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July 2, 2020

HAND-DELIVERED

Mr. Justin Proffitt, AICP
Community Development Director
Planning & Zoning Department
City of North Miami Beach
17050 N.E. 19th Ave
North Miami Beach, FL 33162-3100

RE: Dezer Intracoastal Mall LLC / Intracoastal Mall Redevelopment – 3501 Sunny Isles Boulevard, North Miami Beach, Florida (the “Property”)

Dear Mr. Proffitt:

This letter and associated enclosures shall serve as the Applicant’s response to the additional comments issued by the Corradino Group dated June 30, 2020. In addition to the responses provided herein, enclosed please find 1) responses to the comments, and 2) the updated traffic impact analysis, both prepared by Kimley-Horn and Associates, Inc., and dated July 2, 2020. The traffic study has been revised as requested by City Staff and the Corradino Group to reflect and include the additional data and analysis requested by the aforementioned comments.

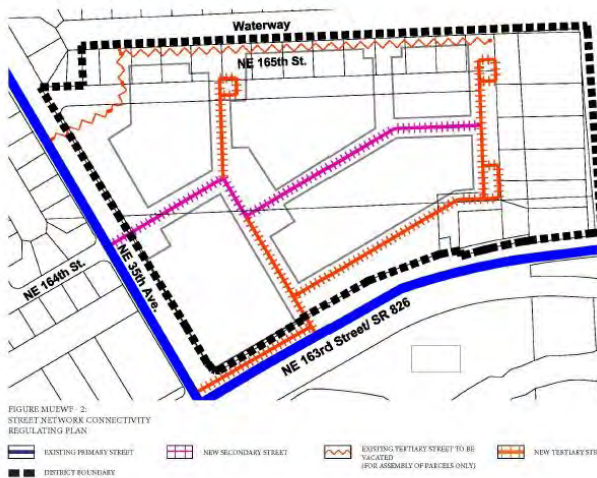
With this letter we hereby confirm that the project complies with Section 24-58.7(O)(2)(e) of the Land Development Code, which provides that a condition for approval of a development requires the following public service compliance:

The developer shall be required to provide for multiple access points with direct east and west access to and from SR 826 and traffic mitigation such that the development does not over burden NE 35th Avenue.

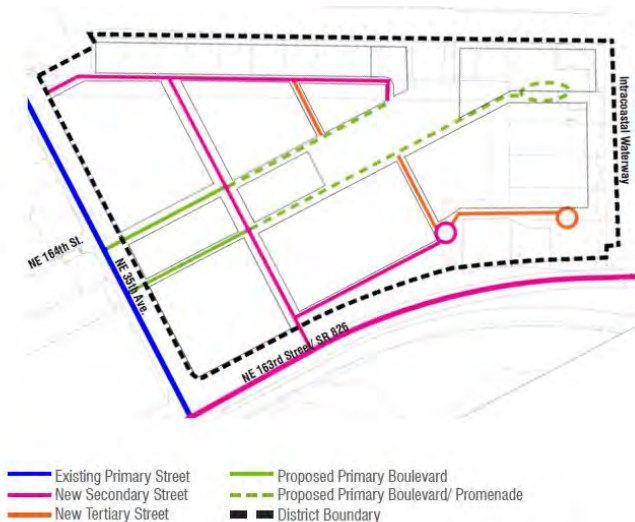
The conceptual plan submitted for the project provides multiple access points that include direct east and west access to and from SR 826 and traffic improvements that result in an improved level of service on NE 35 Avenue, as detailed below.

As part of the district regulations for the MU/EWF district that govern the development of the subject property, a series of regulating plans were adopted that set forth the design standards for the project. Figure MU/EWF-2: Street Network Connectivity Regulating Plan (“Figure MU/EWF-2”) provides the approximate location of existing and required new streets, and hierarchy of said streets, needed to create the prescribed network of streets within the project. In fact, Figure MU/EWF-2 is being proposed to be modified in order to provide additional access for the Property and improve the project’s connectivity, including additional access points, as shown below:

Existing



Proposed



In the current version of Figure MU/EWF-2, the two project access points are identified at 1) NE 35 Avenue and NE 164 Street, and 2) a frontage road with a potential connection to SR 826 at NE 36 Avenue/Intracoastal Mall Driveway. In the proposed version, three project access points are identified at 1) NE 165 Street and NE 35 Avenue, 2) at NE 164 Street and NE 35 Avenue, and 3) a new intersection at NE 36 Avenue/Intracoastal Mall Driveway.

In both versions of Figure MU/EWF-2, the direct east and west access to and from SR 826 is shown as NE 36 Avenue/Intracoastal Mall Driveway. The project proposes to signalize the intersection of SR 826 and NE 36 Avenue/Intracoastal Mall Driveway. This new intersection is located at the only feasible location available for direct east and west access to SR 826 given the existing conditions, including, land topography, bridge gates on SR 826, intersection and signalization distance requirements, and ownership constraints. It is important to note that even though required by the Land Development Code, this new intersection will require the approval of a variance from the FDOT Access Management Variance Committee. This request to FDOT is supported by the City, as evidenced by the letter from the City Manager dated June 23, 2020, attached hereto for your reference. The variance approval is anticipated to be obtained on August 6, 2020.

Finally, Section 24-58.7(O)(2)(e) requires that the street network connections associated with the project does not overburden NE 35 Avenue. The project complies with this requirement. The results of the traffic study confirm that the overall combined left-turn and right-turn lane queues

Dezer Intracoastal Mall

July 2, 2020

Page 3

along NE 35 Avenue are expected to decrease under future total with improvements conditions when compared to future background conditions and future total conditions. Additionally, the eastbound left-turn storage lanes are able to accommodate the expected vehicle queues along SR 826/NE 163rd Street at NE 35 Avenue and NE 36 Avenue/Intracoastal Mall Driveway under future total with improvements conditions.

As noted above, the complete responses to the supplemental comments and the updated traffic impact analysis are enclosed for your review. If you have any questions or require additional information, please contact me.

Respectfully submitted,

HOLLAND & KNIGHT LLP

A handwritten signature in blue ink that reads "Tracy Slavens". The signature is written in a cursive style and is contained within a rectangular box.

Tracy R. Slavens, Esq.

Enclosures

Cc: Daniel A. Espino, Esq., City Attorney
Sharon Cino, Planning & Zoning Manager
Arthur Gallagher, Esq.
Adrian Dabkowski, P.E.
Joseph G. Goldstein, Esq.

RESPONSES TO CORRADINO COMMENTS
AND UPDATED TRAFFIC STUDY DATED JULY 2020



MEMORANDUM

To: Justin Proffitt, AICP
City of North Miami Beach

From: Adrian K. Dabkowski, P.E., PTOE 

Date: July 2, 2020

**Subject: Intracoastal Mall Redevelopment
Response to the Corradino Group**

We have received additional comments on June 30, 2020. We offer the following additional responses and information:

1. Prior to site plan approval, the Applicant must obtain design approval from the FDOT Access Management Board. This approval shall be for the design presented in the Master Plan or a comparable design which satisfies Section 24-58.7(O)(e) - Eastern Mixed-Use Waterfront District (MU/EWF) pertaining to an access point with direct east and west access to and from SR 826/NE 163rd Street and traffic mitigation such that the development does not over burden NE 35th Avenue.

Response: The Applicant agrees to comply with this condition.

Corradino Response: Condition Addressed.

Additional Response: As an update, the project is schedule for the next FDOT Access Management Variance Committee hearing. The hearing is currently scheduled for August 6.

3. Prior to the first site plan approval, the developer must provide mitigation measures to reduce project impacts at the intersection of Biscayne Boulevard and NE 163rd Street in order to not further degrade the overall intersection volumes during the P.M. peak hour under future total and future total with improvements conditions as outlined in the Traffic Impact Analysis dated and submitted to the City of North Miami Beach and the Florida Department of Transportation on February 2020 and updated March 2020.

RESPONSE: The Applicant has worked with the City's traffic consultants to re-analyze the existing and future level of service at the intersection of Biscayne Boulevard and NE 163 Street based on enhanced multi-modal facilities agreed to during the review process. The revised analysis is dated June 2020 and is attached to this response. The current level of service at the intersection is LOS E+50. The project is unique in many respects but, most importantly, it emphasizes and encourages multi-modal transportation and has thus incorporated transit, bicycle, and pedestrian facilities into the design. Therefore, the multi-modal factor utilized in the updated traffic impact analysis is 15%. As a result of the incorporation of this enhanced multi-modal factor in the analysis, the future projected level of service for intersection of Biscayne Boulevard and NE 163 Street with the project will be LOS E+49. Based on this

updated analysis, the project results in an improved level of service for the intersection, has no negative impacts on the intersection, and no mitigation measures are required.

CORRADINO RESPONSE: This condition has been addressed. The Adopted Level of Service for this intersection is LOS E+50 per the City of North Miami Beach Transportation Master Plan and prior traffic studies conducted with the City of North Miami Beach. As the response above demonstrates, the mitigation measures taken based on the enhanced multi-modal facilities along the corridor improves the level of service at the intersection of Biscayne Boulevard and NE 163rd Street to LOS E+49. The applicant should include language that clarifies the Adopted Level of Service at this intersection and its mitigation as part of the narrative in the Traffic Impact Study.

Additional Response: The traffic study was updated to account for all the multimodal improvements requested by the City of North Miami Beach and Florida Department of Transportation and is contained in Attachment A.

A multimodal (public transit, bicycle, and pedestrian) reduction factor of 10 percent (10%) multimodal factor was applied to future total conditions without improvements. Note that a 15.0 percent (15.0%) was applied to the trip generation calculations for future total conditions with improvements as the project proposes a significant amount of multimodal improvements. These improvements will make it easier and encourage residents, employees, and patrons to walk/bike or use public transit to and from the development and surrounding areas. These multimodal improvements include:

- A westbound buffered bicycle lane fronting the project on SR 826/NE 163rd Street.***
- A shared bicycle lane in the frontage road west of NE 35th Avenue on SR 826/NE 163rd Street.***
- Providing transit shelters at the bus station on SR 826/NE 163rd Street at NE 35th Avenue***
- Providing an enhanced pedestrian crossing and refuge island on SR 826/NE 163rd Street at NE 35th Avenue.***
- A shared use path fronting the project on SR 826/NE 163rd Street.***
- An enhanced bus station along northbound NE 35th Avenue north of 826/NE 163rd Street***

Furthermore, a water taxi, shuttle, or other transient water borne transportation is proposed to operate along the Intracoastal Waterway. Miami-Dade Transit (MDT) and the City of North Miami Beach provide bus service to and from the project area via three (3) routes:

- Route 105/Route E operates along SR 826/NE 163rd Street within the vicinity of the project. This route serves the Golden Glades Park & Ride Lot, Aventura Mall, and the Gulfstream Park. This route operates with 30-minute headways during the A.M. and P.M. peak hours and provides connecting service to 13 additional MDT bus routes.***

- *Route 108/Route H operates along SR 826/NE 163rd Street within the vicinity of the project. This route serves Haulover Park and the 163rd Street Mall. This route operates with 30-minute headways during the A.M. and P.M. peak hours and provides connecting service to 14 additional MDT bus routes.*
- *North Miami Beach’s free trolley NMB-Line Route A operates along SR 826/NE 163rd Street within the vicinity of the project. The route originates at the Intracoastal Mall and offers connections to other routes serving City Hall, Fulford Elementary, Florida International University, and Nova University. This route operates with 60-minute headways during the A.M. and P.M. peak hours and provides connecting service to 12 additional MDT bus routes.*

The intersection capacity tables 3 and 4 were updated to include the adopted level of service at each intersection. Note that the results of the intersection capacity analyses indicate that the study intersections are expected to operate at City of North Miami Beach’s adopted levels of service (LOS) or better under existing, future background without project, and future total with project and improvements during the A.M and P.M. peak hours. Note that the intersection of SR 826/NE 163rd Street and Biscayne Boulevard/US-1 is expected to operate at LOS F under future total conditions without improvements.

4. Prior to the first Certificate of Occupancy, applicant shall demonstrate through its plans, improved or maintained levels of transit service to the development, including accessibility and transferability between existing transit lines. Applicant will maintain or enhance the current level of service by allowing for onsite access in the form of a premium transit facility with collocated transit stops for the North Miami Beach and Sunny Isles Beach, at that agency's option, trolley systems. The premium transit facility shall include features at a minimum, but not limited to, premium shelters or facilities; digital routing displays, including real time information; seating; and WiFi hotspots. The premium transit facility shall be ADA compliant.

RESPONSE: The Applicant agrees to comply with this condition to the extent it is feasible. Transit stops to serve the project are located on NE 163 Street and NE 35 Avenue and premium shelter facilities are contemplated at these stops. It is important that the city acknowledge that transit routes do not typically enter private property or travel on private driveways. The Applicant has previously committed to providing premium transit shelters. Exhibit F-1 to the Development Agreement “Roadway Transportation Facilities,” which has been submitted to the City for review, provides:

**EXHIBIT F-1
PUBLIC FACILITIES**

Roadway Transportation Facilities:

In accordance with Section 163.3227(1)(d), Florida Statutes (2020), the proposed development will be serviced by those roadway transportation facilities currently in existence as provided by state, county, and local roadways. The proposed development will also be serviced by public transportation facilities currently in existence, as provided by Miami-Dade County, the City of North Miami Beach, and such other governmental entities as may presently operate public transportation services within the City of North Miami Beach. Certain enhancements to the

existing transportation and transit infrastructure, such as premium transit shelters, including, but not limited to, transit shelters with digital displays, Wi-Fi access, and/or seating accommodations, and traffic signalization be considered at the time of Site Plan review.

CORRADINO RESPONSE: Acceptance of this comment is predicated on the applicant providing on-site premium shelters, in addition to any additional transit improvements for stops on NE 163rd Street and NE 35th Avenue.

Additional Response: Noted.

We trust that this response adequately addresses the comment provided. Please contact us should you have any questions.

