

THE
ALTON

traffic study



Since 1978

THE
ALTON

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DPA Job #:
22113

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EXECUTIVE SUMMARY

The project is located on the west side of Alton Road between Lincoln Road and 17th Street in Miami Beach, Florida. The project proposes a mixed-use development with 121,761 SF of office space, 24 hotel rooms (existing to remain), 5 residential units, and 71,984 SF retail space (55,214 SF of which is existing to remain). The site is currently occupied by 24 hotel units and 55,214 SF of retail space. Access to the site will be provided via a two-way driveway located on West Avenue and a one-way inbound driveway along Lincoln Road. For the purpose of this traffic study, project build-out is anticipated by 2024.

An assessment of the traffic impacts associated with The Alton project was performed in accordance with the requirements of the City of Miami Beach and the methodology approved by the City's staff. The analysis indicates that all study intersections currently operate and will continue to operate within the City's adopted overall LOS standards during the AM and PM peak hours for existing, future without project, and future with project conditions. The project driveways were analyzed and the results show adequate operations. It should be noted that the projects proposed uses are projected to generate 1,816 less daily trips, only 38 additional trips during the AM peak hour, and 11 less PM peak hour trips when compared to the site's existing uses.

As part of the study, mobility and circulation plans were completed. The plan shows that the project area is currently served by four Miami-Dade Transit bus routes and two Miami Beach trolley routes. The project is located in an area that provides sidewalk connectivity, clearly marked crosswalks, signalized intersections that provide pedestrian signals, multiple Citibike stations, and bike lanes. These conditions facilitate pedestrian activity to nearby retail, restaurants, and entertainment thus encouraging the use of other modes of transportation and reduce the vehicular impact on the roadway network.

A Transportation Demand Management (TDM) plan was developed for the project. The plan consists of strategies that increase the over-all system efficiency by encouraging a shift from single-occupant vehicle (SOV) trips to non-SOV modes, or shifting auto trips out of peak periods. This plan seeks to reduce auto trips by increasing travel options, providing incentives and

information to encourage and help individuals modify their travel behavior, or by reducing the physical need to travel through transportation-efficient land uses. Implementation of the TDM plan could result in a reduction of peak hour vehicle trips.

As discussed above, the project will offer both self-parking and valet parking. An assessment of the valet queuing station was performed during the PM peak hour (worst inbound scenario). The analysis was done to determine if there is sufficient storage to accommodate the anticipated queue within the valet stacking areas. The results of the valet analysis show that 15 valet attendants would be able to handle the expected queue at the valet station with an average queue of two vehicle or less.

1.0 INTRODUCTION

1.1 Project Background

The project is located on the west side of Alton Road between Lincoln Road and 17th Street in Miami Beach, Florida (see Exhibit 1). The project proposes a mixed-use development with 121,761 SF of office space, 24 hotel rooms (existing to remain), 5 residential units, and 71,984 SF retail space (55,214 SF of which is existing to remain). The site is currently occupied by 24 hotel units and 55,214 SF of retail space. Access to the site will be provided via a two-way driveway located on West Avenue and a one-way inbound driveway along Lincoln Road. The proposed site plan is included in Appendix A. For the purpose of this traffic study, project build-out is anticipated by 2024.

1.2 Study Objective

The project will be applying for permits from the City. As part of this permit, the City of Miami Beach will require traffic related studies. The purpose of this study is to assess the traffic impacts associated with the proposed project and to conduct a mobility and circulation analysis. The assessment will be performed in accordance with the methodology approved by the City's staff and the requirements of the City of Miami Beach *Comprehensive Plan*.



 Project Location

Exhibit 1

Location Map



1.3 Study Area and Methodology

The approved methodology is included in Appendix B. The following is a brief description of the study components and analysis undertaken:

- Traffic Counts (Intersections) – Available turning movement counts collected during the AM (7 – 9) and PM (4 – 6) peak hour conditions of a regular weekday were used to analyze the following intersections:
 - Lincoln Road / West Avenue
 - 17th Street / West Avenue
 - 17th Street / Alton Road
 - Lincoln Road / Alton Road
 - Dade Boulevard / West Avenue
 - Dade Boulevard / Alton Road
- Signal Location and Timing – Existing signal phasing and timing for the signalized intersections were obtained from Miami-Dade County. Signal timing plans are included in Appendix C.
- Future Transportation Projects – The 2022 Transportation Improvement Program (TIP), the 2045 Long Range Transportation Plan (LRTP), and the City of Miami Beach Transportation Master Plan were reviewed to include future transportation projects which add capacity to the network.
- Background Traffic – Available Florida Department of Transportation (FDOT) and Miami-Dade County (MDC) traffic counts were consulted to determine a growth factor consistent with historical annual growth in the area. The growth factor was applied to the existing traffic volumes to establish background traffic. Due to the effects of the Covid-19 pandemic the 2020 and 2021 FDOT historical count data will be excluded from the analysis.
- Committed Developments – Future traffic associated with the committed developments in the vicinity of the project site was considered in the analysis.
- Project Trip Generation – Trip generation for the project was estimated using trip generation information published by the Institute of Transportation Engineers (ITE) Trip Generation

Manual, 11th Edition. Based on U.S. Census Bureau data, a 38.6% deduction for other modes of transportation may be applied. However, for a conservative analysis and as discussed with the City reviewer, a 20% reduction was used for other modes of transportation.

- Project Trip Distribution / Trip Assignment – Net new external project traffic will be assigned to the adjacent street network using the appropriate cardinal distribution for TAZ 641 from the *2045 Miami-Dade Long Range Transportation Plan Update*, published by the *Transportation Planning Organization*. Normal area traffic patterns will also be considered when assigning project trips. A figure showing all of the assigned trips to the adjacent transportation network will be provided as part of the study. The expected build-out year is 2024.
- Future Traffic Conditions – Project traffic was combined with background traffic and committed development traffic to obtain future conditions with project. Intersection capacity analyses were performed for existing and future with project conditions.
- Circulation Analysis / Plan – A circulation plan is provided depicting the project site, driveways, location of street signs/signals, crosswalks, sidewalks, location of bus facilities, and bike facilities in the vicinity of this project.
- An extensive Transportation Demand Management plan (TDM) will be included in the report.

1.4 Project Site Information

The project is located on the west side of Alton Road between Lincoln Road and 17th Street in Miami Beach, Florida. The project proposes a mixed-use development with 121,761 SF of office space, 24 hotel rooms (existing to remain), 5 residential units, and 71,984 SF retail space (55,214 SF of which is existing to remain). The site is currently occupied by 24 hotel units and 55,214 SF of retail space. Access to the site will be provided via a two-way driveway located on West Avenue and a one-way inbound driveway along Lincoln Road. The loading area is located on the south side of the project site. Access to the loading area is provided via the one-way inbound driveway along Lincoln Road.

2.0 EXISTING CONDITIONS

Data collection for this study included roadway characteristics, intersection traffic counts, signal timing, and seasonal adjustment factors. The data collection effort is described in the following sections.

2.1 Roadway Characteristics

West Avenue

Within the study area, West Avenue is a two-way, two-lane, undivided collector roadway that provides north / south access. The posted speed limit south of Lincoln Road is 25 mph and the posted speed limit north of Lincoln Road is 30 mph. There is on-street parking provided on portions of the roadway. North of 16th Street, bike lanes are provided along both sides of the roadway. The City of Miami Beach has jurisdiction over this portion of the West Avenue.

Alton Road (SR 907)

Within the study area, Alton Road is a two-way, four-lane, divided minor arterial roadway that provides north / south access. The posted speed limit is 30 mph. There is on-street parking provided on portions of the roadway. The Florida Department of Transportation (FDOT) has jurisdiction over Alton Road.

Lincoln Road

East of West Avenue, Lincoln Road is a two-way, three-lane, divided local roadway that provides east / west access to the project area. West of West Avenue, Lincoln Road is a two-way, two-lane, undivided roadway. The speed limit is not posted on this segment of Lincoln Road. There is on-street parking provided on portions of the roadway. The City of Miami Beach has jurisdiction over Lincoln Road.

17th Street

East of Alton Road, 17th Street is a two-way, four-lane, undivided collector roadway that provides east / west access all along the City of Miami Beach. West of Alton Road, 17th Street is a two-way, three-lane, undivided minor arterial roadway. The speed limit is not posted on this segment of 17th

Street. There is on-street parking provided on portions of the roadway. Bike lanes are provided along both sides of Alton Road west of West Avenue. The City of Miami Beach has jurisdiction over 17th Street.

Dade Boulevard

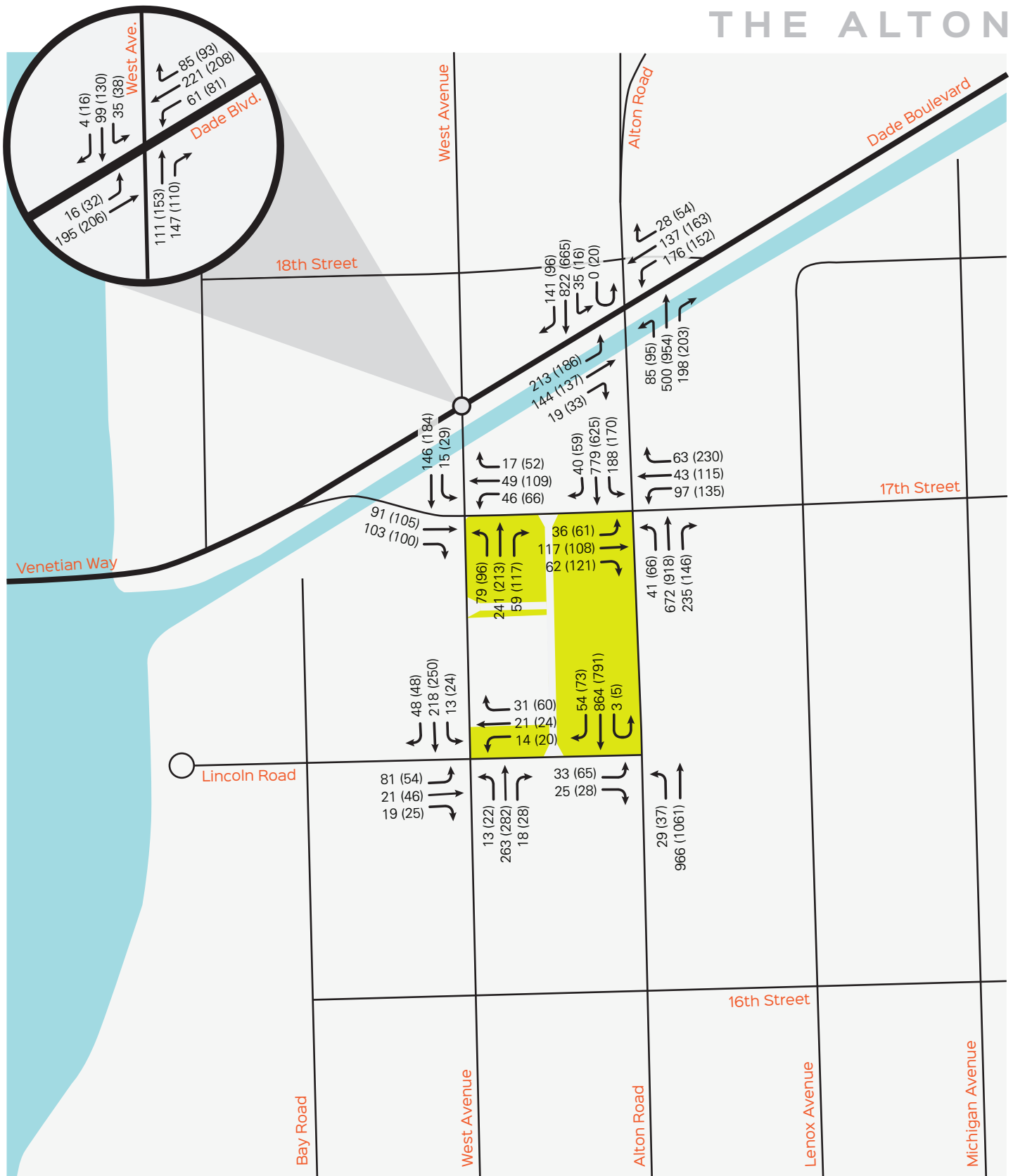
Within the study area, Dade Boulevard is a two-way, four-lane, undivided minor arterial roadway that runs northeast / southwest across the City of Miami Beach. The posted speed limit is 30 mph. The City of Miami Beach has jurisdiction over Dade Boulevard.

2.2 Traffic Counts

Vehicle turning movement counts were collected on September 14, 2022 for the morning (7am – 9am) and afternoon (4pm – 6pm) peak periods. A weekly volume peak season conversion factor (PSCF) of 1.01 (for Miami-Dade County North) was used from 2021 data corresponding to the dates of the counts, to adjust the raw traffic counts to peak season conditions. The turning movement counts and PSCF are provided in Appendix C. Existing volumes at the intersection are graphically portrayed in Exhibit 2.

2.3 Intersection Data

Existing signal phasing and timing for all the intersections were obtained from Miami-Dade County. This information was used for the signal phasing and timing required for the intersection capacity analysis and is provided in Appendix C. A field survey was conducted to obtain the intersection lane configurations to be used in the intersection analysis. Exhibit 3 shows the existing lane configurations at the analyzed intersections.



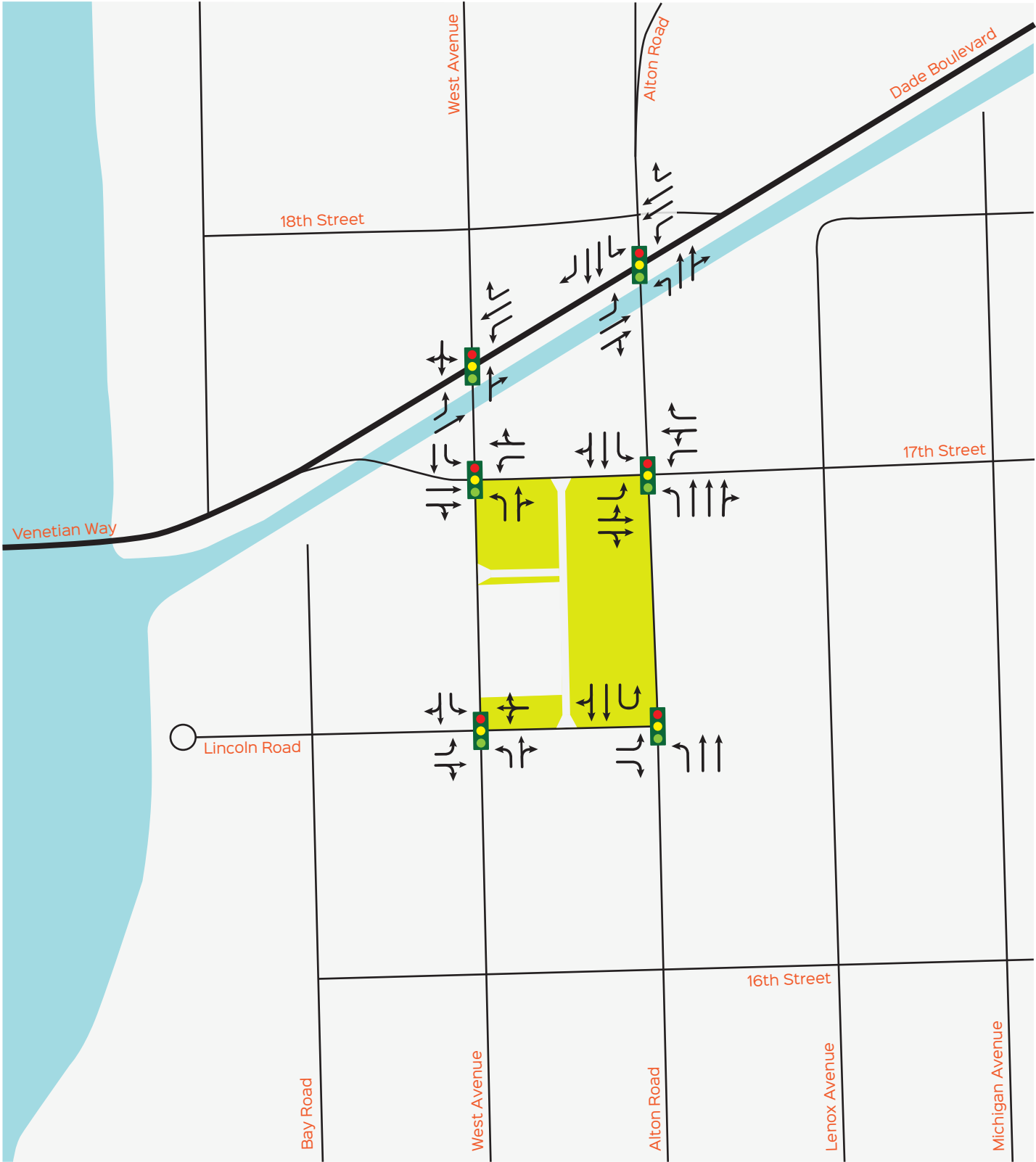
00 AM
(00) PM

Project Location

Exhibit 2

Existing AM & PM Peak Hour Traffic Volumes





 Project Location

Exhibit 3

Existing Lane Configurations



2.4 Intersection Capacity Analysis

The Synchro Software was used to perform intersection capacity analysis at the analyzed intersections. Synchro is a macroscopic analysis and optimization software application that implements the intersection capacity utilization method for determining intersection capacity. Synchro also supports the Highway Capacity Manual's methodology for signalized / un-signalized intersections. Exhibit 4 shows the resulting level of service (LOS) for the existing weekday AM and PM peak hour conditions. The analysis indicates that all study intersections currently operate within the City's adopted overall LOS standards during the AM and PM peak hours. Intersection capacity analysis worksheets are included in Appendix D.

**Exhibit 4: Existing Intersection Capacity Analysis
Weekday AM and PM Peak Hour Conditions**

Intersection	Signalized/ Un-signalized	Direction	AM Peak LOS	Delay (Sec)	PM Peak LOS	Delay (Sec)	LOS Standard*
Lincoln Road / West Avenue	Signalized	NB	A	5.3	A	6.0	D+20
		SB	A	0.4	A	0.5	D+20
		EB	D	41.3	D	40.3	D+50
		WB	D	40.9	D	41.7	D+50
		Overall	B	12.3	B	13.1	D+
17 th Street / West Avenue	Signalized	NB	B	14.4	B	15.0	D+20
		SB	D	41.9	C	22.0	D+20
		EB	C	20.9	C	20.9	D+50
		WB	B	15.0	B	15.6	D+50
		Overall	C	21.2	B	17.6	D+
17 th Street / Alton Road	Signalized	NB	B	14.1	B	19.7	D+20
		SB	B	12.2	B	12.3	D+20
		EB	D+27	69.6	D+27	69.7	D+50
		WB	D+23	67.3	D+35	74.0	D+50
		Overall	C	22.9	C	32.1	D+
Lincoln Road / Alton Road	Signalized	NB	A	3.6	A	4.3	D+20
		SB	A	2.0	A	2.8	D+20
		EB	D+29	70.5	D+36	74.4	D+50
		Overall	A	4.9	A	6.8	D+
		Dade Boulevard / West Avenue	Signalized	NB	D	35.9	C
SB	C			34.4	C	33.4	D+20
EB	B			18.4	B	19.0	D+50
WB	B			16.9	B	17.6	D+50
Overall	C			24.7	C	24.7	D+
Dade Boulevard / Alton Road	Signalized	NB	A	2.3	A	2.6	D+20
		SB	B	18.3	B	16.6	D+20
		EB	D+24	68.1	D+6	58.0	D+50
		WB	D+4	57.1	D	53.6	D+50
		Overall	C	25.4	B	19.4	D+

*Adopted LOS standard based on the Miami Beach 2040 Comprehensive Plan Transportation Element.

Source: David Plummer & Associates

3.0 PLANNED AND PROGRAMMED ROADWAY IMPROVEMENTS

The 2022 Miami-Dade County *Transportation Improvement Program* (TIP), the *2045 Long Range Transportation Program* (LRTP), and the City of Miami Beach *Transportation Master Plan* were reviewed to identify any programmed project within the limits of the established study area. These documents show the following projects within the study area:

Roadway Improvements

DT4291931 – SR 907 / Alton Road from Michigan Avenue to South of Ed Sullivan Drive / 43 Street, flexible pavement reconstruction.

DT4291932 – SR 907 / Alton Road at Michigan Avenue, intersection improvement.

Transit / Pedestrian Improvements

DT4441961 – Miami Beach High School Pedestrian Enhancements, pedestrian safety improvement.

DT4479841 – City of Miami Beach – 17th Street Bicycle Lane Project, bike lane / sidewalk.

PW000716 – Venetian Causeway Bridge from Bayshore Drive to Purdy Avenue, study.

TA201925 – Beach Express South (SMART Plan), transit improvement.

TA4445421 – City of Miami Beach – South Beach Trolley Service, transit service demonstration.

MDT135 – Beach Corridor – Rapid transit from Midtown Miami/Downtown to Miami Beach Convention Center.

NW00123 – Meridian Avenue – On-Road Bicycle Facility Improvement from 16th Street to 19th Street.

NW00126 – Pennsylvania Avenue – On-Road Bicycle Facility Improvement from Washington Avenue to 17th Street.

NW00129 – 15th Street – On-Road Bicycle Facility Improvement from Washington Avenue to SR 907 / Alton Road.

NW00133 – Meridian Avenue – On-Road Bicycle Facility Improvement from 1st Street to 16th Street.

NW00141 – Lenox Avenue – On-Road Bicycle Facility Improvement from Lincoln Lane N to 17th Street.

NW00145 – 17th Street – On-Road Bicycle Facility Improvement from Washington Avenue to West Avenue.

NW00149 – Convention Center Drive – Dedicated On-Road Bicycle Facility Improvement from 17th Street to Dade Boulevard.

NW00151 – 19th Street / Dade Boulevard – Off-Road Bicycle and Pedestrian Facility Improvement from 17th Street to Dade Boulevard.

NW00152 – Drexel Avenue – On-Road Bicycle Facility Improvement from 12th Street to 14th Street.

NW00154 – Espanola Way – On-Road Bicycle Facility Improvement from SR A1A / Collins Avenue to Jefferson Avenue.

NW00155 – 13th Street – On-Road Bicycle Facility Improvement from Beachwalk to Meridian Avenue.

NW00156 – Lincoln Lane N – On-Road Bicycle Facility Improvement from Washington Avenue to Meridian Avenue.

NW00157 – Lincoln Lane N – On-Road Bicycle Facility Improvement from Meridian Avenue to Lenox Avenue.

West Avenue Protected Bicycle Lanes – from 6th Street to 20th Street, Bike/Pedestrian improvements.

SR 907 / Alton Road and 17th Street Intersection Improvements – review geometry of intersection, Bike/Pedestrian improvements.

Dade Boulevard Shared Use Path + Road Diet – from 17th Street to Pine Tree Drive, Bike/Pedestrian improvements.

Lincoln Lane North Bicycle Connection/Neighborhood Greenway – from Alton Road to Washington Avenue, Bike/Pedestrian improvements.

15th Street Neighborhood Greenway – from Washington Avenue to West Avenue, Bike/Pedestrian improvements.

Purdy Avenue Neighborhood Greenway – from Dade Boulevard to 20th Street, Bike/Pedestrian improvements.

These documents are within the study area however, show no officially programmed or planned capacity improvement projects at the study intersections prior to completion of the proposed project. Roadway project documentation is included in Appendix E.

4.0 FUTURE TRAFFIC CONDITIONS

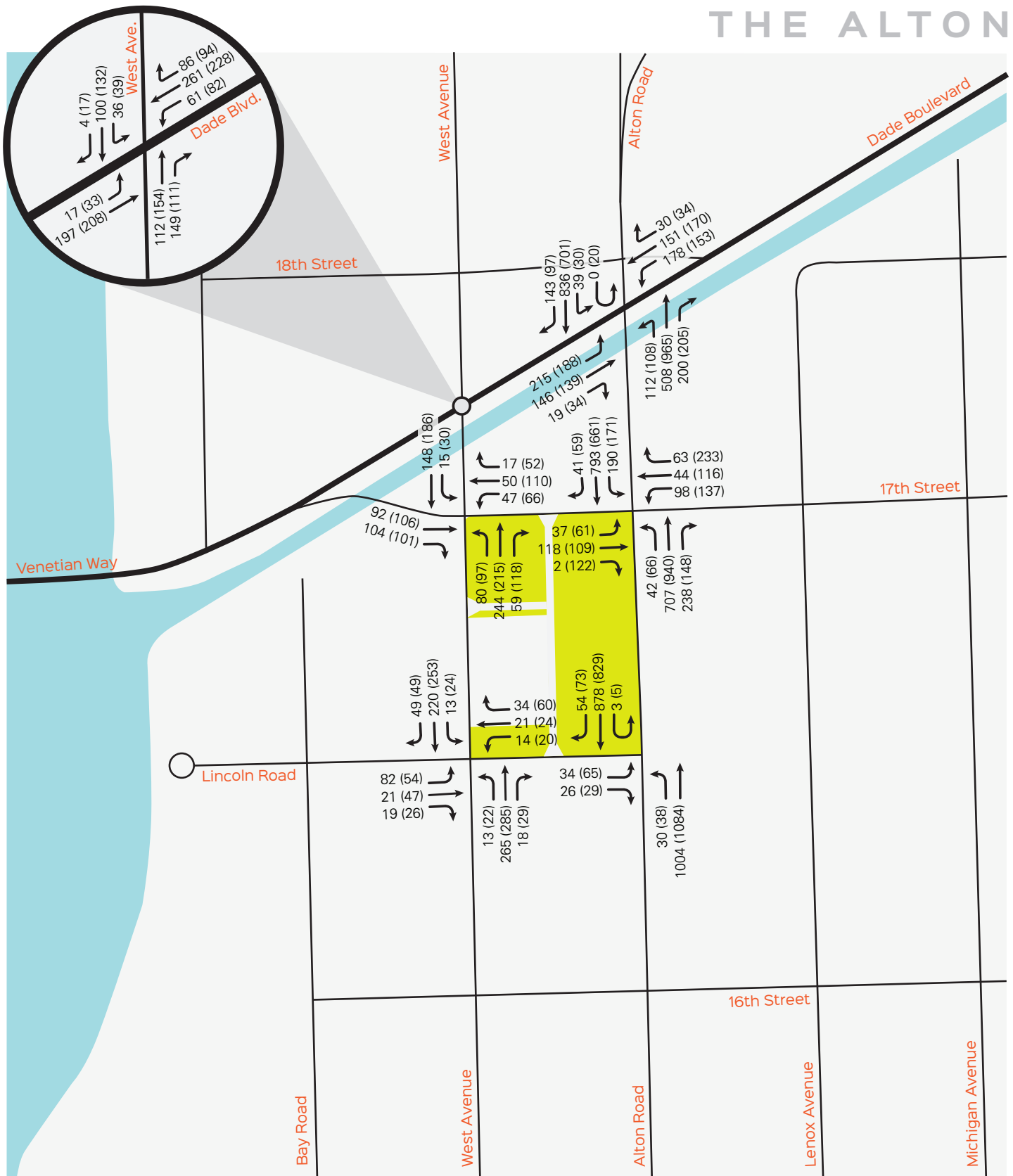
4.1 Background Traffic and Committed Developments

Average Daily Traffic (ADT) counts published by FDOT were reviewed to determine historic growth in the area. This analysis indicated that the annual growth rate is -1.2% in the past five years. However, for a conservative analysis, an annual growth rate of 0.5% was used to project future background traffic conditions. Historic growth rate documentation is included in Appendix C.

The City was consulted to determine any committed developments in the vicinity of the project site. The Eighteen Sunset and 1910 Alton Road developments were considered as committed developments. Committed development information is included in Appendix E. Turning movement volumes for future without project conditions were obtained by applying two years of background growth and committed development traffic to existing traffic volumes. Exhibit 5 shows the projected turning movement volumes for future without project conditions.

4.2 Future without Project Intersection Capacity Analysis

Future without project turning movement volumes were obtained by applying two additional years of background growth to the existing network. Exhibit 6 shows the resulting LOS for the future without project conditions during the AM and PM peak hours. The analysis indicates that all study intersections continue to operate within the City's adopted overall LOS standards during the AM and PM peak hours. Intersection capacity analysis worksheets are included in Appendix D.



00 AM
(00) PM

Project Location

Exhibit 5

Future Without Project AM & PM Peak Hour Traffic Volumes



**Exhibit 6: Future without Project Intersection Capacity Analysis
Weekday AM and PM Peak Hour Conditions**

Intersection	Signalized/ Un-signalized	Direction	AM Peak LOS	Delay (Sec)	PM Peak LOS	Delay (Sec)	LOS Standard*
Lincoln Road / West Avenue	Signalized	NB	A	5.3	A	6.1	D+20
		SB	A	0.4	A	0.5	D+20
		EB	D	41.3	D	40.3	D+50
		WB	D	40.9	D	41.7	D+50
		Overall	B	12.4	B	13.1	D+
17 th Street / West Avenue	Signalized	NB	B	14.5	B	15.0	D+20
		SB	D	42.0	C	22.1	D+20
		EB	C	20.9	C	21.0	D+50
		WB	B	15.0	B	15.6	D+50
		Overall	C	21.3	B	17.7	D+
17 th Street / Alton Road	Signalized	NB	B	14.6	C	20.6	D+20
		SB	B	12.3	B	12.6	D+20
		EB	D+27	69.8	D+27	69.6	D+50
		WB	D+23	67.2	D+31	71.9	D+50
		Overall	C	23.0	C	32.0	D+
Lincoln Road / Alton Road	Signalized	NB	A	3.8	A	4.4	D+20
		SB	A	2.3	A	2.9	D+20
		EB	D+28	70.4	D+36	74.4	D+50
		Overall	A	5.0	A	6.8	D+
		Dade Boulevard / West Avenue	Signalized	NB	D	36.1	C
SB	C			35.0	C	33.8	D+20
EB	B			18.5	B	19.1	D+50
WB	B			17.4	B	17.9	D+50
Overall	C			24.8	C	24.8	D+
Dade Boulevard / Alton Road	Signalized	NB	A	2.7	A	2.8	D+20
		SB	B	19.2	B	18.2	D+20
		EB	D+28	70.1	D+6	58.2	D+50
		WB	D+5	57.4	D	53.6	D+50
		Overall	C	26.1	B	20.0	D+

*Adopted LOS standard based on the Miami Beach 2040 Comprehensive Plan Transportation Element.

Source: David Plummer & Associates

4.3 Project Trip Generation

Trip generation for the proposed project was estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition, which provides gross trip generation rates and/or equations by land use type. These rates and equations estimate vehicle trip ends at a free-standing site's driveways. ITE trip generation worksheets are provided in Appendix F.

The proposed development plan incorporates office, hotel, residential and retail land uses, which can satisfy the work trip and retail needs for some residents, employees, and visitors without making a trip off-site. An internalization matrix was developed to establish the appropriate number of internal project trips. Internal capture rates used are also included in Appendix F.

ITE research shows that a certain percent of retail trips are “*pass-by*” trips. These are described as trips “attracted from the traffic passing the site on an adjacent street.” These are not new trips, but trips already using the existing roadway network that stop at the proposed use and go back to their original path. Pass-by trips for this use were established based on guidelines provided in ITE's *Trip Generation Handbook Manual*, 11th Edition supporting documentation.

The study area is pedestrian and bicyclist friendly and transit is readily available (see Section 5 of this report for additional pedestrian and transit information). US Census data shows an existing 38.6% use of other modes of transportation in the US Census Tract 42.08 where the project is located. However, for a conservative analysis and in compliance with City standards, a 20% reduction was used for other modes of transportation. The project trip generation summary is provided in Exhibit 7.

It should be noted that the project is expected to add 38 trips to the network during the AM peak hour. The proposed project is also projected to decrease the daily trips by 1,816 trips and the PM peak hour trips by 11 trips when compared to the existing uses.

Exhibit 7: Project Trip Generation Summary

Proposed Uses

Proposed ITE Land Use Designation ¹	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
General Office Building <i>Land Use Code: 710</i>	121,761 SF	1,378	175	24	199	33	162	195
All Suites Hotel <i>Land Use Code: 311</i>	24 Rooms	106	4	4	8	4	4	8
Multifamily Housing (Mid-Rise) <i>Land Use Code: 221</i>	5 DU	22	0	1	1	1	1	2
Shopping Plaza (40-150K) <i>Land Use Code: 821</i>	71,984 SF	6,802	158	97	255	322	349	671
Total Gross Trips		8,308	337	126	463	360	516	876
Other Modes of Transportation ²		20%	-68	-25	-93	-72	-103	-175
Internalization ³	AM	7.0%	-13	-13	-26	-28	-28	-56
	PM	8.0%						
Passby Retail (PM) ⁴		40%	0	0	0	-102	-102	-204
Net Proposed Trips			256	88	344	158	283	441

¹Based on ITE Trip Generation, 11th Edition.

²Based on US Census Tract 42.08 (38.6%), capped at 20% per City of Miami Beach standards.

³Based on ITE Trip Generation Handbook, 3rd Edition.

⁴Based on ITE Trip Generation, 11th Edition supporting documentation.

Existing Uses

Existing ITE Land Use Designation ¹	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
All Suites Hotel <i>Land Use Code: 311</i>	24 Rooms	106	4	4	8	4	4	8
Shopping Plaza (40-150K) <i>Land Use Code: 821</i>	106,028 SF	10,018	232	142	374	447	485	932
Total Gross Trips		10,124	236	146	382	451	489	940
Other Modes of Transportation ²		20%	-47	-29	-76	-90	-98	-188
Internalization ³	AM	0.0%	0	0	0	-1	-1	-2
	PM	0.3%						
Passby Retail (PM) ⁴		40%	0	0	0	-149	-149	-298
Net Existing Trips			189	117	306	211	241	452

¹Based on ITE Trip Generation, 11th Edition.

²Based on US Census Tract 42.08 (38.6%), capped at 20% per City of Miami Beach standards.

³Based on ITE Trip Generation Handbook, 3rd Edition.

⁴Based on ITE Trip Generation, 11th Edition supporting documentation.

Net Trip Difference

	Daily Vehicle Trips	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed	8,308	256	88	344	158	283	441
Existing	10,124	189	117	306	211	241	452
Net New External Trips	-1,816	67	-29	38	-53	42	-11

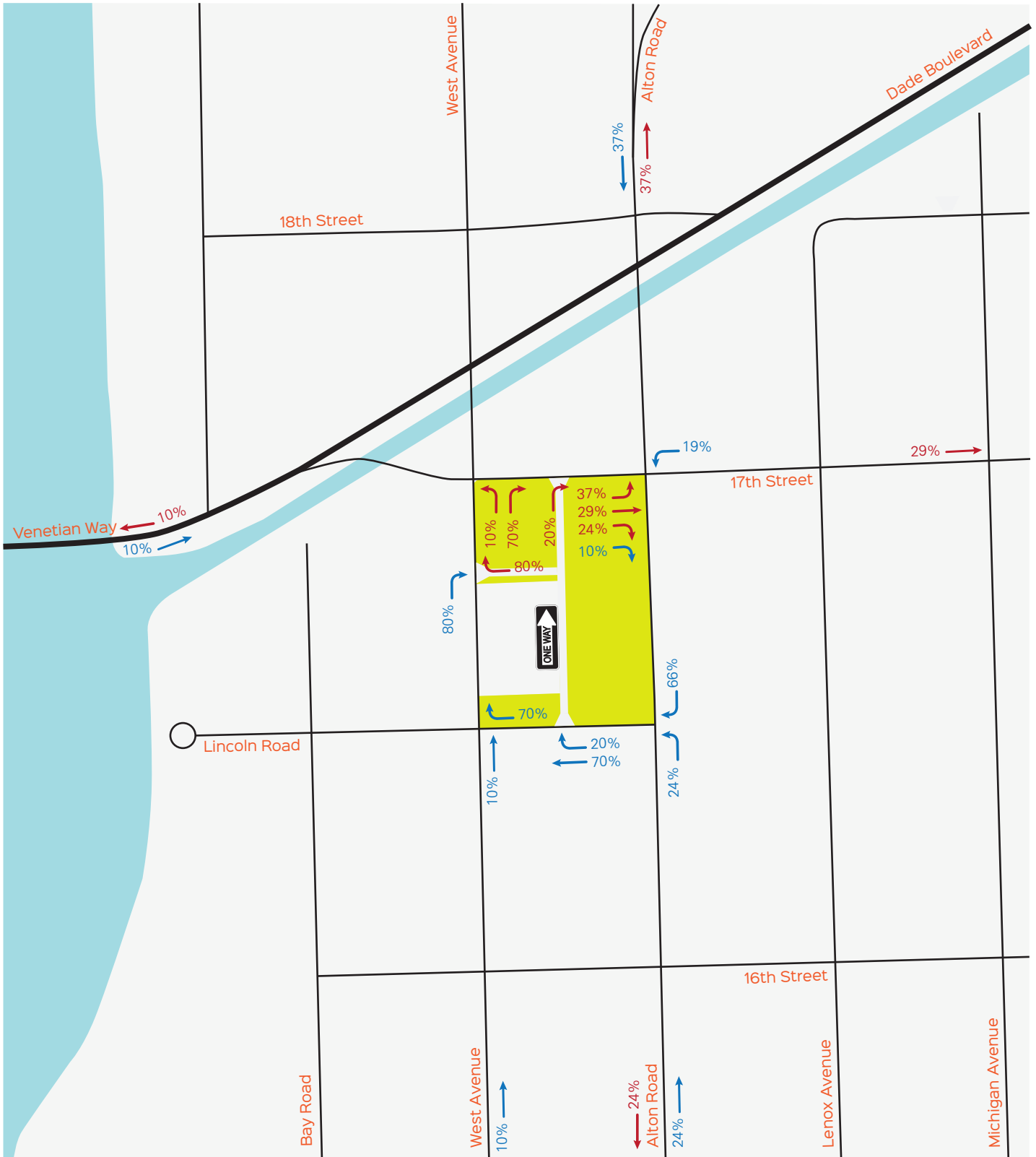
4.4 Project Trip Assignment

Project traffic was distributed and assigned to the study area using the Cardinal Distribution for TAZ 641 shown in Exhibit 8. The Cardinal Distribution gives a generalized distribution of trips from a TAZ to other parts of Miami-Dade County. The distribution can be summarized as follows: 26% to the north, 12% to the south, 23% to the east, and 39% to the west. For estimating trip distribution for the project traffic, consideration was given to conditions such as the roadway network accessed by the project traffic, roadways available to travel in the desired direction, and attractiveness of traveling on a specific roadway. Exhibits 9 and 10 show the project trip distribution and assignment for the project. Exhibit 11 shows the projected turning movement volumes for future with project conditions.

**Exhibit 8: Cardinal Distribution
(TAZ 641)**

DIRECTION	2015	2045	2024
NNE	13.5%	13.5%	13.50%
ENE	22.1%	12.5%	19.22%
ESE	3.7%	2.4%	3.31%
SSE	9.3%	6.7%	8.52%
SSW	4.0%	2.9%	3.67%
WSW	20.3%	28.1%	22.64%
WNW	15.3%	20.4%	16.83%
NNW	11.8%	13.5%	12.31%

Source: Long Range Transportation Plan



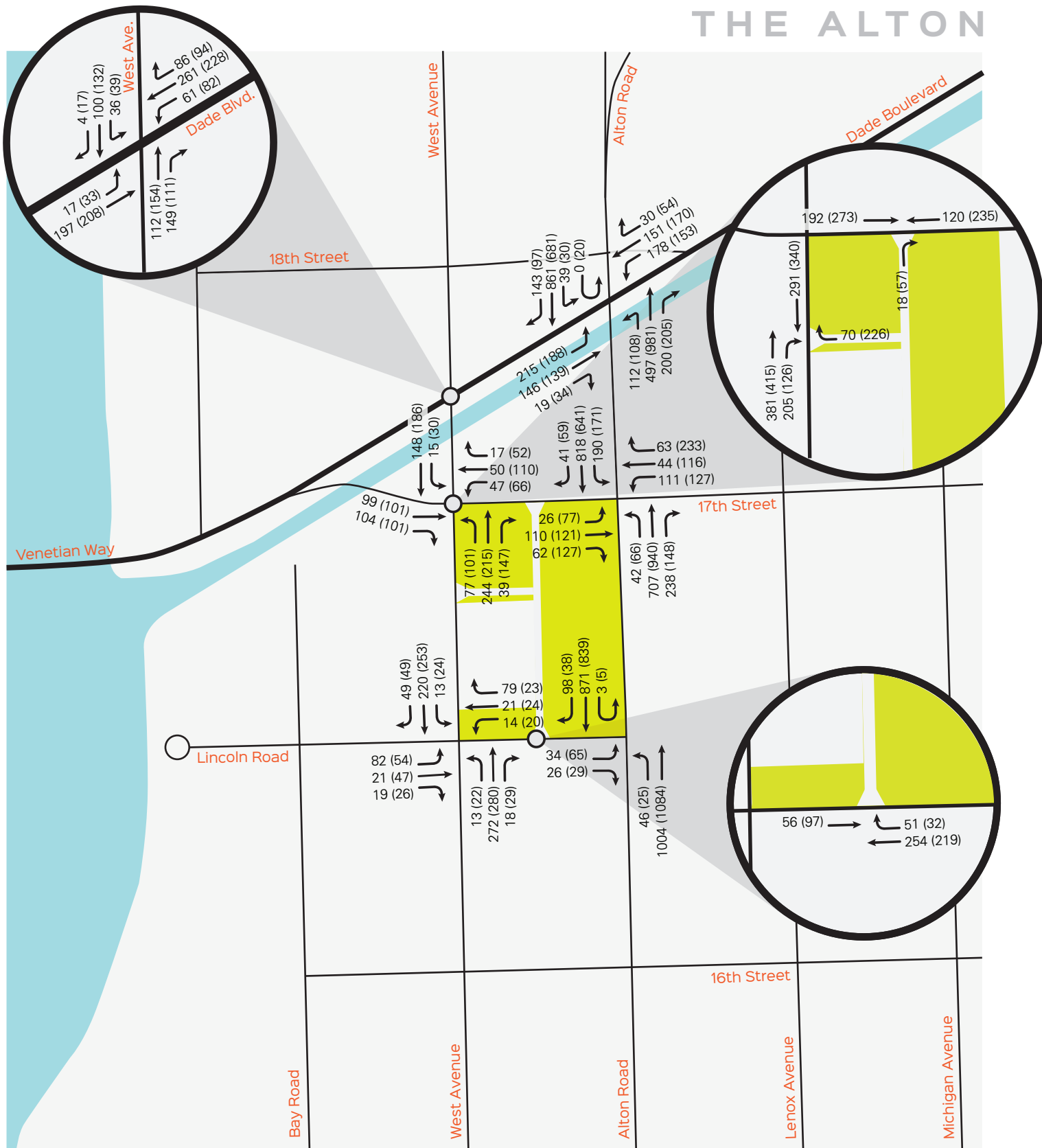
00 AM
(00) PM

- Project Location
- % Inbound
- % Outbound

Exhibit 9

Project Trip Distribution





4.5 Future with Project Intersection Capacity Analysis

Future background traffic and project traffic projections were combined to obtain future with project traffic at the analyzed intersections. Exhibit 12 shows the resulting LOS for the future with project conditions during the AM and PM peak hours. The analysis indicates that all study intersections operate within the City's adopted overall LOS standards during the AM and PM peak hours. The project driveways were analyzed and the results show adequate operations. Intersection capacity analysis worksheets are included in Appendix D.

**Exhibit 12: Future with Project Intersection Capacity Analysis
Weekday AM and PM Peak Hour Conditions**

Intersection	Signalized/ Un-signalized	Direction	AM Peak LOS	Delay (Sec)	PM Peak LOS	Delay (Sec)	LOS Standard*
Lincoln Road / West Avenue	Signalized	NB	A	5.7	A	5.8	D+20
		SB	A	0.4	A	0.5	D+20
		EB	D	42.0	D	40.4	D+50
		WB	D	42.3	D	40.2	D+50
		Overall	B	14.4	B	11.7	D+
17 th Street / West Avenue	Signalized	NB	B	14.2	C	20.4	D+20
		SB	D	41.9	C	22.6	D+20
		EB	C	21.0	C	20.9	D+50
		WB	B	15.1	B	15.6	D+50
		Overall	C	21.3	B	20.0	D+
17 th Street / Alton Road	Signalized	NB	B	14.4	C	20.8	D+20
		SB	B	12.1	B	12.8	D+20
		EB	D+27	69.8	D+29	70.5	D+50
		WB	D+24	68.0	D+31	72.0	D+50
		Overall	C	22.6	C	32.7	D+
Lincoln Road / Alton Road	Signalized	NB	A	3.7	A	4.4	D+20
		SB	A	2.4	A	2.6	D+20
		EB	D+28	70.4	D+36	74.4	D+50
		Overall	A	5.0	A	6.8	D+
Dade Boulevard / West Avenue	Signalized	NB	D	36.3	C	34.0	D+20
		SB	C	35.0	C	33.8	D+20
		EB	B	18.5	B	19.1	D+50
		WB	B	17.4	B	17.9	D+50
		Overall	C	24.8	C	24.8	D+
Dade Boulevard / Alton Road	Signalized	NB	A	2.7	A	2.8	D+20
		SB	B	19.4	B	18.1	D+20
		EB	D+28	70.1	D+6	58.2	D+50
		WB	D+5	57.4	D	53.6	D+50
		Overall	C	26.2	B	19.9	D+
West Avenue / Project Driveway	Unsignalized	WB	B	12.6	C	16.5	N/A
17 th Street / Alton Court	Unsignalized	NB	A	9.0	A	9.4	N/A

*Adopted LOS standard based on the Miami Beach 2040 Comprehensive Plan Transportation Element.

Source: David Plummer & Associates

The approximate existing storage length and the projected 95th percentile back of queue (BOQ) at all the exclusive turn lanes for the AM and PM peak hour conditions are displayed in Exhibit 13. The results show that the existing storage lengths at the 17th Street / West Avenue intersection, Lincoln Road / Alton Road intersection, and Dade Boulevard / West Avenue intersection have enough capacity to accommodate the projected 95th percentile back of queues.

The projected 95th percentile back of queue for the eastbound left turn lane at the Lincoln Road / West Avenue intersection exceeds the storage length during the AM and PM peak hours for existing, future without project, and future with project conditions. It should be noted this is an existing condition, the project adds five (5) feet of queue and no additional queue to the respective AM and PM peak hours. The turn lane storage for the eastbound left turn lane at the Lincoln Road / West Avenue intersection cannot be extended since it will conflict with the existing adjacent street parking.

The projected 95th percentile back of queue for the eastbound left turn lane at the 17th Street / Alton Road intersection exceeds the storage length during the PM peak hour. The project adds 21 feet of queue (less than one vehicle length) during the PM peak hour. The turn lane storage for the eastbound left turn lane at the 17th Street / Alton Road intersection cannot be extended due to the existing westbound left turn lane storage for the 17th Street / West Avenue intersection.

The projected 95th percentile back of queue for the eastbound left and westbound left turn lanes at the Dade Boulevard / Alton Road intersection exceeds the storage length during the AM and PM peak hours for existing, future without project, and future with project conditions. It should be noted that these are existing conditions, the project adds no additional queue to the projected 95th percentile back of queue at these turning lanes. The turn lane storage for the eastbound left turn lane at the Dade Boulevard / Alton Road intersection cannot be extended due to the existing westbound left turn lane storage for the Dade Boulevard / West Avenue intersection. Similarly, the turn lane storage for the westbound left turn lane at the Dade Boulevard / Alton Road intersection cannot be extended due to the existing eastbound left turn lane storage for the Dade Boulevard / Publix Supermarket driveway entrance.

The southbound right turn lane at the Dade Boulevard / Alton Road intersection also exceeds the storage length during the AM peak hour. It should be noted that this is an existing condition, the project adds no additional queue to this movement. The turn lane storage for the southbound right turn lane at the Dade Boulevard / Alton Road intersection cannot be extended due to the existing sidewalk, north of the turning lane.

Exhibit 13: Projected 95th Percentile Back of Queues and Existing Storage Length (Feet)

Intersection	Direction	Existing		Future without Project		Future with Project		Existing Storage Length
		AM	PM	AM	PM	AM	PM	
Lincoln Road / West Avenue	NBL	8	11	8	11	8	10	170
	SBL	7	15	7	15	8	14	185
	EBL	109	81	111	81	116	80	50
17 th Street / West Avenue	NBL	69	87	70	87	68	95	175
	SBL ¹	17	27	16	27	16	28	160
	WBL	38	50	38	50	38	50	130
17 th Street / Alton Road	NBL	20	54	21	53	21	54	155
	SBL	57	98	57	108	56	109	305
	EBL	76	109	78	109	60	130	120
	WBL	132	194	134	196	143	185	220
	WBR ²	95	281	94	282	93	284	100+
Lincoln Road / Alton Road	NBL	9	12	9	12	12	9	115
	SBU	0	1	0	1	0	1	145
	EBL ¹	73	116	74	116	74	116	310
	EBR ¹	33	33	34	34	34	34	310
Dade Boulevard / West Avenue	EBL	15	25	16	25	16	25	135
	WBL	41	50	41	51	41	51	120
	WBR ²	23	27	24	27	24	27	325
Dade Boulevard / Alton Road	NBL ²	30	23	38	25	43	26	360
	SBL	77	75	83	135	83	135	220
	SBR	55	28	58	29	58	29	45
	EBL	374	271	383	276	383	276	145
	WBL	249	198	253	199	253	199	185
	WBR	0	0	0	0	0	0	75

¹ Entire lane is a turning lane

² Through movement becomes an exclusive turning lane

Source: David Plummer & Associates

4.6 Turn Lane Requirements

The FDOT *Access Management Guidebook* (Chapter 6) and the American Association of State Highway and Transportation Officials (AASHTO) *Greenbook* provide guidelines and considerations to assist in the decision-making process for the need for exclusive right and left turn lanes. However, there are “no specific guidance on warrants for [exclusive] turn lanes based on number of turns in and out of unsignalized driveways.” The following are guidelines provided by the FDOT and AASHTO when considering exclusive turn lanes:

Recommended Guidelines for Exclusive Right-Turn Lanes to Unsignalized Driveway:

- 80-125 right turns / hour at a posted speed of 45 mph or less
- 35-55 right turns / hour at a posted speed of over 45 mph

Considerations for Exclusive Left-Turn Lanes:

- When left-turn volumes exceed **100 vph** at signalized intersections
- Along multi-lane roadways with speeds in excess of 45 mph and a median opening serving a driveway
- Driveways located on curved roadways with speeds of 45 mph or higher
- Driveways located on two-lane roadways with posted speeds of 40 mph or higher that meet the Advancing and Opposing volume guidelines outlined in the AASHTO *Greenbook* (and the NCHRP Report 457)

When not to consider exclusive turn lanes:

- Dense or built-out corridors with limited space
- Right-turn lanes would negatively impact pedestrians or bicyclists
- Vehicular movements from driveways or median openings that cross right-turn lanes resulting in multiple threat crashes
- Context classifications C2T, C4, C5, or C6

A review of the driveways was conducted based on the guidelines mentioned above to determine the necessity of any exclusive turn lanes at the project driveways. As the trips generated by the project at the Lincoln Road and Alton Court site access driveway connection are below the recommended thresholds, no exclusive turn lanes are required. The trips generated by the project at the West Avenue driveway connection are above the recommended threshold for an exclusive right turn lane. However, it should be noted that the project is expected to only add 38 trips to the network during the AM peak hour, decrease the daily trips by 1,816 trips, and decrease the PM peak hour trips by 11 trips when compared to the existing uses.

5.0 CIRCULATION PLAN

The project is located on the west side of Alton Road between Lincoln Road and 17th Street in Miami Beach, Florida. Access to the site will be provided via a two-way driveway located on West Avenue and a one-way inbound driveway along Lincoln Road. The loading area is located on the south side of the project site. Access to the loading area is provided via the one-way inbound driveway along Lincoln Road.

A maneuverability analysis was performed at the project loading area and on-site parking garage (see Appendix I). The analysis shows that the garage truck and delivery van require a multi-point turn to enter the loading bays, but can exit in a single movement.

The project is proposing self-parking and valet services. The mechanical lift parking spaces on the third floor of the parking garage will be reserved for valet parking. There will be a gate on the garage ramp up to the third floor to ensure only the valet attendants have to access this area of the garage. The standard parking spaces on the second floor will be available for self-parking and the tandem spaces will also be reserved for valet parking. The valet drop-off / pick-up station is located north of the ground floor lobby.

The study area is located in an area that is conducive for pedestrian and cyclist activities. Sidewalks along all neighboring roadways and clearly marked crosswalks (available at all major intersections) facilitate pedestrian activity to nearby restaurants, retail, and entertainment. The site's proximity to two CitiBike stations (station 170 is located on West Avenue approximately 370 feet west of the project and station 174 is located on Lincoln Road approximately 170 feet south of the project), exclusive bike lanes along West Avenue, Venetian Way, and 16th Street, and shared lanes along Alton Road encourage cyclist activity within the area. A mobility plan was prepared for the site (see Exhibit 14). The plan shows the project location, cyclist connections, sidewalk connections, and pedestrian crosswalks.

There are four bus routes that traverse this area of Miami Beach (A, M, S, and 115). The closest bus stops to the project site are located on Alton Road, approximately 90 feet east and 180 feet south of the project, respectively. The project area is also served by two City of Miami Beach trolley routes (Middle Beach and South Beach Loops). The closest trolley stop to the project site

is located on Alton Road, approximately 180 feet south of the project. Exhibit 15 shows the available bus and trolley routes, as well as, the bus and trolley stops in the area. Transit documentation is provided in Appendix G.



 Project Location

Exhibit 14

Circulation Plan - Pedestrian












-  Citibike Station
-  Sidewalk
-  Crosswalk
-  Exclusive Bike Lane
-  Shared Road








Exhibit 15
Circulation Plan - Transit

-  Bus Stop
-  Trolley Stop
-  Bus & Trolley Stop

-  Project Location
-  Miami Beach Trolley Middle Beach Loop
-  Miami Beach Trolley South Beach Loop

-  Miami-Dade Bus Routes Route A
-  Miami-Dade Bus Routes Routes M & S
-  Miami-Dade Bus Routes Route 115



6.0 QUEUING ANALYSIS

As previously mentioned, the project is proposing optional valet services for the onsite parking garage. All retail project trips will have to use the valet services. The residential and office project trips will have assigned self-parking spaces, but will use the valet services if there are no available self-parking spaces. The valet drop-off / pick-up area will be west of the lobby. The existing to remain 55,214 SF of retail space and 24-room hotel has existing parking and will not utilize the proposed project's access or valet services.

The queuing analysis for the proposed valet drop-off / pick-up area was performed based on the methodology outlined in the *Institute of Transportation Engineers (ITE) Transportation and Land Development*. The analysis was performed to determine the number of valet parking attendants required during the peak hour so that the queue does not extend past the valet storage area (95% confidence level analysis). The potential queues were calculated based on the PM peak hour of the adjacent street (worst case scenario for the combined uses) published by the ITE trip generation rates and/or equations. A trip generation was performed to determine the demand at the valet station. The parking garage utilizes standard, tandem, and mechanical parking spaces. As a valet attendant or operator is required for mechanical and tandem parking spaces, it was assumed that 57% of vehicles to the site would utilize the valet services, based on the split between standard (43%), tandem (6%), and mechanical (51%) parking spaces. Exhibit 16 shows the AM and PM peak hour trip generation summary for the AM and PM peak hour vehicle trips at the valet station.

Exhibit 16: Valet Trip Generation

Proposed ITE Land Use Designation ¹	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
General Office Building <i>Land Use Code: 710</i>	121,761 SF	1,378	175	24	199	33	162	195
Multifamily Housing (Mid-Rise) <i>Land Use Code: 221</i>	5 DU	22	0	1	1	1	1	2
Strip Retail Plaza (<40K) <i>Land Use Code: 822</i>	16,770 SF	938	24	16	40	56	56	112
Total Gross Trips		2,338	199	41	240	90	219	309
Other Modes of Transportation ²		20%	-40	-8	-48	-18	-43	-61
Internalization ³		AM 9.4%	-9	-9	-18	-5	-5	-10
		PM 4.0%						
Net Proposed Trips			150	24	174	67	171	238
Vehicle Trips at the Valet Station		57%	86	14	99	38	97	136

¹Based on ITE Trip Generation, 11th Edition.

²Based on US Census Tract 42.08 (38.6%), capped at 20% per City of Miami Beach standards.

³Based on ITE Trip Generation Handbook, 3rd Edition.

The results of the trip generation show that the critical peak hour for valet parking is the PM peak hour of the adjacent street. Queuing and queuing trip generation documentation are available in Appendix H.

The queuing analysis used the single-channel waiting line model with Poisson arrivals and exponential service times. The analysis is based on the coefficient of utilization (ρ) which is the ratio of the average arrival rate of vehicles to the average service rate.

$$\rho = \frac{\text{Average Demand Rate}}{\text{Average Service Rate}}$$

The average service rate corresponds to the time it will take a valet parking attendant to park or retrieve a vehicle. If the coefficient of utilization is greater than 1, then the calculation will yield an infinite queue length.

The required queue storage (M) is determined using the following equation:

$$M = \left[\frac{\ln P(x > M) - \ln Q_M}{\ln \rho} \right] - 1$$

In this equation, $P(x > M)$ is set at 5% to yield a 95% confidence that the queue will not back-up onto the adjacent street.

The processing rates were calculated by adding the time it will take a valet attendant to process the vehicles (**processing time**), the time it will take the attendant to circulate to / from the parking space (**driving time**), the time it will take the attendant to park or retrieve a vehicle (**mechanical lift processing time** and **park processing time**), the time it will take for a valet attendant to travel through the mechanical arm gate located inside the garage to prevent non-valet drivers from accessing the third floor mechanical parking area (**mechanical arm gate lift time**), and the time it will take the attendant to walk to/from the parking area (**walking time**). A processing time of 60 seconds per vehicle was used in the analysis. The driving time for the valet attendant was calculated using a conservative speed of 10 mph, and the walking time for the valet attendant was calculated on a jogging speed of 6 ft/sec.

The project is providing 170 parking spaces (74 standard parking spaces, 10 tandem parking spaces, and 86 mechanical parking spaces) in the parking garage. Only the mechanical and tandem parking spaces will be reserved for the valet parking. The standard parking spaces will be available for vehicles that wish to self-park. Since the distance from the valet drop-off / pick-up area differs for inbound / outbound, a weighted average was taken of the inbound / outbound valet processing times (based on the entering / exiting split from the trip generation) to determine the average processing time for the valet parking. The weighted average was based on the inbound / outbound trip distribution, which is 28% inbound and 72% outbound. The valet processing rates for the tandem and mechanical parking spaces can be seen in Exhibits 17 and 18. As the processing time for the valet parking differs between the tandem and mechanical parking spaces, a weighted average was taken to determine the average processing rate at the valet station. Exhibit 19 shows the weighted processing time for the valet station during the PM peak hour (critical hour for the combined land uses).

Exhibit 17: Valet Station Processing Rate Tandem Parking

Inbound Valet Processing Rate Tandem Parking Space

<i>Processing time:</i>	60 sec / 60 sec / 1 min = 1.00 min
<i>Driving time:</i>	585 ft * 1 mile / 5280 ft * 1hr / 10 miles * 60 min / hr = 0.66 min
<i>Park Processing time:</i>	= 0.45 min
<i>Walking time:</i>	385 ft / 6 ft / sec / 60 sec / min = 1.07 min
Total	= <u>3.18 min</u>

Outbound Valet Processing Rate Tandem Parking Space

<i>Processing time:</i>	60 sec / 60 sec / 1 min = 1.00 min
<i>Driving time:</i>	615 ft * 1 mile / 5280 ft * 1hr / 10 miles * 60 min / hr = 0.70 min
<i>Park Processing time:</i>	= 0.45 min
<i>Walking time:</i>	385 ft / 6 ft / sec / 60 sec / min = 1.07 min
Total	= <u>3.22 min</u>

Tandem Parking Weighted Valet Processing Rate

<i>28% Inbound:</i>	0.28*3.18 min = 0.89 min
<i>72% Outbound:</i>	0.72*3.22 min = 2.32 min
Total	= <u>3.21 min</u>

Exhibit 18: Valet Station Processing Rate Mechanical Parking

Inbound Valet Processing Rate Mechanical Parking Space

<i>Processing time:</i>	60 sec / 60 sec / 1 min = 1.00 min
<i>Driving time:</i>	850 ft * 1 mile / 5,280 ft * 1hr / 10 miles * 60 min / hr = 0.97 min
<i>Mechanical Lift time:</i>	30 sec / lift * 2 lift * 1 min / 60sec = 1.00 min
<i>Park Processing time:</i>	= 0.45 min
<i>Mechanical Arm Lift time:</i>	0.7 min / gate * 1 gate = 0.7 min
<i>Walking time:</i>	415 ft / 6 ft / sec / 60 sec / min = 1.15 min
Total	= <u>4.64 min</u>

Outbound Valet Processing Rate Mechanical Parking Space

<i>Processing time:</i>	60 sec / 60 sec / 1 min = <i>1.00 min</i>
<i>Driving time:</i>	910 ft * 1 mile / 5,280 ft * 1hr / 10 miles * 60 min / hr = <i>1.03 min</i>
<i>Mechanical Lift time:</i>	30 sec / lift * 2 lift * 1 min / 60sec = <i>1.00 min</i>
<i>Park Processing time:</i>	= <i>0.45 min</i>
<i>Mechanical Arm Lift time:</i>	0.7 min / gate * 1 gate = <i>0.7 min</i>
<i>Walking time:</i>	415 ft / 6 ft / sec / 60 sec / min = <i>1.15 min</i>
Total	= <u>4.70 min</u>

Mechanical Parking Weighted Valet Processing Rate

<i>28% Inbound:</i>	0.28*4.64 min = <i>1.16 min</i>
<i>72% Outbound:</i>	0.72*4.70 min = <i>3.34 min</i>
Total	= <u>4.70 min</u>

Exhibit 19: Valet Processing Rate - Weighted Tandem & Mechanical Parking

Weighted Valet Time

<i>10% Tandem Parking:</i>	0.10*3.21 min = <i>0.32 min</i>
<i>90% Mechanical Parking:</i>	0.90*4.68 min = <i>4.22 min</i>
Total	= <u>4.54 min</u>

An iterative approach was used to determine the minimum number of valet attendants required during the PM peak hour of the adjacent street to serve both the entering and exiting vehicles that will ensure that the average queue at the valet station will not extend past the valet storage. Exhibit 20 shows the queuing calculations for the valet drop-off / pick-up area.

Exhibit 20: Valet Station Queuing Calculations

$$Q = \text{Processing rate} = \frac{60 \text{ min/hr}}{4.54 \text{ min/process}} = 13.73 \text{ process/hr}$$

$$q = \text{Demand Rate} = 136 \frac{\text{veh}}{\text{hr}}$$

$$N = \text{Service Positions} = 15 \text{ attendants}$$

$$\rho = \text{Utilization factor} = \frac{q}{(NQ)} = \frac{136 \text{ veh/hr}}{15 \times 13.73 \text{ process/hr}} = 0.6856$$

$$Q_m = \text{Table Value} = 0.1277$$

$$M = \text{queue length which is exceeded 5\% of the time [P}(x>M)]$$

$$M = \frac{\ln P(x>M) - \ln(Q_m)}{\ln(\rho)} - 1 = \frac{\ln(0.05) - \ln(0.1277)}{\ln(0.6856)} - 1 = 1.48, \text{ say 2 Vehicles on queue}$$

The results of the analysis show that a total of 15 valet attendants would be able to handle the demand at the valet drop-off / pick-up area with approximately two vehicles on queue. It should be noted that the queuing analysis considers the worst-case scenario during the peak hour to ensure that the queue fits within the provided storage. Once operational the development will assess the actual need for valet attendants.

7.0 TRANSPORTATION DEMAND MANAGEMENT PLAN

A Transportation Demand Management plan is proposed as part of this project with the following goals:

- **Reducing congestion** – by encouraging patrons to shift from single occupancy vehicle trips to use other available modes of transportation.
- **Conserving energy and reducing emissions** - the damage caused by vehicle emissions and greenhouse gases is a major contributor to environmental degradation. Therefore, getting people to make better use of shared transportation options is one of the most important ways in which communities can do their part to encourage greener thinking.
- **Improving community health and fitness levels** - TDM can lead to better levels of health and fitness among community members by encouraging people to be more active as they move around town. Improving the walkability of cities and adding cycling features are two of the most important ways TDM strategies can be used to promote healthier and more active lifestyles.
- **Boosting urban livability** - Studies have shown that community-oriented modes of transportation can lead to significant improvements in personal satisfaction and happiness. People are more engaged when they are active stakeholders in the communities they live in. By improving social quality for residents, commuters, and visitors alike, TDM helps improve the overall livability of cities.

The development will promote the following strategies to further reduce vehicle trips:

- Encourage patrons to participate in ridesharing programs through South Florida Commuter Services. Available information will be obtained and distributed to residents and employees in the development.
- Miami-Dade County Transportation Agency current local and regional mass transit route and schedule information will be provided to potential transit users in a prominent public area of the development. The information provided and maintained on the premises will be updated, when necessary, at no less than six month intervals.

- Promote mass transit use by encouraging employers to purchase transit passes and make them available to employees at discounted prices or no charge, or in lieu of subsidized parking.
- Provide Citibike membership / passes to employees.
- Provide carpool incentive program for employees.
- Provide 37 short term and 22 long term bicycle storage spaces
- Provide subsidy to employees to participate in a bike share program.
- Provide elevators that can accommodate bikes.
- Provide shower facility for employees use.
- Encourage employers to implement staggered work hours.
- Improve walkability by improving and enhancing sidewalks around the site.

Implementation of these items will generate a shift from single vehicle drivers to use other modes of transportation and, thus, reducing the peak hour vehicle trips.

8.0 CONCLUSIONS

An assessment of the traffic impacts associated with The Alton project was performed in accordance with the requirements of the City of Miami Beach and the methodology approved by the City's staff. The analysis indicates that all study intersections currently operate and will continue to operate within the City's adopted overall LOS standards during the AM and PM peak hours for existing, future without project, and future with project conditions. The project driveways were analyzed and the results show adequate operations. It should be noted that the projects proposed uses are projected to generate 1,816 less daily trips, only 38 additional trips during the AM peak hour, and 11 less PM peak hour trips when compared to the site's existing uses.

As part of the study, mobility and circulation plans were completed. The plan shows that the project area is currently served by four Miami-Dade Transit bus routes and two Miami Beach trolley routes. The project is located in an area that provides sidewalk connectivity, clearly marked crosswalks, signalized intersections that provide pedestrian signals, multiple Citibike stations, and bike lanes. These conditions facilitate pedestrian activity to nearby retail, restaurants, and entertainment thus encouraging the use of other modes of transportation and reduce the vehicular impact on the roadway network.

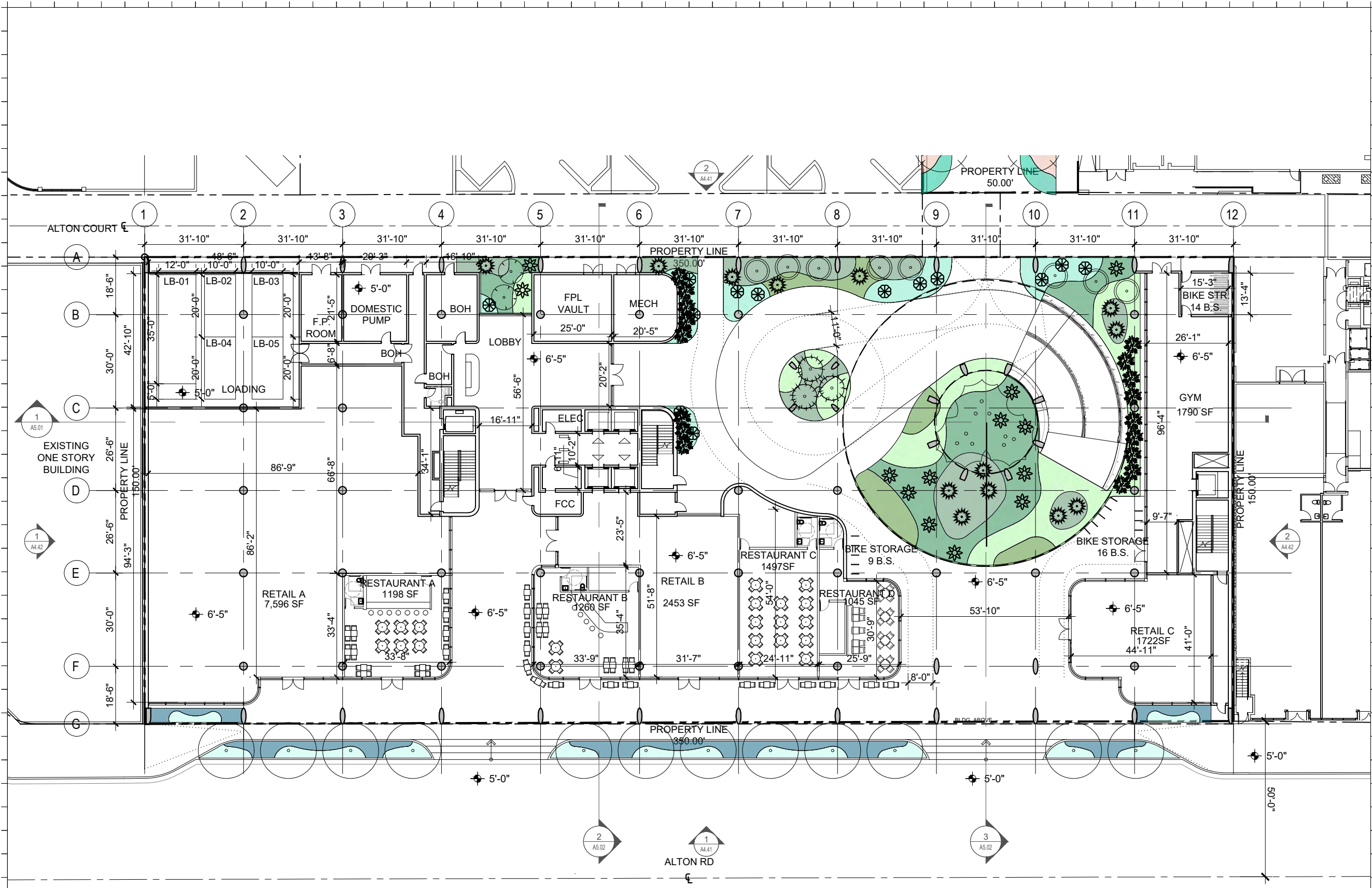
A Transportation Demand Management (TDM) plan was developed for the project. The plan consists of strategies that increase the over-all system efficiency by encouraging a shift from single-occupant vehicle (SOV) trips to non-SOV modes, or shifting auto trips out of peak periods. This plan seeks to reduce auto trips by increasing travel options, providing incentives and information to encourage and help individuals modify their travel behavior, or by reducing the physical need to travel through transportation-efficient land uses. Implementation of the TDM plan could result in a reduction of peak hour vehicle trips.

As discussed above, the project will offer both self-parking and valet parking. An assessment of the valet queuing station was performed during the PM peak hour (worst inbound scenario). The analysis was done to determine if there is sufficient storage to accommodate the anticipated queue within the valet stacking areas. The results of the valet analysis show that 15 valet attendants would be able to handle the expected queue at the valet station with an average queue of two vehicle or less.

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Appendix A

Site Plan



Rev.	Date	Rev.	Date

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PB22-0562 - FINAL SUBMITTAL

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 MIAMI BEACH, FLORIDA 33139

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Landscape:
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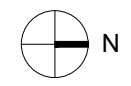
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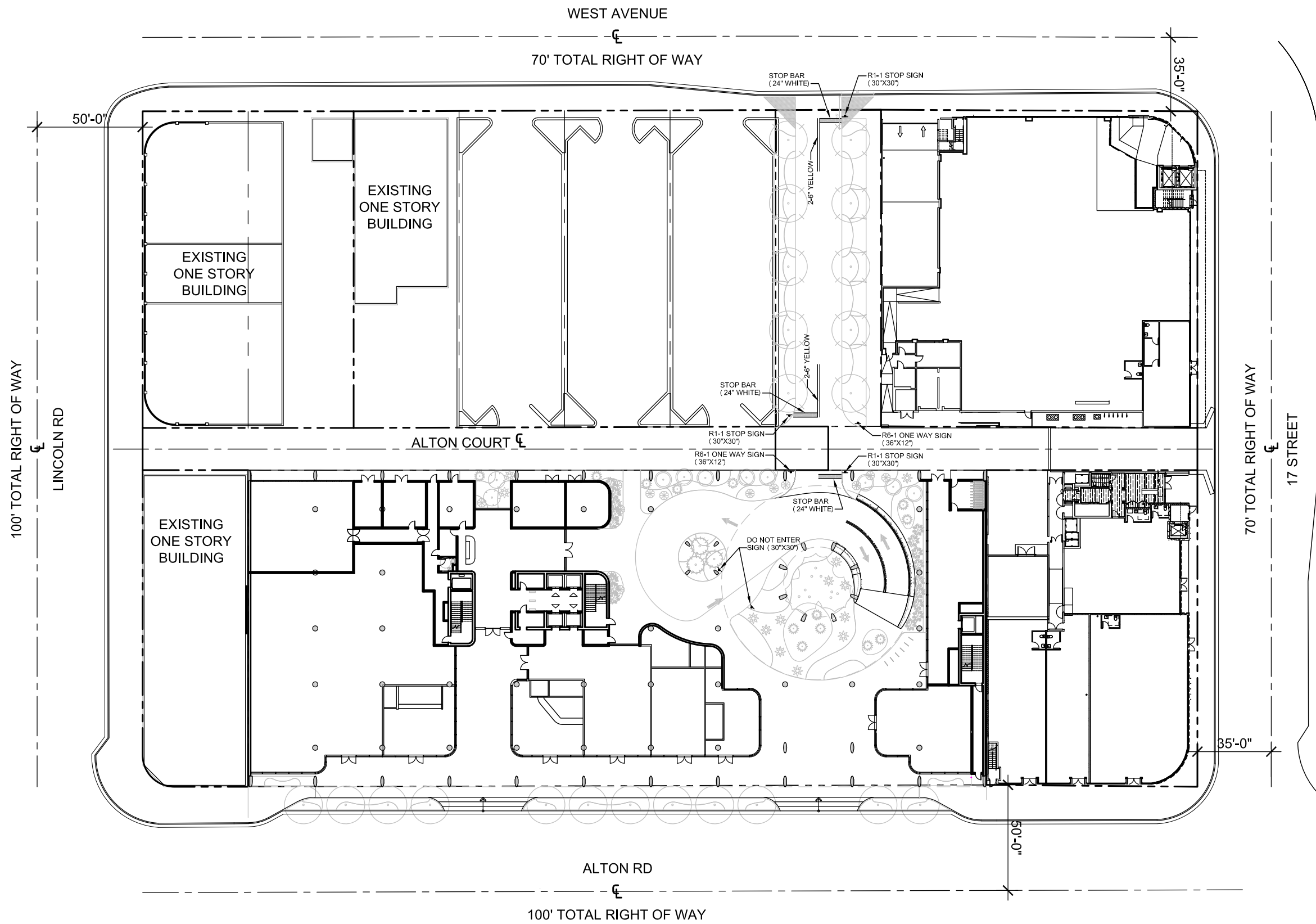
**GROUND FLOOR PLAN
 ENLARGED**

Date	01.05.2023	Sheet No.	
Scale	1/32" = 1'-0"		A2.21.1
Project	2132		

1 PROPOSED GROUND FLOOR PLAN
 SCALE: 1/32" = 1'-0"



100' TOTAL RIGHT OF WAY



Rev.	Date	Rev.	Date

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DRB SUBMITTAL

OFFICE BUILDING

1656-1680 ALTON RD
MIAMI BEACH, FLORIDA 33139

Owner:
Name: BH The Alton LLC
Address:
Address:
Tel:
Email:

Landscape:
CLAD
8020 NE 4th Ave
Studio 113, Miami FL
(786) 536-6076
Email: carolina@cladlandscape.com

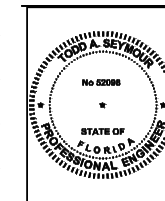
Consultant:
Kobi Karp
571 NW 28th St
Miami, FL 33127
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CERTIFICATE OF AUTHORIZATION EB 2600



SIGNING & PAVEMENT MARKING PLAN

Date	01/05/2023	Sheet No.	C-1A.0
Scale	1" = 50'-0"		
Project	20113.01		

1A SIGNING & PAVEMENT MARKING PLAN
SCALE 1" = 50'-0"



Appendix B

Methodology

The Alton Traffic Study Methodology

August 2, 2022
September 6, 2022

PROJECT LOCATION

The project is located on the west side of Alton Road between Lincoln Road and 17th Street in Miami Beach, Florida. The project proposes a mixed-use development with 105,756 SF of office space, 24 hotel rooms (existing to remain), 10 residential units, and 59,639 SF of retail space (36,458 SF of which is existing to remain). The site is currently occupied by 24 hotel units (to remain) and 102,186 SF of retail space. The project location and the proposed site plan are provided in Attachment A.

PURPOSE

This methodology will provide the details of the Transportation Impact Study for the proposed development. Confirmation of this methodology will be requested from the City and/or its traffic consultant prior to performing the study.

TRAFFIC STUDY

- Traffic Counts (Intersections) – Turning movement counts (TMCs) will be collected during the morning (7 – 9 am) and afternoon (4 – 6 pm) peak hour conditions of a regular weekday at the study intersections. The counts will be used to analyze the following intersections:
 - Lincoln Road / West Avenue
 - 17th Street / West Avenue
 - 17th Street / Alton Road
 - Lincoln Road / Alton Road
 - Dade Boulevard / West Avenue
 - Dade Boulevard / Alton Road

- Trip Generation – When applicable, trip generation for the project will be estimated using trip generation information published by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, otherwise engineering judgement will be used. Internal capture trips will be established based on the ITE, Trip Generation Handbook, 3rd Edition. Pass-by trips will be established based on the supporting documentation from ITE, Trip Generation Manual, 11th Edition. Based on U.S. Census Bureau data, 38.6% of the area utilize modes of transportation. However, for a conservative analysis a 20% reduction will be used for other modes of transportations for the trip generation calculations. Trip generation documentation is available in Attachment B.

The Alton Trip Generation

Proposed Uses

Proposed ITE Land Use Designation ¹	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
General Office Building <i>Land Use Code: 710</i>	105,756 SF	1218	155	21	176	30	144	174
All Suites Hotel <i>Land Use Code: 311</i>	24 Rooms	106	4	4	8	4	5	9
Multifamily Housing (Mid-Rise) <i>Land Use Code: 221</i>	10 DU	46	1	3	4	2	2	4
Shopping Plaza (40-150K) <i>Land Use Code: 821</i>	59,639 SF	5,636	131	80	211	277	300	577
Total Gross Trips		7,006	291	108	399	313	451	764
Other Modes of Transportation ³		20%	-58	-22	-80	-62	-90	-152
Internalization ²		AM PM	7.5% 8.5%	-12 -12	-24	-27 -27	-27	-54
Passby Retail (PM) ⁴		40%	0	0	0	-87	-87	-174
Net Proposed Trips			221	74	295	137	247	384

¹Based on ITE Trip Generation, 11th Edition.

²Based on US Census Tract 42.08 (38.6%), capped at 20% per City of Miami Beach standards.

³Based on ITE Trip Generation Handbook, 3rd Edition.

⁴Based on ITE Trip Generation, 11th Edition supporting Documentation.

The Alton Trip Generation (Continued)

Existing Use

Existing ITE Land Use Designation ¹	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
All Suites Hotel <i>Land Use Code: 311</i>	24 Rooms	106	4	4	8	4	5	9
Shopping Plaza (40-150K) <i>Land Use Code: 821</i>	102,186 SF	9,656	224	137	361	433	469	902
Total Gross Trips		106	228	141	369	437	474	911
Other Modes of Transportation ³		20%	-46	-28	-74	-88	-95	-183
Internalization ²	AM	0.0%	0	0	0	-2	-2	-4
	PM	0.3%						
Passby Retail (PM) ⁴		40%	0	0	0	-144	-144	-288
Net Existing Trips			182	113	295	203	233	436

¹Based on ITE Trip Generation, 11th Edition.

²Based on US Census Tract 42.08 (38.6%), capped at 20% per City of Miami Beach standards.

Net Trip Difference

	Daily Vehicle Trips	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed	7,006	221	74	295	137	247	384
Existing	106	182	113	295	203	233	436
Net New External Trips	6,900	39	-39	0	-66	14	-52

- Trip Distribution / Trip Assignment – Net new external project traffic will be assigned to the adjacent street network using the appropriate cardinal distribution for **TAZ 641** from the *2045 Miami-Dade Long Range Transportation Plan Update*, published by the *Transportation Planning Organization*. Normal area traffic patterns will also be considered when assigning project trips. A figure showing all of the assigned trips to the adjacent transportation network will be provided as part of the study. **The expected build-out year is 2024.**
- Background Traffic – Available Florida Department of Transportation (FDOT) and Miami-Dade County (MDC) traffic counts will be consulted to determine a growth factor consistent with historical annual growth in the area. The growth factor will be applied to the existing traffic volumes to establish background traffic. This will be documented in the study. **Due to the effects**

of the Covid-19 pandemic the 2020 and 2021 FDOT historical count data will be excluded from the analysis.

- Committed Developments – The City’s **Transportation and Mobility Department** will be consulted for nearby committed developments (**approved but unbuilt/ unopened projects**) in the project area. **Committed trips associated with the committed developments will be added to the analysis.** If no committed developments are found in the area, a 0.5% growth rate will be applied to the analysis to account for any unknown committed developments in the area.
- Future Transportation Projects – The 2022 TIP, 2045 LRTP, and the City of Miami Beach’s *Transportation Master Plan Final Report* will be reviewed and **consulted to determine any planned roadway improvements within the project area. Any found roadway improvements (published by the FDOT, MDC, City of Miami Beach, etc.) will be considered in the analysis at project build-out.**
- Intersection Capacity Analysis – The intersection capacity analyses will be conducted for the following conditions:
 - Existing conditions (2022)
 - Future conditions with Committed Developments (2024)
 - Future conditions with Project and Committed Development (2024)

Intersection analysis will be done using the Synchro software based on the Highway Capacity Manual (HCM 6th Ed). Figures depicting trip distribution for each of these scenarios will be provided as part of this study. In addition to the intersections identified above, all projects driveways will be analyzed. If the results of the analysis show any intersection operating below the City’s Level of Service standards, mitigation measures will be recommended.

- Signal Location and Timing – Existing signal phasing and timing for the signalized intersections will be obtained from Miami-Dade County. Signal data collected from the county will be included in the appendix of this study.
- As part of the intersection analysis, a table summarizing/comparing the 95th percentile vehicle stacking / queues and existing storage length for all exclusive turn lanes will be provided.
- An extensive Transportation Demand Management plan (TDM) will be included in the report.
- **Per the City reviewer’s request, a current copy of a signed and sealed pavement marking and signage plan prepared by a Professional Engineer in the state of Florida will be provided.**

CIRCULATION ANALYSIS/PLAN

- Multimodal – Pedestrian, bicycle and transit facilities will be defined in the Circulation Plan. Existing bus routes including schedule and bus stop locations will be discussed as part of the study. An effort will be made to include bicycle parking facilities within the project site to be utilized either by employees or tenants.
- A vehicle maneuverability analysis for the loading zone and all ingress and egress driveway connections will be performed and included within the report.

QUEUING ANALYSIS

- If applicable, a queuing analysis will be performed at the gated entrance per the methods outlined in the Institute of Transportation Engineers (ITE) Transportation and Land Development. The vehicle queue (M) will be calculated based on processing rate, demand rate, service positions and utilization factor as necessary. The analysis will be done to ensure that there is sufficient on-site vehicle stacking so that there is no vehicle back-up onto the public right-of-way. Peak hour demand will be estimated at the project's entrances. The analysis will consider both demand and typical service times per vehicle. The gated entrances capacity will be a function of the numbers of lanes, type of service provided, and geometrics. The analysis, conclusions and recommendations will be documented in the traffic report.
- A valet queuing analysis will be performed to determine the potential queue at the project's pick-up and drop-off areas. The queue will be calculated based on the peak hour traffic published by ITE's Trip Generation, 11th Edition. The project trip generation for the AM and PM peak hours will be used for the analysis. A processing rate will be used for valet operations. Arrival flow rate from the traffic distribution will be converted to a random distribution using the Poisson formula (if applicable). The queuing analysis will be based on ITE's Transportation and Land Development publication – using Poisson arrivals and negative exponential service time. Entrance capacity will be a function of the numbers of lanes, number of valet attendants, and geometrics.

If you have any questions you can contact me at (305) 447-0900.

w:\22\22113\methodology july 2022\the alton traffic study methodology.docx

Attachment A



Rev.	Date	Rev.	Date

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PB SUBMITTAL

OFFICE BUILDING
 1656-1680 ALTON RD
 MIAMI BEACH, FLORIDA 33139

Owner:
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 Address:
 Tel:
 Email:

Landscape:
 CLAD
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 Studio 113, Miami Fl
 (786) 536-6076
 Email: caroline@cladlandscape.com

Consultant:
 Name:
 Address:
 Address:
 Tel:
 Email:

Consultant:
 Name:
 Address:
 Address:
 Tel:
 Email:

Architect:
 Kobi Karp Architecture and Interior Design, Inc.
 571 NW 28th Street
 Miami, Florida 33127 USA
 Tel: +1(305) 573 1818
 Fax: +1(305) 573 3766



SITE PLAN TRAFFIC

1 PROPOSED SITE PLAN TRAFFIC
 SCALE: 1:50

Date	07.28.2022	Sheet No.	A2.21
Scale	1:50		
Project	2132		

1680 Alton Road

Property Appraiser Information	Lot Area	Existing Adjusted Area	Proposed Areas	INCREASE	Existing Uses				Proposed Uses			
					Office	Retail	Restaurant	Residential	Office	Retail	Restaurant	Residential
1680 Alton	15,000	11,220	166,185				11,220		105,756	7,297	15,884	15,500
1676 Alton	7,500	7,485				7,485						
1664 Alton	15,000	24,145				24,145						
1656 Alton	15,000	7,964				7,964						
1209 Lincoln Road	7,500	14,914				7,457	7,457					
1677 West Ave	7,500	0										
1245 Lincoln Road	15,000	9815				4,908	4,908			4,908	4,908	
1698 Alton	15,000	182,527	182,527			23,443	3,199	46,802		23,443	3,199	46,802
1683 West Ave	17,000											
1681 West Ave	7,500											
TOTALS	122,000	258,070	348,712	100,457	0	75,402	26,784	46,802	105,756	35,648	23,991	62,302
								DIFFERENCE	105,756	-39,754	-2,793	15,500



 Project Location

Exhibit 1

Location Map



Attachment B

Scenario - 3

Scenario Name: Proposed - Sept 2022

User Group:

Dev. phase: 1

No. of Years to

Project Traffic : 0

Analyst Note:

Warning: The time periods among the land uses do not appear to match.

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
311 - All Suites Hotel	General	Rooms	24	Weekday	Average	53	53	106
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				4.40	50%	50%	
311(1) - All Suites Hotel	General	Rooms	24	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average	4	4	8
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				0.34	53%	47%	
311(2) - All Suites Hotel	General	Rooms	24	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average	4	4	8
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				0.36	49%	51%	
821 - Shopping Plaza (40-150k) - Supermarket -	General	1000 Sq. Ft. GLA	59.64	Weekday	Average	2818	2818	5636
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				94.49	50%	50%	
821(1) - Shopping Plaza (40-150k) -	General	1000 Sq. Ft. GLA	59.64	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average	131	80	211
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				3.53	62%	38%	
821(2) - Shopping Plaza (40-150k) - Supermarket	General	1000 Sq. Ft. GLA	59.64	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN) T = 7.67(X) + 118.86	277	300	577
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban					48%	52%	
221 - Multifamily Housing (Mid-Rise) - Not Close	General	Dwelling Units	10	Weekday	Average	23	23	46
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				4.54	50%	50%	
221(1) - Multifamily Housing (Mid-Rise) - Not	General	Dwelling Units	10	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average	1	3	4
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				0.37	23%	77%	
221(2) - Multifamily Housing (Mid-Rise) - Not	General	Dwelling Units	10	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average	2	2	4
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				0.39	61%	39%	
710 - General Office Building	General	1000 Sq. Ft. GFA	105.756	Weekday	Best Fit (LOG) Ln(T) = 0.87Ln(X) + 3.05	609	609	1218
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban					50%	50%	
710(1) - General Office Building	General	1000 Sq. Ft. GFA	105.756	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LOG) Ln(T) = 0.86Ln(X) + 1.16	155	21	176
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban					88%	12%	
710(2) - General Office Building	General	1000 Sq. Ft. GFA	105.75	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG) Ln(T) = 0.83Ln(X) + 1.29	30	144	174
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban					17%	83%	

Scenario - 1

Scenario Name: Existing

User Group:

Dev. phase: 1

No. of Years to 0

Project Traffic :

Analyst Note:

Warning: The time periods among the land uses do not appear to match.

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
311 - All Suites Hotel	General	Rooms	24	Weekday	Average	53	53	106
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				4.40	50%	50%	
311(1) - All Suites Hotel	General	Rooms	24	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average	4	4	8
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				0.34	53%	47%	
311(2) - All Suites Hotel	General	Rooms	24	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average	4	5	9
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				0.36	49%	51%	
821 - Shopping Plaza (40-150k) - Supermarket -	General	1000 Sq. Ft. GLA	102.186	Weekday	Average	4828	4828	9656
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				94.49	50%	50%	
821(1) - Shopping Plaza (40-150k) -	General	1000 Sq. Ft. GLA	102.186	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average	224	137	361
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				3.53	62%	38%	
821(2) - Shopping Plaza (40-150k) - Supermarket	General	1000 Sq. Ft. GLA	102.186	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN)	433	469	902
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				T = 7.67(X) + 118.86	48%	52%	

AM Peak Hour Trip Generation and Internalization

The Alton

All Suites Hotel Land Use 311 24 Suites		Retail Land Use 821 102,186 SF		
In	Out	In	Out	
4	4	224	137	369 ITE Trips
-1	-1	-45	-27	-74 -20.0% Transit/Pedestrian
3	3	179	110	295 Non transit vehicle Trips
UNBALANCED INTERNALIZATION				
0%	14%	0	4%	
0	0	0	7	
0	0	0	0	
All Suites Hotel		Retail		
In	Out	In	Out	
3	3	179	110	295 Vehicle Trips
BALANCED INTERNALIZATION				
0	0	0	0	
3	3	179	110	
	0.0%		0.0%	0 Internal 295 External Trips 0.0% % Internal
3	3	179	110	295
		0	0	0 0% Passby
3	3	179	110	295 Net New External Trips

PM Peak Hour Trip Generation and Internalization

The Alton

All Suites Hotel Land Use 311 24 Suites		Retail Land Use 821 102,186 SF		
In	Out	In	Out	
4	5	433	469	911 ITE Trips
-1	-1	-87	-94	-183 -20.0%
3	4	346	375	728 Non transit vehicle Trips
UNBALANCED INTERNALIZATION				
17% 1	16% 1	1	2% 7	5% 19
All Suites Hotel		Retail		
In	Out	In	Out	
3	4	346	375	728 Vehicle Trips
BALANCED INTERNALIZATION				
-1	-1	-1	-1	
2	3	345	374	-4 Internal 724 External Trips 0.5% % Internal
	28.6%		0.3%	
2	3	345	374	724
		-144	-144	-288 40% Passby
2	3	201	230	436 Net New External Trips



COMMUTING CHARACTERISTICS BY SEX

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Census Tract 42.08, Miami-Dade County, Florida						
Label	Total		Male		Female	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Workers 16 years and over	869	±247	419	±124	450	±190
MEANS OF TRANSPORTATION TO WORK						
Car, truck, or van	46.5%	±14.7	68.7%	±16.8	25.8%	±16.8
Drove alone	42.6%	±14.4	64.4%	±17.9	22.2%	±15.7
Carpooled	3.9%	±4.4	4.3%	±7.4	3.6%	±6.4
In 2-person carpool	0.8%	±2.3	0.0%	±10.7	1.6%	±4.7
In 3-person carpool	2.1%	±3.7	4.3%	±7.4	0.0%	±10.0
In 4-or-more person carpool	1.0%	±1.8	0.0%	±10.7	2.0%	±3.7
Workers per car, truck, or van	1.06	±0.07	1.05	±0.08	1.10	±0.19
Public transportation (excluding taxicab)	9.9%	±11.5	0.0%	±10.7	19.1%	±21.0
Walked	2.6%	±4.4	5.5%	±8.8	0.0%	±10.0
Bicycle	26.1%	±12.4	18.4%	±12.8	33.3%	±23.1
Taxicab, motorcycle, or other means	10.4%	±10.9	7.4%	±11.6	13.1%	±13.0
Worked from home	4.5%	±6.7	0.0%	±10.7	8.7%	±12.6
PLACE OF WORK						
Workers 16 years and over who did not work from home	830	±232	419	±124	411	±171
VEHICLES AVAILABLE						
PERCENT ALLOCATED						

Table Notes

COMMUTING CHARACTERISTICS BY SEX

Survey/Program: American Community Survey

Year: 2020

Estimates: 5-Year

Table ID: S0801

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, for 2020, the 2020 Census provides the official counts of the population and housing units for the nation, states, counties, cities, and towns. For 2016 to 2019, the Population Estimates Program provides estimates of the population for the nation, states, counties, cities, and towns and intercensal housing unit estimates for the nation, states, and counties.

Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

When information is missing or inconsistent, the Census Bureau logically assigns an acceptable value using the response to a related question or questions. If a logical assignment is not possible, data are filled using a statistical process called allocation, which uses a similar individual or household to provide a donor value. The "Allocated" section is the number of respondents who received an allocated value for a particular subject.

2019 ACS data products include updates to several categories of the existing means of transportation question. For more information, see: Change to Means of Transportation.

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

The 2016-2020 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

-

The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution.

N

The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.

(X)

The estimate or margin of error is not applicable or not available.

median-

The median falls in the lowest interval of an open-ended distribution (for example "2,500-")

median+

The median falls in the highest interval of an open-ended distribution (for example "250,000+").

**

The margin of error could not be computed because there were an insufficient number of sample observations.

The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.

A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Appendix C

Traffic Data

Traffic Volumes

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & Lincoln Rd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-001
 Date: 9/14/2022

Data - Cars

NS/EW Streets:	West Ave				West Ave				Lincoln Rd				Lincoln Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	40	1	0	1	23	9	0	15	4	5	0	0	4	4	0	106
7:15 AM	1	31	2	0	2	27	15	0	10	6	8	0	1	4	0	0	107
7:30 AM	3	43	1	0	1	22	9	0	18	4	1	0	1	3	3	0	109
7:45 AM	1	43	2	0	2	27	6	0	23	4	4	0	2	3	7	0	124
8:00 AM	4	56	5	0	2	53	9	0	28	2	2	0	4	6	1	0	172
8:15 AM	2	58	6	0	2	44	9	0	12	8	4	0	4	3	5	0	157
8:30 AM	5	74	1	0	3	49	11	0	14	4	4	0	4	5	15	0	189
8:45 AM	2	63	4	0	4	58	16	0	23	6	8	0	2	6	9	0	201
TOTAL VOLUMES :	18	408	22	0	17	303	84	0	143	38	36	0	18	34	44	0	1165
APPROACH %'s :	4.02%	91.07%	4.91%	0.00%	4.21%	75.00%	20.79%	0.00%	65.90%	17.51%	16.59%	0.00%	18.75%	35.42%	45.83%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	13	251	16	0	11	204	45	0	77	20	18	0	14	20	30	0	719
PEAK HR FACTOR :	0.650	0.848	0.667	0.000	0.688	0.879	0.703	0.000	0.688	0.625	0.563	0.000	0.875	0.833	0.500	0.000	0.894
	0.875				0.833				0.777				0.667				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	4	85	7	0	3	65	19	0	19	14	8	0	6	9	13	0	252
4:15 PM	5	46	6	0	3	54	10	1	5	5	10	0	4	4	15	0	168
4:30 PM	6	78	6	0	11	54	10	0	15	10	4	0	3	1	12	0	210
4:45 PM	7	66	7	0	5	69	9	1	14	15	2	0	6	9	18	1	229
5:00 PM	3	49	7	0	3	56	25	1	15	7	3	0	3	5	13	0	190
5:15 PM	1	64	3	0	7	57	22	0	19	8	2	0	4	6	9	1	203
5:30 PM	5	66	9	0	1	52	16	0	12	7	5	0	6	9	5	0	193
5:45 PM	0	69	8	0	2	61	18	0	10	3	1	1	9	8	14	0	204
TOTAL VOLUMES :	31	523	53	0	35	468	129	3	109	69	35	1	41	51	99	2	1649
APPROACH %'s :	5.11%	86.16%	8.73%	0.00%	5.51%	73.70%	20.31%	0.47%	50.93%	32.24%	16.36%	0.47%	21.24%	26.42%	51.30%	1.04%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	22	275	26	0	22	242	48	2	53	44	24	0	19	23	58	1	859
PEAK HR FACTOR :	0.786	0.809	0.929	0.000	0.500	0.877	0.632	0.500	0.697	0.733	0.600	0.000	0.792	0.639	0.806	0.250	0.852
	0.841				0.902				0.738				0.743				

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & Lincoln Rd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-001
 Date: 9/14/2022

Data - HT

NS/EW Streets:	West Ave				West Ave				Lincoln Rd				Lincoln Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
7:15 AM	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	0	1	0	0	4	0	0	0	0	1	0	0	0	0	0	6
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	1	0	0	3	1	0	0	0	0	0	0	0	0	0	6
8:15 AM	0	1	0	0	1	2	0	0	0	0	0	0	0	1	1	0	6
8:30 AM	0	2	0	0	0	7	1	0	2	1	1	0	0	0	0	0	14
8:45 AM	0	5	1	0	1	0	1	0	1	0	0	0	0	0	0	0	9
TOTAL VOLUMES :	0	10	3	0	2	18	4	0	4	1	2	0	0	1	1	0	46
APPROACH %'s :	0.00%	76.92%	23.08%	0.00%	8.33%	75.00%	16.67%	0.00%	57.14%	14.29%	28.57%	0.00%	0.00%	50.00%	50.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																
PEAK HR VOL :	0	9	2	0	2	12	3	0	3	1	1	0	0	1	1	0	35
PEAK HR FACTOR :	0.000	0.450	0.500	0.000	0.500	0.429	0.750	0.000	0.375	0.250	0.250	0.000	0.000	0.250	0.250	0.000	0.625

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	5
4:15 PM	0	1	0	0	0	0	0	0	0	2	1	0	0	1	0	0	4
4:30 PM	0	2	1	0	0	2	0	0	0	0	0	0	0	0	1	0	6
4:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	0	5	2	0	0	9	0	0	2	2	1	0	0	1	2	0	24
APPROACH %'s :	0.00%	71.43%	28.57%	0.00%	0.00%	100.00%	0.00%	0.00%	40.00%	40.00%	20.00%	0.00%	0.00%	33.33%	66.67%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																
PEAK HR VOL :	0	4	2	0	0	6	0	0	0	2	1	0	0	1	1	0	17
PEAK HR FACTOR :	0.000	0.500	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.250	0.250	0.000	0.708

	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU
AM	0%	3%	11%	#DIV/0!	15%	6%	6%	#DIV/0!	4%	5%	5%	#DIV/0!	0%	5%	3%	#DIV/0!
PM	0%	1%	7%	#DIV/0!	0%	2%	0%	0%	0%	4%	4%	#DIV/0!	0%	4%	2%	0%

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & Lincoln Rd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-001
 Date: 9/14/2022

Data - Bikes

NS/EW Streets:	West Ave				West Ave				Lincoln Rd				Lincoln Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	2	0	0	0	3	0	0	1	1	0	0	0	0	0	0	7
7:15 AM	1	7	0	0	3	1	2	0	1	2	0	0	0	1	2	0	20
7:30 AM	1	7	0	0	0	2	1	0	1	0	1	0	0	4	2	0	19
7:45 AM	0	8	0	0	1	4	3	0	3	1	0	0	0	0	0	0	20
8:00 AM	0	8	1	0	3	3	1	0	1	1	1	0	0	1	5	0	25
8:15 AM	0	7	1	0	1	6	2	0	1	0	0	0	0	1	0	0	19
8:30 AM	0	4	1	0	1	6	0	0	1	0	0	0	0	2	2	0	17
8:45 AM	0	5	2	0	0	4	1	0	0	0	1	0	2	2	2	0	19
TOTAL VOLUMES :	2	48	5	0	9	29	10	0	9	5	3	0	2	11	13	0	146
APPROACH %'s :	3.64%	87.27%	9.09%	0.00%	18.75%	60.42%	20.83%	0.00%	52.94%	29.41%	17.65%	0.00%	7.69%	42.31%	50.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	24	5	0	5	19	4	0	3	1	2	0	2	6	9	0	80
PEAK HR FACTOR :	0.000	0.750	0.625	0.000	0.417	0.792	0.500	0.000	0.750	0.250	0.500	0.000	0.250	0.750	0.450	0.000	0.800
	0.806				0.778				0.500				0.708				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	1	3	0	0	1	3	1	0	3	1	0	0	0	2	4	0	19
4:15 PM	1	6	1	0	0	8	2	0	2	0	1	0	0	3	0	0	24
4:30 PM	2	2	0	0	0	2	2	0	1	0	0	0	1	0	1	0	11
4:45 PM	0	10	3	0	2	3	1	0	1	0	0	0	0	1	2	0	23
5:00 PM	0	6	1	0	4	7	2	0	1	0	0	0	0	1	1	1	24
5:15 PM	0	7	2	0	0	5	2	0	0	1	1	0	0	1	2	0	21
5:30 PM	0	6	0	0	0	7	2	0	5	1	0	0	0	1	1	0	23
5:45 PM	0	4	1	0	2	6	3	0	0	2	0	0	0	3	1	0	22
TOTAL VOLUMES :	4	44	8	0	9	41	15	0	13	5	2	0	1	12	12	1	167
APPROACH %'s :	7.14%	78.57%	14.29%	0.00%	13.85%	63.08%	23.08%	0.00%	65.00%	25.00%	10.00%	0.00%	3.85%	46.15%	46.15%	3.85%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	4	21	4	0	3	16	6	0	7	1	1	0	1	6	7	0	77
PEAK HR FACTOR :	0.500	0.525	0.333	0.000	0.375	0.500	0.750	0.000	0.583	0.250	0.250	0.000	0.250	0.500	0.438	0.000	0.802
	0.558				0.625				0.563				0.583				

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & Lincoln Rd
City: Miami Beach

Project ID: 22-140413-001
Date: 9/14/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	West Ave		West Ave		Lincoln Rd		Lincoln Rd		TOTAL
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
AM	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	4	0	6	2	5	3	1	2	23
7:15 AM	7	2	3	2	3	0	1	5	23
7:30 AM	5	3	6	2	0	0	7	3	26
7:45 AM	2	4	6	1	3	2	2	1	21
8:00 AM	3	4	4	4	5	0	5	3	28
8:15 AM	5	5	0	5	4	4	6	5	34
8:30 AM	6	1	3	10	3	0	3	5	31
8:45 AM	8	4	9	8	5	1	3	6	44
TOTAL VOLUMES :	EB 40	WB 23	EB 37	WB 34	NB 28	SB 10	NB 28	SB 30	TOTAL 230
APPROACH %'s :	63.49%	36.51%	52.11%	47.89%	73.68%	26.32%	48.28%	51.72%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	22	14	16	27	17	5	17	19	137
PEAK HR FACTOR :	0.688	0.700	0.444	0.675	0.850	0.313	0.708	0.792	0.778
	0.750		0.632		0.688		0.818		

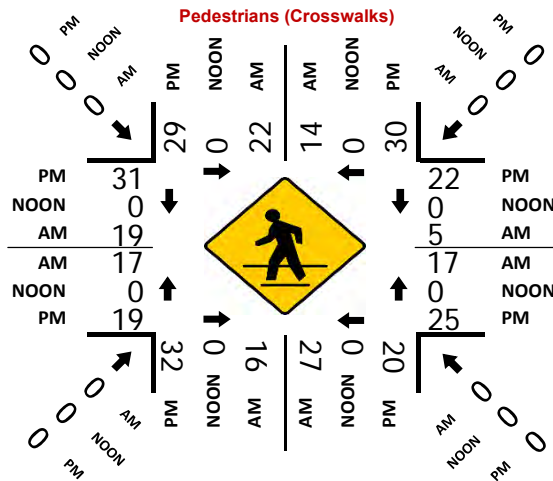
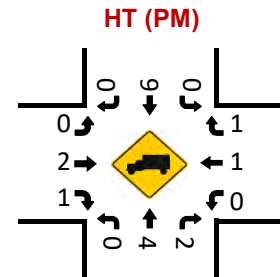
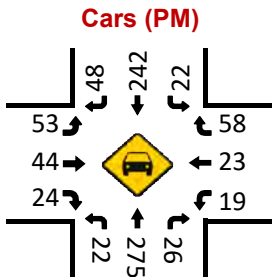
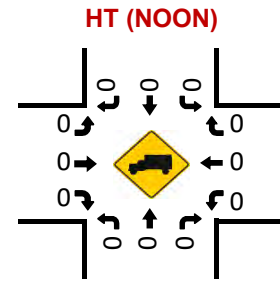
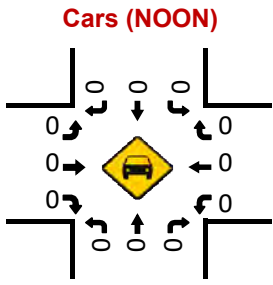
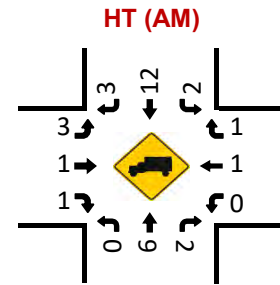
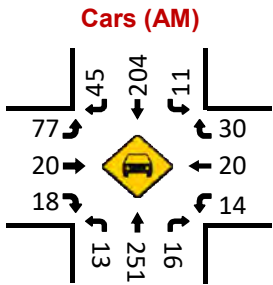
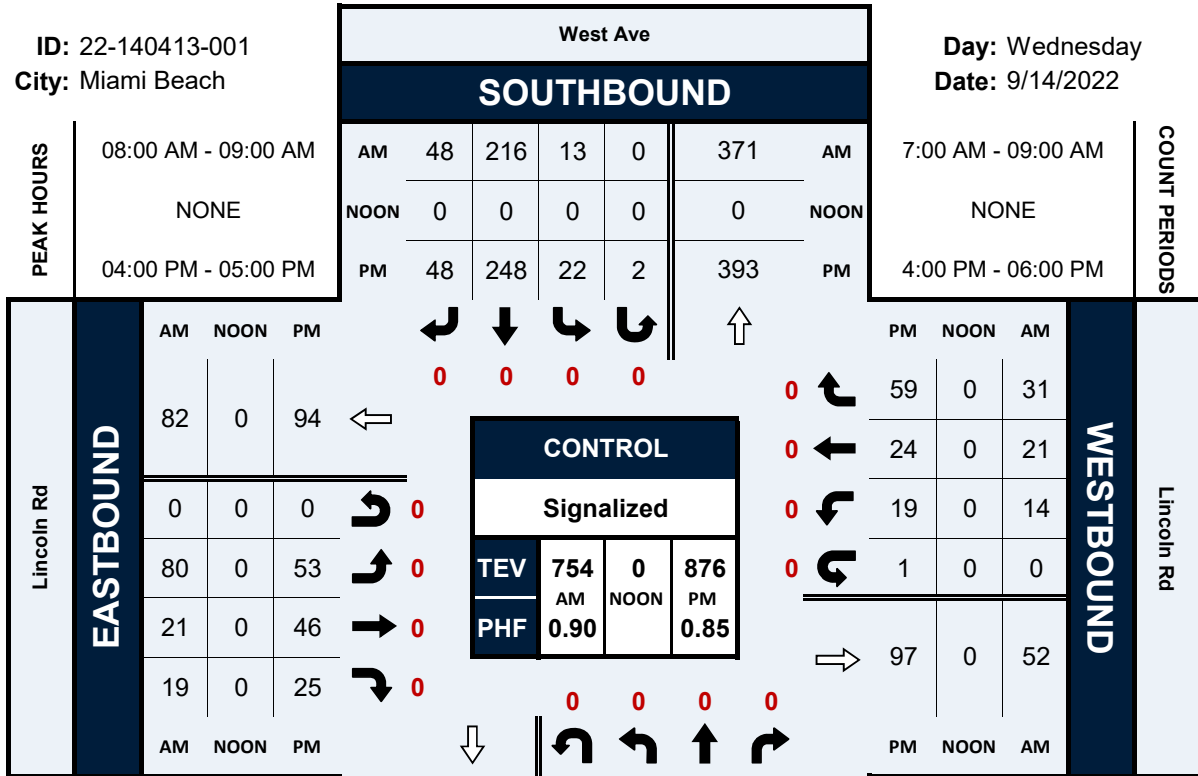
NS/EW Streets:	West Ave		West Ave		Lincoln Rd		Lincoln Rd		TOTAL
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
PM	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	11	12	7	8	12	5	8	9	72
4:15 PM	3	5	9	6	4	6	3	6	42
4:30 PM	8	6	9	5	5	4	1	6	44
4:45 PM	7	7	7	1	4	7	7	10	50
5:00 PM	15	12	11	9	5	7	9	12	80
5:15 PM	6	11	10	6	8	14	7	6	68
5:30 PM	6	7	9	20	11	18	11	5	87
5:45 PM	13	7	13	8	3	3	7	13	67
TOTAL VOLUMES :	EB 69	WB 67	EB 75	WB 63	NB 52	SB 64	NB 53	SB 67	TOTAL 510
APPROACH %'s :	50.74%	49.26%	54.35%	45.65%	44.83%	55.17%	44.17%	55.83%	
PEAK HR :	04:00 PM - 05:00 PM								TOTAL
PEAK HR VOL :	29	30	32	20	25	22	19	31	208
PEAK HR FACTOR :	0.659	0.625	0.889	0.625	0.521	0.786	0.594	0.775	0.722
	0.641		0.867		0.691		0.735		

West Ave & Lincoln Rd

Peak Hour Turning Movement Count

ID: 22-140413-001
City: Miami Beach

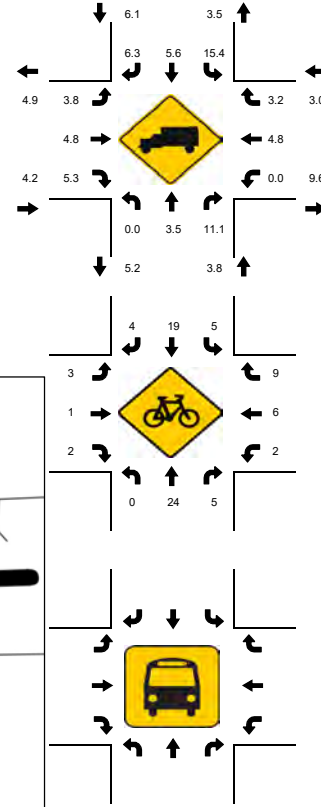
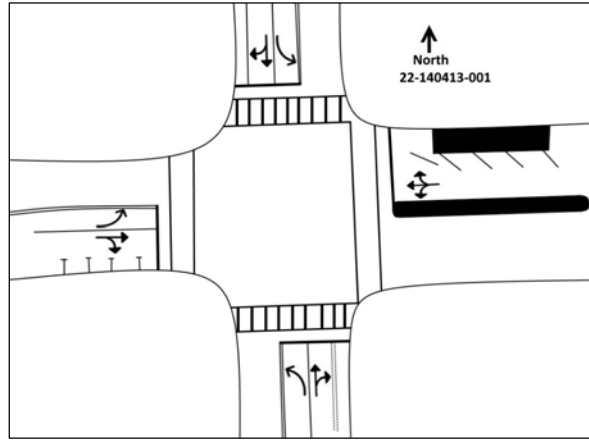
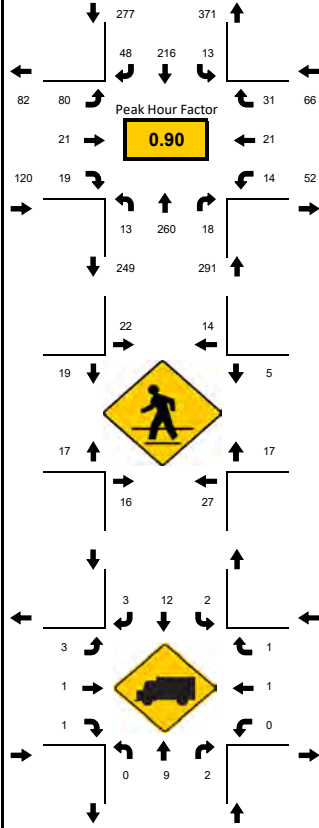
Day: Wednesday
Date: 9/14/2022



LOCATION: West Ave & Lincoln Rd
CITY/STATE: Miami Beach, FL

PROJECT ID: 22-140413-001
DATE: Wed, Sep 14, 2022

Peak-Hour: 08:00 AM - 09:00 AM
Peak 15-Minute: 08:45 AM - 09:00 AM

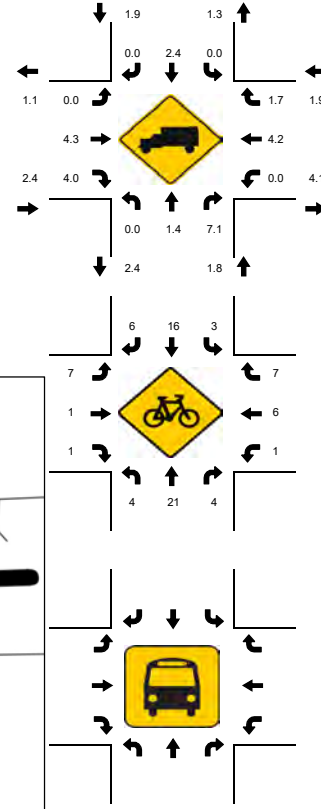
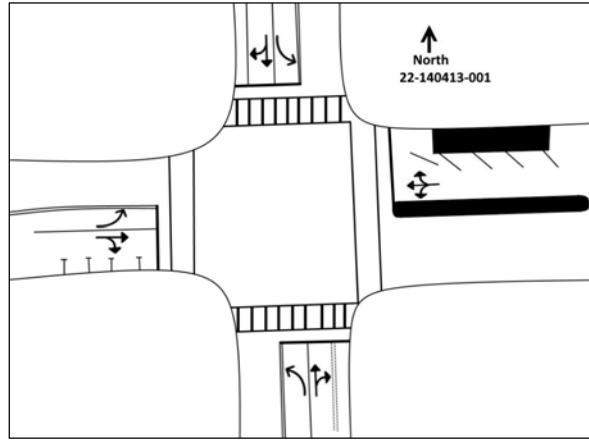
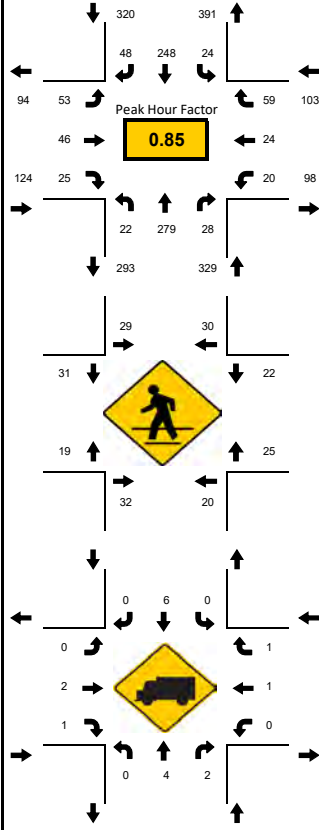


15-Min Count Period Beginning At	West Ave Northbound					West Ave Southbound					Lincoln Rd Eastbound					Lincoln Rd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	0	40	1	0		1	24	9	0		16	4	5	0		0	4	4	0		108	457
07:15 AM	1	32	2	0		2	28	16	0		10	6	8	0		1	4	0	0		110	527
07:30 AM	3	43	2	0		1	26	9	0		18	4	2	0		1	3	3	0		115	580
07:45 AM	1	43	2	0		2	27	6	0		23	4	4	0		2	3	7	0		124	668
08:00 AM	4	57	6	0		2	56	10	0		28	2	2	0		4	6	1	0		178	754
08:15 AM	2	59	6	0		3	46	9	0		12	8	4	0		4	4	6	0		163	576
08:30 AM	5	76	1	0		3	56	12	0		16	5	5	0		4	5	15	0		203	413
08:45 AM	2	68	5	0		5	58	17	0		24	6	8	0		2	6	9	0		210	210
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	20	304	24	0		20	232	68	0		112	32	32	0		16	24	60	0		944	
Heavy Trucks	0	20	4	0		4	28	4	0		8	4	4	0		0	4	4	0		84	
Pedestrians		68					48					44					32				192	
Bicycles	0	32	8	0		12	24	8	0		4	4	4	0		8	8	20	0		132	
Buses																						
Stopped Buses																						

LOCATION: West Ave & Lincoln Rd
CITY/STATE: Miami Beach, FL

PROJECT ID: 22-140413-001
DATE: Wed, Sep 14, 2022

Peak-Hour: 04:00 PM - 05:00 PM
Peak 15-Minute: 04:00 PM - 04:15 PM



15-Min Count Period Beginning At	West Ave Northbound					West Ave Southbound					Lincoln Rd Eastbound					Lincoln Rd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	4	85	8	0		3	68	19	0		19	14	8	0		6	10	13	0		257	876
04:15 PM	5	47	6	0		3	54	10	1		5	7	11	0		4	4	15	0		172	811
04:30 PM	6	80	7	0		11	56	10	0		15	10	4	0		3	1	13	0		216	843
04:45 PM	7	67	7	0		5	70	9	1		14	15	2	0		6	9	18	1		231	823
05:00 PM	3	49	7	0		3	56	25	1		16	7	3	0		3	5	14	0		192	797
05:15 PM	1	64	3	0		7	58	22	0		19	8	2	0		4	6	9	1		204	605
05:30 PM	5	67	9	0		1	53	16	0		13	7	5	0		6	9	5	0		196	401
05:45 PM	0	69	8	0		2	62	18	0		10	3	1	1		9	8	14	0		205	205
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	28	340	32	0		44	280	76	4		76	60	44	0		24	40	72	4		1124	
Heavy Trucks	0	8	4	0		0	12	0	0		0	8	4	0		0	4	4	0		44	
Pedestrians		60					92					68					68				288	
Bicycles	8	40	12	0		8	32	8	0		12	4	4	0		4	12	16	0		160	
Buses																						
Stopped Buses																						

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & 17th St
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-002
 Date: 9/14/2022

Data - Total

NS/EW Streets:	West Ave				West Ave				17th St				17th St						
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU			
7:00 AM	15	41	8	0	0	16	0	0	0	5	11	0	6	9	2	0	113		
7:15 AM	9	29	4	1	0	26	0	0	0	13	8	0	14	12	3	0	119		
7:30 AM	14	39	9	0	3	13	0	0	0	13	14	0	9	5	1	0	120		
7:45 AM	16	39	17	0	0	18	0	0	0	15	10	0	5	15	3	0	138		
8:00 AM	20	55	12	0	3	26	0	0	0	20	32	0	9	7	4	0	188		
8:15 AM	13	60	14	0	4	37	0	0	0	18	20	0	9	7	7	0	189		
8:30 AM	18	63	16	0	5	31	0	0	0	21	27	0	20	16	3	0	220		
8:45 AM	27	61	16	0	3	51	0	0	0	31	23	0	8	19	3	0	242		
TOTAL VOLUMES :	132	387	96	1	18	218	0	0	0	136	145	0	80	90	26	0	1329		
APPROACH %'s :	21.43%	62.82%	15.58%	0.16%	7.63%	92.37%	0.00%	0.00%	0.00%	48.40%	51.60%	0.00%	40.82%	45.92%	13.27%	0.00%			
PEAK HR :	08:00 AM - 09:00 AM																TOTAL		
PEAK HR VOL :	78	239	58	0	15	145	0	0	0	90	102	0	46	49	17	0	839		
PEAK HR FACTOR :	0.722	0.948	0.906	0.000	0.750	0.711	0.000	0.000	0.000	0.726	0.797	0.000	0.575	0.645	0.607	0.000	0.867		
	0.901																0.741	0.889	0.718
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU			
4:00 PM	25	60	39	0	1	52	0	0	0	24	27	0	19	29	12	0	288		
4:15 PM	22	44	19	0	13	41	0	0	0	36	22	0	14	32	10	0	253		
4:30 PM	26	56	31	0	5	40	0	0	0	20	21	0	17	18	13	0	247		
4:45 PM	22	51	27	0	10	49	0	0	0	24	29	0	15	29	16	0	272		
5:00 PM	20	48	20	0	8	38	0	0	0	19	32	0	25	29	8	0	247		
5:15 PM	21	62	18	0	9	51	0	0	0	27	26	0	17	28	12	0	271		
5:30 PM	18	53	11	0	9	37	0	0	0	15	20	0	15	30	9	0	217		
5:45 PM	20	41	30	0	9	46	0	0	0	20	30	0	15	20	7	1	239		
TOTAL VOLUMES :	174	415	195	0	64	354	0	0	0	185	207	0	137	215	87	1	2034		
APPROACH %'s :	22.19%	52.93%	24.87%	0.00%	15.31%	84.69%	0.00%	0.00%	0.00%	47.19%	52.81%	0.00%	31.14%	48.86%	19.77%	0.23%			
PEAK HR :	04:00 PM - 05:00 PM																TOTAL		
PEAK HR VOL :	95	211	116	0	29	182	0	0	0	104	99	0	65	108	51	0	1060		
PEAK HR FACTOR :	0.913	0.879	0.744	0.000	0.558	0.875	0.000	0.000	0.000	0.722	0.853	0.000	0.855	0.844	0.797	0.000	0.920		
	0.851																0.894	0.875	0.933

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & 17th St
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-002
 Date: 9/14/2022

Data - Cars

NS/EW Streets:	West Ave				West Ave				17th St				17th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	14	40	7	0	0	15	0	0	0	5	11	0	5	7	2	0	106
7:15 AM	9	28	4	1	0	25	0	0	0	13	8	0	13	11	3	0	115
7:30 AM	14	39	9	0	3	12	0	0	0	13	13	0	7	5	1	0	116
7:45 AM	16	39	17	0	0	18	0	0	0	15	10	0	5	14	3	0	137
8:00 AM	20	55	12	0	3	25	0	0	0	19	30	0	9	6	4	0	183
8:15 AM	12	59	13	0	3	36	0	0	0	16	19	0	8	7	7	0	180
8:30 AM	17	63	13	0	4	27	0	0	0	18	24	0	16	14	3	0	199
8:45 AM	25	58	15	0	2	51	0	0	0	29	23	0	7	19	3	0	232
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	127	381	90	1	15	209	0	0	0	128	138	0	70	83	26	0	1268
	21.20%	63.61%	15.03%	0.17%	6.70%	93.30%	0.00%	0.00%	0.00%	48.12%	51.88%	0.00%	39.11%	46.37%	14.53%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	74	235	53	0	12	139	0	0	0	82	96	0	40	46	17	0	794
PEAK HR FACTOR :	0.740	0.933	0.883	0.000	0.750	0.681	0.000	0.000	0.000	0.707	0.800	0.000	0.625	0.605	0.607	0.000	0.856
	0.923				0.712				0.856				0.780				0.856
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	25	60	39	0	1	51	0	0	0	24	26	0	18	29	12	0	285
4:15 PM	22	43	19	0	12	41	0	0	0	35	22	0	14	32	9	0	249
4:30 PM	24	55	31	0	5	40	0	0	0	20	21	0	16	18	13	0	243
4:45 PM	22	50	27	0	9	49	0	0	0	24	28	0	15	29	16	0	269
5:00 PM	20	47	20	0	8	38	0	0	0	19	31	0	25	28	8	0	244
5:15 PM	21	62	17	0	7	51	0	0	0	27	26	0	17	27	11	0	266
5:30 PM	17	52	11	0	8	37	0	0	0	15	19	0	15	30	9	0	213
5:45 PM	20	41	30	0	9	46	0	0	0	20	29	0	15	20	7	1	238
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	171	410	194	0	59	353	0	0	0	184	202	0	135	213	85	1	2007
	22.06%	52.90%	25.03%	0.00%	14.32%	85.68%	0.00%	0.00%	0.00%	47.67%	52.33%	0.00%	31.11%	49.08%	19.59%	0.23%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	93	208	116	0	27	181	0	0	0	103	97	0	63	108	50	0	1046
PEAK HR FACTOR :	0.930	0.867	0.744	0.000	0.563	0.887	0.000	0.000	0.000	0.736	0.866	0.000	0.875	0.844	0.781	0.000	0.918
	0.841				0.897				0.877				0.921				0.918

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & 17th St
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-002
 Date: 9/14/2022

Data - HT

NS/EW Streets:	West Ave				West Ave				17th St				17th St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
7:00 AM	1	1	1	0	0	1	0	0	0	0	0	0	1	2	0	0					7
7:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	1	1	0	0					4
7:30 AM	0	0	0	0	0	1	0	0	0	0	1	0	2	0	0	0					4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0					1
8:00 AM	0	0	0	0	0	1	0	0	0	1	2	0	0	1	0	0					5
8:15 AM	1	1	1	0	1	1	0	0	0	2	1	0	1	0	0	0					9
8:30 AM	1	0	3	0	1	4	0	0	0	3	3	0	4	2	0	0					21
8:45 AM	2	3	1	0	1	0	0	0	0	2	0	0	1	0	0	0					10
TOTAL VOLUMES :	5	6	6	0	3	9	0	0	0	8	7	0	10	7	0	0					61
APPROACH %'s :	29.41%	35.29%	35.29%	0.00%	25.00%	75.00%	0.00%	0.00%	0.00%	53.33%	46.67%	0.00%	58.82%	41.18%	0.00%	0.00%					
PEAK HR :	08:00 AM - 09:00 AM																				
PEAK HR VOL :	4	4	5	0	3	6	0	0	0	8	6	0	6	3	0	0					45
PEAK HR FACTOR :	0.500	0.333	0.417	0.000	0.750	0.375	0.000	0.000	0.000	0.667	0.500	0.000	0.375	0.375	0.000	0.000					0.536
	0.542				0.450				0.583				0.375								

NS/EW Streets:	West Ave				West Ave				17th St				17th St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0					3
4:15 PM	0	1	0	0	1	0	0	0	0	1	0	0	0	0	1	0					4
4:30 PM	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0					4
4:45 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0					3
5:00 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0					3
5:15 PM	0	0	1	0	2	0	0	0	0	0	0	0	0	1	1	0					5
5:30 PM	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0					4
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0					1
TOTAL VOLUMES :	3	5	1	0	5	1	0	0	0	1	5	0	2	2	2	0					27
APPROACH %'s :	33.33%	55.56%	11.11%	0.00%	83.33%	16.67%	0.00%	0.00%	0.00%	16.67%	83.33%	0.00%	33.33%	33.33%	33.33%	0.00%					
PEAK HR :	04:00 PM - 05:00 PM																				
PEAK HR VOL :	2	3	0	0	2	1	0	0	0	1	2	0	2	0	1	0					14
PEAK HR FACTOR :	0.250	0.750	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.250	0.500	0.000	0.500	0.000	0.250	0.000					0.875
	0.417				0.750				0.750				0.750								

	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
AM	5%	2%	9%	#DIV/0!	20%	4%	#DIV/0!	#DIV/0!	#DIV/0!	9%	6%	#DIV/0!	13%	6%	0%	#DIV/0!					
PM	2%	1%	0%	#DIV/0!	7%	1%	#DIV/0!	#DIV/0!	#DIV/0!	1%	2%	#DIV/0!	3%	0%	2%	#DIV/0!					

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & 17th St
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-002
 Date: 9/14/2022

Data - Bikes

NS/EW Streets:	West Ave				West Ave				17th St				17th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	1	4	0	0	0	1	1	0	0	2	1	0	0	2	0	0	12
7:30 AM	7	3	0	0	0	1	0	0	0	1	5	0	0	2	0	0	19
7:45 AM	3	4	1	0	0	2	0	0	0	4	2	0	0	3	1	0	20
8:00 AM	6	4	0	0	0	0	0	0	0	2	6	0	0	2	1	0	21
8:15 AM	7	3	1	0	0	3	0	0	0	1	4	0	0	3	1	0	23
8:30 AM	5	5	0	0	0	3	0	0	0	1	7	0	0	2	0	0	23
8:45 AM	2	3	0	0	0	3	0	0	0	6	5	0	0	4	1	0	24
8:45 AM	3	4	0	0	0	0	0	0	0	2	4	0	0	1	0	0	14
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	34	30	2	0	0	13	1	0	0	19	34	0	0	19	4	0	156
	51.52%	45.45%	3.03%	0.00%	0.00%	92.86%	7.14%	0.00%	0.00%	35.85%	64.15%	0.00%	0.00%	82.61%	17.39%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	17	15	1	0	0	9	0	0	0	10	20	0	0	10	2	0	84
PEAK HR FACTOR :	0.607	0.750	0.250	0.000	0.000	0.750	0.000	0.000	0.000	0.417	0.714	0.000	0.000	0.625	0.500	0.000	0.875
	0.750				0.750				0.682				0.600				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	4	5	0	0	0	2	0	0	0	0	2	0	1	3	2	0	19
4:30 PM	3	6	0	0	3	4	0	0	0	2	4	0	1	1	0	1	25
4:45 PM	1	0	0	0	0	2	0	0	1	0	1	0	0	5	0	1	11
5:00 PM	3	7	0	0	0	4	0	0	0	1	0	0	0	1	0	0	16
5:15 PM	2	2	2	0	0	3	1	0	0	3	4	0	0	5	0	0	22
5:30 PM	7	5	0	0	1	2	0	0	0	1	5	0	0	2	3	0	26
5:45 PM	4	7	1	0	1	4	0	0	0	3	6	0	1	3	1	0	31
5:45 PM	0	5	0	0	1	4	0	0	0	1	4	0	1	1	1	0	18
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	24	37	3	0	6	25	1	0	1	11	26	0	4	21	7	2	168
	37.50%	57.81%	4.69%	0.00%	18.75%	78.13%	3.13%	0.00%	2.63%	28.95%	68.42%	0.00%	11.76%	61.76%	20.59%	5.88%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	11	18	0	0	3	12	0	0	1	3	7	0	2	10	2	2	71
PEAK HR FACTOR :	0.688	0.643	0.000	0.000	0.250	0.750	0.000	0.000	0.250	0.375	0.438	0.000	0.500	0.500	0.250	0.500	0.710
	0.725				0.536				0.458				0.667				

National Data & Surveying Services **Intersection Turning** Movement Count

Location: West Ave & 17th St
City: Miami Beach

Project ID: 22-140413-002
Date: 9/14/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	West Ave		West Ave		17th St		17th St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	5	3	1	2	0	4	0	15
7:15 AM	1	3	2	1	0	0	1	2	10
7:30 AM	0	1	1	1	0	0	3	0	6
7:45 AM	1	1	1	8	1	0	1	0	13
8:00 AM	1	1	10	6	2	0	8	2	30
8:15 AM	1	0	8	0	1	2	10	4	26
8:30 AM	0	2	2	3	1	0	6	1	15
8:45 AM	1	1	7	4	1	1	4	3	22
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	5	14	34	24	8	3	37	12	137
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	3	4	27	13	5	3	28	10	93
PEAK HR FACTOR :	0.750	0.500	0.675	0.542	0.625	0.375	0.700	0.625	0.775
	0.875		0.625		0.667		0.679		

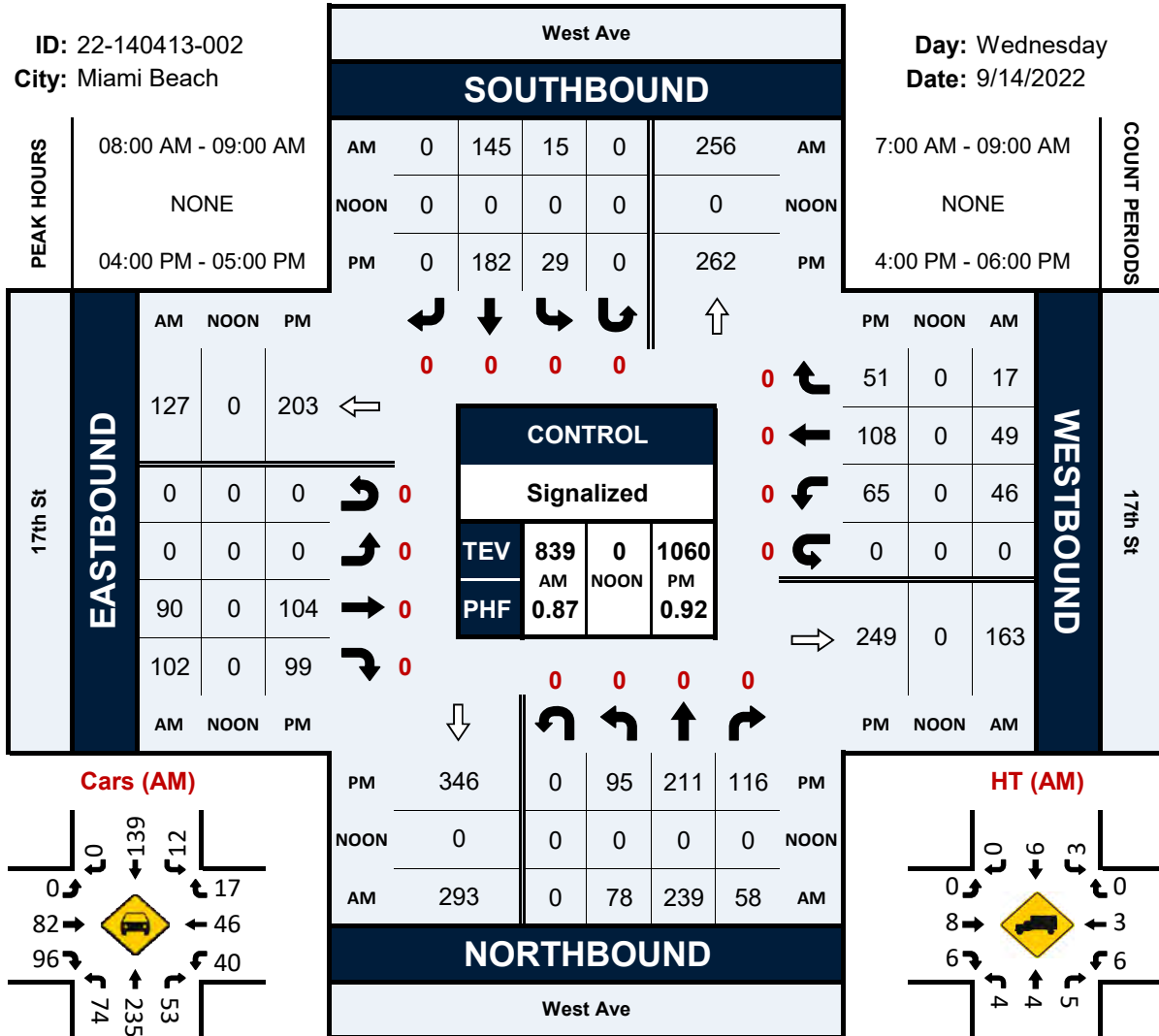
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	3	1	3	5	6	0	2	2	22
4:15 PM	1	5	6	5	2	0	8	8	35
4:30 PM	4	5	7	3	4	0	1	3	27
4:45 PM	3	1	5	3	3	3	5	5	28
5:00 PM	3	2	11	4	1	0	4	4	29
5:15 PM	3	0	7	7	3	1	8	6	35
5:30 PM	1	1	9	3	1	1	7	2	25
5:45 PM	2	14	14	12	1	0	7	3	53
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	20	29	62	42	21	5	42	33	254
PEAK HR :	04:00 PM - 05:00 PM								TOTAL
PEAK HR VOL :	11	12	21	16	15	3	16	18	112
PEAK HR FACTOR :	0.688	0.600	0.750	0.800	0.625	0.250	0.500	0.563	0.800
	0.639		0.841		0.750		0.531		

West Ave & 17th St

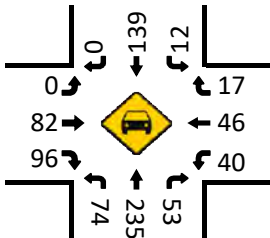
Peak Hour Turning Movement Count

ID: 22-140413-002
City: Miami Beach

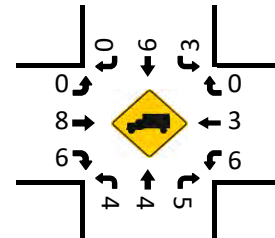
Day: Wednesday
Date: 9/14/2022



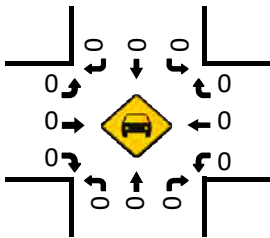
Cars (AM)



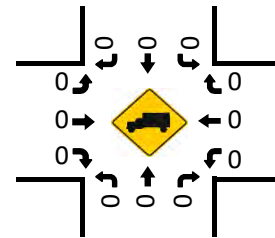
HT (AM)



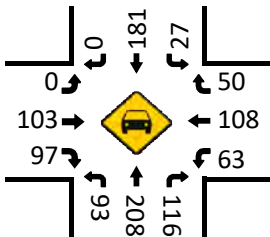
Cars (NOON)



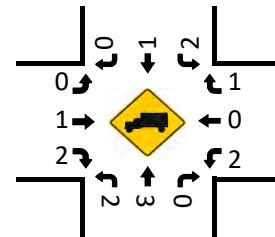
HT (NOON)



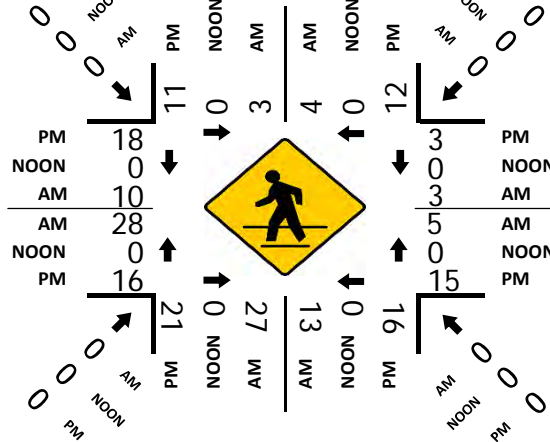
Cars (PM)



HT (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & 17th St
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-003
 Date: 9/14/2022

Data - Total

NS/EW Streets:	Alton Rd				Alton Rd				17th St				17th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	8	110	34	0	36	137	5	0	3	10	5	0	14	9	10	0	381
7:15 AM	9	96	46	0	34	172	10	0	6	7	7	0	22	10	15	0	434
7:30 AM	5	105	48	0	36	151	7	0	6	9	14	0	19	4	10	0	414
7:45 AM	17	112	56	0	43	190	0	0	5	17	15	0	9	12	17	0	493
8:00 AM	8	143	59	0	42	201	11	0	10	25	11	0	21	6	12	0	549
8:15 AM	8	163	57	1	38	168	8	0	8	30	15	0	26	12	16	0	550
8:30 AM	8	166	61	0	51	197	13	0	10	22	18	0	29	13	18	0	606
8:45 AM	15	193	56	1	55	205	8	0	8	39	17	0	20	12	16	0	645
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	78	1088	417	2	335	1421	62	0	56	159	102	0	160	78	114	0	4072
	4.92%	68.64%	26.31%	0.13%	18.43%	78.16%	3.41%	0.00%	17.67%	50.16%	32.18%	0.00%	45.45%	22.16%	32.39%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	39	665	233	2	186	771	40	0	36	116	61	0	96	43	62	0	2350
PEAK HR FACTOR :	0.650	0.861	0.955	0.500	0.845	0.940	0.769	0.000	0.900	0.744	0.847	0.000	0.828	0.827	0.861	0.000	0.911
	0.886				0.930				0.832				0.838				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	16	214	44	0	32	164	16	0	14	26	31	0	24	31	68	0	680
4:15 PM	16	231	32	0	38	176	9	0	8	28	34	0	39	37	40	0	688
4:30 PM	19	234	41	0	36	142	13	0	15	26	24	0	29	21	58	0	658
4:45 PM	17	213	37	1	53	155	19	0	20	34	30	0	18	23	54	1	675
5:00 PM	12	231	35	0	41	146	17	0	17	19	32	0	47	33	76	0	706
5:15 PM	12	227	26	0	36	160	13	0	16	29	21	1	35	37	71	2	686
5:30 PM	11	191	40	0	35	182	13	0	11	21	16	1	46	25	43	0	635
5:45 PM	9	200	29	0	49	169	12	0	20	25	28	0	47	24	44	0	656
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	112	1741	284	1	320	1294	112	0	121	208	216	2	285	231	454	3	5384
	5.24%	81.43%	13.28%	0.05%	18.54%	74.97%	6.49%	0.00%	22.12%	38.03%	39.49%	0.37%	29.29%	23.74%	46.66%	0.31%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	64	909	145	1	168	619	58	0	60	107	120	0	133	114	228	1	2727
PEAK HR FACTOR :	0.842	0.971	0.884	0.250	0.792	0.879	0.763	0.000	0.750	0.787	0.882	0.000	0.707	0.770	0.750	0.250	0.966
	0.952				0.931				0.854				0.763				

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & 17th St
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-003
 Date: 9/14/2022

Data - Cars

NS/EW Streets:	Alton Rd				Alton Rd				17th St				17th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	6	103	32	0	33	128	4	0	3	9	5	0	14	8	9	0	354
7:15 AM	9	93	43	0	32	167	10	0	6	6	6	0	22	8	14	0	416
7:30 AM	5	103	48	0	34	145	6	0	6	9	13	0	15	3	9	0	396
7:45 AM	16	107	52	0	42	183	0	0	5	17	15	0	9	10	15	0	471
8:00 AM	7	140	55	0	38	191	10	0	10	24	11	0	18	6	11	0	521
8:15 AM	7	157	56	1	38	159	7	0	5	29	13	0	25	12	13	0	522
8:30 AM	8	155	58	0	48	192	11	0	10	17	16	0	27	12	17	0	571
8:45 AM	15	182	53	1	55	198	7	0	7	37	15	0	19	12	13	0	614
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	73	1040	397	2	320	1363	55	0	52	148	94	0	149	71	101	0	3865
APPROACH %'s :	4.83%	68.78%	26.26%	0.13%	18.41%	78.42%	3.16%	0.00%	17.69%	50.34%	31.97%	0.00%	46.42%	22.12%	31.46%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	37	634	222	2	179	740	35	0	32	107	55	0	89	42	54	0	2228
PEAK HR FACTOR :	0.617	0.871	0.957	0.500	0.814	0.934	0.795	0.000	0.800	0.723	0.859	0.000	0.824	0.875	0.794	0.000	0.907
	0.891				0.917				0.822				0.826				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	16	209	42	0	32	158	16	0	14	26	31	0	21	31	66	0	662
4:15 PM	15	223	31	0	37	168	9	0	8	28	32	0	37	36	38	0	662
4:30 PM	19	224	38	0	33	140	13	0	15	25	24	0	27	21	56	0	635
4:45 PM	17	209	35	1	53	153	19	0	20	33	30	0	17	23	54	1	665
5:00 PM	12	227	34	0	40	141	17	0	17	19	32	0	46	32	75	0	692
5:15 PM	12	221	26	0	35	157	12	0	16	26	21	1	34	36	68	2	667
5:30 PM	11	188	35	0	35	179	13	0	11	20	16	1	43	25	42	0	619
5:45 PM	9	194	28	0	48	169	12	0	20	25	28	0	45	24	43	0	645
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	111	1695	269	1	313	1265	111	0	121	202	214	2	270	228	442	3	5247
APPROACH %'s :	5.35%	81.65%	12.96%	0.05%	18.53%	74.90%	6.57%	0.00%	22.45%	37.48%	39.70%	0.37%	28.63%	24.18%	46.87%	0.32%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	63	883	138	1	163	602	58	0	60	105	118	0	127	112	223	1	2654
PEAK HR FACTOR :	0.829	0.972	0.908	0.250	0.769	0.896	0.763	0.000	0.750	0.795	0.922	0.000	0.690	0.778	0.743	0.250	0.959
	0.965				0.914				0.852				0.757				

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & 17th St
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-003
 Date: 9/14/2022

Data - HT

NS/EW Streets:	Alton Rd				Alton Rd				17th St				17th St																				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL																
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU																	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27																
7:15 AM	2	7	2	0	3	9	1	0	0	1	0	0	0	1	1	0	18																
7:30 AM	0	3	3	0	2	5	0	0	0	1	0	0	0	2	1	0	18																
7:45 AM	1	5	4	0	1	7	0	0	0	0	0	0	0	2	2	0	22																
8:00 AM	1	3	4	0	4	10	1	0	0	1	0	0	3	0	1	0	28																
8:15 AM	1	6	1	0	0	9	1	0	3	1	2	0	1	0	3	0	28																
8:30 AM	0	11	3	0	3	5	2	0	0	5	2	0	2	1	1	0	35																
8:45 AM	0	11	3	0	0	7	1	0	1	2	2	0	1	0	3	0	31																
TOTAL VOLUMES :	5	48	20	0	15	58	7	0	4	11	8	0	11	7	13	0	207																
APPROACH %'s :	6.85%	65.75%	27.40%	0.00%	18.75%	72.50%	8.75%	0.00%	17.39%	47.83%	34.78%	0.00%	35.48%	22.58%	41.94%	0.00%																	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL																
PEAK HR VOL :	2	31	11	0	7	31	5	0	4	9	6	0	7	1	8	0	122																
PEAK HR FACTOR :	0.500	0.705	0.688	0.000	0.438	0.775	0.625	0.000	0.333	0.450	0.750	0.000	0.583	0.250	0.667	0.000	0.871																
	0.786																0.717	0.679															

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL																
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU																	
4:00 PM	0	5	2	0	0	6	0	0	0	0	0	0	3	0	2	0	18																
4:15 PM	1	8	1	0	1	8	0	0	0	0	2	0	2	1	2	0	26																
4:30 PM	0	10	3	0	3	2	0	0	0	1	0	0	2	0	2	0	23																
4:45 PM	0	4	2	0	0	2	0	0	0	1	0	0	1	0	0	0	10																
5:00 PM	0	4	1	0	1	5	0	0	0	0	0	0	1	1	1	0	14																
5:15 PM	0	6	0	0	1	3	1	0	0	3	0	0	1	1	3	0	19																
5:30 PM	0	3	5	0	0	3	0	0	0	1	0	0	3	0	1	0	16																
5:45 PM	0	6	1	0	1	0	0	0	0	0	0	0	2	0	1	0	11																
TOTAL VOLUMES :	1	46	15	0	7	29	1	0	0	6	2	0	15	3	12	0	137																
APPROACH %'s :	1.61%	74.19%	24.19%	0.00%	18.92%	78.38%	2.70%	0.00%	0.00%	75.00%	25.00%	0.00%	50.00%	10.00%	40.00%	0.00%																	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL																
PEAK HR VOL :	1	26	7	0	5	17	0	0	0	2	2	0	6	2	5	0	73																
PEAK HR FACTOR :	0.250	0.650	0.583	0.000	0.417	0.531	0.000	0.000	0.000	0.500	0.250	0.000	0.750	0.500	0.625	0.000	0.702																
	0.654																0.611	0.500															

	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU
AM	5%	5%	5%	0%	4%	4%	13%	#DIV/0!	11%	8%	10%	#DIV/0!	7%	2%	13%	#DIV/0!
PM	2%	3%	5%	0%	3%	3%	0%	#DIV/0!	0%	2%	2%	#DIV/0!	5%	2%	2%	0%

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & 17th St
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-003
 Date: 9/14/2022

Data - Bikes

NS/EW Streets:	Alton Rd				Alton Rd				17th St				17th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
7:15 AM	1	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	4
7:30 AM	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	6
7:45 AM	1	1	0	0	0	0	1	0	1	0	2	0	0	1	0	0	8
8:00 AM	2	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	7
8:15 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	4
8:30 AM	1	2	0	0	0	0	0	0	0	6	0	0	0	3	1	0	13
8:45 AM	0	3	0	0	0	1	0	0	0	2	1	0	0	1	1	0	9
TOTAL VOLUMES :	6	11	0	0	0	1	1	0	1	15	4	0	0	14	3	0	56
APPROACH %'s :	35.29%	64.71%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	5.00%	75.00%	20.00%	0.00%	0.00%	82.35%	17.65%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	3	8	0	0	0	1	0	0	0	11	1	0	0	7	2	0	33
PEAK HR FACTOR :	0.375	0.667	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.458	0.250	0.000	0.000	0.583	0.500	0.000	0.635
	0.688																
	0.250																
	0.500																
	0.563																
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	2	1	1	1	1	0	0	0	0	1	0	0	0	5	0	0	12
4:15 PM	0	0	2	0	1	1	2	0	0	4	2	0	0	1	2	0	15
4:30 PM	2	0	1	0	1	1	1	1	0	0	0	0	0	4	0	0	11
4:45 PM	0	0	1	0	0	1	0	0	0	1	0	0	0	2	1	0	6
5:00 PM	3	2	1	0	0	2	1	0	1	4	0	0	0	3	0	0	17
5:15 PM	1	2	0	0	0	2	0	0	2	1	1	0	0	2	0	0	11
5:30 PM	1	0	1	0	0	0	0	0	0	3	1	0	1	3	0	0	10
5:45 PM	0	2	1	0	0	0	0	0	0	2	1	0	0	3	2	0	11
TOTAL VOLUMES :	9	7	8	1	3	7	4	1	3	16	5	0	1	23	5	0	93
APPROACH %'s :	36.00%	28.00%	32.00%	4.00%	20.00%	46.67%	26.67%	6.67%	12.50%	66.67%	20.83%	0.00%	3.45%	79.31%	17.24%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	5	2	5	0	2	5	4	1	1	9	2	0	0	10	3	0	49
PEAK HR FACTOR :	0.417	0.250	0.625	0.000	0.500	0.625	0.500	0.250	0.250	0.563	0.250	0.000	0.000	0.625	0.375	0.000	0.721
	0.500																
	0.750																
	0.500																
	0.813																

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & 17th St
City: Miami Beach

Project ID: 22-140413-003
Date: 9/14/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Alton Rd		Alton Rd		17th St		17th St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	7	1	2	2	0	2	2	16
7:15 AM	0	5	1	6	2	0	5	2	21
7:30 AM	1	2	2	0	1	0	2	0	8
7:45 AM	7	2	2	3	3	2	2	4	25
8:00 AM	2	4	3	5	1	0	1	4	20
8:15 AM	2	0	4	6	1	1	2	3	19
8:30 AM	4	5	4	4	5	1	4	3	30
8:45 AM	5	3	5	3	8	1	2	5	32
TOTAL VOLUMES :	EB 21	WB 28	EB 22	WB 29	NB 23	SB 5	NB 20	SB 23	TOTAL 171
APPROACH %'s :	42.86%	57.14%	43.14%	56.86%	82.14%	17.86%	46.51%	53.49%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	13	12	16	18	15	3	9	15	TOTAL 101
PEAK HR FACTOR :	0.650	0.600	0.800	0.750	0.469	0.750	0.563	0.750	0.789
	0.694		0.850		0.500		0.857		

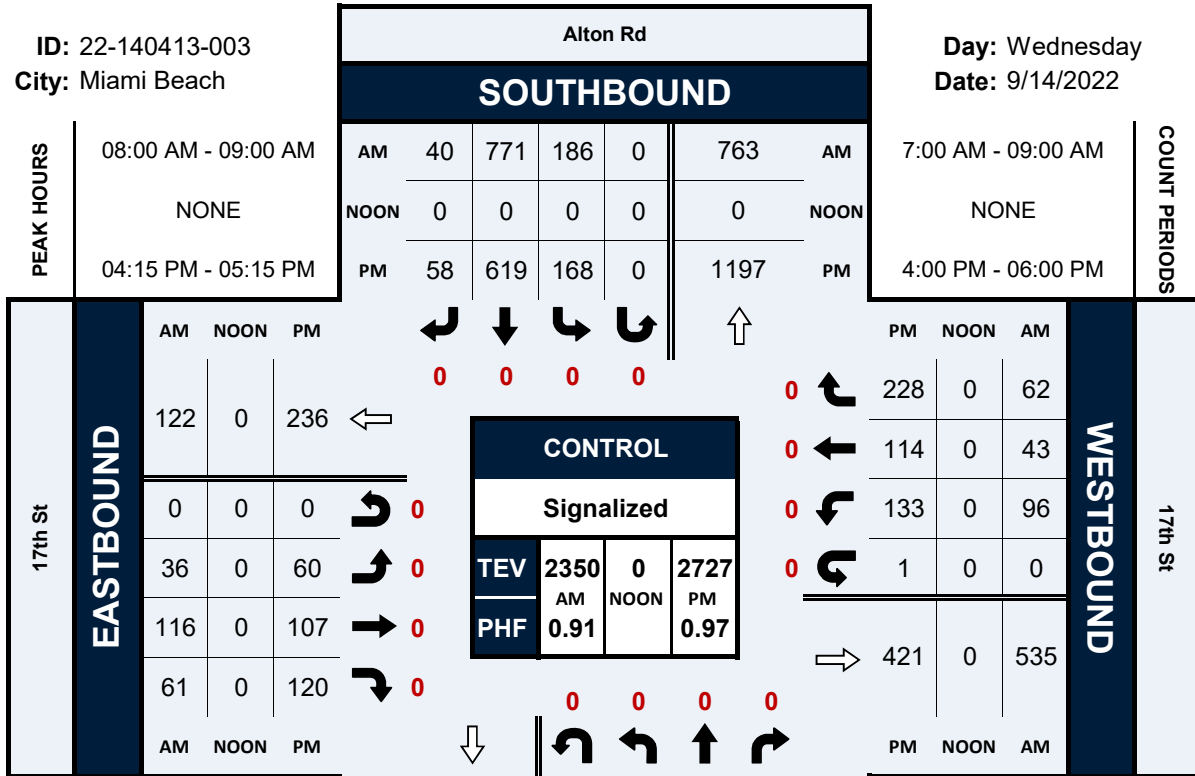
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	2	6	10	5	4	10	5	6	48
4:15 PM	2	4	5	14	2	3	6	6	42
4:30 PM	5	6	9	7	5	6	6	8	52
4:45 PM	8	9	12	3	7	2	5	6	52
5:00 PM	4	1	10	6	5	2	2	16	46
5:15 PM	2	2	8	7	12	9	9	7	56
5:30 PM	2	11	4	5	13	2	4	5	46
5:45 PM	1	1	13	12	1	1	9	5	43
TOTAL VOLUMES :	EB 26	WB 40	EB 71	WB 59	NB 49	SB 35	NB 46	SB 59	TOTAL 385
APPROACH %'s :	39.39%	60.61%	54.62%	45.38%	58.33%	41.67%	43.81%	56.19%	
PEAK HR :	04:15 PM - 05:15 PM								TOTAL
PEAK HR VOL :	19	20	36	30	19	13	19	36	TOTAL 192
PEAK HR FACTOR :	0.594	0.556	0.750	0.536	0.679	0.542	0.792	0.563	0.923
	0.574		0.868		0.727		0.764		

Alton Rd & 17th St

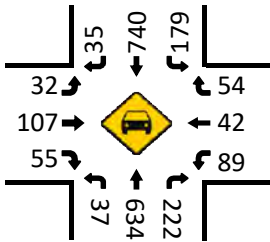
Peak Hour Turning Movement Count

ID: 22-140413-003
City: Miami Beach

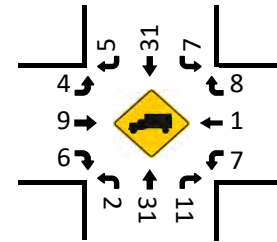
Day: Wednesday
Date: 9/14/2022



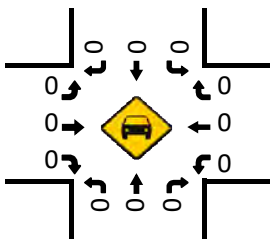
Cars (AM)



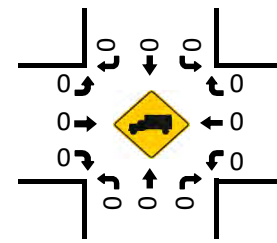
HT (AM)



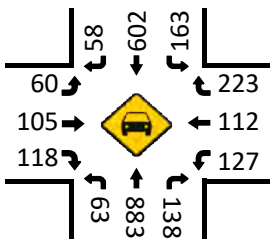
Cars (NOON)



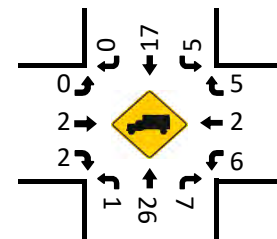
HT (NOON)



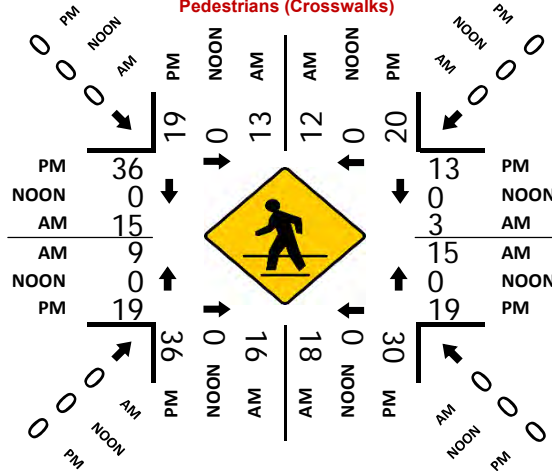
Cars (PM)



HT (PM)



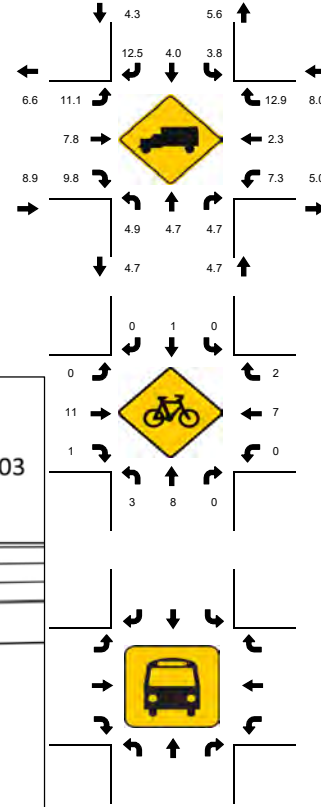
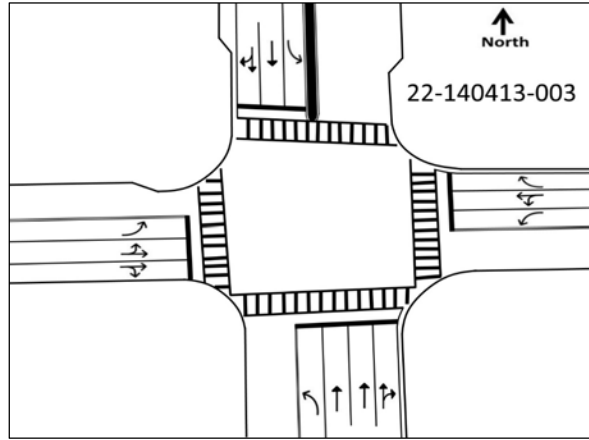
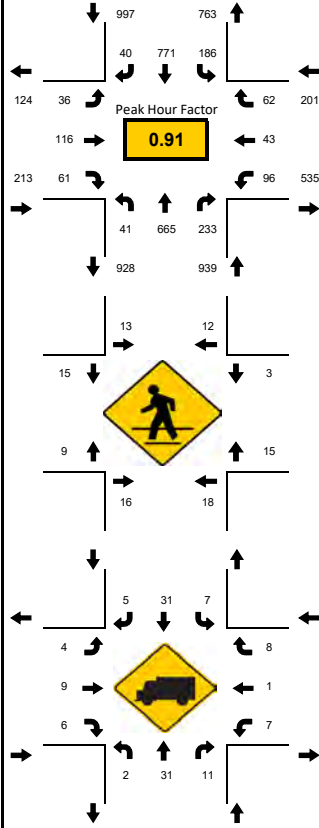
Pedestrians (Crosswalks)



LOCATION: Alton Rd & 17th St
 CITY/STATE: Miami Beach, FL

PROJECT ID: 22-140413-003
 DATE: Wed, Sep 14, 2022

Peak-Hour: 08:00 AM - 09:00 AM
 Peak 15-Minute: 08:45 AM - 09:00 AM



15-Min Count Period Beginning At	Alton Rd Northbound					Alton Rd Southbound					17th St Eastbound					17th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	8	110	34	0		36	137	5	0		3	10	5	0		14	9	10	0		381	1722
07:15 AM	9	96	46	0		34	172	10	0		6	7	7	0		22	10	15	0		434	1890
07:30 AM	5	105	48	0		36	151	7	0		6	9	14	0		19	4	10	0		414	2006
07:45 AM	17	112	56	0		43	190	0	0		5	17	15	0		9	12	17	0		493	2198
08:00 AM	8	143	59	0		42	201	11	0		10	25	11	0		21	6	12	0		549	2350
08:15 AM	8	163	57	1		38	168	8	0		8	30	15	0		26	12	16	0		550	1801
08:30 AM	8	166	61	0		51	197	13	0		10	22	18	0		29	13	18	0		606	1251
08:45 AM	15	193	56	1		55	205	8	0		8	39	17	0		20	12	16	0		645	645
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	60	772	244	4		220	820	52	0		40	156	72	0		116	52	72	0		2680	
Heavy Trucks	4	44	16	0		16	40	8	0		12	20	8	0		12	4	12	0		196	
Pedestrians		40					36					28					36				140	
Bicycles	8	12	0	0		0	4	0	0		0	24	4	0		0	12	4	0		68	
Buses																						
Stopped Buses																						

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & Lincoln Rd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-004
 Date: 9/14/2022

Data - Total

NS/EW Streets:	Alton Rd				Alton Rd				Lincoln Rd				Lincoln Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	311
7:15 AM	5	147	0	1	0	146	4	2	4	0	2	0	0	0	0	0	364
7:30 AM	3	150	0	0	0	198	4	0	5	0	4	0	0	0	0	0	350
7:45 AM	6	181	0	0	0	200	8	0	3	0	5	0	0	0	0	0	403
8:00 AM	5	202	0	1	0	215	8	2	8	0	5	0	0	0	0	0	446
8:15 AM	5	235	0	0	0	194	13	0	10	0	8	0	0	0	0	0	465
8:30 AM	10	249	0	1	0	220	18	1	4	0	6	0	0	0	0	0	509
8:45 AM	6	270	0	1	0	226	14	0	10	0	6	1	0	0	0	0	534
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	43	1588	0	6	0	1577	75	5	49	0	38	1	0	0	0	0	3382
APPROACH %'s :	2.63%	97.01%	0.00%	0.37%	0.00%	95.17%	4.53%	0.30%	55.68%	0.00%	43.18%	1.14%					
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	26	956	0	3	0	855	53	3	32	0	25	1	0	0	0	0	1954
PEAK HR FACTOR :	0.650	0.885	0.000	0.750	0.000	0.946	0.736	0.375	0.800	0.000	0.781	0.250	0.000	0.000	0.000	0.000	0.915
			0.889			0.949				0.806							
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	11	249	0	0	0	206	21	0	18	0	7	0	0	0	0	0	512
4:15 PM	7	259	0	0	0	218	18	0	16	0	6	0	0	0	0	0	524
4:30 PM	8	280	0	0	0	186	9	2	16	0	11	0	0	0	0	0	512
4:45 PM	15	243	0	0	0	180	24	2	15	0	8	0	0	0	0	0	487
5:00 PM	7	268	0	0	0	199	21	1	17	0	3	0	0	0	0	0	516
5:15 PM	10	256	0	0	0	208	8	2	14	0	3	0	0	0	0	0	501
5:30 PM	9	217	0	0	0	222	14	3	9	0	5	0	0	0	0	0	479
5:45 PM	6	237	0	0	0	217	30	2	6	0	8	1	0	0	0	0	507
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	73	2009	0	0	0	1636	145	12	111	0	51	1	0	0	0	0	4038
APPROACH %'s :	3.51%	96.49%	0.00%	0.00%	0.00%	91.24%	8.09%	0.67%	68.10%	0.00%	31.29%	0.61%					
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	37	1050	0	0	0	783	72	5	64	0	28	0	0	0	0	0	2039
PEAK HR FACTOR :	0.617	0.938	0.000	0.000	0.000	0.898	0.750	0.625	0.941	0.000	0.636	0.000	0.000	0.000	0.000	0.000	0.973
			0.944			0.911				0.852							

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & Lincoln Rd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-004
 Date: 9/14/2022

Data - Cars

NS/EW Streets:	Alton Rd				Alton Rd				Lincoln Rd				Lincoln Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	293
7:15 AM	5	137	0	1	0	138	4	2	4	0	2	0	0	0	0	0	351
7:30 AM	3	144	0	0	0	191	4	0	5	0	4	0	0	0	0	0	338
7:45 AM	6	171	0	0	0	192	8	0	3	0	5	0	0	0	0	0	385
8:00 AM	5	193	0	1	0	203	8	1	8	0	5	0	0	0	0	0	424
8:15 AM	5	229	0	0	0	184	11	0	10	0	6	0	0	0	0	0	445
8:30 AM	10	234	0	1	0	213	18	1	4	0	5	0	0	0	0	0	486
8:45 AM	6	257	0	1	0	214	14	0	9	0	6	1	0	0	0	0	508
TOTAL VOLUMES :	43	1517	0	6	0	1503	73	4	48	0	35	1	0	0	0	0	3230
APPROACH %'s :	2.75%	96.87%	0.00%	0.38%	0.00%	95.13%	4.62%	0.25%	57.14%	0.00%	41.67%	1.19%					
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	26	913	0	3	0	814	51	2	31	0	22	1	0	0	0	0	1863
PEAK HR FACTOR :	0.650	0.888	0.000	0.750	0.000	0.951	0.708	0.500	0.775	0.000	0.917	0.250	0.000	0.000	0.000	0.000	0.917
	0.892																
	0.934																
	0.844																
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	11	242	0	0	0	197	20	0	18	0	6	0	0	0	0	0	494
4:15 PM	7	250	0	0	0	206	18	0	14	0	6	0	0	0	0	0	501
4:30 PM	7	269	0	0	0	182	9	2	15	0	11	0	0	0	0	0	495
4:45 PM	15	237	0	0	0	177	24	2	15	0	8	0	0	0	0	0	478
5:00 PM	7	262	0	0	0	194	20	1	17	0	3	0	0	0	0	0	504
5:15 PM	10	251	0	0	0	204	8	2	14	0	3	0	0	0	0	0	492
5:30 PM	9	209	0	0	0	216	14	3	9	0	5	0	0	0	0	0	465
5:45 PM	6	229	0	0	0	215	30	2	6	0	8	1	0	0	0	0	497
TOTAL VOLUMES :	72	1949	0	0	0	1591	143	12	108	0	50	1	0	0	0	0	3926
APPROACH %'s :	3.56%	96.44%	0.00%	0.00%	0.00%	91.12%	8.19%	0.69%	67.92%	0.00%	31.45%	0.63%					
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	36	1018	0	0	0	759	71	5	61	0	28	0	0	0	0	0	1978
PEAK HR FACTOR :	0.600	0.946	0.000	0.000	0.000	0.921	0.740	0.625	0.897	0.000	0.636	0.000	0.000	0.000	0.000	0.000	0.981
	0.955																
	0.932																
	0.856																

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & Lincoln Rd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-004
 Date: 9/14/2022

Data - HT

NS/EW Streets:	Alton Rd				Alton Rd				Lincoln Rd				Lincoln Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	10	0	0	0	8	0	0	0	0	0	0	0	0	0	0	18
7:15 AM	0	6	0	0	0	7	0	0	0	0	0	0	0	0	0	0	13
7:30 AM	0	2	0	0	0	10	0	0	0	0	0	0	0	0	0	0	12
7:45 AM	0	10	0	0	0	8	0	0	0	0	0	0	0	0	0	0	18
8:00 AM	0	9	0	0	0	12	0	1	0	0	0	0	0	0	0	0	22
8:15 AM	0	6	0	0	0	10	2	0	0	0	2	0	0	0	0	0	20
8:30 AM	0	15	0	0	0	7	0	0	0	0	1	0	0	0	0	0	23
8:45 AM	0	13	0	0	0	12	0	0	1	0	0	0	0	0	0	0	26
TOTAL VOLUMES :	0	71	0	0	0	74	2	1	1	0	3	0	0	0	0	0	152
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	96.10%	2.60%	1.30%	25.00%	0.00%	75.00%	0.00%					
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	43	0	0	0	41	2	1	1	0	3	0	0	0	0	0	91
PEAK HR FACTOR :	0.000	0.717	0.000	0.000	0.000	0.854	0.250	0.250	0.250	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.875
	0.717																
	0.846																
	0.500																

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	7	0	0	0	9	1	0	0	0	1	0	0	0	0	0	18
4:15 PM	0	9	0	0	0	12	0	0	2	0	0	0	0	0	0	0	23
4:30 PM	1	11	0	0	0	4	0	0	1	0	0	0	0	0	0	0	17
4:45 PM	0	6	0	0	0	3	0	0	0	0	0	0	0	0	0	0	9
5:00 PM	0	6	0	0	0	5	1	0	0	0	0	0	0	0	0	0	12
5:15 PM	0	5	0	0	0	4	0	0	0	0	0	0	0	0	0	0	9
5:30 PM	0	8	0	0	0	6	0	0	0	0	0	0	0	0	0	0	14
5:45 PM	0	8	0	0	0	2	0	0	0	0	0	0	0	0	0	0	10
TOTAL VOLUMES :	1	60	0	0	0	45	2	0	3	0	1	0	0	0	0	0	112
APPROACH %'s :	1.64%	98.36%	0.00%	0.00%	0.00%	95.74%	4.26%	0.00%	75.00%	0.00%	25.00%	0.00%					
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	1	32	0	0	0	24	1	0	3	0	0	0	0	0	0	0	61
PEAK HR FACTOR :	0.250	0.727	0.000	0.000	0.000	0.500	0.250	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.663
	0.688																
	0.521																
	0.375																

	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU
AM	0%	4%	#DIV/0!	0%	#DIV/0!	5%	4%	33%	3%	#DIV/0!	12%	0%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
PM	3%	3%	#DIV/0!	#DIV/0!	#DIV/0!	3%	1%	0%	5%	#DIV/0!	0%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & Lincoln Rd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-004
 Date: 9/14/2022

Data - Bikes

NS/EW Streets:	Alton Rd				Alton Rd				Lincoln Rd				Lincoln Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	2	0	0	0	0	0	0	0	2	1	0	0	0	0	0	5
7:15 AM	0	0	0	0	0	0	0	0	0	6	1	0	0	4	1	0	11
7:30 AM	1	1	0	0	0	0	0	0	1	0	0	0	0	5	0	0	8
7:45 AM	0	3	1	0	1	1	0	0	0	3	1	0	0	0	0	0	10
8:00 AM	0	3	0	0	0	0	0	0	0	4	2	0	0	6	1	0	16
8:15 AM	0	2	0	1	0	0	0	0	0	1	0	0	0	1	0	0	5
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	4	1	0	6
8:45 AM	0	1	0	0	2	1	0	0	1	1	0	0	0	6	1	0	13
TOTAL VOLUMES :	1	12	1	1	3	2	0	0	2	17	5	0	0	26	4	0	74
APPROACH %'s :	6.67%	80.00%	6.67%	6.67%	60.00%	40.00%	0.00%	0.00%	8.33%	70.83%	20.83%	0.00%	0.00%	86.67%	13.33%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																
PEAK HR VOL :	0	6	0	1	2	1	0	0	1	6	3	0	0	17	3	0	40
PEAK HR FACTOR :	0.000	0.500	0.000	0.250	0.250	0.250	0.000	0.000	0.250	0.375	0.375	0.000	0.000	0.708	0.750	0.000	0.625
	0.583				0.250				0.417				0.714				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	1	3	0	0	0	1	0	0	1	1	1	0	1	1	1	0	11
4:15 PM	1	3	0	0	1	0	0	0	2	1	1	0	1	1	1	0	14
4:30 PM	1	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	5
4:45 PM	0	2	1	0	2	1	1	0	2	1	2	0	0	2	0	0	14
5:00 PM	1	5	0	0	0	2	0	0	2	5	0	0	0	4	2	0	21
5:15 PM	1	5	0	0	0	3	1	0	0	2	1	0	1	1	0	0	15
5:30 PM	1	2	0	0	0	2	1	0	1	0	1	0	0	0	0	0	8
5:45 PM	0	2	0	0	0	1	1	0	0	1	2	0	0	2	0	0	9
TOTAL VOLUMES :	6	22	1	0	3	12	4	0	8	11	8	0	2	14	6	0	97
APPROACH %'s :	20.69%	75.86%	3.45%	0.00%	15.79%	63.16%	21.05%	0.00%	29.63%	40.74%	29.63%	0.00%	9.09%	63.64%	27.27%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																
PEAK HR VOL :	3	10	1	0	3	5	1	0	6	7	3	0	0	10	5	0	54
PEAK HR FACTOR :	0.750	0.500	0.250	0.000	0.375	0.625	0.250	0.000	0.750	0.350	0.375	0.000	0.000	0.625	0.625	0.000	0.643
	0.583				0.563				0.571				0.625				

National Data & Surveying Services **Intersection Turning** Movement Count

Location: Alton Rd & Lincoln Rd
City: Miami Beach

Project ID: 22-140413-004
Date: 9/14/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Alton Rd		Alton Rd		Lincoln Rd		Lincoln Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	4	2	2	0	0	0	1	2	11
7:15 AM	7	2	2	3	0	0	1	4	19
7:30 AM	4	5	3	1	0	0	3	3	19
7:45 AM	3	5	8	1	0	0	2	2	21
8:00 AM	7	6	6	3	0	0	3	2	27
8:15 AM	5	5	4	4	0	0	2	4	24
8:30 AM	6	7	3	6	0	0	5	7	34
8:45 AM	13	7	8	3	0	0	8	5	44
TOTAL VOLUMES :	EB 49	WB 39	EB 36	WB 21	NB 0	SB 0	NB 25	SB 29	TOTAL 199
APPROACH %'s :	55.68%	44.32%	63.16%	36.84%			46.30%	53.70%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	31	25	21	16	0	0	18	18	TOTAL 129
PEAK HR FACTOR :	0.596	0.893	0.656	0.667			0.563	0.643	0.733
	0.700		0.841				0.692		

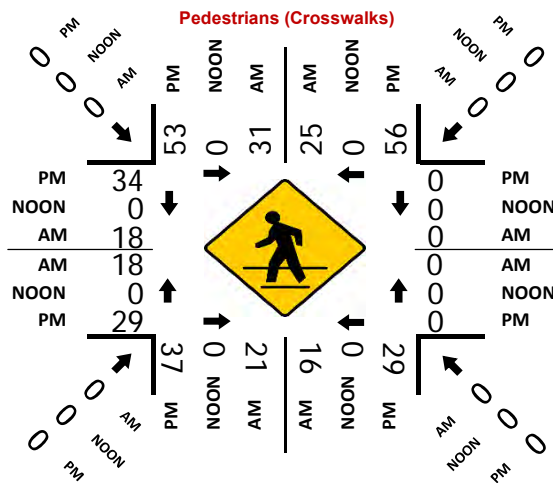
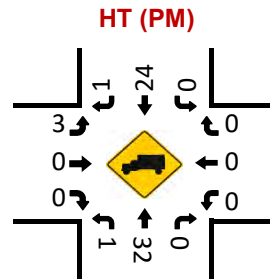
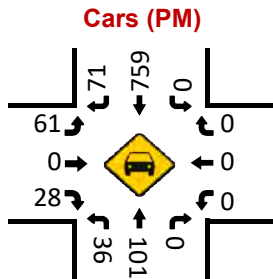
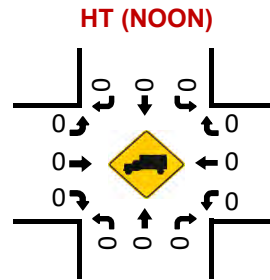
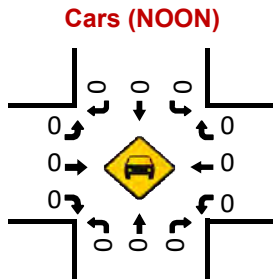
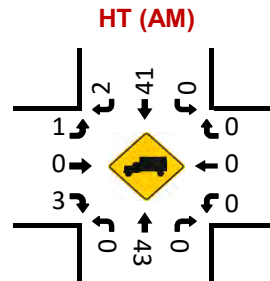
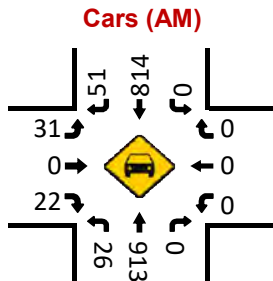
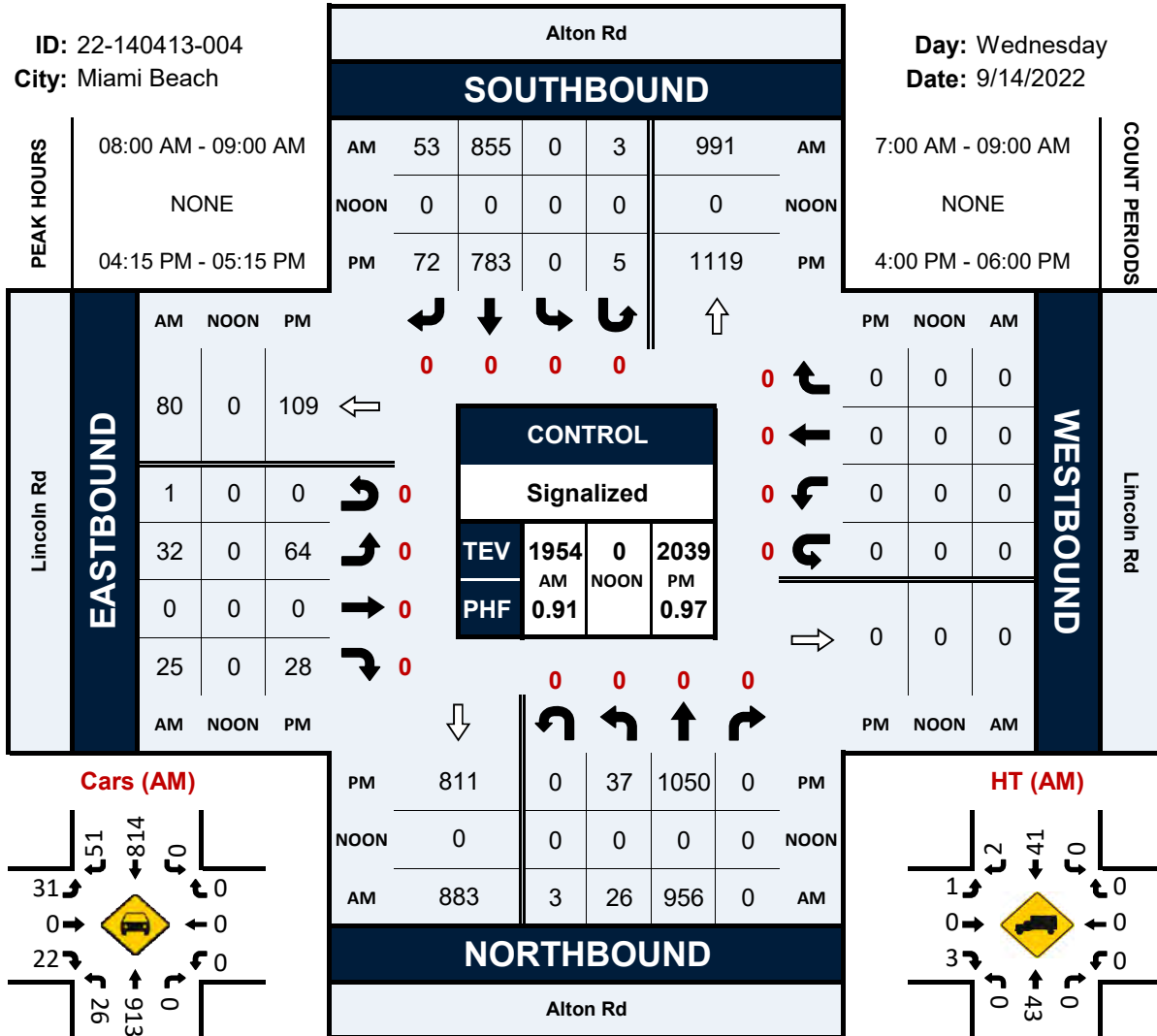
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	12	18	12	13	0	0	6	9	70
4:15 PM	17	11	11	6	0	0	8	15	68
4:30 PM	14	15	4	6	0	0	11	11	61
4:45 PM	12	15	9	4	0	0	5	5	50
5:00 PM	10	15	13	13	0	0	5	3	59
5:15 PM	16	27	20	7	0	0	10	15	95
5:30 PM	10	19	15	11	0	0	8	8	71
5:45 PM	18	11	14	10	0	0	8	10	71
TOTAL VOLUMES :	EB 109	WB 131	EB 98	WB 70	NB 0	SB 0	NB 61	SB 76	TOTAL 545
APPROACH %'s :	45.42%	54.58%	58.33%	41.67%			44.53%	55.47%	
PEAK HR :	04:15 PM - 05:15 PM								TOTAL
PEAK HR VOL :	53	56	37	29	0	0	29	34	TOTAL 238
PEAK HR FACTOR :	0.779	0.933	0.712	0.558			0.659	0.567	0.875
	0.940		0.635				0.685		

Alton Rd & Lincoln Rd

Peak Hour Turning Movement Count

ID: 22-140413-004
City: Miami Beach

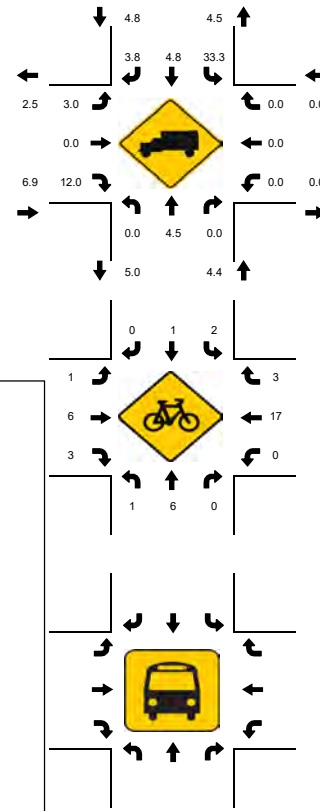
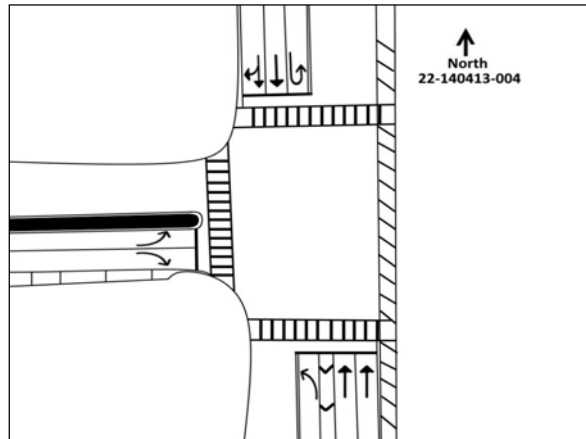
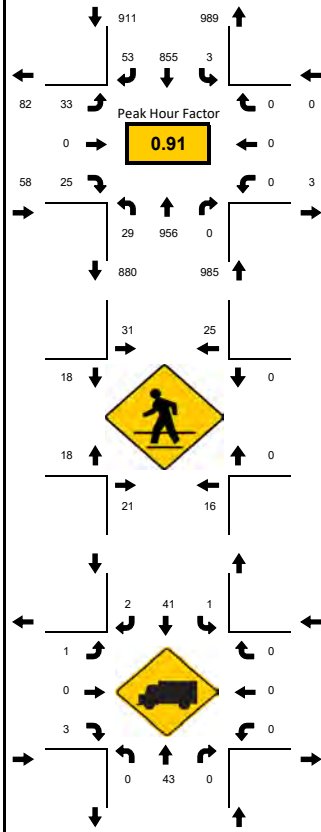
Day: Wednesday
Date: 9/14/2022



LOCATION: Alton Rd & Lincoln Rd
 CITY/STATE: Miami Beach, FL

PROJECT ID: 22-140413-004
 DATE: Wed, Sep 14, 2022

Peak-Hour: 08:00 AM - 09:00 AM
 Peak 15-Minute: 08:45 AM - 09:00 AM



15-Min Count Period Beginning At	Alton Rd Northbound					Alton Rd Southbound					Lincoln Rd Eastbound					Lincoln Rd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	5	147	0	1		0	146	4	2		4	0	2	0		0	0	0	0		311	1428
07:15 AM	3	150	0	0		0	198	4	0		5	0	4	0		0	0	0	0		364	1563
07:30 AM	3	154	0	2		0	178	6	0		5	0	2	0		0	0	0	0		350	1664
07:45 AM	6	181	0	0		0	200	8	0		3	0	5	0		0	0	0	0		403	1823
08:00 AM	5	202	0	1		0	215	8	2		8	0	5	0		0	0	0	0		446	1954
08:15 AM	5	235	0	0		0	194	13	0		10	0	8	0		0	0	0	0		465	1508
08:30 AM	10	249	0	1		0	220	18	1		4	0	6	0		0	0	0	0		509	1043
08:45 AM	6	270	0	1		0	226	14	0		10	0	6	1		0	0	0	0		534	534
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	40	1080	0	4		0	904	72	8		40	0	32	4		0	0	0	0		2184	
Heavy Trucks	0	60	0	0		0	48	8	4		4	0	8	0		0	0	0	0		128	
Pedestrians		44					80					52					0				176	
Bicycles	0	12	0	4		8	4	0	0		4	16	8	0		0	24	4	0		80	
Buses																						
Stopped Buses																						

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & Dade Blvd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-005
 Date: 9/14/2022

Data - Total

NS/EW Streets:	West Ave				West Ave				Dade Blvd				Dade Blvd					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	0	15	30	0	0	8	9	0	0	4	33	0	0	7	46	19	0	170
7:15 AM	0	17	15	0	0	16	1	0	0	2	23	0	0	12	52	15	0	153
7:30 AM	0	19	20	0	11	8	0	0	0	2	25	0	0	6	38	11	0	140
7:45 AM	0	21	22	0	6	8	1	0	0	3	33	0	0	12	57	15	0	178
8:00 AM	0	32	26	0	7	20	0	0	0	1	42	0	0	10	55	18	0	211
8:15 AM	0	26	42	0	15	28	1	0	0	7	41	0	0	11	57	17	0	245
8:30 AM	0	29	37	0	6	25	2	0	0	6	49	0	0	13	52	21	0	240
8:45 AM	0	23	41	0	7	25	1	0	0	2	61	0	0	26	55	28	0	269
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :	0	182	233	0	60	138	6	0	27	307	0	0	97	412	144	0	1606	
	0.00%	43.86%	56.14%	0.00%	29.41%	67.65%	2.94%	0.00%	8.08%	91.92%	0.00%	0.00%	14.85%	63.09%	22.05%	0.00%		
PEAK HR :	08:00 AM - 09:00 AM																TOTAL	
PEAK HR VOL :	0	110	146	0	35	98	4	0	16	193	0	0	60	219	84	0	965	
PEAK HR FACTOR :	0.000	0.859	0.869	0.000	0.583	0.875	0.500	0.000	0.571	0.791	0.000	0.000	0.577	0.961	0.750	0.000	0.897	
	0.941				0.778				0.829				0.833					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	0	43	28	0	9	28	3	0	14	53	0	0	26	56	16	0	276	
4:15 PM	0	38	22	0	10	40	3	0	3	65	0	0	18	49	32	0	280	
4:30 PM	0	33	35	0	9	29	5	0	7	47	0	0	14	44	26	0	249	
4:45 PM	0	37	24	0	10	32	5	0	8	39	0	0	22	57	18	0	252	
5:00 PM	0	36	27	0	19	34	4	0	5	45	0	0	19	40	26	0	255	
5:15 PM	0	30	37	0	10	32	7	0	4	49	0	0	21	41	30	0	261	
5:30 PM	0	29	36	0	10	27	4	0	6	34	0	0	24	43	19	0	232	
5:45 PM	0	21	30	0	12	34	2	0	6	43	0	0	22	39	33	1	243	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :	0	267	239	0	89	256	33	0	53	375	0	0	166	369	200	1	2048	
	0.00%	52.77%	47.23%	0.00%	23.54%	67.72%	8.73%	0.00%	12.38%	87.62%	0.00%	0.00%	22.55%	50.14%	27.17%	0.14%		
PEAK HR :	04:00 PM - 05:00 PM																TOTAL	
PEAK HR VOL :	0	151	109	0	38	129	16	0	32	204	0	0	80	206	92	0	1057	
PEAK HR FACTOR :	0.000	0.878	0.779	0.000	0.950	0.806	0.800	0.000	0.571	0.785	0.000	0.000	0.769	0.904	0.719	0.000	0.944	
	0.915				0.863				0.868				0.955					

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & Dade Blvd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-005
 Date: 9/14/2022

Data - Cars

NS/EW Streets:	West Ave				West Ave				Dade Blvd				Dade Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	14	30	0	7	7	0	0	4	32	0	0	7	44	18	0	163
7:15 AM	0	16	15	0	0	15	0	0	2	23	0	0	12	49	15	0	147
7:30 AM	0	19	20	0	10	7	0	0	2	25	0	0	6	37	11	0	137
7:45 AM	0	21	22	0	4	8	0	0	3	31	0	0	12	52	15	0	168
8:00 AM	0	32	26	0	6	19	0	0	1	41	0	0	10	51	17	0	203
8:15 AM	0	26	41	0	14	25	0	0	7	40	0	0	11	55	16	0	235
8:30 AM	0	29	37	0	4	23	2	0	6	47	0	0	11	47	20	0	226
8:45 AM	0	23	38	0	6	24	0	0	2	61	0	0	26	54	26	0	260
TOTAL VOLUMES :	0	180	229	0	51	128	2	0	27	300	0	0	95	389	138	0	1539
APPROACH %'s :	0.00%	44.01%	55.99%	0.00%	28.18%	70.72%	1.10%	0.00%	8.26%	91.74%	0.00%	0.00%	15.27%	62.54%	22.19%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	110	142	0	30	91	2	0	16	189	0	0	58	207	79	0	924
PEAK HR FACTOR :	0.000	0.859	0.866	0.000	0.536	0.910	0.250	0.000	0.571	0.775	0.000	0.000	0.558	0.941	0.760	0.000	0.888
	0.940				0.788				0.813				0.811				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	43	28	0	9	28	2	0	14	52	0	0	25	55	15	0	271
4:15 PM	0	37	21	0	8	38	3	0	3	64	0	0	18	49	32	0	273
4:30 PM	0	32	35	0	9	29	4	0	7	44	0	0	14	43	24	0	241
4:45 PM	0	36	24	0	10	32	5	0	7	38	0	0	22	56	17	0	247
5:00 PM	0	35	27	0	19	34	4	0	5	45	0	0	19	40	25	0	253
5:15 PM	0	30	36	0	9	30	6	0	4	49	0	0	21	41	30	0	256
5:30 PM	0	28	36	0	10	26	4	0	6	34	0	0	24	43	19	0	230
5:45 PM	0	21	30	0	11	34	1	0	6	42	0	0	22	39	33	1	240
TOTAL VOLUMES :	0	262	237	0	85	251	29	0	52	368	0	0	165	366	195	1	2011
APPROACH %'s :	0.00%	52.51%	47.49%	0.00%	23.29%	68.77%	7.95%	0.00%	12.38%	87.62%	0.00%	0.00%	22.70%	50.34%	26.82%	0.14%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	148	108	0	36	127	14	0	31	198	0	0	79	203	88	0	1032
PEAK HR FACTOR :	0.000	0.860	0.771	0.000	0.900	0.836	0.700	0.000	0.554	0.773	0.000	0.000	0.790	0.906	0.688	0.000	0.945
	0.901				0.903				0.854				0.934				

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & Dade Blvd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-005
 Date: 9/14/2022

Data - HT

NS/EW Streets:	West Ave				West Ave				Dade Blvd				Dade Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	1	0	0	1	1	0	0	0	1	0	0	0	2	1	0	7
7:15 AM	0	1	0	0	0	1	1	0	0	0	0	0	0	3	0	0	6
7:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	3
7:45 AM	0	0	0	0	2	0	1	0	0	2	0	0	0	5	0	0	10
8:00 AM	0	0	0	0	1	1	0	0	0	1	0	0	0	4	1	0	8
8:15 AM	0	0	1	0	1	3	1	0	0	1	1	0	0	2	1	0	10
8:30 AM	0	0	0	0	2	2	0	0	0	2	0	0	2	5	1	0	14
8:45 AM	0	0	3	0	1	1	1	0	0	0	0	0	0	1	2	0	9
TOTAL VOLUMES :	0	2	4	0	9	10	4	0	0	7	0	0	2	23	6	0	67
APPROACH %'s :	0.00%	33.33%	66.67%	0.00%	39.13%	43.48%	17.39%	0.00%	0.00%	100.00%	0.00%	0.00%	6.45%	74.19%	19.35%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	4	0	0	5	7	2	0	0	4	0	0	2	12	5	0	41
PEAK HR FACTOR :	0.000	0.000	0.333	0.000	0.625	0.583	0.500	0.000	0.000	0.500	0.000	0.000	0.250	0.600	0.625	0.000	0.732
			0.333			0.700				0.500				0.594			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	5
4:15 PM	0	1	1	0	2	2	0	0	0	1	0	0	0	1	0	0	7
4:30 PM	0	1	0	0	0	0	1	0	0	3	0	0	0	1	2	0	8
4:45 PM	0	1	0	0	0	0	0	0	1	1	0	0	0	1	1	0	5
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
5:15 PM	0	0	1	0	1	2	1	0	0	0	0	0	0	0	0	0	5
5:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	3
TOTAL VOLUMES :	0	5	2	0	4	5	4	0	1	7	0	0	1	3	5	0	37
APPROACH %'s :	0.00%	71.43%	28.57%	0.00%	30.77%	38.46%	30.77%	0.00%	12.50%	87.50%	0.00%	0.00%	11.11%	33.33%	55.56%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	3	1	0	2	2	2	0	1	6	0	0	1	3	4	0	25
PEAK HR FACTOR :	0.000	0.750	0.250	0.000	0.250	0.250	0.500	0.000	0.250	0.500	0.000	0.000	0.250	0.750	0.500	0.000	0.781
			0.500			0.375				0.583				0.667			

	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
AM	#DIV/0!	0%	3%	#DIV/0!	14%	7%	50%	#DIV/0!	0%	2%	#DIV/0!	#DIV/0!	3%	5%	6%	#DIV/0!	
PM	#DIV/0!	2%	1%	#DIV/0!	5%	2%	13%	#DIV/0!	3%	3%	#DIV/0!	#DIV/0!	1%	1%	4%	#DIV/0!	

