0.005	0.013
Collision with pedestrian (from Worksheet 2G or 2I)	0.082	0.000	0.082
Collision with bicycle (from Worksheet 2J)	0.062	0.000	0.062
Subtotal	0.217	0.183	0.399
Total	1.296	2.739	4.035

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	4.0
Fatal and injury (FI)	1.3
Property damage only (PDO)	2.7

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections					
General Information			**Location Information**		
Analyst	KRG		Roadway	Gandy Blvd	
Agency or Company	Jacobs		Intersection	West Shore Blvd	
Date Performed	08/12/22		Jurisdiction	Pinellas County	
			Analysis Year	2050	
Input Data			**Base Conditions**	**Site Conditions**	
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG	
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ =	67,700 (veh/day)	--	47,000	
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ =	33,400 (veh/day)	--	22,500	
Intersection lighting (present/not present)			Not Present	Present	
Calibration factor, C_i			1.00	1.00	
Data for unsignalized intersections only:			--	--	
Number of major-road approaches with left-turn lanes (0,1,2)			0		
Number of major-road approaches with right-turn lanes (0,1,2)			0		
Data for signalized intersections only:			--	--	
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	4	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	4	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	4	
Type of left-turn signal phasing for Leg #1			Permissive	Protected / Permissive	
Type of left-turn signal phasing for Leg #2			--	Protected / Permissive	
Type of left-turn signal phasing for Leg #3			--	Protected	
Type of left-turn signal phasing for Leg #4 (if applicable)			--	Protected	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]			0	0	
Intersection red light cameras (present/not present)			Not Present	Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only				0	
Maximum number of lanes crossed by a pedestrian (n_{lanesx})			--	6	
Number of bus stops within 300 m (1,000 ft) of the intersection			0	4	
Schools within 300 m (1,000 ft) of the intersection (present/not present)			Not Present	Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection			0	3	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections						
(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.66	0.87	0.85	1.00	0.91	1.00	0.44

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	16.875	1.000	16.875	0.44	1.00	7.461
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	5.807	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.355	5.983	0.44	1.00	2.645
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	10.572	$(5)_{TOTAL}-(5)_{FI}$ = 0.645	10.892	0.44	1.00	4.816

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	2.645	1.000	4.816	7.461
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	1.190	0.483	2.326	3.516
Head-on collision	0.049	0.130	0.030	0.144	0.274
Angle collision	0.347	0.918	0.244	1.175	2.093
Sideswipe	0.099	0.262	0.032	0.154	0.416
Other multiple-vehicle collision	0.055	0.145	0.211	1.016	1.162

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.828	1.000	0.828	0.44	1.00	0.366
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.179	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.219	0.181	0.44	1.00	0.080
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.642	$(5)_{TOTAL}-(5)_{FI}$ = 0.781	0.647	0.44	1.00	0.286

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.080	1.000	0.286	0.366
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.060	0.870	0.249	0.308
Collision with other object	0.072	0.006	0.070	0.020	0.026
Other single-vehicle collision	0.040	0.003	0.023	0.007	0.010
Single-vehicle noncollision	0.141	0.011	0.034	0.010	0.021

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16	(4)*(5)
Total	--	--	--	--	--
Fatal and injury (FI)	--	--	--	--	--

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-30

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.00	1.12	4.65

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	#NUM!	4.65	1.00	#NUM!
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	#NUM!

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(7)*
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17	(4)*(5)
Total	7.461	0.366	7.827	0.015	0.117
Fatal and injury (FI)	--	--	--	--	0.117

* Column 6 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-31

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.190	2.326	3.516
Head-on collisions (from Worksheet 2D)	0.130	0.144	0.274
Angle collisions (from Worksheet 2D)	0.918	1.175	2.093
Sideswipe (from Worksheet 2D)	0.262	0.154	0.416
Other multiple-vehicle collision (from Worksheet 2D)	0.145	1.016	1.162
Subtotal	2.645	4.816	7.461
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.060	0.249	0.308
Collision with other object (from Worksheet 2F)	0.006	0.020	0.026
Other single-vehicle collision (from Worksheet 2F)	0.003	0.007	0.010
Single-vehicle noncollision (from Worksheet 2F)	0.011	0.010	0.021
Collision with pedestrian (from Worksheet 2G or 2I)	#NUM!	0.000	#NUM!
Collision with bicycle (from Worksheet 2J)	0.117	0.000	0.117
Subtotal	#NUM!	0.286	#NUM!
Total	#NUM!	5.102	#NUM!