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Attachment A

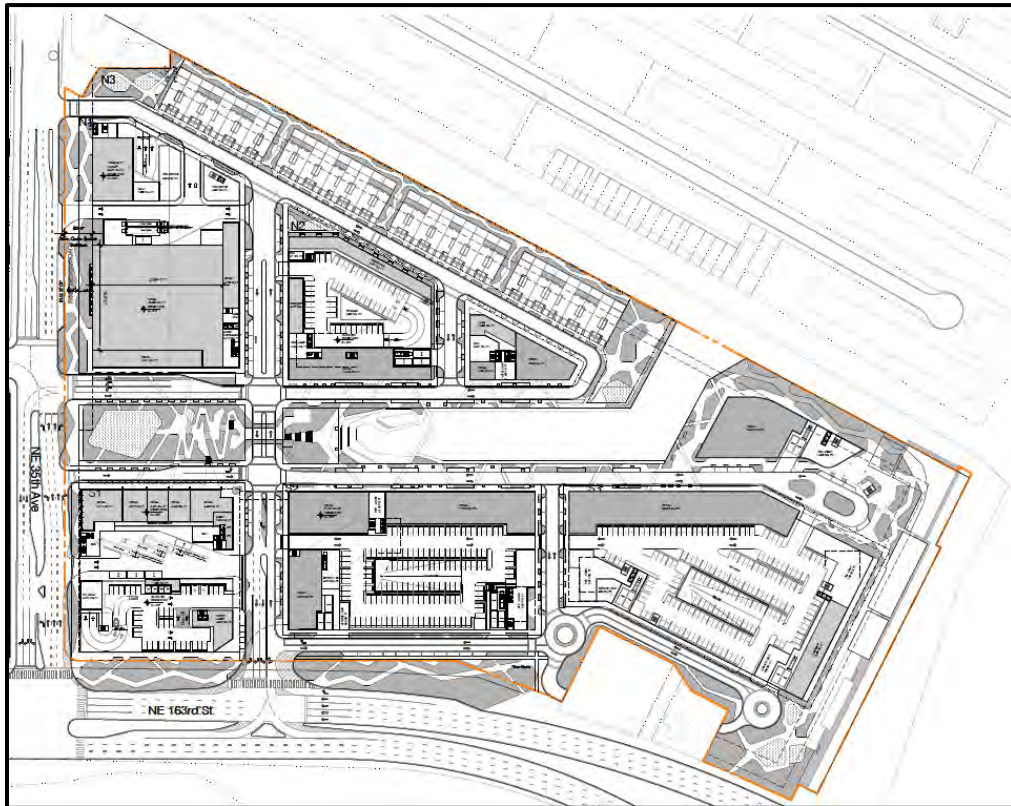
Updated Traffic Impact Analysis



*Traffic Impact Analysis for
Submittal to the
City of North Miami Beach*

Intracoastal Mall Redevelopment

North Miami Beach, Florida



Kimley»Horn

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Updated July 2020

March 2020

February 2020

August 2019

043796003

*Traffic Impact Analysis
for Submittal to the
City of North Miami Beach*

**Intracoastal Mall Redevelopment
North Miami Beach, Florida**

Prepared for:
Dezer Intracoastal Mall, LLC

Prepared by:
Kimley-Horn and Associates, Inc.



Kimley»Horn

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Updated July 2020
March 2020
February 2020
August 2019
043769003

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Registry # 00000696

EXECUTIVE SUMMARY

Dezer Intracoastal Mall, LLC is proposing to redevelop the property located at 3789 NE 163rd Street in North Miami Beach, Florida. The site proposed for redevelopment is currently occupied by 189,026 square feet of shopping center and a 45,000 square-foot supermarket. The proposed redevelopment consists of 200,000 square feet of office space, 280,000 square feet of shopping center, a 50,000 square-foot supermarket, 45,000 square feet of gym space, 2,000 multifamily residential units (35 Low-Rise, 48 Mid-Rise, and 1917 High-Rise units), and a 250-room hotel. The redevelopment is expected to be completed by year 2031.

Access to the existing development is provided via one (1) limited-access (right-in/right-out) driveway along NE 163rd Street east of NE 35th Avenue, one (1) full-access driveway at the signalized intersection of NE 164th Street and NE 35th Avenue, and one (1) limited-access (right-in/right-out/left-out) driveway at the intersection of NE 35th Avenue and Intracoastal Mall Driveway.

The project proposes improvements including signaling the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway, the addition of one (1) southbound left-turn lane, the addition of one (1) eastbound left-turn lane, and the addition of one (1) receiving lane to the west leg. The new signal would operate similar to the current operations of the signalized intersection of SR 826/NE 163rd Street and NE 35th Avenue with eastbound partial continuous green T-intersection, signalized southbound left- and right-turn lanes, signalized eastbound left-turn lanes, and signalized westbound through and right-turn lanes. Furthermore, the proposed improvements include the addition of one (1) eastbound left-turn lane at the intersection of SR 826/NE 163rd Street and NE 35th Avenue and the elimination of the exclusive westbound left-turn lane along Frontage Road at NE 34th Street. The intersection of SR 826/NE 163rd Street and NE 35th Avenue is proposed to be modified to remove the eastbound partial continuous green T-intersection as well as the exclusive pedestrian phase. The configuration of this intersection is proposed to include signalized eastbound through and left-turn lanes, signalized southbound left and right-turn lanes, and signalized westbound through and shared through/right-turn lanes. The proposed improvements satisfy the City of North Miami Beach's Eastern Mixed-Use Waterfront

District (MU/EWF) code requirements by providing for multiple access points with direct east and west access to and from SR 826/NE 163rd Street and traffic mitigation such that the development does not over burden NE 35th Avenue.

The results of the intersection capacity analyses indicate that the study intersections are expected to operate at City of North Miami Beach's adopted levels of service (LOS) or better under existing, future background without project, and future total with project and improvements during the A.M and P.M. peak hours. Note that the intersection of SR 826/NE 163rd Street and Biscayne Boulevard/US-1 is expected to operate at LOS F under future total conditions without improvements.

A 95th percentile queue analysis was performed to identify the expected vehicle queues at the intersections of SR 826/NE 163rd Street at NE 35th Avenue and SR 826/NE 163rd Street at Intracoastal Mall Driveway. The eastbound left-turn lanes and southbound left-turn and right-turn lanes queues were examined. The westbound approach queue at the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway was also examined. The queue length analysis was prepared for existing, future background, future total, and future total with improvements analysis conditions. The results of the analysis indicate that the overall combined left-turn and right-turn lane queues along NE 35th Avenue are expected to decrease under future total with improvements conditions when compared to future background conditions and future total conditions. Additionally, the eastbound left-turn storage lanes are able to accommodate the expected vehicle queues along SR 826/NE 163rd Street at NE 35th Avenue and Intracoastal Mall Driveway under future total with improvements conditions. Furthermore, the westbound through-lane queues at Intracoastal Mall Driveway are not expected to extend to the bridge gates on SR 826/NE 163rd Street for when the bridge is drawn closed.

A signal warrant analysis was conducted at the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway under future total with improvements conditions and determined that the intersection satisfies Warrant 2 and Warrant 3. Therefore, a signal is recommended for installation at this intersection under future total with improvements conditions.

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
EXISTING TRAFFIC	3
FUTURE BACKGROUND TRAFFIC	5
Background Area Growth	5
Committed Developments	6
PROJECT TRAFFIC	8
Existing and Proposed Land Uses	8
Project Access	8
Trip Generation	9
Multimodal Reduction.....	9
Internal Capture	10
Pass-By Capture.....	11
Net New Project Trips	11
Trip Distribution and Assignment.....	12
FUTURE TOTAL TRAFFIC	22
INTERSECTION CAPACITY ANALYSIS	25
QUEUE LENGTH ANALYSIS.....	29
SIGNAL WARRANT ANALYSIS.....	32
CONCLUSION	35

LIST OF FIGURES

	<u>Page</u>
Figure 1: Site Location Map.....	2
Figure 2: Existing A.M. and P.M. Peak Hour Traffic Volumes	4
Figure 3: Future Background A.M. and P.M. Peak Hour Traffic Volumes	7
Figure 4: Peak Hour Project Trip Distribution.....	14
Figure 5: Peak Hour Project Trip Distribution with Improvements.....	15
Figure 6: Peak Hour Project Trip Assignment	16
Figure 7: Peak Hour Project Trip Assignment with Improvements.....	17
Figure 8: P.M. Peak Hour Pass-By Trip Distribution.....	18
Figure 9: P.M. Peak Hour Pass-By Trip Distribution with Improvements	19
Figure 10: Peak Hour Pass-By Trip Assignment	20
Figure 11: Peak Hour Pass-By Trip Assignment with Improvements	21
Figure 12: Future Total Peak Hour Traffic Volumes.....	23
Figure 13: Future Total Peak Hour Traffic Volumes with Improvements	24

LIST OF TABLES

	<u>Page</u>
Table 1: Proposed Trip Generation	12
Table 2: Cardinal Trip Distribution	13
Table 3: A.M. Peak Hour Intersection Capacity Analysis	27
Table 4: P.M. Peak Hour Intersection Capacity Analysis.....	28
Table 5: A.M. Peak Hour Queuing Analysis	30
Table 6: P.M. Peak Hour Queuing Analysis.....	31
Table 7: Pagone’s Theorem Hourly Right-Turn Volume Reduction	33
Table 8: Signal Warrant Analysis Summary	34

LIST OF APPENDICES

- APPENDIX A: Site Plan
- APPENDIX B: Methodology Correspondence
- APPENDIX C: Traffic Data
- APPENDIX D: Growth Rate Calculations
- APPENDIX E: Committed Development Traffic
- APPENDIX F: Volume Development Worksheets
- APPENDIX G: Conceptual Improvements
- APPENDIX H: Transit Route Information
- APPENDIX I: Trip Generation
- APPENDIX J: Cardinal Trip Distribution
- APPENDIX K: Intersection Capacity Analysis Worksheets
- APPENDIX L: Signal Warrant Analysis

INTRODUCTION

Dezer Intracoastal Mall, LLC is proposing to redevelop the property located at 3789 NE 163rd Street in North Miami Beach, Florida. The site proposed for redevelopment is currently occupied by 189,026 square feet of shopping center and a 45,000 square-foot supermarket. The proposed redevelopment consists of 200,000 square feet of office space, 280,000 square feet of shopping center, a 50,000 square-foot supermarket, 45,000 square feet of gym space, 2,000 multifamily residential units (35 Low-Rise, 48 Mid-Rise, and 1917 High-Rise units), and a 250-room hotel. A project location map is provided as Figure 1. The redevelopment is expected to be completed by year 2031. A conceptual site plan is included in Appendix A.

Kimley-Horn and Associates, Inc. has completed this traffic impact analysis for submittal to the City of North Miami Beach. The purpose of the study is to assess the proposed redevelopment's impact on the surrounding transportation network. This report summarizes the data collection, project trip generation and distribution, capacity analysis, queuing analysis, and signal warrant analysis. Methodology correspondence detailing the traffic study requirements is included in Appendix B.



EXISTING TRAFFIC

A.M. peak period (7:00 to 9:00 A.M.) and P.M. peak period (4:00 to 6:00 P.M.) turning movement counts were collected on May 14, 2019 (Tuesday) at the following intersections:

- SR 826/NE 163rd Street and Biscayne Boulevard/US-1
- SR 826/NE 163rd Street and NE 26th Avenue
- SR 826/NE 163rd Street and NE 28th Avenue
- SR 826/NE 163rd Street and NE 2900 Block
- SR 826/NE 163rd Street and NE 34th Avenue
- SR 826/NE 163rd Street and NE 35th Avenue
- SR 826/NE 163rd Street and Intracoastal Mall Driveway
- NE 164th Street and NE 35th Avenue

Additionally, turning movement counts were collected on October 10, 2019 (Thursday) at the intersection of NE 35th Avenue and Intracoastal Mall Drive North/NE 165th Street.



All volumes were collected in 15-minute intervals. All traffic counts were adjusted to peak season conditions. Please note that the appropriate Florida Department of Transportation (FDOT) peak season factors for study area intersections are 1.03 and 1.01. Signal timing information was obtained from Miami-Dade County Department of Transportation and Public Works – Traffic Signals and Signs Division for all study area signalized intersections.