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & Dade Blvd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-005
 Date: 9/14/2022

Data - Bikes

NS/EW Streets:	West Ave				West Ave				Dade Blvd				Dade Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	2	2	0	0	0	0	0	0	3	0	0	0	2	0	0	9
7:15 AM	0	3	0	0	0	1	0	0	0	0	0	0	0	5	0	0	9
7:30 AM	0	5	0	0	0	2	1	0	0	2	0	0	0	4	1	0	15
7:45 AM	0	4	0	0	1	0	0	0	0	0	0	0	0	4	0	0	9
8:00 AM	0	4	0	0	0	3	0	0	0	2	0	0	0	0	0	0	9
8:15 AM	0	3	2	0	0	3	0	0	0	2	0	0	0	2	0	0	12
8:30 AM	0	4	0	0	0	2	0	0	1	1	0	0	1	1	0	0	10
8:45 AM	0	4	0	0	0	0	0	0	0	3	0	0	0	4	0	0	11
TOTAL VOLUMES :	0	29	4	0	1	11	1	0	1	13	0	0	1	22	1	0	84
APPROACH %'s :	0.00%	87.88%	12.12%	0.00%	7.69%	84.62%	7.69%	0.00%	7.14%	92.86%	0.00%	0.00%	4.17%	91.67%	4.17%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	15	2	0	0	8	0	0	1	8	0	0	1	7	0	0	42
PEAK HR FACTOR :	0.000	0.938	0.250	0.000	0.000	0.667	0.000	0.000	0.250	0.667	0.000	0.000	0.250	0.438	0.000	0.000	0.875
	0.850																
	0.667																
	0.750																
	0.500																
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	5	2	0	0	2	0	0	0	3	0	0	0	1	0	0	10
4:15 PM	0	6	0	0	0	7	0	0	0	0	0	0	0	7	0	0	23
4:30 PM	0	0	1	0	0	2	0	0	0	1	0	0	0	1	0	0	5
4:45 PM	0	7	0	0	0	4	0	0	0	1	0	0	0	3	0	0	15
5:00 PM	0	2	0	0	0	4	0	0	1	0	0	0	0	1	0	0	8
5:15 PM	0	7	1	0	0	3	0	0	0	1	0	0	0	0	0	0	12
5:30 PM	0	5	3	0	0	5	0	0	0	5	0	0	0	0	0	0	18
5:45 PM	1	5	0	0	0	5	0	0	0	1	0	0	0	2	4	0	18
TOTAL VOLUMES :	1	37	7	0	0	32	0	0	1	12	0	0	0	15	4	0	109
APPROACH %'s :	2.22%	82.22%	15.56%	0.00%	0.00%	100.00%	0.00%	0.00%	7.69%	92.31%	0.00%	0.00%	0.00%	78.95%	21.05%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	18	3	0	0	15	0	0	0	5	0	0	0	12	0	0	53
PEAK HR FACTOR :	0.000	0.643	0.375	0.000	0.000	0.536	0.000	0.000	0.000	0.417	0.000	0.000	0.000	0.429	0.000	0.000	0.576
	0.750																
	0.536																
	0.417																
	0.429																

National Data & Surveying Services Intersection Turning Movement Count

Location: West Ave & Dade Blvd
City: Miami Beach

Project ID: 22-140413-005
Date: 9/14/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	West Ave		West Ave		Dade Blvd		Dade Blvd		TOTAL
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
AM	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	1	1	0	1	5	0	1	0	9
7:15 AM	0	2	0	0	4	0	0	1	7
7:30 AM	1	1	1	0	2	1	3	0	9
7:45 AM	0	2	0	0	2	0	0	1	5
8:00 AM	2	3	1	0	1	0	11	2	20
8:15 AM	2	2	2	2	4	4	8	3	27
8:30 AM	0	1	1	1	4	2	5	2	16
8:45 AM	1	1	1	2	8	3	6	2	24
TOTAL VOLUMES :	EB 7	WB 13	EB 6	WB 6	NB 30	SB 10	NB 34	SB 11	TOTAL 117
APPROACH %'s :	35.00%	65.00%	50.00%	50.00%	75.00%	25.00%	75.56%	24.44%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	5	7	5	5	17	9	30	9	87
PEAK HR FACTOR :	0.625	0.583	0.625	0.625	0.531	0.563	0.682	0.750	0.806
	0.600		0.625		0.591		0.750		

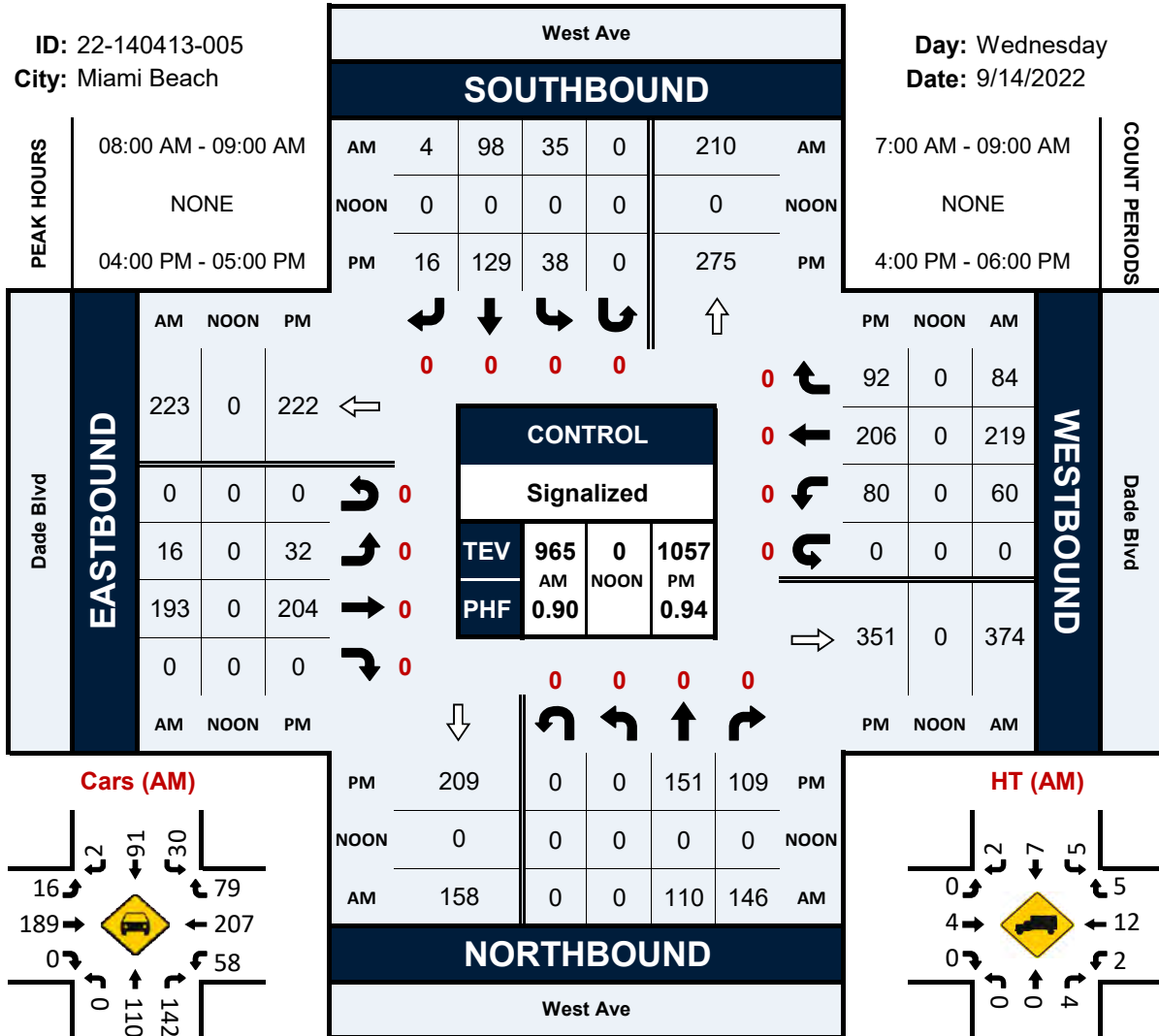
NS/EW Streets:	West Ave		West Ave		Dade Blvd		Dade Blvd		TOTAL
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
PM	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	2	1	2	0	5	3	1	4	18
4:15 PM	2	2	0	0	1	0	7	12	24
4:30 PM	0	0	0	1	8	8	3	3	23
4:45 PM	0	1	0	0	4	5	2	5	17
5:00 PM	1	3	3	0	5	0	3	5	20
5:15 PM	5	1	0	0	6	8	6	7	33
5:30 PM	0	4	0	0	15	1	8	6	34
5:45 PM	0	1	0	0	3	1	20	3	28
TOTAL VOLUMES :	EB 10	WB 13	EB 5	WB 1	NB 47	SB 26	NB 50	SB 45	TOTAL 197
APPROACH %'s :	43.48%	56.52%	83.33%	16.67%	64.38%	35.62%	52.63%	47.37%	
PEAK HR :	04:00 PM - 05:00 PM								TOTAL
PEAK HR VOL :	4	4	2	1	18	16	13	24	82
PEAK HR FACTOR :	0.500	0.500	0.250	0.250	0.563	0.500	0.464	0.500	0.854
	0.500		0.375		0.531		0.487		

West Ave & Dade Blvd

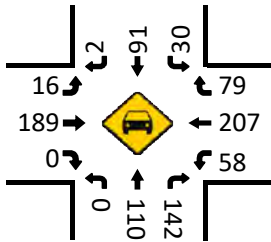
Peak Hour Turning Movement Count

ID: 22-140413-005
City: Miami Beach

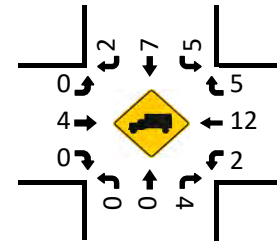
Day: Wednesday
Date: 9/14/2022



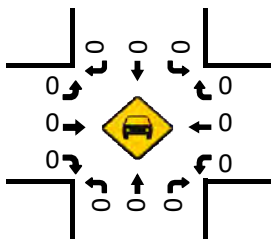
Cars (AM)



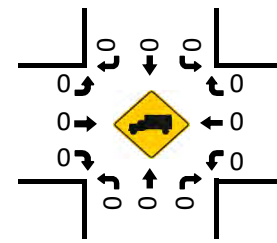
HT (AM)



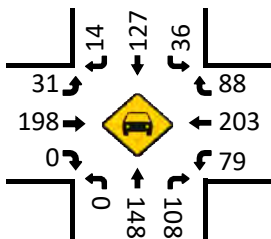
Cars (NOON)



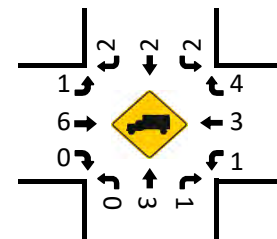
HT (NOON)



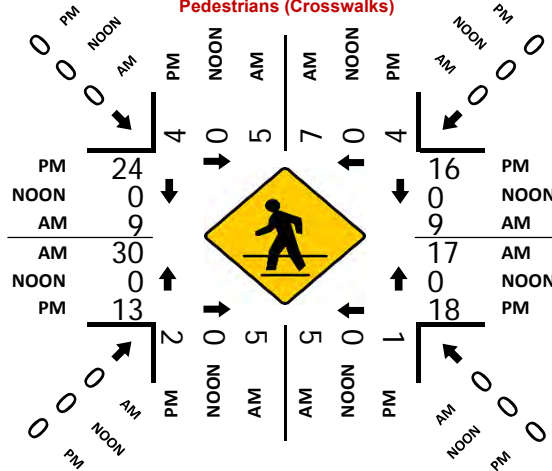
Cars (PM)



HT (PM)



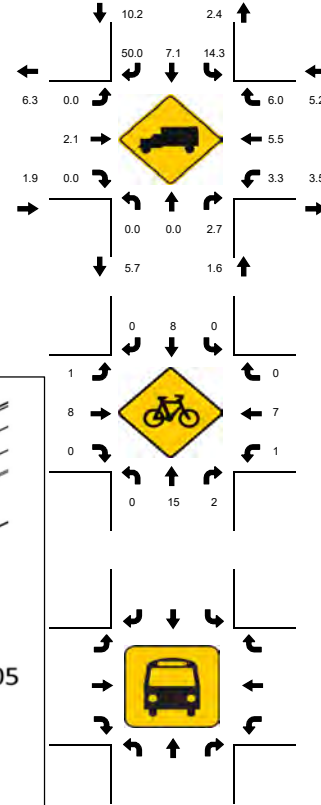
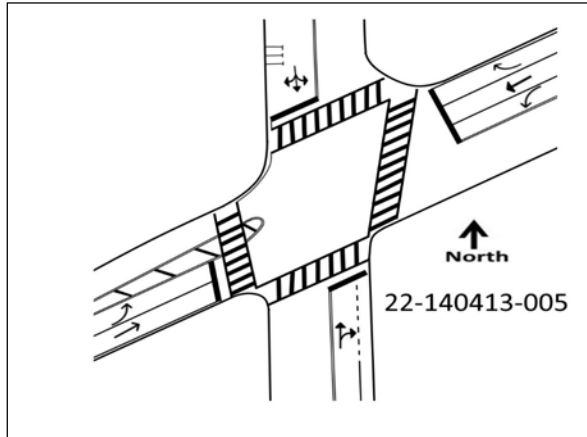
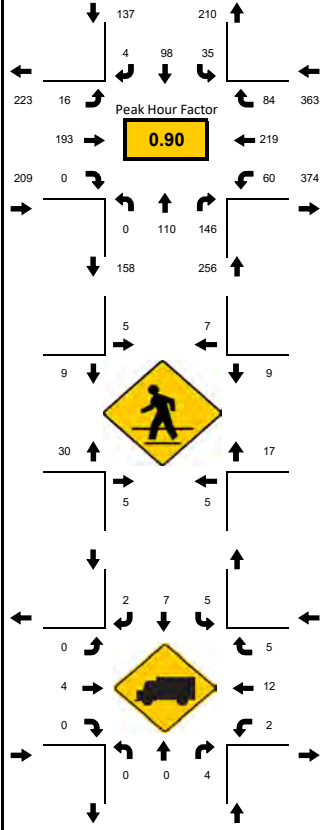
Pedestrians (Crosswalks)



LOCATION: West Ave & Dade Blvd
 CITY/STATE: Miami Beach, FL

PROJECT ID: 22-140413-005
 DATE: Wed, Sep 14, 2022

Peak-Hour: 08:00 AM - 09:00 AM
 Peak 15-Minute: 08:45 AM - 09:00 AM

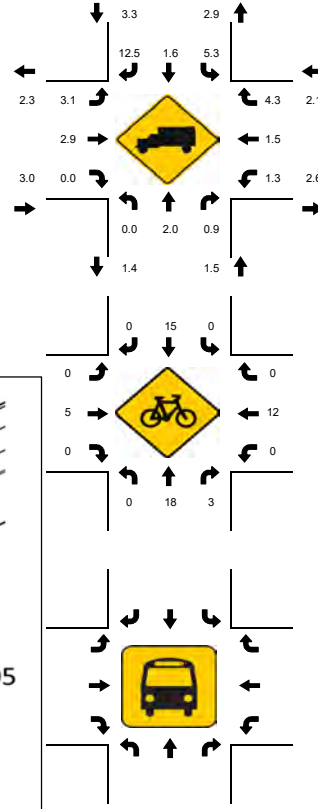
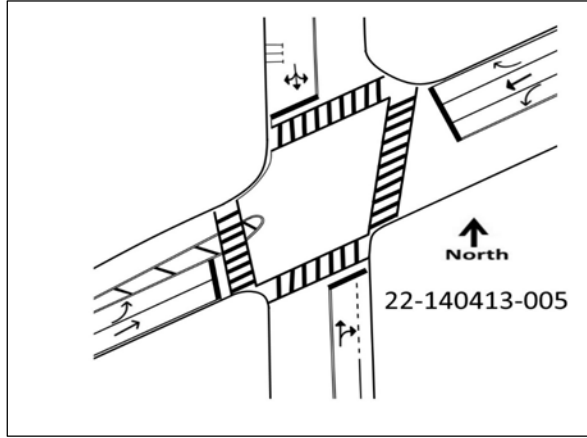
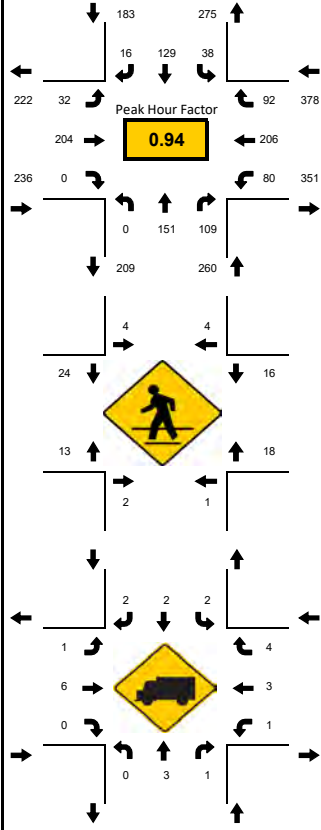


15-Min Count Period Beginning At	West Ave Northbound					West Ave Southbound					Dade Blvd Eastbound					Dade Blvd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	0	15	30	0		8	8	0	0		4	33	0	0		7	46	19	0		170	641
07:15 AM	0	17	15	0		0	16	1	0		2	23	0	0		12	52	15	0		153	682
07:30 AM	0	19	20	0		11	8	0	0		2	25	0	0		6	38	11	0		140	774
07:45 AM	0	21	22	0		6	8	1	0		3	33	0	0		12	57	15	0		178	874
08:00 AM	0	32	26	0		7	20	0	0		1	42	0	0		10	55	18	0		211	965
08:15 AM	0	26	42	0		15	28	1	0		7	41	0	0		11	57	17	0		245	754
08:30 AM	0	29	37	0		6	25	2	0		6	49	0	0		13	52	21	0		240	509
08:45 AM	0	23	41	0		7	25	1	0		2	61	0	0		26	55	28	0		269	269
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	0	128	168	0		60	112	8	0		28	244	0	0		104	228	112	0		1192	
Heavy Trucks	0	0	12	0		8	12	4	0		0	8	0	0		8	20	8	0		80	
Pedestrians	16					20					52					44					132	
Bicycles	0	16	8	0		0	12	0	0		4	12	0	0		4	16	0	0		72	
Buses																						
Stopped Buses																						

LOCATION: West Ave & Dade Blvd
 CITY/STATE: Miami Beach, FL

PROJECT ID: 22-140413-005
 DATE: Wed, Sep 14, 2022

Peak-Hour: 04:00 PM - 05:00 PM
 Peak 15-Minute: 04:15 PM - 04:30 PM



15-Min Count Period Beginning At	West Ave Northbound					West Ave Southbound					Dade Blvd Eastbound					Dade Blvd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	0	43	28	0		9	28	3	0		14	53	0	0		26	56	16	0		276	1057
04:15 PM	0	38	22	0		10	40	3	0		3	65	0	0		18	49	32	0		280	1036
04:30 PM	0	33	35	0		9	29	5	0		7	47	0	0		14	44	26	0		249	1017
04:45 PM	0	37	24	0		10	32	5	0		8	39	0	0		22	57	18	0		252	1000
05:00 PM	0	36	27	0		19	34	4	0		5	45	0	0		19	40	26	0		255	991
05:15 PM	0	30	37	0		10	32	7	0		4	49	0	0		21	41	30	0		261	736
05:30 PM	0	29	36	0		10	27	4	0		6	34	0	0		24	43	19	0		232	475
05:45 PM	0	21	30	0		12	34	2	0		6	43	0	0		22	39	33	1		243	243
Peak 15-Min Flowrates	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Total	
All Vehicles	0	172	140	0		40	160	20	0		56	260	0	0		104	228	128	0		1308	
Heavy Trucks	0	4	4	0		8	8	4	0		4	12	0	0		4	4	8	0		60	
Pedestrians		8					16					76					64				164	
Bicycles	0	28	8	0		0	28	0	0		0	12	0	0		0	28	0	0		104	
Buses																						
Stopped Buses																						

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & Dade Blvd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-006
 Date: 9/14/2022

Data - Total

NS/EW Streets:	Alton Rd				Alton Rd				Dade Blvd				Dade Blvd				TOTAL			
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND							
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
7:00 AM	12	58	56	0	3	160	33	0	26	41	3	0	36	26	8	0				
7:15 AM	12	72	25	0	5	157	34	3	19	14	4	0	51	26	8	0				
7:30 AM	11	85	24	1	5	171	26	0	37	18	2	0	26	15	7	0				
7:45 AM	10	83	32	0	1	195	42	1	35	21	5	0	31	30	3	0				
8:00 AM	21	110	42	1	7	212	40	3	49	22	3	0	32	25	5	0				
8:15 AM	18	125	51	0	8	179	34	2	57	34	6	0	41	29	6	0				
8:30 AM	17	133	44	2	5	201	32	1	52	37	5	0	54	31	10	0				
8:45 AM	24	127	59	1	8	222	34	1	53	50	5	0	47	51	7	0				
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL			
APPROACH %'s :	125	793	333	5	42	1497	275	11	328	237	33	0	318	233	54	0	4284			
	9.95%	63.14%	26.51%	0.40%	2.30%	82.03%	15.07%	0.60%	54.85%	39.63%	5.52%	0.00%	52.56%	38.51%	8.93%	0.00%				
PEAK HR :	08:00 AM - 09:00 AM																TOTAL			
PEAK HR VOL :	80	495	196	4	28	814	140	7	211	143	19	0	174	136	28	0	2475			
PEAK HR FACTOR :	0.833	0.930	0.831	0.500	0.875	0.917	0.875	0.583	0.925	0.715	0.792	0.000	0.806	0.667	0.700	0.000	0.898			
	0.918				0.933				0.863				0.805							
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL			
4:00 PM	27	220	47	2	5	159	34	2	53	30	5	0	39	31	12	0	666			
4:15 PM	28	199	53	3	4	182	24	3	56	35	5	0	38	44	13	0	687			
4:30 PM	21	241	54	1	4	158	20	4	48	33	13	0	28	40	13	0	678			
4:45 PM	26	210	50	0	5	174	26	9	33	32	6	0	45	44	20	0	680			
5:00 PM	21	247	57	1	5	159	24	1	53	32	7	1	39	36	12	0	695			
5:15 PM	22	247	40	2	2	167	25	6	49	39	7	0	38	41	8	0	693			
5:30 PM	18	172	57	5	7	183	26	2	43	35	3	0	36	37	14	0	638			
5:45 PM	22	203	44	1	4	177	23	2	39	37	9	0	42	46	7	0	656			
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL			
APPROACH %'s :	185	1739	402	15	36	1359	202	29	374	273	55	1	305	319	99	0	5393			
	7.90%	74.28%	17.17%	0.64%	2.21%	83.58%	12.42%	1.78%	53.20%	38.83%	7.82%	0.14%	42.19%	44.12%	13.69%	0.00%				
PEAK HR :	04:30 PM - 05:30 PM																TOTAL			
PEAK HR VOL :	90	945	201	4	16	658	95	20	183	136	33	1	150	161	53	0	2746			
PEAK HR FACTOR :	0.865	0.956	0.882	0.500	0.800	0.945	0.913	0.556	0.863	0.872	0.635	0.250	0.833	0.915	0.663	0.000	0.988			
	0.951				0.922				0.929				0.835							

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & Dade Blvd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-006
 Date: 9/14/2022

Data - Cars

NS/EW Streets:	Alton Rd				Alton Rd				Dade Blvd				Dade Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	12	53	51	0	3	148	31	0	26	40	2	0	34	25	8	0	
7:15 AM	11	71	24	0	4	152	32	3	19	14	4	0	49	26	8	0	
7:30 AM	11	83	22	1	4	164	25	0	36	18	2	0	25	13	5	0	
7:45 AM	8	80	31	0	1	189	41	1	33	20	5	0	30	29	3	0	
8:00 AM	19	107	42	1	6	198	38	3	49	21	2	0	31	24	5	0	
8:15 AM	17	115	51	0	8	173	32	2	55	34	5	0	39	26	3	0	
8:30 AM	15	125	41	2	5	194	29	1	51	36	3	0	51	30	10	0	
8:45 AM	22	119	57	1	8	217	34	1	53	46	4	0	47	50	7	0	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	115	753	319	5	39	1435	262	11	322	229	27	0	306	223	49	0	4095
APPROACH %'s :	9.65%	63.17%	26.76%	0.42%	2.23%	82.14%	15.00%	0.63%	55.71%	39.62%	4.67%	0.00%	52.94%	38.58%	8.48%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	73	466	191	4	27	782	133	7	208	137	14	0	168	130	25	0	2365
PEAK HR FACTOR :	0.830	0.932	0.838	0.500	0.844	0.901	0.875	0.583	0.945	0.745	0.700	0.000	0.824	0.650	0.625	0.000	0.888
	0.922				0.913				0.871				0.776				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	27	213	47	2	5	153	33	2	52	30	5	0	38	30	10	0	
4:15 PM	26	194	52	3	3	174	24	3	54	34	4	0	37	44	13	0	
4:30 PM	19	231	53	1	4	156	20	3	46	33	12	0	28	39	11	0	
4:45 PM	25	208	48	0	5	172	26	9	32	32	6	0	45	44	18	0	
5:00 PM	21	243	56	1	5	153	24	1	53	32	7	1	38	35	12	0	
5:15 PM	22	239	39	2	2	163	25	6	47	39	7	0	38	41	7	0	
5:30 PM	18	169	56	5	7	182	26	2	43	35	3	0	34	37	13	0	
5:45 PM	22	197	43	1	4	176	23	2	38	37	9	0	42	46	6	0	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	180	1694	394	15	35	1329	201	28	365	272	53	1	300	316	90	0	5273
APPROACH %'s :	7.88%	74.20%	17.26%	0.66%	2.20%	83.43%	12.62%	1.76%	52.82%	39.36%	7.67%	0.14%	42.49%	44.76%	12.75%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	87	921	196	4	16	644	95	19	178	136	32	1	149	159	48	0	2685
PEAK HR FACTOR :	0.870	0.948	0.875	0.500	0.800	0.936	0.913	0.528	0.840	0.872	0.667	0.250	0.828	0.903	0.667	0.000	0.984
	0.941				0.913				0.933				0.832				

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & Dade Blvd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-006
 Date: 9/14/2022

Data - HT

NS/EW Streets:	Alton Rd				Alton Rd				Dade Blvd				Dade Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	5	5	0	0	12	2	0	0	1	1	0	2	1	0	0	29
7:15 AM	1	1	1	0	1	5	2	0	0	0	0	0	2	0	0	0	13
7:30 AM	0	2	2	0	1	7	1	0	1	0	0	0	1	2	2	0	19
7:45 AM	2	3	1	0	0	6	1	0	2	1	0	0	1	1	0	0	18
8:00 AM	2	3	0	0	1	14	2	0	0	1	1	0	1	1	0	0	26
8:15 AM	1	10	0	0	0	6	2	0	2	0	1	0	2	3	3	0	30
8:30 AM	2	8	3	0	0	7	3	0	1	1	2	0	3	1	0	0	31
8:45 AM	2	8	2	0	0	5	0	0	0	4	1	0	0	1	0	0	23
TOTAL VOLUMES :	10	40	14	0	3	62	13	0	6	8	6	0	12	10	5	0	189
APPROACH %'s :	15.63%	62.50%	21.88%	0.00%	3.85%	79.49%	16.67%	0.00%	30.00%	40.00%	30.00%	0.00%	44.44%	37.04%	18.52%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																
PEAK HR VOL :	7	29	5	0	1	32	7	0	3	6	5	0	6	6	3	0	110
PEAK HR FACTOR :	0.875	0.725	0.417	0.000	0.250	0.571	0.583	0.000	0.375	0.375	0.625	0.000	0.500	0.500	0.250	0.000	0.887
			0.788			0.588				0.700				0.469			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	7	0	0	0	6	1	0	1	0	0	0	1	1	2	0	19
4:15 PM	2	5	1	0	1	8	0	0	2	1	1	0	1	0	0	0	22
4:30 PM	2	10	1	0	0	2	0	1	2	0	1	0	0	1	2	0	22
4:45 PM	1	2	2	0	0	2	0	0	1	0	0	0	0	0	2	0	10
5:00 PM	0	4	1	0	0	6	0	0	0	0	0	0	1	1	0	0	13
5:15 PM	0	8	1	0	0	4	0	0	2	0	0	0	0	0	1	0	16
5:30 PM	0	3	1	0	0	1	0	0	0	0	0	0	2	0	1	0	8
5:45 PM	0	6	1	0	0	1	0	0	1	0	0	0	0	0	1	0	10
TOTAL VOLUMES :	5	45	8	0	1	30	1	1	9	1	2	0	5	3	9	0	120
APPROACH %'s :	8.62%	77.59%	13.79%	0.00%	3.03%	90.91%	3.03%	3.03%	75.00%	8.33%	16.67%	0.00%	29.41%	17.65%	52.94%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																
PEAK HR VOL :	3	24	5	0	0	14	0	1	5	0	1	0	1	2	5	0	61
PEAK HR FACTOR :	0.375	0.600	0.625	0.000	0.000	0.583	0.000	0.250	0.625	0.000	0.250	0.000	0.250	0.500	0.625	0.000	0.693
			0.615			0.625				0.500				0.667			

	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
AM	9%	6%	3%	0%	4%	4%	5%	0%	1%	4%	26%	#DIV/0!	3%	4%	11%	#DIV/0!	
PM	3%	3%	2%	0%	0%	2%	0%	5%	3%	0%	3%	0%	1%	1%	9%	#DIV/0!	

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & Dade Blvd
 City: Miami Beach
 Control: Signalized

Project ID: 22-140413-006
 Date: 9/14/2022

Data - Bikes

NS/EW Streets:	Alton Rd				Alton Rd				Dade Blvd				Dade Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	1	0	0	0	0	0	0	0	4	1	0	0	2	0	0	8
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	6
7:30 AM	1	0	1	0	0	0	0	0	0	2	0	0	0	5	0	0	9
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	4	0	0	6
8:00 AM	0	3	0	0	0	0	0	0	0	2	0	0	0	1	0	0	6
8:15 AM	0	0	0	0	0	0	0	0	0	4	0	0	1	3	0	0	8
8:30 AM	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3
8:45 AM	1	1	0	0	0	1	0	0	0	3	0	0	0	4	2	0	12
TOTAL VOLUMES :	2	6	2	0	0	1	1	0	0	17	1	0	2	24	2	0	58
APPROACH %'s :	20.00%	60.00%	20.00%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	94.44%	5.56%	0.00%	7.14%	85.71%	7.14%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	1	4	1	0	0	1	1	0	0	10	0	0	1	8	2	0	29
PEAK HR FACTOR :	0.250	0.333	0.250	0.000	0.000	0.250	0.250	0.000	0.000	0.625	0.000	0.000	0.250	0.500	0.250	0.000	0.604
					0.500				0.625				0.458				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	1	1	0	0	0	0	0	0	2	1	0	0	2	1	0	8
4:15 PM	1	0	0	0	0	3	0	0	0	3	0	0	1	6	0	0	14
4:30 PM	0	1	1	0	0	1	0	0	1	0	1	0	1	1	0	0	7
4:45 PM	0	1	0	0	1	1	1	0	0	1	0	0	0	2	0	0	7
5:00 PM	0	1	2	0	0	0	0	0	0	1	0	0	2	1	0	0	7
5:15 PM	0	2	3	0	0	1	0	0	0	1	0	0	1	0	0	0	8
5:30 PM	0	0	0	0	1	0	0	0	3	3	0	0	1	0	0	0	8
5:45 PM	2	0	1	0	0	0	0	0	1	2	0	0	0	3	0	0	9
TOTAL VOLUMES :	3	6	8	0	2	6	1	0	5	13	2	0	6	15	1	0	68
APPROACH %'s :	17.65%	35.29%	47.06%	0.00%	22.22%	66.67%	11.11%	0.00%	25.00%	65.00%	10.00%	0.00%	27.27%	68.18%	4.55%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	5	6	0	1	3	1	0	1	3	1	0	4	4	0	0	29
PEAK HR FACTOR :	0.000	0.625	0.500	0.000	0.250	0.750	0.250	0.000	0.250	0.750	0.250	0.000	0.500	0.500	0.000	0.000	0.906
					0.417				0.625				0.667				

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & Dade Blvd
City: Miami Beach

Project ID: 22-140413-006
Date: 9/14/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Alton Rd		Alton Rd		Dade Blvd		Dade Blvd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	5	1	3	0	3	0	2	0	14
7:15 AM	1	1	0	0	5	1	3	1	12
7:30 AM	0	0	1	0	2	0	8	1	12
7:45 AM	1	3	0	1	1	2	1	0	9
8:00 AM	0	1	3	1	4	3	1	4	17
8:15 AM	2	0	1	3	0	2	4	5	17
8:30 AM	1	1	1	1	7	1	0	2	14
8:45 AM	0	1	0	1	6	0	3	0	11
TOTAL VOLUMES :	EB 10	WB 8	EB 9	WB 7	NB 28	SB 9	NB 22	SB 13	TOTAL 106
APPROACH %'s :	55.56%	44.44%	56.25%	43.75%	75.68%	24.32%	62.86%	37.14%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	3	3	5	6	17	6	8	11	59
PEAK HR FACTOR :	0.375	0.750	0.417	0.500	0.607	0.500	0.500	0.550	0.868
	0.750		0.688		0.719		0.528		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	2	2	0	3	2	4	3	2	18
4:15 PM	5	2	0	0	2	6	0	1	16
4:30 PM	1	1	1	3	3	6	2	4	21
4:45 PM	2	2	2	0	4	5	1	3	19
5:00 PM	0	5	0	3	1	1	1	1	12
5:15 PM	5	2	1	2	7	4	3	4	28
5:30 PM	0	7	0	0	6	0	1	2	16
5:45 PM	1	0	1	2	5	1	3	1	14
TOTAL VOLUMES :	EB 16	WB 21	EB 5	WB 13	NB 30	SB 27	NB 14	SB 18	TOTAL 144
APPROACH %'s :	43.24%	56.76%	27.78%	72.22%	52.63%	47.37%	43.75%	56.25%	
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	8	10	4	8	15	16	7	12	80
PEAK HR FACTOR :	0.400	0.500	0.500	0.667	0.536	0.667	0.583	0.750	0.714
	0.643		0.750		0.705		0.679		

Signal Timings






TOD Schedule Report
for 2646: Alton Rd&Lincoln Rd

Print Date:
10/4/2021

Print Time:
3:11 PM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
2646	Alton Rd&Lincoln Rd	DOW-2	TOD	[10] PRE-PM PEAK	150	145	N/A	1	Max 2

Splits

<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>
NBL	SBT	-	-	SBL	NBT	XPD	EBT
11	69	0	0	11	69	36	16
						N/A	

Active Phase Bank: Phase Bank 1

Phase	<u>Walk</u>			<u>Don't Walk</u>			<u>Min Initial</u>			<u>Veh Ext</u>			<u>Max Limit</u>			<u>Max 2</u>			<u>Yellow</u>	<u>Red</u>	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3			
1 NBL	0	0	0	0	0	0	5	5	5	2	2	2	10	10	10	20	20	20	4	2	
2 SBT	0	0	0	0	0	0	7	7	7	1	1	1	40	40	40	0	0	0	4	2.3	
3 -	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
5 SBL	0	0	0	0	0	0	5	5	5	2	2	2	7	7	7	20	20	20	4	2	
6 NBT	0	0	0	0	0	0	7	7	7	1	1	1	40	40	40	0	0	0	4	2.3	
7 XPD	7	7	7	28	28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 EBT	0	0	0	0	0	0	7	7	7	2.5	2.5	2.5	15	15	15	40	40	40	4	2	

Last In Service Date: unknown

Permitted Phases	
	12345678
Default	12--5678
External Permit 0	12--5678
External Permit 1	-2---6-8
External Permit 2	-2---6-8

TOD Schedule Report
for 2646: Alton Rd&Lincoln Rd

Print Date:
10/4/2021

Print Time:
3:11 PM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 NBL	2 SBT	3 -	4 -	5 SBL	6 NBT	7 XPD	8 EBT		
1		100	7	23	0	0	7	23	36	16	0	5
3		120	7	43	0	0	7	43	36	16	0	90
5		150	7	65	0	0	7	65	36	24	0	55
10		150	11	69	0	0	11	69	36	16	0	145
13		130	11	49	0	0	11	49	36	16	0	70
19		120	7	43	0	0	7	43	36	16	0	30
20		140	11	59	0	0	11	59	36	16	0	102
21		140	7	59	0	0	7	59	40	16	0	76
22		120	7	39	0	0	7	39	40	16	0	15
25		140	7	59	0	0	7	59	40	16	0	120
26		200	7	119	0	0	7	119	40	16	0	161
27		180	7	99	0	0	7	99	40	16	0	94

Local TOD Schedule		
Time	Plan	DOW
0000	1	Su M T W Th F S
0600	3	Su M T W Th F S
0800	5	M T W Th F
0800	19	Su S
1000	20	Su S
1300	10	M T W Th F
1900	13	Su M T W Th F S
2000	22	Su S

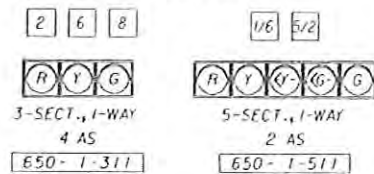
Current Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD LOCAL MULTIFU	---4---	SuM T W ThF S
0000	TOD OUTPUTS	8-----	SuM T W ThF S
0500	PED RECALL	-7-----	SuM T W ThF S
0500	TOD LOCAL MULTIFU	-----	SuM T W ThF S
0700	TOD OUTPUTS	-----	SuM T W ThF S
2000	TOD OUTPUTS	8-----	SuM T W Th
2200	PED RECALL	-----	SuM T W ThF S

Local Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD LOCAL MULTIFUNCT	---4---	SuM T W ThF S
0000	TOD OUTPUTS	8-----	SuM T W ThF S
0500	PED RECALL	-7-----	SuM T W ThF S
0500	TOD LOCAL MULTIFUNCT	-----	SuM T W ThF S
0700	TOD OUTPUTS	-----	SuM T W ThF S
2000	TOD OUTPUTS	8-----	SuM T W Th
2200	TOD OUTPUTS	8-----	F S
2200	PED RECALL	-----	SuM T W ThF S

* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

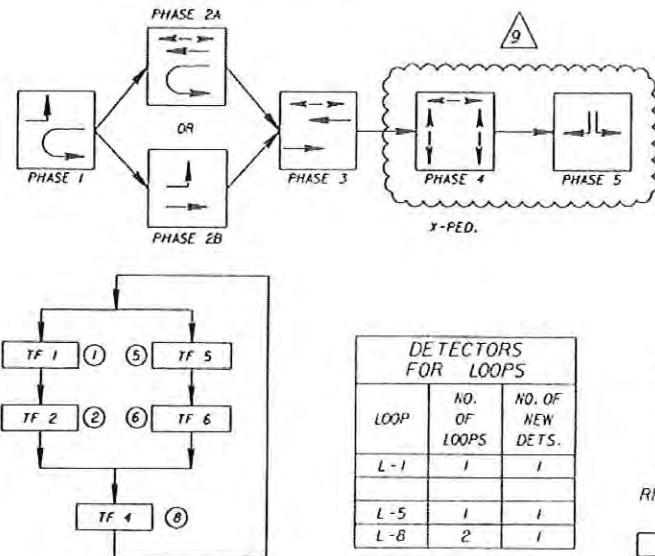
SIGNAL HEAD DETAIL



CONTROLLER OPERATION

1. CONTROLLER OPERATION AS SHOWN. MAJOR STREET: ALTON ROAD. MINOR STREET: LINCOLN ROAD.
2. SOP AS SHOWN.
3. PHASE 3: RECALL PHASES 1, 2, 4 AND 5: ACTUATED.
4. FLASHING OPERATION: MOVEMENTS 2 AND 6: YELLOW. MOVEMENT 4: RED.

**SIGNAL OPERATION PLAN
PHASE MOVEMENT DIAGRAM**

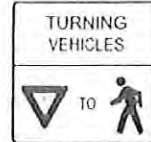


NOTES:

1. SIGNAL TIMING TO BE PROVIDED BY MIAMI-DADE COUNTY SIGNAL DIVISION.
2. THE SPACE BETWEEN LETTERS COULD BE REDUCED IN ORDER TO COMPLY WITH LETTER SIZE AND OVERALL DIMENSION IN THE OVERHEAD STREET NAME SIGNS.
3. ALL PEDESTRIAN SIGNAL HEADS SHALL ALIGN WITH CENTER FAR SIDE END OF CORRESPONDING CROSSWALK.
4. PEDESTRIAN PUSH BUTTON SHALL BE THE AUDIBLE TYPE.
5. AUDIBLE PEDESTRIAN MESSAGE SHALL BE ACTUATED. UPON ACTUATION THE FOLLOWING MESSAGE SHALL BE DELIVERED:
"WAIT TO CROSS ALTON ROAD AT LINCOLN ROAD STREET WAIT"
"ALTON ROAD WALK SIGN IS ON TO CROSS ALTON ROAD"
REPEAT THIS MESSAGE THROUGHOUT FLASHING CYCLE.
SIMILAR MESSAGE SHALL BE DELIVERED TO CROSS LINCOLN ROAD.
6. PAY ITEM 650-1-13 INCLUDES ANY RESTORATION WORK OUTSIDE THE MILLING AND RESURFACING LIMITS, THE FULL WIDTH OF THE AFFECTED LANE SHALL BE RESURFACED AND RE-STRIPPED.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
01/07/13	RELOCATE LOOPS L-1 AND L-6, PED. POLE AND SIGNALS AND NORTHBOUND TRAFFIC HEADS SIGNALS.	6/9/14	RELOCATE LOOP L-1 AND NB TRAFFIC HEADS SIGNALS. G1, G2 WEST ARM LENGTH CHANGED TO MATCH SHEET T-11. CONTROLLER STATION AND OFFSET ADDED.
3/11/14	RELOCATE "P2" PED. SIGNALS TO NEAR PED. POLES AND ADD AUDIBLE PUSH BUTTONS AND SIGNS.	7/27/15	EXCLUSIVE PEDESTRIAN PHASE ADDED.



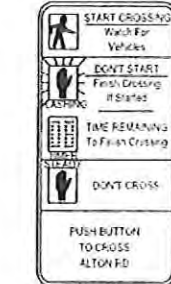
R10-15 Modified
30" x 30"
700-48-18 1EA

Alton Rd

INTERNALLY ILLUMINATED LED SIGN

Lincoln Rd

INTERNALLY ILLUMINATED LED SIGN



NAVIGATOR P.B.
OR APPROVED EQUAL
PEDESTRIAN DETECTOR
SIGN (LED OPTION)
COMBINATIONS

ENTERPRISE ELECTRICAL CONTRACTING, INC.

AS-BUILT DATE 4/1/16

FOREMAN JCS

SUPERVISOR J.M.F.

REMOVAL ITEMS:

- 690-10 6 EA
- 690-20 8 EA
- 690-32-2 4 EA
- 690-50 1 EA

- 690-70 4 EA
- 690-90 1 PI
- 690-100 1 PI

CONDUITS:

- 630-1-13 950 LF

PULL BOXES:

- 635-1-11 22 EA

LOOP ASSEMBLIES:

- 660-2-101 4 AS

PROP. CONTROLLER LOCATION
APPROX. STA. 67+61.08
76.52 FT LT OF C

CONTROLLER ITEMS:
632-7-1 1 PI
660-1-109 4 EA
670-5-120 1 AS

PROP. PED. SIGNAL
APPROX. STA. 67+59.09
43.65 FT LT OF C

646-1-11 1EA
665-111 1EA

PROP. PED. SIGNAL
APPROX. STA. 67+52.18
41.25 FT LT OF C

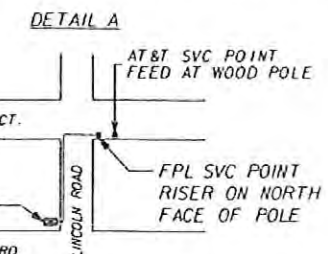
646-1-11 1EA

POLE LOCATION
STA. 67+45.25
43.4 FT LT OF C
ARM LENGTH = 42'
ARM BEARING =
N 88° 0' 53.67" E

649-31-102 1EA
665-111 1EA

PROP. PED. SIGNAL
APPROX. STA. 67+54.00
44.94 FT RT OF C

646-1-11 1EA
665-111 1EA



ELEC. SWITCH DISCONNECT
CONCRETE POLE
STA. 67+60.75 (86.25' RT)

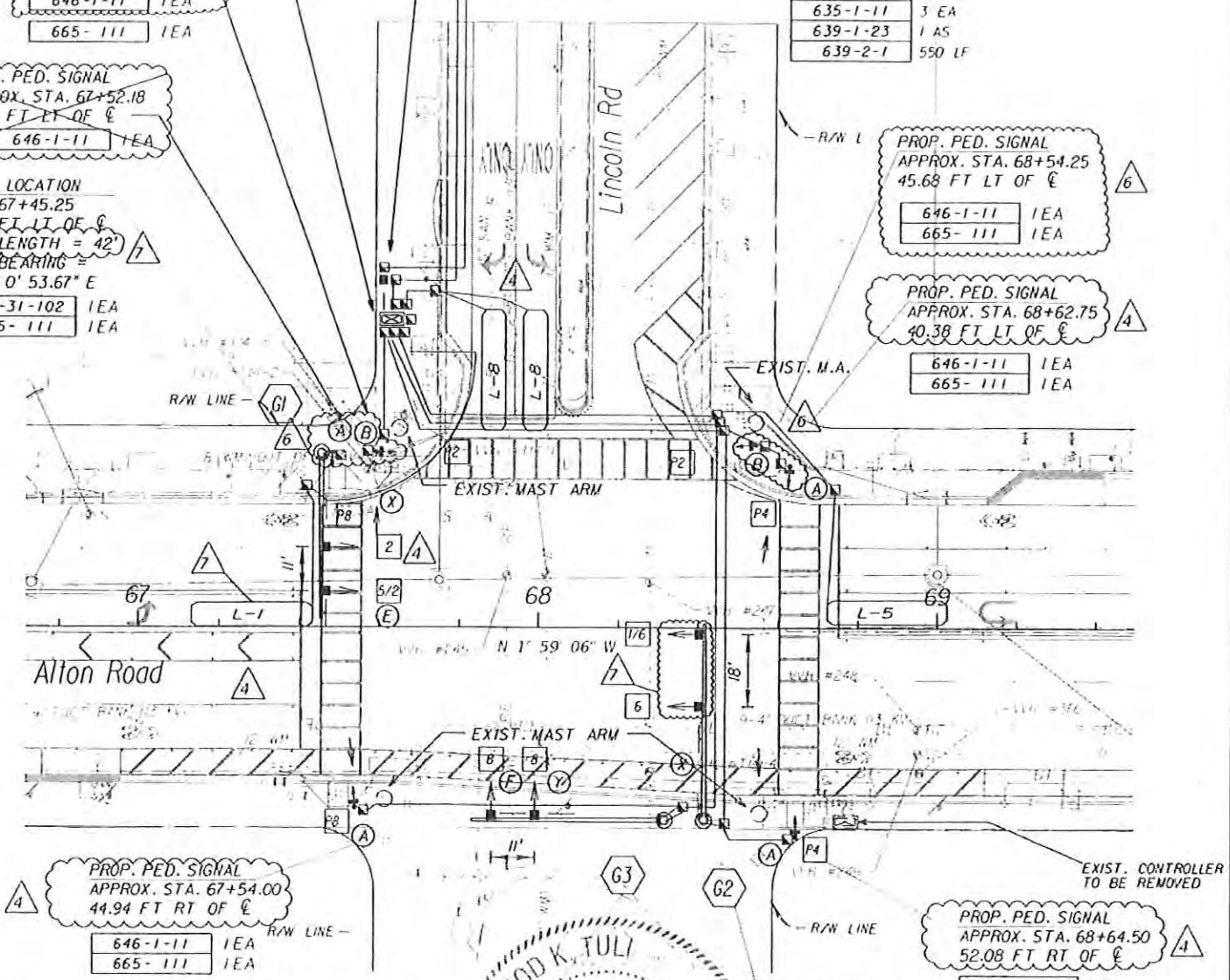
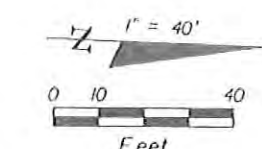
630-1-13 30 LF
639-2-1 60 LF

AT&T SERVICE POINT ITEMS:

- 630-1-13 310 LF
- 635-1-11 2 EA

**FPL SERVICE POINT ITEMS:
SEE NOTE 7**

- 630-1-13 275 LF
- 635-1-11 3 EA
- 639-1-23 1 AS
- 639-2-1 550 LF



SR-907/ ALTON ROAD AND LINCOLN RD.
ID No. : 2646

<p>FDOT DISTRICT SIX VINOD TULI, P.E. 1000 N.W. 11TH AVENUE MIAMI, FLORIDA 33172 P.E. NO. 44916</p>	<p>STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION</p>			<p>SIGNALIZATION PLAN</p>	<p>SHEET NO. T-11</p>
	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
	907	MIAMI-DADE	249911-1-52-01		

SIGNAL OPERATING PLAN



		Direction	NB		SB		EB		Ped Heads			
Timing Phases	Head No.	1/6	6	5/2	2	8			P2	P4	P8	Movements/Display/Actuation
(1+5) Alton Rd (ACTUATED)	Dwell	<G/R	R	<G/R	G	R			DW	DW	DW	
	(1+6)	<G/R	R	<Y/R	R	R			DW	DW	DW	
	(2+5)	<Y/R	R	<G/R	R	R			DW	DW	DW	
	(2+6)	<Y/R	R	<Y/R	R	R			DW	DW	DW	
(1+6) NB Alton Rd (ACTUATED)	Dwell	<G/G	G	R	R	R			DW	DW	DW	
	(2+6)	<Y/G	G	R	R	R			DW	DW	DW	
(2+5) SB Alton Rd (ACTUATED)	Dwell	R	R	<G/G	G	R			W/F	DW	DW	
	(2+6)	R	R	<Y/G	G	R			DW	DW	DW	
(2+6) N/SB Alton Rd (RECALL)	Dwell	G	G	G	G	R			W/F	DW	DW	
	4	Y	Y	Y	Y	R			DW	DW	DW	
8	Y	Y	Y	Y	Y	R			DW	DW	DW	
4 PED Lincoln Rd (ACTUATED)	Dwell	R	R	R	R	R			W/F	W/F	W/F	
	8	R	R	R	R	R			DW	DW	DW	
	(1+5)	R	R	R	R	R			DW	DW	DW	
	(1+6)	R	R	R	R	R			DW	DW	DW	
	(2+5)	R	R	R	R	R			DW	DW	DW	
(2+6)	R	R	R	R	R							
8 EB LINCOLN RD (ACTUATED)	Dwell	R	R	R	R	G						
	(1+5)	R	R	R	R	Y			DW	DW	DW	
	(1+6)	R	R	R	R	Y			DW	DW	DW	
	(2+5)	R	R	R	R	Y			DW	DW	DW	
(2+6)	R	R	R	R	Y			DW	DW	DW		

Miami-Dade County Public Works Department

Drawn WILLIAM RIVERA PAZ	Date 8/4/2015	Alton Rd & Lincoln Rd		
Checked <i>H. Howland</i>	Date 8/4/15	Placed in Service Date 1/29/15 By ECC	Phasing No. 7	Asset Number 2646

TOD Schedule Report
for 2647: Alton Rd&17 St


Print Date:
10/4/2021

Print Time:
3:11 PM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
2647	Alton Rd&17 St	DOW-2	TOD	[10] PRE-PM PEAK	150	11	N/A	1	Max 2

Splits

<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>
NBL	SBT	EBT	WBT	SBL	NBT	-	-
6	53	24	42	8	51	0	0



Active Phase Bank: Phase Bank 1

<u>Phase</u>	<u>Walk</u>			<u>Don't Walk</u>			<u>Min Initial</u>			<u>Veh Ext</u>			<u>Max Limit</u>			<u>Max 2</u>			<u>Yellow</u>	<u>Red</u>
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
1 NBL	0	0	0	0	0	0	5	5	5	2	2	2	5	5	10	7	5	0	3.7	2
2 SBT	4	4	4	12	12	12	4	4	4	1	1	1	30	27	40	0	27	0	4	2.2
3 EBT	7	7	7	16	16	16	7	7	7	2.5	2.5	2.5	22	12	16	55	18	12	4	2.3
4 WBT	7	7	7	13	13	13	7	7	7	2.5	2.5	2.5	12	18	12	55	20	12	4	3.2
5 SBL	0	0	0	0	0	0	4	5	5	2	2	2	8	8	10	38	8	0	3.7	2
6 NBT	4	4	4	12	12	12	4	4	4	1	1	1	30	27	40	0	27	0	4	2.2
7 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Last In Service Date: 11/22/2016 17:07

Permitted Phases	
	12345678
Default	123456--
External Permit 0	-234-6--
External Permit 1	1234-6--
External Permit 2	-234-6--

TOD Schedule Report
for 2647: Alton Rd&17 St

Print Date:
10/4/2021

Print Time:
3:11 PM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 NBL	2 SBT	3 EBT	4 WBT	5 SBL	6 NBT	7 -	8 -		
1		100	7	22	21	25	7	22	0	0	0	51
3		120	7	32	35	21	17	22	0	0	0	87
5		150	7	62	25	31	20	49	0	0	0	39
10		150	6	53	24	42	8	51	0	0	0	11
13		130	7	42	35	21	17	32	0	0	0	45
19		120	7	32	31	25	17	22	0	0	0	33
20		140	7	52	35	21	17	42	0	0	0	102
21		140	7	52	35	21	17	42	0	0	0	86
22		120	7	32	35	21	13	26	0	0	0	19
25		140	6	60	25	24	19	47	0	0	0	26
26		200	7	103	25	40	18	92	0	0	0	162
27		180	7	83	25	40	19	71	0	0	0	105

Local TOD Schedule		
Time	Plan	DOW
0000	1	Su M T W Th F S
0600	3	Su M T W Th F S
0800	5	M T W Th F
0800	19	Su S
1000	20	Su S
1300	10	M T W Th F
2000	13	Su M T W Th F S
2000	22	Su S

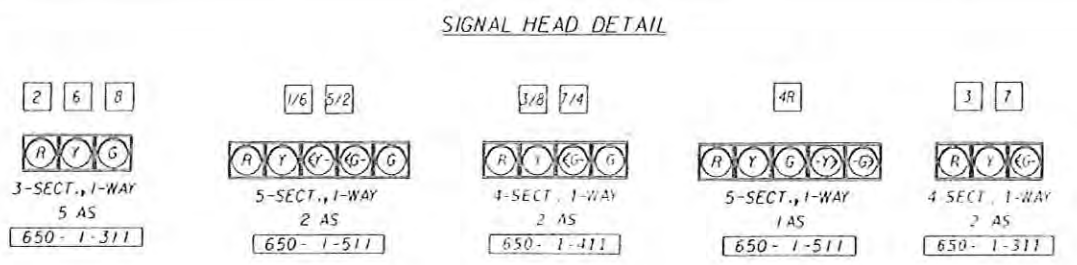
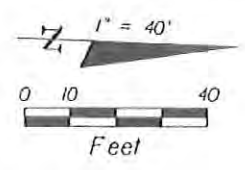
Current Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	8-----1	SuM T W ThF S
0000	VEH RECALL	---4---	M T W ThF
0000	TOD LOCAL MULTIFU	---4---	SuM T W ThF S
0500	TOD LOCAL MULTIFU	-----	SuM T W ThF S
0500	VEH RECALL	-----	M T W ThF
0500	PED RECALL	---43--	SuM T W ThF S
0600	TOD OUTPUTS	-----	M T W ThF
2000	TOD OUTPUTS	8---3--	M T W ThF
2200	PED RECALL	-----	SuM T W ThF S

Local Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	8-----1	SuM T W ThF S
0000	VEH RECALL	---4---	M T W ThF
0000	TOD LOCAL MULTIFUNCT	---4---	SuM T W ThF S
0500	TOD LOCAL MULTIFUNCT	-----	SuM T W ThF S
0500	VEH RECALL	-----	M T W ThF
0500	PED RECALL	---43--	SuM T W ThF S
0600	TOD OUTPUTS	-----	M T W ThF
0700	TOD OUTPUTS	-----	Su S
2000	TOD OUTPUTS	8---3--	M T W ThF
2200	TOD OUTPUTS	8---3--	Su S
2200	PED RECALL	-----	SuM T W ThF S

* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

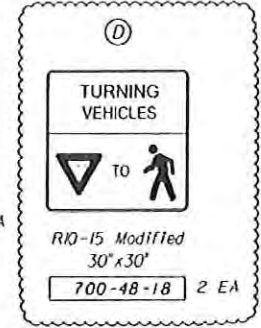
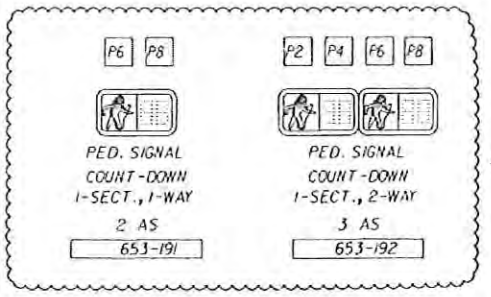
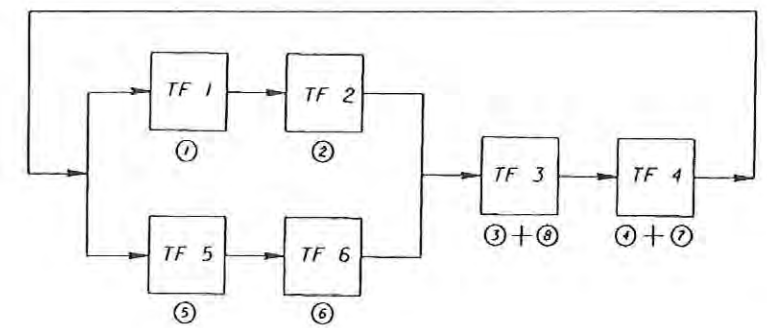
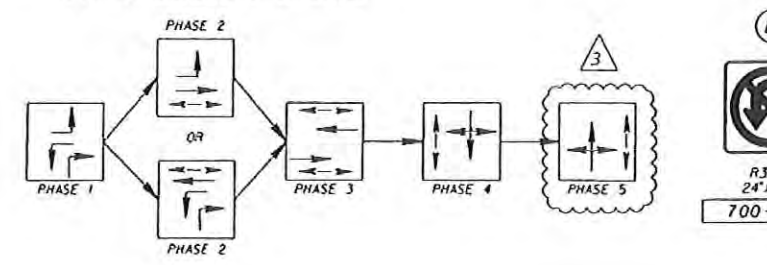
No Calendar Defined/Enabled

ENTERPRISE ELECTRICAL CONTRACTING, INC.
 AS-BUILT DATE 4/1/16
 FOREMAN JCO
 SUPERVISOR [Signature]



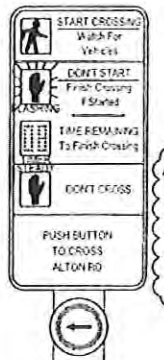
- CONTROLLER OPERATION**
- CONTROLLER OPERATION AS SHOWN. MAJOR STREET: ALTON ROAD MINOR STREET: 17TH STREET
 - SOP AS SHOWN
 - PHASE 3: RECALL PHASES 1, 4, AND 5: ACTUATED
 - FLASHING OPERATION: MOVEMENTS 2 AND 6: YELLOW MOVEMENTS 3, 4, 7 AND 8: RED

SIGNAL OPERATION PLAN PHASE MOVEMENT DIAGRAM



Alton Rd
 D3
 699-1-1 2 EA
 INTERNALLY ILLUMINATED LED SIGN

17 Street
 D3
 699-1-1 2 EA
 INTERNALLY ILLUMINATED LED SIGN



R10-3E (MODIFIED) 9' x 15' TO BE INCLUDED IN THE COST OF ITEM No. 665-11 (4 EA)

- NOTES:**
- SIGNAL TIMING TO BE PROVIDED BY MIAMI-DADE COUNTY SIGNAL DIVISION.
 - THE SPACE BETWEEN LETTERS COULD BE REDUCED IN ORDER TO COMPLY WITH LETTER SIZE AND OVERALL DIMENSIONS IN THE OVERHEAD STREET NAME SIGNS.
 - ALL PEDESTRIAN SIGNAL HEADS SHALL ALIGN WITH CENTER FAR SIDE END OF CORRESPONDING CROSSWALK.
 - PAY ITEM 630-1-13 INCLUDES ANY RESTORATION WORK OUTSIDE THE MILLING AND RESURFACING LIMITS, THE FULL WIDTH OF THE AFFECTED LANE SHALL BE RESURFACED AND RE-STRIPED.
 - PEDESTRIAN PUSH BUTTON SHALL BE THE AUDIBLE TYPE.
 - AUDIBLE PEDESTRIAN MESSAGE SHALL BE ACTUATED. UPON ACTUATION THE FOLLOWING MESSAGE SHALL BE DELIVERED:
 "WAIT TO CROSS ALTON ROAD AT 17 STREET WAIT"
 "ALTON ROAD WALK SIGN IS ON TO CROSS ALTON ROAD"
 REPEAT THIS MESSAGE THROUGHOUT FLASHING CYCLE.

REMOVAL ITEMS:

690-10	11 EA
690-20	6 EA
690-32-2	4 EA
690-50	1 EA

690-70	2 EA
690-90	1 PI
690-100	1 PI

CONDUITS:

630-1-13	150 LF
----------	--------

PULL BOXES:

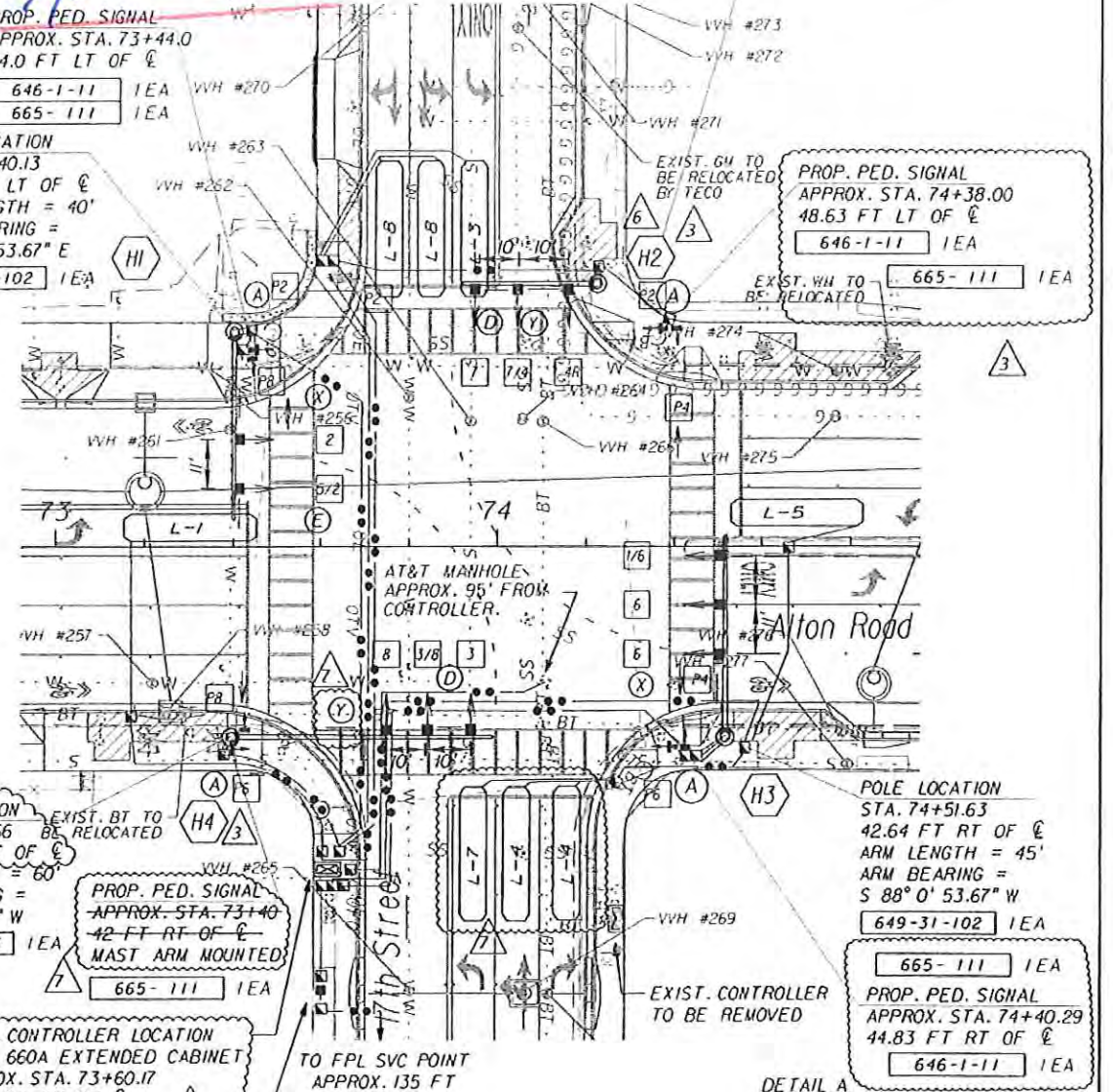
635-1-11	9 EA
----------	------

LOOP ASSEMBLIES:

660-2-101	8 AS
-----------	------

DETECTORS FOR LOOPS

LOOP	NO. OF LOOPS	NO. OF NEW DETS.
L-1	1	1
L-3	1	1
L-4	2	1
L-5	1	1
L-7	1	1
L-8	2	1



POLE LOCATION STA. 73+39.66 42.55 FT RT OF C ARM LENGTH = 60' ARM BEARING = N 1° 59' 6.33" W 649-31-103 1 EA

PROP. PED. SIGNAL APPROX. STA. 73+40 42 FT RT OF C MAST ARM MOUNTED 665-111 1 EA

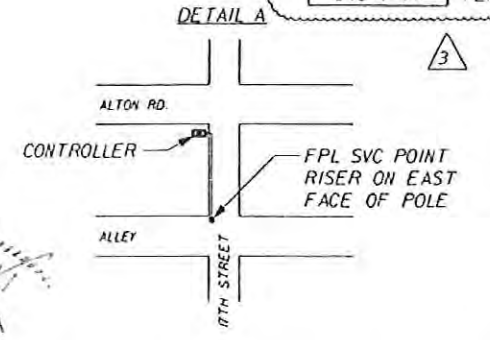
PROP. CONTROLLER LOCATION TYPE 660A EXTENDED CABINET APPROX. STA. 73+60.17 72.15 FT RT OF C CONTROLLER ITEMS:
 632-7-1 1 PI
 660-1-109 6 EA
 670-5-130 1 AS

ELEC. SWITCH DISCONNECT CONCRETE POLE STA. 73+60.5 (99.25' RT)
 630-1-13 20 LF
 639-2-1 40 LF

AT&T SVC POINT ITEMS
 630-1-13 100 LF
 635-1-11 2 EA

TO FPL SVC POINT APPROX. 135 FT SEE DETAIL A

FPL SERVICE POINT ITEMS: SEE NOTE 5
 630-1-13 135 LF
 635-1-11 2 EA
 639-1-23 1 AS
 639-2-1 270 LF



SR-907/ ALTON ROAD AND 17th STREET ID No. : 2647

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
8/30/13	ADDED R10-15 SIGN TO MAST ARMS H2 AND H4. ADDED PED. MOVEMENT TO PHASE 3. PED SIGNALS ADDED FOR NEW NORTH-CROSSWALK. ADJUST L-5 LOOP LOCATION.	8/30/13	CONTROLLER CHANGED TO 660A TYPE. MAST ARM H4 OFFSET CHANGED.
		3/11/14	MAST ARM H2 RELOCATED.
		6/9/14	WB LOOPS ADJUSTED. SE PED SIGNAL STA AND OFFSET REMOVED. CONTROLLER STATION AND OFFSET ADDED. H4-Y SIGN MOVED.

FDOT DISTRICT SIX VINOD TULI, P.E. 1000 N.W. 11TH AVENUE MIAMI, FLORIDA 33172 P.E. NO. 44916

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
907	MIAMI-DADE	249911-1-52-01

SIGNALIZATION PLAN

SHEET NO. T-12

SIGNAL OPERATING PLAN



Timing Phases	Direction	NB		SB		EB		WB		Ped Heads				Movements/Display/Actuation			
	Head No.	1/6	6	5/2	2	3	3/8	8	7	7/4	4R	P2	P6	P4	P8		
(1+5) Alton Rd (ACTUATED)	Dwell	<G/R	R	<G/R	R	R	R	R	R	R	R/G>	DW	DW	DW	DW		
	Clearance	(1+6)	<G/R	R	<Y/R	R	R	R	R	R	R	R/Y>	DW	DW	DW		DW
		(2+5)	<Y/R	R	<G/R	R	R	R	R	R	R	R/G>	DW	DW	DW		DW
		(2+6)	<Y/R	R	<Y/R	R	R	R	R	R	R	R/Y>	DW	DW	DW		DW
(1+6) NB Alton Rd (ACTUATED)	Dwell	<G/G	G	R	R	R	R	R	R	R	R	DW	W/F	DW	DW		
	Clearance	(2+6)	<Y/G	G	R	R	R	R	R	R	R	DW	DW	DW	DW		
(2+5) SB Alton Rd (ACTUATED)	Dwell	R	R	<G/G	G	R	R	R	R	R	R/G>	W/F	DW	DW	DW		
	Clearance	(2+6)	R	R	<Y/G	G	R	R	R	R	R/Y>	DW	DW	DW	DW		
(2+6) N/SB Alton Rd (RECALL)	Dwell	G	G	G	G	R	R	R	R	R	R	W/F	W/F	DW	DW		
	Clearance	3	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW		DW
4		Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW		
3 EB 17 STREET (ACTUATED)	Dwell	R	R	R	R	<G	<G/G	G	R	R	R	DW	DW	DW	W/F		
	Clearance	4	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW		DW
		(1+5)	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW		DW
		(1+6)	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW		DW
		(2+5)	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW		DW
(2+6)	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW			
4 WB 17 STREET (ACTUATED)	Dwell	R	R	R	R	R	R	R	<G	<G/G	G	DW	DW	W/F	DW		
	Clearance	(1+5)	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW		DW
		(1+6)	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW		DW
		(2+5)	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW		DW
		(2+6)	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW		DW

Flashing Operation

FY FY FY FY FR FR FR FR FR FR FR

Page 1 of 1

Miami-Dade County Public Works Department

Drawn WILLIAM RIVERA PAZ	Date 12/16/2014	Alton Rd & 17 Street		
Checked H. Hernandez	Date 12/16/14	Placed in Service Date 1/16/15	Phasing No. 7	Asset Number 2647
		By R/E C		









TOD Schedule Report
for 2648: Alton Rd&Dade Blvd

Print Date:
10/4/2021

Print Time:
3:11 PM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
2648	Alton Rd&Dade Blvd	DOW-2	TOD	[10] PRE-PM PEAK	150	24	N/A	1	Max 2

Splits

<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>
NBL	SBT	NEL	SWT	SBL	NBT	SWL	NET
11	70	10	34	11	70	14	31
							

Active Phase Bank: Phase Bank 1

Phase	<u>Walk</u>			<u>Don't Walk</u>			<u>Min Initial</u>			<u>Veh Ext</u>			<u>Max Limit</u>			<u>Max 2</u>			<u>Yellow</u>	<u>Red</u>
	Phase Bank																			
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
1 NBL	0	0	0	0	0	0	5	5	5	2	2	2	10	7	8	23	5	12	3.7	2
2 SBT	4	4	4	19	19	19	4	7	7	1	1	1	30	45	30	0	30	30	4	2
3 NEL	0	0	0	0	0	0	5	5	5	2	2	2	7	5	8	22	5	12	3.7	2
4 SWT	4	4	4	27	27	27	7	7	7	2.5	2.5	2.5	12	22	20	40	22	25	4	2
5 SBL	0	0	0	0	0	0	5	5	5	2	2	2	10	7	8	23	5	12	3.7	2
6 NBT	4	4	4	19	19	19	4	7	7	1	1	1	30	45	30	0	30	30	4	2
7 SWL	0	0	0	0	0	0	5	5	5	2	2	2	8	5	8	22	5	12	3.7	2
8 NET	4	4	4	27	27	27	7	7	7	2.5	2.5	2.5	12	22	20	40	22	25	4	2

Last In Service Date: unknown

Permitted Phases	
	12345678
Default	12345678
External Permit 0	-2-456-8
External Permit 1	-2-456-8
External Permit 2	-2-456-8

TOD Schedule Report
for 2648: Alton Rd&Dade Blvd

Print Date:
10/4/2021

Print Time:
3:11 PM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 NBL	2 SBT	3 NEL	4 SWT	5 SBL	6 NBT	7 SWL	8 NET		
1		100	10	23	11	32	10	23	9	34	0	15
3		120	9	42	11	34	9	42	11	34	0	75
5		150	11	70	10	34	11	70	14	31	0	25
10		150	11	70	10	34	11	70	14	31	0	24
13		130	8	50	11	37	8	50	11	37	0	50
19		120	9	42	11	34	9	42	11	34	0	35
20		140	9	62	11	34	9	62	11	34	0	105
21		140	5	73	5	33	5	73	5	33	0	97
22		120	9	42	11	34	9	42	11	34	0	25
25		140	7	60	16	33	7	60	11	34	0	9
26		200	19	105	21	31	19	105	21	31	0	168
27		180	9	102	11	34	9	102	11	34	0	118

Local TOD Schedule		
Time	Plan	DOW
0000	1	Su M T W Th F S
0600	3	Su M T W Th F S
0800	5	M T W Th F
0800	19	Su S
1000	20	Su S
1300	10	M T W Th F
1900	13	Su M T W Th F S
2000	22	Su S

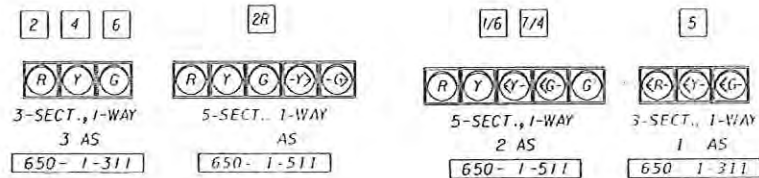
Current Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S
0000	TOD LOCAL MULTIFU	---4---	SuM T W ThF S
0500	TOD LOCAL MULTIFU	-----	SuM T W ThF S

Local Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S
0000	TOD LOCAL MULTIFUNCT	---4---	SuM T W ThF S
0500	TOD LOCAL MULTIFUNCT	-----	SuM T W ThF S

* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

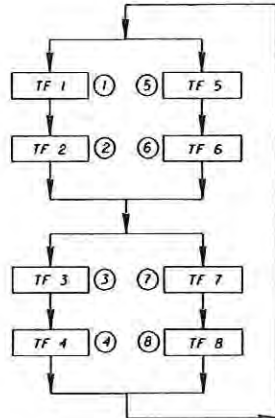
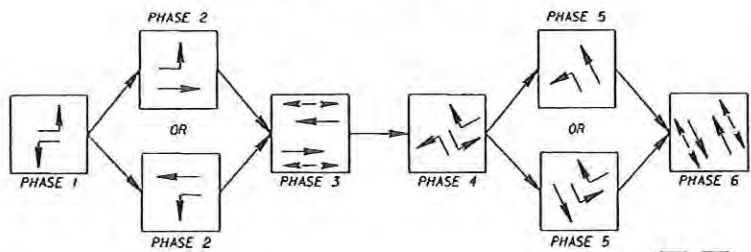
SIGNAL HEAD DETAIL



CONTROLLER OPERATION

- CONTROLLER OPERATION AS SHOWN. MAJOR STREET: ALTON ROAD MINOR STREET: DADE BLVD.
- SOP AS SHOWN
- PHASE 3: RECALL PHASES 1, 3, 4, 5 AND 8: ACTUATED
- FLASHING OPERATION: MOVEMENTS 2 AND 6: YELLOW MOVEMENTS 4 AND 8: RED

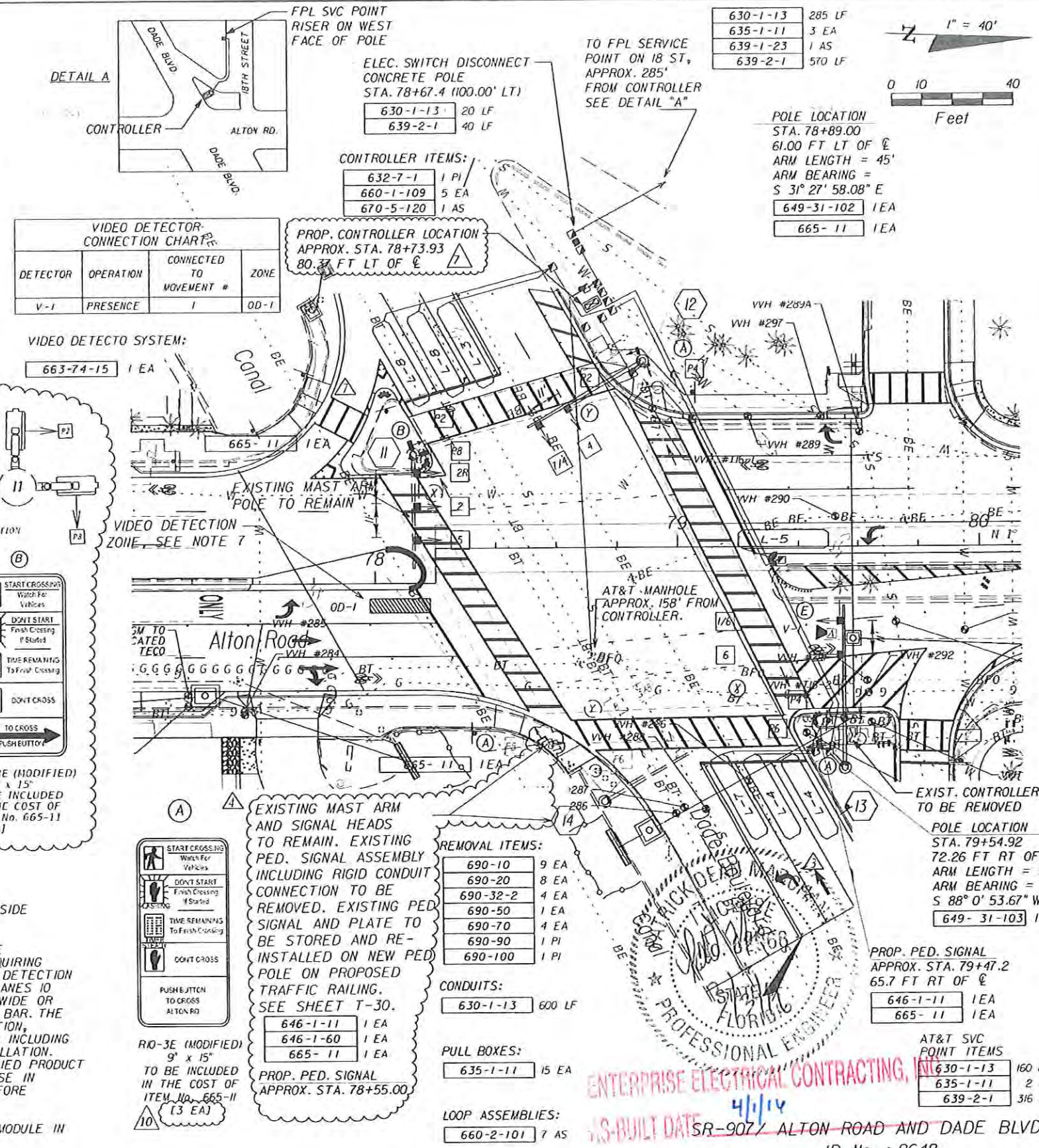
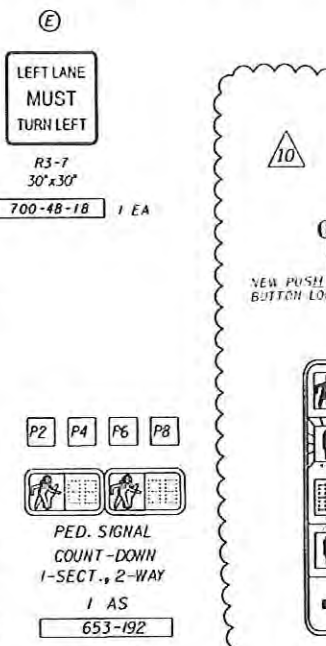
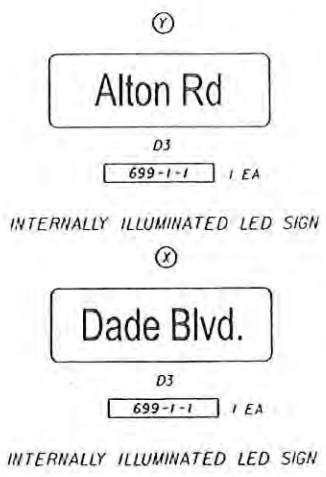
**SIGNAL OPERATION PLAN
PHASE MOVEMENT DIAGRAM**



DETECTORS FOR LOOPS		
LOOP	NO. OF LOOPS	NO. OF NEW DETS.
L-3	1	1
L-4	2	1
L-5	1	1
L-7	1	1
L-8	2	1

NOTES:

- SIGNAL TIMING TO BE PROVIDED BY MIAMI-DADE COUNTY SIGNAL DIVISION.
- THE SPACE BETWEEN LETTERS COULD BE REDUCED IN ORDER TO COMPLY WITH LETTER SIZE AND OVERALL DIMENSIONS IN THE OVERHEAD STREET NAME SIGNS.
- ALL PEDESTRIAN SIGNAL HEADS SHALL ALIGN WITH CENTER FAR SIDE END OF CORRESPONDING CROSSWALK.
- THE PAY ITEM 663-74-15 (VIDEO DETECTION SYSTEM) SHALL INCLUDE SUNSHIELDS FOR EACH CAMERA AND A MENU DRIVEN INTERFACE REQUIRING NO SEPARATE COMPUTER FOR SETUP OR MAINTENANCE. THE INITIAL DETECTION ZONES SHALL BE DIMENSIONED 5 FEET BY 30 FEET FOR TRAFFIC LANES 10 FEET WIDE AND 6 FEET BY 30 FEET FOR TRAFFIC LANES 12 FEET WIDE OR GREATER, AND BE PLACED APPROXIMATELY 5 FEET AHEAD OF STOP BAR. THE PAY ITEM SHALL INCLUDE SURGE PROTECTION AND LIGHTING PROTECTION, COMMUNICATIONS MODULE AND CABLING FROM CAMERA TO CONTROLLER INCLUDING ANY ADDITIONAL CONDUIT REQUIRED FOR A COMPLETE WORKING INSTALLATION. THE CONTRACTOR SHALL REFER TO THE MIAMI-DADE COUNTY QUALIFIED PRODUCT LIST SECTION 660 FOR VIDEO DETECTOR SYSTEMS APPROVED FOR USE IN MIAMI-DADE COUNTY AND SUBMIT SHOP DRAWINGS FOR APPROVAL BEFORE INSTALLATION.
- PAY ITEM 670-5-120 INCLUDES INSTALLATION OF VIDEO DETECTOR MODULE IN EXISTING CONTROLLER



REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
08/30/13	REPLACED DADE BLVD W/8 APPROACH SHARED THRU/RT ARROW WITH THRU DIR. ARROW	06/09/14	SIGNAL PLAN UPDATED WITH LATEST PAVEMENT & MARKING. CONTROLLER STATION AND OFFSET ADDED
10/07/13	REVISED NOTE AND INCLUDED PAY ITEMS FOR THE REMOVAL, STORAGE, AND RE-INSTALLATION OF EXIST. PED. SIGNAL EQUIPMENT ON SE CORNER	1/25/16	RELOCATE PUSH BUTTON AND CHANGE R10-3E SIGN AT MAST ARM POLE 11.