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	#NUM!
Fatal and injury (FI)	#NUM!
Property damage only (PDO)	5.1

Worksheet 3A -- Predicted Crashes by Severity and Site Type and Observed Crashes Using the Site-Specific EB Method for Urban and Suburban Arterials

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Collision type / Site type	**Predicted average crash frequency (crashes/year)**			**Observed crashes, $N_{observed}$** (crashes/year)	**Overdispersion Parameter, k**	**Weighted adjustment, w**	**Expected average crash frequency,**
	$N_{predicted}$ (TOTAL)	$N_{predicted}$ (FI)	$N_{predicted}$ (PDO)			Equation A-5 from Part C Appendix	Equation A-4 from Part C Appendix
ROADWAY SEGMENTS							
Multiple-vehicle nondriveway							
Segment_11	3.487	0.931	2.556	0.000	1.320	0.178	0.622
Segment_12	1.621	0.433	1.188	0.000	1.320	0.319	0.516
Single-vehicle							
Segment_11	0.410	0.078	0.332	0.000	0.860	0.739	0.303
Segment_12	0.191	0.036	0.154	0.000	0.860	0.859	0.164
Multiple-vehicle driveway-related							
Segment_11	0.083	0.023	0.059	0.000	1.390	0.897	0.074
Segment_12	0.453	0.129	0.325	0.000	1.390	0.613	0.278
Segment Totals:	6.245	1.631	4.614	0.000			1.958
INTERSECTIONS							
Multiple-vehicle							
Intersection_1	3.636	1.079	2.557	0.000	0.800	0.256	0.930
Intersection_2	7.461	2.645	4.816	0.000	0.390	0.256	1.908
Single-vehicle							
Intersection_1	0.255	0.073	0.183	0.000	1.140	0.774	0.198
Intersection_2	0.366	0.080	0.286	0.000	0.360	0.884	0.323
Intersection Totals:	11.718	3.877	7.841	0.000			3.360
COMBINED (sum of column)	17.963	5.508	12.455	0.000	--	--	5.317

Worksheet 3B -- Predicted Pedestrian and Bicycle Crashes for Urban and Suburban Arterials

(1)	(2)	(3)
Site Type	**N_{ped}**	**N_{bike}**
ROADWAY SEGMENTS		
Segment_11	0.076	0.020
Segment_12	0.043	0.011
Segment_3	0.000	0.000
Segment_4	0.000	0.000
Segment_5	0.000	0.000
Segment_6	0.000	0.000
Segment_7	0.000	0.000
Segment_8	0.000	0.000
INTERSECTIONS		
Intersection_1	0.082	0.062
Intersection_2	0.000	0.117
Intersection_3	0.000	0.000
Intersection_4	0.000	0.000
Intersection_5	0.000	0.000
Intersection_6	0.000	0.000
Intersection_7	0.000	0.000
Intersection_8	0.000	0.000
COMBINED (sum of column)	0.200	0.211

Worksheet 3C -- Site-Specific EB Method Summary Results for Urban and Suburban Arterials