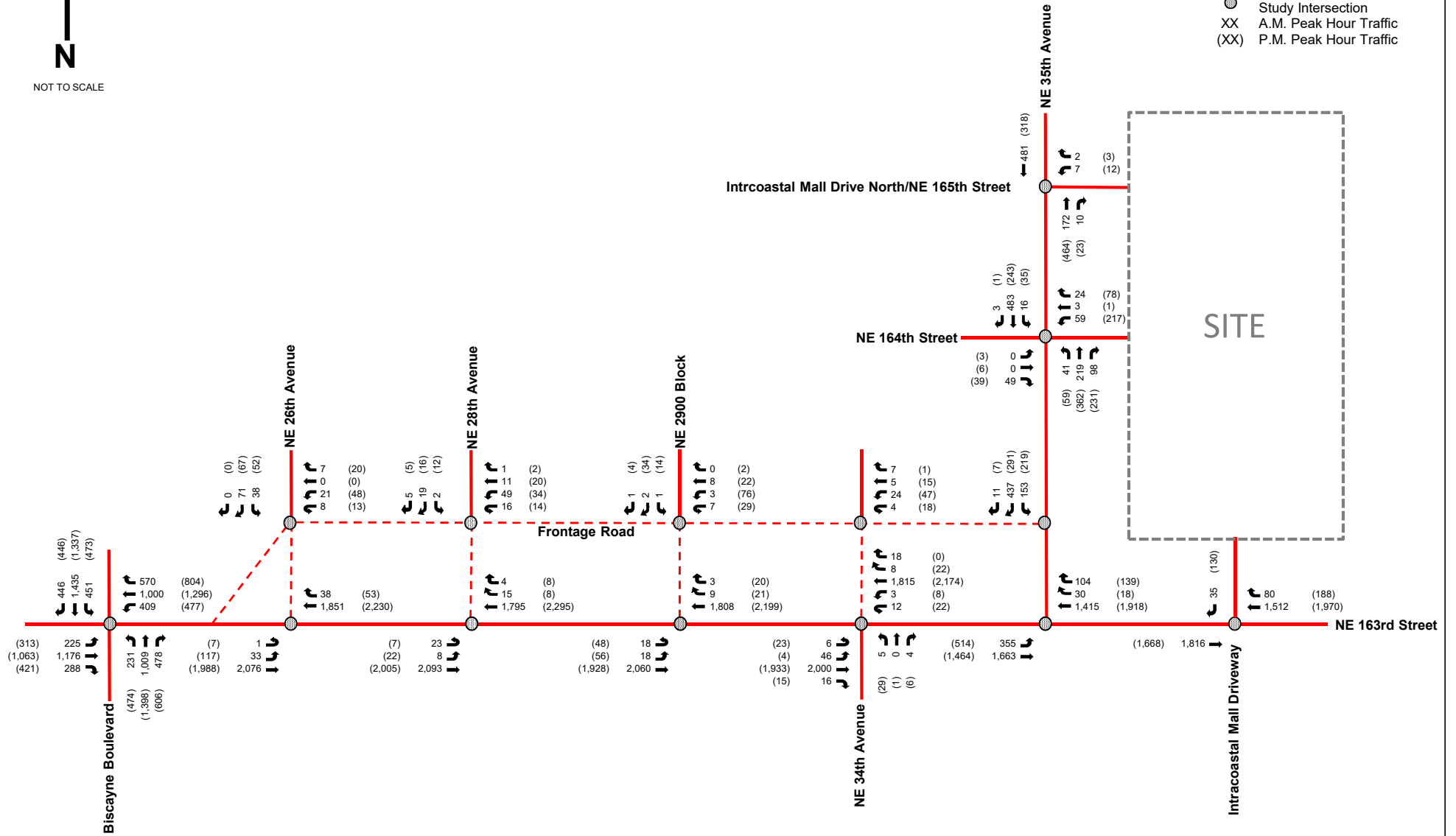
The turning movement counts, FDOT peak season factor category report, and signal timing data are included in Appendix C. Figure 2 presents the existing turning movement volumes at the study intersections during the weekday A.M. and P.M. peak hours.



NOT TO SCALE

Legend

-  Study Roadway
-  Study Intersection
- XX** A.M. Peak Hour Traffic
- (XX)** P.M. Peak Hour Traffic



SITE

Figure 2
Existing Peak Hour Traffic
Intracoastal Mall Redevelopment
North Miami Beach, Florida

FUTURE BACKGROUND TRAFFIC

Future background traffic conditions are defined as expected traffic conditions on the roadway network in the year 2031 without project traffic. Future background traffic volumes used in the analysis are the sum of the existing traffic, an additional amount of traffic generated by growth in the study area, and traffic generated from committed developments in the proximity of the study area. Refer to Figure 3 for the year 2031 peak hour background traffic volumes during the weekday A.M. and P.M. peak hours.

Background Area Growth

Future traffic growth on the transportation network was determined based upon historic growth trends at nearby FDOT traffic count stations and a comparison of the 2010 and 2040 traffic volume plots from the Florida Standard Urban Transportation Model Structure (FSUTMS) Southeast Florida Regional Planning Model (SERPM). The following FDOT count stations were referenced for this analysis:

- FDOT count station no. 0269 located on SR-A1A/Collins Avenue, 200 feet north of NE 172nd Street
- FDOT count station no. 0556 located on SR-826/NE 163rd Street, 1,700 feet east of SR-5/US-1
- FDOT count station no. 2645 located on SR-A1A/Collins Avenue, 200 feet north of Miami Beach Boulevard
- FDOT count station no. 5219 located on SR-5/US-1, 300 feet south of NE 163rd Street/Sunny Isles Causeway
- FDOT count station no. 8452 located on NE 35th Avenue, 200 feet north of NE 166th Street

The linear growth trend yielded a growth rate of 1.05 percent (1.05%) over the most recent five (5) year period and 0.78 percent (0.78%) over the most recent ten (10) year period. The exponential growth trend yielded a growth rate of 1.10 percent (1.10%) over the most recent five (5) year period and 0.77 percent (0.77%) over the most recent ten (10) year period. The decaying exponential growth trend yielded a growth rate of 1.58 percent (1.58%) over the most recent five (5) year period and 1.10 percent (1.10%) over the most recent ten (10) year period.

Based on the volume information obtained from the years 2010 and 2040 FSUTMS SERPM model, an annual growth rate of 1.02 percent (1.02%) in the vicinity of the development was calculated.

The growth rate with the highest R-squared value, 1.10 percent (1.10%), was applied annually to the existing traffic volumes for future (2031) background conditions. The worksheets used to analyze the historic growth trends along with the FSUTMS transportation model outputs are included in Appendix D.

Committed Developments

The following committed developments were included as part of future background and future total traffic conditions:

- Uptown Biscayne Development
- 15780 West Dixie Highway (New North Town Center)

Committed development trip assignment data is included in Appendix E. Volume development worksheets for the study intersections are included in Appendix F.



NOT TO SCALE

Legend

- Study Roadway
- Study Intersection
- XX A.M. Peak Hour Traffic
- (XX) P.M. Peak Hour Traffic

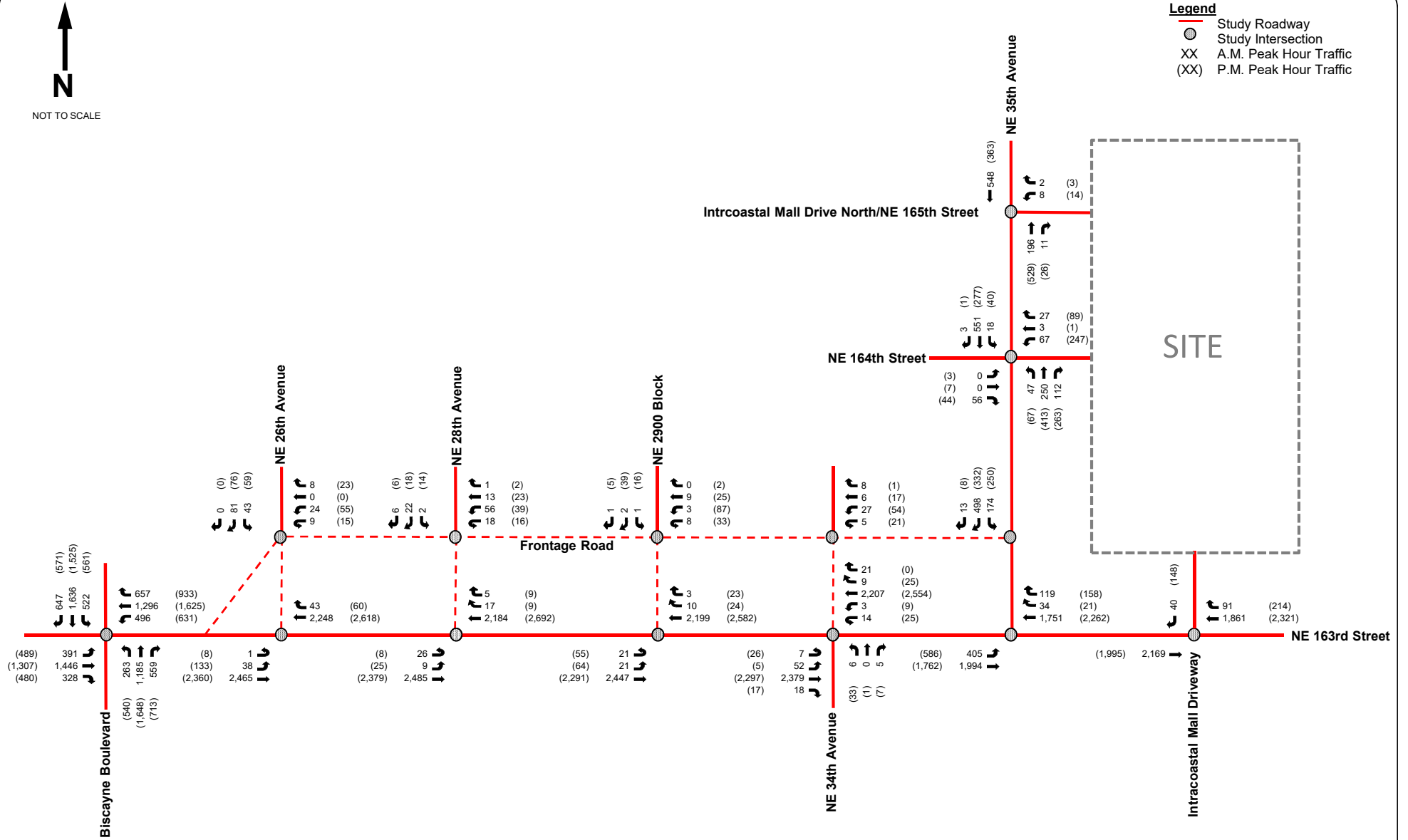


Figure 3
 Future Background Peak Hour Traffic
 Intracoastal Mall Redevelopment
 North Miami Beach, Florida

PROJECT TRAFFIC

Project traffic is defined as the vehicle trips expected to be generated by the project and the distribution and assignment of that traffic over the study roadway network.

Existing and Proposed Land Uses

The site proposed for redevelopment is currently occupied by 189,026 square feet of shopping center and a 45,000 square-foot supermarket. The proposed redevelopment consists of 200,000 square feet of office space, 280,000 square feet of shopping center, a 50,000 square-foot supermarket, 45,000 square feet of gym space, 2,000 multifamily residential units (35 Low-Rise, 48 Mid-Rise, and 1917 High-Rise units), and a 250-room hotel. The redevelopment is expected to be completed by year 2031.

Project Access

Access to the existing development is provided via one (1) limited-access (right-in/right-out) driveway along NE 163rd Street east of NE 35th Avenue, one (1) full-access driveway at the signalized intersection of NE 164th Street and NE 35th Avenue, and one (1) limited-access (right-in/right-out/left-out) driveway at the intersection of NE 35th Avenue and Intracoastal Mall Driveway.

The project proposes improvements including signaling the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway, the addition of one (1) southbound left-turn lane, the addition of one (1) eastbound left-turn lane, and the addition of one (1) receiving lane to the west leg. The new signal would operate similar to the current operations of the signalized intersection of SR 826/NE 163rd Street and NE 35th Avenue with eastbound partial continuous green T-intersection, signalized southbound left- and right-turn lanes, signalized eastbound left-turn lanes, and signalized westbound through and right-turn lanes. Furthermore, the proposed improvements include the addition of one (1) eastbound left-turn lane at the intersection of SR 826/NE 163rd Street and NE 35th Avenue and the elimination of the exclusive westbound left-turn lane along Frontage Road at NE 34th Street. The intersection of SR 826/NE 163rd Street and NE 35th Avenue is proposed to be modified to remove the eastbound partial continuous green T-

intersection as well as the exclusive pedestrian phase. The configuration of this intersection is proposed to include signalized eastbound through and left-turn lanes, signalized southbound left and right-turn lanes, and signalized westbound through and shared through/right-turn lanes. The proposed improvements satisfy the City of North Miami Beach's Eastern Mixed-Use Waterfront District (MU/EWF) code requirements by providing for multiple access points with direct east and west access to and from SR 826/NE 163rd Street and traffic mitigation such that the development does not over burden NE 35th Avenue. An exhibit summarizing the proposed access improvements is contained in Appendix G.

Trip Generation

Trip generation for the existing development and proposed redevelopment were calculated using rates and equations contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition. Trip generation calculations for the existing development were performed using ITE Land Use Codes (LUC) 820 (Shopping Center) and LUC 850 (Supermarket). Trip generation calculations for the proposed redevelopment were performed using LUC 710 (General Office Building), LUC 820 (Shopping Center), LUC 850 (Supermarket), LUC 492 (Health/Fitness Club), LUC 222 (Multifamily Housing [High-Rise]), LUC 221 (Multifamily Housing [Mid-Rise]), LUC 220 (Multifamily Housing [Low-Rise]), and LUC 310 (Hotel). Project trips were estimated for the weekday A.M. and P.M. peak hours.

Multimodal Reduction

A multimodal (public transit, bicycle, and pedestrian) reduction factor of 10 percent (10%) multimodal factor was applied to future total conditions without improvements. Note that a 15.0 percent (15.0%) was applied to the trip generation calculations for future total conditions with improvements as the project proposes a significant amount of multimodal improvements. These improvements will make it easier and encourage residents, employees, and patrons to walk/bike or use public transit to and from the development. These multimodal improvements include:

- A westbound buffered bicycle lane fronting the project on SR 826/NE 163rd Street.
- A shared bicycle lane in the frontage road west of NE 35th Avenue on SR 826/NE 163rd Street.

- Providing transit shelters at the bus station on SR 826/NE 163rd Street at NE 35th Avenue
- Providing an enhanced pedestrian crossing and refuge island on SR 826/NE 163rd Street at NE 35th Avenue.
- A shared use path fronting the project on SR 826/NE 163rd Street.
- An enhanced bus station along northbound NE 35th Avenue north of 826/NE 163rd Street

Furthermore, a water taxi, shuttle, or other transient water borne transportation is proposed to operate along the Intracoastal Waterway. Miami-Dade Transit (MDT) and the City of North Miami Beach provide bus service to and from the project area via three (3) routes:

- Route 105/Route E operates along SR 826/NE 163rd Street within the vicinity of the project. This route serves the Golden Glades Park & Ride Lot, Aventura Mall, and the Gulfstream Park. This route operates with 30-minute headways during the A.M. and P.M. peak hours and provides connecting service to 13 additional MDT bus routes.
- Route 108/Route H operates along SR 826/NE 163rd Street within the vicinity of the project. This route serves Haulover Park and the 163rd Street Mall. This route operates with 30-minute headways during the A.M. and P.M. peak hours and provides connecting service to 14 additional MDT bus routes.
- North Miami Beach's free trolley NMB-Line Route A operates along SR 826/NE 163rd Street within the vicinity of the project. The route originates at the Intracoastal Mall and offers connections to other routes serving City Hall, Fulford Elementary, Florida International University, and Nova University. This route operates with 60-minute headways during the A.M. and P.M. peak hours and provides connecting service to 12 additional MDT bus routes.