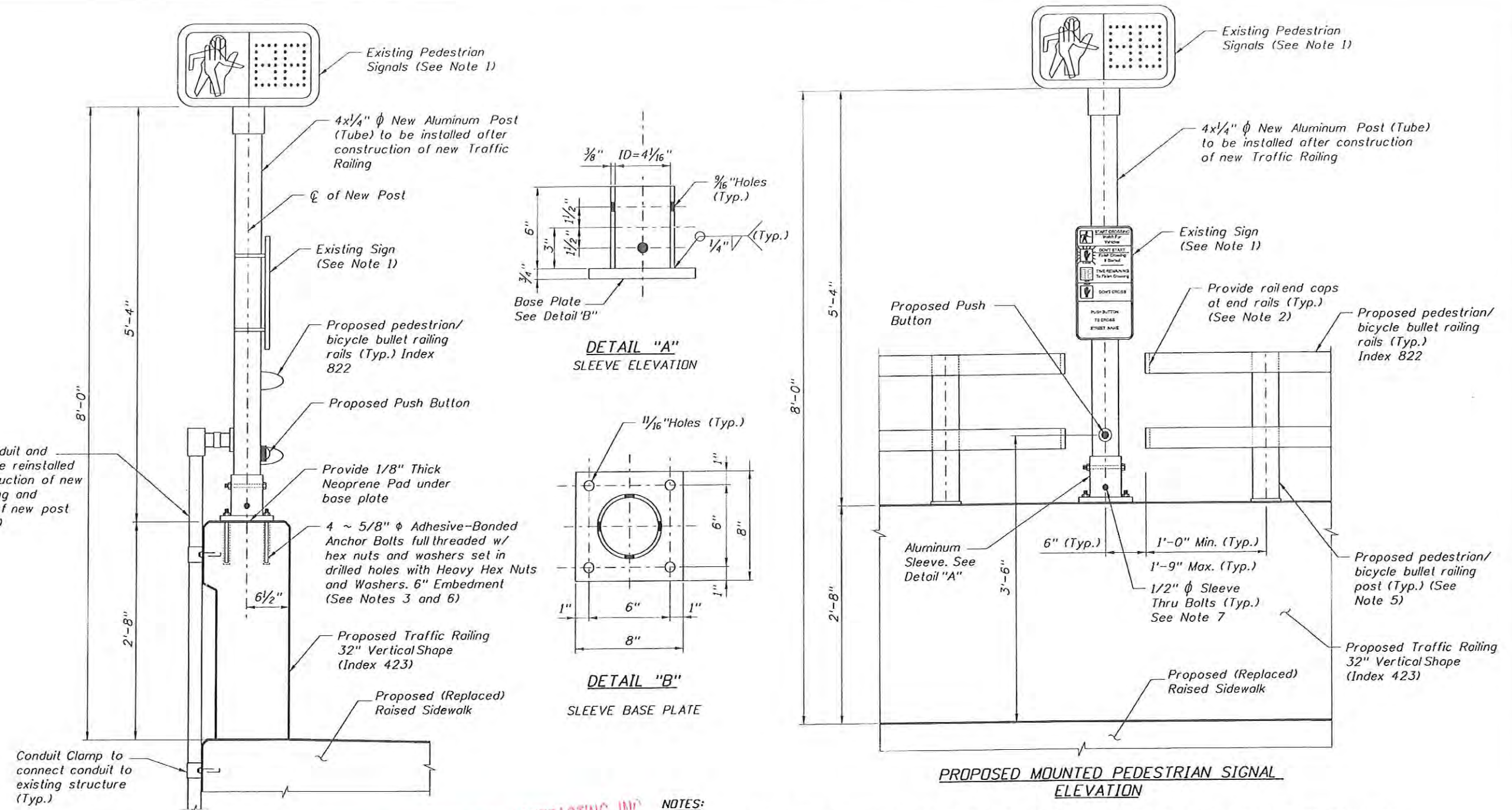
STATE OF FLORIDA
 DEPARTMENT OF TRANSPORTATION
 FDOT DISTRICT SIX
 VINOD TULLI, P.E.
 1000 N.W. 11TH AVENUE
 MIAMI, FLORIDA 33172
 P.E. NO. 44916

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
907	MIAMI-DADE	249911-1-52-01

ENTERPRISE ELECTRICAL CONTRACTING, INC.
 4/1/14
 SR-907 ALTON ROAD AND DADE BLVD.
 ID No. : 2648
 SUPERVISOR: [Signature]

SHEET NO.
 T-13

Designed By : AG 10-13
 Checked By : LN 10-13
 Drawn By : AG 10-13
 Checked By : JAR 10-13



Existing Conduit and cabling to be reinstalled after construction of new Traffic Railing and installation of new post (See Note 1)

Conduit Clamp to connect conduit to existing structure (Typ.)

PROPOSED MOUNTED PEDESTRIAN SIGNAL SIDE VIEW

DETAIL "A" SLEEVE ELEVATION

DETAIL "B" SLEEVE BASE PLATE

PROPOSED MOUNTED PEDESTRIAN SIGNAL ELEVATION

BID ITEMS NOTES:

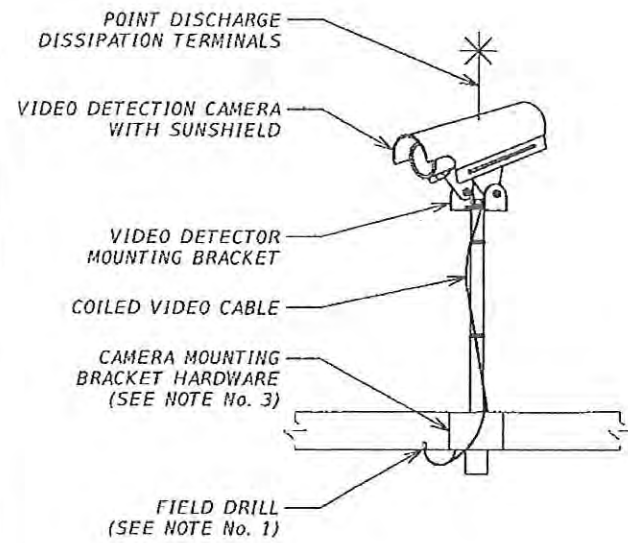
1. Pay Item 646-1-11 includes: Furnishing and installing new Aluminum Pole, with push button, existing Pedestrian Signals and Plate, new Adhesive-Bonded Anchor Bolts, new Aluminum Sleeve and hardware, new Neoprene Pad, and any other incidental items related to the installation of the Wall Mounted Pedestrian Signal
2. For other Pay Items, see Signalization Plans.

NOTES:

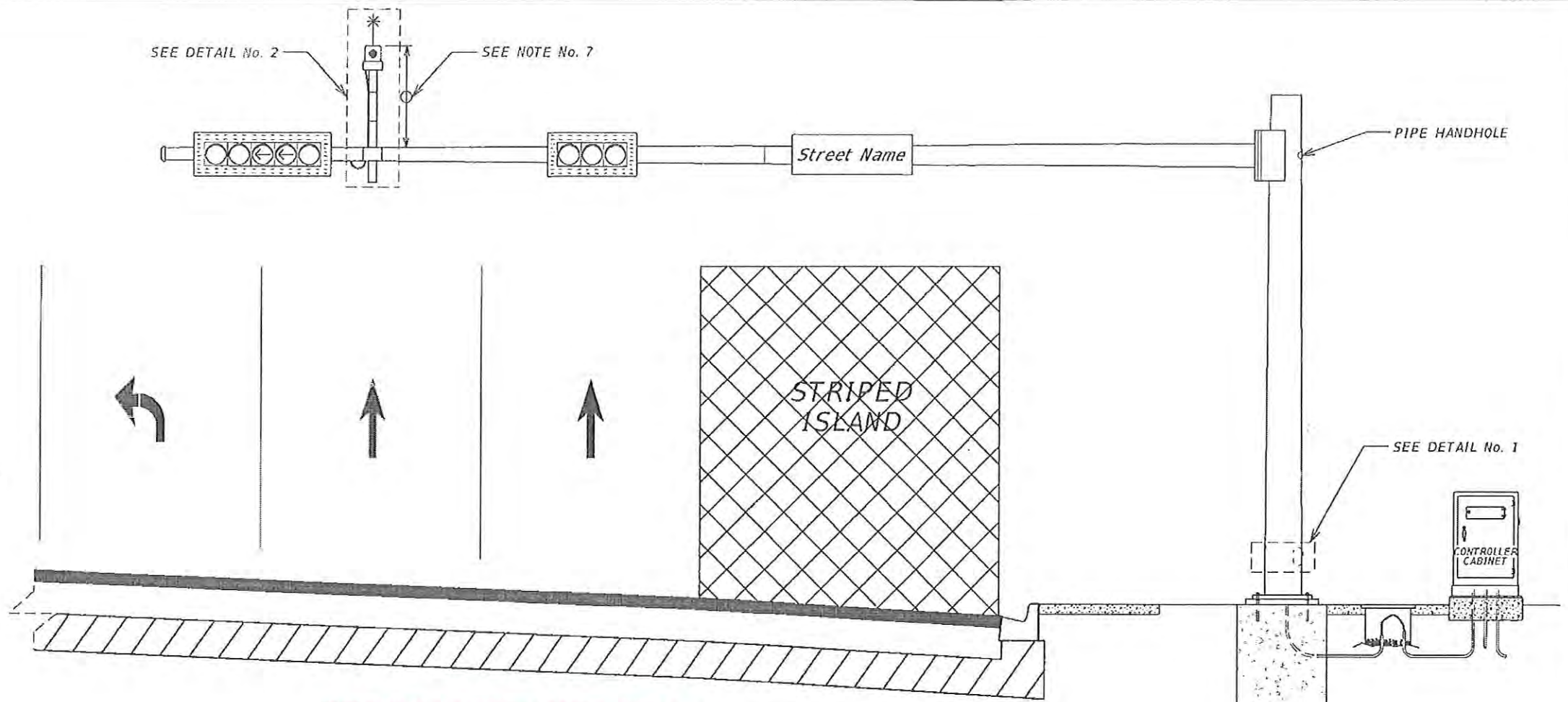
1. Existing pedestrian signals assembly and sign must be carefully removed and preserved to be reinstalled on new aluminum post.
2. Rail End Cap: ASTM B26 sand cast aluminum alloy 356.0-F.
3. Contractor shall use Type HV adhesive (QPL approved) for anchor bolt embedment. Install according to Sections 416 and 937 of the Specifications.
4. Contractor to submit pedestrian/bicycle bullet railing shop drawings for engineer review. Coordinate location of railing posts with proposed wall mounted pedestrian signal.
5. Anchor Bolt shall be in accordance to ASTM F1554-Grade 36 with nuts per ASTM 563 and flat washers per ASTM F436. Anchor bolts, nuts and washers shall be galvanized.
6. Sleeve Bolts to be ASTM A-307, 1/2" ϕ galvanized steel bolt (with lock nuts)
7. Aluminum Materials shall meet requirements of Aluminum Association Alloy 6061-T6 (ASTM B209, B221 or B308). Perform all welding per ANSI/ AWS D1.2 (Current Edition)

ENTERPRISE ELECTRICAL CONTRACTING, INC.
 AS-BUILT DATE 4/1/14
 FOREMAN JCO
 J-Mil

REVISIONS				STRUCTURES DESIGN OFFICE DISTRICT 6 1000 N.W. 111th Avenue Miami, Florida 33172 JORGE A RODRIGUEZ PE NO. 40680	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			WALL MOUNTED PEDESTRIAN SIGNAL DETAIL	SHEET NO. T-30
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
10/07/13	△ New Sheet added.				907	MIAMI-DADE	2499II-1-52-01		



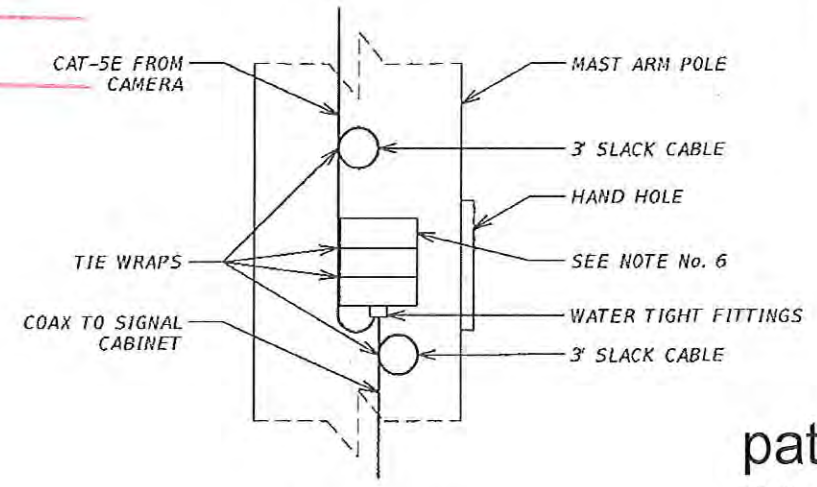
DETAIL 2



ENTERPRISE ELECTRICAL CONTRACTING, INC.
 AS-BUILT DATE 4/11/16
 FOREMAN JLD
 SUPERVISOR [Signature]

NOTES:

1. SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGNS ARE TYPICAL LOCATIONS, REFER TO SIGNALIZATION PLANS.
2. WIRE ACCESS HOLES SHALL NOT EXCEED 1" IN DIAMETER AND SHALL INCLUDE A RUBBER GROMMET ROUTE CAMERA CABLE(S) THROUGH MAST ARM. DRILL HOLE AS TO NOT DAMAGE EXISTING SIGNAL WIRE. UTILIZE EXISTING SIGNAL ACCESS HOLE IF POSSIBLE.
3. THE CONTRACTOR SHALL REFER TO THE FDOT'S APPROVED PRODUCT LIST (APL) AND THE MIAMI-DADE COUNTY QUALIFIED PRODUCT LIST SECTION 660 FOR VIDEO DETECTOR SYSTEMS AND ALL MOUNTING HARDWARE APPROVED FOR USE IN MIAMI-DADE COUNTY AND SUBMIT SHOP DRAWINGS FOR APPROVAL BEFORE INSTALLATION.
4. ALL MOUNTING HARDWARE SHALL BE ON THE FDOT'S APPROVED PRODUCT LIST (APL) WEB SITE.
5. THE NUMBER, SIZE AND ORIENTATION OF CONDUIT SWEEP WILL VARY ACCORDING TO SITE CONDITION OR LOCATIONS IF THERE IS NOT ENOUGH ROOM IN EXISTING CONDUITS FOR THE ASC DETECTION CAMERA CABLES AND BLUETOOTH CABLES. CONTRACTOR SHALL INSTALL NEW CONDUIT AND CORE DRILL CABINET BASE AS PART OF THE PROJECT.
6. MEET ALL GROUNDING AND SURGE PROTECTIVE DEVICE (SPD) REQUIREMENTS OF SECTION 620 OF THE STANDARD SPECIFICATIONS.
7. VIDEO CAMERA LOCATION AND INSTALLATION HEIGHT SPECIFICATIONS, REFER TO THE MAST ARM TABULATION SHEET.
8. NEMA 3R ENCLOSURE WITH ETHERNET TO COAX MEDIA CONVERTER SIZED TO FIT THROUGH HAND HOLE.
9. CONTROLLER CABINET SHOWN FOR VISUALIZATION PURPOSES ONLY, REFER TO SIGNALIZATION PLANS FOR PROPER LOCATION.



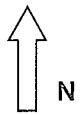
DETAIL 1

patrick d marchant
 2016.04.06 07:21:
 55 -05'00'

REVISIONS		DESCRIPTION		FDOT DISTRICT SIX PATRICK MARCHANT, P.E. 1000 N.W. 111TH AVENUE MIAMI, FLORIDA 33172 P.E. NO. 62968	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			VIDEO DETECTOR INSTALLATION DETAIL	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 907	MIAMI-DADE	249911-1-52-01		

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

SIGNAL OPERATING PLAN



	Direction	NB		SB			EB		WB		Ped Heads				
Timing Phases	Head No.	1/6	6	5	2	2R	3/8	8	7/4	4	P2	P6	P4	P8	Movements/Display/Actuation
(1+5) N/SBLT Alton Rd (ACTUATED)	Dwell	R/<G	R	<G	R	R	R	R	R	R	DW	DW	DW	DW	
	(1+6)	R/<G	R	<Y	R	R	R	R	R	R	DW	DW	DW	DW	
	(2+5)	R/<Y	R	<G	R	R	R	R	R	R	DW	DW	DW	DW	
	(2+6)	R/<Y	R	<Y	R	R	R	R	R	R	DW	DW	DW	DW	
(2+5) NB Alton Rd (ACTUATED)	Dwell	R	R	<G	G	G	R	R	R	R	W/F	DW	DW	DW	
	(2+6)	R	R	<Y	G	G	R	R	R	R	DW	DW	DW	DW	
(1+6) Alton Rd US-1 (ACTUATED)	Dwell	<G/G	G	<R	R	R	R	R	R	R	DW	W/F	DW	DW	
	(2+6)	<Y/G	G	<R	R	R	R	R	R	R	DW	DW	DW	DW	
(2+6) N/SB Alton Rd (RECALL)	Dwell	G	G	<R	G	G	R	R	R	R	W/F	W/F	DW	DW	
	(3+7)	Y	Y	<R	Y	Y	R	R	R	R	DW	DW	DW	DW	
	(3+8)	Y	Y	<R	Y	Y	R	R	R	R	DW	DW	DW	DW	
	(7+4)	Y	Y	<R	Y	Y	R	R	R	R	DW	DW	DW	DW	
	(4+8)	Y	Y	<R	Y	Y	R	R	R	R	DW	DW	DW	DW	
	(1+5)	Y	Y	<R	Y	Y	R	R	R	R	DW	DW	DW	DW	
(3+7) NE/SWBLT Dade Blvd (ACTUATED)	Dwell	R	R	<R	R	R/G>	R/<G	R	R/<G	R	DW	DW	DW	DW	
	(3+8)	R	R	<R	R	R/G>	R/<G	R	R/<Y	R	DW	DW	DW	DW	
	(7+4)	R	R	<R	R	R/Y>	R/<Y	R	R/<G	R	DW	DW	DW	DW	
	(4+8)	R	R	<R	R	R/Y>	R/<Y	R	R/<Y	R	DW	DW	DW	DW	
	(1+5)	R	R	<R	R	R/Y>	R/<Y	R	R/<Y	R	DW	DW	DW	DW	
	(2+5)	R	R	<R	R	R/Y>	R/<Y	R	R/<Y	R	DW	DW	DW	DW	
	(1+6)	R	R	<R	R	R/Y>	R/<Y	R	R/<Y	R	DW	DW	DW	DW	
(3+8) NEB Dade Blvd (ACTUATED)	Dwell	R	R	<R	R	R/G>	<G/G	G	R	R	DW	DW	DW	W/F	
	(4+8)	R	R	<R	R	R/Y>	<Y/G	G	R	R	DW	DW	DW	DW	
	(1+5)	R	R	<R	R	R/Y>	Y/<Y	Y	R	R	DW	DW	DW	DW	
	(2+5)	R	R	<R	R	R/Y>	Y/<Y	Y	R	R	DW	DW	DW	DW	
	(1+6)	R	R	<R	R	R/Y>	Y/<Y	Y	R	R	DW	DW	DW	DW	
(7+4) SWB Dade Blvd (ACTUATED)	Dwell	R	R	<R	R	R	R	R	<G/G	G	DW	DW	W/F	DW	
	(4+8)	R	R	<R	R	R	R	R	<Y/G	G	DW	DW	DW	DW	
	(1+5)	R	R	<R	R	R	R	R	Y/<Y	Y	DW	DW	DW	DW	
	(1+6)	R	R	<R	R	R	R	R	Y/<Y	Y	DW	DW	DW	DW	
	(2+5)	R	R	<R	R	R	R	R	Y/<Y	Y	DW	DW	DW	DW	
(4+8) NE/SWB Dade Blvd (ACTUATED)	Dwell	R	R	<R	R	R	G	G	G	G	DW	DW	W/F	W/F	
	(1+5)	R	R	<R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	
	(1+6)	R	R	<R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	
	(2+6)	R	R	<R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	

Flashing Operation

FY FY F<R FY FY FR FR FR FR

Page 1 of 1

Miami-Dade County Public Works Department

Drawn WILLIAM RIVERA PAZ	Date 6/16/2015	Alton Rd & Dade Blvd		
Checked H. HERNANDEZ	Date 6/16/15	Placed in Service Date 7/27/15	Phasing No. 8	Asset Number 2648

TOD Schedule Report
for 3611: Lincoln Rd&West Av

Print Date:
10/4/2021

Print Time:
5:00 PM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
3611	Lincoln Rd&West Av	DOW-2	TOD	[03] AM PEAK	110	32	N/A	1	Max 2

Splits

<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>
-	SBT	-	WBT	-	NBT	-	EBT
0	73	0	25	0	73	0	25

Active Phase Bank: Phase Bank 1

<u>Phase</u>	<u>Walk</u>			<u>Don't Walk</u>			<u>Min Initial</u>			<u>Veh Ext</u>			<u>Max Limit</u>			<u>Max 2</u>			<u>Yellow</u>	<u>Red</u>
	<u>Phase Bank</u>																			
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
1 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 SBT	4	6	6	25	25	25	4	6	6	1	1	1	30	35	35	0	25	25	4	2
3 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 WBT	4	5	5	17	17	17	7	7	7	2.5	-2.5	-2.5	25	20	20	55	12	12	4	2
5 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 NBT	4	6	6	25	25	25	4	6	6	1	1	1	30	35	35	0	25	25	4	2
7 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 EBT	4	5	5	17	17	17	7	7	7	2.5	-2.5	-2.5	25	20	20	55	12	12	4	2

Last In Service Date: unknown

Permitted Phases	
	12345678
Default	-2-4-6-8
External Permit 0	-2-4-6-8
External Permit 1	-2-4-6-8
External Permit 2	-2-4-6-8

<u>Current TOD Schedule</u>	<u>Plan</u>	<u>Cycle</u>	<u>Green Time</u>								<u>Ring Offset</u>	<u>Offset</u>
			1	2	3	4	5	6	7	8		
			-	SBT	-	WBT	-	NBT	-	EBT		
	1	160	0	123	0	25	0	123	0	25	31	126
	2	100	0	63	0	25	0	63	0	25	31	25
	3	110	0	73	0	25	0	73	0	25	31	32
	4	130	0	93	0	25	0	93	0	25	31	34
	5	110	0	73	0	25	0	73	0	25	31	14
	6	70	0	34	0	24	0	34	0	24	30	29
	8	120	0	83	0	25	0	83	0	25	31	31
	13	110	0	73	0	25	0	73	0	25	0	61
	16	90	0	53	0	25	0	53	0	25	0	34
	21	90	0	53	0	25	0	53	0	25	0	46

Local TOD Schedule		
<u>Time</u>	<u>Plan</u>	<u>DOW</u>
0000	Free	Su M T W Th F S
0530	2	M T W Th F
0700	13	Su M T W Th F S
0900	3	Su
0930	5	M T W Th F
1545	3	M T W Th F
1830	2	M T W Th F
2030	Free	Su
2330	Free	M T W Th F

TOD Schedule Report
for 3611: Lincoln Rd&West Av

Print Date:
10/4/2021

Print Time:
5:00 PM

Current Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	8-----	SuM T W ThF S
0000	TOD LOCAL MULTIFU	---4---	SuM T W ThF S
0500	TOD LOCAL MULTIFU	-----	SuM T W ThF S
0500	PED RECALL	8-6-4-2-	SuM T W ThF S
0900	TOD OUTPUTS	-----	M T W ThF
1800	TOD OUTPUTS	8-----	SuM T W ThF S
2200	PED RECALL	-----	SuM T W ThF S

Local Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	8-----	SuM T W ThF S
0000	TOD LOCAL MULTIFUNCT	---4---	SuM T W ThF S
0500	TOD LOCAL MULTIFUNCT	-----	SuM T W ThF S
0500	PED RECALL	8-6-4-2-	SuM T W ThF S
0900	TOD OUTPUTS	-----	M T W ThF
1000	TOD OUTPUTS	-----	Su S
1800	TOD OUTPUTS	8-----	SuM T W ThF S
2200	PED RECALL	-----	SuM T W ThF S

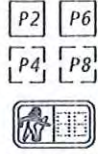
* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

**REMOVAL PAY
ITEM NUMBERS**

4 EA 690-70

**PEDESTRIAN HEAD
DETAILS**



PEDESTRIAN
SIGNAL
COUNT-DOWN
1-SECT., 1-WAY
4 AS, 4 EXIST

**PEDESTRIAN
DETECTOR SIGN**



FTP-68B-06, 4 REQUIRED
(INCLUDED W/ 665-1-12)

CONTROLLER TIMINGS

TIMING FUNCTION	MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MAXIMUM GREEN 1	--	30	--	18	--	30	--	18	
YELLOW CLEARANCE	--	4.0	--	4.0	--	4.0	--	4.0	
ALL RED	--	2.0	--	2.0	--	2.0	--	2.0	
PEDESTRIAN WALK	--	7	--	7	--	7	--	7	
PED. CLEARANCE	--	15	--	16	--	15	--	16	

NOTES:

- CONTROLLER NOTES:
- MAJOR STREET IS WEST AVENUE (MOVEMENTS 2 AND 6)
- MINOR STREET IS LINCOLN ROAD (MOVEMENTS 4 AND 8)
- POSTED SPEED LIMITS ARE AS FOLLOWS:
- WEST AVENUE = 30 MPH
- LINCOLN ROAD = 30 MPH
- AUDIBLE PEDESTRIAN DETECTORS ON NORTHEAST, NORTHWEST, SOUTHEAST AND SOUTHWEST CORNERS CROSSING WEST AVENUE TO STATE THE FOLLOWING MESSAGE: "WEST AVENUE. WALK SIGN IS ON TO CROSS WEST AVENUE."
- AUDIBLE PEDESTRIAN DETECTORS ON NORTHEAST, NORTHWEST, SOUTHEAST AND SOUTHWEST CORNERS CROSSING LINCOLN ROAD TO STATE THE FOLLOWING MESSAGE: "LINCOLN ROAD. WALK SIGN IS ON TO CROSS LINCOLN ROAD."
- CONTROLLER PROGRAMMING TO BE UPDATED FROM CNA TIMINGS TO ACTUATED PEDESTRIAN DETECTORS. MODIFIED CONTROLLER PAY ITEM NUMBER (670-5-411) TO INCLUDE NEW PEDESTRIAN DETECTOR CARDS AND LOAD CENTERS.
- THE SETTINGS SHALL BE PROVIDED BY MIAMI DADE COUNTY PUBLIC WORKS (MDCPW) TRAFFIC SIGNALS AND SIGNS.

AS-BUILT

8/11/16
Paul J. Mannix
AUM CONSTRUCTION, INC
8950 NW 119 ST
MIAMI GARDENS, FL 33018

UTILIZE EXISTING CONDUIT
REPLACE EXISTING SIGNAL CABLE

UTILIZE EXISTING
PULL BOX

ONE PEDESTRIAN HEAD TO
REMAIN, ONE PEDESTRIAN HEAD
TO BE REPLACED

1 AS 653-1-11
1 EA 665-1-12

UTILIZE EXISTING CONDUIT
REPLACE EXISTING SIGNAL CABLE

UTILIZE EXISTING
PULL BOX

ONE PEDESTRIAN HEAD TO
REMAIN, ONE PEDESTRIAN HEAD
TO BE REPLACED

1 AS 653-1-11
1 EA 665-1-12

UTILIZE EXISTING
PULL BOX

95 LF 632-7-2
1 AS 670-5-411

ONE PEDESTRIAN HEAD TO
REMAIN, ONE PEDESTRIAN HEAD
TO BE REPLACED

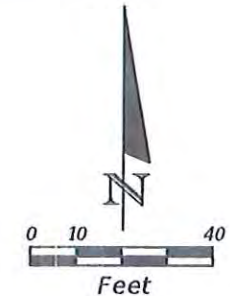
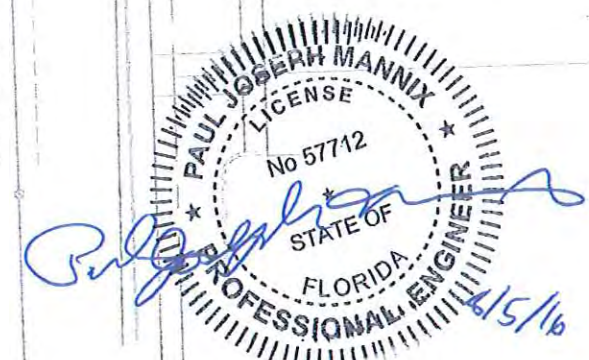
653-1-11 1 AS
665-1-12 1 EA

UTILIZE EXISTING
PULL BOX

UTILIZE EXISTING
PULL BOX

ONE PEDESTRIAN HEAD TO
REMAIN, ONE PEDESTRIAN HEAD
TO BE REPLACED

653-1-11 1 AS
665-1-12 1 EA



AS-BUILTS

#3611

REVISIONS		ATKINS 482 SOUTH KELLER ROAD ORLANDO, FLORIDA 32810 FBPE CERTIFICATE OF AUTHORIZATION NO. 24 PAUL J. MANNIX, P.E. 57712	MIAMI BEACH	PUBLIC WORKS DEPARTMENT HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION			LINCOLN RD & WEST AVE SIGNALIZATION PLAN	SHEET NO. T-9
DATE	DESCRIPTION			CITY	INTERSECTION	CITY PROJECT NO.		
				MIAMI BEACH	LINCOLN ROAD & WEST AVENUE			

TOD Schedule Report


for 4130: West Av&17 St

Print Date:
10/4/2021

Print Time:
5:56 PM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
4130	West Av&17 St	DOW-2	TOD	[03] AM PEAK	110	75	N/A	1	Max 2

Splits

<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>
-	WBT	-	NBT	WBL	EBT	NBL	SBT
0	56	0	42	9	41	9	27
							

Active Phase Bank: Phase Bank 1

<u>Phase</u>	<u>Walk</u>			<u>Don't Walk</u>			<u>Min Initial</u>			<u>Veh Ext</u>			<u>Max Limit</u>			<u>Max 2</u>			<u>Yellow</u>	<u>Red</u>
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
1 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 WBT	4	4	4	24	24	24	12	12	12	2.6	-2.6	-2.6	50	50	50	0	0	0	4	2.2
3 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 NBT	4	4	4	20	20	20	7	7	7	2.5	-2.5	-2.5	25	25	25	65	65	65	4	2.2
5 WBL	0	0	0	0	0	0	5	5	5	2	-2	-2	5	5	5	10	10	10	4	2
6 EBT	4	4	4	24	24	24	12	12	12	2.6	-2.6	-2.6	50	50	50	0	0	0	4	2.2
7 NBL	0	0	0	0	0	0	5	5	5	2	-2	-2	15	15	15	30	30	30	4	2
8 SBT	4	4	4	20	20	20	7	7	7	2.5	-2.5	-2.5	25	25	25	65	65	65	4	2.2

Last In Service Date: unknown

Permitted Phases	
12345678	
Default	-2-45678
External Permit 0	-2-45678
External Permit 1	-2-45678
External Permit 2	-2-45678

TOD Schedule Report

for 4130: West Av&17 St

Print Date:
10/4/2021

Print Time:
5:56 PM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 -	2 WBT	3 -	4 NBT	5 WBL	6 EBT	7 NBL	8 SBT		
2		100	0	46	0	42	9	31	9	27	0	67
3		110	0	56	0	42	9	41	9	27	0	75
4		110	0	56	0	42	9	41	9	27	0	54
5		110	0	56	0	42	9	41	12	24	0	42
6		110	0	49	0	49	10	33	14	29	0	44
7		110	0	46	0	52	9	31	12	34	0	42
13		110	0	56	0	42	9	41	12	24	0	87
14		120	0	79	0	29	9	64	14	9	0	75
15		110	0	49	0	49	9	34	14	29	0	66
16		120	0	59	0	49	9	44	14	29	0	114
17		110	0	49	0	49	9	34	14	29	0	44
18		120	0	79	0	29	9	64	14	9	0	75
19		110	0	69	0	29	9	54	14	9	0	75
20		120	0	59	0	49	9	44	14	29	0	75
23		110	0	49	0	49	9	34	14	29	0	75
25		140	0	79	0	49	9	64	14	29	0	0
26		180	0	119	0	49	9	104	14	29	0	0
27		140	0	79	0	49	9	64	14	29	0	0
28		140	0	79	0	49	9	64	14	29	0	0

Local TOD Schedule		
Time	Plan	DOW
0000	Free	Su M T W Th F S
0530	2	M T W Th F
0700	13	Su M T W Th F S
0900	3	Su S
0930	5	M T W Th F
1115	7	M T W Th F
1315	5	M T W Th F
1545	3	M T W Th F
1830	2	M T W Th F
2030	Free	Su S
2330	Free	M T W Th F

Current Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S
0500	PED RECALL	8--4--	SuM T W ThF S
1115	VEH MAX RECALL	8--4--	M T W ThF
1315	VEH MAX RECALL	-----	M T W ThF
2200	PED RECALL	-----	SuM T W ThF S

Local Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S
0500	PED RECALL	8--4--	SuM T W ThF S
1115	VEH MAX RECALL	8--4--	M T W ThF
1315	VEH MAX RECALL	-----	M T W ThF
2200	PED RECALL	-----	SuM T W ThF S

* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

TOD Schedule Report
for 4130: West Av&17 St

Print Date:
10/4/2021

Print Time:
5:56 PM

No Calendar Defined/Enabled

SIGNAL OPERATING PLAN



Timing Phases	Direction	EB		WB		NB		SB	Ped Heads				Movements/Display/Actuation
	Head No.	6V	6	2/5	2	7/4	4	8	P2	P4	P6	P8	
[2+5] 17 ST WBL+WBT	Dwell	R	R	<G/G	G	R	R	R	W/F	DW	DW	DW	
	2+6	R	R	<Y/G	G	R	R	R	W/F	DW	DW	DW	
	Clear												
	to												
ACTUATED													
[2+6] 17 ST WBT+EBT	Dwell	G	G	G	G	R	R	R	W/F	DW	W/F	DW	
	7+4	Y	Y	Y	Y	R	R	R	DW	DW	DW	DW	
	4+8	Y	Y	Y	Y	R	R	R	DW	DW	DW	DW	
	Clear												
to													
ACTUATED													
[7+4] WEST AV NBL+ NBT	Dwell	R	R	R	R	<G/G	G	R	DW	W/F	DW	DW	
	4+8	R	R	R	R	<Y/G	G	R	DW	W/F	DW	DW	
	2+6	R	R	R	R	<Y/Y	Y	R	DW	DW	DW	DW	
	Clear												
to													
ACTUATED													
[4+8] WEST AV NBT+SBT	Dwell	R	R	R	R	G	G	G	DW	W/F	DW	W/F	
	2+5	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	
	2+6	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	
	Clear												
to													
ACTUATED													
Dwell													
Flashing Operation		FY	FY	FY	FY	FR	FR	FR					Page 1 of 1
MIAMI-DADE COUNTY PUBLIC WORK DEPARTMENT													
MLH	Date	West Ave & 17 Street											
Checked <i>A. Hamas</i>	Date	Placed in Service			Phasing No.			Asset Number					
	<i>5/25/21</i>	Date	By	6			4130						







TOD Schedule Report
for 6995: Dade Blvd&West Av

Print Date:
10/4/2021

Print Time:
10:12 PM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
6995	Dade Blvd&West Av	DOW-2	TOD	N/A	0	0	N/A	0	Max 0

Splits

<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>
EBL	WBT	-	NBT	WBL	EBT	-	SBT
0	0	0	0	0	0	0	0
							

Active Phase Bank: Phase Bank 1

<u>Phase</u>	<u>Walk</u>			<u>Don't Walk</u>			<u>Min Initial</u>			<u>Veh Ext</u>			<u>Max Limit</u>			<u>Max 2</u>			<u>Yellow</u>	<u>Red</u>
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
1 EBL	0	0	0	0	0	0	5	5	5	3.5	3.5	3.5	15	15	15	25	25	25	4	3.4
2 WBT	7	7	7	20	20	20	7	7	7	1	1	1	45	45	45	0	0	0	4	3.4
3 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 NBT	7	7	7	25	25	25	7	7	7	2.5	2.5	2.5	50	25	25	65	65	65	4	2.6
5 WBL	0	0	0	0	0	0	5	5	5	3.5	3.5	3.5	15	15	15	25	25	25	4	3.4
6 EBT	7	7	7	20	20	20	7	7	7	1	1	1	45	45	45	0	0	0	4	3.4
7 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 SBT	7	7	7	25	25	25	7	7	7	2.5	2.5	2.5	50	25	25	65	65	65	4	2.6

Last In Service Date: unknown

Permitted Phases	
	12345678
Default	12-456-8
External Permit 0	-----
External Permit 1	-----
External Permit 2	-----

TOD Schedule Report
for 6995: Dade Blvd&West Av

Print Date:
10/4/2021

Print Time:
10:12 PM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 EBL	2 WBT	3 -	4 NBT	5 WBL	6 EBT	7 -	8 SBT		
1		160	13	48	0	78	13	48	0	78	0	72
2		100	7	38	0	34	7	38	0	34	0	77
3		110	7	48	0	34	7	48	0	34	0	80
4		130	13	48	0	48	13	48	0	48	0	54
5		110	7	48	0	34	7	48	0	34	0	48
6		130	13	48	0	48	13	48	0	48	0	44
7		110	7	30	0	52	7	30	0	52	0	48
8		120	8	43	0	48	8	43	0	48	0	109
9		120	8	43	0	48	8	43	0	48	0	111
10		130	8	53	0	48	8	53	0	48	0	44
13		110	7	49	0	33	7	49	0	33	0	93
14		105	7	43	0	34	7	43	0	34	0	75
15		130	8	53	0	48	8	53	0	48	0	66
16		130	8	53	0	48	8	53	0	48	0	114
17		130	8	53	0	48	8	53	0	48	0	44
18		90	7	28	0	34	7	28	0	34	0	67
19		90	7	28	0	34	7	28	0	34	0	67
20		130	8	53	0	48	8	53	0	48	0	75
23		90	7	28	0	34	7	28	0	34	0	67

Local TOD Schedule		
Time	Plan	DOW
0000	Free	Su M T W Th F S
0115	5	M T W Th F
0530	2	M T W Th F
0700	13	Su M T W Th F S
0900	3	Su S
0930	5	M T W Th F
1115	7	M T W Th F
1545	3	M T W Th F
1830	2	M T W Th F
2030	Free	Su S
2330	Free	M T W Th F

Current Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S
0500	PED RECALL	8--4--	SuM T W ThF S
1500	VEH RECALL	---4---	M T W ThF
1900	VEH RECALL	-----	M T W ThF
2200	PED RECALL	-----	SuM T W ThF S

Local Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S
0500	PED RECALL	8--4--	SuM T W ThF S
1500	VEH RECALL	---4---	M T W ThF
1900	VEH RECALL	-----	M T W ThF
2200	PED RECALL	-----	SuM T W ThF S

* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

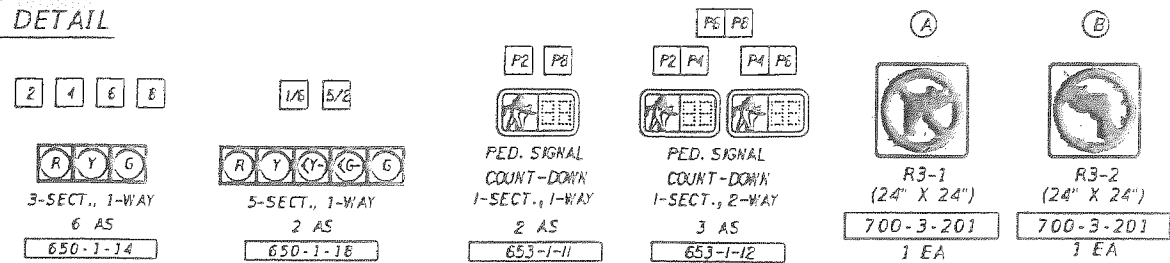
TOD Schedule Report
for 6995: Dade Blvd&West Av

Print Date:
10/4/2021

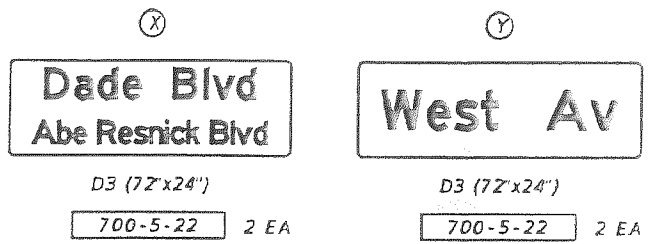
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No Calendar Defined/Enabled

SIGNAL DETAIL

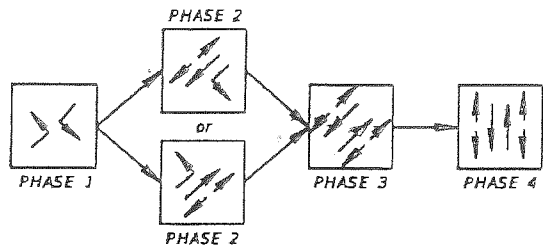


SIGN DETAIL



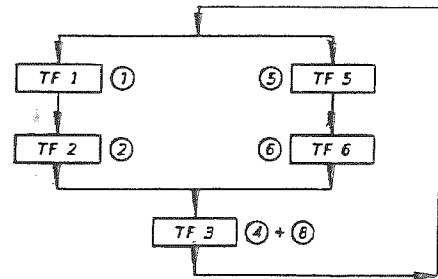
CONTROLLER OPERATION:

- MODEL 170 CONTROLLER ASSEMBLY WITH COORDINATION CAPABILITIES.
- MAJOR STREET: DADE BLVD
MINOR STREET: WEST AVE
- SDP AS SHOWN
- PHASE 2 RECALL
PHASE 4 ACTUATED
- FLASHING OPERATIONS:
MOVEMENTS 2 AND 6 YELLOW
MOVEMENTS 4, 8, 5/2, 1/6 RED



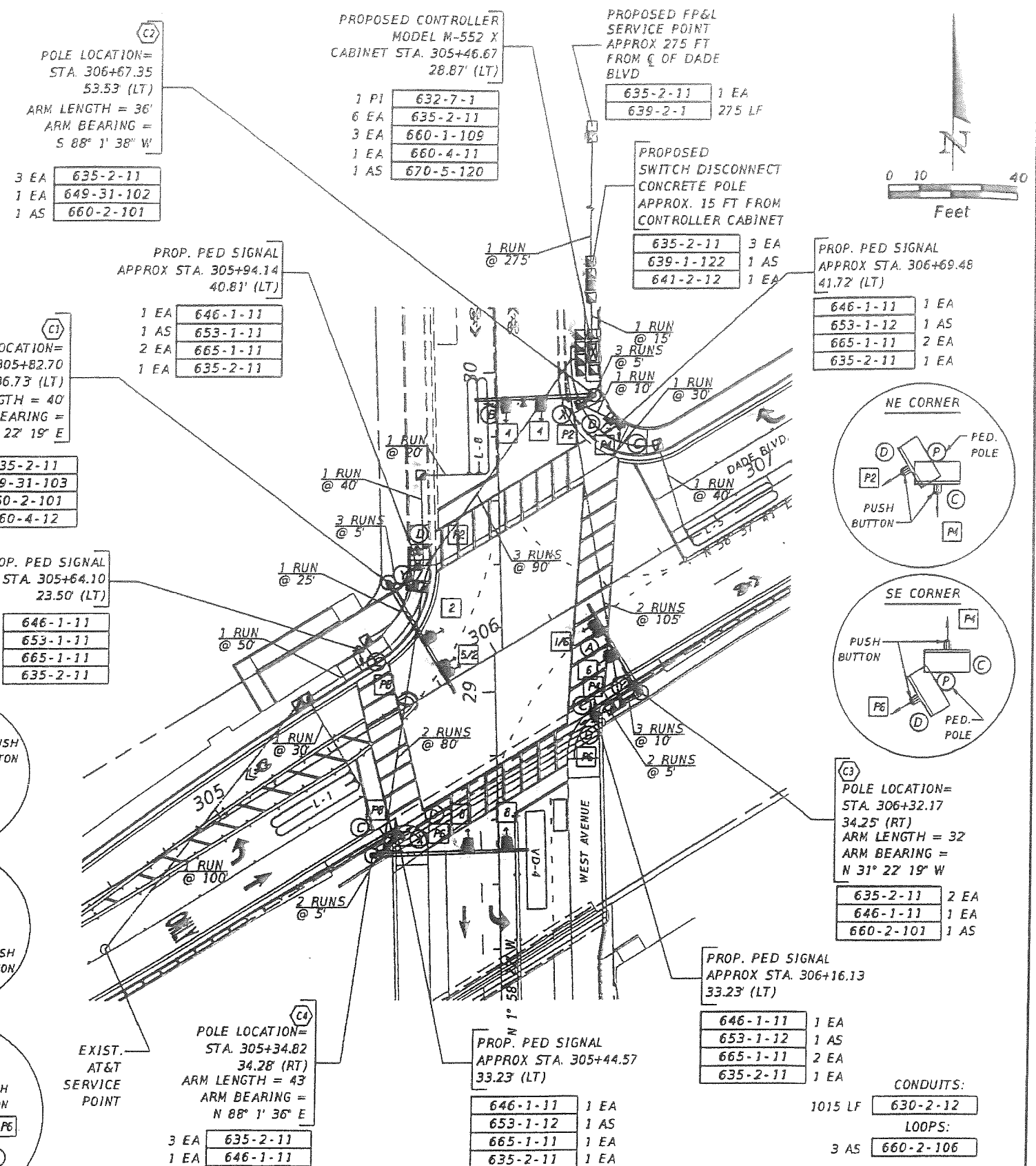
DETECTORS FOR LOOPS

LOOP	NO. OF LOOPS	NO. OF NEW DETS.
L-1	1	1
L-5	1	1
L-8	1	1



NOTES:

- SIGNAL TIMING TO BE PROVIDED BY MIAMI-DADE COUNTY SIGNAL DIVISION.
- LOOP ASSEMBLIES SHALL BE QUADRUPOLES 6'X30' FOR ALL LANES.
- ALL PEDESTRIAN SIGNAL HEADS SHALL ALIGN WITH CENTER FAR SIDE END OF CORRESPONDING CROSSWALK.
- VERTICAL SIGNAL HEAD TO BE MOUNTED ON THE UPRIGHT 12' ABOVE GROUND.
- ALL STATIONS AND OFFSETS ARE BASED ON THE C OF DADE BLVD.
- PAY ITEM 670-5-120 INCLUDES ALL COSTS FOR THE COMPLETE INSTALLATION, INCLUDING BUT NOT LIMITED TO: DIGI WR21-L328-DE1-SH/TRANSPORT WR21-LTE NORTH AMERICA GSM/AT&T (700 MHz/AWS), 2 ETHERNET, RS232, NO WIFI, ENTERPRISE SOFTWARE PACKAGE, EXTENDED TEMPERATURE, US POWER SUPPLY, AND ANTENNAS.



DADE BLVD & WEST AVE
ID No. : 6995

REVISIONS		REVISIONS		ENGINEER OF RECORD: S. MARK KLJNE P.E. #44016 KEITH and SCHNARS, P.A. ENGINEERS, PLANNERS, SURVEYORS 6500 NORTH ANDREWS AVENUE FORT LAUDERDALE, FLORIDA 33309-2132 (954)776-1616 CERTIFICATE OF AUTHORIZATION NO. 1337	CITY OF MIAMI BEACH			SHEET NO. T-5
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					MIAMI-DADE		SIGNALIZATION PLAN	

Miami-Dade County Public Works Department

Signalization Operation Definition and Timing Report

Location: **Dade Blvd&West Av**

Asset Number: **6995**

Page Name

Last Change

Section: **0**

Movements

Phase	Overlap	Ped
1: EBL	1:	
2: WBT	2:	2: NorthX
3:	3:	
4: NBT	4:	4: EastX
5: WBL	5:	
6: EBT	6:	6: SouthX
7:	7:	
8: SBT	8:	8: WestX

Preemption Device: No

Type HW/SW
 Equipment Type: B1233DA
 Cabinet Type: 552

Addresses
 Drop: 1
 Phone Number: -

Preemption
 EV (Local): RR(Local): Route (remote): Bridge:

Comments


Assignnable Inputs DA	10/30/2017 15:26
Assignnable Outputs DA	10/30/2017 15:27
Basic Timing Phase Bank 1	10/30/2017 15:06
Basic Timing Phase Bank 2	10/30/2017 15:07
Basic Timing Phase Bank 3	10/30/2017 15:07
Configuration Setup	11/1/2017 10:21
Coordination All Plans DA	10/30/2017 16:13
Coordination Parameters	10/30/2017 15:09
Coordination Timing	10/30/2017 15:11
Daylight Savings	10/30/2017 15:28
Detectors	10/30/2017 14:45
Holiday Events DA	10/30/2017 15:30
Holiday TOD Functions DA	10/30/2017 15:29
TOD Functions	10/30/2017 15:28
TOD Schedule	10/30/2017 15:29

Zone Assignments

Zone Category	Zone
Engineering	03 - (MH) SE Miami

Last Updated by: mariolh

Last Update: 11/1/2017 10:21

Approved by: 	Approval Date/Time: 11/8/17
In Service Date:	ATMS Migration Date:
SOP/Phasing No.: 1	

SIGNAL OPERATING PLAN



Timing Phases	Direction	WB		EB		NB	SB	Ped Heads				Movements/Display/Actuation	
	Head No.	5/2	2	1/6	6	4	8	P2	P6	P4	P8		
1 + 5 EBLT + WBLT (ACTUATED) Dade Blvd	Dwell	R/<G	R	R/<G	R	R	R	DW	DW	DW	DW		
	Clear to	2+5	R/<G	R	R/<Y	R	R	R	DW	DW	DW		DW
		1+6	R/<Y	R	R/<G	R	R	R	DW	DW	DW		DW
		2+6	R/<Y	R	R/<Y	R	R	R	DW	DW	DW		DW
2 + 5 WB + WBLT (ACTUATED) Dade Blvd	Dwell	<G/G	G	R	R	R	R	W/F	DW	DW	DW		
	Clear to	2+6	<Y/G	G	R	R	R	R	DW	DW	DW		DW
1 + 6 EBLT + EB (ACTUATED) Dade Blvd	Dwell	R	R	<G/G	G	R	R	DW	W/F	DW	DW		
	Clear to	2+6	R	R	<Y/G	G	R	R	DW	DW	DW		DW
2 + 6 WB + EB (RECALL) Dade Blvd	Dwell	G	G	G	G	R	R	W/F	W/F	DW	DW		
	Clear to	4+8	Y	Y	Y	Y	R	R	DW	DW	DW		DW
4+8 NB+SB (ACTUATED) West Av	Dwell	R	R	R	R	G	G	DW	DW	W/F	W/F		
	Clear to	1+5	R	R	R	R	Y	Y	DW	DW	DW		DW
		1+6	R	R	R	R	Y	Y	DW	DW	DW		DW
		2+5	R	R	R	R	Y	Y	DW	DW	DW		DW
		2+6	R	R	R	R	Y	Y	DW	DW	DW		DW

Flashing Operation

FY FY FY FY FR FR

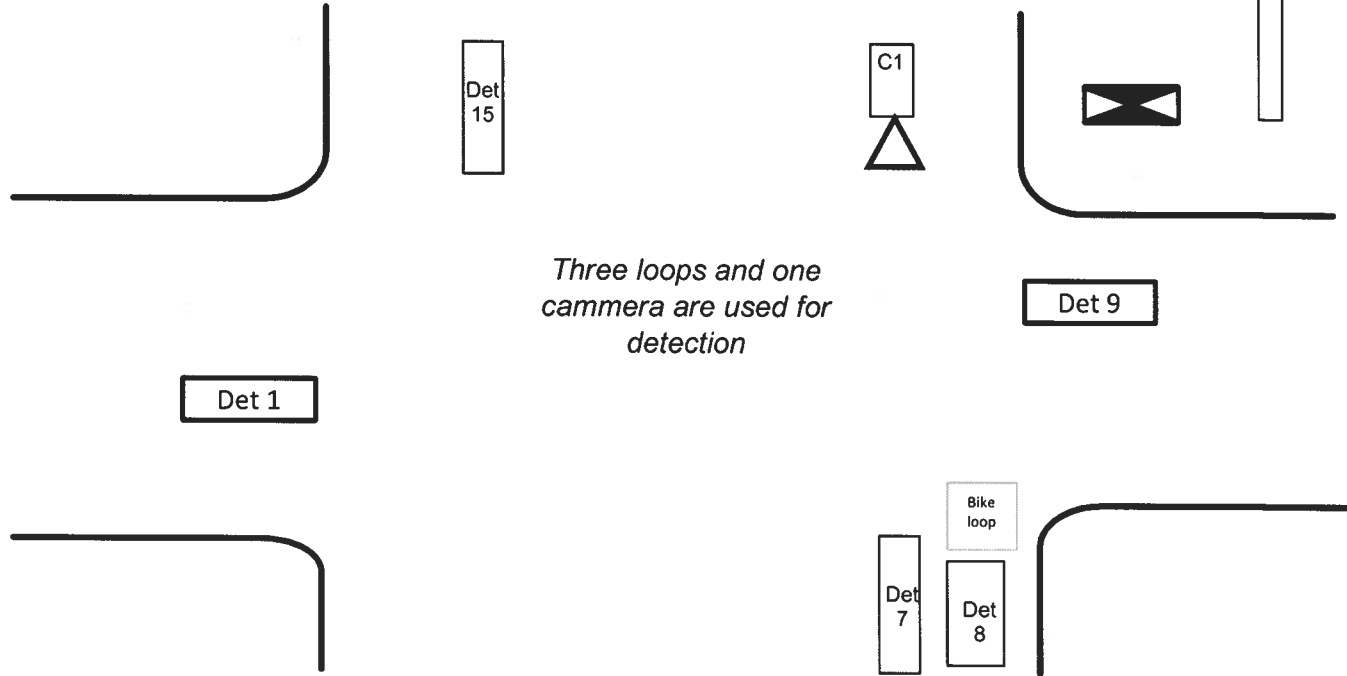
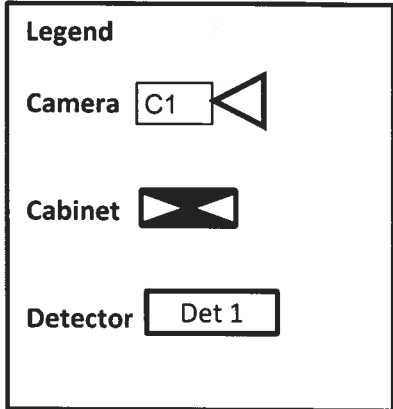
Page 1 of 1

Miami-Dade County Public Works Department

Drawn MLH	Date 10/30/2017	Dade Blv & West Av		
Checked 	Date 11/8/17	Placed in Service	Phasing No.	Asset Number
		Date: By:	1	6995

ASSET # 6995 **LOCATION:** Dade Blvd & West Av

LOOP#		Movement	SLOT#	Camara/Loop	TERMINALS
D1	PP	EBLT	1	L2	TBA4-(1,3)
D2					TBA4-(4,6)
D3			2		TBA4-(7,9)
D4					TBA4-(10,12)
D5			3		TBA4-(13,15)
D6					TBA4-(16,18)
D7		NBT/4	4	C1	TBA3-(1,3)
D8					TBA3-(4,6)
D9	PP	WBLT	5	L1	TBA3-(7,9)
D10					TBA3-(10,12)
D11			6		TBA3-(13,15)
D12					TBA3-(16,18)
D13			7		TBA2-(1,3)
D14					TBA2-(4,6)
D15		SBT/8	8	L3	TBA2-(7,9)
D16					TBA2-(10,12)



DETECTOR RACK CONNECTION STANDARDIZATION FOR CABINETS

Detector Rack 552 & 660									
Movement	1	2	3	4	5	6	7	8	ANY
	EBLT	WBT		NBT	WBLT	EBT		SBT	
SLOT #	1	2	3	4	5	6	7	8	9
CHANNEL #	1	3	5	7	9	11	13	15	17
CHANNEL #	2	4	6	8	10	12	14	16	18
			C1						

Historic Background Growth

22113

The Alton
Background Growth Rate

Station	Location	2015	2016	2017	2018	2019
2542	SR 90 / Alton Road, 200' S of Venetian Causeway	41,000	30,000	33,000	35,000	35,000
8350	Venetian Causeway, 200' East of West Avenue	14,400	12,900	13,300	12,400	14,000
5159	SR A1A / Collins Avenue, 200' N 5th Street	13,800	13,100	14,600	11,800	12,900
5170	SR A1A / Collins Avenue, N of 21st Street	26,500	26,000	26,500	27,500	23,500
6059	Ramp 87037200 from EB MacArthur Causeway to NB Alton Road, 300' of MacArthur Causeway	15,500	18,500	19,000	16,500	16,500
8414	Washington Avenue, 200' N of 12th Street	20,300	20,800	20,200	20,400	23,000
Total		131,500	121,300	126,600	123,600	124,900
Yearly Growth			-7.8%	4.4%	-2.4%	1.1%
Growth Trend						-1.2%

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2021 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 2542 - SR 907/ALTON RD, 200' S OF VENETIAN CSWY

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	32500	C	N 13500		S 19000	9.00	54.30	2.90
2020	27500	C	N 14000		S 13500	9.00	54.20	5.60
2019	35000	F	N 17500		S 17500	9.00	54.60	3.50
2018	35000	C	N 17500		S 17500	9.00	54.30	3.50
2017	33000	C	N 16500		S 16500	9.00	55.00	2.80
2016	30000	C	N 15000		S 15000	9.00	54.50	5.90
2015	41000	C	N 21000		S 20000	9.00	54.70	1.60
2014	30500	F	N 14000		S 16500	9.00	54.50	7.60
2013	30500	C	N 14000		S 16500	9.00	52.40	7.60
2012	37000	C	N 19000		S 18000	9.00	55.70	7.50
2011	39500	C	N 19000		S 20500	9.00	55.10	1.50
2010	39000	C	N 20000		S 19000	8.98	54.08	1.50
2009	38500	C	N 19000		S 19500	8.99	53.24	6.20
2008	37500	C	N 17500		S 20000	9.09	55.75	4.80
2007	39500	C	N 18500		S 21000	8.01	54.34	5.20
2006	36500	C	N 17500		S 19000	7.97	54.22	1.60

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2021 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 5159 - SR AIA/COLLINS AV, 200' N 5 ST(MIAMI BEACH)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR	
2021	15700	C	N	9400	S	6300	9.00	54.30	5.40
2020	14500	C	N	6900	S	7600	9.00	54.20	9.20
2019	12900	C	N	6900	S	6000	9.00	54.60	5.00
2018	11800	C	N	6600	S	5200	9.00	54.30	5.60
2017	14600	C	N	8800	S	5800	9.00	55.00	5.30
2016	13100	C	N	6700	S	6400	9.00	54.50	7.80
2015	13800	C	N	5500	S	8300	9.00	54.70	4.60
2014	13400	C	N	6500	S	6900	9.00	54.50	5.10
2013	16400	C	N	7400	S	9000	9.00	52.40	6.10
2012	16700	C	N	7100	S	9600	9.00	55.70	8.40
2011	13600	C	N	6900	S	6700	9.00	55.10	7.50
2010	12900	C	N	6200	S	6700	8.98	54.08	8.80
2009	15300	C	N	7600	S	7700	8.99	53.24	8.40
2008	13600	C	N	6300	S	7300	9.09	55.75	5.30
2007	14300	C	N	6500	S	7800	8.01	54.34	4.90
2006	13100	C	N	5800	S	7300	7.97	54.22	2.20

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 5170 - SR A1A/COLLINS AV, N OF 21 ST (MIAMI BEACH)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR	
2021	18400	C	N	9300	S	9100	9.00	54.30	8.40
2020	10400	C	N	5200	S	5200	9.00	54.20	31.10
2019	23500	C	N	12000	S	11500	9.00	54.60	10.00
2018	27500	C	N	13000	S	14500	9.00	54.30	7.90
2017	26500	C	N	13000	S	13500	9.00	55.00	6.60
2016	26000	C	N	13500	S	12500	9.00	54.50	20.20
2015	26500	C	N	12500	S	14000	9.00	54.70	4.20
2014	27000	C	N	12500	S	14500	9.00	54.50	4.10
2013	22500	C	N	10500	S	12000	9.00	52.40	9.00
2012	25000	C	N	12000	S	13000	9.00	55.70	4.30
2011	26500	C	N	13500	S	13000	9.00	55.10	2.80
2010	25000	C	N	12500	S	12500	8.98	54.08	2.80
2009	26500	C	N	13000	S	13500	8.99	53.24	2.70
2008	27000	C	N	13500	S	13500	9.09	55.75	4.60
2007	25500	C	N	12500	S	13000	8.01	54.34	5.10
2006	25500	C	N	12500	S	13000	7.97	54.22	2.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 6059 - RAMP 87037200 FRM EB MACARTHUR CSWY TO NB ALTON RD, 300' E OF MACARTHUR CSWY

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	14000 F	0	0	9.00	99.90	7.80
2020	14500 C	N 14500	0	9.00	99.90	7.80
2019	16500 F	0	0	9.00	99.90	3.80
2018	16500 C	N 16500	0	9.00	99.90	3.80
2017	19000 F	0	0	9.00	99.90	5.50
2016	18500 C	N 18500	0	9.00	99.90	5.50
2015	15500 F	0	0	9.00	99.90	18.00
2014	15000 C	N 15000	0	9.00	99.90	18.00
2013	19000 F	0	0	9.00	99.90	2.20
2012	19500 C	N 19500	0	9.00	99.90	2.20
2011	18000 F	0	0	9.00	99.90	2.70
2010	18000 C	N 18000	0	8.98	99.99	2.70
2009	17500 F	0	0	8.99	99.99	7.70
2008	18000 C	N 18000	0	9.09	99.99	7.70
2007	20500 F	0	0	8.01	99.99	1.40
2006	20500 C	N 20500	0	7.97	99.99	1.40

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8350 - VENETIAN CSWY, 200' EAST OF WEST AVENUE

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR	
2021	12000	C	E	5600	W	6400	9.00	54.30	1.90
2020	11600	C	E	5200	W	6400	9.00	54.20	1.60
2019	14000	C	E	6900	W	7100	9.00	54.60	2.90
2018	12400	C	E	5900	W	6500	9.00	54.30	2.60
2017	13300	F	E	6600	W	6700	9.00	55.00	2.40
2016	12900	C	E	6400	W	6500	9.00	54.50	2.40
2015	14400	C	E	6200	W	8200	9.00	54.70	12.80
2014	5100	F	E	2100	W	3000	9.00	54.50	11.70
2013	5100	C	E	2100	W	3000	9.00	52.40	16.20
2012	5400	F	E	2500	W	2900	9.00	55.70	16.00
2011	5400	C	E	2500	W	2900	9.00	55.10	14.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2021 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8414 - WASHINGTON AVE, 200 FT N OF 12 ST (2011 OFF SYSTEM CYCLE)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR	
2021	14200	C	N	6500	S	7700	9.00	55.00	3.30
2020	14100	C	N	7100	S	7000	9.00	56.00	10.70
2019	23000	C	N	11000	S	12000	9.00	56.00	2.40
2018	20400	C	N	11500	S	8900	9.00	54.30	2.50
2017	20200	C	N	9200	S	11000	9.00	59.30	2.40
2016	20800	C	N	9800	S	11000	9.00	56.10	1.90
2015	20300	C	N	9800	S	10500	9.00	57.40	17.50
2014	21000	C	N	10000	S	11000	9.00	59.30	13.90
2013	18700	F	N	9200	S	9500	9.00	58.90	16.20
2012	18700	C	N	9200	S	9500	9.00	59.70	16.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

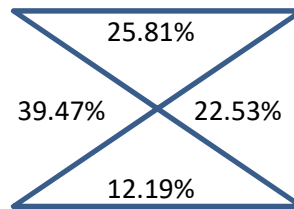
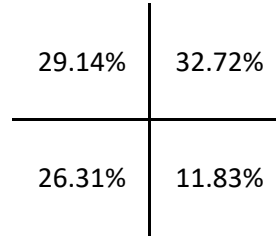
Cardinal Distribution

**Cardinal Distribution
The Alton**

22113

TAZ 641

DIRECTION	2015	2045	2024
NNE	13.5%	13.5%	13.50%
ENE	22.1%	12.5%	19.22%
ESE	3.7%	2.4%	3.31%
SSE	9.3%	6.7%	8.52%
SSW	4.0%	2.9%	3.67%
WSW	20.3%	28.1%	22.64%
WNW	15.3%	20.4%	16.83%
NNW	11.8%	13.5%	12.31%



Appendix D
Intersection Capacity Analysis
Worksheets

**The Alton
AM Intersection Assignment**

INTERSECTION	MOVEMENT	2022 Existing Volumes	PSCF 1.01	Existing at 2022	BACKGROUND Growth rate: 0.50% No. of years: 2	COMMITTED DEVELOPMENTS	FUTURE W/O PROJECT (2024)	EXISTING USES			The Alton			FUTURE WITH PROJECT (2024)
								IN 189	OUT 117	Total 306	IN 256	OUT 88	Total 344	
1) Lincoln Road / West Avenue (S)	NBU	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	NBL	13	13	13	13	0	13	0%	0%	0	0%	0%	0	13
	NBT	260	263	263	265	0	265	10%	0%	19	10%	0%	26	272
	NBR	18	18	18	18	0	18	0%	0%	0	0%	0%	0	18
	SBL	13	13	13	13	0	13	0%	0%	0	0%	0%	0	13
	SBT	216	218	218	220	0	220	0%	0%	0	0%	0%	0	220
	SBR	48	48	48	49	0	49	0%	0%	0	0%	0%	0	49
	EBL	80	81	81	82	0	82	0%	0%	0	0%	0%	0	82
	EBT	21	21	21	21	0	21	0%	0%	0	0%	0%	0	21
	EBR	19	19	19	19	0	19	0%	0%	0	0%	0%	0	19
	WBL	14	14	14	14	0	14	0%	0%	0	0%	0%	0	14
WBT	21	21	21	21	0	21	0%	0%	0	0%	0%	0	21	
WBR	31	31	31	32	0	32	70%	0%	132	70%	0%	179	79	
TOTAL		754	762	762	767	0	767	80%	0%	151	80%	0%	205	821
2) 17th Street / West Avenue (S)	NBL	78	79	79	80	0	80	0%	10%	12	0%	10%	9	77
	NBT	239	241	241	244	0	244	0%	0%	0	0%	0%	0	244
	NBR	58	59	59	59	0	59	0%	70%	82	0%	70%	62	39
	SBL	15	15	15	15	0	15	0%	0%	0	0%	0%	0	15
	SBT	145	146	146	148	0	148	0%	0%	0	0%	0%	0	148
	SBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBT	90	91	91	92	0	92	10%	0%	19	10%	0%	26	99
	EBR	102	103	103	104	0	104	0%	0%	0	0%	0%	0	104
	WBL	46	46	46	47	0	47	0%	0%	0	0%	0%	0	47
	WBT	49	49	49	50	0	50	0%	0%	0	0%	0%	0	50
WBR	17	17	17	17	0	17	0%	0%	0	0%	0%	0	17	
TOTAL		839	847	847	856	0	856	10%	80%	113	10%	80%	97	841
3) 17th Street / Alton Road (S)	NBL	41	41	41	42	0	42	0%	0%	0	0%	0%	0	42
	NBT	665	672	672	678	29	707	0%	0%	0	0%	0%	0	707
	NBR	233	235	235	238	0	238	0%	0%	0	0%	0%	0	238
	SBL	186	188	188	190	0	190	0%	0%	0	0%	0%	0	190
	SBT	771	779	779	787	6	793	37%	0%	70	37%	0%	95	818
	SBR	40	40	40	41	0	41	0%	0%	0	0%	0%	0	41
	EBL	36	36	36	37	0	37	0%	37%	43	0%	37%	33	26
	EBT	116	117	117	118	0	118	0%	29%	34	0%	29%	26	110
	EBR	61	62	62	62	0	62	10%	24%	47	10%	24%	47	62
	WBL	96	97	97	98	0	98	19%	0%	36	19%	0%	49	111
	WBT	43	43	43	44	0	44	0%	0%	0	0%	0%	0	44
WBR	62	63	63	63	0	63	0%	0%	0	0%	0%	0	63	
TOTAL		2,350	2,374	2,374	2,398	35	2,433	66%	90%	230	66%	90%	248	2,451
4) Lincoln Road / Alton Road (S)	NBL	29	29	29	30	0	30	24%	0%	45	24%	0%	61	46
	NBT	956	966	966	975	29	1004	0%	0%	0	0%	0%	0	1004
	NBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	SBU	3	3	3	3	0	3	0%	0%	0	0%	0%	0	3
	SBT	855	864	864	872	6	878	0%	24%	28	0%	24%	21	871
	SBR	53	54	54	54	0	54	66%	0%	125	66%	0%	169	98
	EBL	33	33	33	34	0	34	0%	0%	0	0%	0%	0	34
	EBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBR	25	25	25	26	0	26	0%	0%	0	0%	0%	0	26
	WBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	WBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
WBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0	
TOTAL		1,954	1,974	1,974	1,994	35	2,029	90%	24%	198	90%	24%	252	2,082
5) Dade Boulevard / West Avenue (S)	NBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	NBT	110	111	111	112	0	112	0%	0%	0	0%	0%	0	112
	NBR	146	147	147	149	0	149	0%	0%	0	0%	0%	0	149
	SBL	35	35	35	36	0	36	0%	0%	0	0%	0%	0	36
	SBT	98	99	99	100	0	100	0%	0%	0	0%	0%	0	100
	SBR	4	4	4	4	0	4	0%	0%	0	0%	0%	0	4
	EBL	16	16	16	17	1	17	0%	0%	0	0%	0%	0	17
	EBT	193	195	195	197	0	197	0%	0%	0	0%	0%	0	197
	EBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	WBL	60	61	61	61	0	61	0%	0%	0	0%	0%	0	61
	WBT	219	221	221	223	38	261	0%	0%	0	0%	0%	0	261
WBR	84	85	85	86	0	86	0%	0%	0	0%	0%	0	86	
TOTAL		965	975	975	984	39	1,023	0%	0%	0	0%	0%	0	1,023
6) Dade Boulevard / Alton Road (S)	NBL	84	85	85	86	26	112	0%	0%	0	0%	0%	0	112
	NBT	495	500	500	505	3	508	0%	37%	43	0%	37%	33	497
	NBR	196	198	198	200	0	200	0%	0%	0	0%	0%	0	200
	SBU	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	SBL	35	35	35	36	3	39	0%	0%	0	0%	0%	0	39
	SBT	814	822	822	830	6	836	37%	0%	70	37%	0%	95	861
	SBR	140	141	141	143	0	143	0%	0%	0	0%	0%	0	143
	EBU	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBL	211	213	213	215	0	215	0%	0%	0	0%	0%	0	215
	EBT	143	144	144	146	0	146	0%	0%	0	0%	0%	0	146
	EBR	19	19	19	19	0	19	0%	0%	0	0%	0%	0	19
WBU	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0	
WBL	174	176	176	178	0	178	0%	0%	0	0%	0%	0	178	
WBT	136	137	137	139	12	151	0%	0%	0	0%	0%	0	151	
WBR	28	28	28	29	1	30	0%	0%	0	0%	0%	0	30	
TOTAL		2,475	2,500	2,500	2,526	51	2,577	37%	37%	113	37%	37%	127	2,591
7) West Avenue / Project Driveway (U)	NBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	NBT	373	377	377	381	0	381	0%	0%	0	0%	0%	0	381
	NBR	0	0	0	0	0	0	0%	0%	0	80%	0%	205	205
	SBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	SBT	285	288	288	291	0	291	0%	0%	0	0%	0%	0	291
	SBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	WBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	WBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
WBR	0	0	0	0	0	0	0%	0%	0	0%	80%	70	70	
TOTAL		658	665	665	672	0	672	0%	0%	0	80%	80%	275	947
8) Lincoln Road / Alton Court inbound only (U)	NBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	NBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	NBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	SBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	SBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	SBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBT	55	56	56	56	0	56	0%	0%	0	0%	0%	0	56
	EBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	WBL													

**The Alton
PM Intersection Assignment**

INTERSECTION	MOVEMENT	2022 Existing Volumes	PSCF 1.01	Existing at 2022	BACKGROUND Growth rate: 0.50% No. of years: 2	COMMITTED DEVELOPMENTS	FUTURE W/O PROJECT (2024)	EXISTING USES			The Alton			FUTURE WITH PROJECT (2024)
								IN 211	OUT 241	Total 452	IN 158	OUT 283	Total 441	
1) Lincoln Road / West Avenue (S)	NBU	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	NBL	22	22	22	22	0	22	0%	0%	0	0%	0%	0	22
	NBT	279	282	282	285	0	285	10%	0%	21	10%	0%	16	280
	NBR	28	28	28	29	0	29	0%	0%	0	0%	0%	0	29
	SBL	24	24	24	24	0	24	0%	0%	0	0%	0%	0	24
	SBT	248	250	250	253	0	253	0%	0%	0	0%	0%	0	253
	SBR	48	48	48	49	0	49	0%	0%	0	0%	0%	0	49
	EBL	53	54	54	54	0	54	0%	0%	0	0%	0%	0	54
	EBT	46	46	46	47	0	47	0%	0%	0	0%	0%	0	47
	EBR	25	25	25	26	0	26	0%	0%	0	0%	0%	0	26
	WBL	20	20	20	20	0	20	0%	0%	0	0%	0%	0	20
	WBT	24	24	24	24	0	24	0%	0%	0	0%	0%	0	24
WBR	59	60	60	60	0	60	70%	0%	148	70%	0%	111	23	
TOTAL		876	885	885	893	0	893	80%	0%	169	80%	0%	126	851
2) 17th Street / West Avenue (S)	NBL	95	96	96	97	0	97	0%	10%	24	0%	10%	28	101
	NBT	211	213	213	215	0	215	0%	0%	0	0%	0%	0	215
	NBR	116	117	117	118	0	118	0%	70%	169	0%	70%	198	147
	SBL	29	29	29	30	0	30	0%	0%	0	0%	0%	0	30
	SBT	182	184	184	186	0	186	0%	0%	0	0%	0%	0	186
	SBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBT	104	105	105	106	0	106	10%	0%	21	10%	0%	16	101
	EBR	99	100	100	101	0	101	0%	0%	0	0%	0%	0	101
	WBL	65	66	66	66	0	66	0%	0%	0	0%	0%	0	66
	WBT	108	109	109	110	0	110	0%	0%	0	0%	0%	0	110
	WBR	51	52	52	52	0	52	0%	0%	0	0%	0%	0	52
TOTAL		1,060	1,071	1,071	1,081	0	1,081	10%	80%	214	10%	80%	242	1,109
3) 17th Street / Alton Road (S)	NBL	65	66	66	66	0	66	0%	0%	0	0%	0%	0	66
	NBT	909	918	918	927	13	940	0%	0%	0	0%	0%	0	940
	NBR	145	146	146	148	0	148	0%	0%	0	0%	0%	0	148
	SBL	168	170	170	171	0	171	0%	0%	0	0%	0%	0	171
	SBT	619	625	625	631	30	661	37%	0%	78	37%	0%	58	641
	SBR	58	59	59	59	0	59	0%	0%	0	0%	0%	0	59
	EBL	60	61	61	61	0	61	0%	37%	89	0%	37%	105	77
	EBT	107	108	108	109	0	109	0%	29%	70	0%	29%	82	121
	EBR	120	121	121	122	0	122	10%	24%	79	10%	24%	84	127
	WBL	134	135	135	137	0	137	19%	0%	40	19%	0%	30	127
	WBT	114	115	115	116	0	116	0%	0%	0	0%	0%	0	116
	WBR	228	230	230	233	0	233	0%	0%	0	0%	0%	0	233
TOTAL		2,727	2,754	2,754	2,780	43	2,823	66%	90%	356	66%	90%	359	2,825
4) Lincoln Road / Alton Road (S)	NBL	37	37	37	38	0	38	24%	0%	51	24%	0%	38	25
	NBT	1,050	1,061	1,061	1,071	13	1,084	0%	0%	0	0%	0%	0	1,084
	NBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	SBU	5	5	5	5	0	5	0%	0%	0	0%	0%	0	5
	SBT	783	791	791	799	30	829	0%	24%	58	0%	24%	68	839
	SBR	72	73	73	73	0	73	66%	0%	139	66%	0%	104	38
	EBL	64	65	65	65	0	65	0%	0%	0	0%	0%	0	65
	EBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBR	28	28	28	29	0	29	0%	0%	0	0%	0%	0	29
	WBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	WBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	WBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
TOTAL		2,039	2,059	2,059	2,080	43	2,123	90%	24%	248	90%	24%	210	2,085
5) Dade Boulevard / West Avenue (S)	NBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	NBT	151	153	153	154	0	154	0%	0%	0	0%	0%	0	154
	NBR	109	110	110	111	0	111	0%	0%	0	0%	0%	0	111
	SBL	38	38	38	39	0	39	0%	0%	0	0%	0%	0	39
	SBT	129	130	130	132	0	132	0%	0%	0	0%	0%	0	132
	SBR	16	16	16	16	1	17	0%	0%	0	0%	0%	0	17
	EBL	32	32	32	33	0	33	0%	0%	0	0%	0%	0	33
	EBT	204	206	206	208	0	208	0%	0%	0	0%	0%	0	208
	EBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	WBL	80	81	81	82	0	82	0%	0%	0	0%	0%	0	82
	WBT	206	208	208	210	18	228	0%	0%	0	0%	0%	0	228
	WBR	92	93	93	94	0	94	0%	0%	0	0%	0%	0	94
TOTAL		1,057	1,068	1,068	1,079	20	1,099	0%	0%	0	0%	0%	0	1,099
6) Dade Boulevard / Alton Road (S)	NBL	94	95	95	96	12	108	0%	0%	0	0%	0%	0	108
	NBT	945	954	954	964	1	965	0%	37%	89	0%	37%	105	981
	NBR	201	203	203	205	0	205	0%	0%	0	0%	0%	0	205
	SBU	20	20	20	20	0	20	0%	0%	0	0%	0%	0	20
	SBL	16	16	16	16	14	30	0%	0%	0	0%	0%	0	30
	SBT	658	665	665	671	30	701	37%	0%	78	37%	0%	58	681
	SBR	95	96	96	97	0	97	0%	0%	0	0%	0%	0	97
	EBU	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBL	184	186	186	188	0	188	0%	0%	0	0%	0%	0	188
	EBT	136	137	137	139	0	139	0%	0%	0	0%	0%	0	139
	EBR	33	33	33	34	0	34	0%	0%	0	0%	0%	0	34
	WBU	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
WBL	150	152	152	153	0	153	0%	0%	0	0%	0%	0	153	
WBT	161	163	163	164	6	170	0%	0%	0	0%	0%	0	170	
WBR	53	54	54	54	0	54	0%	0%	0	0%	0%	0	54	
TOTAL		2,746	2,773	2,773	2,801	63	2,864	37%	37%	167	37%	37%	163	2,860
7) West Avenue / Project Driveway (U)	NBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	NBT	407	411	411	415	0	415	0%	0%	0	0%	0%	0	415
	NBR	0	0	0	0	0	0	0%	0%	0	80%	0%	126	126
	SBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	SBT	333	336	336	340	0	340	0%	0%	0	0%	0%	0	340
	SBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	WBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	WBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	WBR	0	0	0	0	0	0	0%	0%	0	0%	80%	226	226
TOTAL		740	747	747	755	0	755	0%	0%	0	80%	80%	352	1,107
8) Lincoln Road / Alton Court inbound only (U)	NBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	NBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	NBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	SBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	SBT	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	SBR	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBL	0	0	0	0	0	0	0%	0%	0	0%	0%	0	0
	EBT	95	96	96	97	0	97	0%	0%	0	0%	0%	0	97
	EBR	0	0											

Existing Conditions

HCM 6th Signalized Intersection Summary
1: West Avenue & Lincoln Road

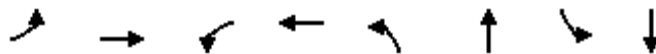
22113 Existing AM
09/26/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	21	19	14	21	31	13	263	18	13	218	48
Future Volume (veh/h)	81	21	19	14	21	31	13	263	18	13	218	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.89		0.81	0.89		0.80	0.98		0.97	0.99		0.95
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	1841	1826	1826	1900	1826	1856	1900	1856	1737	1678	1811	1811
Adj Flow Rate, veh/h	90	23	21	16	23	34	14	292	20	14	242	53
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	5	5	0	5	3	0	3	11	15	6	6
Cap, veh/h	264	128	117	71	91	107	854	1246	85	704	1037	227
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.73	0.73	0.73	1.00	1.00	1.00
Sat Flow, veh/h	1185	783	715	193	559	655	1083	1713	117	950	1425	312
Grp Volume(v), veh/h	90	0	44	73	0	0	14	0	312	14	0	295
Grp Sat Flow(s),veh/h/ln	1185	0	1499	1406	0	0	1083	0	1830	950	0	1737
Q Serve(g_s), s	2.3	0.0	2.8	0.0	0.0	0.0	0.4	0.0	6.2	0.1	0.0	0.0
Cycle Q Clear(g_c), s	7.1	0.0	2.8	4.7	0.0	0.0	0.4	0.0	6.2	6.3	0.0	0.0
Prop In Lane	1.00		0.48	0.22		0.47	1.00		0.06	1.00		0.18
Lane Grp Cap(c), veh/h	264	0	245	270	0	0	854	0	1332	704	0	1264
V/C Ratio(X)	0.34	0.00	0.18	0.27	0.00	0.00	0.02	0.00	0.23	0.02	0.00	0.23
Avail Cap(c_a), veh/h	340	0	341	356	0	0	854	0	1332	704	0	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	41.4	0.0	39.7	40.5	0.0	0.0	4.1	0.0	4.9	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.3	0.4	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.4
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	4.0	0.0	1.9	3.2	0.0	0.0	0.2	0.0	4.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	0.0	39.9	40.9	0.0	0.0	4.2	0.0	5.3	0.3	0.0	0.4
LnGrp LOS	D	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		134			73			326				309
Approach Delay, s/veh		41.3			40.9			5.3				0.4
Approach LOS		D			D			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.0		24.0		86.0		24.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		73.0		25.0		73.0		25.0				
Max Q Clear Time (g_c+I1), s		8.3		6.7		8.2		9.1				
Green Ext Time (p_c), s		0.7		0.3		0.8		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				12.3								
HCM 6th LOS				B								

Timings
1: West Avenue & Lincoln Road

22113 Existing AM
09/26/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↗		↕	↘	↗	↘	↗
Traffic Volume (vph)	81	21	14	21	13	263	13	218
Future Volume (vph)	81	21	14	21	13	263	13	218
Lane Group Flow (vph)	90	44	0	73	14	312	14	295
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	4.0	4.0	4.0
Minimum Split (s)	27.0	27.0	27.0	27.0	35.0	35.0	35.0	35.0
Total Split (s)	31.0	31.0	31.0	31.0	79.0	79.0	79.0	79.0
Total Split (%)	28.2%	28.2%	28.2%	28.2%	71.8%	71.8%	71.8%	71.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.62	0.25		0.41	0.02	0.21	0.02	0.21
Control Delay	63.4	29.2		32.3	3.8	3.9	3.7	3.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	63.4	29.2		32.3	3.8	3.9	3.7	3.0
Queue Length 50th (ft)	61	15		26	2	48	1	18
Queue Length 95th (ft)	109	46		68	8	95	m7	71
Internal Link Dist (ft)		255		332		285		530
Turn Bay Length (ft)	50				170		185	
Base Capacity (vph)	287	333		320	852	1469	752	1393
Starvation Cap Reductn	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0
Reduced v/c Ratio	0.31	0.13		0.23	0.02	0.21	0.02	0.21

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 61 (55%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: West Avenue & Lincoln Road



HCM 6th Signalized Intersection Summary
1: West Avenue & Lincoln Road

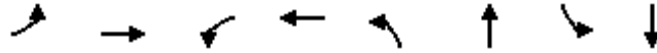
22113 Existing PM
09/26/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	46	25	20	24	60	22	282	28	24	250	48
Future Volume (veh/h)	54	46	25	20	24	60	22	282	28	24	250	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.89		0.79	0.87		0.77	0.98		0.97	0.99		0.94
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	1900	1841	1841	1900	1841	1870	1900	1885	1796	1900	1870	1900
Adj Flow Rate, veh/h	64	54	29	24	28	71	26	332	33	28	294	56
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	4	0	4	2	0	1	7	0	2	0
Cap, veh/h	242	180	97	67	72	136	797	1200	119	724	1078	205
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.71	0.71	0.71	1.00	1.00	1.00
Sat Flow, veh/h	1169	1020	548	157	405	767	1025	1681	167	1024	1510	288
Grp Volume(v), veh/h	64	0	83	123	0	0	26	0	365	28	0	350
Grp Sat Flow(s),veh/h/ln	1169	0	1567	1329	0	0	1025	0	1848	1024	0	1797
Q Serve(g_s), s	0.0	0.0	5.1	1.6	0.0	0.0	0.8	0.0	7.7	0.3	0.0	0.0
Cycle Q Clear(g_c), s	7.9	0.0	5.1	8.8	0.0	0.0	0.8	0.0	7.7	8.1	0.0	0.0
Prop In Lane	1.00		0.35	0.20		0.58	1.00		0.09	1.00		0.16
Lane Grp Cap(c), veh/h	242	0	277	274	0	0	797	0	1320	724	0	1283
V/C Ratio(X)	0.26	0.00	0.30	0.45	0.00	0.00	0.03	0.00	0.28	0.04	0.00	0.27
Avail Cap(c_a), veh/h	301	0	356	339	0	0	797	0	1320	724	0	1283
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.95	0.00	0.95
Uniform Delay (d), s/veh	40.5	0.0	39.3	40.8	0.0	0.0	4.6	0.0	5.6	0.4	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.4	0.9	0.0	0.0	0.1	0.0	0.5	0.1	0.0	0.5
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	2.8	0.0	3.6	5.5	0.0	0.0	0.3	0.0	5.3	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	0.0	39.8	41.7	0.0	0.0	4.7	0.0	6.1	0.5	0.0	0.5
LnGrp LOS	D	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		147			123			391				378
Approach Delay, s/veh		40.3			41.7			6.0				0.5
Approach LOS		D			D			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.5		25.5		84.5		25.5				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		73.0		25.0		73.0		25.0				
Max Q Clear Time (g_c+I1), s		10.1		10.8		9.7		9.9				
Green Ext Time (p_c), s		0.8		0.5		0.9		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				13.1								
HCM 6th LOS				B								

Timings
1: West Avenue & Lincoln Road

22113 Existing PM
09/26/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↗		↕	↘	↗	↘	↗
Traffic Volume (vph)	54	46	20	24	22	282	24	250
Future Volume (vph)	54	46	20	24	22	282	24	250
Lane Group Flow (vph)	64	83	0	123	26	365	28	350
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	4.0	4.0	4.0
Minimum Split (s)	27.0	27.0	27.0	27.0	35.0	35.0	35.0	35.0
Total Split (s)	31.0	31.0	31.0	31.0	79.0	79.0	79.0	79.0
Total Split (%)	28.2%	28.2%	28.2%	28.2%	71.8%	71.8%	71.8%	71.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.65	0.47		0.68	0.03	0.25	0.04	0.25
Control Delay	75.4	41.1		43.4	3.6	4.1	4.8	5.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	75.4	41.1		43.4	3.6	4.1	4.8	5.2
Queue Length 50th (ft)	44	40		44	3	53	5	67
Queue Length 95th (ft)	81	79		93	11	102	15	108
Internal Link Dist (ft)		260		332		285		530
Turn Bay Length (ft)	50				170		185	
Base Capacity (vph)	206	350		319	774	1437	782	1404
Starvation Cap Reductn	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0
Reduced v/c Ratio	0.31	0.24		0.39	0.03	0.25	0.04	0.25

Intersection Summary




















Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 32 (29%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 1: West Avenue & Lincoln Road



HCM 6th Signalized Intersection Summary
 2: West Avenue & 17th Street

22113 Existing AM
 09/26/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	91	103	46	49	17	79	241	59	15	146	0
Future Volume (veh/h)	0	91	103	46	49	17	79	241	59	15	146	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	0.98		0.93	0.99		0.95	0.97		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	0	1767	1811	1707	1811	1900	1826	1870	1767	1604	1841	0
Adj Flow Rate, veh/h	0	105	118	53	56	20	91	277	68	17	168	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	9	6	13	6	0	5	2	9	20	4	0
Cap, veh/h	0	699	577	498	632	226	377	545	134	302	504	0
Arrive On Green	0.00	0.42	0.42	0.04	0.51	0.51	0.10	0.76	0.76	0.09	0.09	0.00
Sat Flow, veh/h	0	1767	1385	1626	1247	445	1739	1434	352	865	1841	0
Grp Volume(v), veh/h	0	105	118	53	0	76	91	0	345	17	168	0
Grp Sat Flow(s),veh/h/ln	0	1678	1385	1626	0	1692	1739	0	1787	865	1841	0
Q Serve(g_s), s	0.0	4.3	6.0	2.0	0.0	2.5	4.0	0.0	8.3	2.0	9.4	0.0
Cycle Q Clear(g_c), s	0.0	4.3	6.0	2.0	0.0	2.5	4.0	0.0	8.3	2.0	9.4	0.0
Prop In Lane	0.00		1.00	1.00		0.26	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	0	699	577	498	0	858	377	0	679	302	504	0
V/C Ratio(X)	0.00	0.15	0.20	0.11	0.00	0.09	0.24	0.00	0.51	0.06	0.33	0.00
Avail Cap(c_a), veh/h	0	699	577	572	0	858	478	0	679	302	504	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.92	0.00	0.92	0.96	0.00	0.96	0.96	0.96	0.00
Uniform Delay (d), s/veh	0.0	20.0	20.5	16.2	0.0	14.0	24.3	0.0	9.2	37.2	40.6	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.8	0.0	0.0	0.2	0.1	0.0	2.6	0.3	1.7	0.0
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	0.0	3.2	3.7	1.3	0.0	1.8	2.8	0.0	5.0	0.8	8.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.4	21.3	16.3	0.0	14.2	24.4	0.0	11.8	37.6	42.3	0.0
LnGrp LOS	A	C	C	B	A	B	C	A	B	D	D	A
Approach Vol, veh/h		223			129			436			185	
Approach Delay, s/veh		20.9			15.0			14.4			41.9	
Approach LOS		C			B			B			D	
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		62.0		48.0	10.0	52.0	11.7	36.3				
Change Period (Y+Rc), s		* 6.2		* 6.2	6.0	* 6.2	6.0	* 6.2				
Max Green Setting (Gmax), s		* 56		* 42	9.0	* 41	12.0	* 24				
Max Q Clear Time (g_c+I1), s		4.5		10.3	4.0	8.0	6.0	11.4				
Green Ext Time (p_c), s		0.4		1.9	0.0	1.3	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
2: West Avenue & 17th Street

22113 Existing AM
09/26/2022

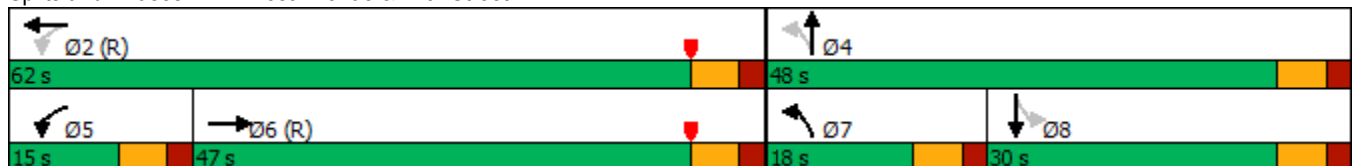


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↑↑	↖	↗	↖	↗	↖	↑
Traffic Volume (vph)	91	46	49	79	241	15	146
Future Volume (vph)	91	46	49	79	241	15	146
Lane Group Flow (vph)	223	53	76	91	345	17	168
Turn Type	NA	pm+pt	NA	pm+pt	NA	Perm	NA
Protected Phases	6	5	2	7	4		8
Permitted Phases		2		4		8	
Detector Phase	6	5	2	7	4	8	8
Switch Phase							
Minimum Initial (s)	12.0	5.0	12.0	5.0	7.0	7.0	7.0
Minimum Split (s)	34.2	11.0	34.2	11.0	30.2	29.2	29.2
Total Split (s)	47.0	15.0	62.0	18.0	48.0	30.0	30.0
Total Split (%)	42.7%	13.6%	56.4%	16.4%	43.6%	27.3%	27.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.2	2.0	2.2	2.0	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.0	6.2	6.0	6.2	6.2	6.2
Lead/Lag	Lag	Lead		Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes
Recall Mode	C-Max	None	C-Max	None	Max	Max	Max
v/c Ratio	0.17	0.11	0.10	0.23	0.51	0.07	0.34
Control Delay	10.7	14.4	11.0	19.5	25.3	25.4	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Total Delay	10.7	14.4	11.0	19.5	25.3	25.4	29.1
Queue Length 50th (ft)	24	18	19	41	198	6	60
Queue Length 95th (ft)	48	38	42	69	214	m17	137
Internal Link Dist (ft)	215		326		530		135
Turn Bay Length (ft)		130		175			
Base Capacity (vph)	1279	497	798	421	673	235	493
Starvation Cap Reductn	0	0	0	0	0	0	175
Spillback Cap Reductn	0	0	0	0	1	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.11	0.10	0.22	0.51	0.07	0.53