(1)	(2)	(3)	(4)	(5)	(6)
Crash severity level	**$N_{predicted}$**	**N_{ped}**	**N_{bike}**	**$N_{expected\ (VEHICLE)}$**	**$N_{expected}$**
Total	$(2)_{COMB}$ from Worksheet 3A	$(2)_{COMB}$ from Worksheet 3B	$(3)_{COMB}$ from Worksheet 3B	$(8)_{COMB}$ Worksheet 3A	(3)+(4)+(5)
	17.963	0.200	0.211	5.317	5.729
Fatal and injury (FI)	$(3)_{COMB}$ from Worksheet 3A	$(2)_{COMB}$ from Worksheet 3B	$(3)_{COMB}$ from Worksheet 3B	$(5)_{TOTAL} * (2)_{FI} / (2)_{TOTAL}$	(3)+(4)+(5)
	5.508	0.200	0.211	1.631	2.042
Property damage only (PDO)	$(4)_{COMB}$ from Worksheet 3A	--	--	$(5)_{TOTAL} * (2)_{PDO} / (2)_{TOTAL}$	(3)+(4)+(5)
	12.455	0.000	0.000	3.687	3.687

Input Worksheet for Freeway Segments										
Clear / Echo Input Values (View results in Column AV) / Check Input Values (View results in Advisory Messages)		Segment 1 Study Period	Segment 2 Study Period	Segment 3 Study Period	Segment 4 Study Period	Segment 5 Study Period	Segment 6 Study Period	Segment 7 Study Period	Segment 8 Study Period	Segment 9 Study Period
Basic Roadway Data										
Number of through lanes (n):		4	4	4	6	6	6	4	4	5
Freeway segment description:		Segment 10	Segment 20	Segment 30	Segment 40	Segment 50	Segment 60	Segment 31	Segment 32	Segment 33
Segment length (L), mi:		0.27	0.28	0.16	0.57	0.86	2.67	0.39	0.89	0.12
Alignment Data										
Horizontal Curve Data ← See note										
1	Horizontal curve in segment?:	Both Dir.	Both Dir.	Both Dir.	Both Dir.	Both Dir.	No	Both Dir.	Both Dir.	Both Dir.
	Curve radius (R_1), ft:	2677	2677	14533	11437	11459		14533	22964	22967
	Length of curve (L_{c1}), mi:	0.14	0.14	0.16	0.09	0.09		0.16	0.16	0.2
	Length of curve in segment ($L_{c1,seg}$), mi:	0.12	0.02	0.14	0.09	0.05		0.02	0.13	0.11
2	Horizontal curve in segment?:	No	No	No	Both Dir.	No		Both Dir.	Both Dir.	No
	Curve radius (R_2), ft:				11459			22964	22963	
	Length of curve (L_{c2}), mi:				0.09			0.16	0.2	
	Length of curve in segment ($L_{c2,seg}$), mi:				0.04			0.03	0.2	
3	Horizontal curve in segment?:				No			No	Both Dir.	
	Curve radius (R_3), ft:								22967	
	Length of curve (L_{c3}), mi:								0.2	
	Length of curve in segment ($L_{c3,seg}$), mi:								0.09	
Cross Section Data										
Lane width (W_l), ft:		12	12	12	12	12	12	12	12	12
Outside shoulder width (W_s), ft:		10	10	10	10	10	10	10	10	10
Inside shoulder width (W_{is}), ft:		8	8	8	8	8	10	6	8	8
Median width (W_m), ft:		46	46	46	22	22	88	15	46	22
Rumble strips on outside shoulders?:		No	No	No	No	No	No	No	No	No
	Length of rumble strips for travel in increasing milepost direction, mi:									
	Length of rumble strips for travel in decreasing milepost direction, mi:									
Rumble strips on inside shoulders?:		No	No	No	No	No	No	No	No	No
	Length of rumble strips for travel in increasing milepost direction, mi:									
	Length of rumble strips for travel in decreasing milepost direction, mi:									
Presence of barrier in median:		Offset	Offset	Offset	Offset	Offset	Offset	Center	Offset	Offset
1	Length of barrier ($L_{ib,1}$), mi:									
	Distance from edge of traveled way to barrier face ($W_{off,in,1}$), ft:									
2	Length of barrier ($L_{ib,2}$), mi:									
	Distance from edge of traveled way to barrier face ($W_{off,in,2}$), ft:									
3	Length of barrier ($L_{ib,3}$), mi:									
	Distance from edge of traveled way to barrier face ($W_{off,in,3}$), ft:									
4	Length of barrier ($L_{ib,4}$), mi:									
	Distance from edge of traveled way to barrier face ($W_{off,in,4}$), ft:									
5	Length of barrier ($L_{ib,5}$), mi:									
	Distance from edge of traveled way to barrier face ($W_{off,in,5}$), ft:									
Median barrier width (W_{ib}), ft:		3	3	3	3	3	3	3	3	3
Nearest distance from edge of traveled way to barrier face (W_{near}), ft:		8	8	8	8	8	10		8	8