Detailed route information and headway data is provided in Appendix H.

Internal Capture

A portion of trips generated by the redevelopment will be captured internally on the site. Internal capture rates were based upon values contained in ITE's *Trip Generation Handbook*, 3rd Edition. The expected internal capture rate for the proposed redevelopment is 5.8 percent (5.8%) during

the A.M. peak hour and 29.0 percent (29.0%) during the P.M. peak hour. Internal capture calculations are contained in Appendix I.

Pass-By Capture

Pass-by capture rates were determined based on average rates provided in ITE's *Trip Generation Handbook*, 3rd Edition. The pass-by capture rate for the existing and proposed shopping center is 34.0 percent (34.0%) during the P.M. peak hour. The pass-by capture rate for the existing and proposed supermarket is 36.0 percent (36.0%) during the P.M. peak hour.

Net New Project Trips

The project is expected to generate 771 net new weekday A.M. peak hour vehicular trips and 597 net new weekday P.M. peak hour vehicular trips. Table 1 summarizes the proposed trip generation for the redevelopment. Detailed trip generation calculations for the project are presented in Appendix I.

Table 1: Proposed Trip Generation				
A.M. (P.M.) Peak Hour Driveway Volume				
			Entering	Exiting
Future Land Use (ITE Code)	Scale	Net External Trips	Trips	Trips
<i>Existing Development</i>				
Shopping Center (820)	189,026 square feet	221 (517)	138 (248)	83 (269)
Supermarket (850)	45,000 square feet	155 (248)	93 (127)	62 (121)
<i>Proposed Redevelopment</i>				
General Office Building (710)	200,000 square feet	159 (134)	140 (11)	19 (123)
Shopping Center (820)	280,000 square feet	209 (498)	129 (258)	80 (240)
Supermarket (850)	50,000 square feet	152 (193)	91 (105)	61 (88)
Health/Fitness Club (492)	45,000 square feet	50 (90)	25 (53)	25 (37)
Multifamily Housing [High-Rise] (222)	1,917 dwelling units	457 (319)	110 (179)	347 (140)
Multifamily Housing [Mid-Rise] (221)	48 dwelling units	14 (11)	3 (6)	11 (5)
Multifamily Housing [Low-Rise] (220)	35 dwelling units	15 (11)	3 (6)	12 (5)
Hotel (310)	250 rooms	91 (106)	60 (50)	31 (56)
<i>Net New Redevelopment</i>				
Net New Vehicle Trips (vehicles per hour)		771 (597)	330 (293)	441 (304)

Trip Distribution and Assignment

The likely distribution of project traffic was forecast for the trips expected to be generated by the proposed redevelopment. The trip distribution was based on an interpolated cardinal trip distribution for the project site’s traffic analysis zone (TAZ) for the years 2010 and 2040 for the project’s anticipated build-out year of 2031 obtained from the Miami-Dade Transportation Planning Organization’s (TPO’s) *Miami-Dade 2040 Long Range Transportation Plan Directional Trip Distribution Report*. The cardinal trip distribution for TAZ 91 is provided in Table 2. Detailed cardinal distribution calculations are contained in Appendix J.



Cardinal Direction	Percentage of Trips
North-Northeast	7%
East-Northeast	6%
East-Southeast	2%
South-Southeast	8%
South-Southwest	17%
West-Southwest	30%
West-Northwest	11%
North-Northwest	19%
Total	100%

Figures 4 through 11 present the peak hour net new trip distribution, peak hour net new trip assignment, peak hour pass-by trip distribution, and peak hour pass-by assignment. Future total with no roadway improvements is shown in Figures 4, 6, 8, and 10. The future total with improvements distribution and assignment is modified to account for the full-access driveway at the Intracoastal Mall Driveway as shown in Figures 5, 7, 9, and 11.



NOT TO SCALE

Legend

-  Study Roadway
-  Study Intersection
- XX% Entering Trip Distribution
- (XX%) Exiting Trip Distribution

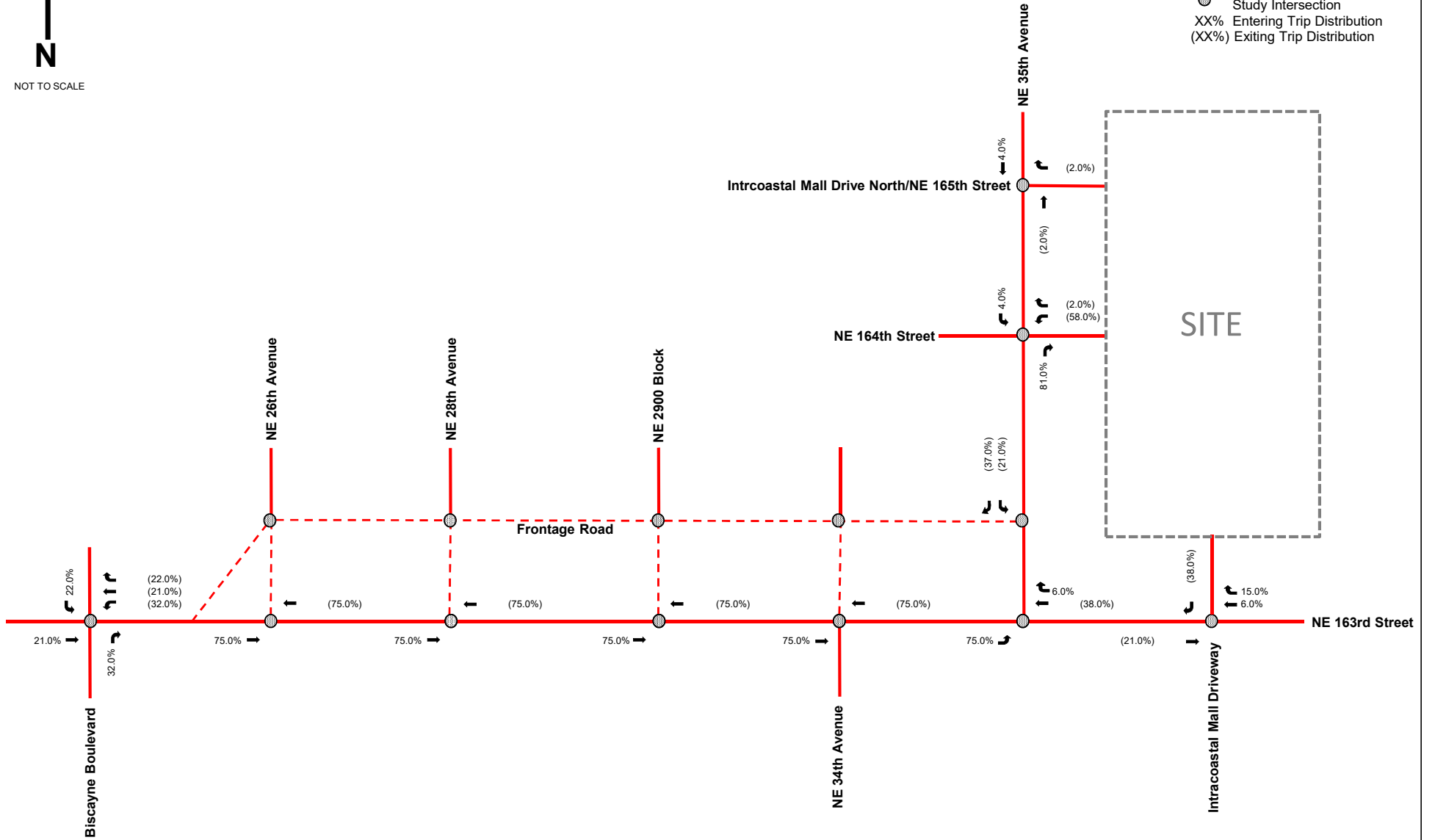


Figure 4
Peak Hour Project Trip Distribution
Intracoastal Mall Redevelopment
North Miami Beach, Florida



NOT TO SCALE

- Legend**
- Study Roadway
 - Study Intersection
 - XX% Entering Trip Distribution
 - (XX%) Exiting Trip Distribution



Figure 5
 Peak Hour Project Trip Distribution with Improvements
 Intracoastal Mall Redevelopment
 North Miami Beach, Florida



NOT TO SCALE

Legend

- Study Roadway
- Study Intersection
- XX A.M. Peak Hour Project Trip Assignment
- (XX) P.M. Peak Hour Project Trip Assignment

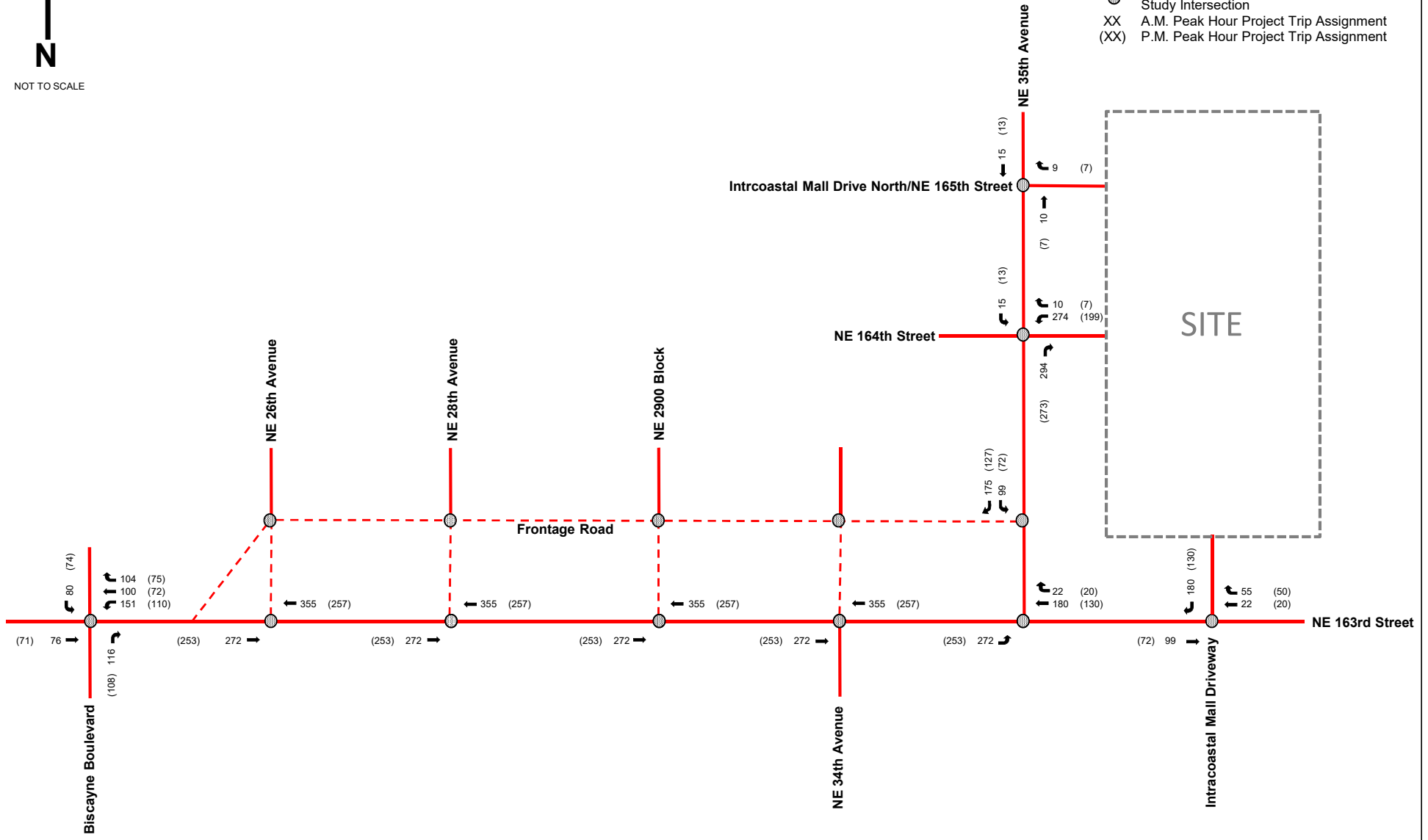




Figure 6
Peak Hour Project Trip Assignment
Intracoastal Mall Redevelopment
North Miami Beach, Florida



NOT TO SCALE

Legend

-  Study Roadway
-  Study Intersection
- XX% Entering Pass-By Trip Distribution
- (XX%) Exiting Pass-By Trip Distribution