Intersection Summary




















Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 87 (79%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: West Avenue & 17th Street



HCM 6th Signalized Intersection Summary
2: West Avenue & 17th Street

22113 Existing PM
09/26/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	105	100	66	109	52	96	213	117	29	184	0
Future Volume (veh/h)	0	105	100	66	109	52	96	213	117	29	184	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	0.98		0.93	0.98		0.96	0.98		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	0	1885	1870	1856	1900	1870	1870	1885	1900	1796	1885	0
Adj Flow Rate, veh/h	0	114	109	72	118	57	104	232	127	32	200	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	2	3	0	2	2	1	0	7	1	0
Cap, veh/h	0	738	608	546	598	289	407	428	234	323	507	0
Arrive On Green	0.00	0.41	0.41	0.04	0.51	0.51	0.11	0.76	0.76	0.54	0.54	0.00
Sat Flow, veh/h	0	1885	1473	1767	1178	569	1781	1126	616	959	1885	0
Grp Volume(v), veh/h	0	114	109	72	0	175	104	0	359	32	200	0
Grp Sat Flow(s),veh/h/ln	0	1791	1473	1767	0	1748	1781	0	1743	959	1885	0
Q Serve(g_s), s	0.0	4.4	5.2	2.5	0.0	6.0	4.5	0.0	9.3	1.8	6.9	0.0
Cycle Q Clear(g_c), s	0.0	4.4	5.2	2.5	0.0	6.0	4.5	0.0	9.3	1.8	6.9	0.0
Prop In Lane	0.00		1.00	1.00		0.33	1.00		0.35	1.00		0.00
Lane Grp Cap(c), veh/h	0	738	608	546	0	887	407	0	662	323	507	0
V/C Ratio(X)	0.00	0.15	0.18	0.13	0.00	0.20	0.26	0.00	0.54	0.10	0.39	0.00
Avail Cap(c_a), veh/h	0	738	608	620	0	887	451	0	662	323	507	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.85	0.00	0.85	0.96	0.00	0.96	0.94	0.94	0.00
Uniform Delay (d), s/veh	0.0	20.3	20.5	16.3	0.0	14.8	24.0	0.0	9.3	19.0	20.2	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.6	0.0	0.0	0.4	0.1	0.0	3.0	0.6	2.2	0.0
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	0.0	3.5	3.4	1.8	0.0	4.4	3.2	0.0	5.4	0.8	5.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.7	21.2	16.3	0.0	15.3	24.1	0.0	12.3	19.6	22.4	0.0
LnGrp LOS	A	C	C	B	A	B	C	A	B	B	C	A
Approach Vol, veh/h		223			247			463			232	
Approach Delay, s/veh		20.9			15.6			15.0			22.0	
Approach LOS		C			B			B			C	
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		62.0		48.0	10.4	51.6	12.2	35.8				
Change Period (Y+Rc), s		* 6.2		* 6.2	6.0	* 6.2	6.0	* 6.2				
Max Green Setting (Gmax), s		* 56		* 42	9.0	* 41	9.0	* 27				
Max Q Clear Time (g_c+I1), s		8.0		11.3	4.5	7.2	6.5	8.9				
Green Ext Time (p_c), s		1.0		2.0	0.0	1.2	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
2: West Avenue & 17th Street

22113 Existing PM
09/26/2022

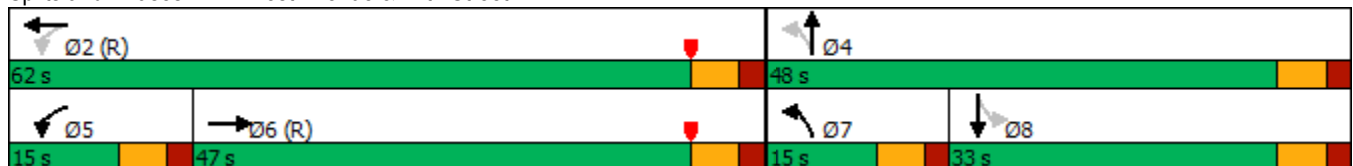


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↑↑	↖	↔	↖	↔	↖	↑
Traffic Volume (vph)	105	66	109	96	213	29	184
Future Volume (vph)	105	66	109	96	213	29	184
Lane Group Flow (vph)	223	72	175	104	359	32	200
Turn Type	NA	pm+pt	NA	pm+pt	NA	Perm	NA
Protected Phases	6	5	2	7	4		8
Permitted Phases		2		4		8	
Detector Phase	6	5	2	7	4	8	8
Switch Phase							
Minimum Initial (s)	12.0	5.0	12.0	5.0	7.0	7.0	7.0
Minimum Split (s)	34.2	11.0	34.2	11.0	30.2	29.2	29.2
Total Split (s)	47.0	15.0	62.0	15.0	48.0	33.0	33.0
Total Split (%)	42.7%	13.6%	56.4%	13.6%	43.6%	30.0%	30.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.2	2.0	2.2	2.0	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.0	6.2	6.0	6.2	6.2	6.2
Lead/Lag	Lag	Lead		Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes
Recall Mode	C-Max	None	C-Max	None	Max	Max	Max
v/c Ratio	0.17	0.14	0.21	0.28	0.54	0.13	0.42
Control Delay	11.6	14.5	12.9	23.0	29.6	25.9	29.4
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	2.7
Total Delay	11.6	14.5	12.9	23.0	29.7	25.9	32.2
Queue Length 50th (ft)	26	25	53	55	216	10	94
Queue Length 95th (ft)	54	50	94	87	313	m27	152
Internal Link Dist (ft)	215		326		530		135
Turn Bay Length (ft)		130		175			
Base Capacity (vph)	1347	547	814	381	669	242	476
Starvation Cap Reductn	0	0	0	0	0	0	177
Spillback Cap Reductn	0	0	0	0	13	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.13	0.21	0.27	0.55	0.13	0.67

Intersection Summary

























Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 75 (68%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: West Avenue & 17th Street



HCM Signalized Intersection Capacity Analysis
3: Alton Road & 17th Street

22113 Existing AM
09/26/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 						 			 		
Traffic Volume (vph)	36	117	62	97	43	63	41	672	235	188	779	40	
Future Volume (vph)	36	117	62	97	43	63	41	672	235	188	779	40	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2		
Lane Util. Factor	0.91	0.91		0.95	0.95	1.00	1.00	0.91		1.00	0.95		
Frbp, ped/bikes	1.00	0.97		1.00	1.00	0.96	1.00	0.98		1.00	0.99		
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		1.00	1.00		
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.96		1.00	0.99		
Flt Protected	0.95	1.00		0.95	0.98	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1480	2935		1603	1702	1372	1708	4668		1733	3238		
Flt Permitted	0.95	1.00		0.95	0.98	1.00	0.29	1.00		0.23	1.00		
Satd. Flow (perm)	1480	2935		1603	1702	1372	523	4668		422	3238		
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	40	129	68	107	47	69	45	738	258	207	856	44	
RTOR Reduction (vph)	0	43	0	0	0	0	0	25	0	0	1	0	
Lane Group Flow (vph)	36	158	0	76	78	69	45	971	0	207	899	0	
Confl. Peds. (#/hr)	25		34	34		25	24		18	18		24	
Confl. Bikes (#/hr)			1			8			11			10	
Heavy Vehicles (%)	11%	8%	10%	7%	2%	13%	5%	5%	5%	4%	4%	13%	
Parking (#/hr)												0	
Turn Type	Split	NA		Split	NA	pm+ov	pm+pt	NA		pm+pt	NA		
Protected Phases	3	3		4	4	5	1	6		5	2		
Permitted Phases						4	6			2			
Actuated Green, G (s)	12.9	12.9		12.0	12.0	23.1	93.4	88.6		105.4	94.9		
Effective Green, g (s)	12.9	12.9		12.0	12.0	23.1	93.4	88.6		105.4	94.9		
Actuated g/C Ratio	0.09	0.09		0.08	0.08	0.15	0.62	0.59		0.70	0.63		
Clearance Time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2		
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.0	2.0	1.0		2.0	1.0		
Lane Grp Cap (vph)	127	252		128	136	211	363	2757		393	2048		
v/s Ratio Prot	0.02	c0.05		c0.05	0.05	0.02	0.00	0.21		c0.04	0.28		
v/s Ratio Perm						0.03	0.07			c0.33			
v/c Ratio	0.28	0.63		0.59	0.57	0.33	0.12	0.35		0.53	0.44		
Uniform Delay, d1	64.2	66.2		66.6	66.5	56.5	11.2	15.9		8.8	14.0		
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.99	0.88		1.09	0.86		
Incremental Delay, d2	0.9	4.2		6.0	4.7	0.3	0.1	0.3		0.5	0.6		
Delay (s)	65.1	70.4		72.7	71.3	56.9	11.1	14.3		10.1	12.7		
Level of Service	E	E		E	E	E	B	B		B	B		
Approach Delay (s)		69.6			67.3			14.1			12.2		
Approach LOS		E			E			B			B		
Intersection Summary													
HCM 2000 Control Delay			22.9									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.56										
Actuated Cycle Length (s)			150.0									Sum of lost time (s)	25.4
Intersection Capacity Utilization			77.1%									ICU Level of Service	D
Analysis Period (min)			15										

c Critical Lane Group

Timings
3: Alton Road & 17th Street

22113 Existing AM
09/26/2022

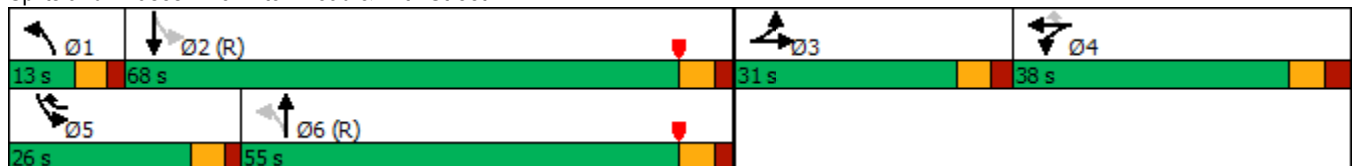


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	36	117	97	43	63	41	672	188	779
Future Volume (vph)	36	117	97	43	63	41	672	188	779
Lane Group Flow (vph)	36	201	76	78	69	45	996	207	900
Turn Type	Split	NA	Split	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases	3	3	4	4	5	1	6	5	2
Permitted Phases					4	6		2	
Detector Phase	3	3	4	4	5	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	5.0	4.0	4.0	4.0
Minimum Split (s)	29.3	29.3	27.2	27.2	9.7	10.7	24.2	9.7	24.2
Total Split (s)	31.0	31.0	38.0	38.0	26.0	13.0	55.0	26.0	68.0
Total Split (%)	20.7%	20.7%	25.3%	25.3%	17.3%	8.7%	36.7%	17.3%	45.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.7	3.7	4.0	3.7	4.0
All-Red Time (s)	2.3	2.3	3.2	3.2	2.0	2.0	2.2	2.0	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	7.2	7.2	5.7	5.7	6.2	5.7	6.2
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
v/c Ratio	0.29	0.68	0.59	0.57	0.31	0.12	0.36	0.53	0.43
Control Delay	68.6	62.4	84.6	82.1	51.9	9.3	14.5	13.5	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	68.6	62.4	84.6	82.1	51.9	9.3	14.5	13.5	13.7
Queue Length 50th (ft)	37	81	76	78	58	10	173	41	305
Queue Length 95th (ft)	76	125	132	134	95	20	258	m57	410
Internal Link Dist (ft)		326		418			517		373
Turn Bay Length (ft)	115		220			155		305	
Base Capacity (vph)	243	522	329	349	312	390	2781	475	2075
Starvation Cap Reductn	0	0	0	0	0	0	0	0	387
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.39	0.23	0.22	0.22	0.12	0.36	0.44	0.53

Intersection Summary






















Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 39 (26%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Alton Road & 17th Street



HCM Signalized Intersection Capacity Analysis
3: Alton Road & 17th Street

22113 Existing PM
09/26/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	61	108	121	135	115	230	66	918	146	170	625	59	
Future Volume (vph)	61	108	121	135	115	230	66	918	146	170	625	59	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2		
Lane Util. Factor	0.91	0.91		0.95	0.95	1.00	1.00	0.91		1.00	0.95		
Frbp, ped/bikes	1.00	0.92		1.00	1.00	0.94	1.00	0.99		1.00	0.98		
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.97	1.00		1.00	1.00		
Frt	1.00	0.92		1.00	1.00	0.85	1.00	0.98		1.00	0.99		
Flt Protected	0.95	1.00		0.95	0.99	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1643	2883		1633	1755	1494	1714	4848		1752	3215		
Flt Permitted	0.95	1.00		0.95	0.99	1.00	0.38	1.00		0.20	1.00		
Satd. Flow (perm)	1643	2883		1633	1755	1494	677	4848		363	3215		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	63	111	125	139	119	237	68	946	151	175	644	61	
RTOR Reduction (vph)	0	116	0	0	0	0	0	10	0	0	3	0	
Lane Group Flow (vph)	57	127	0	125	133	237	68	1087	0	175	702	0	
Confl. Peds. (#/hr)	39		66	66		39	55		32	32		55	
Confl. Bikes (#/hr)			5			3			12			15	
Heavy Vehicles (%)	0%	2%	2%	5%	2%	2%	2%	3%	5%	3%	3%	0%	
Parking (#/hr)												0	
Turn Type	Split	NA		Split	NA	pm+ov	pm+pt	NA		pm+pt	NA		
Protected Phases	3	3		4	4	5	1	6		5	2		
Permitted Phases						4	6			2			
Actuated Green, G (s)	11.4	11.4		16.4	16.4	29.2	89.6	84.0		102.5	91.2		
Effective Green, g (s)	11.4	11.4		16.4	16.4	29.2	89.6	84.0		102.5	91.2		
Actuated g/C Ratio	0.08	0.08		0.11	0.11	0.19	0.60	0.56		0.68	0.61		
Clearance Time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2		
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.0	2.0	1.0		2.0	1.0		
Lane Grp Cap (vph)	124	219		178	191	290	443	2714		366	1954		
v/s Ratio Prot	0.03	c0.04		0.08	0.08	c0.07	0.01	0.22		0.04	0.22		
v/s Ratio Perm						0.09	0.09			c0.29			
v/c Ratio	0.46	0.58		0.70	0.70	0.82	0.15	0.40		0.48	0.36		
Uniform Delay, d1	66.4	67.0		64.4	64.4	57.8	12.7	18.7		10.2	14.7		
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.90	1.06		1.40	0.76		
Incremental Delay, d2	2.0	3.0		11.0	9.7	15.4	0.1	0.4		0.3	0.5		
Delay (s)	68.3	70.0		75.5	74.1	73.2	11.5	20.2		14.6	11.7		
Level of Service	E	E		E	E	E	B	C		B	B		
Approach Delay (s)		69.7			74.0			19.7			12.3		
Approach LOS		E			E			B			B		
Intersection Summary													
HCM 2000 Control Delay			32.1									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.58										
Actuated Cycle Length (s)			150.0									Sum of lost time (s)	25.4
Intersection Capacity Utilization			83.8%									ICU Level of Service	E
Analysis Period (min)			15										

c Critical Lane Group

Timings
3: Alton Road & 17th Street

22113 Existing PM
09/26/2022

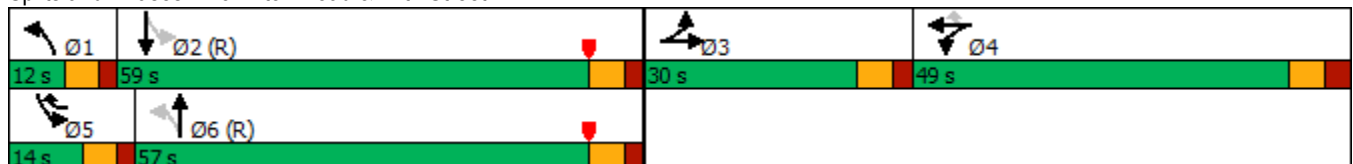


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	61	108	135	115	230	66	918	170	625
Future Volume (vph)	61	108	135	115	230	66	918	170	625
Lane Group Flow (vph)	57	242	125	133	237	68	1097	175	705
Turn Type	Split	NA	Split	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases	3	3	4	4	5	1	6	5	2
Permitted Phases					4	6		2	
Detector Phase	3	3	4	4	5	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	5.0	4.0	4.0	4.0
Minimum Split (s)	29.3	29.3	27.2	27.2	9.7	10.7	24.2	9.7	24.2
Total Split (s)	30.0	30.0	49.0	49.0	14.0	12.0	57.0	14.0	59.0
Total Split (%)	20.0%	20.0%	32.7%	32.7%	9.3%	8.0%	38.0%	9.3%	39.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.7	3.7	4.0	3.7	4.0
All-Red Time (s)	2.3	2.3	3.2	3.2	2.0	2.0	2.2	2.0	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	7.2	7.2	5.7	5.7	6.2	5.7	6.2
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
v/c Ratio	0.46	0.72	0.70	0.69	0.77	0.14	0.40	0.48	0.36
Control Delay	77.0	44.5	84.0	82.2	69.4	9.5	21.3	17.5	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Delay	77.0	44.5	84.0	82.2	69.4	9.5	21.3	17.5	12.8
Queue Length 50th (ft)	59	62	126	134	208	24	234	51	130
Queue Length 95th (ft)	109	109	194	203	281	54	324	98	153
Internal Link Dist (ft)		326		418			517		373
Turn Bay Length (ft)	115		220			155		305	
Base Capacity (vph)	259	562	455	489	306	475	2720	368	1980
Starvation Cap Reductn	0	0	0	0	0	0	0	0	524
Spillback Cap Reductn	0	0	0	0	0	0	322	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.43	0.27	0.27	0.77	0.14	0.46	0.48	0.48

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 11 (7%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated

Splits and Phases: 3: Alton Road & 17th Street



HCM Signalized Intersection Capacity Analysis
4: Alton Road & Lincoln Road

22113 Existing AM
09/26/2022



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	33	25	29	966	3	864	54
Future Volume (vph)	33	25	29	966	3	864	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1752	1298	1803	3471	1356	3230	
Flt Permitted	0.95	1.00	0.27	1.00	0.27	1.00	
Satd. Flow (perm)	1752	1298	512	3471	379	3230	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	27	32	1050	3	939	59
RTOR Reduction (vph)	0	26	0	0	0	1	0
Lane Group Flow (vph)	36	1	32	1050	3	997	0
Confl. Peds. (#/hr)	56	37	36		56		36
Confl. Bikes (#/hr)		1					18
Heavy Vehicles (%)	3%	12%	0%	4%	33%	5%	4%
Parking (#/hr)		0				0	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	
Permitted Phases			6		2		
Actuated Green, G (s)	7.1	7.1	126.7	123.6	122.5	121.5	
Effective Green, g (s)	7.1	7.1	126.7	123.6	122.5	121.5	
Actuated g/C Ratio	0.05	0.05	0.84	0.82	0.82	0.81	
Clearance Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Vehicle Extension (s)	2.5	2.5	2.0	1.0	2.0	1.0	
Lane Grp Cap (vph)	82	61	459	2860	316	2616	
v/s Ratio Prot	c0.02	0.00	c0.00	0.30	0.00	c0.31	
v/s Ratio Perm			0.06		0.01		
v/c Ratio	0.44	0.02	0.07	0.37	0.01	0.38	
Uniform Delay, d1	69.5	68.1	2.0	3.3	2.6	3.9	
Progression Factor	1.00	1.00	1.00	1.00	0.60	0.42	
Incremental Delay, d2	2.7	0.1	0.0	0.4	0.0	0.4	
Delay (s)	72.2	68.2	2.1	3.7	1.5	2.0	
Level of Service	E	E	A	A	A	A	
Approach Delay (s)	70.5			3.6		2.0	
Approach LOS	E			A		A	

Intersection Summary

HCM 2000 Control Delay	4.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.3
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Alton Road & Lincoln Road

22113 Existing AM
09/26/2022

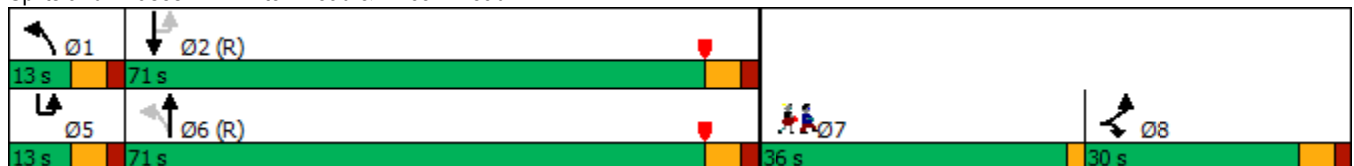


Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	33	25	29	966	3	864	
Future Volume (vph)	33	25	29	966	3	864	
Lane Group Flow (vph)	36	27	32	1050	3	998	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	7
Permitted Phases			6		2		
Detector Phase	8	8	1	6	5	2	
Switch Phase							
Minimum Initial (s)	7.0	7.0	5.0	7.0	5.0	7.0	1.0
Minimum Split (s)	24.0	24.0	11.0	24.3	11.0	24.3	36.0
Total Split (s)	30.0	30.0	13.0	71.0	13.0	71.0	36.0
Total Split (%)	20.0%	20.0%	8.7%	47.3%	8.7%	47.3%	24%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.3	2.0	2.3	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max	None
v/c Ratio	0.36	0.28	0.07	0.35	0.01	0.37	
Control Delay	78.0	28.3	1.9	3.0	1.0	2.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	78.0	28.3	1.9	3.0	1.0	2.0	
Queue Length 50th (ft)	35	0	3	78	0	85	
Queue Length 95th (ft)	73	33	9	186	m0	78	
Internal Link Dist (ft)	332			240		517	
Turn Bay Length (ft)			115		145		
Base Capacity (vph)	280	230	506	3028	370	2717	
Starvation Cap Reductn	0	0	0	0	0	270	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.13	0.12	0.06	0.35	0.01	0.41	

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 55 (37%), Referenced to phase 2:SBTU and 6:NBTL, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Alton Road & Lincoln Road



HCM Signalized Intersection Capacity Analysis
4: Alton Road & Lincoln Road

22113 Existing PM
09/26/2022



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	65	28	37	1061	5	791	73
Future Volume (vph)	65	28	37	1061	5	791	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1454	1748	3505	1802	3275	
Flt Permitted	0.95	1.00	0.30	1.00	0.25	1.00	
Satd. Flow (perm)	1719	1454	549	3505	478	3275	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	67	29	38	1094	5	815	75
RTOR Reduction (vph)	0	27	0	0	0	2	0
Lane Group Flow (vph)	67	2	38	1094	5	888	0
Confl. Peds. (#/hr)	109	66	63		109		63
Confl. Bikes (#/hr)		5					13
Heavy Vehicles (%)	5%	0%	3%	3%	0%	3%	1%
Parking (#/hr)		0				0	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	
Permitted Phases			6		2		
Actuated Green, G (s)	9.4	9.4	125.5	121.3	119.1	118.1	
Effective Green, g (s)	9.4	9.4	125.5	121.3	119.1	118.1	
Actuated g/C Ratio	0.06	0.06	0.84	0.81	0.79	0.79	
Clearance Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Vehicle Extension (s)	2.5	2.5	2.0	1.0	2.0	1.0	
Lane Grp Cap (vph)	107	91	492	2834	388	2578	
v/s Ratio Prot	c0.04	0.00	c0.00	c0.31	0.00	0.27	
v/s Ratio Perm			0.06		0.01		
v/c Ratio	0.63	0.02	0.08	0.39	0.01	0.34	
Uniform Delay, d1	68.6	66.0	2.3	4.0	3.2	4.7	
Progression Factor	1.00	1.00	1.00	1.00	0.61	0.53	
Incremental Delay, d2	9.5	0.1	0.0	0.4	0.0	0.3	
Delay (s)	78.1	66.0	2.3	4.4	2.0	2.8	
Level of Service	E	E	A	A	A	A	
Approach Delay (s)	74.4			4.3		2.8	
Approach LOS	E			A		A	

Intersection Summary

HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.3
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Alton Road & Lincoln Road

22113 Existing PM
09/26/2022



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	65	28	37	1061	5	791	
Future Volume (vph)	65	28	37	1061	5	791	
Lane Group Flow (vph)	67	29	38	1094	5	890	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	7
Permitted Phases			6		2		
Detector Phase	8	8	1	6	5	2	
Switch Phase							
Minimum Initial (s)	7.0	7.0	5.0	7.0	5.0	7.0	1.0
Minimum Split (s)	13.0	13.0	11.0	24.3	11.0	24.3	36.0
Total Split (s)	22.0	22.0	17.0	75.0	17.0	75.0	36.0
Total Split (%)	14.7%	14.7%	11.3%	50.0%	11.3%	50.0%	24%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.3	2.0	2.3	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max	None
v/c Ratio	0.54	0.22	0.08	0.36	0.01	0.34	
Control Delay	82.4	23.9	2.5	3.8	1.4	3.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	
Total Delay	82.4	23.9	2.5	3.8	1.4	3.1	
Queue Length 50th (ft)	65	0	5	98	0	61	
Queue Length 95th (ft)	116	33	12	223	m1	87	
Internal Link Dist (ft)	332			240		517	
Turn Bay Length (ft)			115		145		
Base Capacity (vph)	183	181	557	3003	506	2651	
Starvation Cap Reductn	0	0	0	0	0	681	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.16	0.07	0.36	0.01	0.45	

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 145 (97%), Referenced to phase 2:SBTU and 6:NBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Alton Road & Lincoln Road



HCM 6th Signalized Intersection Summary
5: West Avenue & Dade Boulevard

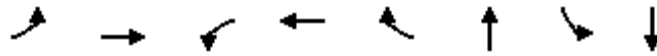
22113 Existing AM
09/26/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	195	0	61	221	85	0	111	147	35	99	4
Future Volume (veh/h)	16	195	0	61	221	85	0	111	147	35	99	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.96	1.00		0.96	0.99		0.91
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	1900	1870	0	1856	1826	1811	0	1900	1856	1693	1796	1159
Adj Flow Rate, veh/h	18	217	0	68	246	94	0	123	163	39	110	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	0	3	5	6	0	0	3	14	7	50
Cap, veh/h	523	864	0	586	881	708	0	219	290	103	265	9
Arrive On Green	0.02	0.46	0.00	0.04	0.48	0.48	0.00	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1810	1870	0	1767	1826	1467	0	721	956	203	873	29
Grp Volume(v), veh/h	18	217	0	68	246	94	0	0	286	153	0	0
Grp Sat Flow(s),veh/h/ln	1810	1870	0	1767	1826	1467	0	0	1677	1105	0	0
Q Serve(g_s), s	0.6	7.8	0.0	2.2	8.9	3.9	0.0	0.0	15.7	2.8	0.0	0.0
Cycle Q Clear(g_c), s	0.6	7.8	0.0	2.2	8.9	3.9	0.0	0.0	15.7	18.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.57	0.25		0.03
Lane Grp Cap(c), veh/h	523	864	0	586	881	708	0	0	509	376	0	0
V/C Ratio(X)	0.03	0.25	0.00	0.12	0.28	0.13	0.00	0.00	0.56	0.41	0.00	0.00
Avail Cap(c_a), veh/h	596	864	0	622	881	708	0	0	509	376	0	0
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	0.00	0.96	0.96	0.96	0.00	0.00	0.85	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.1	18.0	0.0	14.5	17.0	15.7	0.0	0.0	32.2	31.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.1	0.8	0.4	0.0	0.0	3.8	3.2	0.0	0.0
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	0.4	6.3	0.0	1.6	7.0	2.5	0.0	0.0	10.8	7.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.2	18.7	0.0	14.6	17.8	16.1	0.0	0.0	35.9	34.4	0.0	0.0
LnGrp LOS	B	B	A	B	B	B	A	A	D	C	A	A
Approach Vol, veh/h		235			408			286				153
Approach Delay, s/veh		18.4			16.9			35.9				34.4
Approach LOS		B			B			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	60.5		40.0	11.8	58.2		40.0				
Change Period (Y+Rc), s	7.4	7.4		6.6	7.4	7.4		6.6				
Max Green Setting (Gmax), s	6.6	48.6		33.4	6.6	48.6		33.4				
Max Q Clear Time (g_c+I1), s	2.6	10.9		17.7	4.2	9.8		20.5				
Green Ext Time (p_c), s	0.0	0.6		1.3	0.0	0.4		0.5				
Intersection Summary												
HCM 6th Ctrl Delay					24.7							
HCM 6th LOS					C							

Timings
5: West Avenue & Dade Boulevard

22113 Existing AM
09/26/2022



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Configurations	↖	↑	↖	↑	↖	↗		↕
Traffic Volume (vph)	16	195	61	221	85	111	35	99
Future Volume (vph)	16	195	61	221	85	111	35	99
Lane Group Flow (vph)	18	217	68	246	94	286	0	153
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	1	6	5	2		4		8
Permitted Phases	6		2		2		8	
Detector Phase	1	6	5	2	2	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.4	34.4	12.4	34.4	34.4	38.6	38.6	38.6
Total Split (s)	14.0	56.0	14.0	56.0	56.0	40.0	40.0	40.0
Total Split (%)	12.7%	50.9%	12.7%	50.9%	50.9%	36.4%	36.4%	36.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.4	3.4	3.4	3.4	3.4	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	7.4	7.4	7.4	7.4	7.4	6.6		6.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max
v/c Ratio	0.03	0.25	0.11	0.26	0.12	0.52		0.40
Control Delay	10.8	19.7	11.3	17.2	3.0	4.7		34.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.6		0.1
Total Delay	10.8	19.7	11.3	17.2	3.0	5.3		34.2
Queue Length 50th (ft)	5	94	20	82	0	0		85
Queue Length 95th (ft)	15	149	41	170	23	0		146
Internal Link Dist (ft)		226		383		135		167
Turn Bay Length (ft)	135		120					
Base Capacity (vph)	623	870	617	938	796	553		380
Starvation Cap Reductn	0	0	0	0	0	69		0
Spillback Cap Reductn	0	0	0	0	0	0		15
Storage Cap Reductn	0	0	0	0	0	0		0
Reduced v/c Ratio	0.03	0.25	0.11	0.26	0.12	0.59		0.42

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 93 (85%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 5: West Avenue & Dade Boulevard



HCM 6th Signalized Intersection Summary
5: West Avenue & Dade Boulevard

22113 Existing PM
09/26/2022



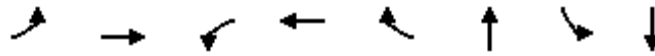
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑		↖	↑	↖		↑			↕	
Traffic Volume (veh/h)	32	206	0	81	208	93	0	153	110	38	130	16
Future Volume (veh/h)	32	206	0	81	208	93	0	153	110	38	130	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.95	0.98		0.91
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	0	1885	1885	1841	0	1870	1885	1826	1870	1707
Adj Flow Rate, veh/h	34	219	0	86	221	99	0	163	117	40	138	17
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	0	1	1	4	0	2	1	5	2	13
Cap, veh/h	529	836	0	582	874	695	0	310	222	97	315	36
Arrive On Green	0.03	0.45	0.00	0.04	0.46	0.46	0.00	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	1856	0	1795	1885	1500	0	990	711	185	1006	114
Grp Volume(v), veh/h	34	219	0	86	221	99	0	0	280	195	0	0
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1795	1885	1500	0	0	1701	1305	0	0
Q Serve(g_s), s	1.1	8.1	0.0	2.8	7.8	4.2	0.0	0.0	14.9	2.7	0.0	0.0
Cycle Q Clear(g_c), s	1.1	8.1	0.0	2.8	7.8	4.2	0.0	0.0	14.9	17.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.42	0.21		0.09
Lane Grp Cap(c), veh/h	529	836	0	582	874	695	0	0	532	447	0	0
V/C Ratio(X)	0.06	0.26	0.00	0.15	0.25	0.14	0.00	0.00	0.53	0.44	0.00	0.00
Avail Cap(c_a), veh/h	583	836	0	614	874	695	0	0	532	447	0	0
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	0.00	0.97	0.97	0.97	0.00	0.00	0.83	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.4	18.8	0.0	15.2	17.9	17.0	0.0	0.0	31.1	30.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.1	0.7	0.4	0.0	0.0	3.1	3.1	0.0	0.0
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	0.8	6.5	0.0	2.1	6.4	2.7	0.0	0.0	10.3	8.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.4	19.6	0.0	15.3	18.6	17.4	0.0	0.0	34.2	33.4	0.0	0.0
LnGrp LOS	B	B	A	B	B	B	A	A	C	C	A	A
Approach Vol, veh/h		253			406			280				195
Approach Delay, s/veh		19.0			17.6			34.2				33.4
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	58.4		41.0	12.0	57.0		41.0				
Change Period (Y+Rc), s	7.4	7.4		6.6	7.4	7.4		6.6				
Max Green Setting (Gmax), s	6.6	47.6		34.4	6.6	47.6		34.4				
Max Q Clear Time (g_c+I1), s	3.1	9.8		16.9	4.8	10.1		19.6				
Green Ext Time (p_c), s	0.0	0.5		1.3	0.0	0.4		0.8				

Intersection Summary

HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Timings
5: West Avenue & Dade Boulevard

22113 Existing PM
09/26/2022

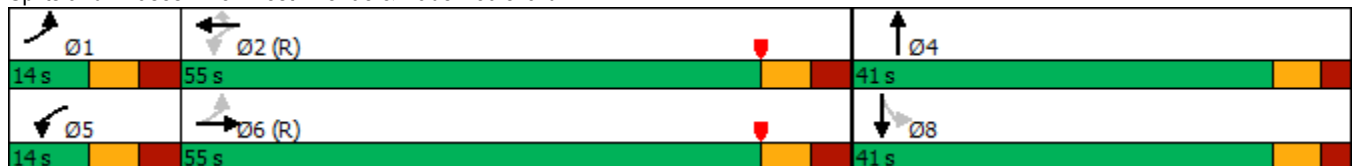


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	32	206	81	208	93	153	38	130
Future Volume (vph)	32	206	81	208	93	153	38	130
Lane Group Flow (vph)	34	219	86	221	99	280	0	195
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	1	6	5	2		4		8
Permitted Phases	6		2		2		8	
Detector Phase	1	6	5	2	2	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.4	34.4	12.4	34.4	34.4	38.6	38.6	38.6
Total Split (s)	14.0	55.0	14.0	55.0	55.0	41.0	41.0	41.0
Total Split (%)	12.7%	50.0%	12.7%	50.0%	50.0%	37.3%	37.3%	37.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.4	3.4	3.4	3.4	3.4	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	7.4	7.4	7.4	7.4	7.4	6.6		6.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max
v/c Ratio	0.06	0.26	0.14	0.24	0.13	0.50		0.45
Control Delay	11.4	20.4	12.0	19.0	3.4	11.8		33.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.4		0.2
Total Delay	11.4	20.4	12.0	19.0	3.4	13.2		33.7
Queue Length 50th (ft)	10	97	27	98	0	30		107
Queue Length 95th (ft)	25	153	50	154	27	50		177
Internal Link Dist (ft)		226		383		135		167
Turn Bay Length (ft)	135		120					
Base Capacity (vph)	609	845	617	909	774	564		434
Starvation Cap Reductn	0	0	0	0	0	136		0
Spillback Cap Reductn	0	0	0	0	0	0		31
Storage Cap Reductn	0	0	0	0	0	0		0
Reduced v/c Ratio	0.06	0.26	0.14	0.24	0.13	0.65		0.48

Intersection Summary
























Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 80 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 5: West Avenue & Dade Boulevard



HCM 6th Signalized Intersection Summary
6: Alton Road & Dade Boulevard

22113 Existing AM
09/26/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	144	19	176	137	28	85	500	198	35	822	141
Future Volume (veh/h)	213	144	19	176	137	28	85	500	198	35	822	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		1.00	0.98		1.00	1.00		0.97	1.00		0.97
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	1885	1841	1515	1856	1841	1737	1767	1811	1856	1841	1841	1826
Adj Flow Rate, veh/h	237	160	0	196	152	0	94	556	220	39	913	157
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	1	4	26	3	4	11	9	6	3	4	4	5
Cap, veh/h	297	403		303	496		334	1445	570	50	2092	1007
Arrive On Green	0.07	0.12	0.00	0.10	0.14	0.00	0.07	1.00	1.00	0.03	0.60	0.60
Sat Flow, veh/h	1795	3589	0	1767	3497	1472	1682	2389	942	1753	3497	1506
Grp Volume(v), veh/h	237	160	0	196	152	0	94	400	376	39	913	157
Grp Sat Flow(s),veh/h/ln	1795	1749	0	1767	1749	1472	1682	1721	1611	1753	1749	1506
Q Serve(g_s), s	10.3	6.4	0.0	14.3	5.8	0.0	3.3	0.0	0.0	3.3	21.3	5.8
Cycle Q Clear(g_c), s	10.3	6.4	0.0	14.3	5.8	0.0	3.3	0.0	0.0	3.3	21.3	5.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	297	403		303	496		334	1041	974	50	2092	1007
V/C Ratio(X)	0.80	0.40		0.65	0.31		0.28	0.38	0.39	0.78	0.44	0.16
Avail Cap(c_a), veh/h	297	723		303	816		402	1041	974	132	2092	1007
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.00	1.00	1.00	0.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.3	61.5	0.0	52.7	57.7	0.0	12.1	0.0	0.0	72.4	16.4	9.3
Incr Delay (d2), s/veh	13.0	0.5	0.0	3.7	0.3	0.0	0.2	1.0	1.1	9.4	0.7	0.3
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	8.4	5.2	0.0	11.2	4.7	0.0	2.2	0.5	0.5	2.9	13.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.3	62.0	0.0	56.4	58.0	0.0	12.2	1.0	1.1	81.8	17.0	9.6
LnGrp LOS	E	E		E	E		B	A	A	F	B	A
Approach Vol, veh/h		397			348			870			1109	
Approach Delay, s/veh		68.1			57.1			2.3			18.3	
Approach LOS		E			E			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	95.7	16.0	27.3	10.0	96.7	20.0	23.3				
Change Period (Y+Rc), s	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0				
Max Green Setting (Gmax), s	* 11	70.0	* 10	35.0	* 11	70.0	* 14	31.0				
Max Q Clear Time (g_c+I1), s	5.3	23.3	12.3	7.8	5.3	2.0	16.3	8.4				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.8	0.0	1.9	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			25.4									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

Timings
6: Alton Road & Dade Boulevard

22113 Existing AM
09/26/2022



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	213	144	176	137	28	85	500	35	822	141
Future Volume (vph)	213	144	176	137	28	85	500	35	822	141
Lane Group Flow (vph)	237	181	196	152	31	94	776	39	913	157
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	pm+ov
Protected Phases	3	8	7	4		1	6	5	2	3
Permitted Phases	8		4		4	6				2
Detector Phase	3	8	7	4	4	1	6	5	2	3
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	10.7	37.0	10.7	37.0	37.0	10.7	29.0	10.7	29.0	10.7
Total Split (s)	16.0	37.0	20.0	41.0	41.0	17.0	76.0	17.0	76.0	16.0
Total Split (%)	10.7%	24.7%	13.3%	27.3%	27.3%	11.3%	50.7%	11.3%	50.7%	10.7%
Yellow Time (s)	3.7	4.0	3.7	4.0	4.0	3.7	4.0	3.7	4.0	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	6.0	5.7	6.0	6.0	5.7	6.0	5.7	6.0	5.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max	None
v/c Ratio	1.04	0.63	0.78	0.40	0.12	0.26	0.38	0.43	0.43	0.15
Control Delay	124.4	72.5	73.9	64.8	1.0	7.6	8.6	82.3	16.1	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	124.4	72.5	73.9	64.8	1.0	7.6	8.7	82.3	16.2	4.6
Queue Length 50th (ft)	~220	87	170	74	0	18	104	38	233	25
Queue Length 95th (ft)	#374	126	#249	108	0	30	119	77	313	55
Internal Link Dist (ft)		383		448			373		394	
Turn Bay Length (ft)	145		185		75			220		45
Base Capacity (vph)	228	693	253	809	411	404	2047	130	2145	1029
Starvation Cap Reductn	0	0	0	0	0	0	358	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	101	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.26	0.77	0.19	0.08	0.23	0.46	0.30	0.45	0.15

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 25 (17%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 ~ 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.

Splits and Phases: 6: Alton Road & Dade Boulevard



HCM 6th Signalized Intersection Summary
6: Alton Road & Dade Boulevard

22113 Existing PM
09/26/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations	↖	↕		↖	↕	↗	↖	↕			↘	↕
Traffic Volume (veh/h)	186	137	33	152	163	54	95	954	203	20	16	665
Future Volume (veh/h)	186	137	33	152	163	54	95	954	203	20	16	665
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		0	0
Ped-Bike Adj(A_pbT)	0.97		1.00	0.97		1.00	1.00		0.97		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
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1856	1900	1856	1885	1885	1767	1856	1856	1870		1900	1870
Adj Flow Rate, veh/h	188	138	0	154	165	0	96	964	205		16	672
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99		0.99	0.99
Percent Heavy Veh, %	3	0	3	1	1	9	3	3	2		0	2
Cap, veh/h	300	486		326	546		451	1745	370		29	2089
Arrive On Green	0.07	0.13	0.00	0.09	0.15	0.00	0.07	1.00	1.00		0.02	0.59
Sat Flow, veh/h	1767	3705	0	1795	3582	1497	1767	2877	611		1810	3554
Grp Volume(v), veh/h	188	138	0	154	165	0	96	590	579		16	672
Grp Sat Flow(s),veh/h/ln	1767	1805	0	1795	1791	1497	1767	1763	1725		1810	1777
Q Serve(g_s), s	10.3	5.2	0.0	11.0	6.1	0.0	3.3	0.0	0.0		1.3	14.4
Cycle Q Clear(g_c), s	10.3	5.2	0.0	11.0	6.1	0.0	3.3	0.0	0.0		1.3	14.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.35		1.00	
Lane Grp Cap(c), veh/h	300	486		326	546		451	1069	1046		29	2089
V/C Ratio(X)	0.63	0.28		0.47	0.30		0.21	0.55	0.55		0.55	0.32
Avail Cap(c_a), veh/h	300	746		342	836		522	1069	1046		136	2089
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00		1.00	1.00
Upstream Filter(I)	0.98	0.98	0.00	1.00	1.00	0.00	0.88	0.88	0.88		1.00	1.00
Uniform Delay (d), s/veh	54.5	58.4	0.0	49.9	56.5	0.0	11.7	0.0	0.0		73.2	15.7
Incr Delay (d2), s/veh	3.0	0.2	0.0	0.4	0.2	0.0	0.1	1.8	1.9		5.7	0.4
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
%ile BackOfQ(95%),veh/ln	3.4	4.3	0.0	8.7	5.1	0.0	2.3	1.0	1.0		1.2	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.5	58.6	0.0	50.3	56.7	0.0	11.7	1.8	1.9		79.0	16.1
LnGrp LOS	E	E		D	E		B	A	A		E	B
Approach Vol, veh/h		326			319			1265				785
Approach Delay, s/veh		58.0			53.6			2.6				16.6
Approach LOS		E			D			A				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	94.2	16.0	28.9	8.1	97.0	18.7	26.2				
Change Period (Y+Rc), s	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0				
Max Green Setting (Gmax), s	* 11	70.0	* 10	35.0	* 11	70.0	* 14	31.0				
Max Q Clear Time (g_c+I1), s	5.3	16.4	12.3	8.1	3.3	2.0	13.0	7.2				
Green Ext Time (p_c), s	0.0	1.9	0.0	0.8	0.0	3.1	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	96
Future Volume (veh/h)	96
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	0.97
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	97
Peak Hour Factor	0.99
Percent Heavy Veh, %	0
Cap, veh/h	1029
Arrive On Green	0.59
Sat Flow, veh/h	1564
Grp Volume(v), veh/h	97
Grp Sat Flow(s),veh/h/ln	1564
Q Serve(g_s), s	3.4
Cycle Q Clear(g_c), s	3.4
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	1029
V/C Ratio(X)	0.09
Avail Cap(c_a), veh/h	1029
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	9.4
Incr Delay (d2), s/veh	0.2
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(95%),veh/ln	2.2
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	9.6
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings
6: Alton Road & Dade Boulevard

22113 Existing PM
09/26/2022

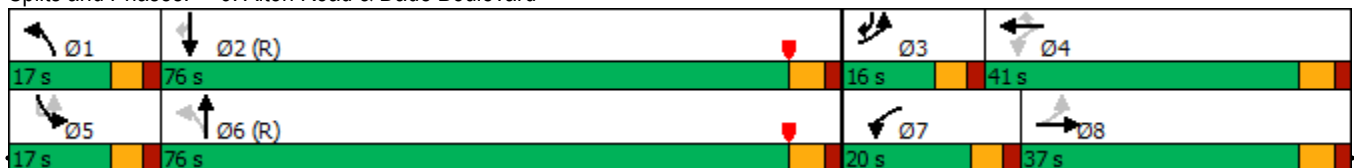


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBU	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	186	137	152	163	54	95	954	20	16	665	96
Future Volume (vph)	186	137	152	163	54	95	954	20	16	665	96
Lane Group Flow (vph)	188	171	154	165	55	96	1169	0	36	672	97
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	custom	Prot	NA	pm+ov
Protected Phases	3	8	7	4		1	6		5	2	3
Permitted Phases	8		4		4	6		5			2
Detector Phase	3	8	7	4	4	1	6	5	5	2	3
Switch Phase											
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	5.0	4.0	5.0	5.0	4.0	5.0
Minimum Split (s)	10.7	37.0	10.7	37.0	37.0	10.7	29.0	10.7	10.7	29.0	10.7
Total Split (s)	16.0	37.0	20.0	41.0	41.0	17.0	76.0	17.0	17.0	76.0	16.0
Total Split (%)	10.7%	24.7%	13.3%	27.3%	27.3%	11.3%	50.7%	11.3%	11.3%	50.7%	10.7%
Yellow Time (s)	3.7	4.0	3.7	4.0	4.0	3.7	4.0	3.7	3.7	4.0	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.7	6.0	5.7	6.0	6.0	5.7	6.0		5.7	6.0	5.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max	None
v/c Ratio	0.88	0.60	0.64	0.47	0.24	0.19	0.58		0.68	0.30	0.09
Control Delay	92.8	68.3	63.5	67.8	2.4	4.9	16.9		117.7	13.6	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1		0.0	0.0	0.0
Total Delay	92.8	68.3	63.5	67.8	2.4	4.9	17.0		117.7	13.6	2.9
Queue Length 50th (ft)	164	77	131	81	0	19	490		35	152	8
Queue Length 95th (ft)	#271	116	198	118	0	m23	614		75	208	28
Internal Link Dist (ft)		383		448			373			394	
Turn Bay Length (ft)	145		185		75				220		45
Base Capacity (vph)	213	729	254	833	411	547	2028		56	2231	1099
Starvation Cap Reductn	0	0	0	0	0	0	118		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	0.88	0.23	0.61	0.20	0.13	0.18	0.61		0.64	0.30	0.09

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 24 (16%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 # 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.





















Splits and Phases: 6: Alton Road & Dade Boulevard



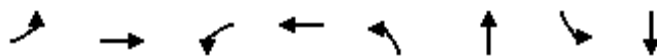
Future without Project Conditions

HCM 6th Signalized Intersection Summary
1: West Avenue & Lincoln Road

22113 Future without Project AM
09/27/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	21	19	14	21	32	13	265	18	13	220	49
Future Volume (veh/h)	82	21	19	14	21	32	13	265	18	13	220	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.90		0.81	0.89		0.80	0.98		0.97	0.99		0.95
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	1841	1826	1826	1900	1826	1856	1900	1856	1737	1678	1811	1811
Adj Flow Rate, veh/h	91	23	21	16	23	36	14	294	20	14	244	54
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	5	5	0	5	3	0	3	11	15	6	6
Cap, veh/h	263	128	117	70	89	110	851	1246	85	702	1033	229
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.73	0.73	0.73	1.00	1.00	1.00
Sat Flow, veh/h	1184	784	716	185	545	673	1080	1714	117	949	1421	315
Grp Volume(v), veh/h	91	0	44	75	0	0	14	0	314	14	0	298
Grp Sat Flow(s),veh/h/ln	1184	0	1499	1403	0	0	1080	0	1831	949	0	1736
Q Serve(g_s), s	2.4	0.0	2.8	0.0	0.0	0.0	0.4	0.0	6.2	0.1	0.0	0.0
Cycle Q Clear(g_c), s	7.3	0.0	2.8	4.9	0.0	0.0	0.4	0.0	6.2	6.3	0.0	0.0
Prop In Lane	1.00		0.48	0.21		0.48	1.00		0.06	1.00		0.18
Lane Grp Cap(c), veh/h	263	0	246	270	0	0	851	0	1331	702	0	1262
V/C Ratio(X)	0.35	0.00	0.18	0.28	0.00	0.00	0.02	0.00	0.24	0.02	0.00	0.24
Avail Cap(c_a), veh/h	338	0	341	356	0	0	851	0	1331	702	0	1262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	41.5	0.0	39.6	40.5	0.0	0.0	4.2	0.0	4.9	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.3	0.4	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.4
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	4.1	0.0	1.9	3.3	0.0	0.0	0.2	0.0	4.2	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	0.0	39.9	40.9	0.0	0.0	4.2	0.0	5.4	0.3	0.0	0.4
LnGrp LOS	D	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		135			75			328				312
Approach Delay, s/veh		41.3			40.9			5.3				0.4
Approach LOS		D			D			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.0		24.0		86.0		24.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		73.0		25.0		73.0		25.0				
Max Q Clear Time (g_c+I1), s		8.3		6.9		8.2		9.3				
Green Ext Time (p_c), s		0.7		0.3		0.8		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				12.4								
HCM 6th LOS				B								

Timings
1: West Avenue & Lincoln Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↗		↕	↘	↗	↘	↗
Traffic Volume (vph)	82	21	14	21	13	265	13	220
Future Volume (vph)	82	21	14	21	13	265	13	220
Lane Group Flow (vph)	91	44	0	75	14	314	14	298
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	4.0	4.0	4.0
Minimum Split (s)	27.0	27.0	27.0	27.0	35.0	35.0	35.0	35.0
Total Split (s)	31.0	31.0	31.0	31.0	79.0	79.0	79.0	79.0
Total Split (%)	28.2%	28.2%	28.2%	28.2%	71.8%	71.8%	71.8%	71.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.63	0.24		0.41	0.02	0.21	0.02	0.21
Control Delay	64.4	29.1		31.9	3.8	3.9	3.7	3.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	29.1		31.9	3.8	3.9	3.7	3.0
Queue Length 50th (ft)	62	15		26	2	48	1	18
Queue Length 95th (ft)	111	46		67	8	96	m7	73
Internal Link Dist (ft)		255		332		285		530
Turn Bay Length (ft)	50				170		185	
Base Capacity (vph)	283	333		321	850	1468	750	1393
Starvation Cap Reductn	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0
Reduced v/c Ratio	0.32	0.13		0.23	0.02	0.21	0.02	0.21

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 61 (55%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: West Avenue & Lincoln Road



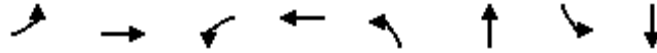
HCM 6th Signalized Intersection Summary
1: West Avenue & Lincoln Road

22113 Future without Project PM
09/27/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	47	26	20	24	60	22	285	29	24	253	49
Future Volume (veh/h)	54	47	26	20	24	60	22	285	29	24	253	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.89		0.79	0.87		0.77	0.98		0.97	0.99		0.94
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	1900	1841	1841	1900	1841	1870	1900	1885	1796	1900	1870	1900
Adj Flow Rate, veh/h	64	55	31	24	28	71	26	335	34	28	298	58
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	4	0	4	2	0	1	7	0	2	0
Cap, veh/h	242	177	99	67	72	136	793	1198	122	721	1073	209
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.71	0.71	0.71	1.00	1.00	1.00
Sat Flow, veh/h	1169	998	562	157	405	767	1019	1677	170	1020	1503	293
Grp Volume(v), veh/h	64	0	86	123	0	0	26	0	369	28	0	356
Grp Sat Flow(s),veh/h/ln	1169	0	1560	1329	0	0	1019	0	1848	1020	0	1796
Q Serve(g_s), s	0.0	0.0	5.3	1.6	0.0	0.0	0.8	0.0	7.9	0.3	0.0	0.0
Cycle Q Clear(g_c), s	7.9	0.0	5.3	8.8	0.0	0.0	0.8	0.0	7.9	8.2	0.0	0.0
Prop In Lane	1.00		0.36	0.20		0.58	1.00		0.09	1.00		0.16
Lane Grp Cap(c), veh/h	242	0	276	274	0	0	793	0	1319	721	0	1282
V/C Ratio(X)	0.26	0.00	0.31	0.45	0.00	0.00	0.03	0.00	0.28	0.04	0.00	0.28
Avail Cap(c_a), veh/h	301	0	355	339	0	0	793	0	1319	721	0	1282
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.95	0.00	0.95
Uniform Delay (d), s/veh	40.5	0.0	39.4	40.8	0.0	0.0	4.6	0.0	5.6	0.4	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.5	0.9	0.0	0.0	0.1	0.0	0.5	0.1	0.0	0.5
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	2.8	0.0	3.7	5.5	0.0	0.0	0.3	0.0	5.4	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	0.0	39.9	41.7	0.0	0.0	4.7	0.0	6.2	0.5	0.0	0.5
LnGrp LOS	D	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		150			123			395				384
Approach Delay, s/veh		40.3			41.7			6.1				0.5
Approach LOS		D			D			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.5		25.5		84.5		25.5				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		73.0		25.0		73.0		25.0				
Max Q Clear Time (g_c+I1), s		10.2		10.8		9.9		9.9				
Green Ext Time (p_c), s		0.8		0.5		0.9		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				13.1								
HCM 6th LOS				B								

Timings
1: West Avenue & Lincoln Road

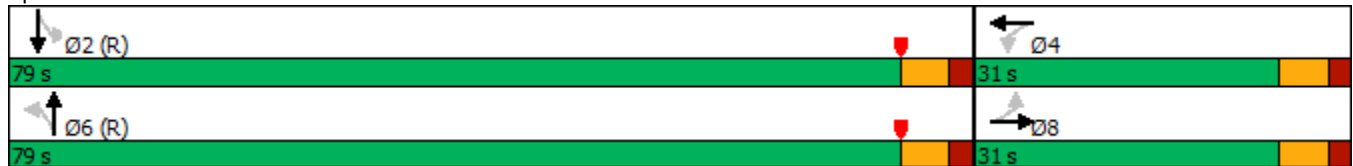


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↗		↕	↘	↗	↘	↗
Traffic Volume (vph)	54	47	20	24	22	285	24	253
Future Volume (vph)	54	47	20	24	22	285	24	253
Lane Group Flow (vph)	64	86	0	123	26	369	28	356
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	4.0	4.0	4.0
Minimum Split (s)	27.0	27.0	27.0	27.0	35.0	35.0	35.0	35.0
Total Split (s)	31.0	31.0	31.0	31.0	79.0	79.0	79.0	79.0
Total Split (%)	28.2%	28.2%	28.2%	28.2%	71.8%	71.8%	71.8%	71.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.65	0.48		0.68	0.03	0.26	0.04	0.25
Control Delay	75.4	41.4		43.4	3.6	4.1	4.8	5.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	75.4	41.4		43.4	3.6	4.1	4.8	5.2
Queue Length 50th (ft)	44	42		44	3	54	5	68
Queue Length 95th (ft)	81	80		93	11	104	15	109
Internal Link Dist (ft)		260		332		285		530
Turn Bay Length (ft)	50				170		185	
Base Capacity (vph)	206	349		318	770	1437	780	1404
Starvation Cap Reductn	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0
Reduced v/c Ratio	0.31	0.25		0.39	0.03	0.26	0.04	0.25

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 32 (29%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 1: West Avenue & Lincoln Road



HCM 6th Signalized Intersection Summary
2: West Avenue & 17th Street

22113 Future without Project AM
09/27/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	0	92	104	47	50	17	80	244	59	15	148	0
Future Volume (veh/h)	0	92	104	47	50	17	80	244	59	15	148	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	0.98		0.93	0.99		0.95	0.97		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	0	1767	1811	1707	1811	1900	1826	1870	1767	1604	1841	0
Adj Flow Rate, veh/h	0	106	120	54	57	20	92	280	68	17	170	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	9	6	13	6	0	5	2	9	20	4	0
Cap, veh/h	0	698	576	496	636	223	376	546	133	301	503	0
Arrive On Green	0.00	0.42	0.42	0.04	0.51	0.51	0.10	0.76	0.76	0.09	0.09	0.00
Sat Flow, veh/h	0	1767	1385	1626	1254	440	1739	1438	349	863	1841	0
Grp Volume(v), veh/h	0	106	120	54	0	77	92	0	348	17	170	0
Grp Sat Flow(s),veh/h/ln	0	1678	1385	1626	0	1693	1739	0	1787	863	1841	0
Q Serve(g_s), s	0.0	4.3	6.1	2.0	0.0	2.6	4.0	0.0	8.4	2.0	9.5	0.0
Cycle Q Clear(g_c), s	0.0	4.3	6.1	2.0	0.0	2.6	4.0	0.0	8.4	2.0	9.5	0.0
Prop In Lane	0.00		1.00	1.00		0.26	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	0	698	576	496	0	859	376	0	679	301	503	0
V/C Ratio(X)	0.00	0.15	0.21	0.11	0.00	0.09	0.24	0.00	0.51	0.06	0.34	0.00
Avail Cap(c_a), veh/h	0	698	576	569	0	859	475	0	679	301	503	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.92	0.00	0.92	0.96	0.00	0.96	0.96	0.96	0.00
Uniform Delay (d), s/veh	0.0	20.0	20.5	16.2	0.0	14.0	24.3	0.0	9.2	37.3	40.7	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.8	0.0	0.0	0.2	0.1	0.0	2.6	0.3	1.7	0.0
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	0.0	3.2	3.8	1.3	0.0	1.8	2.8	0.0	5.1	0.8	8.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.5	21.4	16.3	0.0	14.2	24.4	0.0	11.8	37.6	42.4	0.0
LnGrp LOS	A	C	C	B	A	B	C	A	B	D	D	A
Approach Vol, veh/h		226			131			440				187
Approach Delay, s/veh		20.9			15.0			14.5				42.0
Approach LOS		C			B			B				D
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		62.0		48.0	10.0	52.0	11.7	36.3				
Change Period (Y+Rc), s		* 6.2		* 6.2	6.0	* 6.2	6.0	* 6.2				
Max Green Setting (Gmax), s		* 56		* 42	9.0	* 41	12.0	* 24				
Max Q Clear Time (g_c+I1), s		4.6		10.4	4.0	8.1	6.0	11.5				
Green Ext Time (p_c), s		0.4		1.9	0.0	1.3	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
2: West Avenue & 17th Street

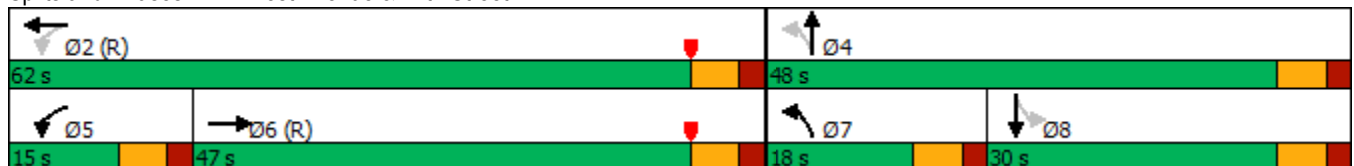


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↑↑	↵	↻	↵	↻	↵	↑
Traffic Volume (vph)	92	47	50	80	244	15	148
Future Volume (vph)	92	47	50	80	244	15	148
Lane Group Flow (vph)	226	54	77	92	348	17	170
Turn Type	NA	pm+pt	NA	pm+pt	NA	Perm	NA
Protected Phases	6	5	2	7	4		8
Permitted Phases		2		4		8	
Detector Phase	6	5	2	7	4	8	8
Switch Phase							
Minimum Initial (s)	12.0	5.0	12.0	5.0	7.0	7.0	7.0
Minimum Split (s)	34.2	11.0	34.2	11.0	30.2	29.2	29.2
Total Split (s)	47.0	15.0	62.0	18.0	48.0	30.0	30.0
Total Split (%)	42.7%	13.6%	56.4%	16.4%	43.6%	27.3%	27.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.2	2.0	2.2	2.0	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.0	6.2	6.0	6.2	6.2	6.2
Lead/Lag	Lag	Lead		Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes
Recall Mode	C-Max	None	C-Max	None	Max	Max	Max
v/c Ratio	0.18	0.11	0.10	0.24	0.52	0.07	0.34
Control Delay	10.7	14.4	11.0	19.5	25.4	25.5	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Total Delay	10.7	14.4	11.0	19.5	25.4	25.5	29.0
Queue Length 50th (ft)	24	19	20	42	202	5	61
Queue Length 95th (ft)	48	38	43	70	217	m16	136
Internal Link Dist (ft)	215		326		530		135
Turn Bay Length (ft)		130		175			
Base Capacity (vph)	1278	495	798	420	674	234	493
Starvation Cap Reductn	0	0	0	0	0	0	174
Spillback Cap Reductn	0	0	0	0	1	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.11	0.10	0.22	0.52	0.07	0.53

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 87 (79%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: West Avenue & 17th Street



HCM 6th Signalized Intersection Summary
2: West Avenue & 17th Street

22113 Future without Project PM
09/27/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	0	106	101	66	110	52	97	215	118	30	186	0
Future Volume (veh/h)	0	106	101	66	110	52	97	215	118	30	186	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	0.98		0.93	0.98		0.96	0.98		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	0	1885	1870	1856	1900	1870	1870	1885	1900	1796	1885	0
Adj Flow Rate, veh/h	0	115	110	72	120	57	105	234	128	33	202	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	2	3	0	2	2	1	0	7	1	0
Cap, veh/h	0	738	608	545	602	286	405	428	234	322	506	0
Arrive On Green	0.00	0.41	0.41	0.04	0.51	0.51	0.11	0.76	0.76	0.54	0.54	0.00
Sat Flow, veh/h	0	1885	1473	1767	1186	563	1781	1126	616	957	1885	0
Grp Volume(v), veh/h	0	115	110	72	0	177	105	0	362	33	202	0
Grp Sat Flow(s),veh/h/ln	0	1791	1473	1767	0	1749	1781	0	1743	957	1885	0
Q Serve(g_s), s	0.0	4.4	5.2	2.5	0.0	6.1	4.5	0.0	9.4	1.9	7.0	0.0
Cycle Q Clear(g_c), s	0.0	4.4	5.2	2.5	0.0	6.1	4.5	0.0	9.4	1.9	7.0	0.0
Prop In Lane	0.00		1.00	1.00		0.32	1.00		0.35	1.00		0.00
Lane Grp Cap(c), veh/h	0	738	608	545	0	887	405	0	662	322	506	0
V/C Ratio(X)	0.00	0.16	0.18	0.13	0.00	0.20	0.26	0.00	0.55	0.10	0.40	0.00
Avail Cap(c_a), veh/h	0	738	608	618	0	887	449	0	662	322	506	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.85	0.00	0.85	0.96	0.00	0.96	0.94	0.94	0.00
Uniform Delay (d), s/veh	0.0	20.3	20.5	16.3	0.0	14.9	24.0	0.0	9.3	19.1	20.3	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.7	0.0	0.0	0.4	0.1	0.0	3.1	0.6	2.2	0.0
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	0.0	3.5	3.4	1.8	0.0	4.5	3.2	0.0	5.4	0.8	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.7	21.2	16.3	0.0	15.3	24.1	0.0	12.4	19.7	22.5	0.0
LnGrp LOS	A	C	C	B	A	B	C	A	B	B	C	A
Approach Vol, veh/h		225			249			467			235	
Approach Delay, s/veh		21.0			15.6			15.0			22.1	
Approach LOS		C			B			B			C	
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		62.0		48.0	10.4	51.6	12.3	35.7				
Change Period (Y+Rc), s		* 6.2		* 6.2	6.0	* 6.2	6.0	* 6.2				
Max Green Setting (Gmax), s		* 56		* 42	9.0	* 41	9.0	* 27				
Max Q Clear Time (g_c+I1), s		8.1		11.4	4.5	7.2	6.5	9.0				
Green Ext Time (p_c), s		1.0		2.0	0.0	1.2	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
2: West Avenue & 17th Street

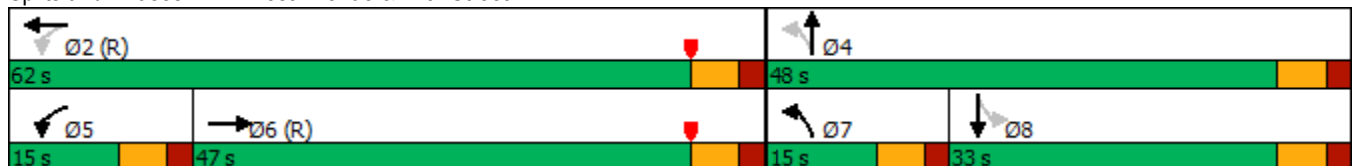


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↑↑	↵	↑	↵	↑	↵	↑
Traffic Volume (vph)	106	66	110	97	215	30	186
Future Volume (vph)	106	66	110	97	215	30	186
Lane Group Flow (vph)	225	72	177	105	362	33	202
Turn Type	NA	pm+pt	NA	pm+pt	NA	Perm	NA
Protected Phases	6	5	2	7	4		8
Permitted Phases		2		4		8	
Detector Phase	6	5	2	7	4	8	8
Switch Phase							
Minimum Initial (s)	12.0	5.0	12.0	5.0	7.0	7.0	7.0
Minimum Split (s)	34.2	11.0	34.2	11.0	30.2	29.2	29.2
Total Split (s)	47.0	15.0	62.0	15.0	48.0	33.0	33.0
Total Split (%)	42.7%	13.6%	56.4%	13.6%	43.6%	30.0%	30.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.2	2.0	2.2	2.0	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.0	6.2	6.0	6.2	6.2	6.2
Lead/Lag	Lag	Lead		Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes
Recall Mode	C-Max	None	C-Max	None	Max	Max	Max
v/c Ratio	0.17	0.14	0.22	0.28	0.54	0.14	0.42
Control Delay	11.6	14.5	13.0	23.0	29.7	26.0	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	2.8
Total Delay	11.6	14.5	13.0	23.0	29.8	26.0	32.1
Queue Length 50th (ft)	26	25	54	56	218	11	94
Queue Length 95th (ft)	54	50	96	87	316	m27	152
Internal Link Dist (ft)	215		326		530		135
Turn Bay Length (ft)		130		175			
Base Capacity (vph)	1348	547	815	380	669	241	476
Starvation Cap Reductn	0	0	0	0	0	0	176
Spillback Cap Reductn	0	0	0	0	13	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.13	0.22	0.28	0.55	0.14	0.67

Intersection Summary


























Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 75 (68%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: West Avenue & 17th Street



HCM Signalized Intersection Capacity Analysis
3: Alton Road & 17th Street

22113 Future without Project AM
09/27/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  			 	
Traffic Volume (vph)	37	118	62	98	44	63	42	707	238	190	793	41
Future Volume (vph)	37	118	62	98	44	63	42	707	238	190	793	41
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2	
Lane Util. Factor	0.91	0.91		0.95	0.95	1.00	1.00	0.91		1.00	0.95	
Frbp, ped/bikes	1.00	0.97		1.00	1.00	0.96	1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1480	2936		1603	1703	1373	1709	4675		1736	3238	
Flt Permitted	0.95	1.00		0.95	0.98	1.00	0.29	1.00		0.22	1.00	
Satd. Flow (perm)	1480	2936		1603	1703	1373	513	4675		398	3238	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	41	130	68	108	48	69	46	777	262	209	871	45
RTOR Reduction (vph)	0	41	0	0	0	0	0	25	0	0	1	0
Lane Group Flow (vph)	37	161	0	77	79	69	46	1014	0	209	915	0
Confl. Peds. (#/hr)	25		34	34		25	24		18	18		24
Confl. Bikes (#/hr)			1			8			11			10
Heavy Vehicles (%)	11%	8%	10%	7%	2%	13%	5%	5%	5%	4%	4%	13%
Parking (#/hr)												0
Turn Type	Split	NA		Split	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4	5	1	6		5	2	
Permitted Phases						4	6			2		
Actuated Green, G (s)	13.0	13.0		12.1	12.1	23.6	92.9	88.0		105.2	94.6	
Effective Green, g (s)	13.0	13.0		12.1	12.1	23.6	92.9	88.0		105.2	94.6	
Actuated g/C Ratio	0.09	0.09		0.08	0.08	0.16	0.62	0.59		0.70	0.63	
Clearance Time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.0	2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)	128	254		129	137	216	356	2742		381	2042	
v/s Ratio Prot	0.03	c0.05		c0.05	0.05	0.02	0.00	0.22		c0.04	0.28	
v/s Ratio Perm						0.03	0.08			c0.34		
v/c Ratio	0.29	0.63		0.60	0.58	0.32	0.13	0.37		0.55	0.45	
Uniform Delay, d1	64.2	66.2		66.6	66.5	56.1	11.4	16.4		9.1	14.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.88		1.19	0.83	
Incremental Delay, d2	0.9	4.5		6.1	4.7	0.3	0.1	0.4		0.8	0.6	
Delay (s)	65.1	70.7		72.7	71.2	56.4	11.4	14.8		11.6	12.5	
Level of Service	E	E		E	E	E	B	B		B	B	
Approach Delay (s)		69.8			67.2			14.6			12.3	
Approach LOS		E			E			B			B	
Intersection Summary												
HCM 2000 Control Delay			23.0	HCM 2000 Level of Service				C				
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			150.0	Sum of lost time (s)				25.4				
Intersection Capacity Utilization			77.9%	ICU Level of Service				D				
Analysis Period (min)			15									

c Critical Lane Group

Timings
3: Alton Road & 17th Street

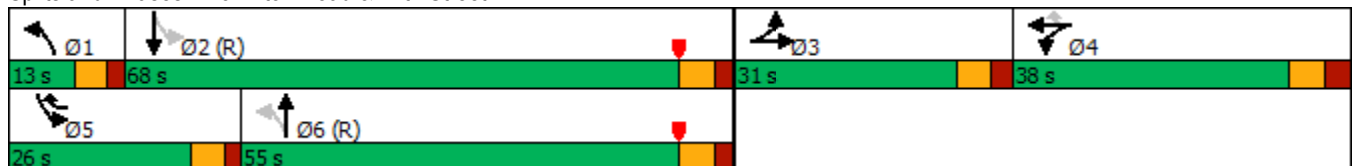


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	37	118	98	44	63	42	707	190	793
Future Volume (vph)	37	118	98	44	63	42	707	190	793
Lane Group Flow (vph)	37	202	77	79	69	46	1039	209	916
Turn Type	Split	NA	Split	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases	3	3	4	4	5	1	6	5	2
Permitted Phases					4	6		2	
Detector Phase	3	3	4	4	5	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	5.0	4.0	4.0	4.0
Minimum Split (s)	29.3	29.3	27.2	27.2	9.7	10.7	24.2	9.7	24.2
Total Split (s)	31.0	31.0	38.0	38.0	26.0	13.0	55.0	26.0	68.0
Total Split (%)	20.7%	20.7%	25.3%	25.3%	17.3%	8.7%	36.7%	17.3%	45.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.7	3.7	4.0	3.7	4.0
All-Red Time (s)	2.3	2.3	3.2	3.2	2.0	2.0	2.2	2.0	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	7.2	7.2	5.7	5.7	6.2	5.7	6.2
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
v/c Ratio	0.29	0.68	0.60	0.58	0.30	0.13	0.38	0.55	0.44
Control Delay	68.6	63.1	84.7	82.1	51.1	9.6	15.1	15.0	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	68.6	63.1	84.7	82.1	51.1	9.6	15.1	15.0	13.5
Queue Length 50th (ft)	38	82	77	80	57	10	183	42	313
Queue Length 95th (ft)	78	126	134	136	94	21	279	m57	419
Internal Link Dist (ft)		326		418			517		373
Turn Bay Length (ft)	115		220			155		305	
Base Capacity (vph)	243	521	329	349	313	382	2765	461	2069
Starvation Cap Reductn	0	0	0	0	0	0	0	0	356
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.39	0.23	0.23	0.22	0.12	0.38	0.45	0.53

Intersection Summary






















Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 39 (26%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Alton Road & 17th Street



HCM Signalized Intersection Capacity Analysis
3: Alton Road & 17th Street

22113 Future without Project PM
09/27/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	109	122	137	116	233	66	940	148	171	661	59
Future Volume (vph)	61	109	122	137	116	233	66	940	148	171	661	59
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2	
Lane Util. Factor	0.91	0.91		0.95	0.95	1.00	1.00	0.91		1.00	0.95	
Frbp, ped/bikes	1.00	0.92		1.00	1.00	0.94	1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.97	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1643	2883		1633	1755	1496	1720	4850		1752	3221	
Flt Permitted	0.95	1.00		0.95	0.99	1.00	0.36	1.00		0.19	1.00	
Satd. Flow (perm)	1643	2883		1633	1755	1496	654	4850		348	3221	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	63	112	126	141	120	240	68	969	153	176	681	61
RTOR Reduction (vph)	0	116	0	0	0	0	0	10	0	0	3	0
Lane Group Flow (vph)	57	128	0	127	134	240	68	1112	0	176	739	0
Confl. Peds. (#/hr)	39		66	66		39	55		32	32		55
Confl. Bikes (#/hr)			5			3			12			15
Heavy Vehicles (%)	0%	2%	2%	5%	2%	2%	2%	3%	5%	3%	3%	0%
Parking (#/hr)												0
Turn Type	Split	NA		Split	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4	5	1	6		5	2	
Permitted Phases						4	6			2		
Actuated Green, G (s)	11.5	11.5		16.6	16.6	30.4	88.3	82.7		102.2	90.9	
Effective Green, g (s)	11.5	11.5		16.6	16.6	30.4	88.3	82.7		102.2	90.9	
Actuated g/C Ratio	0.08	0.08		0.11	0.11	0.20	0.59	0.55		0.68	0.61	
Clearance Time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.0	2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)	125	221		180	194	303	424	2673		366	1951	
v/s Ratio Prot	0.03	c0.04		0.08	0.08	c0.07	0.01	0.23		0.04	0.23	
v/s Ratio Perm						0.09	0.09			c0.28		
v/c Ratio	0.46	0.58		0.71	0.69	0.79	0.16	0.42		0.48	0.38	
Uniform Delay, d1	66.3	66.9		64.3	64.2	56.8	13.2	19.6		10.5	15.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.90	1.05		1.53	0.74	
Incremental Delay, d2	1.9	3.0		11.1	9.4	12.4	0.1	0.5		0.3	0.5	
Delay (s)	68.2	69.9		75.4	73.6	69.2	12.0	21.1		16.5	11.7	
Level of Service	E	E		E	E	E	B	C		B	B	
Approach Delay (s)		69.6			71.9			20.6			12.6	
Approach LOS		E			E			C			B	
Intersection Summary												
HCM 2000 Control Delay			32.0									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			150.0							25.4		
Intersection Capacity Utilization			84.4%									ICU Level of Service E
Analysis Period (min)			15									

c Critical Lane Group

Timings
3: Alton Road & 17th Street

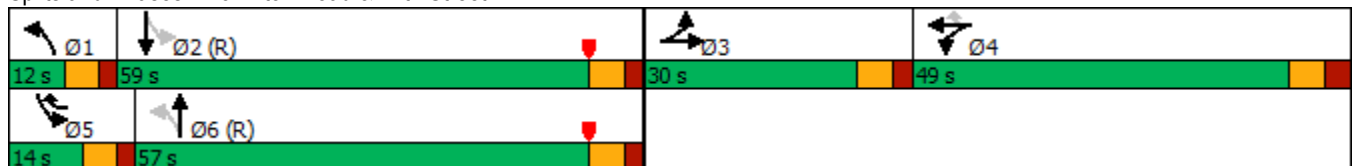


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	61	109	137	116	233	66	940	171	661
Future Volume (vph)	61	109	137	116	233	66	940	171	661
Lane Group Flow (vph)	57	244	127	134	240	68	1122	176	742
Turn Type	Split	NA	Split	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases	3	3	4	4	5	1	6	5	2
Permitted Phases					4	6		2	
Detector Phase	3	3	4	4	5	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	5.0	4.0	4.0	4.0
Minimum Split (s)	29.3	29.3	27.2	27.2	9.7	10.7	24.2	9.7	24.2
Total Split (s)	30.0	30.0	49.0	49.0	14.0	12.0	57.0	14.0	59.0
Total Split (%)	20.0%	20.0%	32.7%	32.7%	9.3%	8.0%	38.0%	9.3%	39.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.7	3.7	4.0	3.7	4.0
All-Red Time (s)	2.3	2.3	3.2	3.2	2.0	2.0	2.2	2.0	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	7.2	7.2	5.7	5.7	6.2	5.7	6.2
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
v/c Ratio	0.46	0.72	0.71	0.69	0.76	0.15	0.42	0.48	0.37
Control Delay	76.8	44.6	84.0	81.6	66.7	9.7	22.0	18.9	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Delay	76.8	44.6	84.0	81.6	66.7	9.7	22.1	18.9	12.8
Queue Length 50th (ft)	59	62	128	134	210	24	243	51	134
Queue Length 95th (ft)	109	110	196	204	282	53	338	108	158
Internal Link Dist (ft)		326		418			517		373
Turn Bay Length (ft)	115		220			155		305	
Base Capacity (vph)	259	563	455	489	317	455	2685	367	1979
Starvation Cap Reductn	0	0	0	0	0	0	0	0	481
Spillback Cap Reductn	0	0	0	0	0	0	420	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.43	0.28	0.27	0.76	0.15	0.50	0.48	0.50

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 11 (7%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated

Splits and Phases: 3: Alton Road & 17th Street



HCM Signalized Intersection Capacity Analysis
4: Alton Road & Lincoln Road

22113 Future without Project AM
09/27/2022



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	34	26	30	1004	3	878	54
Future Volume (vph)	34	26	30	1004	3	878	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1752	1298	1803	3471	1356	3230	
Flt Permitted	0.95	1.00	0.26	1.00	0.26	1.00	
Satd. Flow (perm)	1752	1298	497	3471	364	3230	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	28	33	1091	3	954	59
RTOR Reduction (vph)	0	27	0	0	0	1	0
Lane Group Flow (vph)	37	1	33	1091	3	1012	0
Confl. Peds. (#/hr)	56	37	36		56		36
Confl. Bikes (#/hr)		1					18
Heavy Vehicles (%)	3%	12%	0%	4%	33%	5%	4%
Parking (#/hr)		0				0	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	
Permitted Phases			6		2		
Actuated Green, G (s)	7.2	7.2	127.6	123.5	121.4	120.4	
Effective Green, g (s)	7.2	7.2	127.6	123.5	121.4	120.4	
Actuated g/C Ratio	0.05	0.05	0.85	0.82	0.81	0.80	
Clearance Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Vehicle Extension (s)	2.5	2.5	2.0	1.0	2.0	1.0	
Lane Grp Cap (vph)	84	62	458	2857	301	2592	
v/s Ratio Prot	c0.02	0.00	c0.00	c0.31	0.00	c0.31	
v/s Ratio Perm			0.06		0.01		
v/c Ratio	0.44	0.02	0.07	0.38	0.01	0.39	
Uniform Delay, d1	69.4	68.0	2.0	3.4	2.8	4.3	
Progression Factor	1.00	1.00	1.00	1.00	0.57	0.43	
Incremental Delay, d2	2.7	0.1	0.0	0.4	0.0	0.4	
Delay (s)	72.1	68.1	2.0	3.8	1.6	2.3	
Level of Service	E	E	A	A	A	A	
Approach Delay (s)	70.4			3.8		2.3	
Approach LOS	E			A		A	

Intersection Summary

HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.3
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Alton Road & Lincoln Road

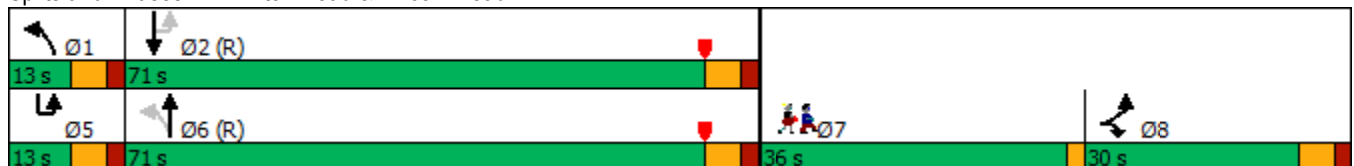


Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	34	26	30	1004	3	878	
Future Volume (vph)	34	26	30	1004	3	878	
Lane Group Flow (vph)	37	28	33	1091	3	1013	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	7
Permitted Phases			6		2		
Detector Phase	8	8	1	6	5	2	
Switch Phase							
Minimum Initial (s)	7.0	7.0	5.0	7.0	5.0	7.0	1.0
Minimum Split (s)	24.0	24.0	11.0	24.3	11.0	24.3	36.0
Total Split (s)	30.0	30.0	13.0	71.0	13.0	71.0	36.0
Total Split (%)	20.0%	20.0%	8.7%	47.3%	8.7%	47.3%	24%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.3	2.0	2.3	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max	None
v/c Ratio	0.37	0.28	0.07	0.36	0.01	0.38	
Control Delay	78.2	28.3	1.9	3.1	1.0	2.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	78.2	28.3	1.9	3.1	1.0	2.4	
Queue Length 50th (ft)	36	0	3	84	0	86	
Queue Length 95th (ft)	74	34	9	196	m0	77	
Internal Link Dist (ft)	332			240		517	
Turn Bay Length (ft)			115		145		
Base Capacity (vph)	280	231	493	3026	357	2668	
Starvation Cap Reductn	0	0	0	0	0	253	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.13	0.12	0.07	0.36	0.01	0.42	

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 55 (37%), Referenced to phase 2:SBTU and 6:NBTL, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Alton Road & Lincoln Road



HCM Signalized Intersection Capacity Analysis
4: Alton Road & Lincoln Road

22113 Future without Project PM
09/27/2022



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	65	29	38	1084	5	829	73
Future Volume (vph)	65	29	38	1084	5	829	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1454	1748	3505	1802	3277	
Flt Permitted	0.95	1.00	0.28	1.00	0.25	1.00	
Satd. Flow (perm)	1719	1454	524	3505	465	3277	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	67	30	39	1118	5	855	75
RTOR Reduction (vph)	0	28	0	0	0	2	0
Lane Group Flow (vph)	67	2	39	1118	5	928	0
Confl. Peds. (#/hr)	109	66	63		109		63
Confl. Bikes (#/hr)		5					13
Heavy Vehicles (%)	5%	0%	3%	3%	0%	3%	1%
Parking (#/hr)		0				0	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	
Permitted Phases			6		2		
Actuated Green, G (s)	9.4	9.4	125.5	121.3	119.1	118.1	
Effective Green, g (s)	9.4	9.4	125.5	121.3	119.1	118.1	
Actuated g/C Ratio	0.06	0.06	0.84	0.81	0.79	0.79	
Clearance Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Vehicle Extension (s)	2.5	2.5	2.0	1.0	2.0	1.0	
Lane Grp Cap (vph)	107	91	472	2834	378	2580	
v/s Ratio Prot	c0.04	0.00	c0.00	c0.32	0.00	0.28	
v/s Ratio Perm			0.07		0.01		
v/c Ratio	0.63	0.02	0.08	0.39	0.01	0.36	
Uniform Delay, d1	68.6	66.0	2.3	4.0	3.3	4.7	
Progression Factor	1.00	1.00	1.00	1.00	0.61	0.53	
Incremental Delay, d2	9.5	0.1	0.0	0.4	0.0	0.4	
Delay (s)	78.1	66.0	2.4	4.4	2.0	2.9	
Level of Service	E	E	A	A	A	A	
Approach Delay (s)	74.4			4.4		2.9	
Approach LOS	E			A		A	

Intersection Summary

HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.3
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Alton Road & Lincoln Road



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	65	29	38	1084	5	829	
Future Volume (vph)	65	29	38	1084	5	829	
Lane Group Flow (vph)	67	30	39	1118	5	930	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	7
Permitted Phases			6		2		
Detector Phase	8	8	1	6	5	2	
Switch Phase							
Minimum Initial (s)	7.0	7.0	5.0	7.0	5.0	7.0	1.0
Minimum Split (s)	13.0	13.0	11.0	24.3	11.0	24.3	36.0
Total Split (s)	22.0	22.0	17.0	75.0	17.0	75.0	36.0
Total Split (%)	14.7%	14.7%	11.3%	50.0%	11.3%	50.0%	24%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.3	2.0	2.3	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max	None
v/c Ratio	0.54	0.23	0.08	0.37	0.01	0.35	
Control Delay	82.4	23.4	2.5	3.8	1.4	3.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	
Total Delay	82.4	23.4	2.5	3.8	1.4	3.2	
Queue Length 50th (ft)	65	0	5	102	0	64	
Queue Length 95th (ft)	116	34	12	229	m1	94	
Internal Link Dist (ft)	332			240		517	
Turn Bay Length (ft)			115		145		
Base Capacity (vph)	183	181	538	3003	496	2654	
Starvation Cap Reductn	0	0	0	0	0	635	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.17	0.07	0.37	0.01	0.46	

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 145 (97%), Referenced to phase 2:SBTU and 6:NBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Alton Road & Lincoln Road



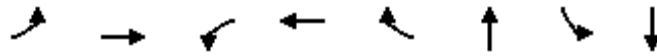
HCM 6th Signalized Intersection Summary
5: West Avenue & Dade Boulevard

22113 Future without Project AM
09/27/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	197	0	61	261	86	0	112	149	36	100	4
Future Volume (veh/h)	17	197	0	61	261	86	0	112	149	36	100	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.96	1.00		0.96	0.99		0.91
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	1900	1870	0	1856	1826	1811	0	1900	1856	1693	1796	1159
Adj Flow Rate, veh/h	19	219	0	68	290	96	0	124	166	40	111	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	0	3	5	6	0	0	3	14	7	50
Cap, veh/h	489	864	0	584	880	707	0	218	291	102	260	9
Arrive On Green	0.02	0.46	0.00	0.04	0.48	0.48	0.00	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1810	1870	0	1767	1826	1467	0	717	960	201	855	28
Grp Volume(v), veh/h	19	219	0	68	290	96	0	0	290	155	0	0
Grp Sat Flow(s),veh/h/ln	1810	1870	0	1767	1826	1467	0	0	1677	1085	0	0
Q Serve(g_s), s	0.6	7.8	0.0	2.2	10.8	4.0	0.0	0.0	16.0	3.1	0.0	0.0
Cycle Q Clear(g_c), s	0.6	7.8	0.0	2.2	10.8	4.0	0.0	0.0	16.0	19.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.57	0.26		0.03
Lane Grp Cap(c), veh/h	489	864	0	584	880	707	0	0	509	371	0	0
V/C Ratio(X)	0.04	0.25	0.00	0.12	0.33	0.14	0.00	0.00	0.57	0.42	0.00	0.00
Avail Cap(c_a), veh/h	561	864	0	620	880	707	0	0	509	371	0	0
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	0.00	0.96	0.96	0.96	0.00	0.00	0.85	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.3	18.0	0.0	14.5	17.6	15.8	0.0	0.0	32.2	31.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.1	1.0	0.4	0.0	0.0	3.9	3.4	0.0	0.0
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	0.5	6.3	0.0	1.6	8.2	2.5	0.0	0.0	11.0	7.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	18.7	0.0	14.6	18.5	16.2	0.0	0.0	36.1	35.0	0.0	0.0
LnGrp LOS	B	B	A	B	B	B	A	A	D	C	A	A
Approach Vol, veh/h		238			454			290				155
Approach Delay, s/veh		18.5			17.4			36.1				35.0
Approach LOS		B			B			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	60.4		40.0	11.8	58.2		40.0				
Change Period (Y+Rc), s	7.4	7.4		6.6	7.4	7.4		6.6				
Max Green Setting (Gmax), s	6.6	48.6		33.4	6.6	48.6		33.4				
Max Q Clear Time (g_c+I1), s	2.6	12.8		18.0	4.2	9.8		21.1				
Green Ext Time (p_c), s	0.0	0.7		1.3	0.0	0.4		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				24.8								
HCM 6th LOS				C								

Timings
5: West Avenue & Dade Boulevard



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Configurations	↖	↑	↖	↑	↖	↗		↕
Traffic Volume (vph)	17	197	61	261	86	112	36	100
Future Volume (vph)	17	197	61	261	86	112	36	100
Lane Group Flow (vph)	19	219	68	290	96	290	0	155
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	1	6	5	2		4		8
Permitted Phases	6		2		2		8	
Detector Phase	1	6	5	2	2	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.4	34.4	12.4	34.4	34.4	38.6	38.6	38.6
Total Split (s)	14.0	56.0	14.0	56.0	56.0	40.0	40.0	40.0
Total Split (%)	12.7%	50.9%	12.7%	50.9%	50.9%	36.4%	36.4%	36.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.4	3.4	3.4	3.4	3.4	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	7.4	7.4	7.4	7.4	7.4	6.6		6.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max
v/c Ratio	0.03	0.25	0.11	0.31	0.12	0.52		0.41
Control Delay	10.8	19.7	11.3	17.8	3.1	4.8		34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5		0.1
Total Delay	10.8	19.7	11.3	17.8	3.1	5.3		34.6
Queue Length 50th (ft)	6	95	20	99	0	0		86
Queue Length 95th (ft)	16	150	41	201	24	0		149
Internal Link Dist (ft)		226		383		135		167
Turn Bay Length (ft)	135		120					
Base Capacity (vph)	595	870	616	938	796	554		374
Starvation Cap Reductn	0	0	0	0	0	66		0
Spillback Cap Reductn	0	0	0	0	0	0		14
Storage Cap Reductn	0	0	0	0	0	0		0
Reduced v/c Ratio	0.03	0.25	0.11	0.31	0.12	0.59		0.43

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 93 (85%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 5: West Avenue & Dade Boulevard



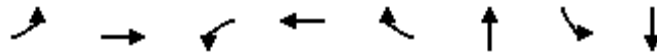
HCM 6th Signalized Intersection Summary
5: West Avenue & Dade Boulevard

22113 Future without Project PM
09/27/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	208	0	82	228	94	0	154	111	39	132	17
Future Volume (veh/h)	33	208	0	82	228	94	0	154	111	39	132	17
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		0.96	1.00		0.95	0.98		0.91
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	0	1885	1885	1841	0	1870	1885	1826	1870	1707
Adj Flow Rate, veh/h	35	221	0	87	243	100	0	164	118	41	140	18
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	0	1	1	4	0	2	1	5	2	13
Cap, veh/h	512	836	0	580	873	694	0	309	223	97	311	37
Arrive On Green	0.03	0.45	0.00	0.04	0.46	0.46	0.00	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	1856	0	1795	1885	1500	0	989	712	184	993	117
Grp Volume(v), veh/h	35	221	0	87	243	100	0	0	282	199	0	0
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1795	1885	1500	0	0	1701	1295	0	0
Q Serve(g_s), s	1.2	8.2	0.0	2.8	8.7	4.2	0.0	0.0	15.0	3.1	0.0	0.0
Cycle Q Clear(g_c), s	1.2	8.2	0.0	2.8	8.7	4.2	0.0	0.0	15.0	18.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.42	0.21		0.09
Lane Grp Cap(c), veh/h	512	836	0	580	873	694	0	0	532	444	0	0
V/C Ratio(X)	0.07	0.26	0.00	0.15	0.28	0.14	0.00	0.00	0.53	0.45	0.00	0.00
Avail Cap(c_a), veh/h	565	836	0	612	873	694	0	0	532	444	0	0
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	0.00	0.96	0.96	0.96	0.00	0.00	0.82	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.4	18.9	0.0	15.2	18.2	17.0	0.0	0.0	31.1	30.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.1	0.8	0.4	0.0	0.0	3.1	3.2	0.0	0.0
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	0.9	6.6	0.0	2.1	7.1	2.8	0.0	0.0	10.4	8.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	19.6	0.0	15.3	19.0	17.4	0.0	0.0	34.2	33.8	0.0	0.0
LnGrp LOS	B	B	A	B	B	B	A	A	C	C	A	A
Approach Vol, veh/h		256			430			282				199
Approach Delay, s/veh		19.1			17.9			34.2				33.8
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	58.3		41.0	12.0	57.0		41.0				
Change Period (Y+Rc), s	7.4	7.4		6.6	7.4	7.4		6.6				
Max Green Setting (Gmax), s	6.6	47.6		34.4	6.6	47.6		34.4				
Max Q Clear Time (g_c+I1), s	3.2	10.7		17.0	4.8	10.2		20.1				
Green Ext Time (p_c), s	0.0	0.5		1.3	0.0	0.4		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				24.8								
HCM 6th LOS				C								

Timings
5: West Avenue & Dade Boulevard

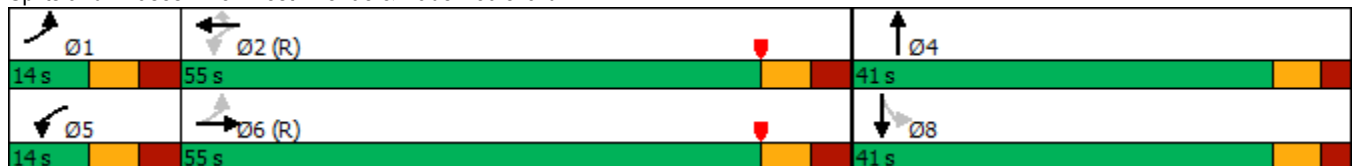


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	33	208	82	228	94	154	39	132
Future Volume (vph)	33	208	82	228	94	154	39	132
Lane Group Flow (vph)	35	221	87	243	100	282	0	199
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	1	6	5	2		4		8
Permitted Phases	6		2		2		8	
Detector Phase	1	6	5	2	2	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.4	34.4	12.4	34.4	34.4	38.6	38.6	38.6
Total Split (s)	14.0	55.0	14.0	55.0	55.0	41.0	41.0	41.0
Total Split (%)	12.7%	50.0%	12.7%	50.0%	50.0%	37.3%	37.3%	37.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.4	3.4	3.4	3.4	3.4	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	7.4	7.4	7.4	7.4	7.4	6.6		6.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max
v/c Ratio	0.06	0.26	0.14	0.27	0.13	0.50		0.46
Control Delay	11.5	20.4	12.1	19.3	3.5	11.8		33.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.4		0.3
Total Delay	11.5	20.4	12.1	19.3	3.5	13.3		34.1
Queue Length 50th (ft)	11	98	27	109	0	31		110
Queue Length 95th (ft)	25	155	51	169	27	50		182
Internal Link Dist (ft)		226		383		135		167
Turn Bay Length (ft)	135		120					
Base Capacity (vph)	593	845	616	909	774	564		429
Starvation Cap Reductn	0	0	0	0	0	136		0
Spillback Cap Reductn	0	0	0	0	0	0		30
Storage Cap Reductn	0	0	0	0	0	0		0
Reduced v/c Ratio	0.06	0.26	0.14	0.27	0.13	0.66		0.50

Intersection Summary

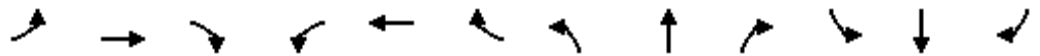
Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 80 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 5: West Avenue & Dade Boulevard



HCM 6th Signalized Intersection Summary
6: Alton Road & Dade Boulevard

22113 Future without Project AM
09/27/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗		↖	↗	↗
Traffic Volume (veh/h)	215	146	19	178	151	30	112	508	200	39	836	143
Future Volume (veh/h)	215	146	19	178	151	30	112	508	200	39	836	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		1.00	0.98		1.00	1.00		0.97	1.00		0.97
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	1885	1841	1515	1856	1841	1737	1767	1811	1856	1841	1841	1826
Adj Flow Rate, veh/h	239	162	0	198	168	0	124	564	222	43	929	159
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	1	4	26	3	4	11	9	6	3	4	4	5
Cap, veh/h	290	404		303	498		337	1439	565	55	2061	994
Arrive On Green	0.07	0.12	0.00	0.10	0.14	0.00	0.09	1.00	1.00	0.03	0.59	0.59
Sat Flow, veh/h	1795	3589	0	1767	3497	1472	1682	2393	939	1753	3497	1506
Grp Volume(v), veh/h	239	162	0	198	168	0	124	405	381	43	929	159
Grp Sat Flow(s),veh/h/ln	1795	1749	0	1767	1749	1472	1682	1721	1611	1753	1749	1506
Q Serve(g_s), s	10.3	6.4	0.0	14.3	6.5	0.0	4.5	0.0	0.0	3.7	22.3	6.1
Cycle Q Clear(g_c), s	10.3	6.4	0.0	14.3	6.5	0.0	4.5	0.0	0.0	3.7	22.3	6.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	290	404		303	498		337	1035	969	55	2061	994
V/C Ratio(X)	0.82	0.40		0.65	0.34		0.37	0.39	0.39	0.78	0.45	0.16
Avail Cap(c_a), veh/h	290	723		303	816		391	1035	969	132	2061	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.00	1.00	1.00	0.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	61.5	0.0	52.8	58.0	0.0	12.5	0.0	0.0	72.1	17.2	9.8
Incr Delay (d2), s/veh	15.9	0.5	0.0	3.9	0.3	0.0	0.2	1.0	1.1	8.5	0.7	0.3
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	8.9	5.2	0.0	11.3	5.3	0.0	2.9	0.5	0.5	3.2	14.2	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.6	62.0	0.0	56.7	58.3	0.0	12.7	1.0	1.1	80.6	17.9	10.2
LnGrp LOS	E	E		E	E		B	A	A	F	B	B
Approach Vol, veh/h		401			366			910			1131	
Approach Delay, s/veh		70.1			57.4			2.7			19.2	
Approach LOS		E			E			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	94.4	16.0	27.3	10.4	96.2	20.0	23.3				
Change Period (Y+Rc), s	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0				
Max Green Setting (Gmax), s	* 11	70.0	* 10	35.0	* 11	70.0	* 14	31.0				
Max Q Clear Time (g_c+I1), s	6.5	24.3	12.3	8.5	5.7	2.0	16.3	8.4				
Green Ext Time (p_c), s	0.1	2.8	0.0	0.8	0.0	1.9	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Timings
6: Alton Road & Dade Boulevard



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	215	146	178	151	30	112	508	39	836	143
Future Volume (vph)	215	146	178	151	30	112	508	39	836	143
Lane Group Flow (vph)	239	183	198	168	33	124	786	43	929	159
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	pm+ov
Protected Phases	3	8	7	4		1	6	5	2	3
Permitted Phases	8		4		4	6				2
Detector Phase	3	8	7	4	4	1	6	5	2	3
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	10.7	37.0	10.7	37.0	37.0	10.7	29.0	10.7	29.0	10.7
Total Split (s)	16.0	37.0	20.0	41.0	41.0	17.0	76.0	17.0	76.0	16.0
Total Split (%)	10.7%	24.7%	13.3%	27.3%	27.3%	11.3%	50.7%	11.3%	50.7%	10.7%
Yellow Time (s)	3.7	4.0	3.7	4.0	4.0	3.7	4.0	3.7	4.0	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	6.0	5.7	6.0	6.0	5.7	6.0	5.7	6.0	5.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max	None
v/c Ratio	1.05	0.63	0.79	0.44	0.13	0.34	0.39	0.46	0.44	0.16
Control Delay	127.1	72.9	74.4	65.5	1.1	9.8	8.7	83.1	16.9	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	127.1	72.9	74.4	65.5	1.1	9.8	8.8	83.1	16.9	4.9
Queue Length 50th (ft)	~225	88	172	82	0	24	104	42	244	26
Queue Length 95th (ft)	#383	128	#253	118	0	38	119	83	329	58
Internal Link Dist (ft)		383		448			373		394	
Turn Bay Length (ft)	145		185		75			220		45
Base Capacity (vph)	228	692	254	809	411	393	2039	131	2119	1018
Starvation Cap Reductn	0	0	0	0	0	0	337	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	94	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.26	0.78	0.21	0.08	0.32	0.46	0.33	0.46	0.16

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 25 (17%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 ~ 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.