Roadside Data											
Clear zone width (W_{hc}), ft:		30	30	30	30	30	30	30	30	30	30
Presence of barrier on roadside:		Full	Full	Full	Full	Full	Full	Full	Full	Full	Full
1	Length of barrier ($L_{ob,1}$), mi:										
	Distance from edge of traveled way to barrier face ($W_{off,o,1}$), ft:										
2	Length of barrier ($L_{ob,2}$), mi:										
	Distance from edge of traveled way to barrier face ($W_{off,o,2}$), ft:										
3	Length of barrier ($L_{ob,3}$), mi:										
	Distance from edge of traveled way to barrier face ($W_{off,o,3}$), ft:										
4	Length of barrier ($L_{ob,4}$), mi:										
	Distance from edge of traveled way to barrier face ($W_{off,o,4}$), ft:										
5	Length of barrier ($L_{ob,5}$), mi:										
	Distance from edge of traveled way to barrier face ($W_{off,o,5}$), ft:										
Distance from edge of traveled way to barrier face, increasing milepost ($W_{off,inc}$), ft:		10	10	10	10	10	10	10	10	10	10
Distance from edge of traveled way to barrier face, decreasing milepost ($W_{off,dec}$), ft:		10	10	10	10	10	10	10	10	10	10
Ramp Access Data											
Travel in Increasing Milepost Direction											
Entrance Ramp	Ramp entrance in segment? (If yes, indicate type.):	No	No	S-C Lane	No	S-C Lane	No	S-C Lane	No	Lane Add	
	Distance from begin milepost to upstream entrance ramp gore ($X_{b,ent}$), mi:	999	999		0.12		999		999		
	Length of ramp entrance ($L_{en,inc}$), mi:			0.19		0.25		0.19			
	Length of ramp entrance in segment ($L_{en,seg,inc}$), mi:			0.16		0.25		0.03			
	Entrance side?:			Right		Right		Right			
Exit Ramp	Ramp exit in segment? (If yes, indicate type.):	S-C Lane	No	No	No	No	No	No	No	No	
	Distance from end milepost to downstream exit ramp gore ($X_{e,ext}$), mi:		999	999	999	999	999	999	999	999	
	Length of ramp exit ($L_{ex,inc}$), mi:	0.12									
	Length of ramp exit in segment ($L_{ex,seg,inc}$), mi:	0.12									
	Exit side?:	Right									
Weave	Type B weave in segment?:	No	No	No	No	No	No	No	No	No	
	Length of weaving section ($L_{wev,inc}$), mi:										
	Length of weaving section in segment ($L_{wev,seg,inc}$), mi:										
Travel in Decreasing Milepost Direction											
Entrance Ramp	Ramp entrance in segment? (If yes, indicate type.):	S-C Lane	No	No	No	No	No	No	No	No	
	Distance from end milepost to upstream entrance ramp gore ($X_{e,ent}$), mi:		999	999	999	999	999	999	999	999	
	Length of ramp entrance ($L_{en,dec}$), mi:	0.19									
	Length of ramp entrance in segment ($L_{en,seg,dec}$), mi:	0.19									
	Entrance side?:	Right									
Exit Ramp	Ramp exit in segment? (If yes, indicate type.):	No	No	No	Lane Drop	No	No	S-C Lane	No	No	
	Distance from begin milepost to downstream exit ramp gore ($X_{b,ext}$), mi:	999	999	999		999	999		0.39	999	
	Length of ramp exit ($L_{ex,dec}$), mi:							0.14			
	Length of ramp exit in segment ($L_{ex,seg,dec}$), mi:							0.14			
	Exit side?:							Right			
Weave	Type B weave in segment?:	No	No	No	No	No	No	No	No	No	
	Length of weaving section ($L_{wev,dec}$), mi:										
	Length of weaving section in segment ($L_{wev,seg,dec}$), mi:										