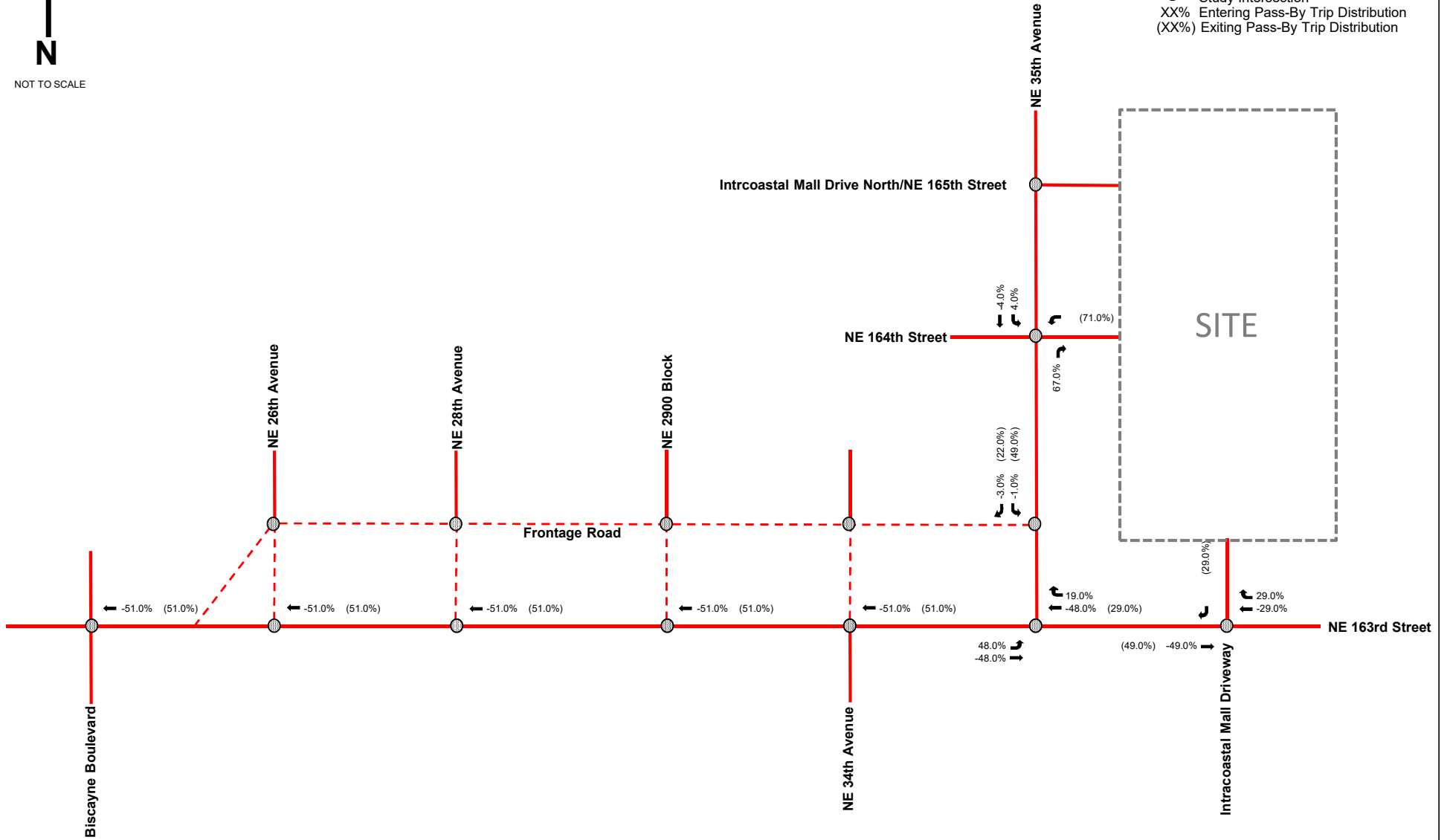




Figure 8
P.M. Peak Hour Pass-By Trip Distribution
Intracoastal Mall Redevelopment
North Miami Beach, Florida



NOT TO SCALE

- Legend**
-  Study Roadway
 -  Study Intersection
 - XX% Entering Pass-By Trip Distribution
 - (XX%) Exiting Pass-By Trip Distribution

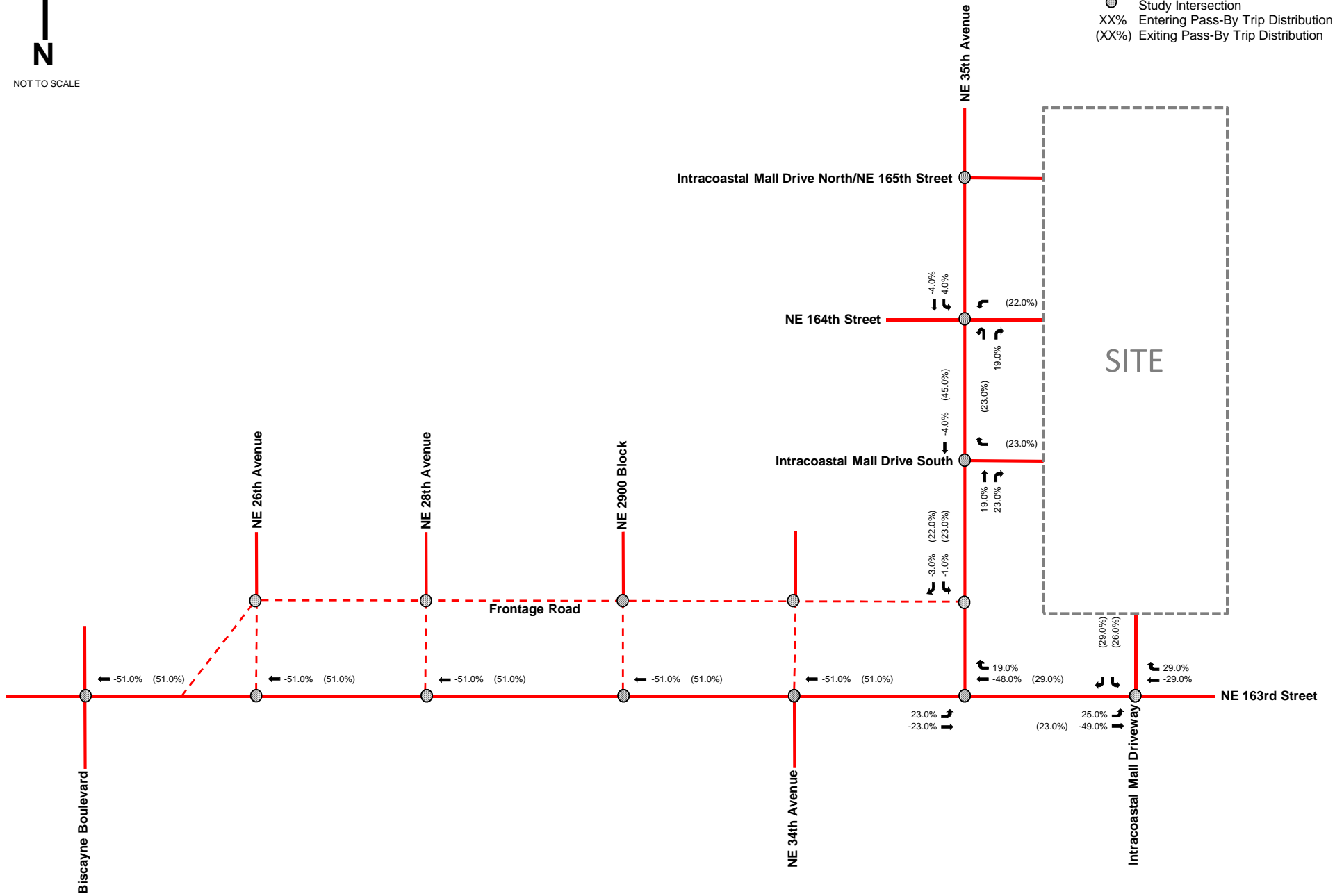





Figure 9
P.M. Peak Hour Pass-By Trip Distribution with Improvements
Intracoastal Mall Redevelopment
North Miami Beach, Florida



NOT TO SCALE

Legend

-  Study Roadway
-  Study Intersection
-  P.M. Peak Hour Pass-By Assignment

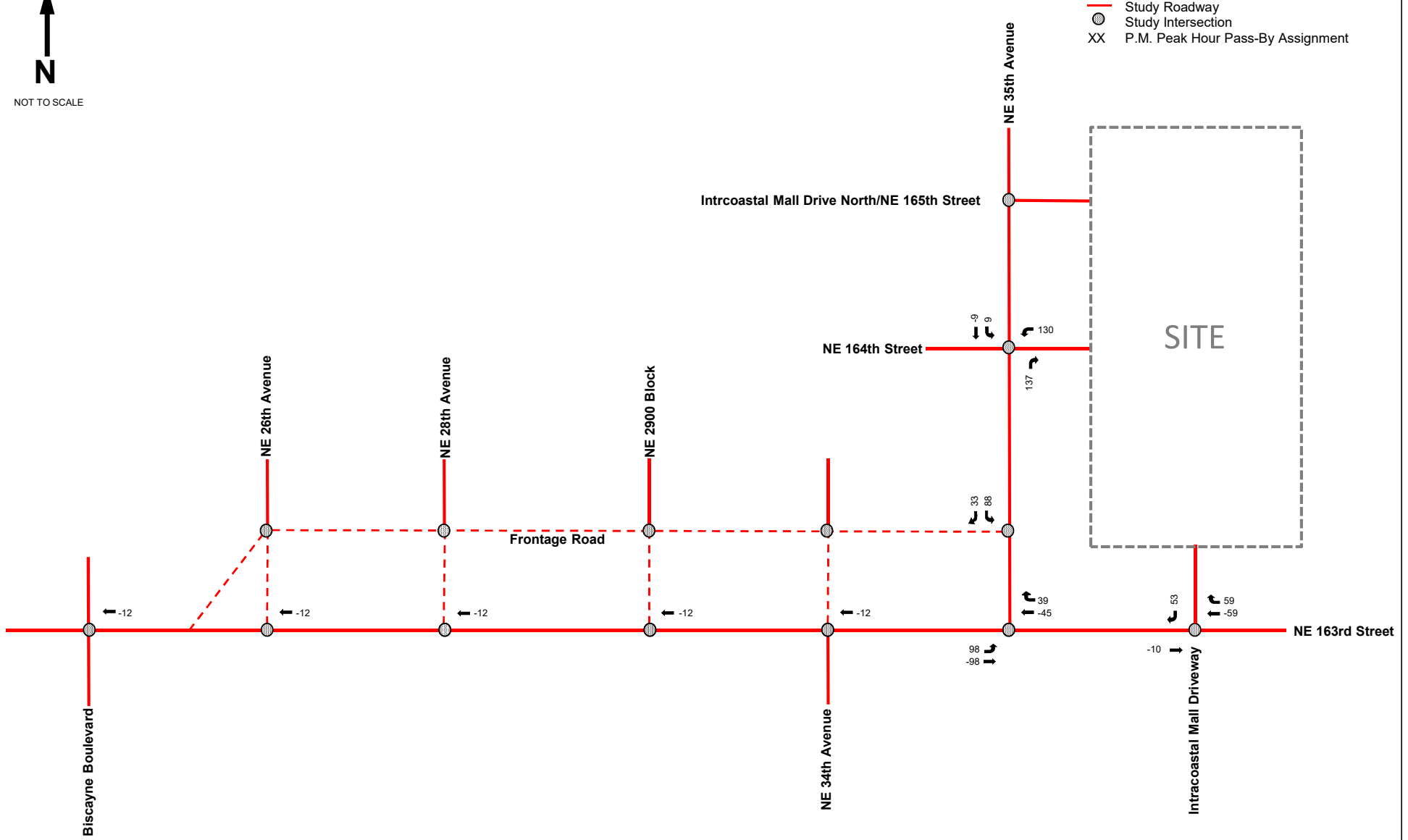


Figure 10
P.M. Peak Hour Pass-By Trip Assignment
Intracoastal Mall Redevelopment
North Miami Beach, Florida



NOT TO SCALE

- Legend**
- Study Roadway
 - Study Intersection
 - XX P.M. Peak Hour Pass-By Trip Assignment

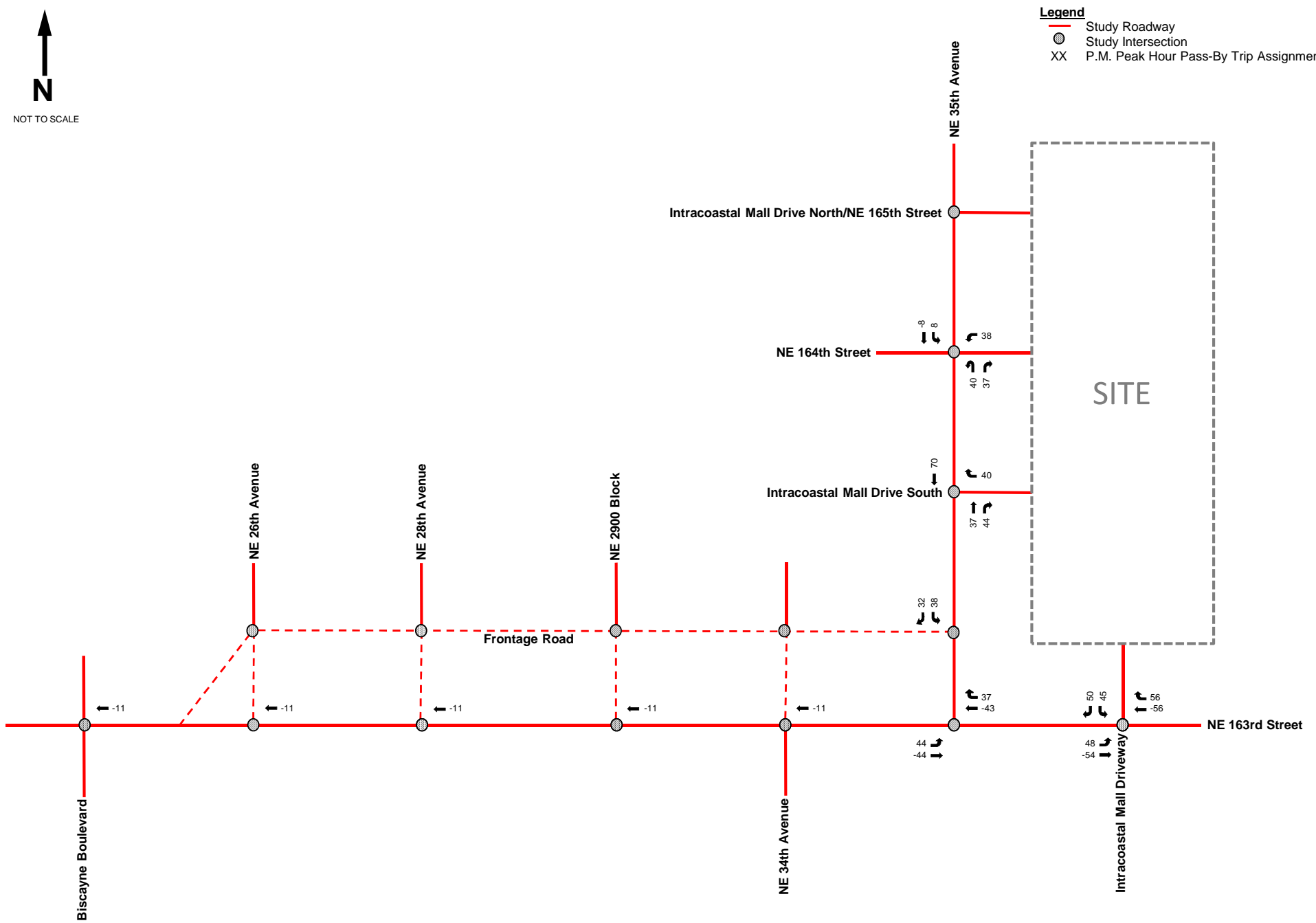


Figure 11
P.M. Peak Hour Pass-By Trip Assignment with Improvements
Intracoastal Mall Redevelopment
North Miami Beach, Florida



FUTURE TOTAL TRAFFIC

Future total traffic conditions are defined as the expected traffic conditions in the year 2031 with project traffic. Future total traffic volumes considered in the analysis for this project are the sum of the year 2031 background traffic volumes and the expected project traffic volumes. The A.M. and P.M. peak hour future total traffic volumes with no roadway improvements are shown in Figure 12. Future total with improvements volumes include the eastbound exit from the proposed site as well as the eastbound entrance at the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway as shown in Figure 13. Volume development worksheets for the study intersections are included in Appendix F.