Splits and Phases: 6: Alton Road & Dade Boulevard



HCM 6th Signalized Intersection Summary
6: Alton Road & Dade Boulevard

22113 Future without Project PM
09/27/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	188	139	34	153	170	54	108	965	205	20	30	701
Future Volume (veh/h)	188	139	34	153	170	54	108	965	205	20	30	701
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		0	0
Ped-Bike Adj(A_pbT)	0.97		1.00	0.97		1.00	1.00		0.97		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
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1856	1900	1856	1885	1885	1767	1856	1856	1870		1900	1870
Adj Flow Rate, veh/h	190	140	0	155	172	0	109	975	207		30	708
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99		0.99	0.99
Percent Heavy Veh, %	3	0	3	1	1	9	3	3	2		0	2
Cap, veh/h	298	487		326	549		438	1722	365		43	2073
Arrive On Green	0.07	0.13	0.00	0.09	0.15	0.00	0.08	1.00	1.00		0.02	0.58
Sat Flow, veh/h	1767	3705	0	1795	3582	1497	1767	2878	610		1810	3554
Grp Volume(v), veh/h	190	140	0	155	172	0	109	597	585		30	708
Grp Sat Flow(s),veh/h/ln	1767	1805	0	1795	1791	1497	1767	1763	1725		1810	1777
Q Serve(g_s), s	10.3	5.2	0.0	11.0	6.4	0.0	3.8	0.0	0.0		2.5	15.5
Cycle Q Clear(g_c), s	10.3	5.2	0.0	11.0	6.4	0.0	3.8	0.0	0.0		2.5	15.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.35		1.00	
Lane Grp Cap(c), veh/h	298	487		326	549		438	1055	1032		43	2073
V/C Ratio(X)	0.64	0.29		0.47	0.31		0.25	0.57	0.57		0.70	0.34
Avail Cap(c_a), veh/h	298	746		341	836		502	1055	1032		136	2073
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00		1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	1.00	1.00	0.00	0.87	0.87	0.87		1.00	1.00
Uniform Delay (d), s/veh	54.6	58.4	0.0	49.8	56.5	0.0	11.9	0.0	0.0		72.7	16.3
Incr Delay (d2), s/veh	3.3	0.2	0.0	0.4	0.2	0.0	0.1	1.9	2.0		7.3	0.4
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
%ile BackOfQ(95%),veh/ln	3.6	4.4	0.0	8.7	5.3	0.0	2.6	1.0	1.0		2.2	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	58.6	0.0	50.2	56.7	0.0	12.0	1.9	2.0		80.0	16.7
LnGrp LOS	E	E		D	E		B	A	A		F	B
Approach Vol, veh/h		330			327			1291				836
Approach Delay, s/veh		58.2			53.6			2.8				18.2
Approach LOS		E			D			A				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	93.5	16.0	29.0	9.3	95.8	18.7	26.2				
Change Period (Y+Rc), s	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0				
Max Green Setting (Gmax), s	* 11	70.0	* 10	35.0	* 11	70.0	* 14	31.0				
Max Q Clear Time (g_c+I1), s	5.8	17.5	12.3	8.4	4.5	2.0	13.0	7.2				
Green Ext Time (p_c), s	0.1	2.0	0.0	0.9	0.0	3.2	0.0	0.7				

Intersection Summary

HCM 6th Ctrl Delay	20.0
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	97
Future Volume (veh/h)	97
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	0.97
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	98
Peak Hour Factor	0.99
Percent Heavy Veh, %	0
Cap, veh/h	1023
Arrive On Green	0.58
Sat Flow, veh/h	1563
Grp Volume(v), veh/h	98
Grp Sat Flow(s),veh/h/ln	1563
Q Serve(g_s), s	3.5
Cycle Q Clear(g_c), s	3.5
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	1023
V/C Ratio(X)	0.10
Avail Cap(c_a), veh/h	1023
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	9.7
Incr Delay (d2), s/veh	0.2
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(95%),veh/ln	2.3
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	9.9
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings
6: Alton Road & Dade Boulevard



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBU	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	188	139	153	170	54	108	965	20	30	701	97
Future Volume (vph)	188	139	153	170	54	108	965	20	30	701	97
Lane Group Flow (vph)	190	174	155	172	55	109	1182	0	50	708	98
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	custom	Prot	NA	pm+ov
Protected Phases	3	8	7	4		1	6		5	2	3
Permitted Phases	8		4		4	6		5			2
Detector Phase	3	8	7	4	4	1	6	5	5	2	3
Switch Phase											
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	5.0	4.0	5.0	5.0	4.0	5.0
Minimum Split (s)	10.7	37.0	10.7	37.0	37.0	10.7	29.0	10.7	10.7	29.0	10.7
Total Split (s)	16.0	37.0	20.0	41.0	41.0	17.0	76.0	17.0	17.0	76.0	16.0
Total Split (%)	10.7%	24.7%	13.3%	27.3%	27.3%	11.3%	50.7%	11.3%	11.3%	50.7%	10.7%
Yellow Time (s)	3.7	4.0	3.7	4.0	4.0	3.7	4.0	3.7	3.7	4.0	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.7	6.0	5.7	6.0	6.0	5.7	6.0		5.7	6.0	5.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max	None
v/c Ratio	0.89	0.60	0.64	0.49	0.23	0.24	0.65		1.02	0.32	0.09
Control Delay	93.8	68.3	63.5	67.9	2.3	6.0	23.1		198.2	14.1	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1		0.0	0.0	0.0
Total Delay	93.8	68.3	63.5	67.9	2.3	6.0	23.3		198.2	14.1	3.0
Queue Length 50th (ft)	166	78	132	84	0	21	521		-52	163	9
Queue Length 95th (ft)	#276	118	199	122	0	m25	642		#135	224	29
Internal Link Dist (ft)		383		448			373			394	
Turn Bay Length (ft)	145		185		75				220		45
Base Capacity (vph)	214	729	254	833	411	506	1815		49	2218	1094
Starvation Cap Reductn	0	0	0	0	0	0	97		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	0.89	0.24	0.61	0.21	0.13	0.22	0.69		1.02	0.32	0.09

Intersection Summary

- Cycle Length: 150
- Actuated Cycle Length: 150
- Offset: 24 (16%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
- Natural Cycle: 100
- Control Type: Actuated-Coordinated
- ~ 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.

Splits and Phases: 6: Alton Road & Dade Boulevard



Future with Project Conditions

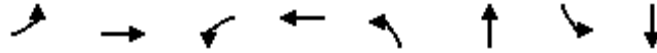
HCM 6th Signalized Intersection Summary
1: West Avenue & Lincoln Road

22113 Future with Project AM
11/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	21	19	14	21	79	13	272	18	13	220	49
Future Volume (veh/h)	82	21	19	14	21	79	13	272	18	13	220	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.92		0.82	0.89		0.81	0.98		0.97	0.99		0.95
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	1841	1826	1826	1900	1826	1856	1900	1856	1737	1678	1811	1811
Adj Flow Rate, veh/h	91	23	21	16	23	88	14	302	20	14	244	54
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	5	5	0	5	3	0	3	11	15	6	6
Cap, veh/h	231	137	125	52	57	162	840	1232	82	684	1020	226
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.72	0.72	0.72	1.00	1.00	1.00
Sat Flow, veh/h	1160	789	720	87	327	935	1080	1717	114	942	1421	315
Grp Volume(v), veh/h	91	0	44	127	0	0	14	0	322	14	0	298
Grp Sat Flow(s),veh/h/ln	1160	0	1509	1349	0	0	1080	0	1831	942	0	1736
Q Serve(g_s), s	2.2	0.0	2.7	0.2	0.0	0.0	0.4	0.0	6.6	0.1	0.0	0.0
Cycle Q Clear(g_c), s	11.4	0.0	2.7	9.2	0.0	0.0	0.4	0.0	6.6	6.8	0.0	0.0
Prop In Lane	1.00		0.48	0.13		0.69	1.00		0.06	1.00		0.18
Lane Grp Cap(c), veh/h	231	0	262	271	0	0	840	0	1314	684	0	1245
V/C Ratio(X)	0.39	0.00	0.17	0.47	0.00	0.00	0.02	0.00	0.25	0.02	0.00	0.24
Avail Cap(c_a), veh/h	293	0	343	342	0	0	840	0	1314	684	0	1245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.7	0.0	38.7	41.4	0.0	0.0	4.5	0.0	5.3	0.3	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.2	0.9	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.5
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	4.2	0.0	1.9	5.8	0.0	0.0	0.2	0.0	4.5	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	0.0	38.9	42.3	0.0	0.0	4.5	0.0	5.8	0.3	0.0	0.5
LnGrp LOS	D	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		135			127			336				312
Approach Delay, s/veh		42.0			42.3			5.7				0.4
Approach LOS		D			D			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.9		25.1		84.9		25.1				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		73.0		25.0		73.0		25.0				
Max Q Clear Time (g_c+I1), s		8.8		11.2		8.6		13.4				
Green Ext Time (p_c), s		0.7		0.5		0.8		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				14.4								
HCM 6th LOS				B								

Timings
1: West Avenue & Lincoln Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	82	21	14	21	13	272	13	220
Future Volume (vph)	82	21	14	21	13	272	13	220
Lane Group Flow (vph)	91	44	0	127	14	322	14	298
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	4.0	4.0	4.0
Minimum Split (s)	27.0	27.0	27.0	27.0	35.0	35.0	35.0	35.0
Total Split (s)	31.0	31.0	31.0	31.0	79.0	79.0	79.0	79.0
Total Split (%)	28.2%	28.2%	28.2%	28.2%	71.8%	71.8%	71.8%	71.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.82	0.23		0.55	0.02	0.23	0.02	0.23
Control Delay	92.7	28.2		24.8	4.2	4.5	4.1	3.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	92.7	28.2		24.8	4.2	4.5	4.1	3.4
Queue Length 50th (ft)	64	15		25	2	52	1	19
Queue Length 95th (ft)	116	46		81	8	104	m8	76
Internal Link Dist (ft)		255		114		285		310
Turn Bay Length (ft)	50				170		185	
Base Capacity (vph)	207	333		355	806	1395	707	1323
Starvation Cap Reductn	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0
Reduced v/c Ratio	0.44	0.13		0.36	0.02	0.23	0.02	0.23

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 61 (55%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: West Avenue & Lincoln Road



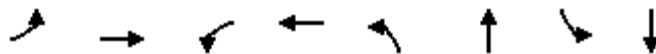
HCM 6th Signalized Intersection Summary
1: West Avenue & Lincoln Road

22113 Future with Project PM
11/21/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	47	26	20	24	23	22	280	29	24	253	49
Future Volume (veh/h)	54	47	26	20	24	23	22	280	29	24	253	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.78	0.87		0.76	0.98		0.97	0.99		0.94
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	1900	1841	1841	1900	1841	1870	1900	1885	1796	1900	1870	1900
Adj Flow Rate, veh/h	64	55	31	24	28	27	26	329	34	28	298	58
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	4	0	4	2	0	1	7	0	2	0
Cap, veh/h	266	171	97	93	100	78	798	1203	124	732	1080	210
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.72	0.72	0.72	1.00	1.00	1.00
Sat Flow, veh/h	1187	995	561	291	578	451	1019	1674	173	1026	1503	293
Grp Volume(v), veh/h	64	0	86	79	0	0	26	0	363	28	0	356
Grp Sat Flow(s),veh/h/ln	1187	0	1555	1321	0	0	1019	0	1847	1026	0	1796
Q Serve(g_s), s	0.0	0.0	5.3	0.6	0.0	0.0	0.8	0.0	7.6	0.3	0.0	0.0
Cycle Q Clear(g_c), s	5.5	0.0	5.3	5.9	0.0	0.0	0.8	0.0	7.6	7.9	0.0	0.0
Prop In Lane	1.00		0.36	0.30		0.34	1.00		0.09	1.00		0.16
Lane Grp Cap(c), veh/h	266	0	268	270	0	0	798	0	1327	732	0	1290
V/C Ratio(X)	0.24	0.00	0.32	0.29	0.00	0.00	0.03	0.00	0.27	0.04	0.00	0.28
Avail Cap(c_a), veh/h	331	0	354	343	0	0	798	0	1327	732	0	1290
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	0.0	39.9	39.8	0.0	0.0	4.5	0.0	5.4	0.4	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.5	0.4	0.0	0.0	0.1	0.0	0.5	0.1	0.0	0.5
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	2.8	0.0	3.7	3.4	0.0	0.0	0.3	0.0	5.2	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.3	0.0	40.4	40.2	0.0	0.0	4.5	0.0	5.9	0.5	0.0	0.5
LnGrp LOS	D	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		150			79			389				384
Approach Delay, s/veh		40.4			40.2			5.8				0.5
Approach LOS		D			D			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		85.0		25.0		85.0		25.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		73.0		25.0		73.0		25.0				
Max Q Clear Time (g_c+I1), s		9.9		7.9		9.6		7.5				
Green Ext Time (p_c), s		0.8		0.3		0.9		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				11.7								
HCM 6th LOS				B								

Timings
1: West Avenue & Lincoln Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	54	47	20	24	22	280	24	253
Future Volume (vph)	54	47	20	24	22	280	24	253
Lane Group Flow (vph)	64	86	0	79	26	363	28	356
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	4.0	4.0	4.0
Minimum Split (s)	27.0	27.0	27.0	27.0	35.0	35.0	35.0	35.0
Total Split (s)	31.0	31.0	31.0	31.0	79.0	79.0	79.0	79.0
Total Split (%)	28.2%	28.2%	28.2%	28.2%	71.8%	71.8%	71.8%	71.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.55	0.52		0.56	0.03	0.24	0.03	0.24
Control Delay	64.2	45.0		49.3	3.1	3.4	4.1	4.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	64.2	45.0		49.3	3.1	3.4	4.1	4.3
Queue Length 50th (ft)	44	42		39	3	50	5	66
Queue Length 95th (ft)	80	83		80	10	90	m14	104
Internal Link Dist (ft)		260		111		285		299
Turn Bay Length (ft)	50				170		185	
Base Capacity (vph)	268	349		298	813	1517	830	1482
Starvation Cap Reductn	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0
Reduced v/c Ratio	0.24	0.25		0.27	0.03	0.24	0.03	0.24

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 32 (29%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: West Avenue & Lincoln Road



HCM 6th Signalized Intersection Summary
2: West Avenue & 17th Street

22113 Future with Project AM
11/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	0	99	104	47	50	17	77	244	39	15	148	0
Future Volume (veh/h)	0	99	104	47	50	17	77	244	39	15	148	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	0.98		0.93	0.99		0.95	0.97		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	0	1767	1811	1707	1811	1900	1826	1870	1767	1604	1841	0
Adj Flow Rate, veh/h	0	114	120	54	57	20	89	280	45	17	170	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	9	6	13	6	0	5	2	9	20	4	0
Cap, veh/h	0	698	576	493	636	223	375	593	95	308	506	0
Arrive On Green	0.00	0.42	0.42	0.04	0.51	0.51	0.10	0.76	0.76	0.09	0.09	0.00
Sat Flow, veh/h	0	1767	1385	1626	1254	440	1739	1560	251	881	1841	0
Grp Volume(v), veh/h	0	114	120	54	0	77	89	0	325	17	170	0
Grp Sat Flow(s),veh/h/ln	0	1678	1385	1626	0	1693	1739	0	1811	881	1841	0
Q Serve(g_s), s	0.0	4.7	6.1	2.0	0.0	2.6	3.9	0.0	7.4	1.9	9.5	0.0
Cycle Q Clear(g_c), s	0.0	4.7	6.1	2.0	0.0	2.6	3.9	0.0	7.4	1.9	9.5	0.0
Prop In Lane	0.00		1.00	1.00		0.26	1.00		0.14	1.00		0.00
Lane Grp Cap(c), veh/h	0	698	576	493	0	859	375	0	688	308	506	0
V/C Ratio(X)	0.00	0.16	0.21	0.11	0.00	0.09	0.24	0.00	0.47	0.06	0.34	0.00
Avail Cap(c_a), veh/h	0	698	576	567	0	859	477	0	688	308	506	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.96	0.96	0.00
Uniform Delay (d), s/veh	0.0	20.1	20.5	16.2	0.0	14.0	24.3	0.0	9.1	37.1	40.6	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.8	0.0	0.0	0.2	0.1	0.0	2.3	0.3	1.7	0.0
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	0.0	3.5	3.8	1.3	0.0	1.9	2.8	0.0	4.7	0.8	8.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.6	21.4	16.3	0.0	14.2	24.4	0.0	11.4	37.5	42.3	0.0
LnGrp LOS	A	C	C	B	A	B	C	A	B	D	D	A
Approach Vol, veh/h		234			131			414				187
Approach Delay, s/veh		21.0			15.1			14.2				41.9
Approach LOS		C			B			B				D
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		62.0		48.0	10.0	52.0	11.6	36.4				
Change Period (Y+Rc), s		* 6.2		* 6.2	6.0	* 6.2	6.0	* 6.2				
Max Green Setting (Gmax), s		* 56		* 42	9.0	* 41	12.0	* 24				
Max Q Clear Time (g_c+I1), s		4.6		9.4	4.0	8.1	5.9	11.5				
Green Ext Time (p_c), s		0.4		1.7	0.0	1.3	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
2: West Avenue & 17th Street

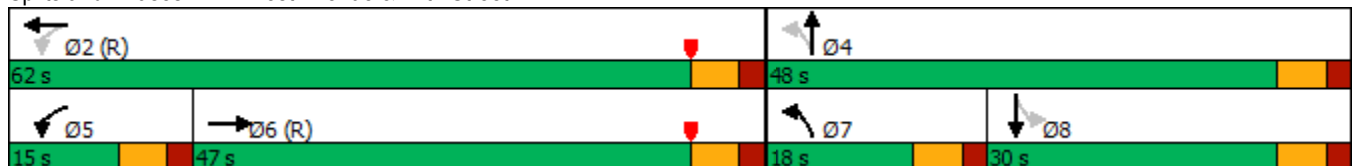


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↑↑	↘	↘	↘	↘	↘	↑
Traffic Volume (vph)	99	47	50	77	244	15	148
Future Volume (vph)	99	47	50	77	244	15	148
Lane Group Flow (vph)	234	54	77	89	325	17	170
Turn Type	NA	pm+pt	NA	pm+pt	NA	Perm	NA
Protected Phases	6	5	2	7	4		8
Permitted Phases		2		4		8	
Detector Phase	6	5	2	7	4	8	8
Switch Phase							
Minimum Initial (s)	12.0	5.0	12.0	5.0	7.0	7.0	7.0
Minimum Split (s)	34.2	11.0	34.2	11.0	30.2	29.2	29.2
Total Split (s)	47.0	15.0	62.0	18.0	48.0	30.0	30.0
Total Split (%)	42.7%	13.6%	56.4%	16.4%	43.6%	27.3%	27.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.2	2.0	2.2	2.0	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.0	6.2	6.0	6.2	6.2	6.2
Lead/Lag	Lag	Lead		Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes
Recall Mode	C-Max	None	C-Max	None	Max	Max	Max
v/c Ratio	0.18	0.11	0.10	0.23	0.48	0.07	0.34
Control Delay	11.0	14.4	11.0	20.8	25.6	25.3	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	1.3
Total Delay	11.0	14.4	11.0	20.8	25.6	25.3	28.8
Queue Length 50th (ft)	26	19	20	40	160	5	60
Queue Length 95th (ft)	51	38	43	68	221	m16	134
Internal Link Dist (ft)	215		128		140		135
Turn Bay Length (ft)		130		175			
Base Capacity (vph)	1283	493	798	420	683	240	495
Starvation Cap Reductn	0	0	0	0	0	0	175
Spillback Cap Reductn	0	0	0	0	17	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.11	0.10	0.21	0.49	0.07	0.53

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 87 (79%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: West Avenue & 17th Street



HCM 6th Signalized Intersection Summary
2: West Avenue & 17th Street

22113 Future with Project PM
11/21/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	0	101	101	66	110	52	101	215	147	30	186	0
Future Volume (veh/h)	0	101	101	66	110	52	101	215	147	30	186	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	0.98		0.93	0.98		0.96	0.98		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	0	1885	1870	1856	1900	1870	1870	1885	1900	1796	1885	0
Adj Flow Rate, veh/h	0	110	110	72	120	57	110	234	160	33	202	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	2	3	0	2	2	1	0	7	1	0
Cap, veh/h	0	738	608	547	602	286	406	389	266	293	501	0
Arrive On Green	0.00	0.41	0.41	0.04	0.51	0.51	0.10	0.63	0.63	0.53	0.53	0.00
Sat Flow, veh/h	0	1885	1473	1767	1186	563	1781	1023	700	931	1885	0
Grp Volume(v), veh/h	0	110	110	72	0	177	110	0	394	33	202	0
Grp Sat Flow(s),veh/h/ln	0	1791	1473	1767	0	1749	1781	0	1723	931	1885	0
Q Serve(g_s), s	0.0	4.2	5.2	2.5	0.0	6.1	4.8	0.0	14.9	2.1	7.0	0.0
Cycle Q Clear(g_c), s	0.0	4.2	5.2	2.5	0.0	6.1	4.8	0.0	14.9	4.5	7.0	0.0
Prop In Lane	0.00		1.00	1.00		0.32	1.00		0.41	1.00		0.00
Lane Grp Cap(c), veh/h	0	738	608	547	0	887	406	0	655	293	501	0
V/C Ratio(X)	0.00	0.15	0.18	0.13	0.00	0.20	0.27	0.00	0.60	0.11	0.40	0.00
Avail Cap(c_a), veh/h	0	738	608	620	0	887	446	0	655	293	501	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	0.0	20.2	20.5	16.3	0.0	14.9	24.6	0.0	15.2	20.6	20.5	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.7	0.0	0.0	0.5	0.1	0.0	4.1	0.7	2.3	0.0
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	0.0	3.3	3.4	1.8	0.0	4.5	3.5	0.0	8.7	0.9	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.7	21.2	16.3	0.0	15.4	24.7	0.0	19.2	21.3	22.8	0.0
LnGrp LOS	A	C	C	B	A	B	C	A	B	C	C	A
Approach Vol, veh/h		220			249			504			235	
Approach Delay, s/veh		20.9			15.6			20.4			22.6	
Approach LOS		C			B			C			C	
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		62.0		48.0	10.4	51.6	12.6	35.4				
Change Period (Y+Rc), s		* 6.2		* 6.2	6.0	* 6.2	6.0	* 6.2				
Max Green Setting (Gmax), s		* 56		* 42	9.0	* 41	9.0	* 27				
Max Q Clear Time (g_c+I1), s		8.1		16.9	4.5	7.2	6.8	9.0				
Green Ext Time (p_c), s		1.0		2.2	0.0	1.2	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay	20.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
2: West Avenue & 17th Street

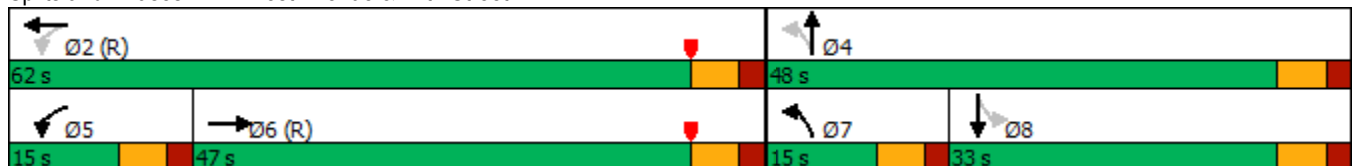


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↑↑	↖	↗	↖	↗	↖	↑
Traffic Volume (vph)	101	66	110	101	215	30	186
Future Volume (vph)	101	66	110	101	215	30	186
Lane Group Flow (vph)	220	72	177	110	394	33	202
Turn Type	NA	pm+pt	NA	pm+pt	NA	Perm	NA
Protected Phases	6	5	2	7	4		8
Permitted Phases		2		4		8	
Detector Phase	6	5	2	7	4	8	8
Switch Phase							
Minimum Initial (s)	12.0	5.0	12.0	5.0	7.0	7.0	7.0
Minimum Split (s)	34.2	11.0	34.2	11.0	30.2	29.2	29.2
Total Split (s)	47.0	15.0	62.0	15.0	48.0	33.0	33.0
Total Split (%)	42.7%	13.6%	56.4%	13.6%	43.6%	30.0%	30.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.2	2.0	2.2	2.0	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.0	6.2	6.0	6.2	6.2	6.2
Lead/Lag	Lag	Lead		Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes
Recall Mode	C-Max	None	C-Max	None	Max	Max	Max
v/c Ratio	0.16	0.14	0.22	0.30	0.59	0.14	0.43
Control Delay	11.3	14.5	13.0	24.3	31.8	26.2	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	2.8
Total Delay	11.3	14.5	13.0	24.3	31.8	26.2	32.2
Queue Length 50th (ft)	25	25	54	54	230	11	98
Queue Length 95th (ft)	53	50	96	95	333	m28	152
Internal Link Dist (ft)	215		132		151		135
Turn Bay Length (ft)		130		175			
Base Capacity (vph)	1343	549	815	379	663	233	474
Starvation Cap Reductn	0	0	0	0	0	0	174
Spillback Cap Reductn	0	0	0	0	10	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.13	0.22	0.29	0.60	0.14	0.67

Intersection Summary






















Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 75 (68%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: West Avenue & 17th Street



HCM Signalized Intersection Capacity Analysis
3: Alton Road & 17th Street

22113 Future with Project AM
11/18/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	110	62	111	44	63	42	707	238	190	818	41
Future Volume (vph)	26	110	62	111	44	63	42	707	238	190	818	41
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2	
Lane Util. Factor	0.91	0.91		0.95	0.95	1.00	1.00	0.91		1.00	0.95	
Frbp, ped/bikes	1.00	0.97		1.00	1.00	0.96	1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1480	2923		1603	1695	1371	1710	4675		1736	3240	
Flt Permitted	0.95	1.00		0.95	0.98	1.00	0.27	1.00		0.22	1.00	
Satd. Flow (perm)	1480	2923		1603	1695	1371	494	4675		399	3240	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	121	68	122	48	69	46	777	262	209	899	45
RTOR Reduction (vph)	0	49	0	0	0	0	0	25	0	0	1	0
Lane Group Flow (vph)	26	143	0	84	86	69	46	1014	0	209	943	0
Confl. Peds. (#/hr)	25		34	34		25	24		18	18		24
Confl. Bikes (#/hr)			1			8			11			10
Heavy Vehicles (%)	11%	8%	10%	7%	2%	13%	5%	5%	5%	4%	4%	13%
Parking (#/hr)												0
Turn Type	Split	NA		Split	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4	5	1	6		5	2	
Permitted Phases						4	6			2		
Actuated Green, G (s)	12.1	12.1		12.7	12.7	24.1	93.3	88.4		105.5	94.9	
Effective Green, g (s)	12.1	12.1		12.7	12.7	24.1	93.3	88.4		105.5	94.9	
Actuated g/C Ratio	0.08	0.08		0.08	0.08	0.16	0.62	0.59		0.70	0.63	
Clearance Time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.0	2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)	119	235		135	143	220	346	2755		382	2049	
v/s Ratio Prot	0.02	c0.05		c0.05	0.05	0.02	0.00	0.22		c0.04	0.29	
v/s Ratio Perm						0.03	0.08			c0.34		
v/c Ratio	0.22	0.61		0.62	0.60	0.31	0.13	0.37		0.55	0.46	
Uniform Delay, d1	64.5	66.7		66.3	66.2	55.6	11.3	16.2		9.0	14.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.88		1.18	0.81	
Incremental Delay, d2	0.7	3.7		7.5	5.9	0.3	0.1	0.4		0.8	0.7	
Delay (s)	65.2	70.4		73.8	72.1	55.9	11.4	14.6		11.4	12.2	
Level of Service	E	E		E	E	E	B	B		B	B	
Approach Delay (s)		69.8			68.0			14.4			12.1	
Approach LOS		E			E			B			B	
Intersection Summary												
HCM 2000 Control Delay			22.6	HCM 2000 Level of Service				C				
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			150.0	Sum of lost time (s)				25.4				
Intersection Capacity Utilization			77.9%	ICU Level of Service				D				
Analysis Period (min)			15									

c Critical Lane Group

Timings
3: Alton Road & 17th Street

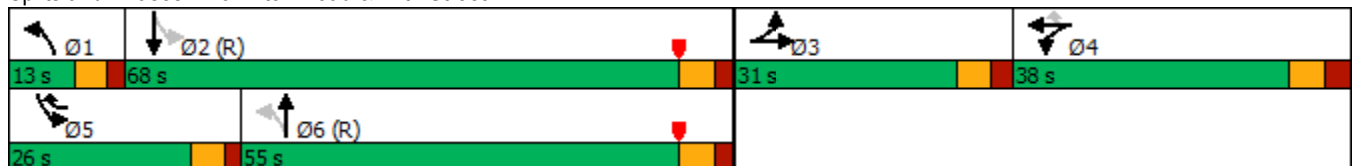


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	26	110	111	44	63	42	707	190	818
Future Volume (vph)	26	110	111	44	63	42	707	190	818
Lane Group Flow (vph)	26	192	84	86	69	46	1039	209	944
Turn Type	Split	NA	Split	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases	3	3	4	4	5	1	6	5	2
Permitted Phases					4	6		2	
Detector Phase	3	3	4	4	5	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	5.0	4.0	4.0	4.0
Minimum Split (s)	29.3	29.3	27.2	27.2	9.7	10.7	24.2	9.7	24.2
Total Split (s)	31.0	31.0	38.0	38.0	26.0	13.0	55.0	26.0	68.0
Total Split (%)	20.7%	20.7%	25.3%	25.3%	17.3%	8.7%	36.7%	17.3%	45.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.7	3.7	4.0	3.7	4.0
All-Red Time (s)	2.3	2.3	3.2	3.2	2.0	2.0	2.2	2.0	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	7.2	7.2	5.7	5.7	6.2	5.7	6.2
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
v/c Ratio	0.22	0.67	0.62	0.60	0.29	0.13	0.37	0.55	0.46
Control Delay	67.2	59.8	84.7	82.4	50.3	9.7	15.0	14.8	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	67.2	59.8	84.7	82.4	50.3	9.7	15.0	14.8	13.2
Queue Length 50th (ft)	26	73	85	87	57	10	183	41	323
Queue Length 95th (ft)	60	117	143	146	93	21	279	m56	434
Internal Link Dist (ft)		118		418			517		373
Turn Bay Length (ft)	115		220			155		305	
Base Capacity (vph)	243	525	329	347	319	373	2773	463	2074
Starvation Cap Reductn	0	0	0	0	0	0	0	0	324
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.37	0.26	0.25	0.22	0.12	0.37	0.45	0.54

Intersection Summary
























Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 39 (26%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Alton Road & 17th Street



HCM Signalized Intersection Capacity Analysis
3: Alton Road & 17th Street

22113 Future with Project PM
11/21/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	121	127	127	116	233	66	940	148	171	641	59
Future Volume (vph)	77	121	127	127	116	233	66	940	148	171	641	59
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2	
Lane Util. Factor	0.91	0.91		0.95	0.95	1.00	1.00	0.91		1.00	0.95	
Frbp, ped/bikes	1.00	0.93		1.00	1.00	0.95	1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.97	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1643	2903		1633	1756	1497	1716	4850		1752	3218	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.37	1.00		0.19	1.00	
Satd. Flow (perm)	1643	2903		1633	1756	1497	669	4850		347	3218	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	79	125	131	131	120	240	68	969	153	176	661	61
RTOR Reduction (vph)	0	120	0	0	0	0	0	10	0	0	3	0
Lane Group Flow (vph)	71	144	0	118	133	240	68	1112	0	176	719	0
Confl. Peds. (#/hr)	39		66	66		39	55		32	32		55
Confl. Bikes (#/hr)			5			3			12			15
Heavy Vehicles (%)	0%	2%	2%	5%	2%	2%	2%	3%	5%	3%	3%	0%
Parking (#/hr)												0
Turn Type	Split	NA		Split	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4	5	1	6		5	2	
Permitted Phases						4	6			2		
Actuated Green, G (s)	12.1	12.1		16.3	16.3	30.1	88.0	82.4		101.9	90.6	
Effective Green, g (s)	12.1	12.1		16.3	16.3	30.1	88.0	82.4		101.9	90.6	
Actuated g/C Ratio	0.08	0.08		0.11	0.11	0.20	0.59	0.55		0.68	0.60	
Clearance Time (s)	6.3	6.3		7.2	7.2	5.7	5.7	6.2		5.7	6.2	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.0	2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)	132	234		177	190	300	431	2664		364	1943	
v/s Ratio Prot	0.04	c0.05		0.07	0.08	c0.07	0.01	0.23		0.04	0.22	
v/s Ratio Perm						0.09	0.09			c0.28		
v/c Ratio	0.54	0.61		0.67	0.70	0.80	0.16	0.42		0.48	0.37	
Uniform Delay, d1	66.3	66.7		64.2	64.5	57.1	13.4	19.8		10.7	15.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.90	1.06		1.53	0.75	
Incremental Delay, d2	3.3	4.0		8.3	9.9	13.4	0.1	0.5		0.4	0.5	
Delay (s)	69.5	70.7		72.5	74.4	70.5	12.1	21.3		16.7	11.9	
Level of Service	E	E		E	E	E	B	C		B	B	
Approach Delay (s)		70.5			72.0			20.8			12.8	
Approach LOS		E			E			C			B	
Intersection Summary												
HCM 2000 Control Delay			32.7									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			150.0								25.4	
Intersection Capacity Utilization			84.4%									ICU Level of Service E
Analysis Period (min)			15									

c Critical Lane Group

Timings
3: Alton Road & 17th Street

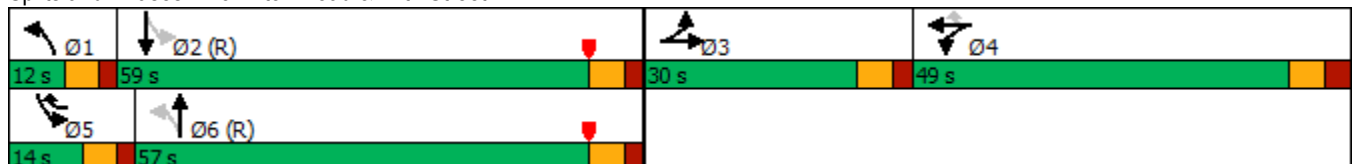


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↔	↖	↖	↖	↖	↑↑↑	↖	↑↑
Traffic Volume (vph)	77	121	127	116	233	66	940	171	641
Future Volume (vph)	77	121	127	116	233	66	940	171	641
Lane Group Flow (vph)	71	264	118	133	240	68	1122	176	722
Turn Type	Split	NA	Split	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases	3	3	4	4	5	1	6	5	2
Permitted Phases					4	6		2	
Detector Phase	3	3	4	4	5	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	4.0	5.0	4.0	4.0	4.0
Minimum Split (s)	29.3	29.3	27.2	27.2	9.7	10.7	24.2	9.7	24.2
Total Split (s)	30.0	30.0	49.0	49.0	14.0	12.0	57.0	14.0	59.0
Total Split (%)	20.0%	20.0%	32.7%	32.7%	9.3%	8.0%	38.0%	9.3%	39.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.7	3.7	4.0	3.7	4.0
All-Red Time (s)	2.3	2.3	3.2	3.2	2.0	2.0	2.2	2.0	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	7.2	7.2	5.7	5.7	6.2	5.7	6.2
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
v/c Ratio	0.54	0.74	0.67	0.70	0.76	0.15	0.42	0.48	0.37
Control Delay	80.0	46.2	81.6	82.8	67.8	9.8	22.3	19.2	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Delay	80.0	46.2	81.6	82.8	67.8	9.8	22.3	19.2	13.0
Queue Length 50th (ft)	74	70	118	134	211	25	245	52	132
Queue Length 95th (ft)	130	120	185	204	284	54	339	109	156
Internal Link Dist (ft)		114		418			517		373
Turn Bay Length (ft)	115		220			155		305	
Base Capacity (vph)	259	570	455	489	314	463	2674	365	1968
Starvation Cap Reductn	0	0	0	0	0	0	0	0	497
Spillback Cap Reductn	0	0	0	0	0	0	424	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.46	0.26	0.27	0.76	0.15	0.50	0.48	0.49

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 11 (7%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated

Splits and Phases: 3: Alton Road & 17th Street



HCM Signalized Intersection Capacity Analysis
4: Alton Road & Lincoln Road

22113 Future with Project AM
11/18/2022



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	34	26	46	1004	3	871	98
Future Volume (vph)	34	26	46	1004	3	871	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1752	1298	1803	3471	1356	3203	
Flt Permitted	0.95	1.00	0.25	1.00	0.26	1.00	
Satd. Flow (perm)	1752	1298	473	3471	365	3203	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	28	50	1091	3	947	107
RTOR Reduction (vph)	0	27	0	0	0	2	0
Lane Group Flow (vph)	37	1	50	1091	3	1052	0
Confl. Peds. (#/hr)	56	37	36		56		36
Confl. Bikes (#/hr)		1					18
Heavy Vehicles (%)	3%	12%	0%	4%	33%	5%	4%
Parking (#/hr)		0				0	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	
Permitted Phases			6		2		
Actuated Green, G (s)	7.2	7.2	127.7	123.5	121.3	120.3	
Effective Green, g (s)	7.2	7.2	127.7	123.5	121.3	120.3	
Actuated g/C Ratio	0.05	0.05	0.85	0.82	0.81	0.80	
Clearance Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Vehicle Extension (s)	2.5	2.5	2.0	1.0	2.0	1.0	
Lane Grp Cap (vph)	84	62	439	2857	301	2568	
v/s Ratio Prot	c0.02	0.00	c0.00	c0.31	0.00	c0.33	
v/s Ratio Perm			0.09		0.01		
v/c Ratio	0.44	0.02	0.11	0.38	0.01	0.41	
Uniform Delay, d1	69.4	68.0	2.1	3.4	2.8	4.4	
Progression Factor	1.00	1.00	1.00	1.00	0.55	0.44	
Incremental Delay, d2	2.7	0.1	0.0	0.4	0.0	0.4	
Delay (s)	72.1	68.1	2.1	3.8	1.5	2.4	
Level of Service	E	E	A	A	A	A	
Approach Delay (s)	70.4			3.7		2.4	
Approach LOS	E			A		A	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.3
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Alton Road & Lincoln Road

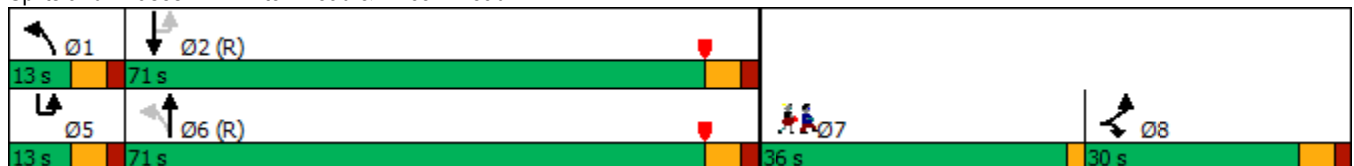


Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	34	26	46	1004	3	871	
Future Volume (vph)	34	26	46	1004	3	871	
Lane Group Flow (vph)	37	28	50	1091	3	1054	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	7
Permitted Phases			6		2		
Detector Phase	8	8	1	6	5	2	
Switch Phase							
Minimum Initial (s)	7.0	7.0	5.0	7.0	5.0	7.0	1.0
Minimum Split (s)	24.0	24.0	11.0	24.3	11.0	24.3	36.0
Total Split (s)	30.0	30.0	13.0	71.0	13.0	71.0	36.0
Total Split (%)	20.0%	20.0%	8.7%	47.3%	8.7%	47.3%	24%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.3	2.0	2.3	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max	None
v/c Ratio	0.37	0.28	0.11	0.36	0.01	0.40	
Control Delay	78.2	28.3	2.1	3.1	1.0	2.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	78.2	28.3	2.1	3.1	1.0	2.4	
Queue Length 50th (ft)	36	0	5	84	0	92	
Queue Length 95th (ft)	74	34	12	196	m0	92	
Internal Link Dist (ft)	138			240		517	
Turn Bay Length (ft)			115		145		
Base Capacity (vph)	280	231	473	3026	356	2644	
Starvation Cap Reductn	0	0	0	0	0	212	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.13	0.12	0.11	0.36	0.01	0.43	

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 55 (37%), Referenced to phase 2:SBTU and 6:NBTL, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Alton Road & Lincoln Road



HCM Signalized Intersection Capacity Analysis
4: Alton Road & Lincoln Road

22113 Future with Project PM
11/21/2022



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	65	29	25	1084	5	839	38
Future Volume (vph)	65	29	25	1084	5	839	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1454	1748	3505	1802	3302	
Flt Permitted	0.95	1.00	0.30	1.00	0.24	1.00	
Satd. Flow (perm)	1719	1454	547	3505	461	3302	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	67	30	26	1118	5	865	39
RTOR Reduction (vph)	0	28	0	0	0	1	0
Lane Group Flow (vph)	67	2	26	1118	5	903	0
Confl. Peds. (#/hr)	109	66	63		109		63
Confl. Bikes (#/hr)		5					13
Heavy Vehicles (%)	5%	0%	3%	3%	0%	3%	1%
Parking (#/hr)		0				0	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	
Permitted Phases			6		2		
Actuated Green, G (s)	9.4	9.4	124.4	121.3	120.2	119.2	
Effective Green, g (s)	9.4	9.4	124.4	121.3	120.2	119.2	
Actuated g/C Ratio	0.06	0.06	0.83	0.81	0.80	0.79	
Clearance Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Vehicle Extension (s)	2.5	2.5	2.0	1.0	2.0	1.0	
Lane Grp Cap (vph)	107	91	478	2834	378	2623	
v/s Ratio Prot	c0.04	0.00	c0.00	c0.32	0.00	0.27	
v/s Ratio Perm			0.04		0.01		
v/c Ratio	0.63	0.02	0.05	0.39	0.01	0.34	
Uniform Delay, d1	68.6	66.0	2.4	4.0	3.1	4.4	
Progression Factor	1.00	1.00	1.00	1.00	0.63	0.53	
Incremental Delay, d2	9.5	0.1	0.0	0.4	0.0	0.3	
Delay (s)	78.1	66.0	2.4	4.4	2.0	2.6	
Level of Service	E	E	A	A	A	A	
Approach Delay (s)	74.4			4.4		2.6	
Approach LOS	E			A		A	

Intersection Summary

HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.3
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Alton Road & Lincoln Road



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	65	29	25	1084	5	839	
Future Volume (vph)	65	29	25	1084	5	839	
Lane Group Flow (vph)	67	30	26	1118	5	904	
Turn Type	Prot	Prot	pm+pt	NA	pm+pt	NA	
Protected Phases	8	8	1	6	5	2	7
Permitted Phases			6		2		
Detector Phase	8	8	1	6	5	2	
Switch Phase							
Minimum Initial (s)	7.0	7.0	5.0	7.0	5.0	7.0	1.0
Minimum Split (s)	13.0	13.0	11.0	24.3	11.0	24.3	36.0
Total Split (s)	22.0	22.0	17.0	75.0	17.0	75.0	36.0
Total Split (%)	14.7%	14.7%	11.3%	50.0%	11.3%	50.0%	24%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.3	2.0	2.3	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.3	6.0	6.3	
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max	None
v/c Ratio	0.54	0.23	0.05	0.37	0.01	0.33	
Control Delay	82.4	23.4	2.4	3.8	1.6	2.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	
Total Delay	82.4	23.4	2.4	3.8	1.6	2.8	
Queue Length 50th (ft)	65	0	3	102	0	63	
Queue Length 95th (ft)	116	34	9	229	m1	88	
Internal Link Dist (ft)	141			240		517	
Turn Bay Length (ft)			115		145		
Base Capacity (vph)	183	181	556	3003	494	2728	
Starvation Cap Reductn	0	0	0	0	0	692	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.17	0.05	0.37	0.01	0.44	

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 145 (97%), Referenced to phase 2:SBTU and 6:NBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Alton Road & Lincoln Road



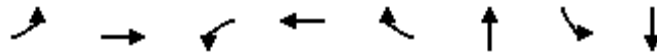
HCM 6th Signalized Intersection Summary
5: West Avenue & Dade Boulevard

22113 Future with Project AM
11/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	197	0	61	261	86	0	112	149	36	100	4
Future Volume (veh/h)	17	197	0	61	261	86	0	112	149	36	100	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.96	1.00		0.96	0.99		0.91
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	1900	1870	0	1856	1826	1811	0	1900	1856	1693	1796	1159
Adj Flow Rate, veh/h	19	219	0	68	290	96	0	124	166	40	111	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	0	3	5	6	0	0	3	14	7	50
Cap, veh/h	489	864	0	584	880	707	0	218	291	102	260	9
Arrive On Green	0.02	0.46	0.00	0.04	0.48	0.48	0.00	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1810	1870	0	1767	1826	1467	0	717	960	201	855	28
Grp Volume(v), veh/h	19	219	0	68	290	96	0	0	290	155	0	0
Grp Sat Flow(s),veh/h/ln	1810	1870	0	1767	1826	1467	0	0	1677	1085	0	0
Q Serve(g_s), s	0.6	7.8	0.0	2.2	10.8	4.0	0.0	0.0	16.0	3.1	0.0	0.0
Cycle Q Clear(g_c), s	0.6	7.8	0.0	2.2	10.8	4.0	0.0	0.0	16.0	19.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.57	0.26		0.03
Lane Grp Cap(c), veh/h	489	864	0	584	880	707	0	0	509	371	0	0
V/C Ratio(X)	0.04	0.25	0.00	0.12	0.33	0.14	0.00	0.00	0.57	0.42	0.00	0.00
Avail Cap(c_a), veh/h	561	864	0	620	880	707	0	0	509	371	0	0
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	0.00	0.96	0.96	0.96	0.00	0.00	0.88	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.3	18.0	0.0	14.5	17.6	15.8	0.0	0.0	32.2	31.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.1	1.0	0.4	0.0	0.0	4.0	3.4	0.0	0.0
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	0.5	6.3	0.0	1.6	8.2	2.5	0.0	0.0	11.1	7.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	18.7	0.0	14.6	18.5	16.2	0.0	0.0	36.3	35.0	0.0	0.0
LnGrp LOS	B	B	A	B	B	B	A	A	D	C	A	A
Approach Vol, veh/h		238			454			290				155
Approach Delay, s/veh		18.5			17.4			36.3				35.0
Approach LOS		B			B			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	60.4		40.0	11.8	58.2		40.0				
Change Period (Y+Rc), s	7.4	7.4		6.6	7.4	7.4		6.6				
Max Green Setting (Gmax), s	6.6	48.6		33.4	6.6	48.6		33.4				
Max Q Clear Time (g_c+I1), s	2.6	12.8		18.0	4.2	9.8		21.1				
Green Ext Time (p_c), s	0.0	0.7		1.3	0.0	0.4		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				24.8								
HCM 6th LOS				C								

Timings
5: West Avenue & Dade Boulevard



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Configurations	↖	↑	↖	↑	↖	↗		↕
Traffic Volume (vph)	17	197	61	261	86	112	36	100
Future Volume (vph)	17	197	61	261	86	112	36	100
Lane Group Flow (vph)	19	219	68	290	96	290	0	155
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	1	6	5	2		4		8
Permitted Phases	6		2		2		8	
Detector Phase	1	6	5	2	2	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.4	34.4	12.4	34.4	34.4	38.6	38.6	38.6
Total Split (s)	14.0	56.0	14.0	56.0	56.0	40.0	40.0	40.0
Total Split (%)	12.7%	50.9%	12.7%	50.9%	50.9%	36.4%	36.4%	36.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.4	3.4	3.4	3.4	3.4	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	7.4	7.4	7.4	7.4	7.4	6.6		6.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max
v/c Ratio	0.03	0.25	0.11	0.31	0.12	0.52		0.41
Control Delay	10.8	19.7	11.3	17.8	3.1	5.5		34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5		0.1
Total Delay	10.8	19.7	11.3	17.8	3.1	6.0		34.6
Queue Length 50th (ft)	6	95	20	99	0	0		86
Queue Length 95th (ft)	16	150	41	201	24	0		149
Internal Link Dist (ft)		226		383		135		167
Turn Bay Length (ft)	135		120					
Base Capacity (vph)	595	870	616	938	796	554		374
Starvation Cap Reductn	0	0	0	0	0	58		0
Spillback Cap Reductn	0	0	0	0	0	0		14
Storage Cap Reductn	0	0	0	0	0	0		0
Reduced v/c Ratio	0.03	0.25	0.11	0.31	0.12	0.58		0.43

Intersection Summary

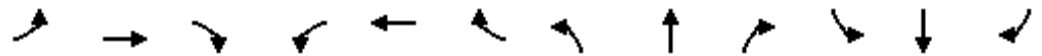
Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 93 (85%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 5: West Avenue & Dade Boulevard



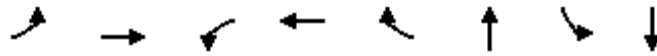
HCM 6th Signalized Intersection Summary
5: West Avenue & Dade Boulevard

22113 Future with Project PM
11/21/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	208	0	82	228	94	0	154	111	39	132	17
Future Volume (veh/h)	33	208	0	82	228	94	0	154	111	39	132	17
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		0.96	1.00		0.95	0.98		0.91
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	0	1885	1885	1841	0	1870	1885	1826	1870	1707
Adj Flow Rate, veh/h	35	221	0	87	243	100	0	164	118	41	140	18
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	0	1	1	4	0	2	1	5	2	13
Cap, veh/h	512	836	0	580	873	694	0	309	223	97	311	37
Arrive On Green	0.03	0.45	0.00	0.04	0.46	0.46	0.00	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	1856	0	1795	1885	1500	0	989	712	184	993	117
Grp Volume(v), veh/h	35	221	0	87	243	100	0	0	282	199	0	0
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1795	1885	1500	0	0	1701	1295	0	0
Q Serve(g_s), s	1.2	8.2	0.0	2.8	8.7	4.2	0.0	0.0	15.0	3.1	0.0	0.0
Cycle Q Clear(g_c), s	1.2	8.2	0.0	2.8	8.7	4.2	0.0	0.0	15.0	18.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.42	0.21		0.09
Lane Grp Cap(c), veh/h	512	836	0	580	873	694	0	0	532	444	0	0
V/C Ratio(X)	0.07	0.26	0.00	0.15	0.28	0.14	0.00	0.00	0.53	0.45	0.00	0.00
Avail Cap(c_a), veh/h	565	836	0	612	873	694	0	0	532	444	0	0
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	0.00	0.96	0.96	0.96	0.00	0.00	0.77	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.4	18.9	0.0	15.2	18.2	17.0	0.0	0.0	31.1	30.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.1	0.8	0.4	0.0	0.0	2.9	3.2	0.0	0.0
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	0.9	6.6	0.0	2.1	7.1	2.8	0.0	0.0	10.2	8.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	19.6	0.0	15.3	19.0	17.4	0.0	0.0	34.0	33.8	0.0	0.0
LnGrp LOS	B	B	A	B	B	B	A	A	C	C	A	A
Approach Vol, veh/h		256			430			282				199
Approach Delay, s/veh		19.1			17.9			34.0				33.8
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	58.3		41.0	12.0	57.0		41.0				
Change Period (Y+Rc), s	7.4	7.4		6.6	7.4	7.4		6.6				
Max Green Setting (Gmax), s	6.6	47.6		34.4	6.6	47.6		34.4				
Max Q Clear Time (g_c+I1), s	3.2	10.7		17.0	4.8	10.2		20.1				
Green Ext Time (p_c), s	0.0	0.5		1.3	0.0	0.4		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				24.8								
HCM 6th LOS				C								

Timings
5: West Avenue & Dade Boulevard

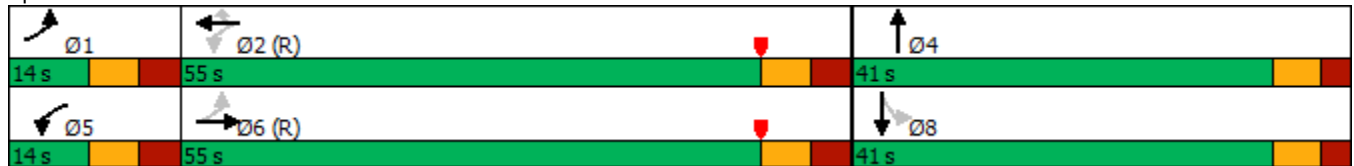


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	33	208	82	228	94	154	39	132
Future Volume (vph)	33	208	82	228	94	154	39	132
Lane Group Flow (vph)	35	221	87	243	100	282	0	199
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	1	6	5	2		4		8
Permitted Phases	6		2		2		8	
Detector Phase	1	6	5	2	2	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.4	34.4	12.4	34.4	34.4	38.6	38.6	38.6
Total Split (s)	14.0	55.0	14.0	55.0	55.0	41.0	41.0	41.0
Total Split (%)	12.7%	50.0%	12.7%	50.0%	50.0%	37.3%	37.3%	37.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.4	3.4	3.4	3.4	3.4	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	7.4	7.4	7.4	7.4	7.4	6.6		6.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max
v/c Ratio	0.06	0.26	0.14	0.27	0.13	0.50		0.46
Control Delay	11.5	20.4	12.1	19.3	3.5	12.0		33.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	2.0		0.3
Total Delay	11.5	20.4	12.1	19.3	3.5	14.0		34.1
Queue Length 50th (ft)	11	98	27	109	0	32		110
Queue Length 95th (ft)	25	155	51	169	27	52		182
Internal Link Dist (ft)		226		383		135		167
Turn Bay Length (ft)	135		120					
Base Capacity (vph)	593	845	616	909	774	564		429
Starvation Cap Reductn	0	0	0	0	0	157		0
Spillback Cap Reductn	0	0	0	0	0	0		32
Storage Cap Reductn	0	0	0	0	0	0		0
Reduced v/c Ratio	0.06	0.26	0.14	0.27	0.13	0.69		0.50

Intersection Summary
























Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 80 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 5: West Avenue & Dade Boulevard



HCM 6th Signalized Intersection Summary
6: Alton Road & Dade Boulevard

22113 Future with Project AM
11/18/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	146	19	178	151	30	112	497	200	39	861	143
Future Volume (veh/h)	215	146	19	178	151	30	112	497	200	39	861	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		1.00	0.98		1.00	1.00		0.97	1.00		0.97
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	1885	1841	1515	1856	1841	1737	1767	1811	1856	1841	1841	1826
Adj Flow Rate, veh/h	239	162	0	198	168	0	124	552	222	43	957	159
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	1	4	26	3	4	11	9	6	3	4	4	5
Cap, veh/h	290	404		303	498		329	1430	573	55	2061	994
Arrive On Green	0.07	0.12	0.00	0.10	0.14	0.00	0.09	1.00	1.00	0.03	0.59	0.59
Sat Flow, veh/h	1795	3589	0	1767	3497	1472	1682	2377	953	1753	3497	1506
Grp Volume(v), veh/h	239	162	0	198	168	0	124	399	375	43	957	159
Grp Sat Flow(s),veh/h/ln	1795	1749	0	1767	1749	1472	1682	1721	1609	1753	1749	1506
Q Serve(g_s), s	10.3	6.4	0.0	14.3	6.5	0.0	4.5	0.0	0.0	3.7	23.2	6.1
Cycle Q Clear(g_c), s	10.3	6.4	0.0	14.3	6.5	0.0	4.5	0.0	0.0	3.7	23.2	6.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	290	404		303	498		329	1035	968	55	2061	994
V/C Ratio(X)	0.82	0.40		0.65	0.34		0.38	0.39	0.39	0.78	0.46	0.16
Avail Cap(c_a), veh/h	290	723		303	816		382	1035	968	132	2061	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.00	1.00	1.00	0.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	61.5	0.0	52.8	58.0	0.0	12.7	0.0	0.0	72.1	17.4	9.8
Incr Delay (d2), s/veh	15.9	0.5	0.0	3.9	0.3	0.0	0.2	1.0	1.1	8.5	0.8	0.3
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	8.9	5.2	0.0	11.3	5.3	0.0	2.9	0.5	0.5	3.2	14.7	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.6	62.0	0.0	56.7	58.3	0.0	13.0	1.0	1.1	80.6	18.2	10.2
LnGrp LOS	E	E		E	E		B	A	A	F	B	B
Approach Vol, veh/h		401			366			898			1159	
Approach Delay, s/veh		70.1			57.4			2.7			19.4	
Approach LOS		E			E			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	94.4	16.0	27.3	10.4	96.2	20.0	23.3				
Change Period (Y+Rc), s	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0				
Max Green Setting (Gmax), s	* 11	70.0	* 10	35.0	* 11	70.0	* 14	31.0				
Max Q Clear Time (g_c+I1), s	6.5	25.2	12.3	8.5	5.7	2.0	16.3	8.4				
Green Ext Time (p_c), s	0.1	2.9	0.0	0.8	0.0	1.9	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			26.2									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

Timings
6: Alton Road & Dade Boulevard



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	215	146	178	151	30	112	497	39	861	143
Future Volume (vph)	215	146	178	151	30	112	497	39	861	143
Lane Group Flow (vph)	239	183	198	168	33	124	774	43	957	159
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	pm+ov
Protected Phases	3	8	7	4		1	6	5	2	3
Permitted Phases	8		4		4	6				2
Detector Phase	3	8	7	4	4	1	6	5	2	3
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	10.7	37.0	10.7	37.0	37.0	10.7	29.0	10.7	29.0	10.7
Total Split (s)	16.0	37.0	20.0	41.0	41.0	17.0	76.0	17.0	76.0	16.0
Total Split (%)	10.7%	24.7%	13.3%	27.3%	27.3%	11.3%	50.7%	11.3%	50.7%	10.7%
Yellow Time (s)	3.7	4.0	3.7	4.0	4.0	3.7	4.0	3.7	4.0	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	6.0	5.7	6.0	6.0	5.7	6.0	5.7	6.0	5.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max	None
v/c Ratio	1.05	0.63	0.79	0.44	0.13	0.35	0.38	0.46	0.45	0.16
Control Delay	127.1	72.9	74.4	65.5	1.1	10.9	8.5	83.1	17.1	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	127.1	72.9	74.4	65.5	1.1	10.9	8.6	83.1	17.2	4.9
Queue Length 50th (ft)	~225	88	172	82	0	23	97	42	254	26
Queue Length 95th (ft)	#383	128	#253	118	0	43	112	83	341	58
Internal Link Dist (ft)		383		448			373		394	
Turn Bay Length (ft)	145		185		75			220		45
Base Capacity (vph)	228	692	254	809	411	383	2038	131	2119	1018
Starvation Cap Reductn	0	0	0	0	0	0	339	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	94	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.26	0.78	0.21	0.08	0.32	0.46	0.33	0.47	0.16

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 25 (17%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 ~ 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.

Splits and Phases: 6: Alton Road & Dade Boulevard



HCM 6th Signalized Intersection Summary
6: Alton Road & Dade Boulevard

22113 Future with Project PM
11/21/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	188	139	34	153	170	54	108	981	205	20	30	681
Future Volume (veh/h)	188	139	34	153	170	54	108	981	205	20	30	681
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		1.00	0.97		1.00	1.00		0.97		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
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1856	1900	1856	1885	1885	1767	1856	1856	1870		1900	1870
Adj Flow Rate, veh/h	190	140	0	155	172	0	109	991	207		30	688
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99		0.99	0.99
Percent Heavy Veh, %	3	0	3	1	1	9	3	3	2		0	2
Cap, veh/h	298	487		326	549		446	1728	360		43	2073
Arrive On Green	0.07	0.13	0.00	0.09	0.15	0.00	0.08	1.00	1.00		0.02	0.58
Sat Flow, veh/h	1767	3705	0	1795	3582	1497	1767	2887	602		1810	3554
Grp Volume(v), veh/h	190	140	0	155	172	0	109	604	594		30	688
Grp Sat Flow(s),veh/h/ln	1767	1805	0	1795	1791	1497	1767	1763	1726		1810	1777
Q Serve(g_s), s	10.3	5.2	0.0	11.0	6.4	0.0	3.8	0.0	0.0		2.5	15.0
Cycle Q Clear(g_c), s	10.3	5.2	0.0	11.0	6.4	0.0	3.8	0.0	0.0		2.5	15.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.35		1.00	
Lane Grp Cap(c), veh/h	298	487		326	549		446	1055	1033		43	2073
V/C Ratio(X)	0.64	0.29		0.47	0.31		0.24	0.57	0.57		0.70	0.33
Avail Cap(c_a), veh/h	298	746		341	836		511	1055	1033		136	2073
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00		1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	1.00	1.00	0.00	0.87	0.87	0.87		1.00	1.00
Uniform Delay (d), s/veh	54.6	58.4	0.0	49.8	56.5	0.0	11.8	0.0	0.0		72.7	16.1
Incr Delay (d2), s/veh	3.3	0.2	0.0	0.4	0.2	0.0	0.1	2.0	2.0		7.3	0.4
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
%ile BackOfQ(95%),veh/ln	3.6	4.4	0.0	8.7	5.3	0.0	2.6	1.0	1.0		2.2	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	58.6	0.0	50.2	56.7	0.0	11.9	2.0	2.0		80.0	16.6
LnGrp LOS	E	E		D	E		B	A	A		F	B
Approach Vol, veh/h		330			327			1307				816
Approach Delay, s/veh		58.2			53.6			2.8				18.1
Approach LOS		E			D			A				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	93.5	16.0	29.0	9.3	95.8	18.7	26.2				
Change Period (Y+Rc), s	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0	* 5.7	6.0				
Max Green Setting (Gmax), s	* 11	70.0	* 10	35.0	* 11	70.0	* 14	31.0				
Max Q Clear Time (g_c+I1), s	5.8	17.0	12.3	8.4	4.5	2.0	13.0	7.2				
Green Ext Time (p_c), s	0.1	1.9	0.0	0.9	0.0	3.2	0.0	0.7				

Intersection Summary

HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	97
Future Volume (veh/h)	97
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	0.97
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	98
Peak Hour Factor	0.99
Percent Heavy Veh, %	0
Cap, veh/h	1023
Arrive On Green	0.58
Sat Flow, veh/h	1563
Grp Volume(v), veh/h	98
Grp Sat Flow(s),veh/h/ln	1563
Q Serve(g_s), s	3.5
Cycle Q Clear(g_c), s	3.5
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	1023
V/C Ratio(X)	0.10
Avail Cap(c_a), veh/h	1023
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	9.7
Incr Delay (d2), s/veh	0.2
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(95%),veh/ln	2.3
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	9.9
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings
6: Alton Road & Dade Boulevard



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBU	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	188	139	153	170	54	108	981	20	30	681	97
Future Volume (vph)	188	139	153	170	54	108	981	20	30	681	97
Lane Group Flow (vph)	190	174	155	172	55	109	1198	0	50	688	98
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	custom	Prot	NA	pm+ov
Protected Phases	3	8	7	4		1	6		5	2	3
Permitted Phases	8		4		4	6		5			2
Detector Phase	3	8	7	4	4	1	6	5	5	2	3
Switch Phase											
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	5.0	4.0	5.0	5.0	4.0	5.0
Minimum Split (s)	10.7	37.0	10.7	37.0	37.0	10.7	29.0	10.7	10.7	29.0	10.7
Total Split (s)	16.0	37.0	20.0	41.0	41.0	17.0	76.0	17.0	17.0	76.0	16.0
Total Split (%)	10.7%	24.7%	13.3%	27.3%	27.3%	11.3%	50.7%	11.3%	11.3%	50.7%	10.7%
Yellow Time (s)	3.7	4.0	3.7	4.0	4.0	3.7	4.0	3.7	3.7	4.0	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.7	6.0	5.7	6.0	6.0	5.7	6.0		5.7	6.0	5.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max	None
v/c Ratio	0.89	0.60	0.64	0.49	0.23	0.23	0.66		1.02	0.31	0.09
Control Delay	93.8	68.3	63.5	67.9	2.3	6.1	23.9		198.2	14.0	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1		0.0	0.0	0.0
Total Delay	93.8	68.3	63.5	67.9	2.3	6.1	24.0		198.2	14.0	3.0
Queue Length 50th (ft)	166	78	132	84	0	22	533		-52	158	9
Queue Length 95th (ft)	#276	118	199	122	0	m26	652		#135	217	29
Internal Link Dist (ft)		383		448			373			394	
Turn Bay Length (ft)	145		185		75				220		45
Base Capacity (vph)	214	729	254	833	411	514	1815		49	2218	1094
Starvation Cap Reductn	0	0	0	0	0	0	92		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	0.89	0.24	0.61	0.21	0.13	0.21	0.70		1.02	0.31	0.09

Intersection Summary

- Cycle Length: 150
- Actuated Cycle Length: 150
- Offset: 24 (16%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
- Natural Cycle: 110
- Control Type: Actuated-Coordinated
- ~ 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.

Splits and Phases: 6: Alton Road & Dade Boulevard



Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			↑
Traffic Vol, veh/h	0	70	381	205	0	291
Future Vol, veh/h	0	70	381	205	0	291
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	76	414	223	0	316

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	526	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	552	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	552	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	552
HCM Lane V/C Ratio	-	-	0.138
HCM Control Delay (s)	-	-	12.6
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.5

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↘			↑
Traffic Vol, veh/h	0	226	415	126	0	340
Future Vol, veh/h	0	226	415	126	0	340
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	246	451	137	0	370

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	520	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-
Pot Cap-1 Maneuver	0	556	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	556	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	556
HCM Lane V/C Ratio	-	-	0.442
HCM Control Delay (s)	-	-	16.5
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	2.2

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑			↑				
Traffic Vol, veh/h	0	56	0	0	254	51	0	0	0	0	0	0
Future Vol, veh/h	0	56	0	0	254	51	0	0	0	0	0	0
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	61	0	0	276	55	0	0	0	0	0	0

Major/Minor	Major1		Major2			Minor1	
Conflicting Flow All	-	0	-	-	-	0	- 392
Stage 1	-	-	-	-	-	-	- 61
Stage 2	-	-	-	-	-	-	- 331
Critical Hdwy	-	-	-	-	-	-	- 6.53
Critical Hdwy Stg 1	-	-	-	-	-	-	- 5.53
Critical Hdwy Stg 2	-	-	-	-	-	-	- 5.53
Follow-up Hdwy	-	-	-	-	-	-	- 4.019
Pot Cap-1 Maneuver	0	-	0	0	-	0	543 0
Stage 1	0	-	0	0	-	0	844 0
Stage 2	0	-	0	0	-	0	644 0
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	0 -
Mov Cap-2 Maneuver	-	-	-	-	-	-	0 -
Stage 1	-	-	-	-	-	-	0 -
Stage 2	-	-	-	-	-	-	0 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT	WBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑			↑				
Traffic Vol, veh/h	0	97	0	0	219	32	0	0	0	0	0	0
Future Vol, veh/h	0	97	0	0	219	32	0	0	0	0	0	0
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	105	0	0	238	35	0	0	0	0	0	0

Major/Minor	Major1		Major2			Minor1	
Conflicting Flow All	-	0	-	-	-	0	- 378
Stage 1	-	-	-	-	-	-	- 105
Stage 2	-	-	-	-	-	-	- 273
Critical Hdwy	-	-	-	-	-	-	- 6.53
Critical Hdwy Stg 1	-	-	-	-	-	-	- 5.53
Critical Hdwy Stg 2	-	-	-	-	-	-	- 5.53
Follow-up Hdwy	-	-	-	-	-	-	- 4.019
Pot Cap-1 Maneuver	0	-	0	0	-	-	0 553
Stage 1	0	-	0	0	-	-	0 808
Stage 2	0	-	0	0	-	-	0 683
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	- 0
Mov Cap-2 Maneuver	-	-	-	-	-	-	- 0
Stage 1	-	-	-	-	-	-	- 0
Stage 2	-	-	-	-	-	-	- 0

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT	WBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑			↔				
Traffic Vol, veh/h	0	192	0	0	120	0	0	0	18	0	0	0
Future Vol, veh/h	0	192	0	0	120	0	0	0	18	0	0	0
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	209	0	0	130	0	0	0	20	0	0	0

Major/Minor	Major1		Major2			Minor1			
Conflicting Flow All	-	0	-	-	-	0	339	339	105
Stage 1	-	-	-	-	-	-	209	209	-
Stage 2	-	-	-	-	-	-	130	130	-
Critical Hdwy	-	-	-	-	-	-	6.63	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	5.83	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	-	-	-	-	-	-	3.519	4.019	3.319
Pot Cap-1 Maneuver	0	-	0	0	-	0	644	582	930
Stage 1	0	-	0	0	-	0	806	729	-
Stage 2	0	-	0	0	-	0	895	788	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	644	0	930
Mov Cap-2 Maneuver	-	-	-	-	-	-	644	0	-
Stage 1	-	-	-	-	-	-	806	0	-
Stage 2	-	-	-	-	-	-	895	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	930	-	-
HCM Lane V/C Ratio	0.021	-	-
HCM Control Delay (s)	9	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑			↔				
Traffic Vol, veh/h	0	273	0	0	235	0	0	0	57	0	0	0
Future Vol, veh/h	0	273	0	0	235	0	0	0	57	0	0	0
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	297	0	0	255	0	0	0	62	0	0	0

Major/Minor	Major1		Major2			Minor1			
Conflicting Flow All	-	0	-	-	-	0	552	552	149
Stage 1	-	-	-	-	-	-	297	297	-
Stage 2	-	-	-	-	-	-	255	255	-
Critical Hdwy	-	-	-	-	-	-	6.63	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	5.83	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	-	-	-	-	-	-	3.519	4.019	3.319
Pot Cap-1 Maneuver	0	-	0	0	-	0	479	441	871
Stage 1	0	-	0	0	-	0	729	667	-
Stage 2	0	-	0	0	-	0	787	696	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	479	0	871
Mov Cap-2 Maneuver	-	-	-	-	-	-	479	0	-
Stage 1	-	-	-	-	-	-	729	0	-
Stage 2	-	-	-	-	-	-	787	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	871	-	-
HCM Lane V/C Ratio	0.071	-	-
HCM Control Delay (s)	9.4	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-

Appendix E

Committed Development Documentation



March 20, 2020

Firat Akcay
City of Miami Beach
Transportation Department
1688 Meridian Avenue, Suite 801
Miami Beach, Florida 33139

**Re: 1910 Alton Road
Miami Beach, Florida
Traffic Assessment**

Dear Mr. Akcay:

Kimley-Horn and Associates, Inc. has performed a traffic assessment for the proposed 1910 Alton Road redevelopment in Miami Beach, Florida. Currently, the site is occupied by a vacant 6,364 square-foot office. The proposed redevelopment consists of a 4,000 square-foot of art gallery, one (1) multifamily residential unit, and 8,000 square feet of office space. A project location map and conceptual site plan is provided in Attachment A-1.

The traffic assessment's methodology is consistent with the requirements outlined by the City of Miami Beach. Methodology correspondence detailing the study requirements is provided in Attachment B-1. The following sections summarize the trip generation analysis, valet analysis, and transportation demand management (TDM) strategies. Note that the raised median conceptual plan and driveway sight distance analyzed are contained in a separate document. Please also note that the maneuverability analysis is contained in a separate document. An event period valet analysis was also required by the city. However, after further coordination with the applicant, special events are not proposed at the redevelopment.

TRIP GENERATION

Trip generation calculations for the proposed redevelopment were performed using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition. The trip generation for the existing development was determined using ITE Land Use Code (LUC) 710 (General Office Building). LUC 580 (Museum), 221 (Multifamily Housing [Mid-Rise]), and LUC 710 (General Office Building) were utilized for the proposed redevelopment. Project trips were estimated for the weekday A.M. and P.M. peak hours.

A multimodal (public transit, bicycle, and pedestrian) factor based on US Census *Means of Transportation to Work* data was reviewed for the census tracts in the vicinity of the redevelopment. A multimodal factor of 7.7 percent (7.7%) was calculated using the Census data. It is expected that residents and patrons will choose to walk, bike, or use public transit to and from the proposed redevelopment.

The redevelopment is expected to generate nine (9) vehicular trips during the A.M. peak hour and 11 vehicular trips during the P.M. peak hour. Note that credit for the existing development was not taken as the facility is currently vacant. Detailed trip generation calculations are included in Attachment C-1. Table 1 provides a summary of the trip generation for the proposed redevelopment.

Table 1: Proposed Net New Trip Generation				
A.M. (P.M.) Peak Hour				
Future Land Use (ITE Code)	Scale	Net New External Trips	Entering Trips	Exiting Trips
<i>Proposed Redevelopment</i>				
Museum (580)	4,000 square feet	1 (1)	1 (0)	0 (1)
Multifamily Housing (Mid-Rise) (221)	1 dwelling unit	0 (1)	0 (1)	0 (0)
General Office Building (710)	8,000 square feet	8 (9)	7 (2)	1 (7)
Net New Project Trips		9 (11)	8 (3)	1 (8)

VALET ANALYSIS

The proposed redevelopment will provide valet-only parking operations. Self-parking will not be provided on-site. The redevelopment will be served by one (1) dedicated valet drop-off and one (1) dedicated valet pick-up area. Three (3) drop-off spaces and three (3) pick-up space are provided at the site’s porte-cochere area. Valet vehicles accessing the site drop-off and pick-up will be driven by a valet attendant to the on-site valet parking area. The on-site valet parking area consists of seven (7) mechanical lift parking spaces (14 spaces) and one (1) ADA space for a total of 15 parking spaces. Attachment D-1 contains graphics illustrating drop-off and pick-up area stacking and proposed valet routes to and from the site’s valet parking area.

The valet analysis was prepared for the highest generator of valet trips, therefore the total weekday A.M. peak hour drop-off trips and the total P.M. peak hour pick-up trips were used for the analysis. The valet trip generation calculations indicate that the development will generate eight (8) A.M. peak hour drop-off trips and eight (8) P.M. peak hour pick-up trips. Note that all vehicles will be valeted internally on-site.

The valet queuing operations analysis was performed based on the methodology outlined in ITE’s *Transportation and Land Development*, 1988. The analysis was performed to determine if valet operations could accommodate vehicular queues without blocking travel lanes on Sunset Drive.

Valet Assumptions

The queuing analysis used the multiple-channel waiting line model with Poisson arrivals and exponential service times. The queuing analysis is based on the coefficient of utilization, ρ , which is the ratio of the average vehicle arrival rate over the average service rate multiplied by the number of channels.

Valet attendants for the site will be stationed at the porte-cochere area and will travel to and from the on-site valet parking area. Valet drop-off trip service time was calculated based on the time it would take a valet parking attendant to obtain and park a drop-off vehicle to the valet parking area. Valet pick-up trip service time was calculated based on the time it would take a valet parking attendant to bring a parked vehicle back to a patron at the valet porte-cochere area for pick-up. Note that the average mechanical lift processing time was based on the Klaus Model G61 vehicle lift. The average mechanical

lift processing time was based on the average processing times of parking and retrieving vehicles from all the various positions within the non-tandem mechanical lift system. The detailed mechanical-lift processing time analysis is contained in Attachment D-1. The following summarizes the total valet drop-off and pick-up service times.

The calculated average service time for the site valet vehicle drop-off is 2.4 minutes. The following summarizes the valet drop-off service time:

- Exchange between valet attendant and driver (0.5 minutes)
- Valet attendant drives vehicle from valet drop-off area to on-site valet parking area (0.3 minutes)
- Valet attendant parks vehicle utilizing mechanical lift (1.2 minutes)
- Valet attendant returns to valet station (0.4 minutes)
- Total service rate: **2.4 minutes**

The calculated average service time for the site valet vehicle pick-up is 2.3 minutes. The following summarizes the valet pick-up service time:

- Valet attendant proceeds to the valet parking area to retrieve the vehicle (0.4 minutes)
- Valet attendant retrieves vehicle from mechanical lift (1.1 minutes)
- Valet attendant drives vehicle from valet parking area to valet pick-up area (0.3 minutes)
- Exchange between valet attendant and driver (0.5 minutes)
- Total service rate: **2.3 minutes**

Detailed travel time calculations are included in Attachment D-1.

If the coefficient of utilization (average service rate/valet attendant service capacity) is greater than one (>1), the calculation methodology does not yield a finite queue length. This result indicates overcapacity conditions for the valet area. The valet attendant service capacity is the number of total trips a valet attendant can make in a one-hour period multiplied by the number of valet attendants.

The analysis determined the required queue storage, M, which is exceeded P percent of the time. Since this analysis seeks to examine if the queue length exceeds the storage provided, at a level of confidence of 95 percent (95%). Three (3) drop-off spaces are provided at the site's drop-off area and three (3) pick-up spaces are provided at the site's pick-up area.

Valet Analysis

An iterative approach was used to determine the number of valet attendants required to accommodate the proposed redevelopment demand during the analysis hour and ensure that the 95th percentile valet queue does not extend beyond the designated valet service area. The valet analysis worksheet is provided in Attachment D-1.

It was determined that one (1) valet attendant is needed for the site's valet drop-off area and one (1) valet attendant is needed for the site's pick-up area (two (2) attendants total) during the weekday P.M. peak hour so that the vehicle queues from the drop-off and pick-up area do not extend beyond the designated valet areas or negatively impact circulation.

Valet Conclusion

Based on the valet operations analysis performed, it was determined that the 95th percentile valet queues will not extend beyond the valet service area and into the public right-of-way or negatively impacting circulation. Based upon the conservative assumptions applied to the traffic demand conditions, it was estimated that one (1) valet attendant is needed for the site's valet drop-off area and one (1) valet attendant is needed for the site's pick-up area (two (2) attendants total) during the weekday P.M. peak hour so that the vehicle queues from the drop-off and pick-up areas do not extend beyond the designated valet areas or negatively impact circulation. It should be noted that projected vehicular volumes and estimated valet processing times were conservatively assumed in the analysis.

TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

The applicant is considering providing the following TDM strategies to encourage people to use public transportation, use bicycles and walk, use car/vanpools, and find alternatives to the typical workday hours to reduce the impacts of the project traffic on the surrounding roadway network:

- Providing secure bicycle parking (15 long-term spaces)
- A shower facility bicyclists can use on site
- Providing wide hallways to accommodate bicycles
- Elevators that can accommodate bicycles

CONCLUSION

The analysis results indicate that the proposed redevelopment is expected to generate nine (9) vehicular trips during the A.M. peak hour trips and 11 vehicular trips during the P.M. peak hour.

The valet operations analysis performed determined that the 95th percentile valet queues will not extend beyond the valet drop-off and pick-up areas onto Sunset Drive. Based upon the conservative assumptions applied to the traffic demand conditions, it was estimated that one (1) valet attendant is needed for the site's valet drop-off area and one (1) valet attendant is needed for the site's pick-up area (two (2) attendants total) during the weekday P.M. peak hour so that the vehicle queues from the drop-off and pick-up areas do not extend beyond the designated valet areas or negatively impact circulation. It should be noted that projected vehicular volumes and estimated valet processing times were conservatively assumed in the analysis.

TDM strategies are also proposed as part of the redevelopment to reduce the impacts of the project traffic on the surrounding roadway network. The applicant is considering providing 15 long-term secure bicycle parking spaces, a shower facility for bicyclists to use on site, wide hallways to accommodate bicycles, and large elevators to accommodate bicycles.

If you have any questions regarding this analysis, please feel free to contact me.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Adrian K. Dabkowski, P.E., PTOE
Associate



Adrian K. Dabkowski, P.E., PTOE
Florida Registration Number 78828
Kimley-Horn and Associates, Inc.
600 North Pine Island Road, Suite 450
Plantation, Florida 33324
Registry # 00000696

K:\FTL_TPTO\143185000-1910 Alton Road\Correspondence\tr\1910 Alton Road - Traffic Assessment 03 20 2020.docx

Attachment A-1

Location Map and Conceptual Site Plan

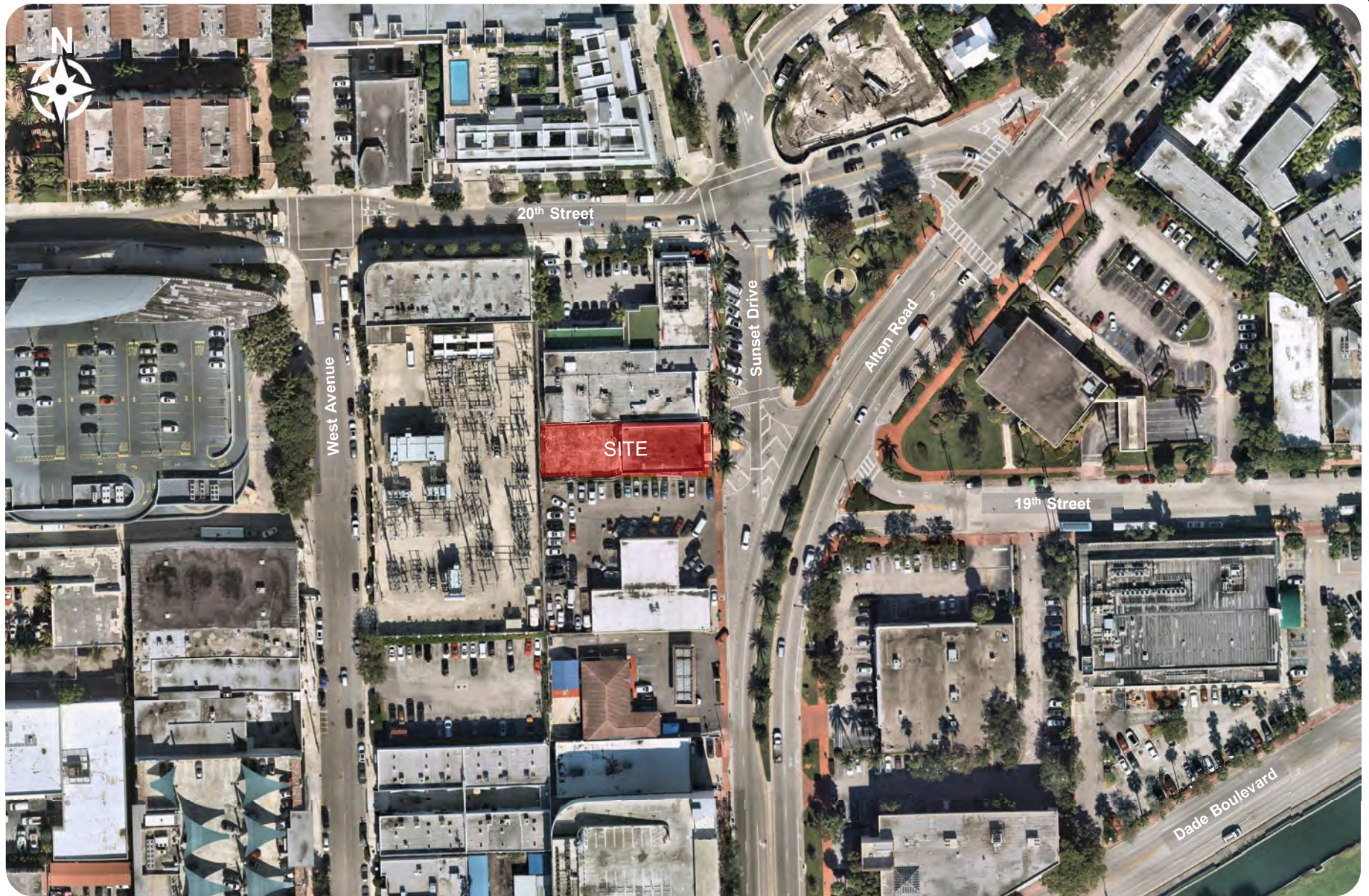


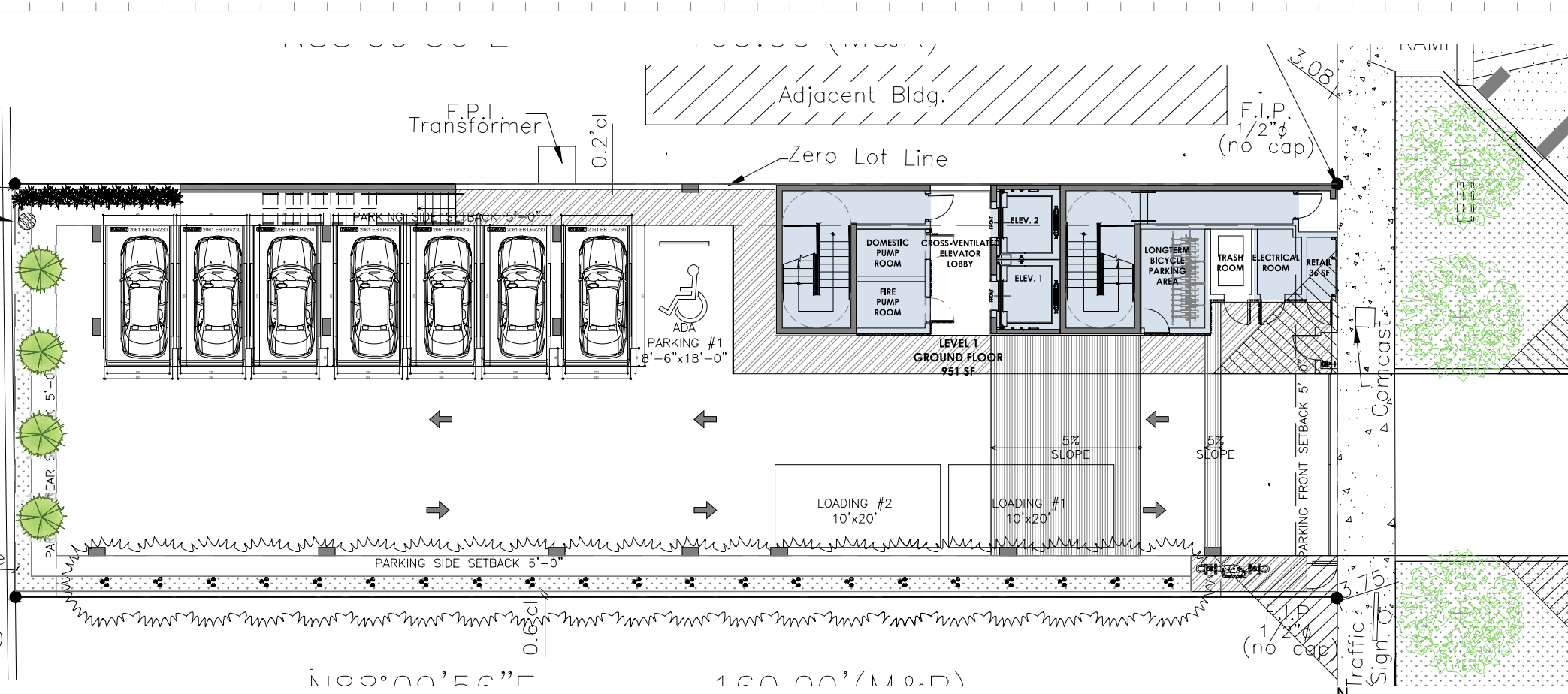
Figure 1
Location Map
1910 Alton Road
Miami Beach, Florida

NOT SUBDIVIDED

S01°55'44"E
7" Conc. Wall
50.00' (M&R)

F.I.P. 1/2"φ (no cap)

F.I.P. 1/2"φ (no cap)



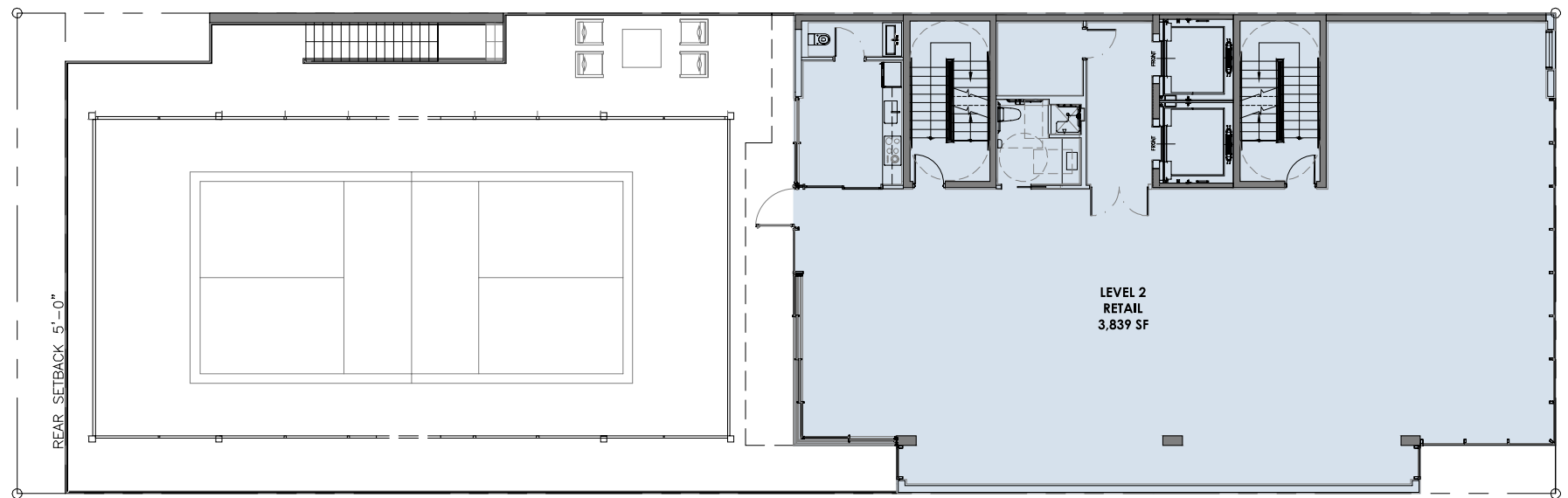
F.A.R. CALCULATIONS	
LEVELS	F.A.R.
LEVEL 1	951 S.F.
LEVEL 2	3,839 S.F.
LEVEL 3	3,461 S.F.
LEVEL 4	3,607 S.F.
LEVEL 5	3,622 S.F.
ROOFTOP	520 S.F.
TOTAL	16,000 S.F.