Traffic Data	**Year**									
Proportion of AADT during high-volume hours (P_{hv}):										
Freeway Segment Data	2030	32800	26200	32900	43800	43950	43950	39600	39600	41700
Average daily traffic ($AADT_{fs}$) by year, veh/d:	2031									
(enter data only for those years for which	2032									
it is available, leave other years blank)	2033									
	2034									
	2035									
	2036									
	2037									
	2038									
	2039									
	2040									
	2041									
	2042									
	2043									
	2044									
	2045									
	2046									
	2047									
	2048									
	2049									
	2050	47200	38000	48100	64600	64750	64750	58200	58200	61400
	2051									
	2052									
	2053									
Entrance Ramp Data for Travel in Increasing Milepost Dir.	**Year**									
Average daily traffic ($AADT_{b,ent}$) by year, veh/d:	2030			6700	2100	150		6700		2100
(enter data only for those years for which	2031									
it is available, leave other years blank)	2032									
	2033									
	2034									
	2035									
	2036									
	2037									
	2038									
	2039									
	2040									
	2041									
	2042									
	2043									
	2044									
	2045									
	2046									
	2047									
	2048									
	2049									
	2050			10100	3200	150		10100		3200
	2051									
	2052									
	2053									

Exit Ramp Data for Travel in Increasing Milepost Direction	Year									
Average daily traffic ($AADT_{e,ext}$) by year, veh/d:	2030	3300								
(enter data only for those years for which	2031									
it is available, leave other years blank)	2032									
	2033									
	2034									
	2035									
	2036									
	2037									
	2038									
	2039									
	2040									
	2041									
	2042									
	2043									
	2044									
	2045									
	2046									
	2047									
	2048									
	2049									
	2050	4600								
	2051									
	2052									
	2053									

Entrance Ramp Data for Travel in Decreasing Milepost Dir.	Year									
Average daily traffic ($AADT_{e,ent}$) by year, veh/d:	2030	3300								
(enter data only for those years for which	2031									
it is available, leave other years blank)	2032									
	2033									
	2034									
	2035									
	2036									
	2037									
	2038									
	2039									
	2040									
	2041									
	2042									
	2043									
	2044									
	2045									
	2046									
	2047									
	2048									
	2049									
	2050	4600								
	2051									
	2052									
	2053									

Exit Ramp Data for Travel in Decreasing Milepost Direction	Year										
Average daily traffic ($AADT_{b,ext}$) by year, veh/d:	2030				2100			6700	6700		
(enter data only for those years for which	2031										
it is available, leave other years blank)	2032										
	2033										
	2034										
	2035										
	2036										
	2037										
	2038										
	2039										
	2040										
	2041										
	2042										
	2043										
	2044										
	2045										
	2046										
	2047										
	2048										
	2049										
	2050				3200			10100	10100		
	2051										
	2052										
	2053										

Crash Data	Year		Segment Crashes -->								
Count of Fatal-and-Injury (FI) Crashes by Year											
Multiple-vehicle crashes (not ramp related) ($N_{o,fs,n,mv,fi}$)	2030										
	2031										
	2032										
	2033										
	2034										
Single-vehicle crashes (not ramp related) ($N_{o,fs,n,sv,fi}$)	2030										
	2031										
	2032										
	2033										
	2034										
Ramp-entrance-related crashes ($N_{o,sc,EN,at,fi}$)	2030										
	2031										
	2032										
	2033										
	2034										
Ramp-exit-related crashes ($N_{o,sc,EX,at,fi}$)	2030										
	2031										
	2032										
	2033										
	2034										