NOT TO SCALE

Legend

-  Study Roadway
-  Study Intersection
- XX** A.M. Peak Hour Traffic
- (XX)** P.M. Peak Hour Traffic

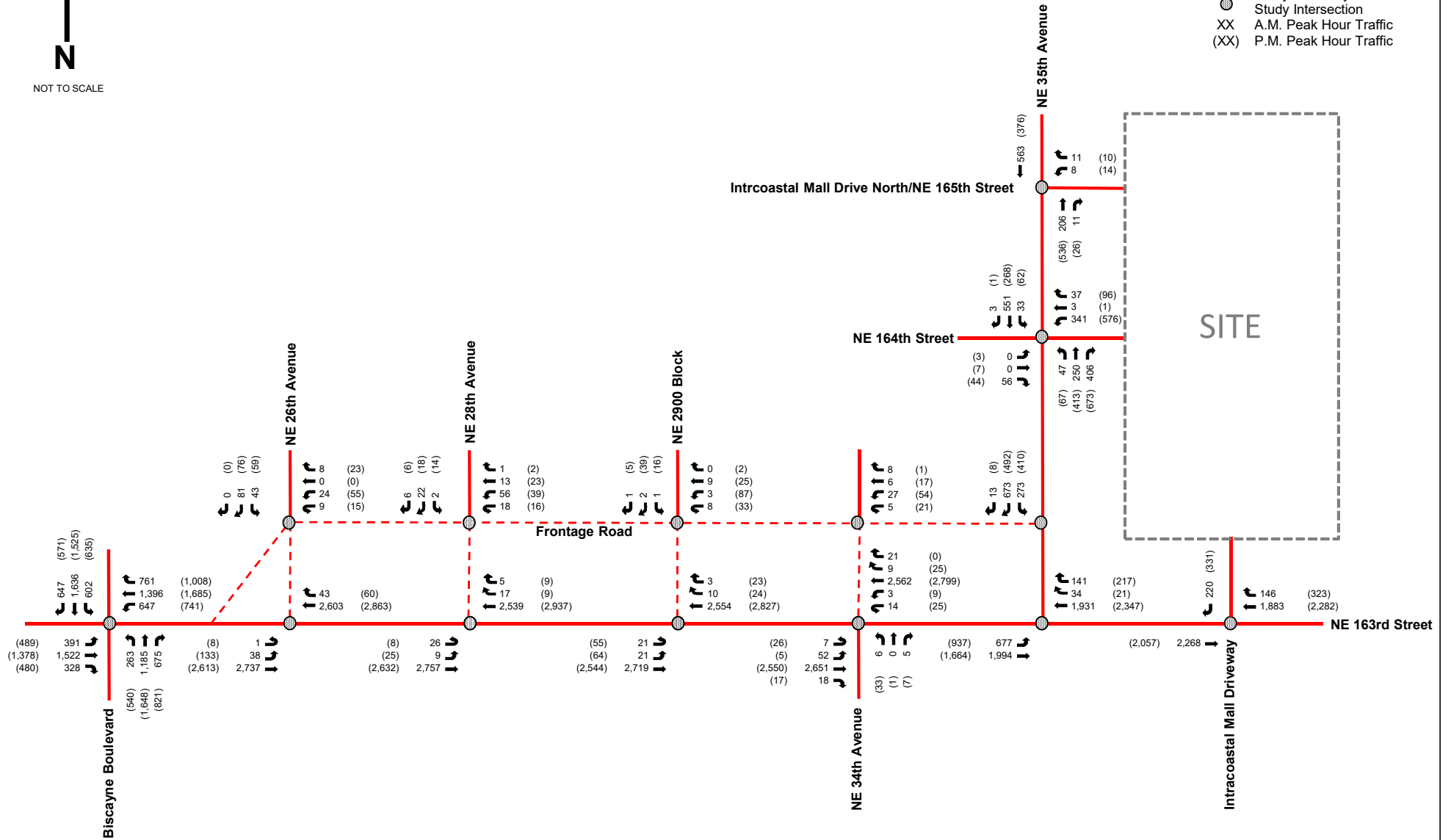


Figure 12
Future Total Peak Hour Traffic
Intracoastal Mall Redevelopment
North Miami Beach, Florida



NOT TO SCALE

- Legend**
- Study Roadway
 - Study Intersection
 - XX A.M. Peak Hour Traffic
 - (XX) P.M. Peak Hour Traffic

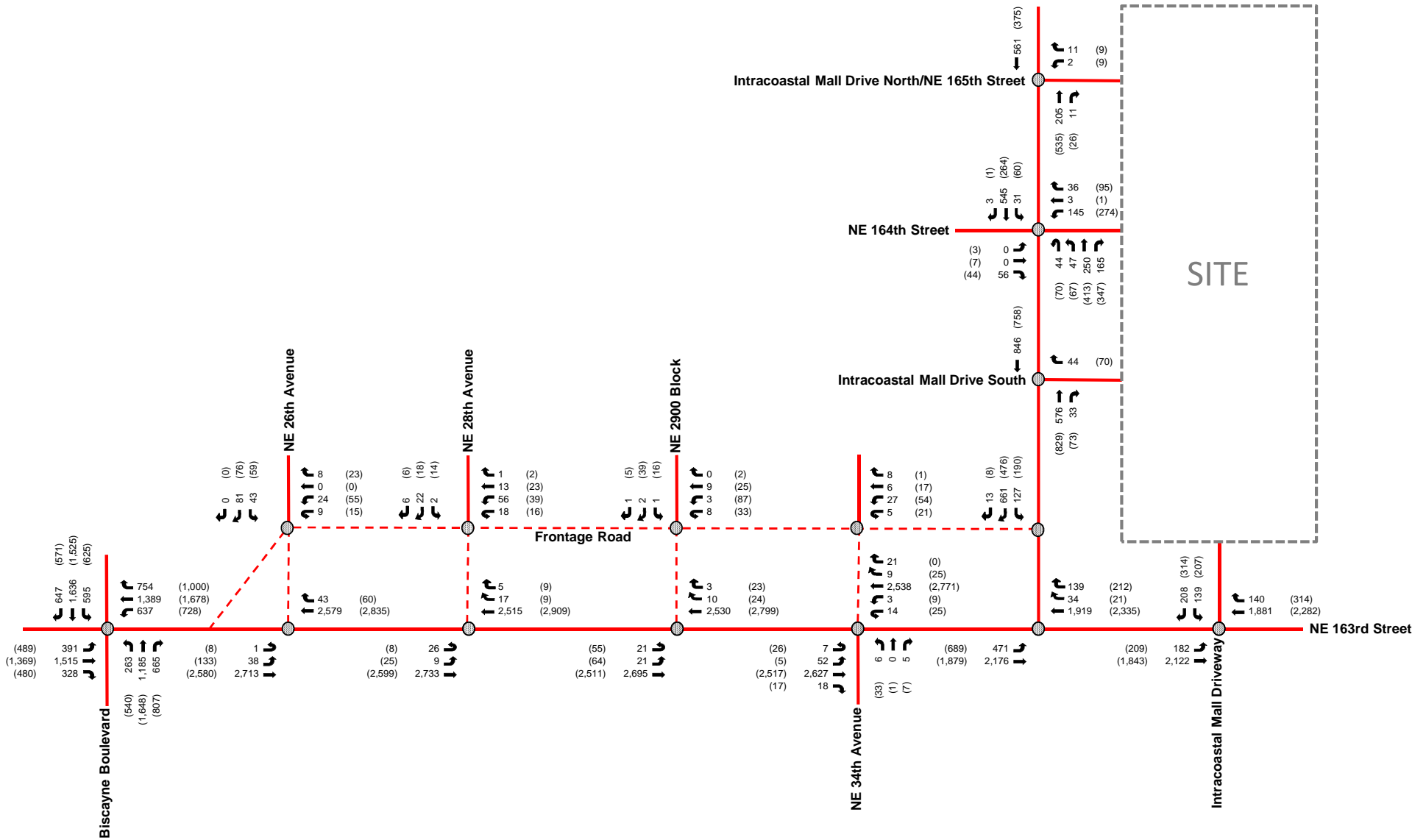


Figure 13
 Future Total Peak Hour Traffic with Improvements
 Intracoastal Mall Redevelopment
 North Miami Beach, Florida

INTERSECTION CAPACITY ANALYSIS

Operating conditions were analyzed for the study intersections. Four (4) scenarios (existing conditions, future background conditions, future total conditions with no roadway improvements, and future total conditions with improvements) were analyzed using Trafficware's *SYNCHRO* software, which applies methodologies outlined in the Transportation Research Board's (TRB's), *Highway Capacity Manual, 2000/2010/6th Editions*. Intersection capacity analysis worksheets for the study intersections are included in Appendix K. A summary of the intersection analyses is presented in Table 3 and Table 4.

The results of the intersection capacity analyses indicate that the study intersections are expected to operate at City of North Miami Beach's adopted levels of service (LOS) or better under existing, future background without project, and future total with project and improvements during the A.M and P.M. peak hours. Note that the intersection of SR 826/NE 163rd Street and Biscayne Boulevard/US-1 is expected to operate at LOS F under future total conditions without improvements.

The project proposes improvements including signaling the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway, the addition of one (1) southbound left-turn lane, the addition of one (1) eastbound left-turn lane, and the addition of one (1) receiving lane to the west leg. The new signal would operate similar to the current operations of the signalized intersection of SR 826/NE 163rd Street and NE 35th Avenue with eastbound partial continuous green T-intersection, signalized southbound left- and right-turn lanes, signalized eastbound left-turn lanes, and signalized westbound through and right-turn lanes. Furthermore, the proposed improvements include the addition of one (1) eastbound left-turn lane at the intersection of SR 826/NE 163rd Street and NE 35th Avenue and the elimination of the exclusive westbound left-turn lane along Frontage Road at NE 34th Street. The intersection of SR 826/NE 163rd Street and NE 35th Avenue is proposed to be modified to remove the eastbound partial continuous green T-intersection as well as the exclusive pedestrian phase. The configuration of this intersection is proposed to include signalized eastbound through and left-turn lanes, signalized southbound left and right-turn lanes, and signalized westbound through and shared through/right-turn lanes. The

proposed improvements satisfy the City of North Miami Beach's Eastern Mixed-Use Waterfront District (MU/EWF) code requirements by providing for multiple access points with direct east and west access to and from SR 826/NE 163rd Street and traffic mitigation such that the development does not over burden NE 35th Avenue.

Vertical and horizontal sight distance analysis was prepared for the westbound approach at the proposed signalized intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway as requested by FDOT. The results of the analysis reveal that 745 feet of vertical sight distance for the westbound approach at the proposed signal is required utilizing a 40-mph design speed (roadway is posted at 35 mph) and 1,333.48 feet are provided. Therefore, the vertical sight distance criteria is satisfied. The horizontal sight distance based on a 40-mph design speed, results in a 1.02 foot inside shoulder where a 4-foot shoulder is provided. Therefore, the horizontal sight distance criteria is satisfied. Detailed calculations and graphics are provided in Appendix G.

Table 3: A.M. Peak Hour Intersection Capacity Analysis							
Intersection	Traffic Control/ Adopted LOS	Overall LOS/Delay	Approach LOS				
			EB	WB	NB	SB	SWB
<i>Existing Conditions (Future Background Conditions)</i> <i>[Future Total Conditions] {Future Total Conditions with Improvements}</i>							
SR 826/NE 163 rd Street and Biscayne Boulevard/US-1	Signalized/ E+50	E/55.7 sec (E/70.8 sec) [E+11%/88.7 sec] {E+11%/86.9 sec}	E (E) [F] {F}	E (E) [F] {F}	D (E) [E] {E}	D (E) [F] {F}	(3)
SR 826/NE 163 rd Street and NE 26 th Avenue	Signalized ⁽⁵⁾ / E+50	A/6.7 sec (A/7.2 sec) [A/7.3 sec] {A/8.2 sec}	A (A) [A] {A}	A (A) [A] {A}	(3)	F (E) [E] {E}	E (E) [E] {E}
SR 826/NE 163 rd Street and NE 28 th Avenue	Signalized ⁽⁵⁾ / E	A/5.9 sec (A/6.8 sec) [A/6.9 sec] {A/8.8 sec}	A (A) [A] {A}	A (A) [A] {A}	(3)	E (E) [E] {E}	E (E) [E] {E}
SR 826/NE 163 rd Street and NE 2900 Block	Signalized ⁽⁵⁾ / E	A/6.1 sec (A/7.4 sec) [A/7.6 sec] {A/7.6 sec}	B (B) [B] {B}	A (A) [A] {A}	(3)	E (E) [E] {E}	D (D) [D] {D}
SR 826/NE 163 rd Street and NE 34 th Avenue	Signalized ⁽⁵⁾ / E	A/7.5 sec (A/8.3 sec) [A/9.3 sec] {B/16.2 sec}	A (A) [B] {B}	A (A) [A] {C}	E (E) [E] {E}	(3)	E (E) [E] {E}
SR 826/NE 163 rd Street and NE 35 th Avenue	Signalized ⁽⁵⁾ / E	B/18.5 sec (B/19.5 sec) [C/31.7 sec] {B/15.4 sec} ⁽⁶⁾	B (B) [B] {B}	B (C) [C] {B}	(3)	D (D) [E] {D}	(4)
SR 826/NE 163 rd Street and Intracoastal Mall Driveway	One-Way, Stop-Controlled/ E	⁽¹⁾ (⁽¹⁾) [⁽¹⁾] {B/17.7 sec} ⁽⁷⁾	⁽³⁾ (⁽³⁾) [⁽³⁾] {A}	⁽²⁾ (⁽²⁾) [⁽²⁾] {C}	(3)	B (B) [C] {D}	(3)
NE 164 th Street and NE 35 th Avenue	Signalized/ E	A/8.9 sec (A/9.0 sec) [D/51.6 sec] {C/22.8 sec} ⁽⁸⁾	E (E) [E] {E}	E (E) [F] {E}	A (A) [A] {B}	A (A) [A] {B}	(3)
Intracoastal Mall North Drive/NE 165 th Street and NE 35 th Avenue	Two-Way, Stop-Controlled/ E	(1)	(3)	A (A) [A] {A}	(2)	(2)	(3)
Intracoastal Mall South Drive and NE 35 th Avenue	One-Way, Stop-Controlled/ E	(1)	(3)	⁽³⁾ (⁽³⁾) [⁽³⁾] {A}	(2)	(2)	(3)