Rev.	Date	Rev.	Date
DRB FIRST SUBMITTAL	03-16-2020		
DRB FINAL SUBMITTAL	04-06-2020		

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DRB FINAL SUBMITTAL
 DRB20-0522
MIXED USE - COMMERCIAL - OFFICE - RESIDENCE
 1910 ALTON ROAD
 MIAMI BEACH, FLORIDA 33139

1 LEVEL 1 / F.A.R. Scale: 1/8" = 1'-0"



1 LEVEL 2 / F.A.R. Scale: 1/8" = 1'-0"

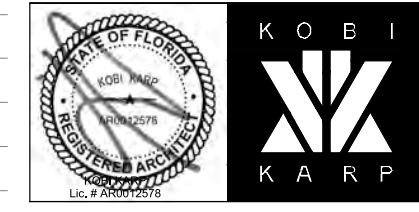
Owner:
 PRIVATE

Landscape Architect:
 Name
 Address
 Address
 Tel:
 Email

Consultant:
 Name
 Address
 Address
 Tel:
 Email

Consultant:
 Name
 Address
 Address
 Tel:
 Email

Architect of Record:
 Kobi Karp Architecture and Interior Design, Inc.
 2915 Biscayne Boulevard, Suite #200
 Miami, Florida 33137 USA
 Tel: +1(305) 573 1818
 Fax: +1(305) 573 3766



F.A.R. DIAGRAMS
 PROPOSED DESIGN

Date 04-06-2020	Sheet No. A0.05
Scale	
Project 2001	

Attachment B-1

Methodology Correspondence

Iliev, Alex

From: Akcay, Firat <FiratAkcay@miamibeachfl.gov>
Sent: Friday, January 31, 2020 5:13 PM
To: Dabkowski, Adrian
Cc: Ferrer, Josiel; Murphy, James
Subject: RE: 1910 Alton Road | Traffic Assessment Methodology

Categories: External

Adrian,

We agree on the below. The event period analysis should consider a demand per the allowed maximum occupancy. We also would like you to analyze the safety and geometric conditions of the roadway at the entrance of the proposed development. Some considerations shall include a conceptual design displaying the highlighted portions of the chevron areas to be raised to prevent drivers from entering directly from Alton Road. The garage entrance should also provide for sight distance clearance, hence the two red dotted parking spaces may need to be removed. The sight distance for the crosswalk and diagonal alignment should be analyzed as well.



Please let me know if you have any questions on the scope of study.
Thank you



*Firat Akcay, M.S.C.E. MBA
Transportation Analyst
Transportation and Mobility Department
1688 Meridian Avenue, Suite 801, Miami Beach, FL 33139
Tel: 305-673-7000, ext 26839*

We are committed to providing excellent public service and safety to all who live, work and play in our vibrant, tropical, historic community.

 Please do not print this e-mail unless necessary.

From: Dabkowski, Adrian <Adrian.Dabkowski@Kimley-horn.com>
Sent: Friday, January 31, 2020 4:13 PM
To: Akcay, Firat <FiratAkcay@miamibeachfl.gov>
Cc: Ferrer, Josiel <JOSIELFERRER@miamibeachfl.gov>; Murphy, James <JamesMurphy@miamibeachfl.gov>
Subject: RE: 1910 Alton Road | Traffic Assessment Methodology

[THIS MESSAGE COMES FROM AN EXTERNAL EMAIL - USE CAUTION WHEN REPLYING AND OPENING LINKS OR ATTACHMENTS]

Good afternoon Firat,

Thank you for calling me back today. As discussed, we will move forward with including the following in the traffic assessment:

- Trip Generation
- TDM
- Valet analysis
- Event period valet analysis
- Maneuverability analysis for the garage

Thank you
Adrian

Adrian K. Dabkowski, P.E., PTOE
Kimley-Horn | 600 North Pine Island Road, Suite 450, Plantation, FL 33324
Direct: 954-535-5144 | Mobile: 303-990-2761

From: Dabkowski, Adrian
Sent: Thursday, January 30, 2020 4:51 PM
To: Akcay, Firat <FiratAkcay@miamibeachfl.gov>
Cc: Ferrer, Josiel <JOSIELFERRER@miamibeachfl.gov>; 'Murphy, James' <JamesMurphy@miamibeachfl.gov>
Subject: 1910 Alton Road | Traffic Assessment Methodology

Good afternoon Firat:

To follow up on my voicemail from earlier today, we are getting started on the 1910 Alton Road project. Currently, a 6,364 sf office building is on the site. The site is proposed to be redeveloped to consist of a 4,000 sf art gallery (ITE LUC 580: Museum), one (1) multi-family unit (ITE LUC 221: Multi-Family Mid-Rise), and 8,000 sf of office (ITE LUC 710: General Office Building). The redevelopment will result in three (3) net new AM peak hour trips and four (4) net new PM peak hour trips.

The project will be valet only, so we propose to prepare a valet analysis, TDM strategies, and maneuverability analysis as part of the traffic assessment. I've attached the trip generation calculations and site plan. Please let us know if we need to meet to finalize the methodology or if email/over the phone will suffice.

I've been told the project is attempting to get on the May DRB agenda so the methodology date was 1/20 and the submittal date is 2/14. We can still meet the 2/14 submittal date if the City gives us the go ahead with methodology early next week.

Thank you
Adrian

Adrian K. Dabkowski, P.E., PTOE

Kimley-Horn | 600 North Pine Island Road, Suite 450, Plantation, FL 33324
Direct: 954-535-5144 | Mobile: 303-990-2761

Attachment C-1

Trip Generation

AM PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY AM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS								
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total						
						In	Out																								
GROUP 1	1	General Office Building	10	710	6,364	ksf	86%	14%	6	1	7	7.7%	1	5	1	6	0.0%	0	5	1	6	0.0%	0	5	1	6					
	2																														
	3																														
	4																														
	5																														
	6																														
	7																														
	8																														
	9																														
	10																														
	11																														
	12																														
	13																														
	14																														
	15																														
		ITE Land Use Code	Rate or Equation		Total:		6	1	7	7.7%	1	5	1	6	0.0%	0	5	1	6	0.0%	0	5	1	6							
		710	Y=1.16(X)																												

PROPOSED WEEKDAY AM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS								
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total						
						In	Out																								
GROUP 2	1	Museum	10	580	4	ksf	86%	14%	1	0	1	7.7%	0	1	0	1	0.0%	0	1	0	1	0.0%	0	1	0	1					
	2	Multifamily (Mid-Rise)	10	221	1	du	26%	74%	0	0	0	7.7%	0	0	0	0	0	0	0	0	0	0.0%	0	0	0	0					
	3	General Office Building	10	710	8	ksf	86%	14%	8	1	9	7.7%	1	7	1	8	0.0%	0	7	1	8	0.0%	0	7	1	8					
	4																														
	5																														
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	10																														
	11																														
	12																														
	13																														
	14																														
	15																														
		ITE Land Use Code	Rate or Equation		Total:		9	1	10	7.7%	1	8	1	9	0.0%	0	8	1	9	0.0%	0	8	1	9							
		580	Y=0.28(X)																												
		221	LN(Y) = 0.98*LN(X)+-0.98																												
		710	Y=1.16(X)																												

PM PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY PM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS									
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total							
						In	Out																									
GROUP 1	1	General Office Building	10	710	6.364	ksf	16%	84%	1	7	8	7.7%	1	1	6	7	0.0%	0	1	6	7	0.0%	0	1	6	7						
	2																															
	3																															
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	13																															
	14																															
	15																															
		ITE Land Use Code	Rate or Equation			Total:		1	7	8	7.7%	1	1	6	7	0.0%	0	1	6	7	0.0%	0	1	6	7							
		710	LN(Y) = 0.95*LN(X)+0.36																													

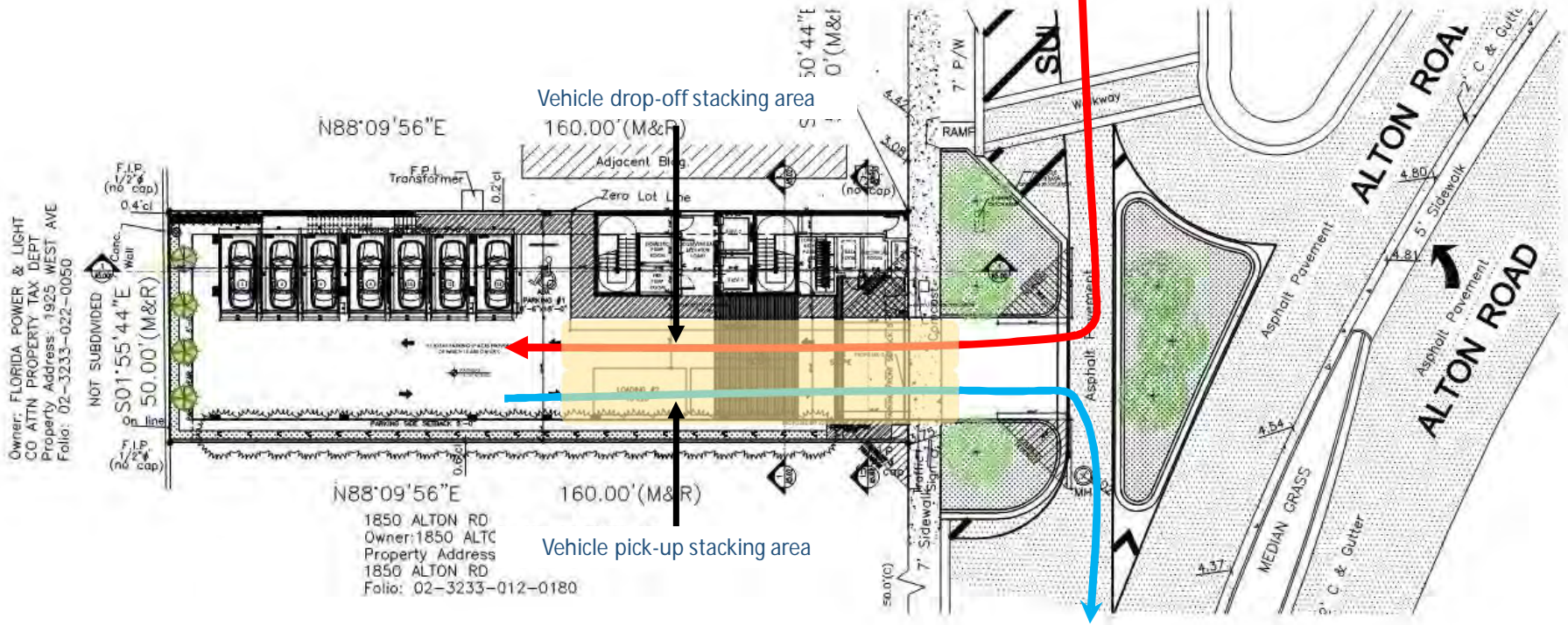
PROPOSED WEEKDAY PM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS									
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total							
						In	Out																									
GROUP 2	1	Museum	10	580	4	ksf	16%	84%	0	1	1	7.7%	0	0	1	1	0.0%	0	0	1	1	0.0%	0	0	1	1						
	2	Multifamily (Mid-Rise)	10	221	1	du	61%	39%	1	0	1	7.7%	0	1	0	1	0.0%	0	1	0	1	0.0%	0	1	0	1						
	3	General Office Building	10	710	8	ksf	16%	84%	2	8	10	7.7%	1	2	7	9	0.0%	0	2	7	9	0.0%	0	2	7	9						
	4																															
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	13																															
	14																															
	15																															
		ITE Land Use Code	Rate or Equation			Total:		3	9	12	7.7%	1	3	8	11	0.0%	0	3	8	11	0.0%	0	3	8	11							
		580	Y=0.18(X)																													
		221	LN(Y) = 0.96*LN(X)+-0.63																													
		710	LN(Y) = 0.95*LN(X)+0.36																													

Attachment D-1

Valet Analysis

Vehicle Routing



Owner: FLORIDA POWER & LIGHT
 CO ATTN PROPERTY TAX DEPT
 Property Address: 1925 WEST AVE
 Folio: 02-3233-022-0050

1850 ALTON RD
 Owner: 1850 ALTC
 Property Address
 1850 ALTON RD
 Folio: 02-3233-012-0180

Vehicle drop-off stacking area

Vehicle pick-up stacking area

Ingress Valet Route
 Egress Valet Route

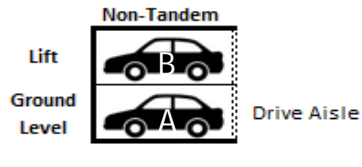


Figure 2
 Valet Routing
 1910 Alton Road
 Miami Beach, Florida

Mechanical Life Processing Scenarios

Vehicle Processing Scenarios

Mechanical Lift Layout



Vehicle A (non-tandem) - Drop-Off

1. Attendant drives onto lift	10
10 sec	

Vehicle A (non-tandem) - Pick-Up

1. Attendant drives off of lift	10
10 sec	

Vehicle B (non-tandem): No Vehicle A - Drop-Off

1. Attendant maneuvers in front of lift	10
2. Attendant exits vehicle to lower lift	5
3. Attendant lowers lift	20
4. Attendant re-enters vehicle and drives onto lift	15
5. Attendant exits vehicle	5
6. Attendant raises lift	30
85 sec	

Vehicle B (non-tandem): No Vehicle A - Pick-Up

1. Attendant lowers lift	20
2. Attendant enters vehicle and drives off of lift	15
3. Attendant exits vehicle to raise lift	5
4. Attendant raises lift	30
5. Attendant re-enters vehicle	5
75 sec	

Vehicle B (non-tandem): Vehicle A Parked - Drop-Off

1. Attendant exits Vehicle B	5
2. Attendant enters Vehicle A	5
3. Attendant moves Vehicle A to drive aisle	10
4. Attendant exits Vehicle A	5
5. Attendant lowers lift	20
6. Attendant re-enters Vehicle B and drives onto lift	15
7. Attendant exits Vehicle B	5
8. Attendant raises lift	30
9. Attendant re-enters Vehicle A and drives into parking space	15
10. Attendant exits Vehicle A	5
115 sec	

Vehicle B (non-tandem): Vehicle A Parked - Pick-Up

1. Attendant moves Vehicle A underneath lift to drive aisle	10
2. Attendant exits Vehicle A	5
3. Attendant lowers lift	20
4. Attendant enters Vehicle B and drives off of lift	15
5. Attendant exits Vehicle B to raise lift	5
6. Attendant raises lift	30
7. Attendant re-enters Vehicle A and drives into parking space	15
8. Attendant exits Vehicle A	5
9. Attendant re-enters Vehicle B	5
110 sec	

Average Drop-off Processing Time	70 sec
Average Pick-up Processing Time	65 sec



Parking Systems Atlantic, Inc.

Klaus Model G61 Vehicle lift Processing time:

- 7.5 HP Power Pack
- 12 Liters per Minute Valves
- Raising Lift Platform < 30 seconds
(With Vehicle)
- Lowering Lift Platform < 30 seconds
(With Vehicle)

When operating Klaus Model G61 Vehicle Lifts with 7.5 HP Power Pack and 12 Liters per Minute Valves, valet can expect the time required to raise platform (With Vehicle) to be no longer than 30 seconds and the time required to lower platform (With Vehicle) no longer than 30 seconds.



Bruce B. Roden Jr.
KLAUS Parking Systems Atlantic, Inc.
Vice President

Valet Travel Times

Valet Drop-off/Pick-Up Calculated Travel Time

Valet Parking Area Calculated Travel Time

VALET DROP-OFF			
VEHICLE TRAVEL TIME		VALET ATTENDANT TRAVEL TIME	
Travel Times (Assume 5 mph speed)		Travel Times (Assume 5 ft/s speed)	
To Valet Parking Area (In vehicle)			
Distance	Travel Time	Distance	Travel Time
0.02 miles	0.3 minutes	0.02 miles	0.4 minutes
Controlled Delay	0.5 Minutes		
Average Mechanical Lift Processing Time	1.2 Minutes		
Total Time	2.4 Minutes		

Valet Parking Area Calculated Travel Time

VALET PICK-UP			
VALET ATTENDANT TRAVEL TIME		VEHICLE TRAVEL TIME	
Travel Times (Assume 5 ft/s speed)		Travel Times (Assume 5 mph speed)	
To Valet Parking Area (Walk/Run)			
Distance	Travel Time	Distance	Travel Time
0.02 miles	0.4 minutes	0.02 miles	0.3 minutes
Controlled Delay	0.5 Minutes		
Average Mechanical Lift Processing Time	1.1 Minutes		
Total Time	2.3 Minutes		

Valet Analysis

Valet Drop-off Analysis

Arrival Rate

IN
8

 veh/hr

Service Rate

IN
2.40

 mins/veh

Service Time = mins/veh

Number of Valet Attendants (N) = 1
 Level of Confidence = 0.95
 Storage Provided On-Site = 3 vehicles
 Total Entering and Exiting Vehicles(q) = 8 veh/hr
 Service Capacity per N (60 mins/Service Rate) (Q) = 25.00 veh/hr/pos
 Average Service Rate (t) = 2.40 mins/veh
 rho (t/Q) = 0.320

Expected (avg.) number of vehicles in the system	E(m)=	0.15	
Expected (avg.) number of vehicles waiting in queue	E(n)=	0.47	
Mean time in the queue	E(w)=	1.13	mins
Mean time in system	E(t)=	3.53	mins

Proportion of customers who wait (P) (E(w) > 0)=		32.00%
Probability of a queue exceeding a length (M) P(x > M)=		5.00%

Queue length which is exceeded 5.00% of the times is equal to 0.4 vehicles

Valet Pick-up Analysis

Arrival Rate

OUT
8

 veh/hr

Service Rate

IN
2.30

 mins/veh

Service Time = mins/veh

Number of Valet Attendants (N) = 1

Level of Confidence = 0.95

Storage Provided On-Site = 3 vehicles

Total Entering and Exiting Vehicles(q) = 8 veh/hr

Service Capacity per N (60 mins/Service Rate) (Q) = 26.09 veh/hr/pos

Average Service Rate (t) = 2.30 mins/veh

rho (t/Q) = 0.307

Expected (avg.) number of vehicles in the system	E(m)=	0.14	
Expected (avg.) number of vehicles waiting in queue	E(n)=	0.44	
Mean time in the queue	E(w)=	1.02	mins
Mean time in system	E(t)=	3.32	mins

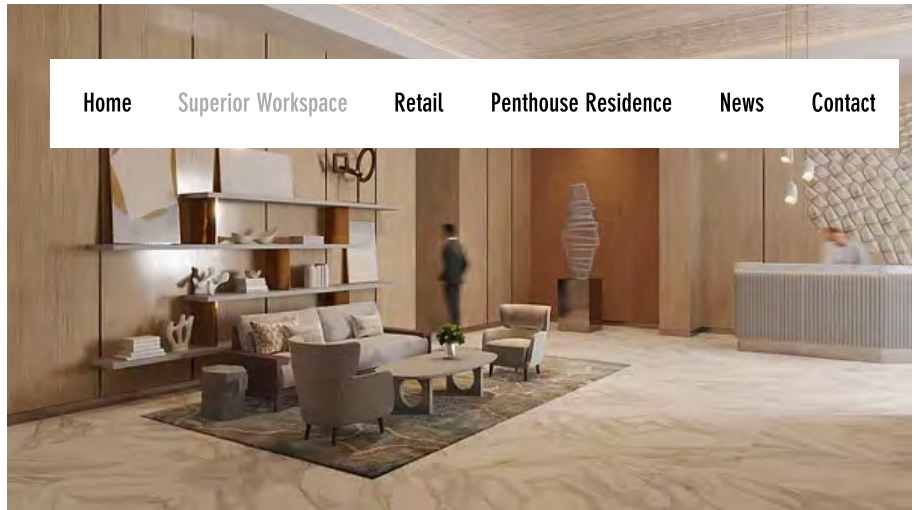
Proportion of customers who wait (P) (E(w) > 0) = 30.67%

Probability of a queue exceeding a length (M) P(x > M) = 5.00%

Queue length which is exceeded 5.00% of the times is equal to 0.3 vehicles



BUILDING DATA



PROJECT NAME	EIGHTEEN SUNSET
ADDRESS	1759 PURDY AVENUE
STORIES	FIVE
OFFICE SPACE	±19,330 RSF PER FLOOR TWO FLOORS OF CLASS A+ OFFICE
RETAIL SPACE	±17,000 RSF
RESIDENTIAL	1 PENTHOUSE UNIT + ROOFTOP POOL
PARKING	76 OFFICE PARKING SPACES
DEVELOPER	DECO CAPITAL GROUP
DESIGN ARCHITECT	DOMO Studio
EXEC ARCHITECT	BERMELLO AJAMIL & PARTNERS
INTERIOR DESIGN	MEYER DAVIS
OFFICE BROKERS	COLLIERS + CBRE
DELIVERY	SPRING 2023

With the refined quality of air and light, our office design boasts additional features that make Eighteen Sunset the healthiest work environment in Miami.

We are redefining the modern office.



THE
Residence
AT
EIGHTEEN SUNSET



ALEXANDER TEAM
at Douglas Elliman Real Estate

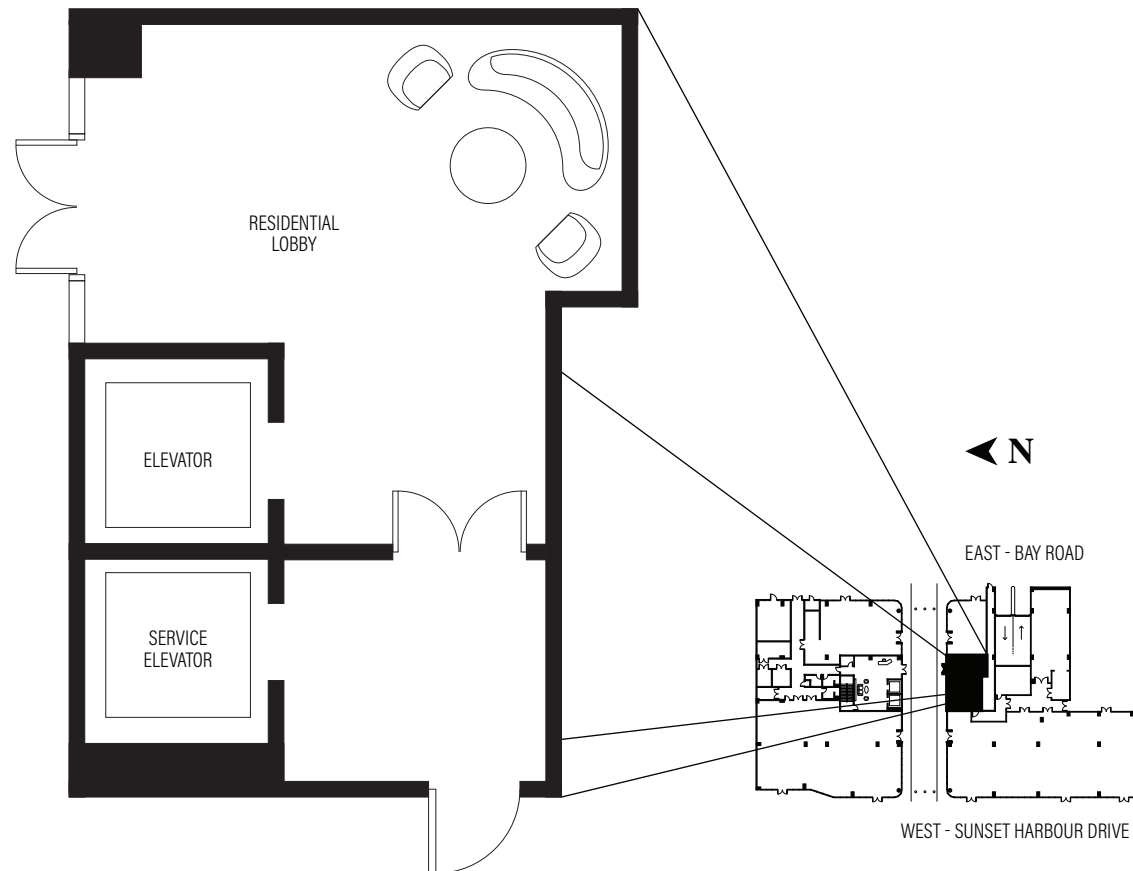
TOTAL

27,800 SQ. FT. APPROX. TOTAL AREA
13,357 SQ. FT. APPROX. INTERIOR AREA
14,487 SQ. FT. APPROX. OUTDOOR AREA

GROUND LEVEL

ATTENDED PRIVATE LOBBY AND LOUNGE

585 SQ. FT. APPROX. INTERIOR AREA



Eighteen Sunset - 22113

Proposed Uses

Proposed ITE Land Use Designation ¹	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
General Office Building <i>Land Use Code: 710</i>	38,660 SF	508	65	9	74	13	63	76
Strip Retail Plaza (<40k) <i>Land Use Code: 822</i>	17,000 SF	948	25	16	41	57	57	114
Rise) <i>Land Use Code: 221</i>	1 DU	4	0	0	0	0	0	0
Total Gross Trips		1,460	90	25	115	70	120	190
Other Modes of Transportation ³		9.8%	-8	-3	-11	-7	-12	-19
Internalization ²		AM 7.7%	-4	-4	-8	-5	-5	-10
		PM 5.8%						
Passby Retail (PM) ⁴		45%	0	0	0	-22	-22	-44
Net Proposed Trips			78	18	96	36	81	117

¹Based on ITE Trip Generation, 11th Edition.

²Based on US Census Tract 41.06.

³Based on ITE Trip Generation Handbook, 3rd Edition.

⁴ Based on two ITE studies the average pass-by rate for shopping centers <40k SF is 66%, a 45% reduction was used for a more conservative analysis.

AM Peak Hour Trip Generation and Internalization

Eighteen Sunset

Office Land Use 710 38,660 SF		Retail (<40k) Land Use 822 17,000 SF		Multifamily Housing (Mid-Rise) Land Use 221 1 DU																																												
In	Out	In	Out	In	Out																																											
65	9	25	16	0	0	115 ITE Trips																																										
-6	-1	-2	-2	0	0	-11 9.8% transit / pedestrian																																										
59	8	23	14	0	0	104																																										
UNBALANCED INTERNALIZATION																																																
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: right;">28%</td> <td style="width: 25%; text-align: center;">2</td> <td style="width: 25%; text-align: center;">2</td> <td style="width: 25%; text-align: left;">32%</td> <td style="width: 25%; text-align: center;">7</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td style="text-align: right;">4%</td> <td style="text-align: center;">2</td> <td style="text-align: center;">2</td> <td style="text-align: left;">29%</td> <td style="text-align: center;">4</td> <td style="text-align: center;">2</td> <td style="text-align: center;">2</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: right;">1%</td> <td style="width: 25%; text-align: center;">0</td> <td style="width: 25%; text-align: center;">0</td> <td style="width: 25%; text-align: left;">0%</td> <td style="width: 25%; text-align: center;">0</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td style="text-align: right;">3%</td> <td style="text-align: center;">2</td> <td style="text-align: center;">0</td> <td style="text-align: left;">2%</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">2%</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: right;">14%</td> <td style="width: 25%; text-align: center;">2</td> <td style="width: 25%; text-align: left;">2%</td> <td style="width: 25%; text-align: center;">0</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td style="text-align: right;">17%</td> <td style="text-align: center;">4</td> <td style="text-align: center;">0</td> <td style="text-align: left;">1%</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> </table>							28%	2	2	32%	7			4%	2	2	29%	4	2	2	1%	0	0	0%	0			3%	2	0	2%	0	0	2%		14%	2	2%	0			17%	4	0	1%	0	0	0
28%	2	2	32%	7																																												
4%	2	2	29%	4	2	2																																										
1%	0	0	0%	0																																												
3%	2	0	2%	0	0	2%																																										
	14%	2	2%	0																																												
17%	4	0	1%	0	0	0																																										
Office		Retail (<40k)		Multifamily Housing (Mid-R)																																												
In	Out	In	Out	In	Out																																											
59	8	23	14	0	0	104 Vehicle Trips																																										
BALANCED INTERNALIZATION																																																
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">-2</td> <td style="width: 25%; text-align: center;">-2</td> <td style="width: 25%; text-align: center;">-2</td> <td style="width: 25%; text-align: center;">-2</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">0</td> <td style="width: 25%; text-align: center;">0</td> <td style="width: 25%; text-align: center;">0</td> <td style="width: 25%; text-align: center;">0</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;">0</td> <td style="width: 25%; text-align: center;">0</td> <td style="width: 25%; text-align: center;">0</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>							-2	-2	-2	-2				0	0	0	0					0	0	0																								
-2	-2	-2	-2																																													
0	0	0	0																																													
	0	0	0																																													
-2	-2	-2	-2	0	0	-8 Internal																																										
57	6	21	12	0	0	96 External Trips																																										
	6.0%		10.8%		#DIV/0!	7.7% % Internal																																										
				0	0	0 -45% Passby																																										
57	6	21	12	0	0	96 Net New External Trips																																										

PM Peak Hour Trip Generation and Internalization

Eighteen Sunset

Office Land Use 710 38,660 SF		Retail (<40k) Land Use 822 17,000 SF		Multifamily Housing (Mid-Rise) Land Use 221 1 DU		
In	Out	In	Out	In	Out	
13	63	57	57	0	0	190 ITE Trips
-1	-6	-6	-6	0	0	-19 9.8% transit / pedestrian
12	57	51	51	0	0	171
UNBALANCED INTERNALIZATION						
<p>Office: In 11 (20%), Out 4 (31%) Retail: In 4 (8%), Out 1 (2%) Multifamily: In 0 (0%), Out 0 (0%)</p>						
<p>Office: In 0 (0%), Out 7 (57%) Retail: In 0 (0%), Out 0 (0%) Multifamily: In 0 (0%), Out 0 (0%)</p>						
<p>Office: In 5 (10%), Out 0 (0%) Retail: In 13 (26%), Out 0 (0%) Multifamily: In 0 (0%), Out 0 (0%)</p>						
Office		Retail (<40k)		Multifamily Housing (Mid-R)		
In	Out	In	Out	In	Out	
12	57	51	51	0	0	171 Vehicle Trips
BALANCED INTERNALIZATION						
<p>Office: In -1, Out -4 Retail: In -4, Out -1 Multifamily: In 0, Out 0</p>						
<p>Office: In 0, Out 0 Retail: In 0, Out 0 Multifamily: In 0, Out 0</p>						
<p>Office: In 0, Out 0 Retail: In 0, Out 0 Multifamily: In 0, Out 0</p>						
-1	-4	-4	-1	0	0	-10 Internal
11	53 7.3%	47	50 4.9%	0	0	161 External Trips 5.8% % Internal
11	53	25	28	0	0	-44 -45% Passby
11	53	25	28	0	0	117 Net New External Trips

Scenario - 4

Scenario Name: Eighteen Sunset Com Dev

User Group:

Dev. phase: 1

No. of Years to Project 0

Traffic :

Analyst Note:

Warning: The time periods among the land uses do not appear to match.

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
710 - General Office Building	General	1000 Sq. Ft. GFA	38.66	Weekday	Best Fit (LOG)	254	254	508
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$\ln(T) = 0.87\ln(X) + 3.05$	50%	50%	
710(1) - General Office Building	General	1000 Sq. Ft. GFA	38.66	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	65	9	74
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$\ln(T) = 0.86\ln(X) + 1.16$	88%	12%	
710(2) - General Office Building	General	1000 Sq. Ft. GFA	38.66	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	13	63	76
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$\ln(T) = 0.83\ln(X) + 1.29$	17%	83%	
822 - Strip Retail Plaza (<40k)	General	1000 Sq. Ft. GLA	17	Weekday	Best Fit (LIN)	474	474	948
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$T = 42.20(X) + 229.68$	50%	50%	
822(1) - Strip Retail Plaza (<40k)	General	1000 Sq. Ft. GLA	17	Weekday, Peak Hour of Adjacent Street	Best Fit (LOG)	25	16	41
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$\ln(T) = 0.66\ln(X) + 1.84$	60%	40%	
822(2) - Strip Retail Plaza (<40k)	General	1000 Sq. Ft. GLA	17	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	57	57	114
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$\ln(T) = 0.71\ln(X) + 2.72$	50%	50%	
221 - Multifamily Housing (Mid-Rise) - Not Close	General	Dwelling Units	1	Weekday	Average	2	2	4
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				4.54	50%	50%	
221(1) - Multifamily Housing (Mid-Rise) - Not	General	Dwelling Units	1	Weekday, Peak Hour of Adjacent Street Traffic,	Average	0	0	0
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				0.37	23%	77%	
221(2) - Multifamily Housing (Mid-Rise) - Not	General	Dwelling Units	1	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LIN)	0	0	0
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$T = 0.39(X) + 0.34$	61%	39%	

COMMUTING CHARACTERISTICS BY SEX



Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Census Tract 41.06, Miami-Dade County, Florida

Label	Total	Male	Female
	Estimate	Estimate	Estimate
✓ Workers 16 years and over	1,493	987	506
✓ MEANS OF TRANSPORTATION TO WORK			
✓ Car, truck, or van	58.5%	55.6%	64.2%
Drove alone	55.7%	52.6%	61.7%
✓ Carpooled	2.9%	3.0%	2.6%
In 2-person carpool	2.9%	3.0%	2.6%
In 3-person carpool	0.0%	0.0%	0.0%
In 4-or-more person carpool	0.0%	0.0%	0.0%
Workers per car, truck, or van	1.02	1.03	1.02
Public transportation (excluding taxicab)	0.7%	0.0%	2.0%
Walked	3.7%	5.6%	0.0%
Bicycle	5.4%	4.8%	6.5%
Taxicab, motorcycle, or other means	6.6%	4.7%	10.3%
Worked from home	25.2%	29.4%	17.0%
> PLACE OF WORK			
> Workers 16 years and over who did not work from home	1,117	697	420
> VEHICLES AVAILABLE			
> PERCENT ALLOCATED			

Table Notes

COMMUTING CHARACTERISTICS BY SEX

Survey/Program: American Community Survey

Year: 2020

Estimates: 5-Year

Table ID: S0801

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, for 2020, the 2020 Census provides the official counts of the population and housing units for the nation, states, counties, cities, and towns. For 2016 to 2019, the Population Estimates Program provides estimates of the population for the nation, states, counties, cities, and towns and intercensal housing unit estimates for the nation, states, and counties.

Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

When information is missing or inconsistent, the Census Bureau logically assigns an acceptable value using the response to a related question or questions. If a logical assignment is not possible, data are filled using a statistical process called allocation, which uses a similar individual or household to provide a donor value. The "Allocated" section is the number of respondents who received an allocated value for a particular subject.

2019 ACS data products include updates to several categories of the existing means of transportation question. For more information, see: [Change to Means of Transportation](#).

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

The 2016-2020 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

-

The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution.

N

The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.

(X)

The estimate or margin of error is not applicable or not available.

median-

The median falls in the lowest interval of an open-ended distribution (for example "2,500-")

median+

The median falls in the highest interval of an open-ended distribution (for example "250,000+").

**

The margin of error could not be computed because there were an insufficient number of sample observations.

The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.

A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

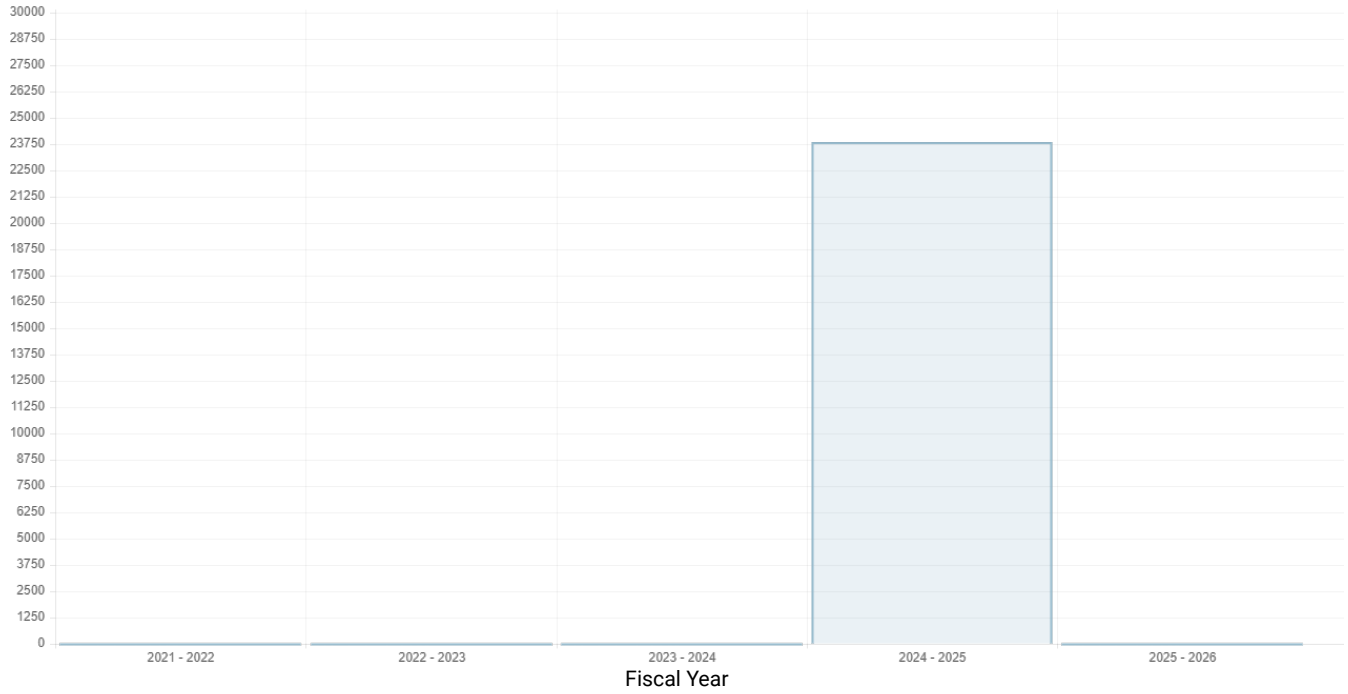
Project Type: Arterial/Collector Road
MPO Project No.: DT4291931
Type of Work: FLEXIBLE PAVEMENT RECONSTRUCT.
TIP Year: 2022
Construction Year: 2025
From: FROM MICHIGAN AVE
To: TO SOUTH OF ED SULLIVAN DR / 43 ST
Agency: FL Dept. of Transportation
Management Agency: FDOT
Agency Project No: 4291931
Status:
Contact Person:
Contact Email:
Contact Phone:
Description:

Funding Information \$(thousands)

Project Phase	Funding	2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026
CONSTRUCTION	DDR	\$0	\$0	\$0	\$19,965	\$0
CONSTRUCTION	DIH	\$0	\$0	\$0	\$100	\$0
CONSTRUCTION	DS	\$0	\$0	\$0	\$126	\$0
CONSTRUCTION	LF	\$0	\$0	\$0	\$126	\$0
CONSTRUCTION	SA	\$0	\$0	\$0	\$531	\$0
ENVIRONMENTAL	DS	\$0	\$0	\$0	\$0	\$0
PRELIMINARY ENGINEERING	DDR	\$0	\$0	\$0	\$0	\$0
PRELIMINARY ENGINEERING	DIH	\$0	\$0	\$0	\$0	\$0
PRELIMINARY ENGINEERING	DS	\$0	\$0	\$0	\$0	\$0
PRELIMINARY ENGINEERING	DS	\$0	\$0	\$0	\$0	\$0
PRELIMINARY	LF	\$0	\$0	\$0	\$0	\$0

Project Phase	Funding	2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026
ENGINEERING						
PRELIMINARY ENGINEERING	SA	\$0	\$0	\$0	\$0	\$0
PRELIMINARY ENGINEERING	SU	\$0	\$0	\$0	\$0	\$0
RIGHT OF WAY	DIH	\$0	\$0	\$0	\$0	\$0
RIGHT OF WAY	DS	\$0	\$0	\$0	\$0	\$0
RAILROAD & UTILITIES	LF	\$0	\$0	\$0	\$3,000	\$0

Funding Chart \$(thousands)

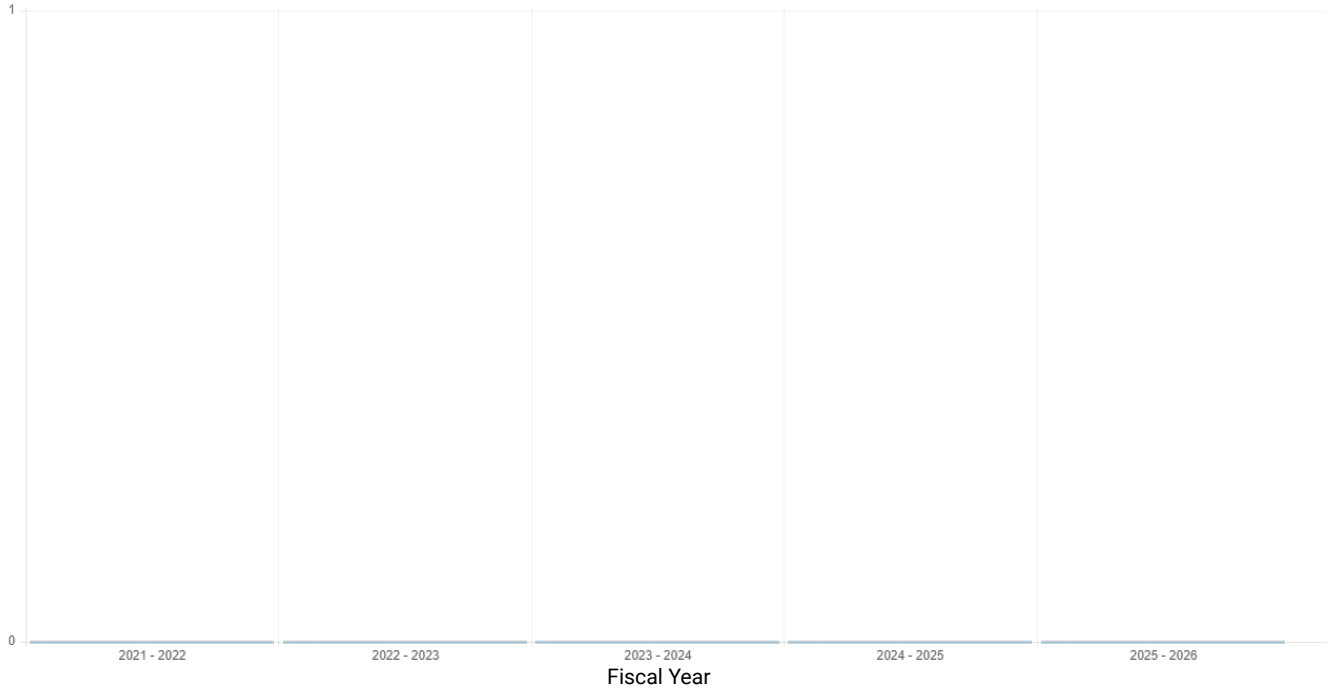


Project Type: Arterial/Collector Road
MPO Project No.: DT4291932
Type of Work: INTERSECTION IMPROVEMENT
TIP Year: 2022
Construction Year: 2022
From: AT MICHIGAN AVE
To:
Agency: FL Dept. of Transportation
Management Agency: FDOT
Agency Project No: 4291932
Status:
Contact Person:
Contact Email:
Contact Phone:
Description:

Funding Information \$(thousands)

Project Phase	Funding	2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026
CONSTRUCTION		\$0	\$0	\$0	\$0	\$0
ALTERNATIVE CONTRACTING INCENTIVES		\$0	\$0	\$0	\$0	\$0
PRELIMINARY ENGINEERING		\$0	\$0	\$0	\$0	\$0
RAILROAD & UTILITIES		\$0	\$0	\$0	\$0	\$0

Funding Chart \$(thousands)



Project Photos

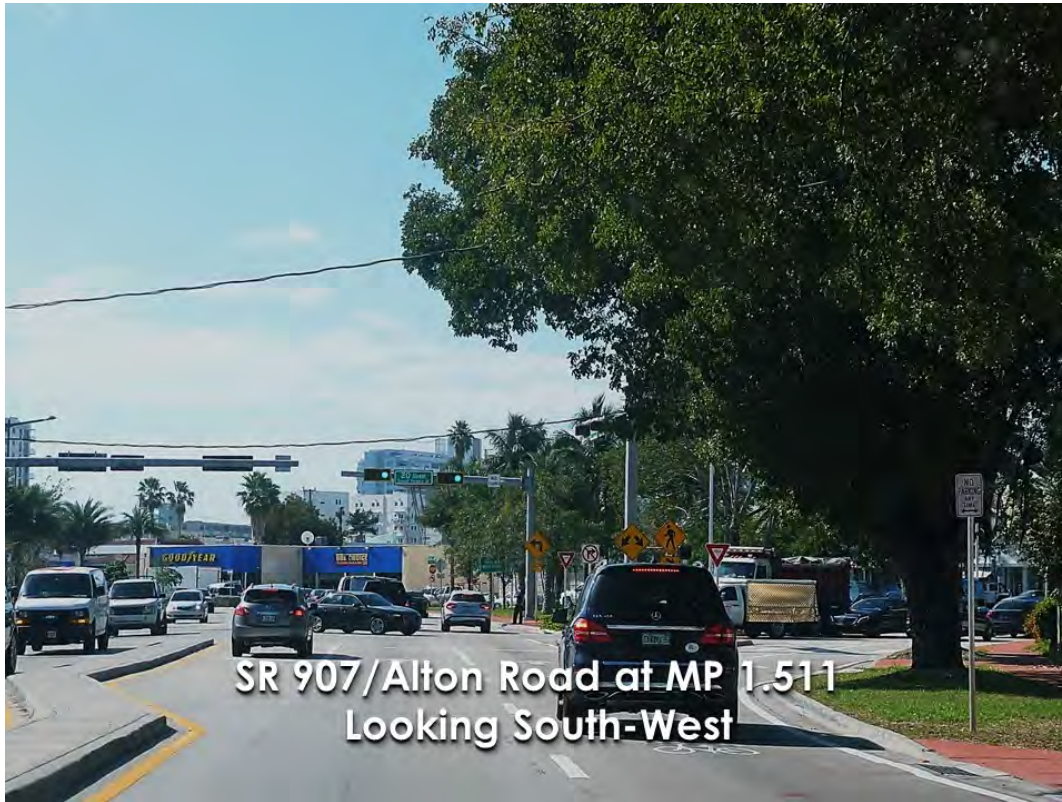


2. SR 907/ALTON ROAD AT MICHIGAN AVENUE (FM No. 4291932)

From: MP 1.511 To: MP 1.658
Intersection Improvement









MIAMI BEACH HIGH SCHOOL PEDESTRIAN ENHANCEMENTS

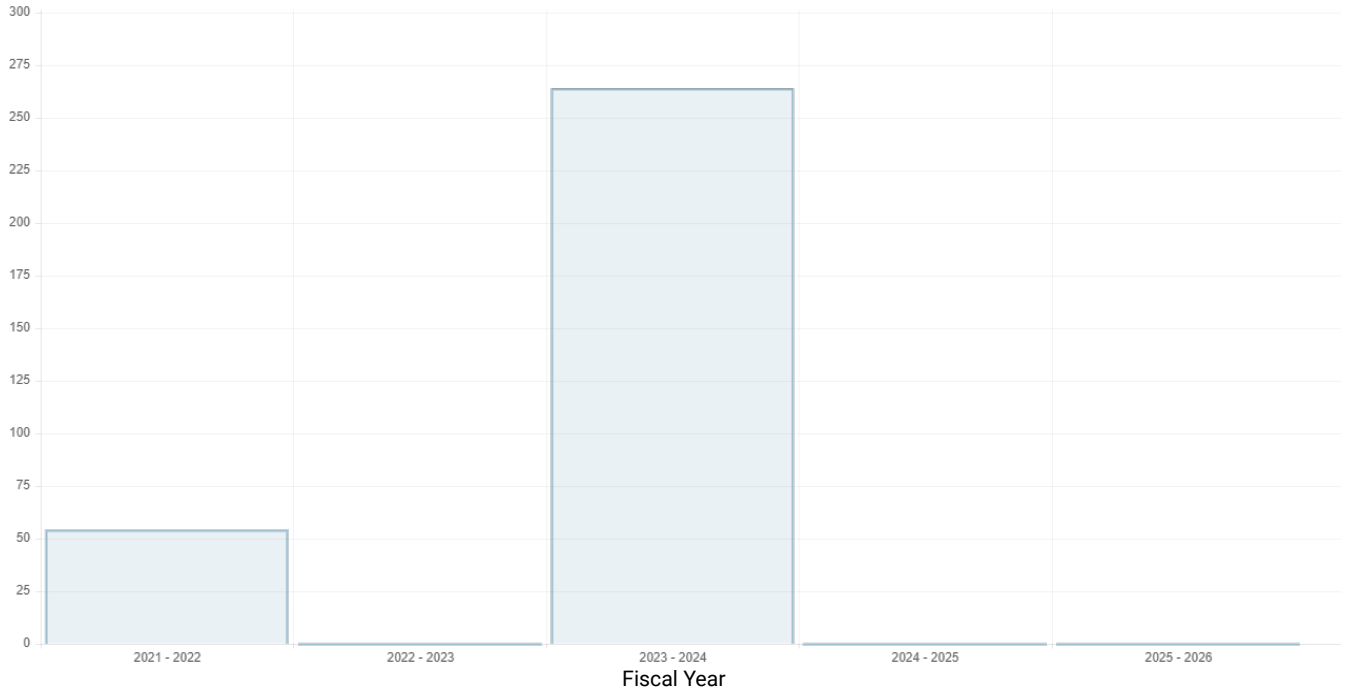
2022 Transportation Improvement Program

Project Type: Pedestrian/Bicycle
MPO Project No.: DT4441961
Type of Work: PEDESTRIAN SAFETY IMPROVEMENT
TIP Year: 2022
Construction Year: 2024
From:
To:
Agency: FL Dept. of Transportation
Management Agency: FDOT
Agency Project No: 4441961
Status:
Contact Person:
Contact Email:
Contact Phone:
Description:

Funding Information \$(thousands)

Project Phase	Funding	2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026
CONSTRUCTION	LF	\$0	\$0	\$40	\$0	\$0
CONSTRUCTION	SA	\$0	\$0	\$5	\$0	\$0
CONSTRUCTION	TALU	\$0	\$0	\$219	\$0	\$0
PRELIMINARY ENGINEERING	DIH	\$5	\$0	\$0	\$0	\$0
PRELIMINARY ENGINEERING	LF	\$49	\$0	\$0	\$0	\$0

Funding Chart \$(thousands)



CITY OF MIAMI BEACH - 17TH STREET BICYCLE LANE PROJECT

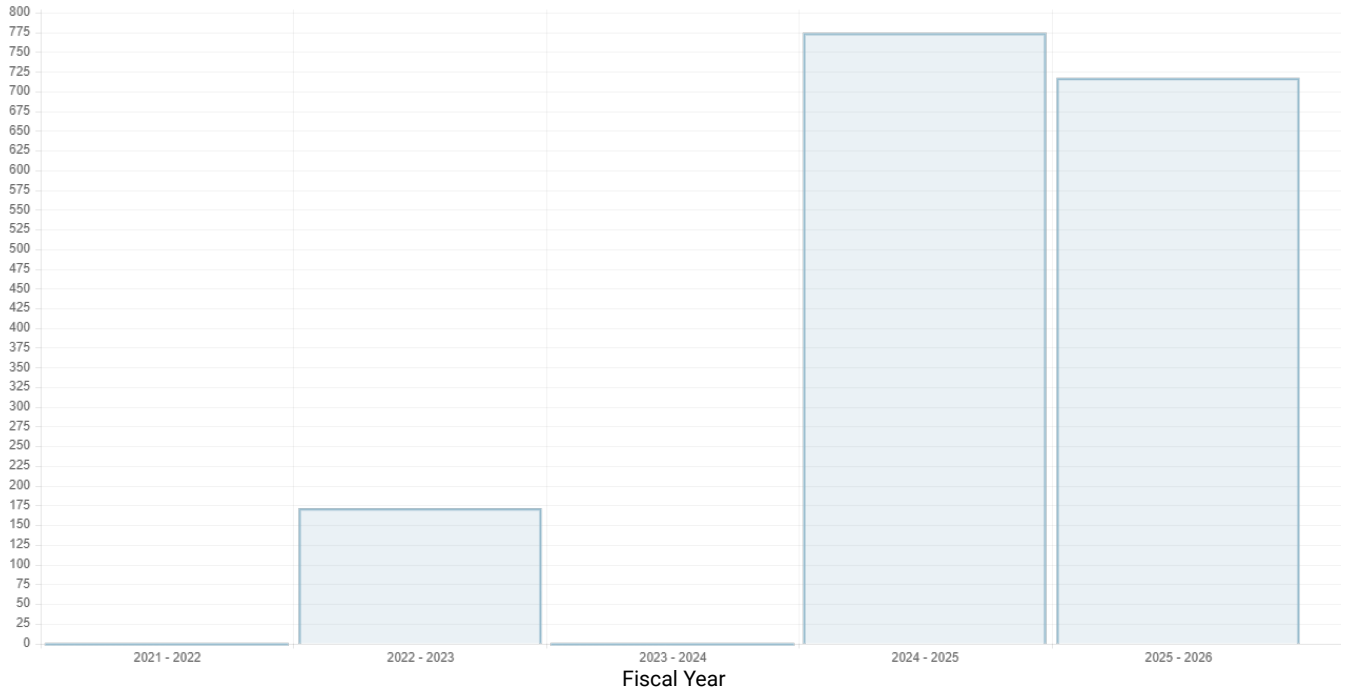
2022 Transportation Improvement Program

Project Type: Pedestrian/Bicycle
MPO Project No.: DT4479841
Type of Work: BIKE LANE/SIDEWALK
TIP Year: 2022
Construction Year: 2025
From:
To:
Agency: FL Dept. of Transportation
Management Agency: FDOT
Agency Project No: 4479841
Status:
Contact Person:
Contact Email:
Contact Phone:
Description:

Funding Information \$(thousands)

Project Phase	Funding	2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026
CONSTRUCTION	LF	\$0	\$0	\$0	\$159	\$0
CONSTRUCTION	SA	\$0	\$0	\$0	\$5	\$0
CONSTRUCTION	SU	\$0	\$0	\$0	\$0	\$327
CONSTRUCTION	TALT	\$0	\$0	\$0	\$506	\$390
CONSTRUCTION	TALU	\$0	\$0	\$0	\$104	\$0
PRELIMINARY ENGINEERING	DIH	\$0	\$5	\$0	\$0	\$0
PRELIMINARY ENGINEERING	LF	\$0	\$166	\$0	\$0	\$0

Funding Chart \$(thousands)



Project Type: Arterial/Collector Road
MPO Project No.: PW000716
Type of Work: Study
TIP Year: 2022
Construction Year:
From: Bayshore Drive
To: Purdy Avenue
Agency: Miami-Dade Dept. of Transportation and Public Works
Management Agency: Miami-Dade Dept. of Transportation and Public Works
Agency Project No: 716
Status:
Contact Person:
Contact Email:
Contact Phone:
Description:
Study. Prior Years' Funding as follows: \$50,000 for PE.

No Funding Information

Project Photos





Project Type: Transit
MPO Project No.: TA201925
Type of Work: Transit Improvement
TIP Year: 2022
Construction Year: 2022
From:
To:
Agency: Miami-Dade Dept. of Transportation and Public Works (Transit)
Management Agency: Miami-Dade Dept. of Transportation and Public Works (Transit)
Agency Project No: 201925
Status:
Contact Person:
Contact Email:
Contact Phone:

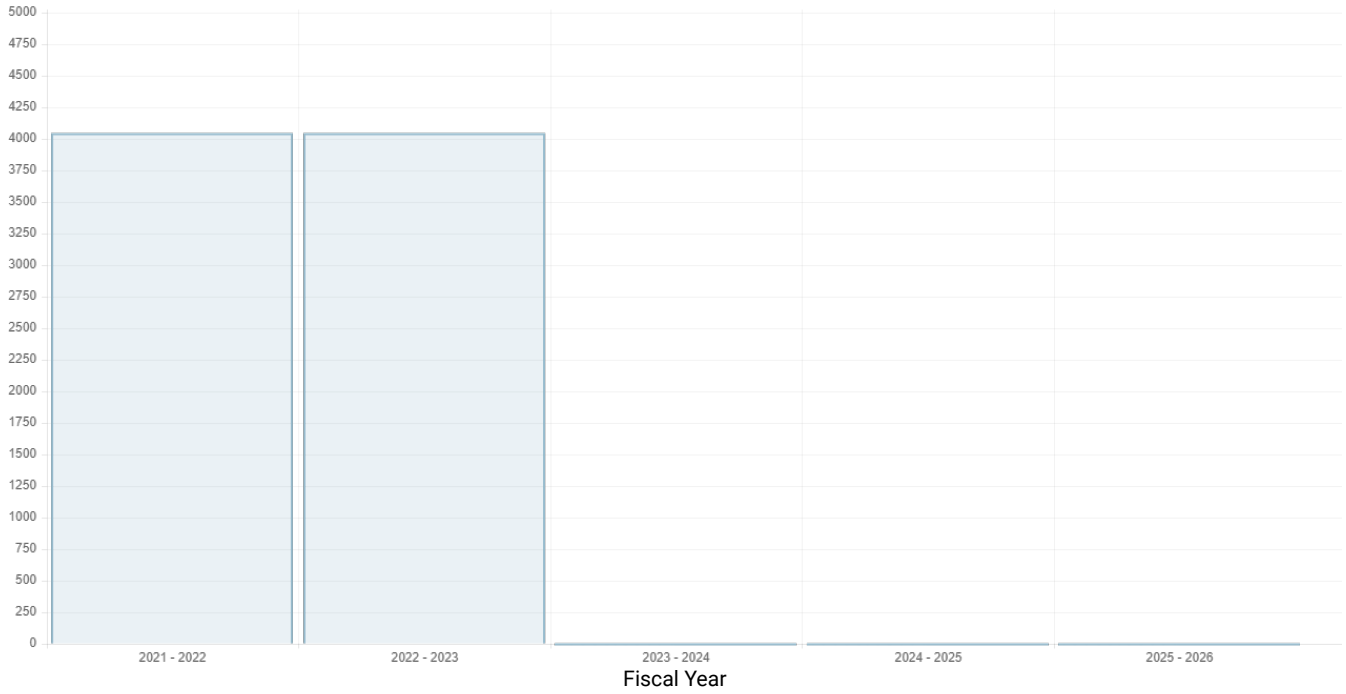
Description:

Design and construction of transit-only lanes along Washington Ave on Miami Beach, from 5th Ave to Dade Blvd. Project includes exclusive bus lanes, signing, new thermoplastic markings, colored asphalt, passenger shelter, bulb outs, minor drainage improvements and updated traffic controls.

Funding Information \$(thousands)

Project Phase	Funding	2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026
CAPITAL	PTP	\$4,046	\$4,046	\$0	\$0	\$0

Funding Chart \$(thousands)

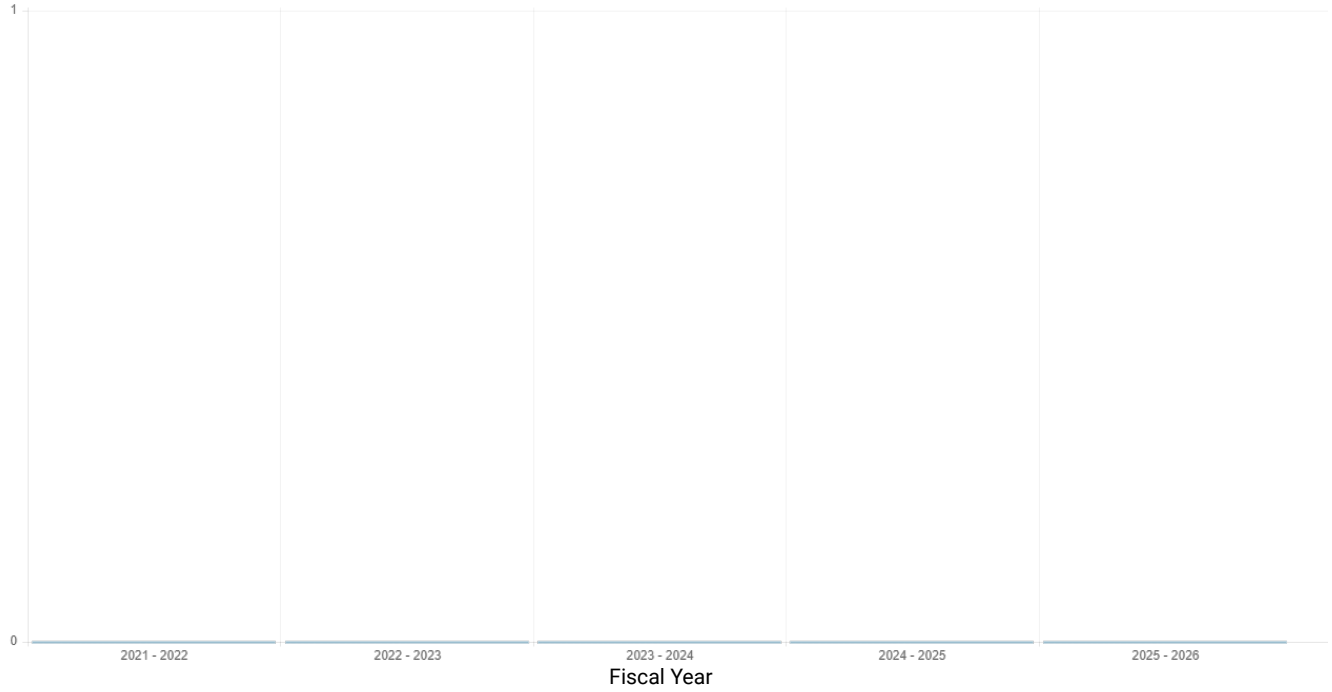


Project Type: Transit
MPO Project No.: TA4445421
Type of Work: TRANSIT SERVICE DEMONSTRATION
TIP Year: 2022
Construction Year:
From:
To:
Agency: FL Dept. of Transportation
Management Agency: FDOT
Agency Project No: 4445421
Status:
Contact Person:
Contact Email:
Contact Phone:
Description:

Funding Information \$(thousands)

Project Phase	Funding	2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026
OPERATIONS		\$0	\$0	\$0	\$0	\$0
OPERATIONS		\$0	\$0	\$0	\$0	\$0

Funding Chart \$(thousands)



Project Details - MDT135

Field Name	Field Value
LRTP Project Code	MDT135
Facility	Beach Corridor
Limit From	Midtown Miami and Downtown
Limit To	Miami Beach Convention Center
Description	Rapid Transit connecting Midtown / Miami CBD to Miami Beach Convention Center area.
LRTP Year	2045
Project Type	Transit
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$111.186M
Total Capital Cost	\$897M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$2.973M	\$M	\$M	\$111.186M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00123

Field Name	Field Value
LRTP Project Code	NW00123
Facility	Meridian Ave
Limit From	16th Street
Limit To	19th Street
Description	On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$22.965M
Total Capital Cost	\$11.203M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$2.355M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$20.61M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00126

Field Name	Field Value
LRTP Project Code	NW00126
Facility	Pennsylvania Ave
Limit From	Washington Ave
Limit To	17th Street
Description	On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$59.062M
Total Capital Cost	\$28.811M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$6.058M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$53.005M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00129

Field Name	Field Value
LRTP Project Code	NW00129
Facility	15th Street
Limit From	Washington Ave
Limit To	SR 907 / Alton Road
Description	On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$37.67M
Total Capital Cost	\$18.376M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$3.864M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$33.807M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00133

Field Name	Field Value
LRTP Project Code	NW00133
Facility	Meridian Ave
Limit From	1st Street
Limit To	16th Street
Description	On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$74.931M
Total Capital Cost	\$36.552M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$7.685M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$67.245M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00141

Field Name	Field Value
LRTP Project Code	NW00141
Facility	Lenox Ave
Limit From	Lincoln Lane N.
Limit To	17th Street
Description	On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$3.754M
Total Capital Cost	\$1.831M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$0.385M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$3.369M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00145

Field Name	Field Value
LRTP Project Code	NW00145
Facility	17th Street
Limit From	Washington Ave
Limit To	West Ave
Description	On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$52.754M
Total Capital Cost	\$25.734M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$5.411M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$47.343M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00149

Field Name	Field Value
LRTP Project Code	NW00149
Facility	Convention Center Drive
Limit From	17th Street
Limit To	Dade Boulevard
Description	Dedicated On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$267.787M
Total Capital Cost	\$130.628M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$27.465M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$240.322M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00151

Field Name	Field Value
LRTP Project Code	NW00151
Facility	19th Street / Dade Boulevard
Limit From	Meridian Ave
Limit To	23rd Street
Description	Off-Road Bicycle and Pedestrian Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$514.034M
Total Capital Cost	\$250.748M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$70.901M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$443.133M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00152

Field Name	Field Value
LRTP Project Code	NW00152
Facility	Drexel Ave
Limit From	12th Street
Limit To	14th Street
Description	On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$9.692M
Total Capital Cost	\$4.728M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$0.994M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$8.698M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00154

Field Name	Field Value
LRTP Project Code	NW00154
Facility	Espanola Way
Limit From	SR A1A / Collins Ave
Limit To	Jefferson Ave
Description	On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$24.641M
Total Capital Cost	\$12.02M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$2.527M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$22.114M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00155

Field Name	Field Value
LRTP Project Code	NW00155
Facility	13th Street
Limit From	Beachwalk
Limit To	Meridian Ave
Description	On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$26.072M
Total Capital Cost	\$12.718M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$2.674M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$23.398M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00156

Field Name	Field Value
LRTP Project Code	NW00156
Facility	Lincoln Lane N
Limit From	Washington Ave
Limit To	Meridian Ave
Description	On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$16.633M
Total Capital Cost	\$8.114M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$1.706M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$14.927M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

Project Details - NW00157

Field Name	Field Value
LRTP Project Code	NW00157
Facility	Lincoln Lane N
Limit From	Meridian Ave
Limit To	Lenox Ave
Description	On-Road Bicycle Facility Improvement
LRTP Year	2045
Project Type	Bicycle/Pedestrian Improvements
Agency Name	Miami-Dade Dept. of Transportation and Public Works
Purpose	
Last Approved Date	
Last Approved User Name	
Last Amended Date	
Last Amended User Name	
Project Costs Funded	\$12.165M
Total Capital Cost	\$5.934M

Priority Data

	P1 2020-2025(Y-O-E\$)	P2 2026-2030(Y-O-E\$)	P3 2031-2035(Y-O-E\$)	P4 2036-2045(Y-O-E\$)
Preliminary Engineering	\$M	\$M	\$M	\$1.248M
Right of Way	\$M	\$M	\$M	\$M
Construction	\$M	\$M	\$M	\$10.917M
Operations and Maintenance	\$M	\$M	\$M	\$M
Capital	\$M	\$M	\$M	\$M

TRANSPORTATION MASTER PLAN FINAL REPORT



MIAMI BEACH

City of Miami Beach Mayor and Commissioners

Mayor Philip Levine
Commissioner John Elizabeth Alemán
Commissioner Ricky Arriola
Commissioner Michael Grieco
Commissioner Joy Malakoff
Commissioner Kristen Rosen Gonzalez
Commissioner Micky Steinberg

City of Miami Beach Management Team

Jimmy L. Morales, City Manager
Kathie G. Brooks, Assistant City Manager
Jose R. Gonzalez, P.E., Transportation Director
Josiel Ferrer-Diaz, E.I., Transportation Manager
Milosh Majstorovic, M.S.C.E., Transit Operations Supervisor
Xavier R. Falconi, P.E., Bicycle & Pedestrian Coordinator

PROJECT NUMBER	PROJECT NAME	CITY AREA	PROJECT TYPE	FROM	TO	PROJECT LENGTH (MILES)	PROJECT DESCRIPTION	PURPOSE & NEED
3	West Avenue Protected Bicycle Lanes	South	Bike/Ped	6th Street	20th Street	1.3	Protected/buffered bicycle lanes (Lane repurposing), Enhanced crosswalks	West Avenue requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
4	73rd Street One Way Protected Bicycle Lanes	North	Bike/Ped	Dickens Avenue	Atlantic Trail	0.35	Protected/buffered bicycle lanes (Lane repurposing), Enhanced crosswalks	73rd Street requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
5	72nd Street One Way Protected Bicycle Lanes	North	Bike/Ped	Dickens Avenue	Collins Avenue	0.28	Protected/buffered bicycle lanes (Lane repurposing), Enhanced crosswalks	72 nd Street requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.

PROJECT NUMBER	PROJECT NAME	CITY AREA	PROJECT TYPE	FROM	TO	PROJECT LENGTH (MILES)	PROJECT DESCRIPTION	PURPOSE & NEED
6	Byron Avenue Protected Bicycle Lanes/Neighborhood Greenway	North	Bike/Ped	73 rd Street	Hawthorne Avenue	0.56	Protected/buffered bicycle lanes (<i>Lane repurposing</i>) from 73 rd Street to 75 th Street. Neighborhood Greenway from 75 th Street to Hawthorne Avenue. Enhanced crosswalks	Byron Avenue requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
7	North Bay Road Neighborhood Greenway (Including SR 907/Alton Road connecting bridge over Surprise Waterway)	Middle	Bike/Ped	Dade Boulevard	La Gorce Drive	4.6	Neighborhood Greenway(<i>Boulevard Markers and Traffic Calming</i>) Enhanced crosswalks	North Bay Road requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
8	SR 907 / Alton Road and 17th Street Intersection Improvements	South	Bike/Ped	N/A	N/A	N/A	Review Geometry of the intersection for the addition of an additional left turn lane.	Improved vehicular operations at the Intersection of SR 907 / Alton Road AND 17th Street

PROJECT NUMBER	PROJECT NAME	CITY AREA	PROJECT TYPE	FROM	TO	PROJECT LENGTH (MILES)	PROJECT DESCRIPTION	PURPOSE & NEED
9	51 st Street Green Bicycle Lanes	Middle	Bike/Ped	Alton Road	Pine Tree Drive	0.4	Enhanced (green) Bicycle Lanes	51 st Street requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
10	63 rd Street: Feasibility Study for Bicycle Alternatives	Middle	Multimodal	Alton Road	Indian Creek Drive	0.4	Multimodal Feasibility Analysis for bicycle and transit alternatives consistent with the Bicycle Pedestrian Master Plan	63 rd Street requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
11	SR 907 Bicycle Alternatives Analysis and Implementation	Middle	Bike/Ped	Michigan Avenue	Chase Avenue	0.93	Analysis and implementation of Separated or Protected Bicycle Facilities adjacent to the golf course	Alton Road requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.

PROJECT NUMBER	PROJECT NAME	CITY AREA	PROJECT TYPE	FROM	TO	PROJECT LENGTH (MILES)	PROJECT DESCRIPTION	PURPOSE & NEED
12	Dade Boulevard Shared Use Path + Road Diet	South	Bike/Ped	17th Street	Pine Tree Drive	1	Feasibility Study and Implementation of Shared Use Path Adjacent to Collins Canal with potential road diet on the eastbound approach between SR 907/Alton Road and Michigan Avenue	Dade Boulevard requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
13	Euclid Avenue Protected Bicycle Lanes	South	Bike/Ped	2 nd Avenue	16 th Street	1.15	Protected Bicycle Lanes from 5 th Street to 16 th Street. Neighborhood Greenway from 3 rd Street to 5 th Street.	Dade Boulevard requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
14	Meridian Avenue Bicycle Facilities	South	Bike/Ped/ Safety/ Capacity	16 th Street	Dade Boulevard	0.47	Phase I of the Project includes a geometric feasibility analysis for protected bicycle lanes. The analysis also includes a capacity analysis of the Meridian Avenue and 17 th Street Intersection (Priority 1A). Phase II of the project includes implementation based on the results of Phase I.	Meridian Avenue requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.

PROJECT NUMBER	PROJECT NAME	CITY AREA	PROJECT TYPE	FROM	TO	PROJECT LENGTH (MILES)	PROJECT DESCRIPTION	PURPOSE & NEED
13	Lincoln Lane North Bicycle Connection/ Neighborhood Greenway	South	Bike/Ped	Alton Road	Washington Avenue	0.57	Exploring the various typical sections of the alleyway to create an exclusive bicycle lane or Neighborhood Greenways.	Lincoln Lane North requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
14	Fairway Drive Shared-Use Path	North	Bike/Ped	Biarritz Drive	Bay Drive	1.10	Shared-Use Path adjacent to the golf course.	Fairway Drive requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.

PROJECT NUMBER	PROJECT NAME	CITY AREA	PROJECT TYPE	FROM	TO	PROJECT LENGTH (MILES)	PROJECT DESCRIPTION	PURPOSE & NEED
28	SR A1A/ Indian Creek Drive Protected Bicycle Lanes	North	Bike/Ped	Abbott Avenue	Dickens Avenue	0.33	Protected Bicycle Lanes (Lane repurposing and/or roadway widening)	That section of Indian Creek Drive requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
29	15 th Street Neighborhood Greenway	South	Bike/Ped	Washington Avenue	West Avenue	0.66	Neighborhood Greenway (Bicycle Boulevard Markers) Enhanced crosswalks	15 th Street requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
30	20 Street Neighborhood Greenway	South	Bike/Ped	Purdy Avenue	Sunset Drive	0.25	Neighborhood Greenway (Bicycle Boulevard Markers) Enhanced crosswalks	20 th Street requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.

PROJECT NUMBER	PROJECT NAME	CITY AREA	PROJECT TYPE	FROM	TO	PROJECT LENGTH (MILES)	PROJECT DESCRIPTION	PURPOSE & NEED
31	Ocean Drive Shared Space	South	Bike/Ped	5 th Street	15 th Street	0.90	Shared Space (Public Space) allowing for easy closures for events, calming traffic, and improved pedestrian space.	Ocean Drive requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
32	Crespi Avenue Neighborhood Greenway	North	Bike/Ped	Hawthorne Avenue	85 th Street	0.22	Neighborhood Greenway (Bicycle Boulevard Markers) Enhanced crosswalks	Crespi Boulevard requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.
33	Purdy Avenue Neighborhood Greenway	South	Bike/Ped	Dade Boulevard	20 th Street	0.26	Neighborhood Greenway (Bicycle Boulevard Markers) Enhanced crosswalks	Purdy Avenue requires an improvement towards local non-motorized transportation infrastructure connectivity. Develop a safe, complete, and accessible multi-user citywide bicycle and pedestrian network. Promote non-motorized transportation as a reliable mode of travel within the City.

Appendix F

Trip Generation

Scenario - 5

Scenario Name: Proposed - Nov 2022

User Group:

Dev. phase: 1

No. of Years to 0
Project Traffic :

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
311 - All Suites Hotel	General Urban/Suburban	Rooms	24	Weekday	Average	53	53	106
Data Source: Trip Generation Manual, 11th Ed					4.40	50%	50%	
311(1) - All Suites Hotel	General Urban/Suburban	Rooms	24	Weekday, Peak Hour of Adjacent	Average	4	4	8
Data Source: Trip Generation Manual, 11th Ed					0.34	53%	47%	
311(2) - All Suites Hotel	General Urban/Suburban	Rooms	24	Weekday, Peak Hour of Adjacent	Average	4	4	8
Data Source: Trip Generation Manual, 11th Ed					0.36	49%	51%	
821 - Shopping Plaza (40-150k) - Supermarket - Yes	General Urban/Suburban	1000 Sq. Ft. GLA	71.98	Weekday	Average	3401	3401	6802
Data Source: Trip Generation Manual, 11th Ed					94.49	50%	50%	
821(1) - Shopping Plaza (40-150k) - Supermarket - Yes	General Urban/Suburban	1000 Sq. Ft. GLA	71.98	Weekday, Peak Hour of	Average	158	97	255
Data Source: Trip Generation Manual, 11th Ed					3.53	62%	38%	
821(2) - Shopping Plaza (40-150k) - Supermarket - Yes	General Urban/Suburban	1000 Sq. Ft. GLA	71.98	Weekday, Peak Hour of Adjacent	Best Fit (LIN)	322	349	671
Data Source: Trip Generation Manual, 11th Ed					$T = 7.67(X) + 118.86$	48%	52%	
221 - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit	General Urban/Suburban	Dwelling Units	5	Weekday	Average	11	11	22
Data Source: Trip Generation Manual, 11th Ed					4.54	50%	50%	
221(1) - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit	General Urban/Suburban	Dwelling Units	5	Weekday, Peak Hour of Adjacent	Average	0	1	1
Data Source: Trip Generation Manual, 11th Ed					0.37	23%	77%	
221(2) - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit	General Urban/Suburban	Dwelling Units	5	Weekday, Peak Hour of Adjacent	Average	1	1	2
Data Source: Trip Generation Manual, 11th Ed					0.39	61%	39%	
710 - General Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	121.76	Weekday	Best Fit (LOG)	689	689	1378
Data Source: Trip Generation Manual, 11th Ed					$\ln(T) = 0.87\ln(X) + 3.05$	50%	50%	
710(1) - General Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	121.76	Weekday, Peak Hour of Adjacent Street Traffic, One	Best Fit (LOG)	175	24	199
Data Source: Trip Generation Manual, 11th Ed					$\ln(T) = 0.86\ln(X) + 1.16$	88%	12%	
710(2) - General Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	121.76	Weekday, Peak Hour of Adjacent Street Traffic, One	Best Fit (LOG)	33	162	195
Data Source: Trip Generation Manual, 11th Ed					$\ln(T) = 0.83\ln(X) + 1.29$	17%	83%	

Scenario - 1

Scenario Name: Existing

User Group:

Dev. phase: 1

No. of Years to 0

Project Traffic :

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
821 - Shopping Plaza (40-150k) - Supermarket - Yes	General Urban/Suburban	1000 Sq. Ft. GLA	106.03	Weekday	Average	5009	5009	10018
Data Source: Trip Generation Manual, 11th Ed					94.49	50%	50%	
821(1) - Shopping Plaza (40-150k) - Supermarket - Yes	General Urban/Suburban	1000 Sq. Ft. GLA	106.03	Weekday, Peak Hour of Adjacent	Average	232	142	374
Data Source: Trip Generation Manual, 11th Ed					3.53	62%	38%	
821(2) - Shopping Plaza (40-150k) - Supermarket - Yes	General Urban/Suburban	1000 Sq. Ft. GLA	106.03	Weekday, Peak Hour of Adjacent	Best Fit (LIN)	447	485	932
Data Source: Trip Generation Manual, 11th Ed					$T = 7.67(X) + 118.86$	48%	52%	
311 - All Suites Hotel	General Urban/Suburban	Rooms	24	Weekday	Average	53	53	106
Data Source: Trip Generation Manual, 11th Ed					4.40	50%	50%	
311(1) - All Suites Hotel	General Urban/Suburban	Rooms	24	Weekday, Peak Hour of	Average	4	4	8
Data Source: Trip Generation Manual, 11th Ed					0.34	53%	47%	
311(2) - All Suites Hotel	General Urban/Suburban	Rooms	24	Weekday, Peak Hour of Adjacent	Average	4	4	8
Data Source: Trip Generation Manual, 11th Ed					0.36	49%	51%	

AM Peak Hour Trip Generation and Internalization The Alton - 22113

Multifamily Housing Land Use 221 5 residential units		All Suites Hotel Land Use 311 24 Suites		Office Land Use 710 121,761 SF		Shopping Plaza Land Use 821 71,984 SF																																																																																																																																																																																																																																																			
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0	0	-1	-1	-35	-5	-32	-19	-93	20.0% Transit/Pedestrian																																																																																																																																																																																																																																																
0	1	3	3	140	19	126	78		Vehicle Trips																																																																																																																																																																																																																																																
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PM Peak Hour Trip Generation and Internalization
The Alton - 22113

Multifamily Housing Land Use 221 5 residential units		All Suites Hotel Land Use 311 24 Suites		Office Land Use 710 121,761 SF		Shopping Plaza Land Use 821 71,984 SF			
In	Out	In	Out	In	Out	In	Out		
1	1	4	4	33	162	322	349	876	ITE Trips
0	0	-1	-1	-7	-32	-64	-70	-175	20.0% Transit/Pedestrian
1	1	3	3	26	130	258	279		Vehicle Trips
UNBALANCED INTERNALIZATION									
	3% 0	0	12% 0						
0%			2%						
0	0	0	0						
	4% 0	0		57% 15					
4%					2%				
0	0	0			3				
	42% 0		0			10% 26			
46%							26%		
0	0		0				73		
		0%	0	0%	0				
		0%	0		0%				
			16% 0			2% 5			
		17% 1			1		5% 14		
				20% 26	21	8% 21			
				31% 8	6		2% 6		
BALANCED INTERNALIZATION									
	0	0	0						
0	0		0		0				
0	0				0				
0	0					0			
0	0						0		
		0	0		0				
		-1				0			
					-21	-21			
				-6			-6		
TOTAL SUMMARY									
0	0	-1	0	-6	-21	-21	-7	Total Sum	
1	1	2	3	20	109	237	272	-56	Internal
	0.0%		16.7%		17.3%		5.2%	645	External Trips
				0	0			0.0	0% % Internal
						-102	-102	-204	40% % Passby (Retail 40-150K)
1	1	2	3	20	109	135	170	441	Net New External Trips

AM Peak Hour Trip Generation and Internalization

The Alton

All Suites Hotel Land Use 311 24 Suites		Retail Land Use 821 106,028 SF		
In	Out	In	Out	
4	4	232	142	382 ITE Trips
-1	-1	-46	-28	-76 -20.0% Transit/Pedestrian
3	3	186	114	306 Non transit vehicle Trips
UNBALANCED INTERNALIZATION				
0% 0	14% 0	0	4% 7	0% 0
All Suites Hotel Retail				
In	Out	In	Out	
3	3	186	114	306 Vehicle Trips
BALANCED INTERNALIZATION				
0	0	0	0	0 Internal
3	3 0.0%	186	114 0.0%	306 External Trips 0.0% % Internal
3	3	186	114	306
		0	0	0 0% Passby
3	3	186	114	306 Net New External Trips

PM Peak Hour Trip Generation and Internalization

The Alton

All Suites Hotel Land Use 311 24 Suites		Retail Land Use 821 106,028 SF		
In	Out	In	Out	
4	4	447	485	940 ITE Trips
-1	-1	-89	-97	-188 -20.0%
3	3	358	388	752 Non transit vehicle Trips
UNBALANCED INTERNALIZATION				
17% 1	16% 0	0	2% 7	5% 19
All Suites Hotel Retail				
In	Out	In	Out	
3	3	358	388	752 Vehicle Trips
BALANCED INTERNALIZATION				
-1	0	0	-1	
2	3 16.7%	358	387 0.1%	-2 Internal 750 External Trips 0.3% % Internal
2	3	358	387	750
		-149	-149	-298 40% Passby
2	3	209	238	452 Net New External Trips



COMMUTING CHARACTERISTICS BY SEX

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Census Tract 42.08, Miami-Dade County, Florida						
Label	Total		Male		Female	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Workers 16 years and over	869	±247	419	±124	450	±190
MEANS OF TRANSPORTATION TO WORK						
Car, truck, or van	46.5%	±14.7	68.7%	±16.8	25.8%	±16.8
Drove alone	42.6%	±14.4	64.4%	±17.9	22.2%	±15.7
Carpooled	3.9%	±4.4	4.3%	±7.4	3.6%	±6.4
In 2-person carpool	0.8%	±2.3	0.0%	±10.7	1.6%	±4.7
In 3-person carpool	2.1%	±3.7	4.3%	±7.4	0.0%	±10.0
In 4-or-more person carpool	1.0%	±1.8	0.0%	±10.7	2.0%	±3.7
Workers per car, truck, or van	1.06	±0.07	1.05	±0.08	1.10	±0.19
Public transportation (excluding taxicab)	9.9%	±11.5	0.0%	±10.7	19.1%	±21.0
Walked	2.6%	±4.4	5.5%	±8.8	0.0%	±10.0
Bicycle	26.1%	±12.4	18.4%	±12.8	33.3%	±23.1
Taxicab, motorcycle, or other means	10.4%	±10.9	7.4%	±11.6	13.1%	±13.0
Worked from home	4.5%	±6.7	0.0%	±10.7	8.7%	±12.6
PLACE OF WORK						
Workers 16 years and over who did not work from home	830	±232	419	±124	411	±171
VEHICLES AVAILABLE						
PERCENT ALLOCATED						

Table Notes

COMMUTING CHARACTERISTICS BY SEX

Survey/Program: American Community Survey

Year: 2020

Estimates: 5-Year

Table ID: S0801

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, for 2020, the 2020 Census provides the official counts of the population and housing units for the nation, states, counties, cities, and towns. For 2016 to 2019, the Population Estimates Program provides estimates of the population for the nation, states, counties, cities, and towns and intercensal housing unit estimates for the nation, states, and counties.

Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

When information is missing or inconsistent, the Census Bureau logically assigns an acceptable value using the response to a related question or questions. If a logical assignment is not possible, data are filled using a statistical process called allocation, which uses a similar individual or household to provide a donor value. The "Allocated" section is the number of respondents who received an allocated value for a particular subject.

2019 ACS data products include updates to several categories of the existing means of transportation question. For more information, see: Change to Means of Transportation.

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

The 2016-2020 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

-

The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution.

N

The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.

(X)

The estimate or margin of error is not applicable or not available.

median-

The median falls in the lowest interval of an open-ended distribution (for example "2,500-")

median+

The median falls in the highest interval of an open-ended distribution (for example "250,000+").

**

The margin of error could not be computed because there were an insufficient number of sample observations.

The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.

A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.



OFFICE OF THE PROPERTY APPRAISER

Summary Report

Generated On : 11/18/2022

Property Information	
Folio:	02-3234-017-0190
Property Address:	1680 ALTON RD Miami Beach, FL 33139-2426
Owner	BH THE ALTON LLC
Mailing Address	745 FIFTH AVE NEW YORK, NY 10151 USA
PA Primary Zone	6400 COMMERCIAL - CENTRAL
Primary Land Use	4632 FOOD PROCESSING : LIGHT MFG & FOOD PROCESSING
Beds / Baths / Half	0 / 0 / 0
Floors	2
Living Units	0
Actual Area	11,220 Sq.Ft
Living Area	Sq.Ft
Adjusted Area	11,220 Sq.Ft
Lot Size	15,000 Sq.Ft
Year Built	Multiple (See Building Info.)



Assessment Information			
Year	2022	2021	2020
Land Value	\$5,250,000	\$4,500,000	\$3,000,000
Building Value	\$326,358	\$283,925	\$285,008
XF Value	\$36,550	\$36,602	\$36,652
Market Value	\$5,612,908	\$4,820,527	\$3,321,660
Assessed Value	\$3,962,538	\$3,602,308	\$3,274,826

Benefits Information				
Benefit	Type	2022	2021	2020
Non-Homestead Cap	Assessment Reduction	\$1,650,370	\$1,218,219	\$46,834

Note: Not all benefits are applicable to all Taxable Values (i.e. County, School Board, City, Regional).