Count of Property-Damage-Only (PDO) Crashes by Year												
	Multiple-vehicle crashes (not ramp related) ($N_{o,fs,n,mv,pdo}$)	2030										
		2031										
		2032										
		2033										
		2034										
	Single-vehicle crashes (not ramp related) ($N_{o,fs,n,sv,pdo}$)	2030										
		2031										
		2032										
		2033										
		2034										
	Ramp-entrance-related crashes ($N_{o,sc,EN,at,pdo}$)	2030										
		2031										
		2032										
		2033										
		2034										
	Ramp-exit-related crashes ($N_{o,sc,EX,at,pdo}$)	2030										
		2031										
		2032										
		2033										
		2034										

Input Worksheet for Ramp Segments

Clear | Echo Input Values (View results in Column CJ) | Check Input Values (View results in Advisory Messages)

	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7
	Study Period	**Study Period**	**Study Period**	**Study Period**	**Study Period**	**Study Period**	**Study Period**
Basic Roadway Data							
Number of through lanes (n):	1	1	1	1	1	1	1
Ramp segment description:	Ramp 1	Ramp 2	Ramp 3	Ramp 4	Ramp 5	Ramp 6	Ramp 7
Segment length (L), mi:	0.05	0.04	0.07	0.24	0.15	0.19	0.14
Average traffic speed on the freeway (V_{frwy}), mi/h:	50	50	50	50	50	50	55
Segment type (ramp or collector-distributor road):	Exit	Entrance	Entrance	Exit	Entrance	Exit	Entrance
Type of control at crossroad ramp terminal:	None	None	None	None	None	None	None
Alignment Data							
Horizontal Curve Data ←See notes→							
1 Horizontal curve?:	No	No	No	No	No	No	No
Curve radius (R_1), ft:							
Length of curve (L_{c1}), mi:							
Length of curve in segment ($L_{c1,seg}$), mi:							
Ramp-mile of beginning of curve in direction of travel (X_1), mi:							
2 Horizontal curve?:							
Curve radius (R_2), ft:							
Length of curve (L_{c2}), mi:							
Length of curve in segment ($L_{c2,seg}$), mi:							
Ramp-mile of beginning of curve in direction of travel (X_2), mi:							
3 Horizontal curve?:							
Curve radius (R_3), ft:							
Length of curve (L_{c3}), mi:							
Length of curve in segment ($L_{c3,seg}$), mi:							
Ramp-mile of beginning of curve in direction of travel (X_3), mi:							
4 Horizontal curve?:							
Curve radius (R_4), ft:							
Length of curve (L_{c4}), mi:							
Length of curve in segment ($L_{c4,seg}$), mi:							
Ramp-mile of beginning of curve in direction of travel (X_4), mi:							
5 Horizontal curve?:							
Curve radius (R_5), ft:							
Length of curve (L_{c5}), mi:							
Length of curve in segment ($L_{c5,seg}$), mi:							
Ramp-mile of beginning of curve in direction of travel (X_5), mi:							
Cross Section Data							
Lane width (W_l), ft:	15	15	15	15	15	15	15
Right shoulder width (W_{rs}), ft:	10	10	10	10	8	6	6
Left shoulder width (W_{ls}), ft:	2	2	2	2	7	6	6
Presence of lane add or lane drop by taper:	No	No	No	No	No	No	No
Length of taper in segment ($L_{add,seg}$ or $L_{drop,seg}$), mi:							