- Notes:
- ⁽¹⁾ Overall intersection LOS is not defined, as intersection operated under stop-control conditions.
 - ⁽²⁾ Approach operates under free-flow conditions. LOS is not defined.
 - ⁽³⁾ Approach does not exist.
 - ⁽⁴⁾ Approach does not exist under analysis scenario.
 - ⁽⁵⁾ Intersection cannot be analyzed in HCM 6th nor 2010. Therefore, HCM 2000 was used.
 - ⁽⁶⁾ Signal timing optimization
 - ⁽⁷⁾ Signalized intersection operation
 - ⁽⁸⁾ Northbound left-turn permitted/protected phasing

Table 4: P.M. Peak Hour Intersection Capacity Analysis							
Intersection	Traffic Control/ Adopted LOS	Overall LOS/Delay	Approach LOS				
			EB	WB	NB	SB	SWB
<i>Existing Conditions (Future Background Conditions)</i>							
<i>[Future Total Conditions] {Future Total Conditions with Improvements}</i>							
SR 826/NE 163 rd Street and Biscayne Boulevard/US-1	Signalized/ E+50	E/65.2 sec (E+33%/106.5 sec) [F/128.1 sec] {E+49%/119.0 sec}	E (E) [E] {F}	E (F) [F] {F}	E (F) [F] {F}	E (F) [F] {F}	(3)
SR 826/NE 163 rd Street and NE 26 th Avenue	Signalized ⁽⁵⁾ / E+50	C/21.2 sec (C/21.6 sec) [C/21.5 sec] {C/19.8 sec}	B (B) [B] {B}	C (C) [C] {C}	(3)	E (F) [F] {F}	E (F) [F] {F}
SR 826/NE 163 rd Street and NE 28 th Avenue	Signalized ⁽⁵⁾ / E	A/5.7 sec (A/6.8 sec) [A/6.9 sec] {A/3.8 sec}	A (A) [A] {A}	A (A) [A] {A}	(3)	E (E) [E] {E}	E (E) [E] {E}
SR 826/NE 163 rd Street and NE 2900 Block	Signalized ⁽⁵⁾ / E	B/11.2 sec (B/12.8 sec) [B/13.3 sec] {B/15.1 sec}	A (A) [A] {A}	A (A) [A] {A}	(3)	E (E) [E] {E}	F (F) [F] {F}
SR 826/NE 163 rd Street and NE 34 th Avenue	Signalized ⁽⁵⁾ / E	B/11.7 sec (B/14.1 sec) [B/14.4 sec] {B/17.6 sec}	B (B) [B] {B}	A (A) [A] {B}	E (E) [E] {E}	(3)	F (F) [F] {F}
SR 826/NE 163 rd Street and NE 35 th Avenue	Signalized ⁽⁵⁾ / E	C/27.6 sec (C/32.6 sec) [E/65.8 sec] {B/18.1 sec} ⁽⁶⁾	B (B) [D] {B}	C (D) [D] {B}	(3)	D (E) [F] {D}	(4)
SR 826/NE 163 rd Street and Intracoastal Mall Driveway	One-Way, Stop-Controlled/ E	⁽¹⁾ ⁽¹⁾ [⁽¹⁾] {C/21.3 sec} ⁽⁷⁾	⁽³⁾ ⁽³⁾ [⁽³⁾] {A}	⁽²⁾ ⁽²⁾ [⁽²⁾] {C}	(3)	C (C) [E] {D}	(3)
NE 164 th Street and NE 35 th Avenue	Signalized/ E	B/17.9 sec (B/18.6 sec) [E+11%/89.1 sec] {C/22.3 sec} ⁽⁸⁾	E (E) [E] {E}	E (E) [F] {E}	A (A) [A] {A}	A (A) [A] {B}	(3)
Intracoastal Mall North Drive/NE 165 th Street and NE 35 th Avenue	Two-Way, Stop-Controlled/ E	(1)	(3)	B (B) [B] {B}	(2)	(2)	(3)
Intracoastal Mall South Drive and NE 35 th Avenue	One-Way, Stop-Controlled/ E	(1)	(3)	⁽³⁾ ⁽³⁾ [⁽³⁾] {B}	(2)	(2)	(3)

- Notes:
- ⁽¹⁾ Overall intersection LOS is not defined, as intersection operated under stop-control conditions.
 - ⁽²⁾ Approach operates under free-flow conditions. LOS is not defined.
 - ⁽³⁾ Approach does not exist.
 - ⁽⁴⁾ Approach does not exist under analysis scenario.
 - ⁽⁵⁾ Intersection cannot be analyzed in HCM 6th nor 2010. Therefore, HCM 2000 was used.
 - ⁽⁶⁾ Signal timing optimization
 - ⁽⁷⁾ Signalized intersection operation
 - ⁽⁸⁾ Northbound left-turn permitted/protected phasing

QUEUE LENGTH ANALYSIS

A 95th percentile queue analysis was performed to identify the expected vehicle queues at the intersections of SR 826/NE 163rd Street at NE 35th Avenue and SR 826/NE 163rd Street at Intracoastal Mall Driveway. The eastbound left-turn lanes and southbound left-turn and right-turn lanes queues were examined. The westbound approach queue at the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway was also examined. The queue length analysis was prepared for existing, future background, future total, and future total with improvements analysis conditions. The 95th percentile queue lengths were calculated using Trafficware's SYNCHRO 10 software. The results of the queue length analysis are summarized in Table 5 and Table 6. Synchro worksheets for the study intersections are included in Appendix K. The results of the analysis indicate that the overall combined left-turn and right-turn lane queues along NE 35th Avenue are expected to decrease under future total with improvements conditions when compared to future background conditions and future total conditions. Additionally, the eastbound left-turn storage lanes are able to accommodate the expected vehicle queues along SR 826/NE 163rd Street at NE 35th Avenue and Intracoastal Mall Driveway under future total with improvements conditions. Furthermore, the westbound through-lane queues at Intracoastal Mall Driveway are not expected to extend to the bridge gates on SR 826/NE 163rd Street for when the bridge is drawn closed. The bridge gates are located approximately 876 feet from the westbound stop bar at the proposed traffic signal.

Table 5: A.M. Peak Hour Queuing Analysis			
Existing Conditions (Future Background Conditions)			
[Future Total Conditions] {Future Total Conditions with Improvements}			
Intersection	Movement	95 th Percentile Queue (ft) ⁽¹⁾	Provided Storage Length (ft)
SR 826/NE 163 rd Street and NE 35 th Avenue	Eastbound Left-Turn	230 (257) [#410] {103}	348 ⁽²⁾ (348) ⁽²⁾ [348] ⁽²⁾ {318} ⁽³⁾
	Southbound Left-Turn	#223 (#266) [#491] {177}	300 (300) [300] {300}
	Southbound Right-Turn	235 (261) [389] {336}	(4)
SR 826/NE 163 rd Street and Intracoastal Mall Driveway	Eastbound Left-Turn	⁽⁵⁾ (⁽⁵⁾) [⁽⁵⁾] {179}	⁽⁵⁾ (⁽⁵⁾) [⁽⁵⁾] {300}
	Westbound Through	0 (0) [0] {493}	(6)
	Southbound Left-Turn	⁽⁵⁾ (⁽⁵⁾) [⁽⁵⁾] {189}	(4)
	Southbound Right-Turn	<25 (<25) [73] {87}	(4)

Notes:

- ⁽¹⁾ The 95th percentile queue length is based on Synchro 10 capacity analyses. Minimum queue of 25 feet assumed.
- ⁽²⁾ Storage length calculated as average of two eastbound left-turn lane storage lengths.
- ⁽³⁾ Storage length calculated as average of three eastbound left-turn lane storage lengths.
- ⁽⁴⁾ Storage length is equal to block length.
- ⁽⁵⁾ Movement does not exist under analysis conditions.
- ⁽⁶⁾ Storage length measured to bridge gates on SR 826/NE 163rd Street. Approximately 876 feet of storage length is provided.
- # 95th percentile volume exceeds capacity, queue may be longer.
- m 95th percentile queue is metered by upstream signal.

Table 6: P.M. Peak Hour Queuing Analysis			
Existing Conditions (Future Background Conditions)			
		[Future Total Conditions]	{Future Total Conditions with Improvements}
Intersection	Movement	95 th Percentile Queue (ft) ⁽¹⁾	Provided Storage Length (ft)
SR 826/NE 163 rd Street and NE 35 th Avenue	Eastbound Left-Turn	309 (345) [#620] {211}	348 ⁽²⁾ (348) ⁽²⁾ [348] ⁽²⁾ {318} ⁽³⁾
	Southbound Left-Turn	#362 (#430) [m#627] {202}	300 (300) [300] {300}
	Southbound Right-Turn	169 (192) [m260] {206}	(4)
SR 826/NE 163 rd Street and Intracoastal Mall Driveway	Eastbound Left-Turn	⁽⁵⁾ (⁽⁵⁾) [⁽⁵⁾] {272}	⁽⁵⁾ (⁽⁵⁾) [⁽⁵⁾] {300}
	Westbound Through	0 (0) [0] {578}	(6)
	Southbound Left-Turn	⁽⁵⁾ (⁽⁵⁾) [⁽⁵⁾] {256}	(4)
	Southbound Right-Turn	29 (43) [193] {132}	(4)

Notes:

- ⁽¹⁾ The 95th percentile queue length is based on Synchro 10 capacity analyses. Minimum queue of 25 feet assumed.
- ⁽²⁾ Storage length calculated as average of two eastbound left-turn lane storage lengths.
- ⁽³⁾ Storage length calculated as average of three eastbound left-turn lane storage lengths.
- ⁽⁴⁾ Storage length is equal to block length.
- ⁽⁵⁾ Movement does not exist under analysis conditions.
- ⁽⁶⁾ Storage length measured to bridge gates on SR 826/NE 163rd Street. Approximately 876 feet of storage length is provided.
- # 95th percentile volume exceeds capacity, queue may be longer.
- m 95th percentile queue is metered by upstream signal.

SIGNAL WARRANT ANALYSIS

A signal warrant analysis was performed at the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway. The signal warrant analysis was performed based upon criteria contained in the Federal Highway Administration's (FHWA's) *Manual on Uniform Traffic Control Devices* (MUTCD), 2009 Edition. Appendix L includes the signal warrant analysis data. The signal warrant analysis evaluated expected traffic conditions in 2031 under future total with improvements conditions. SR 826/NE 163rd Street is considered the major street approach and the Intracoastal Mall Driveway is considered the minor street approach in this analysis.

Traffic volumes for major street approach movements were obtained from existing 24-hour traffic volume counts, background traffic growth, and project trip generation, distribution, and assignment. Traffic volumes for minor street approach movements were obtained from the project trip generation, distribution, and assignment. The 24-hour traffic volume counts were collected along SR 826/NE 163rd Street between NE 35th Avenue and Intracoastal Mall Driveway on May 30, 2019 (Thursday). The volumes were collected in 15-minute intervals and were adjusted to peak season conditions using the FDOT peak season factor of 1.03. The 24-hour traffic volume counts and FDOT peak season factor category report are included in Appendix C.

The residential, hotel, health/fitness, office, and retail daily traffic was distributed based on each land use's hourly variations contained in Appendix A of ITE's *Trip Generation Manual*, 10th Edition.

Under future total with improvements conditions, the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway is proposed to include an exclusive right-turn lane and an exclusive left-turn lane at the southbound approach, three (3) through lanes and an exclusive left-turn lane for the eastbound approach, and four (4) through lanes and an exclusive right-turn lane for the westbound approach.

The projected future volumes at the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway were compared to criteria contained in the MUTCD for the following volume warrants:

- Warrant Number 1: Eight-Hour Vehicular Volume Warrant
 - Condition A: Minimum Vehicular Volume
 - Condition B: Interruption of Continuous Traffic
 - Combination: Combination of Conditions A & B
- Warrant Number 2: Four-Hour Vehicular Volume Warrant
- Warrant Number 3: Peak Hour Warrant

Note that Warrant 4-9 are not applicable in this analysis.

Right-turn volume reductions based on ITE documents from the Alabama Department of Transportation as provided by Miami-Dade County Department of Transportation and Public Works – Traffic Engineering Division (TED) were considered to provide for a conservative volume analysis. The Pagone’s Theorem is referred to in the reference documents. This theorem stipulates various right-turn volume reductions for minor-street approaches based on the ratio of the right-turn volume to approach volume or minor street lane configuration. Table 7 summarizes the relevant right-turn volume reduction. The reduction was applied to the minor-street right-turn volume on an hourly basis.