Short Legal Description
COMM SUB 1 ADD PB 6-30 LOTS 7 & 8 BLK 40 LOT SIZE 100.000 X 150 OR 18044-0453 0498 5 (3) COC 22596-0415 08 2004 6

Taxable Value Information			
	2022	2021	2020
County			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$3,962,538	\$3,602,308	\$3,274,826
School Board			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$5,612,908	\$4,820,527	\$3,321,660
City			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$3,962,538	\$3,602,308	\$3,274,826
Regional			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$3,962,538	\$3,602,308	\$3,274,826

Sales Information			
Previous Sale	Price	OR Book-Page	Qualification Description
06/03/2022	\$39,300,000	33230-0423	Qual on DOS, multi-parcel sale
08/01/2004	\$9,750,000	22596-0415	Other disqualified
09/01/1977	\$550,000	09832-0887	Deeds that include more than one parcel
07/01/1973	\$125,000	00000-00000	Sales which are qualified

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Version:



OFFICE OF THE PROPERTY APPRAISER

Summary Report

Generated On : 11/18/2022

Property Information	
Folio:	02-3234-017-0180
Property Address:	1676 ALTON RD Miami Beach, FL 33139-2426
Owner	BH THE ALTON LLC
Mailing Address	745 FIFTH AVE NEW YORK, NY 10151 USA
PA Primary Zone	6400 COMMERCIAL - CENTRAL
Primary Land Use	1111 STORE : RETAIL OUTLET
Beds / Baths / Half	0 / 0 / 0
Floors	1
Living Units	0
Actual Area	Sq.Ft
Living Area	Sq.Ft
Adjusted Area	7,485 Sq.Ft
Lot Size	7,500 Sq.Ft
Year Built	1940



Assessment Information			
Year	2022	2021	2020
Land Value	\$2,625,000	\$1,687,500	\$1,500,000
Building Value	\$460,047	\$386,000	\$404,841
XF Value	\$22,388	\$21,500	\$22,913
Market Value	\$3,107,435	\$2,095,000	\$1,927,754
Assessed Value	\$2,304,500	\$2,095,000	\$1,927,754

Benefits Information				
Benefit	Type	2022	2021	2020
Non-Homestead Cap	Assessment Reduction	\$802,935		

Note: Not all benefits are applicable to all Taxable Values (i.e. County, School Board, City, Regional).

Short Legal Description
COMM SUB 1 ADD PB 6-30 LOT 6 BLK 40 LOT SIZE 50.000 X 150 OR 18044-0453 0498 5 (3) COC 22596-0415 08 2004 6

Taxable Value Information			
	2022	2021	2020
County			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$2,304,500	\$2,095,000	\$1,927,754
School Board			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$3,107,435	\$2,095,000	\$1,927,754
City			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$2,304,500	\$2,095,000	\$1,927,754
Regional			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$2,304,500	\$2,095,000	\$1,927,754

Sales Information			
Previous Sale	Price	OR Book-Page	Qualification Description
06/03/2022	\$39,300,000	33230-0423	Qual on DOS, multi-parcel sale
08/01/2004	\$9,750,000	22596-0415	Other disqualified
09/01/1977	\$550,000	09832-0887	Deeds that include more than one parcel

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Version:



OFFICE OF THE PROPERTY APPRAISER

Summary Report

Generated On : 11/18/2022

Property Information	
Folio:	02-3234-017-0170
Property Address:	1664 ALTON RD Miami Beach, FL 33139-2426
Owner	BH THE ALTON LLC
Mailing Address	745 FIFTH AVE NEW YORK, NY 10151 USA
PA Primary Zone	6400 COMMERCIAL - CENTRAL
Primary Land Use	1111 STORE : RETAIL OUTLET
Beds / Baths / Half	0 / 0 / 0
Floors	2
Living Units	0
Actual Area	24,145 Sq.Ft
Living Area	24,145 Sq.Ft
Adjusted Area	24,145 Sq.Ft
Lot Size	15,000 Sq.Ft
Year Built	Multiple (See Building Info.)



Assessment Information			
Year	2022	2021	2020
Land Value	\$5,250,000	\$3,375,000	\$3,000,000
Building Value	\$1,559,658	\$1,392,000	\$1,412,983
XF Value	\$114,452	\$115,500	\$117,517
Market Value	\$6,924,110	\$4,882,500	\$4,530,500
Assessed Value	\$5,370,750	\$4,882,500	\$4,530,500

Benefits Information				
Benefit	Type	2022	2021	2020
Non-Homestead Cap	Assessment Reduction	\$1,553,360		

Note: Not all benefits are applicable to all Taxable Values (i.e. County, School Board, City, Regional).

Short Legal Description
COMM SUB 1 ADD PB 6-30 LOTS 4 & 5 BLK 40 LOT SIZE 100.000 X 150 OR 15421-1095 TO 1101 0392 5 COC 22596-0415 08 2004 6

Taxable Value Information			
	2022	2021	2020
County			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$5,370,750	\$4,882,500	\$4,530,500
School Board			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$6,924,110	\$4,882,500	\$4,530,500
City			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$5,370,750	\$4,882,500	\$4,530,500
Regional			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$5,370,750	\$4,882,500	\$4,530,500

Sales Information			
Previous Sale	Price	OR Book-Page	Qualification Description
06/03/2022	\$39,300,000	33230-0423	Qual on DOS, multi-parcel sale
08/01/2004	\$9,750,000	22596-0415	Other disqualified
12/01/1990	\$0	14815-3299	Sales which are disqualified as a result of examination of the deed
08/01/1990	\$0	00000-00000	Sales which are disqualified as a result of examination of the deed

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Version:



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Summary Report

Generated On : 11/18/2022

Property Information	
Folio:	02-3234-017-0160
Property Address:	1656 ALTON RD Miami Beach, FL 33139-2426
Owner	BH THE ALTON LLC
Mailing Address	745 FIFTH AVE NEW YORK, NY 10151 USA
PA Primary Zone	6400 COMMERCIAL - CENTRAL
Primary Land Use	1111 STORE : RETAIL OUTLET
Beds / Baths / Half	0 / 0 / 0
Floors	1
Living Units	0
Actual Area	7,964 Sq.Ft
Living Area	7,964 Sq.Ft
Adjusted Area	7,964 Sq.Ft
Lot Size	15,000 Sq.Ft
Year Built	Multiple (See Building Info.)



Assessment Information			
Year	2022	2021	2020
Land Value	\$5,250,000	\$3,375,000	\$3,000,000
Building Value	\$4,029	\$5,650	\$3,569
XF Value	\$0	\$350	\$0
Market Value	\$5,254,029	\$3,381,000	\$3,003,569
Assessed Value	\$3,341,888	\$3,303,925	\$3,003,569

Benefits Information				
Benefit	Type	2022	2021	2020
Non-Homestead Cap	Assessment Reduction	\$1,912,141	\$77,075	
Note: Not all benefits are applicable to all Taxable Values (i.e. County, School Board, City, Regional).				

Short Legal Description
COMM SUB 1ST ADD PB 6-30 LOTS 2 & 3 BLK 40 LOT SIZE 15000 SQ FEET OR 18044-0453 0498 5(3) COC 22596-0415 08 2004 6

Taxable Value Information			
	2022	2021	2020
County			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$3,341,888	\$3,303,925	\$3,003,569
School Board			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$5,254,029	\$3,381,000	\$3,003,569
City			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$3,341,888	\$3,303,925	\$3,003,569
Regional			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$3,341,888	\$3,303,925	\$3,003,569

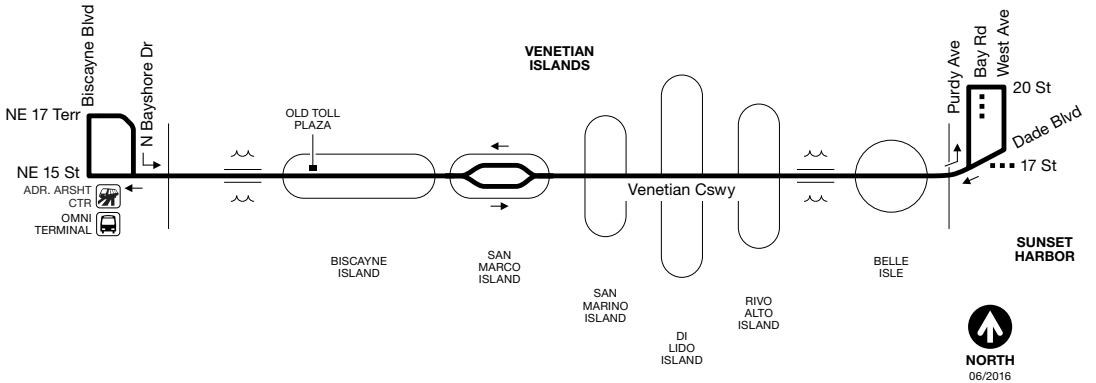
Sales Information			
Previous Sale	Price	OR Book-Page	Qualification Description
06/03/2022	\$39,300,000	33230-0423	Qual on DOS, multi-parcel sale
08/01/2004	\$9,750,000	22596-0415	Other disqualified
09/01/1977	\$550,000	09832-0887	Deeds that include more than one parcel
06/03/1977	\$100	09751-1640	Sales which are disqualified as a result of examination of the deed

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Version:

Appendix G

Transit Information



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GO Miami-Dade Transit

miamidade.gov/transit



311 or 305.468.5900 TTY/Fla Relay: 711

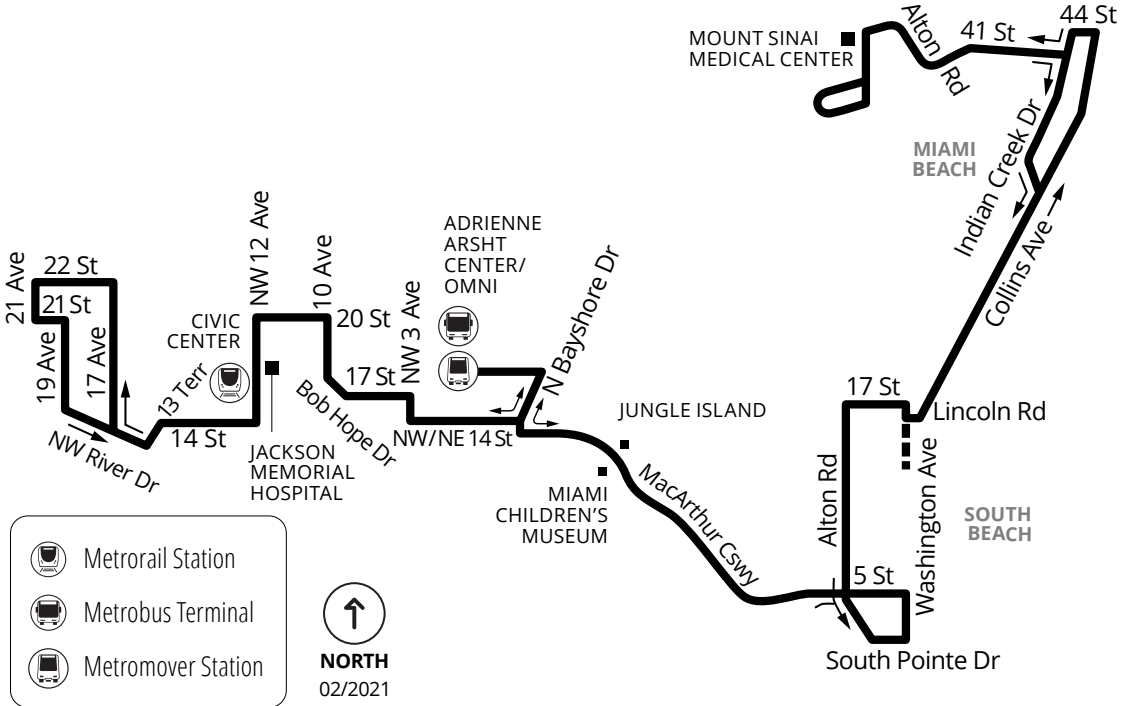


SEVEN DAYS A WEEK/LOS SIETE DIAS/SETJOU YON SEMEN	MORNING MAÑANA/MATIN					AFTERNOON TARDE/APREMIDI								
	EASTBOUND/RUMBO ESTE/DIREKSYON IS													
ARSHT MOVER/OMNI TERMINAL	7:00 a.m.	7:35 a.m.	8:10 a.m.	8:45 a.m.	9:20 a.m.	2:00 p.m.	2:35 p.m.	3:10 p.m.	3:45 p.m.	4:20 p.m.	4:55 p.m.	5:30 p.m.	6:05 p.m.	6:40 p.m.
20 ST & BAY RD MIAMI BEACH	7:12 a.m.	7:47 a.m.	8:22 a.m.	8:57 a.m.	9:32 a.m.	2:12 p.m.	2:47 p.m.	3:22 p.m.	3:57 pm	4:32 p.m.	5:07 p.m.	5:42 p.m.	6:17 p.m.	6:52 p.m.
	WESTBOUND/RUMBO OESTE/DIREKSYON WES													
20 ST & BAY RD MIAMI BEACH	7:12 a.m.	7:47 a.m.	8:22 a.m.	8:57 a.m.	9:32 a.m.	2:12 p.m.	2:47 p.m.	3:22 p.m.	3:57 p.m.	4:32 p.m.	5:07 p.m.	5:42 p.m.	6:17 p.m.	6:52 p.m.
ARSHT MOVER/OMNI TERMINAL	7:27 a.m.	8:02 a.m.	8:37 a.m.	9:12 a.m.	9:47 a.m.	2:27 p.m.	3:02 p.m.	3:37 p.m.	4:12 pm	4:47 p.m.	5:22 p.m.	5:57 p.m.	6:32 p.m.	7:07 p.m.

Scheduled times are approximate. Actual arrival and departure times may vary depending on traffic and road conditions.
 Las horas publicadas son aproximadas, pues dependen del trafico y otras condiciones de las vias. Ore yo apwoksimatif. Vre le bis yo ap rive oswa deplase ka varye selon kondisyon sikilasyon sou wout yo.



M 113 ON GPS APPS




@GoMiamiDade



GO Miami-Dade Transit



WEEKDAYS / DIAS LABORABLES / JOU LASEMÈN

EASTBOUND RUMBO ESTE / DIREKSYON IS		MORNING / MAÑANA / MATEN								AM	PM	AFTERNOON AND EVENING / TARDE Y NOCHE / APREMIDI AK ASWÈ									
		5:42	6:20	6:55	7:45	8:30	9:15	9:55	10:55	11:55	12:55	1:55	2:55	3:40	4:30	5:15	6:00	6:45	7:35	8:35	9:35
	NW 21 Ave & 22 St	5:42	6:20	6:55	7:45	8:30	9:15	9:55	10:55	11:55	12:55	1:55	2:55	3:40	4:30	5:15	6:00	6:45	7:35	8:35	9:35
	NW 12 Ave & 15 St	5:48	6:27	7:03	7:53	8:38	9:23	10:03	11:03	12:03	1:03	2:03	3:03	3:48	4:38	5:23	6:08	6:53	7:42	8:42	9:42
	Omni Terminal / Arshnt Metromover	5:58	6:39	7:16	8:06	8:51	9:37	10:17	11:17	12:17	1:17	2:17	3:17	4:02	4:52	5:37	6:22	7:07	7:55	8:55	9:55
	Alton Rd & 2 St	6:08	6:49	7:27	8:17	9:02	9:48	10:28	11:28	12:28	1:28	2:28	3:28	4:14	5:04	5:49	6:34	7:18	8:06	9:06	10:06
	5 St & Lenox Ave	6:13	6:54	7:33	8:23	9:08	9:54	10:34	11:34	12:34	1:34	2:34	3:34	4:20	5:10	5:55	6:40	7:24	8:12	9:12	10:11
	17 St & Lenox Ave	6:21	7:04	7:43	8:33	9:18	10:04	10:44	11:44	12:44	1:44	2:44	3:44	4:30	5:20	6:05	6:50	7:32	8:20	9:20	10:19
	Lincoln Rd & James Ave	6:26	7:10	7:49	8:39	9:25	10:11	10:51	11:51	12:51	1:51	2:51	3:51	4:37	5:27	6:12	6:57	7:38	8:26	9:26	10:24
	Indian Creek Dr & 43 St	6:35	7:20	7:59	8:51	9:37	10:23	11:03	12:03	1:03	2:03	3:03	4:03	4:49	5:39	6:24	7:09	7:49	8:37	9:37	10:33
	41 St & Meridian Ave	6:42	7:27	8:06	8:58	9:44	10:30	11:10	12:10	1:10	2:10	3:10	4:11	4:57	5:47	6:32	7:16	7:56	8:44	9:44	10:39
	41 St & Alton Rd	6:43	7:29	8:08	9:00	9:46	10:32	11:12	12:12	1:12	2:12	3:12	4:13	4:59	5:49	6:34	7:17	7:57	8:45	9:45	10:40
	Mt Sinai Hospital	6:45	7:31	8:10	9:02	9:48	10:34	11:14	12:14	1:14	2:14	3:14	4:15	5:01	5:51	6:36	7:19	7:59	8:47	9:47	10:42
	Alton Rd & 39 St	6:47	7:33	8:12	9:04	9:50	-	-	-	-	-	-	4:17	5:03	5:53	6:38	-	8:01	8:49	-	-
WESTBOUND RUMBO OESTE / DIREKSYON IWÈS		MORNING / MAÑANA / MATEN								AM	PM	AFTERNOON AND EVENING / TARDE Y NOCHE / APREMIDI AK ASWÈ									
		-	-	7:02	7:43	8:25	9:17	10:13	-	-	-	-	-	-	-	4:29	5:14	6:06	7:12	8:12	8:57
	Alton Rd & 39 St	-	-	7:02	7:43	8:25	9:17	10:13	-	-	-	-	-	-	4:29	5:14	6:06	7:12	8:12	8:57	
	Mt Sinai Hospital	5:43	6:26	7:05	7:46	8:28	9:20	10:16	11:16	12:16	1:16	2:06	2:56	3:46	4:32	5:17	6:09	7:15	8:15	9:00	
	41 St & Alton Rd	5:45	6:28	7:07	7:48	8:30	9:23	10:19	11:19	12:19	1:19	2:09	2:59	3:49	4:34	5:19	6:11	7:17	8:17	9:02	
	41 St & Meridian Ave	5:46	6:30	7:09	7:50	8:32	9:25	10:21	11:21	12:21	1:21	2:11	3:01	3:51	4:36	5:21	6:13	7:19	8:19	9:04	
	Indian Creek Dr & 40 St	5:50	6:34	7:14	7:55	8:38	9:31	10:27	11:27	12:27	1:27	2:17	3:07	3:57	4:42	5:27	6:19	7:25	8:25	9:10	
	Lincoln Rd & Washington Ave	5:56	6:42	7:24	8:06	8:49	9:43	10:39	11:39	12:39	1:39	2:29	3:19	4:09	4:54	5:39	6:31	7:36	8:36	9:21	
	Alton Rd & Lincoln Rd	6:01	6:47	7:29	8:11	8:54	9:49	10:45	11:45	12:45	1:45	2:35	3:25	4:15	5:00	5:45	6:37	7:41	8:41	9:26	
	Alton Rd & 2 St	6:08	6:54	7:38	8:21	9:05	10:00	10:56	11:56	12:56	1:56	2:46	3:36	4:26	5:11	5:56	6:48	7:50	8:50	9:35	
	Omni Terminal / Arshnt Metromover	6:13	6:59	7:44	8:27	9:11	10:06	11:02	12:02	1:02	2:02	2:52	3:42	4:32	5:17	6:02	6:54	7:56	8:56	9:41	
	NW 12 Ave & 16 St	6:21	7:07	7:52	8:37	9:21	10:16	11:12	12:12	1:12	2:12	3:02	3:52	4:42	5:27	6:12	7:04	8:04	9:04	9:49	
	NW 21 Ave & 22 St	6:34	7:20	8:05	8:50	9:35	10:30	11:26	12:26	1:26	2:26	3:16	4:06	4:56	5:41	6:26	7:16	8:16	9:16	10:01	
	NW 21 Ave & 22 St	6:44	7:30	8:15	9:00	9:45	10:40	11:36	12:36	1:36	2:36	3:26	4:16	5:06	5:51	6:36	7:26	8:26	9:26	10:09	

Scheduled times are approximate. Actual arrival and departure times may vary depending on traffic and road conditions.

Las horas publicadas son aproximadas, pues dependen del tráfico y otras condiciones de las vías. | Ore yo apwoksimatif. Vre le bis yo ap rive oswa deplase ka varye selon kondisyon sikilasyon sou wout yo.

SATURDAY / SÁBADO / SAMDI

EASTBOUND RUMBO ESTE / DIREKSYON IS	MORNING / MAÑANA / MATEN						AM	PM	AFTERNOON AND EVENING / TARDE Y NOCHE / APREMIDI AK ASWÈ									
	NW 21 Ave & 22 St	5:53	7:25	8:25	9:25	10:25	11:25	12:25	1:25	2:25	3:25	4:25	5:25	6:25	7:25	8:15	9:15	10:15
NW 12 Ave & 15 St	5:59	7:32	8:32	9:33	10:33	11:33	12:33	1:33	2:33	3:33	4:33	5:33	6:33	7:32	8:22	9:22	10:21	
 Omni Terminal / Arshnt Metromover	6:09	7:43	8:43	9:45	10:45	11:45	12:45	1:45	2:45	3:45	4:45	5:45	6:45	7:43	8:33	9:33	10:31	
Alton Rd & 2 St	6:19	7:53	8:53	9:57	10:57	11:57	12:57	1:57	2:57	3:57	4:57	5:57	6:57	7:53	8:43	9:43	10:41	
5 St & Lenox Ave	6:24	7:59	8:59	10:03	11:03	12:03	1:03	2:03	3:03	4:03	5:03	6:03	7:03	7:59	8:49	9:49	10:46	
17 St & Lenox Ave	6:32	8:08	9:08	10:12	11:12	12:12	1:12	2:12	3:12	4:12	5:12	6:12	7:11	8:07	8:57	9:57	10:53	
Lincoln Rd & James Ave	6:37	8:14	9:15	10:19	11:19	12:19	1:19	2:19	3:19	4:19	5:19	6:19	7:17	8:13	9:03	10:03	10:58	
Indian Creek Dr & 43 St	6:45	8:24	9:27	10:31	11:31	12:31	1:31	2:31	3:31	4:30	5:30	6:30	7:27	8:23	9:13	10:11	11:06	
41 St & Meridian Ave	6:51	8:31	9:35	10:39	11:39	12:39	1:39	2:39	3:39	4:37	5:37	6:37	7:34	8:30	9:20	10:17	11:12	
41 St & Alton Rd	6:52	8:33	9:37	10:41	11:41	12:41	1:41	2:41	3:41	4:39	5:39	6:39	7:35	8:31	9:21	10:18	11:13	
Mt Sinai Hospital	6:54	8:35	9:39	10:43	11:43	12:43	1:43	2:43	3:43	4:41	5:41	6:41	7:37	8:33	9:23	10:20	11:15	
Alton Rd & 39 St	6:56	8:37	9:41	10:45	11:45	12:45	1:45	-	3:45	4:43	5:43	6:43	7:39	8:35	-	-	-	
WESTBOUND RUMBO OESTE / DIREKSYON IWÈS	MORNING / MAÑANA / MATEN						AM	PM	AFTERNOON AND EVENING / TARDE Y NOCHE / APREMIDI AK ASWÈ									
Alton Rd & 39 St	-	7:07	-	8:57	9:57	10:57	11:57	12:57	1:57	-	3:57	4:57	5:57	6:57	7:57	8:57		
Mt Sinai Hospital	6:10	7:10	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00		
41 St & Alton Rd	6:12	7:12	8:02	9:03	10:03	11:03	12:03	1:03	2:03	3:03	4:02	5:02	6:02	7:02	8:02	9:02		
41 St & Meridian Ave	6:13	7:14	8:04	9:05	10:05	11:05	12:05	1:05	2:05	3:05	4:04	5:04	6:04	7:04	8:04	9:04		
Indian Creek Dr & 40 St	6:17	7:19	8:09	9:11	10:11	11:11	12:11	1:11	2:11	3:11	4:10	5:10	6:10	7:10	8:10	9:10		
Lincoln Rd & Washington Ave	6:24	7:28	8:19	9:22	10:22	11:22	12:22	1:22	2:22	3:22	4:21	5:21	6:21	7:20	8:20	9:20		
Alton Rd & Lincoln Rd	6:29	7:33	8:24	9:28	10:28	11:28	12:28	1:28	2:28	3:28	4:27	5:27	6:27	7:25	8:25	9:25		
Alton Rd & 2 St	6:36	7:41	8:33	9:38	10:38	11:38	12:38	1:38	2:38	3:38	4:37	5:37	6:37	7:34	8:34	9:34		
5 St & Lenox Ave	6:41	7:47	8:39	9:44	10:44	11:44	12:44	1:44	2:44	3:44	4:43	5:43	6:43	7:40	8:40	9:40		
 Omni Terminal / Arshnt Metromover	6:48	7:55	8:47	9:54	10:54	11:54	12:54	1:54	2:54	3:54	4:53	5:53	6:53	7:48	8:48	9:48		
NW 12 Ave & 16 St	6:59	8:07	8:59	10:06	11:06	12:06	1:06	2:06	3:06	4:06	5:05	6:05	7:05	7:59	8:59	9:59		
NW 21 Ave & 22 St	7:09	8:17	9:09	10:16	11:16	12:16	1:16	2:16	3:16	4:16	5:15	6:15	7:14	8:08	9:08	10:08		

Scheduled times are approximate. Actual arrival and departure times may vary depending on traffic and road conditions.

Las horas publicadas son aproximadas, pues dependen del tráfico y otras condiciones de las vías. | Ore yo apwoksimatif. Vre le bis yo ap rive oswa deplase ka varye selon kondisyon sikilasyon sou wout yo.

SUNDAY / DOMINGO / DIMANCH

EASTBOUND RUMBO ESTE / DIREKSYON IS		MORNING / MAÑANA / MATEN					AM	PM	AFTERNOON AND EVENING / TARDE Y NOCHE / APREMIDI AK ASWÈ					
	NW 21 Ave & 22 St	5:54	7:29	8:25	9:20	10:20	11:20	12:20	1:20	2:20	3:20	4:20	5:35	
	NW 12 Ave & 15 St	6:01	7:36	8:32	9:28	10:28	11:28	12:28	1:28	2:28	3:28	4:28	5:43	
	Omni Terminal / Arshnt Metromover	6:10	7:45	8:41	9:39	10:39	11:39	12:39	1:39	2:39	3:39	4:39	5:54	
	Alton Rd & 2 St	6:20	7:55	8:51	9:49	10:49	11:50	12:50	1:50	2:50	3:50	4:50	6:05	
	5 St & Lenox Ave	6:25	8:00	8:56	9:55	10:55	11:56	12:56	1:56	2:56	3:56	4:56	6:11	
	17 St & Lenox Ave	6:33	8:08	9:05	10:04	11:04	12:05	1:05	2:05	3:05	4:05	5:05	6:20	
	Lincoln Rd & James Ave	6:38	8:13	9:11	10:10	11:10	12:11	1:11	2:11	3:11	4:11	5:11	6:26	
	Indian Creek Dr & 43 St	6:47	8:22	9:21	10:20	11:21	12:22	1:22	2:22	3:22	4:22	5:22	6:37	
	41 St & Meridian Ave	6:53	8:28	9:28	10:27	11:28	12:29	1:29	2:29	3:29	4:29	5:29	6:44	
	41 St & Alton Rd	6:54	8:29	9:30	10:29	11:30	12:31	1:31	2:31	3:31	4:31	5:31	6:46	
	Mt Sinai Hospital	6:56	8:31	9:32	10:31	11:32	12:33	1:33	2:33	3:33	4:33	5:33	6:48	
	Alton Rd & 39 St	6:58	8:33	9:34	10:33	11:34	12:35	1:35	2:35	3:35	4:35	5:35	-	
WESTBOUND RUMBO OESTE / DIREKSYON IWÈS		MORNING / MAÑANA / MATEN					AM	PM	AFTERNOON AND EVENING TARDE Y NOCHE / APREMIDI AK ASWÈ					
	Alton Rd & 39 St	-	7:07	-	8:57	9:57	10:57	11:57	12:57	1:57	2:57	3:57	4:57	5:57
	Mt Sinai Hospital	6:10	7:10	8:10	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00
	41 St & Alton Rd	6:12	7:12	8:12	9:02	10:02	11:02	12:02	1:02	2:02	3:02	4:02	5:02	6:02
	41 St & Meridian Ave	6:13	7:13	8:13	9:03	10:03	11:03	12:03	1:03	2:03	3:03	4:03	5:03	6:03
	Indian Creek Dr & 40 St	6:18	7:18	8:18	9:09	10:09	11:09	12:09	1:09	2:09	3:09	4:09	5:09	6:09
	Lincoln Rd & Washington Ave	6:27	7:27	8:27	9:19	10:19	11:19	12:19	1:19	2:19	3:19	4:19	5:19	6:19
	Alton Rd & Lincoln Rd	6:31	7:31	8:31	9:24	10:24	11:24	12:24	1:24	2:24	3:24	4:24	5:24	6:24
	Alton Rd & 2 St	6:38	7:38	8:38	9:33	10:33	11:34	12:34	1:34	2:34	3:34	4:34	5:34	6:34
	5 St & Lenox Ave	6:43	7:43	8:43	9:39	10:39	11:40	12:40	1:40	2:40	3:40	4:40	5:40	6:40
	Omni Terminal / Arshnt Metromover	6:50	7:50	8:50	9:48	10:48	11:49	12:49	1:49	2:49	3:49	4:49	5:49	6:49
	NW 12 Ave & 16 St	7:01	8:01	9:02	10:00	11:00	12:01	1:01	2:01	3:01	4:01	5:01	6:01	7:01
	NW 21 Ave & 22 St	7:11	8:11	9:12	10:10	11:10	12:11	1:11	2:11	3:11	4:11	5:11	6:11	7:10

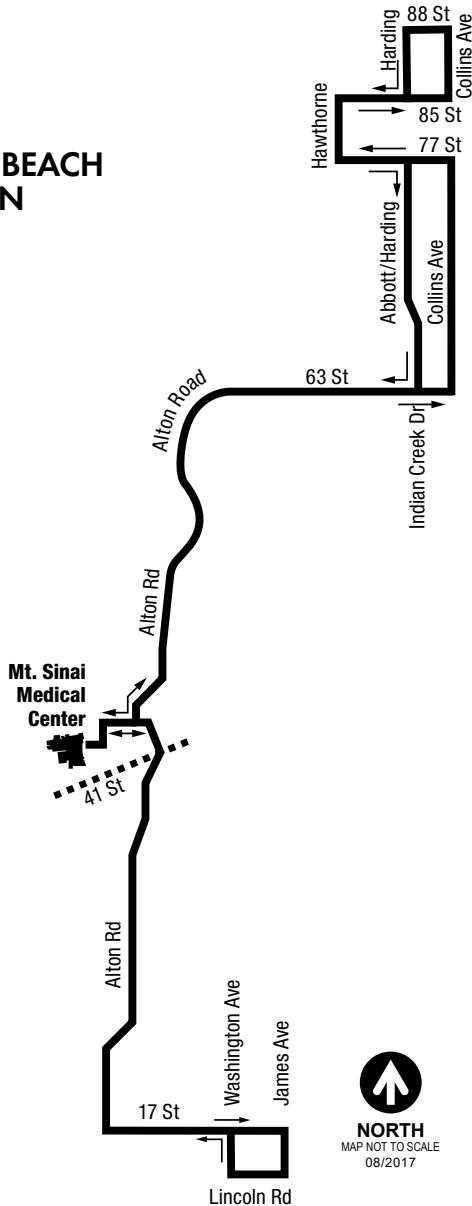
Scheduled times are approximate. Actual arrival and departure times may vary depending on traffic and road conditions.

Las horas publicadas son aproximadas, pues dependen del tráfico y otras condiciones de las vías. | Ore yo apwoksimatif. Vre le bis yo ap rive oswa deplase ka varye selon kondisyon sikilasyon sou wout yo.



115

MID-NORTH BEACH CONNECTION



NORTH
MAP NOT TO SCALE
08/2017



@GoMiamiDade



GO Miami-Dade Transit

miamidade.gov/transit



311 or 305.468.5900 TTY/Fla Relay: 711



WEEKDAYS | ENTRE SEMANA | LA SEMÈN

SOUTHBOUND RUMBO SUR DIREKSYON SID	MORNING MAÑANA / MATIN						AM	PM	AFTERNOON TARDE APREMIDI						
	Collins Ave & 87 St	7:20	8:10	9:00	9:50	10:40	11:30	12:20	1:10	2:00	2:50	3:40	4:30	5:20	6:10
Abbott Ave & 69 St	7:34	8:24	9:12	10:02	10:52	11:42	12:32	1:22	2:12	3:02	3:52	4:42	5:32	6:22	7:12
Mt Sinai Hospital	7:47	8:37	9:25	10:15	11:05	11:55	12:45	1:35	2:25	3:15	4:05	4:55	5:45	6:35	7:22
Lincoln & Washington	8:04	8:54	9:44	10:34	11:24	12:14	1:04	1:54	2:44	3:34	4:24	5:14	6:04	6:54	7:37
NORTHBOUND RUMBO NORTE DIREKSYON NÒ	MORNING MAÑANA / MATIN						AM	PM	AFTERNOON TARDE APREMIDI						
	Lincoln & Washington	8:06	8:56	9:46	10:36	11:26	12:16	1:06	1:56	2:46	3:36	4:26	5:16	6:06	6:56
Mt Sinai Hospital	8:21	9:11	10:00	10:50	11:40	12:30	1:20	2:10	3:00	3:50	4:40	5:30	6:20	7:10	
Collins Ave & 69 St	8:35	9:25	10:14	11:04	11:54	12:44	1:34	2:24	3:14	4:04	4:54	5:44	6:34	7:22	
Collins Ave & 87 St	8:51	9:41	10:30	11:20	12:10	1:00	1:50	2:40	3:30	4:19	5:09	5:59	6:49	7:37	

WEEKENDS | FINES DE SEMANA | WIKENN

SOUTHBOUND RUMBO SUR DIREKSYON SID	MORNING MAÑANA / MATIN						AM	PM	AFTERNOON TARDE APREMIDI						
	Collins Ave & 87 St	7:20	8:10	9:00	9:50	10:40	11:30	12:20	1:10	2:00	2:50	3:40	4:30	5:20	6:10
Abbott Ave & 69 St	7:30	8:20	9:11	10:01	10:51	11:41	12:31	1:21	2:11	3:01	3:51	4:41	5:31	6:21	7:10
Mt Sinai Hospital	7:40	8:30	9:22	10:12	11:02	11:52	12:42	1:32	2:22	3:12	4:02	4:52	5:42	6:32	7:20
Lincoln & Washington	7:54	8:44	9:38	10:28	11:18	12:08	12:58	1:48	2:38	3:28	4:18	5:08	5:58	6:48	7:33
NORTHBOUND RUMBO NORTE DIREKSYON NÒ	MORNING MAÑANA / MATIN						AM	PM	AFTERNOON TARDE APREMIDI						
	Lincoln & Washington	7:56	8:46	9:40	10:30	11:20	12:10	1:00	1:50	2:40	3:30	4:20	5:10	6:00	6:50
Mt Sinai Hospital	8:08	8:58	9:52	10:42	11:32	12:22	1:12	2:02	2:52	3:42	4:32	5:22	6:12	7:02	
Collins Ave & 69 St	8:20	9:11	10:05	10:55	11:49	12:35	1:25	2:15	3:05	3:55	4:46	5:36	6:26	7:13	
Collins Ave & 87 St	8:34	9:25	10:19	11:09	11:59	12:49	1:39	2:29	3:19	4:09	5:00	5:50	6:40	7:25	

Scheduled times are approximate. Actual arrival and departure times may vary depending on traffic and road conditions.

Las horas publicadas son aproximadas, pues dependen del tráfico y otras condiciones de las vías. Ore yo apwoksimatif. Vre le bis yo ap rive oswa deplase ka varye selon kondisyon sikilasyon sou wout yo.



115

MID-NORTH
BEACH
CONNECTION



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311

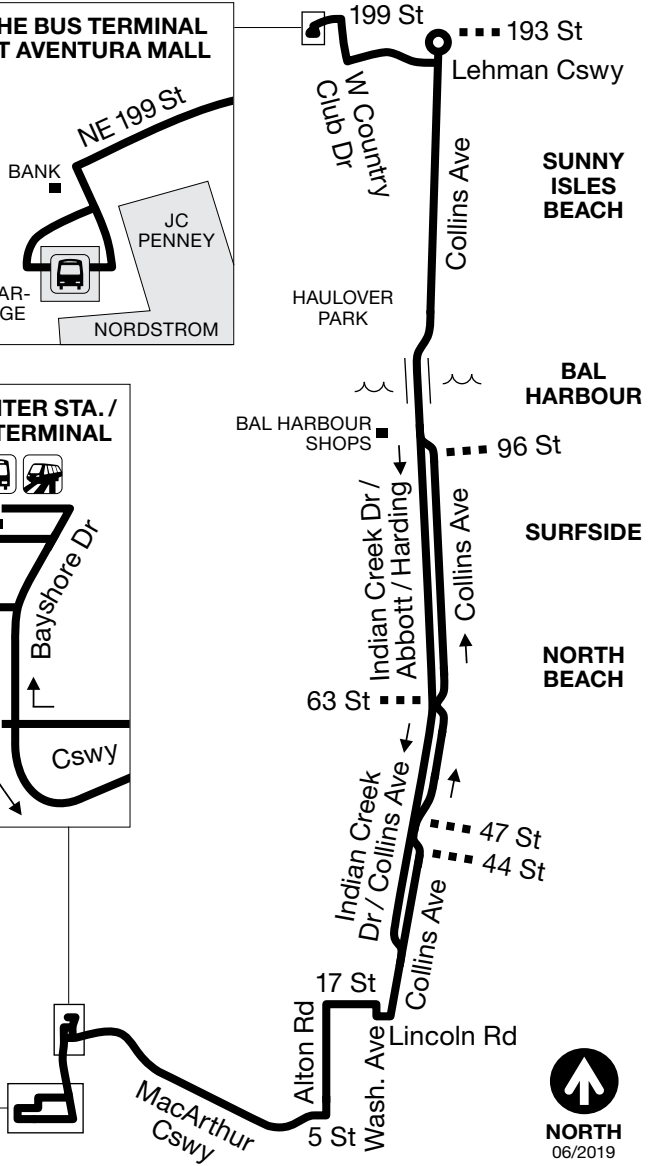
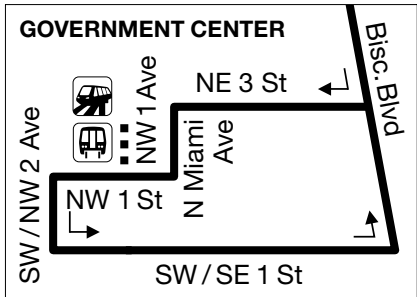
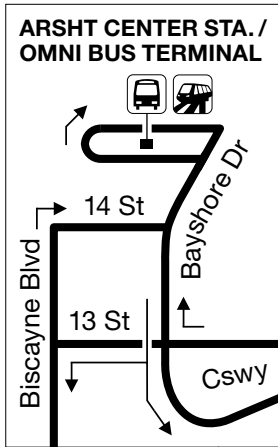
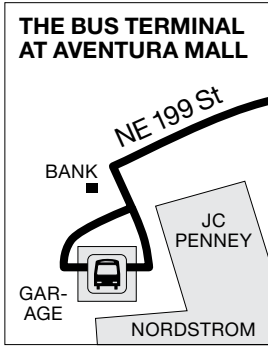


GO Miami-Dade Transit



or 305.468.5900 TTY/Fla Relay: 711





NORTH
06/2019



@GoMiamiDade



GO Miami-Dade Transit





Back

Schedule



119 Route S

- Weekday (Northbound)

ALTON RD LINCOLN RD

5:21 AM

Dest: S - Aventura Mall

5:45 AM

Dest: S - Aventura Mall

5:57 AM

Dest: S - Aventura Mall

6:11 AM

Dest: S - Aventura Mall

6:26 AM

Dest: S - Aventura Mall

6:41 AM

Dest: S - Aventura Mall

6:56 AM

Dest: S - Aventura Mall

7:13 AM

Dest: S - Aventura Mall

7:28 AM

Dest: S - Aventura Mall

7:44 AM

Dest: S - Aventura Mall

7:59 AM

Dest: S - Aventura Mall

8:15 AM

Dest: S - Aventura Mall

8:31 AM

Dest: S - Aventura Mall

8:46 AM

Dest: S - Aventura Mall

9:02 AM

Dest: S - Aventura Mall

9:18 AM

Dest: S - Aventura Mall

9:35 AM

Dest: S - Aventura Mall

9:50 AM

Dest: S - Aventura Mall

10:05 AM (9 min)

Dest: S - Aventura Mall

10:20 AM

Dest: S - Aventura Mall

10:35 AM

Dest: S - Aventura Mall

10:50 AM

Dest: S - Aventura Mall

11:05 AM

Dest: S - Aventura Mall

11:20 AM

Dest: S - Aventura Mall

11:35 AM

Dest: S - Aventura Mall

11:50 AM

Dest: S - Aventura Mall

12:05 PM

Dest: S - Aventura Mall

12:20 PM

Dest: S - Aventura Mall

12:35 PM

Dest: S - Aventura Mall



Back

Schedule



1:05 PM

Dest: S - Aventura Mall

1:20 PM

Dest: S - Aventura Mall

1:35 PM

Dest: S - Aventura Mall

1:50 PM

Dest: S - Aventura Mall

2:06 PM

Dest: S - Aventura Mall

2:22 PM

Dest: S - Aventura Mall

2:37 PM

Dest: S - Aventura Mall

2:52 PM

Dest: S - Aventura Mall

3:07 PM

Dest: S - Aventura Mall

3:22 PM

Dest: S - Aventura Mall

3:37 PM

Dest: S - Aventura Mall

3:52 PM

Dest: S - Aventura Mall

4:07 PM

Dest: S - Aventura Mall

4:19 PM

Dest: S - Aventura Mall

4:31 PM

Dest: S - Aventura Mall

4:43 PM

Dest: S - Aventura Mall

4:55 PM

Dest: S - Aventura Mall

5:07 PM

Dest: S - Aventura Mall

5:19 PM

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5:31 PM

Dest: S - Aventura Mall

5:43 PM

Dest: S - Aventura Mall

5:55 PM

Dest: S - Aventura Mall

6:07 PM

Dest: S - Aventura Mall

6:19 PM

Dest: S - Aventura Mall

6:31 PM

Dest: S - Aventura Mall

6:43 PM

Dest: S - Aventura Mall

6:55 PM

Dest: S - Aventura Mall

7:07 PM

Dest: S - Aventura Mall

7:16 PM

Dest: S - Aventura Mall

7:29 PM

Dest: S - Aventura Mall



Back

Schedule



7:59 PM

Dest: S - Aventura Mall

8:17 PM

Dest: S - Aventura Mall

8:39 PM

Dest: S - Aventura Mall

9:04 PM

Dest: S - Aventura Mall

9:29 PM

Dest: S - Aventura Mall

9:54 PM

Dest: S - Aventura Mall

10:17 PM

Dest: S - Aventura Mall

10:41 PM

Dest: S - Aventura Mall

11:06 PM

Dest: S - Aventura Mall

11:36 PM

Dest: S - Aventura Mall

12:05 AM

Dest: S - Aventura Mall

12:33 AM

Dest: S - Aventura Mall

1:03 AM

Dest: S - Aventura Mall

1:33 AM

Dest: S - Aventura Mall

2:33 AM

Dest: S - Aventura Mall

3:33 AM

Dest: S - Aventura Mall

4:33 AM

Dest: S - Aventura Mall



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MIDDLE BEACH LOOP

TROLLEY CONNECTIONS

COLLINS EXPRESS



MIDDLE BEACH LOOP

MIDDLE BEACH LOOP



SOUTH BEACH LOOP

COLLINS EXPRESS



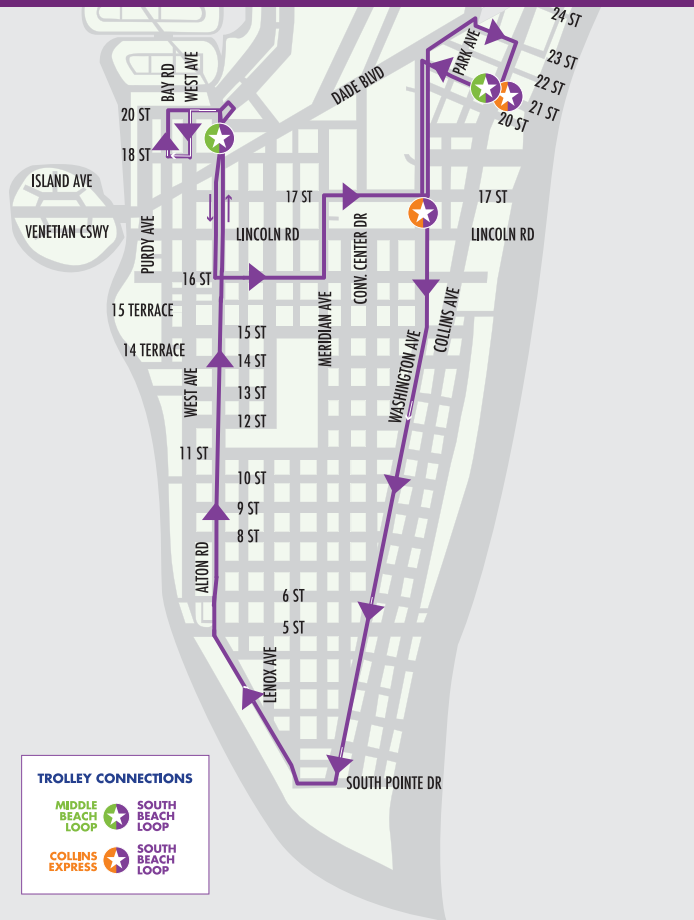
SOUTH BEACH LOOP





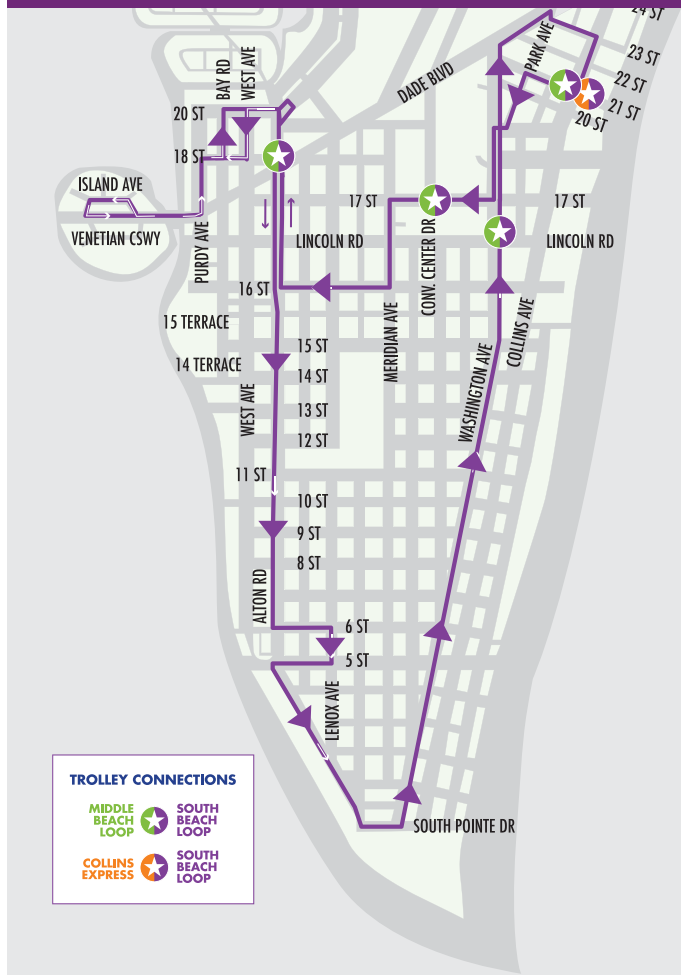
SOUTH BEACH LOOP - A

Clockwise



SOUTH BEACH LOOP - B

Counter Clockwise



Appendix H

Queuing Documentation

Scenario - 6

Scenario Name: Valet Queuing

User Group:

Dev. phase: 1

No. of Years to Project 0

Traffic :

Analyst Note:

Warning: The time periods among the land uses do not appear to match.

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
822 - Strip Retail Plaza (<40k)	General	1000 Sq. Ft. GLA	16.77	Weekday	Best Fit (LIN)	469	469	938
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$T = 42.20(X) + 229.68$	50%	50%	
822(1) - Strip Retail Plaza (<40k)	General	1000 Sq. Ft. GLA	16.77	Weekday, Peak Hour of Adjacent Street Traffic,	Average	24	16	40
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				2.36	60%	40%	
822(2) - Strip Retail Plaza (<40k)	General	1000 Sq. Ft. GLA	16.77	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	56	56	112
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$\ln(T) = 0.71\ln(X) + 2.72$	50%	50%	
221 - Multifamily Housing (Mid-Rise) - Not Close	General	Dwelling Units	5	Weekday	Average	11	11	22
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				4.54	50%	50%	
221(1) - Multifamily Housing (Mid-Rise) -	General	Dwelling Units	5	Weekday, Peak Hour of Adjacent Street	Average	0	1	1
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				0.37	23%	77%	
221(2) - Multifamily Housing (Mid-Rise) - Not	General	Dwelling Units	5	Weekday, Peak Hour of Adjacent Street Traffic,	Average	1	1	2
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				0.39	61%	39%	
710 - General Office Building	General	1000 Sq. Ft. GFA	121.76	Weekday	Best Fit (LOG)	689	689	1378
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$\ln(T) = 0.87\ln(X) + 3.05$	50%	50%	
710(1) - General Office Building	General	1000 Sq. Ft. GFA	121.76	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	175	24	199
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$\ln(T) = 0.86\ln(X) + 1.16$	88%	12%	
710(2) - General Office Building	General	1000 Sq. Ft. GFA	121.76	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	33	162	195
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban				$\ln(T) = 0.83\ln(X) + 1.29$	17%	83%	

PM Peak Hour Trip Generation and Internalization

The Alton

Office Land Use 710 121,761 SF		Mid-Rise Housing Land Use 221 5 DU		Retail Land Use 822 16,770 SF		
In	Out	In	Out	In	Out	
33	162	1	1	56	56	309 ITE Trips
-7	-32	0	0	-11	-11	-61 -20% other modes of transportation
26	130	1	1	45	45	248
UNBALANCED INTERNALIZATION						
57% 19	2% 3	0	4% 0	0	4% 0	
31% 10	20% 32	4	8% 4	2% 1	1	
		46% 0	42% 0	17% 10	26% 15	
BALANCED INTERNALIZATION						
0	0	0	0	0	0	
-1	-4	-4	-4	-1	-1	
		0	0	0	0	
-1	-4	0	0	-4	-1	-10 Internal
25	126 3.2%	1	1 0.0%	41	44 5.6%	238 External Trips 4.0% % Internal
25	126	1	1	41	44	238 Net New External Trips

Shops at Merrick Park Aurora Parking Garage

Garage Entrance Processing Time

Date: 2-May-17
Time: 5 - 6 pm

Car	Processing Time (sec)	Transaction Type	Car	Processing Time (sec)	Transaction Type
1	6.32	T	21	6.92	T
2	9.57	T	22	6.27	T
3	7.47	T	23	6.58	T
4	6.18	T	24	6.16	T
5	8.54	T	25	4.64	C
6	6.61	C	26	3.84	C
7	4.2	C	27	3.43	C
8	6.6	T	28	7.18	C
9	10.66	T	29	3.74	C
10	9.94	T	30	7.23	T
11	4.77	C	31	3.2	C
12	6.51	T	32	3.11	C
13	6.33	T	33	7.17	T
14	5.4	T	34	9.4	T
15	6.28	T	35	5.84	C
16	3.24	C	36	3.57	C
17	3.37	C			
18	7.97	T			
19	3.04	C			
20	6.07	T			

T= Ticket Dispenser
C= Card Reader

Ticket Dispenser Average 7.31 sec
Card Reader Average 4.25 sec
Combined Average 6.04 sec

location, a 5% probability of back-up onto the adjacent street is judged to be acceptable. Demand on the system for design is expected to be 110 vehicles in a 45-minute period. Average service time was expected to be 2.2 minutes. Is the queue storage adequate?

Such problems can be quickly solved using Equation (8-9b) given in Table 8-10 and repeated below for convenience.

$$M = \left[\frac{\ln P(x > M) - \ln Q_M}{\ln \rho} \right] - 1$$

where:

M = queue length which is exceeded p percent of the time

N = number of service channels (drive-in positions)

Q = service rate per channel (vehicles per hour)

$\rho = \frac{\text{demand rate}}{\text{service rate}} = \frac{q}{NQ} = \text{utilization factor}$

q = demand rate on the system (vehicles per hour)

Q_M = tabled values of the relationship between queue length, number of channels, and utilization factor (see Table 8.11)

TABLE 8-11
Table of Q_M Values

ρ	$N = 1$	2	3	4	6	8	10
0.0	0.0000	0.0000	0.0000	0.0000			
0.1	.1000	.0182	.0037	.0008	.0000	0.0000	0.0000
.2	.2000	.0666	.0247	.0096	.0015	.0002	.0000
.3	.3000	.1385	.0700	.0370	.0111	.0036	.0011
.4	.4000	.2286	.1411	.0907	.0400	.0185	.0088
.5	.5000	.3333	.2368	.1739	.0991	.0591	.0360
.6	.6000	.4501	.3548	.2870	.1965	.1395	.1013
.7	.7000	.5766	.4923	.4286	.3359	.2706	.2218
.8	.8000	.7111	.6472	.5964	.5178	.4576	.4093
.9	.9000	.8526	.8172	.7878	.7401	.7014	.6687
1.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$$\rho = \frac{q}{NQ} = \frac{\text{arrival rate, total}}{\text{(number of channels)(service rate per channel)}}$$

N = number of channels (service positions)

Solution

Step 1: $Q = \frac{60 \text{ min/hr}}{2.2 \text{ min/service}} = 27.3 \text{ services per hour}$

Step 2: $q = (110 \text{ veh}/45 \text{ min}) \times (60 \text{ min/hr}) = 146.7 \text{ vehicles per hour}$

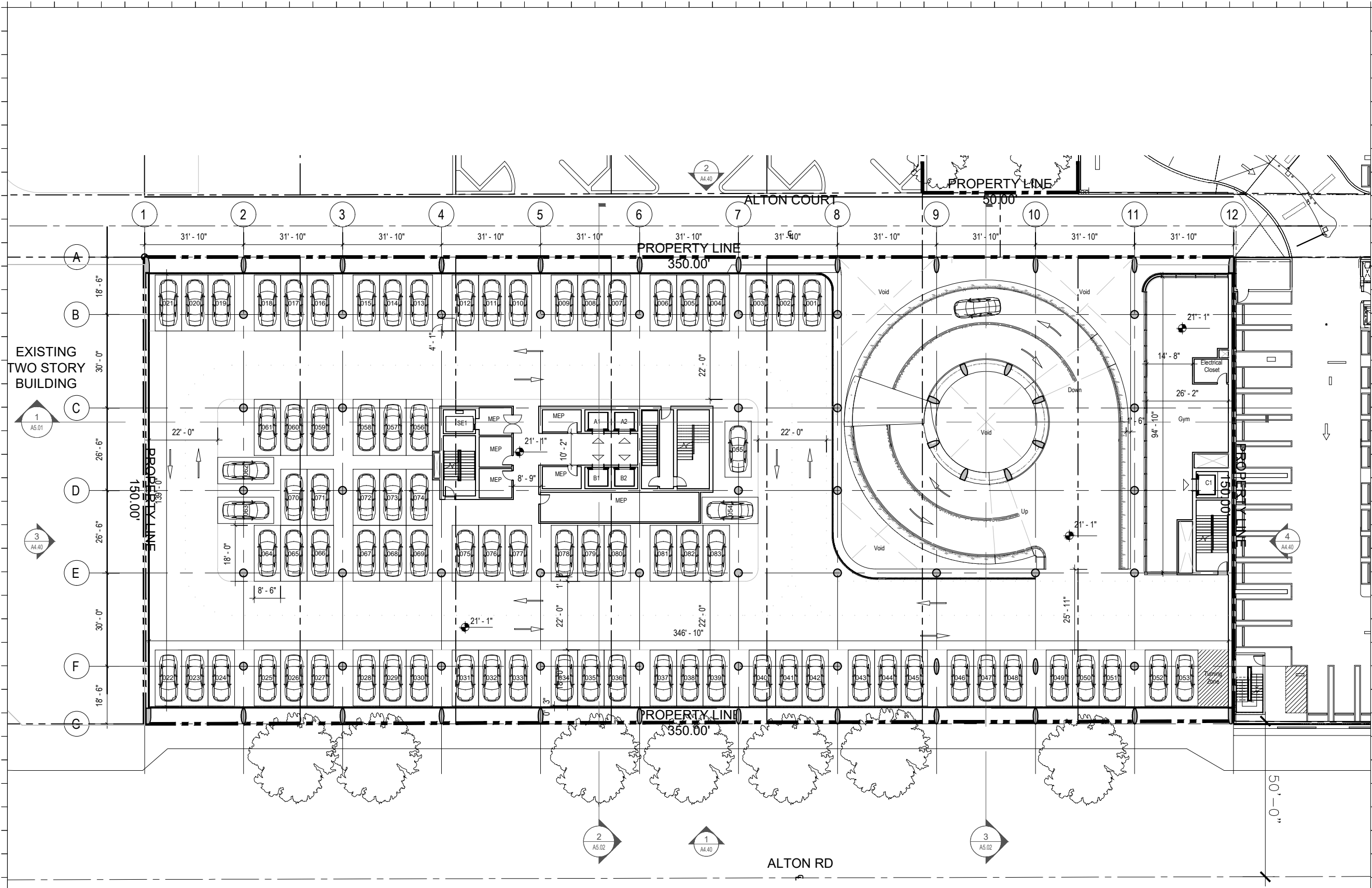
Step 3: $\rho = \frac{q}{NQ} = \frac{146.7}{(6)(27.3)} = 0.8956$

Step 4: $Q_M = 0.7303$ by interpolation between 0.8 and 0.9 for $N = 6$ from the table of Q_M values (see Table 8-11).

Step 5: The acceptable probability of the queue, M , being longer than the storage, 18 spaces in this example, was stated to be 5%. $P(x > M) = 0.05$, and:

$$M = \left[\frac{\ln 0.05 - \ln 0.7303}{\ln 0.8956} \right] - 1 = \left[\frac{-2.996 - (-0.314)}{-0.110} \right] - 1$$

$$= 24.38 - 1 = 23.38, \text{ say } 23 \text{ vehicles.}$$



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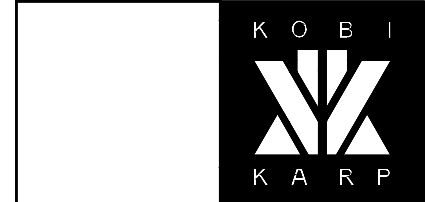
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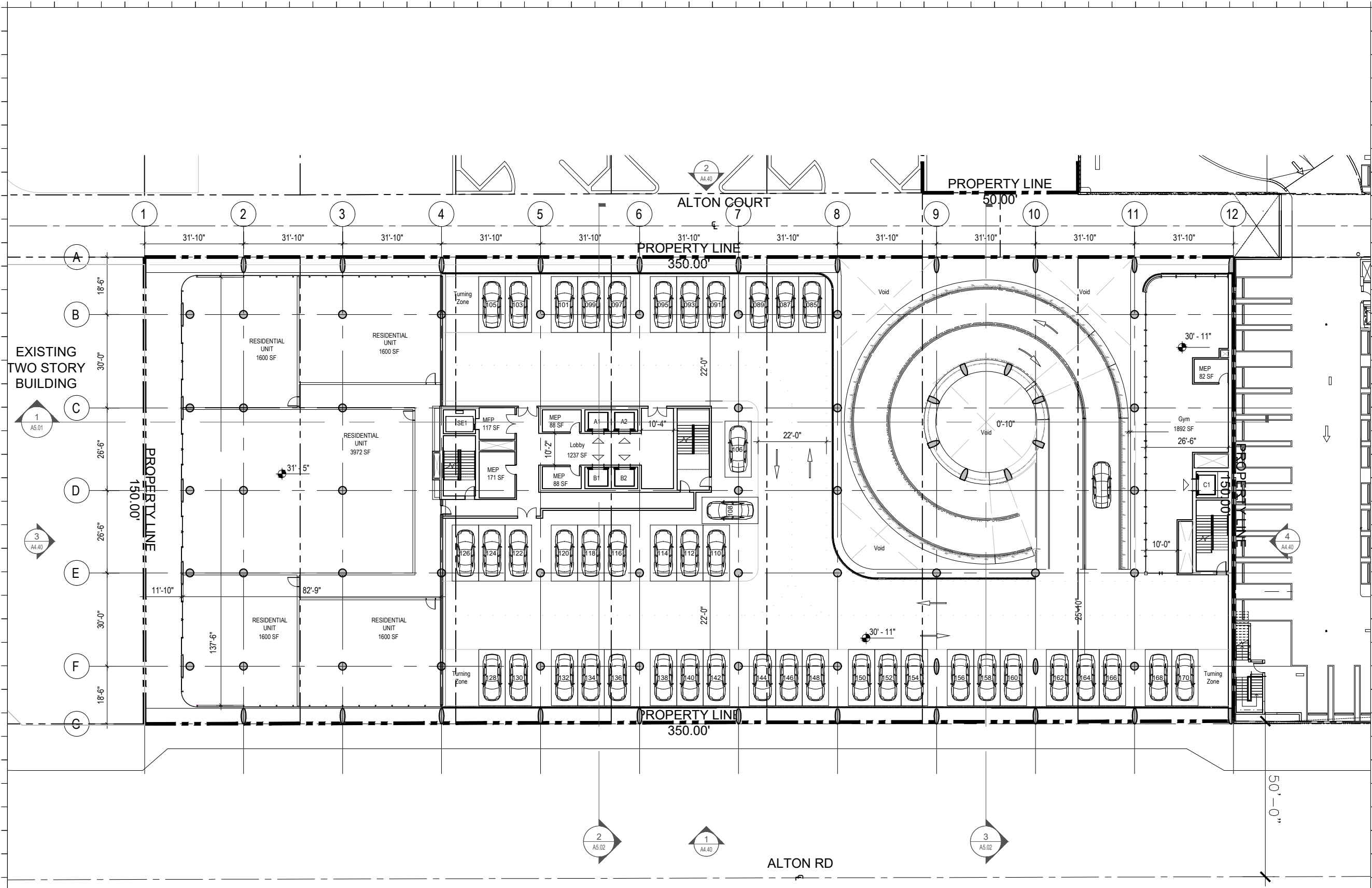
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**PROPOSED LEVEL 2
 ENLARGED**

Date	11.07.2022	Sheet No.	A2.22.1
Scale	1/32" = 1'-0"		
Project	2132		

1 PROPOSED LEVEL 2 FLOOR PLAN
 1/32" = 1'-0"



EXISTING TWO STORY BUILDING

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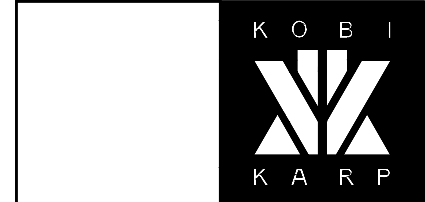
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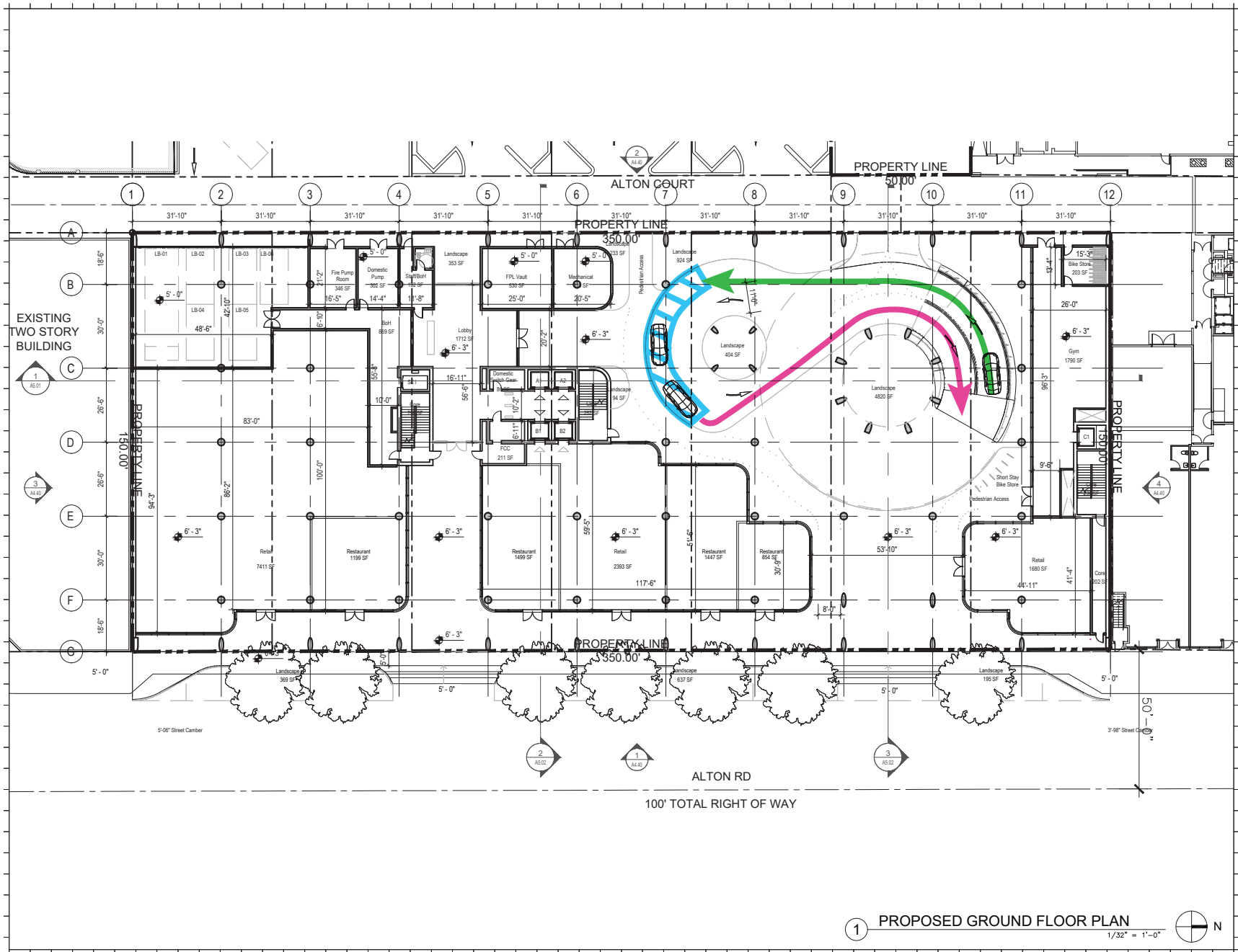
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**PROPOSED LEVEL 3
 ENLARGED**

Date	11.07.2022	Sheet No.
Scale	1/32" = 1'-0"	A2.23.1
Project	2132	

1 PROPOSED LEVEL 3 FLOOR PLAN
 1/32" = 1'-0"



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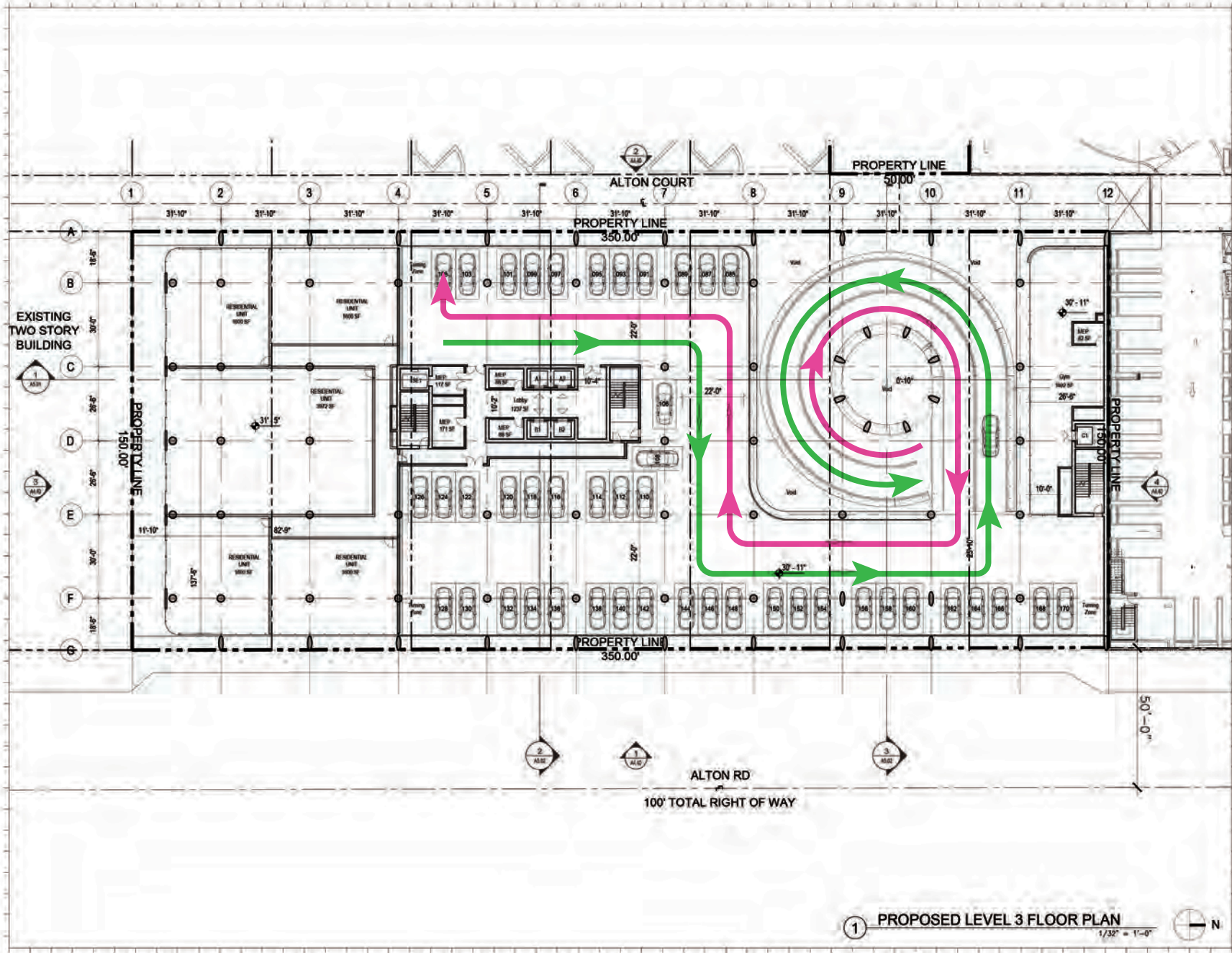
**GROUND FLOOR PLAN
 ENLARGED**

Date	11.07.2022	Sheet No.	A2.21.1
Scale	1/32" = 1'-0"		
Project	2132		

1 PROPOSED GROUND FLOOR PLAN
 1/32" = 1'-0" N

Valet Routing Figure

- Valet Drop-Off/Pick-Up Area
- Valet Inbound
- Valet Outbound



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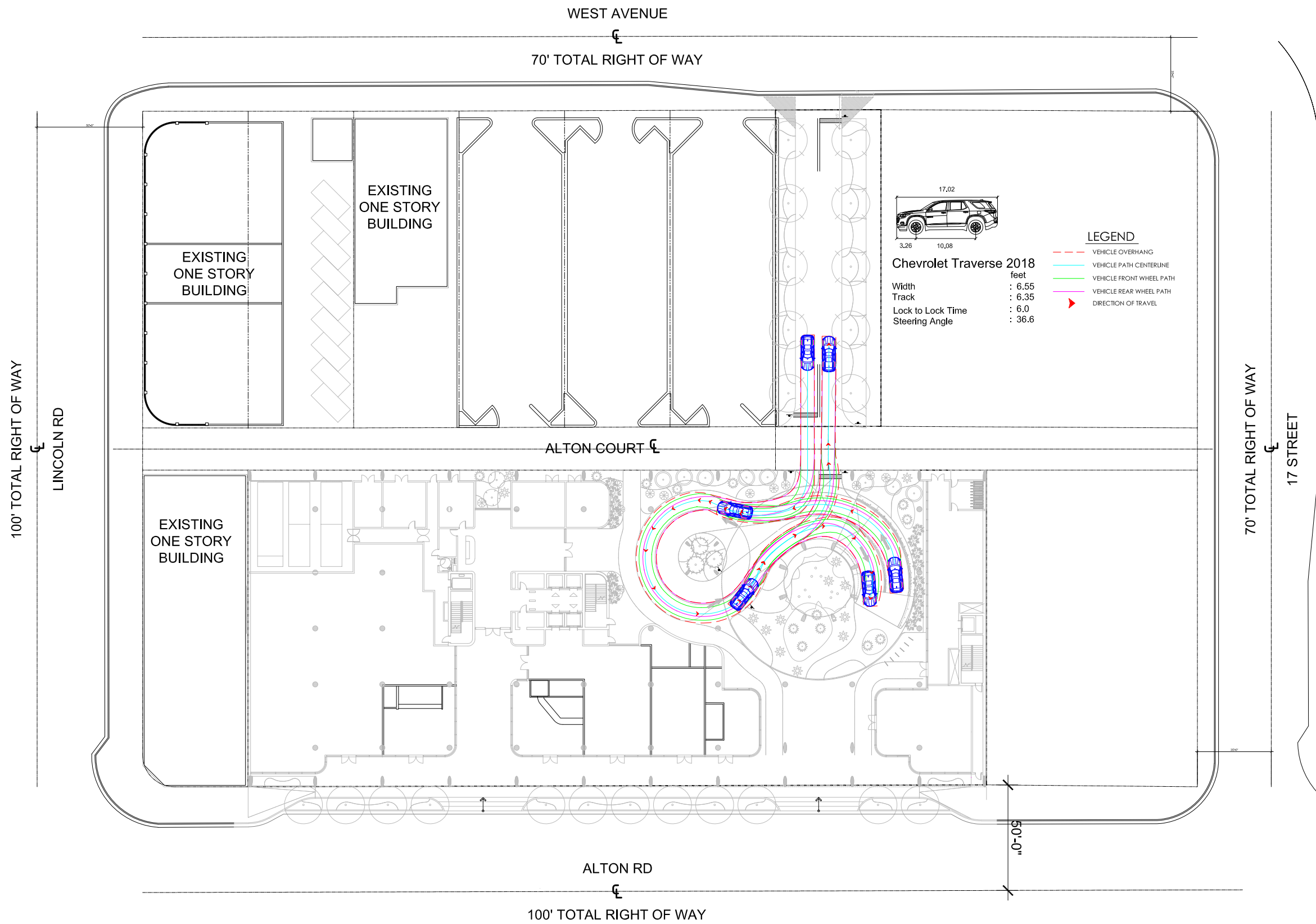
Date	11.07.2023	Sheet No.	A2.23.1
Scale	1/32" = 1'-0"	Project	2152

1 PROPOSED LEVEL 3 FLOOR PLAN
 1/32" = 1'-0"

Valet Inbound
Valet Outbound

Appendix I

Maneuverability Analysis



Rev.	Date	Rev.	Date

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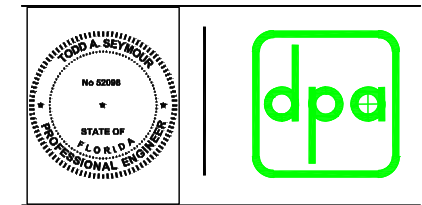
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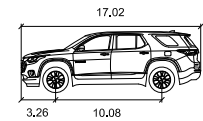
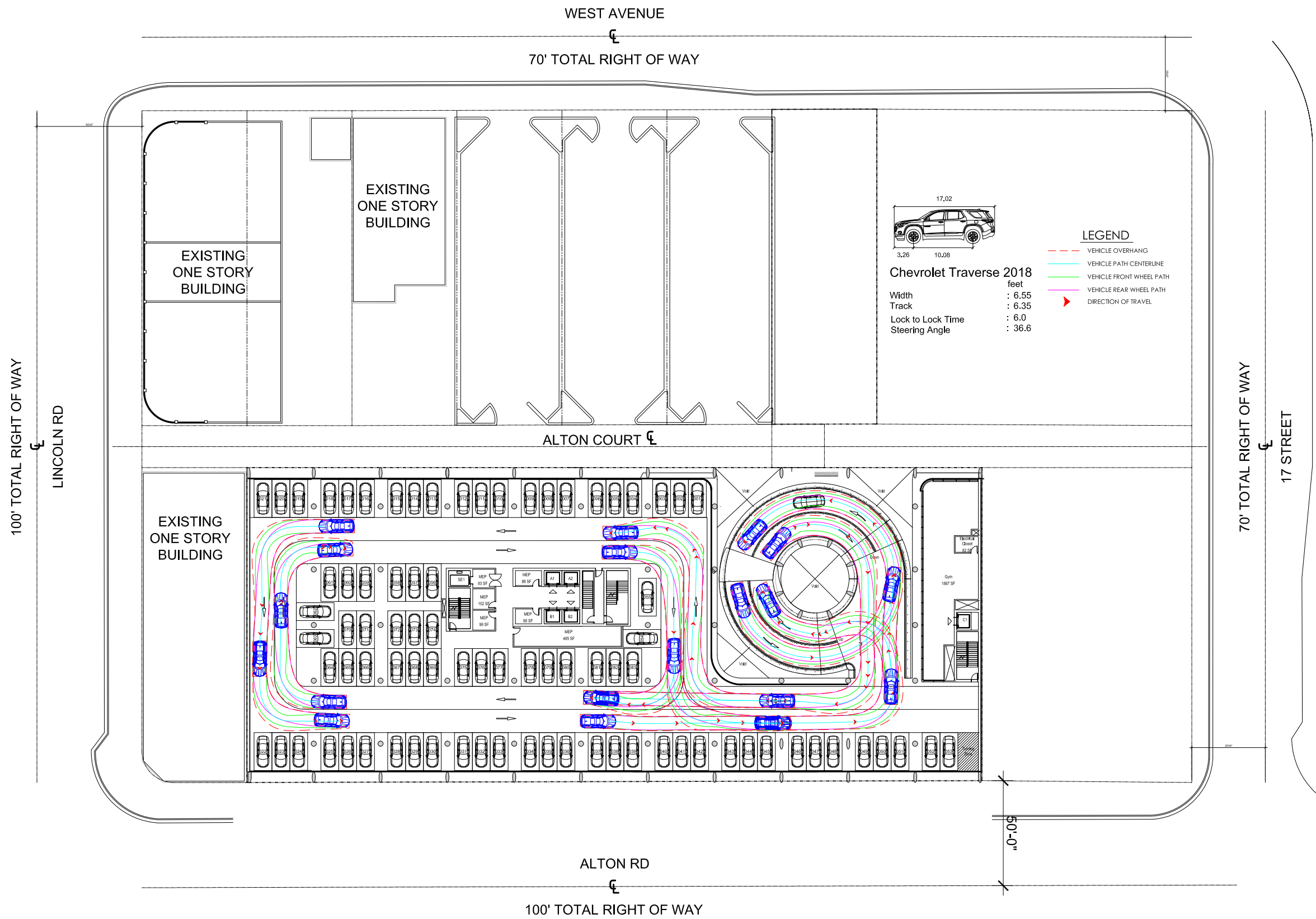
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MANEUVERABILITY ANALYSIS

1 FIRST FLOOR PLAN - LEVEL 01
 SCALE 1" = 50'-0"

Date	01/05/2023	Sheet No.	AT-1.0
Scale	1" = 50'-0"		
Project	20113.01		



Chevrolet Traverse 2018
 feet
 Width : 6.55
 Track : 6.35
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

LEGEND

- VEHICLE OVERHANG
- VEHICLE PATH CENTERLINE
- VEHICLE FRONT WHEEL PATH
- VEHICLE REAR WHEEL PATH
- ▶ DIRECTION OF TRAVEL

Rev.	Date	Rev.	Date

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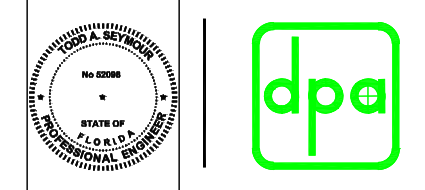
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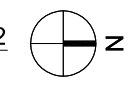
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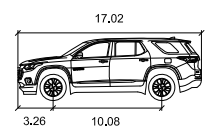
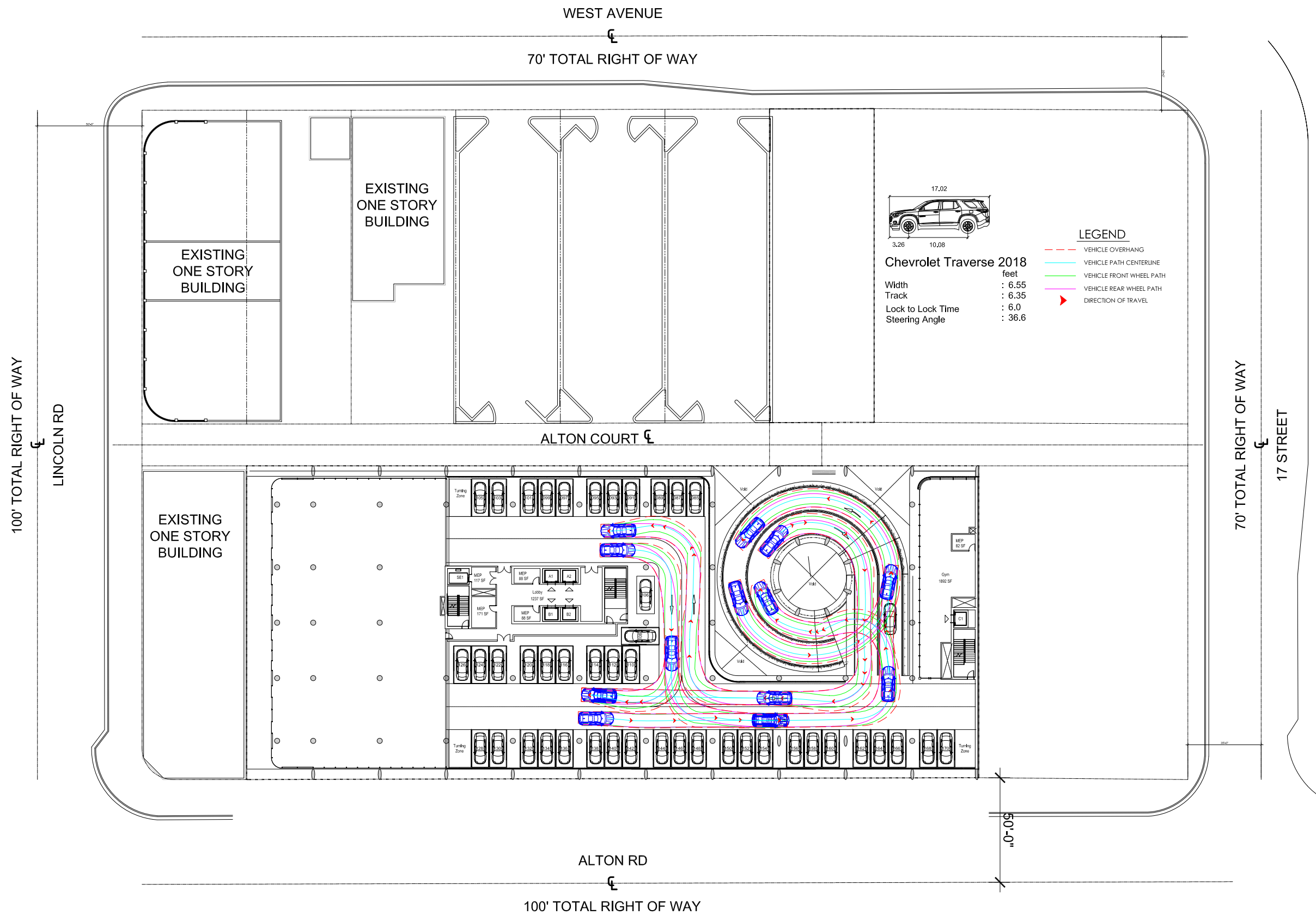


MANEUVERABILITY ANALYSIS

Date	01/05/2023	Sheet No.	AT-2.0
Scale	1" = 50'-0"		
Project	20113.01		

2 SECOND FLOOR PLAN - LEVEL 02
 SCALE 1" = 50'-0"





Chevrolet Traverse 2018
 Width : 6.55 feet
 Track : 6.35 feet
 Lock to Lock Time : 6.0 seconds
 Steering Angle : 36.6 degrees

- LEGEND**
- VEHICLE OVERHANG
 - VEHICLE PATH CENTERLINE
 - VEHICLE FRONT WHEEL PATH
 - VEHICLE REAR WHEEL PATH
 - ▶ DIRECTION OF TRAVEL

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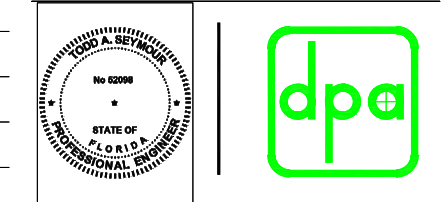
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MANEUVERABILITY ANALYSIS

Date	01/05/2023	Sheet No.	AT-3.0
Scale	1" = 50'-0"		
Project	20113.01		

Appendix J
Response to City Comments

Responses to the City of Miami Beach Review Comments (December 6, 2022)

Re: Review of The Alton Traffic Study dated November 2022

1. Please provide additional peak hour manual turning movement counts and traffic analysis at the following intersections based on the proposed trip assignment.
 - a. Dade Boulevard and West Avenue
 - b. Dade Boulevard and Alton Road

DPA Response (September 2022): The intersections will be added to the intersection analysis.

City Response (November 2022): Addressed.

2. Please update the Trip Generation table to call out rooms as variable instead of suites per the ITE Trip Generation Handbook, 11th Edition. Please also update the PM Peak Hour site generated trips to be 9 trips (4 entry, 5 exit).

DPA Response (September 2022): Comment noted, the trip generation has been updated.

City Response (November 2022): Addressed.

3. Please update the Trip Generation table to revise the PM Peak Hour site generated trips to be 4 trips (2 entry, 2 exit).

DPA Response (September 2022): Comment noted, the trip generation has been updated.

City Response (November 2022): Addressed.

4. Please provide the TAZ number for the subject development parcel per the Miami Dade TPO 2045 LRTP Directional Trip Distribution Report. The traffic impact study should provide the cardinal distribution/assignment percentages for the buildout year.

DPA Response (September 2022): The TAZ number, 641, has been added to the methodology. Please see attachment A for the cardinal distribution and the relevant pages from the 2045 LRTP Directional Trip Distribution Report.

City Response (November 2022): Addressed.

- 5. The background growth rate calculations should not use the historical traffic volume data for the year 2020 due to the impact to the traffic patterns due to the COVID-19 pandemic.**

DPA Response (September 2022): Due to the effects of the Covid-19 pandemic, census data for 2020 and 2021 will be excluded from the report. The counts will also be adjusted using the 2019 PSCF report as data used for the 2021 PSCF report is also affected by the Covid-19 pandemic.

City Response (November 2022): Addressed.

- 6. Please include committed trips from the approved but unbuilt development projects in the area in the traffic operational analysis. A list of the relevant approved but unbuilt development projects should be obtained from the City of Miami Beach Transportation and Mobility Department.**

DPA Response (September 2022): Comment noted, the Methodology has been revised.

City Response (November 2022): Addressed.

- 7. A vehicle maneuverability analysis should be submitted for the loading zone and all ingress and egress driveway connections.**

DPA Response (September 2022): Comment noted, the Methodology has been revised.

City Response (November 2022): Addressed.

- 8. Please include details regarding any programmed projects by Miami Dade County, FDOT or the City of Miami Beach on the adjacent roadway network. This should include projects that are included as part of the most recent City of Miami Beach Transportation Master Plan.**

DPA Response (September 2022): Comment noted, the Methodology has been revised.

City Response (November 2022): Addressed.

- 9. Please provide a pavement marking and signage plan which provides design details including the main drop off area. Please include the appropriate pavement marking and signage (One-Way, Do Not Enter) per MUTCD criteria.**

DPA Response (September 2022): Comment noted, the Methodology has been revised.

City Response (November 2022): Addressed.

- 10. Please provide the intersection volume worksheets. They are not provided in Appendix D as referenced.**

DPA Response (December 2022): The intersection volume worksheets have been added to Appendix D of the report.

11. Please update the reference in Exhibit 4, Exhibit 6 and Exhibit 12 related to the LOS standards. Please reference the current City of Miami Beach 2045 Comprehensive plan/transportation element which is the most current.

DPA Response (December 2022): The LOS standards references were updated to the 2040 (most recent) Comprehensive Plan.

12. Please provide additional narrative to the turn lanes where the 95th percentile vehicle queue exceeds the storage length. Please discuss the feasibility of turn lane extensions (i.e. the turn lane storage for the eastbound left turn lane at Dade Blvd. and Alton Road cannot be extended due to the existing westbound left turn lane storage for the Dade Blvd and West Avenue intersection).

DPA Response (December 2022): Additional narrative has been provided where the 95th percentile vehicle queue exceeds the storage length.

13. Please provide a turn lane warrant analysis for a potential exclusive northbound right turn lane on West Avenue at the development site access driveway connection. Please provide a turn lane warrant analysis for a potential exclusive westbound right turn lane on Lincoln Road at the Alton Court alley site access driveway connection.



Although the future with project LOS is C and B in the AM and PM peak hour conditions at the West Avenue and 17th Street intersection, the 95th percentile vehicle queue at this signalized intersection extends well past the proposed driveway connection (221 LF in the AM, 333 LF in the PM). Please confirm how this proposed right-in and right-out driveway connection will operate satisfactorily during the AM and PM peak hour conditions.

DPA Response (December 2022): A turn lane warrant analysis has added as Section 4.6 of the report. As the trips generated by the project at the Lincoln Road and Alton Court site access

driveway connection are below the recommended thresholds, no exclusive turn lanes are required. The trips generated by the project at the West Avenue driveway connection are above the recommended threshold for an exclusive right turn lane. However, it should be noted that this is an existing driveway with no available R.O.W and the queue surpasses the driveway at existing conditions. Additionally, there is a bicycle path along West Avenue, adjacent to the project, and a public parking lot south of the project driveway; the addition of a right turn lane into the project would increase conflicts with cyclists and pedestrians traveling to/from the public parking areas. Furthermore, the project is expected to only add 38 trips to the network during the AM peak hour, decrease the daily trips by 1,816 trips, and decrease the PM peak hour trips by 11 trips when compared to the existing uses.

The 95th percentile vehicle queue at the West Avenue / 17th Street intersection is 217 feet and 316 feet during the respective AM and PM peak hours for future without project conditions. It should be noted this queue is an existing condition; the project only adds four feet and 17 feet (less than one vehicle) of queue during the AM and PM peak hours, respectively. Although the queue extends past the proposed and existing driveways, the overall LOS is a C and B during the AM and PM peak hour for future with project conditions.

14. Please confirm that the appropriate minimum driveway connection spacing is being met between the proposed right-in and right-out driveway connection on West Avenue with the existing right-in and right-out driveway connection for the Trader Joes building (existing commercial square footage to remain).



DPA Response (December 2022): The minimum driveway connection spacing is met between the Trader Joes driveway and the proposed project driveway as they are existing and access to these driveway connections on West Avenue will not change.

15. Please update the Miami Beach Trolley South Beach loop route as depicted on Exhibit 15. There appears to be two shades of green (dark and light) on the exhibit while the legend shows just a dark green.

DPA Response (December 2022): Exhibit 15 has been revised.

16. Please provide additional narrative to Section 6.0 Queuing Analysis related to the valet trip generation. Please clarify that the existing commercial retail square footage (Trader Joes, etc.) and the 17 West hotel has existing parking and will not utilize the new site access/vale stand. Please also confirm how the enforcement of the valet will be handled for vehicles who choose to self-park and there are no self-parking spaces available.

DPA Response (December 2022): Additional narrative has been provided related to the valet trip generation. The existing to remain 55,214 SF of retail space and 24-room hotel has existing parking and will not utilize the proposed project's driveway or valet services. A gate will be placed at the entrance to the mechanical parking spaces on the third level. If no self-parking spaces are available on the second level, the vehicle must go to the valet station on the ground level in order to park their vehicle.

17. Please provide an exhibit that depicts the valet vehicle routes including distance for the driving time and walking times for each valet parking operational analysis scenario. Please label where the valet parking stand/attendants will be stationed.

DPA Response (December 2022): A valet routing figure has been added to Appendix H of the report.

18. Please be specific regarding the Transportation Demand Management strategies. Section 7.0 of the traffic impact study mentions that the owner will "Promote mass transit use by encouraging employers to purchase transit passes and make them available to employees at discounted prices or no charge, or in lieu of subsidized parking." The Transportation Demand Management strategies need to include more specific commitments. Please also confirm if there will be Citibike membership or passes offered to employees as part of the TDM strategies in addition to the Miami Dade County Transit passes mentioned in the traffic impact study.

DPA Response (December 2022): The Transportation Demand Management plan has been revised to include more specific commitments.

19. Please provide a copy of the vehicle maneuverability analysis for the loading zone and all ingress and egress driveway connections as requested in the traffic impact study methodology.

DPA Response (December 2022): The maneuverability analysis of the loading zone and project driveways has been added to Appendix I of the report.

20. Please provide a copy of the pavement marking and signage plans for the proposed development as requested in the traffic impact study methodology.

DPA Response (December 2022): A copy of the pavement marking and signage plan has been added to Appendix A of the report.