Roadside Data								
Presence of barrier on right side of roadway:		No	No	No	Yes	Yes	Yes	No
1	Length of barrier ($L_{rb,1}$), mi:				0.08	0.09	0.06	
	Distance from edge of traveled way to barrier face ($W_{off,r,1}$), ft:				10	10	10	
2	Length of barrier ($L_{rb,2}$), mi:							
	Distance from edge of traveled way to barrier face ($W_{off,r,2}$), ft:							
3	Length of barrier ($L_{rb,3}$), mi:							
	Distance from edge of traveled way to barrier face ($W_{off,r,3}$), ft:							
4	Length of barrier ($L_{rb,4}$), mi:							
	Distance from edge of traveled way to barrier face ($W_{off,r,4}$), ft:							
5	Length of barrier ($L_{rb,5}$), mi:							
	Distance from edge of traveled way to barrier face ($W_{off,r,5}$), ft:							
Presence of barrier on left side of roadway:		No	No	No	No	No	No	No
1	Length of barrier ($L_{lb,1}$), mi:							
	Distance from edge of traveled way to barrier face ($W_{off,l,1}$), ft:							
2	Length of barrier ($L_{lb,2}$), mi:							
	Distance from edge of traveled way to barrier face ($W_{off,l,2}$), ft:							
3	Length of barrier ($L_{lb,3}$), mi:							
	Distance from edge of traveled way to barrier face ($W_{off,l,3}$), ft:							
4	Length of barrier ($L_{lb,4}$), mi:							
	Distance from edge of traveled way to barrier face ($W_{off,l,4}$), ft:							
5	Length of barrier ($L_{lb,5}$), mi:							
	Distance from edge of traveled way to barrier face ($W_{off,l,5}$), ft:							
Ramp Access Data	↖ See note							
Ramp Entrance	Ramp entrance in segment? (If yes, indicate type.):	No	No	No	No	No	No	No
	Length of entrance s-c lane in segment ($L_{en,seg}$), mi:							
Ramp Exit	Ramp exit in segment? (If yes, indicate type.):	No	No	No	No	No	No	No
	Length of exit s-c lane in segment ($L_{ex,seg}$), mi:							
Weaving Section	Weave section in collector-distributor road segment?:							
	Length of weaving section (L_{wev}), mi:							
	Length of weaving section in segment ($L_{wev,seg}$), mi:							

Traffic Data	**Year**							
Average daily traffic ($AADT_r$ or $AADT_c$) by year, veh/d:	2030	3300	3300	6700	6700	2100	2100	150
(enter data only for those years for which it is available, leave other years blank)	2031							
	2032							
	2033							
	2034							
	2035							
	2036							
	2037							
	2038							
	2039							
	2040							
	2041							
	2042							
	2043							
	2044							
	2045							
	2046							
	2047							
	2048							
	2049							
	2050	4600	4600	10100	10100	3200	3200	150
	2051							
	2052							
	2053							

Crash Data		**Year**		Segment Crashes -->						
Count of Fatal-and-Injury (FI) Crashes by Year										
	Multiple-vehicle crashes ($N_{o,w,n,mv,fi}$)	2030								
		2031								
		2032								
		2033								
		2034								
	Single-vehicle crashes ($N_{o,w,n,sv,fi}$)	2030								
		2031								
		2032								
		2033								
		2034								
Count of Property-Damage-Only (PDO) Crashes by Year										
	Multiple-vehicle crashes ($N_{o,w,n,mv,pdo}$)	2030								
		2031								
		2032								
		2033								
		2034								
	Single-vehicle crashes ($N_{o,w,n,sv,pdo}$)	2030								
		2031								
		2032								
		2033								
		2034								

Output Summary

General Information

Project description:	Gandy Blvd PD&E - Build				
Analyst:	Jacobs	Date:	1/6/2023	Area type:	Urban
First year of analysis:	2030				
Last year of analysis:	2050				

Crash Data Description

Freeway segments	Segment crash data available?	No	First year of crash data:	
	Project-level crash data available?	No	Last year of crash data:	
Ramp segments	Segment crash data available?	No	First year of crash data:	
	Project-level crash data available?	No	Last year of crash data:	
Ramp terminals	Segment crash data available?	No	First year of crash data:	
	Project-level crash data available?	No	Last year of crash data:	

Estimated Crash Statistics

Crashes for Entire Facility	**Total**	**K**	**A**	**B**	**C**	**PDO**
Estimated number of crashes during Study Period, crashes:	1627.4	8.4	22.4	158.1	323.0	1115.4
Estimated average crash freq. during Study Period, crashes/yr:	77.5	0.4	1.1	7.5	15.4	53.1

Crashes by Facility Component	**Nbr. Sites**	**Total**	**K**	**A**	**B**	**C**	**PDO**
Freeway segments, crashes:	9	1605.8	8.1	21.6	154.4	318.2	1103.4
Ramp segments, crashes:	7	21.6	0.3	0.8	3.7	4.8	12.0
Crossroad ramp terminals, crashes:	0	0.0	0.0	0.0	0.0	0.0	0.0

Crashes for Entire Facility by Year	**Year**	**Total**	**K**	**A**	**B**	**C**	**PDO**
Estimated number of crashes during the Study Period, crashes:	2030	60.4	0.3	0.9	6.1	12.4	40.7
	2031	62.0	0.3	0.9	6.2	12.7	41.9
	2032	63.6	0.3	0.9	6.4	13.0	43.1
	2033	65.3	0.3	0.9	6.5	13.3	44.3
	2034	67.0	0.4	0.9	6.6	13.6	45.5
	2035	68.6	0.4	1.0	6.8	13.9	46.7
	2036	70.3	0.4	1.0	6.9	14.2	47.9
	2037	72.1	0.4	1.0	7.1	14.5	49.1
	2038	73.8	0.4	1.0	7.2	14.8	50.4
	2039	75.5	0.4	1.0	7.4	15.1	51.6
	2040	77.3	0.4	1.1	7.5	15.4	52.9
	2041	79.0	0.4	1.1	7.7	15.7	54.2
	2042	80.8	0.4	1.1	7.8	16.0	55.5
	2043	82.6	0.4	1.1	8.0	16.3	56.8
	2044	84.4	0.4	1.2	8.1	16.6	58.1
	2045	86.2	0.4	1.2	8.3	16.9	59.4
	2046	88.0	0.4	1.2	8.4	17.2	60.8
	2047	89.9	0.5	1.2	8.6	17.5	62.1
	2048	91.7	0.5	1.2	8.7	17.8	63.5
	2049	93.6	0.5	1.3	8.9	18.1	64.8
	2050	95.4	0.5	1.3	9.0	18.4	66.2
	2051						
	2052						
	2053						

Distribution of Crashes for Entire Facility

Crash Type	**Crash Type Category**	**Estimated Number of Crashes During the Study Period**					
		Total	**K**	**A**	**B**	**C**	**PDO**
Multiple vehicle	Head-on crashes:	2.8	0.0	0.1	0.6	1.2	0.9
	Right-angle crashes:	15.5	0.1	0.3	2.2	4.5	8.3
	Rear-end crashes:	494.5	2.9	7.7	54.8	112.7	316.4
	Sideswipe crashes:	165.8	0.7	1.9	13.2	27.2	122.7
	Other multiple-vehicle crashes:	18.2	0.1	0.3	2.2	4.6	10.9
	Total multiple-vehicle crashes:	696.6	3.9	10.3	73.1	150.3	459.2
Single vehicle	Crashes with animal:	15.2	0.0	0.0	0.3	0.7	14.2
	Crashes with fixed object:	669.3	3.3	8.8	61.3	124.6	471.3
	Crashes with other object:	104.2	0.2	0.6	4.2	8.7	90.4
	Crashes with parked vehicle:	14.4	0.1	0.2	1.3	2.6	10.4
	Other single-vehicle crashes	127.7	1.0	2.6	17.9	36.2	70.1
	Total single-vehicle crashes:	930.8	4.5	12.2	85.0	172.8	656.3
	Total crashes:	1627.4	8.4	22.4	158.1	323.0	1115.4