Table 7: Pagone’s Theorem Hourly Right-Turn Volume Reduction			
Situation	Minor-Street Approach Configuration	Right-Turn Percentage	Right-Turn Reduction
2	Exclusive left, shared through/right lane	$R > 3T$	60%
2	Exclusive left, shared through/right lane	$3T \geq R \geq T/3$	30%
2	Exclusive left, shared through/right lane	$\leq T/3$	20%
3	Any configuration with an exclusive right turn lane (usually ≥ 600 feet long)	-	75%
4	Shared left/through and shared through/right lane	$> (T + L)$	65%
4	Shared left/through and shared through/right lane	$L > (T + R)$	Use Situation 2
4	Shared left/through and shared through/right lane	$L = T = R$	40%
4	Shared left/through and shared through/right lane	$L = T > 3R$	20%
4	Shared left/through and shared through/right lane	$R = T > 3L$	50%
4	Shared left/through and shared through/right lane	All other cases	30%

Based upon Pagone’s Theorem, a 75 percent (75%) reduction was applied to the southbound right-turn projected volumes at project build-out at the proposed signal. The signal warrant analyses are summarized in Table 12 and are included in more detail in Appendix L. As Table 8 indicates, the intersection satisfies Warrant 2 and Warrant 3 under future total conditions.

Table 8: Signal Warrant Analysis Summary	
MUTCD Warrant	Future Total Conditions
Warrant No. 1, Condition A – Eight-Hour Vehicular Volume	Not Satisfied
Warrant No. 1, Condition B – Eight-Hour Vehicular Volume	Not Satisfied
Warrant No. 1 – Combination of Condition A & B	Not Satisfied
Warrant No. 2 – Four-Hour Vehicular Volumes	Satisfied
Warrant No. 3 – Peak Hour	Satisfied

CONCLUSION

Dezer Intracoastal Mall, LLC is proposing to redevelop the property located at 3789 NE 163rd Street in North Miami Beach, Florida. The site proposed for redevelopment is currently occupied by 189,026 square feet of shopping center and a 45,000 square-foot supermarket. The proposed redevelopment consists of 200,000 square feet of office space, 280,000 square feet of shopping center, a 50,000 square-foot supermarket, 45,000 square feet of gym space, 2,000 multifamily residential units (35 Low-Rise, 48 Mid-Rise, and 1917 High-Rise units), and a 250-room hotel. The redevelopment is expected to be completed by year 2031.

Access to the existing development is provided via one (1) limited-access (right-in/right-out) driveway along NE 163rd Street east of NE 35th Avenue, one (1) full-access driveway at the signalized intersection of NE 164th Street and NE 35th Avenue, and one (1) limited-access (right-in/right-out/left-out) driveway at the intersection of NE 35th Avenue and Intracoastal Mall Driveway.

The project proposes improvements including signaling the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway, the addition of one (1) southbound left-turn lane, the addition of one (1) eastbound left-turn lane, and the addition of one (1) receiving lane to the west leg. The new signal would operate similar to the current operations of the signalized intersection of SR 826/NE 163rd Street and NE 35th Avenue with eastbound partial continuous green T-intersection, signalized southbound left- and right-turn lanes, signalized eastbound left-turn lanes, and signalized westbound through and right-turn lanes. Furthermore, the proposed improvements include the addition of one (1) eastbound left-turn lane at the intersection of SR 826/NE 163rd Street and NE 35th Avenue and the elimination of the exclusive westbound left-turn lane along Frontage Road at NE 34th Street. The intersection of SR 826/NE 163rd Street and NE 35th Avenue is proposed to be modified to remove the eastbound partial continuous green T-intersection as well as the exclusive pedestrian phase. The configuration of this intersection is proposed to include signalized eastbound through and left-turn lanes, signalized southbound left and right-turn lanes, and signalized westbound through and shared through/right-turn lanes. The proposed improvements satisfy the City of North Miami Beach's Eastern Mixed-Use Waterfront

District (MU/EWF) code requirements by providing for multiple access points with direct east and west access to and from SR 826/NE 163rd Street and traffic mitigation such that the development does not over burden NE 35th Avenue.

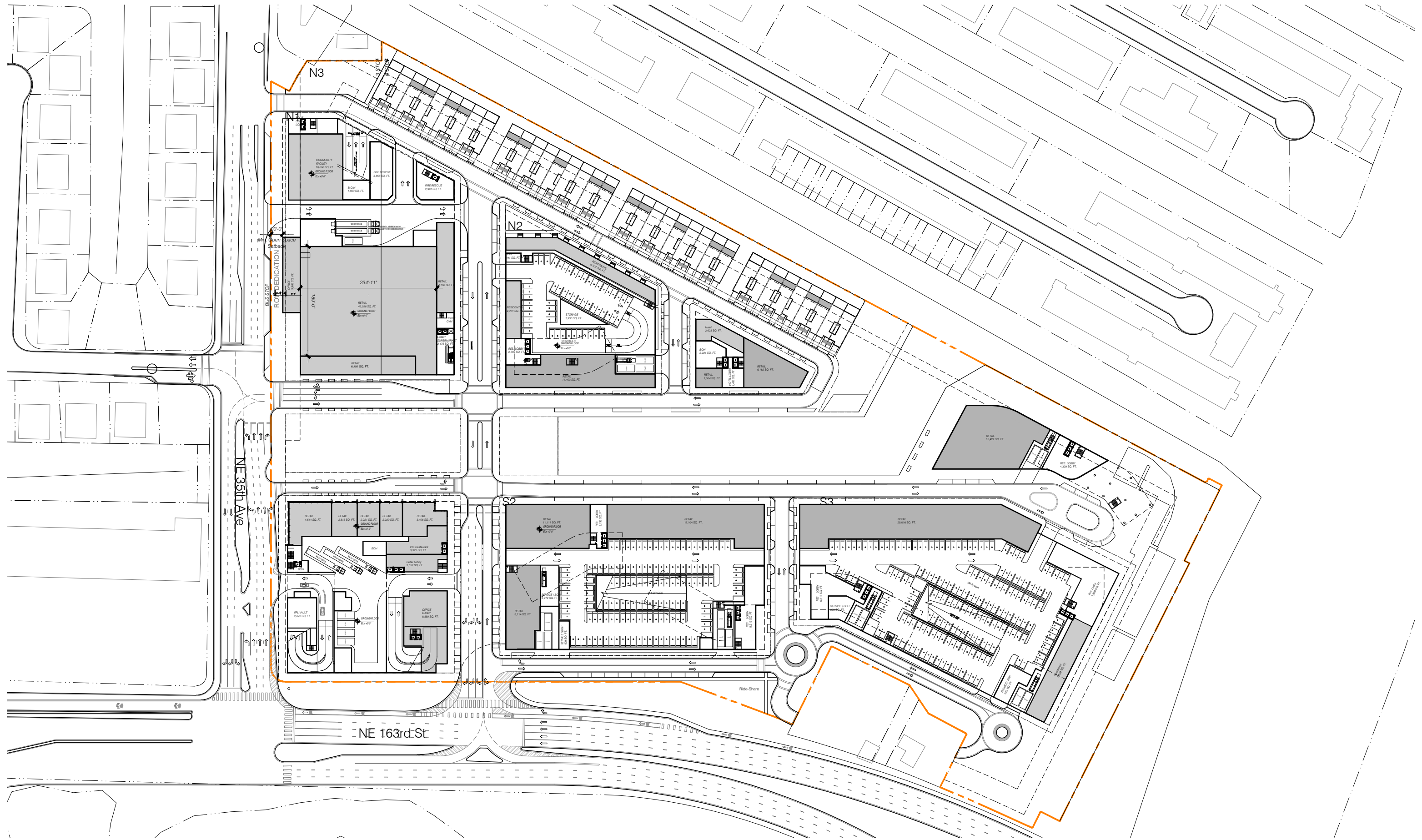
The results of the intersection capacity analyses indicate that the study intersections are expected to operate at City of North Miami Beach's adopted levels of service (LOS) or better under all analysis conditions during the A.M and P.M. peak hours.

A 95th percentile queue analysis was performed to identify the expected vehicle queues at the intersections of SR 826/NE 163rd Street at NE 35th Avenue and SR 826/NE 163rd Street at Intracoastal Mall Driveway. The eastbound left-turn lanes and southbound left-turn and right-turn lanes queues were examined. The westbound approach queue at the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway was also examined. The queue length analysis was prepared for existing, future background, future total, and future total with improvements analysis conditions. The results of the analysis indicate that the overall combined left-turn and right-turn lane queues along NE 35th Avenue are expected to decrease under future total with improvements conditions when compared to future background conditions and future total conditions. Additionally, the eastbound left-turn storage lanes are able to accommodate the expected vehicle queues along SR 826/NE 163rd Street at NE 35th Avenue and Intracoastal Mall Driveway under future total with improvements conditions. Furthermore, the westbound through-lane queues at Intracoastal Mall Driveway are not expected to extend to the bridge gates on SR 826/NE 163rd Street for when the bridge is drawn closed.

A signal warrant analysis was conducted at the intersection of SR 826/NE 163rd Street and Intracoastal Mall Driveway under future total with improvements conditions and determined that the intersection satisfies Warrant 2 and Warrant 3. Therefore, a signal is recommended for installation at this intersection under future total with improvements conditions.

Appendix A

Site Plan



INTRACOASTAL MALL

North Miami Beach, Florida

Site Plan

Scale: 1" = 150'-0"

March 19, 2020

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Appendix B

Methodology Correspondence

Dabkowski, Adrian

From: Proffitt, Justin <Justin.Proffitt@citynmb.com>
Sent: Wednesday, July 17, 2019 11:49 AM
To: Dabkowski, Adrian; joaquin@traftech.biz
Cc: Kanaan, Omar; Hollowed, Maddy; Tracy.Slavens@hklaw.com; Suria Yaffar; Arthur Gallagher; Duron, Mario F.; Johnston, Sarah; Parada, Ana C.; DEspino@wsh-law.com; Almonte, Leo; Joshua Rak; Alfredo Sanchez
Subject: RE: Intracoastal Mall Redevelopment | New Alternative 2
Attachments: New Alternative 2.pdf; 2019 05 31 -Traffic Study Methodology.pdf
Categories: External

Thank you.

I will consult with Bermello & Traf-Tech on this alternative and get back with you.

Justin Proffitt, AICP

Community Development Director
City of North Miami Beach
Community Development
T (305) 354-4456, ext. 4456



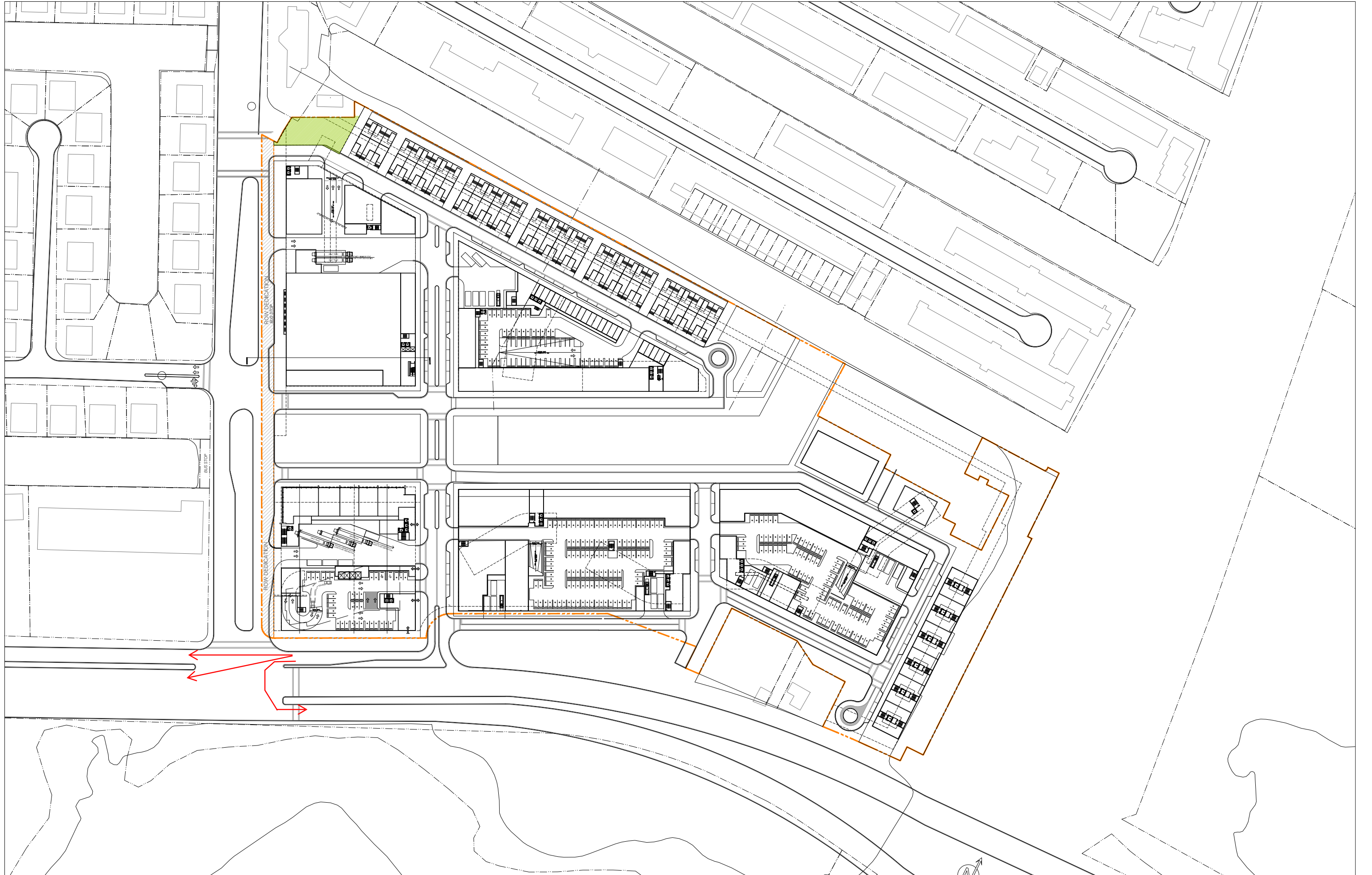
17050 NE 19th Avenue, North Miami Beach, FL 33162 | www.citynmb.com | City NMB on Social Media:   

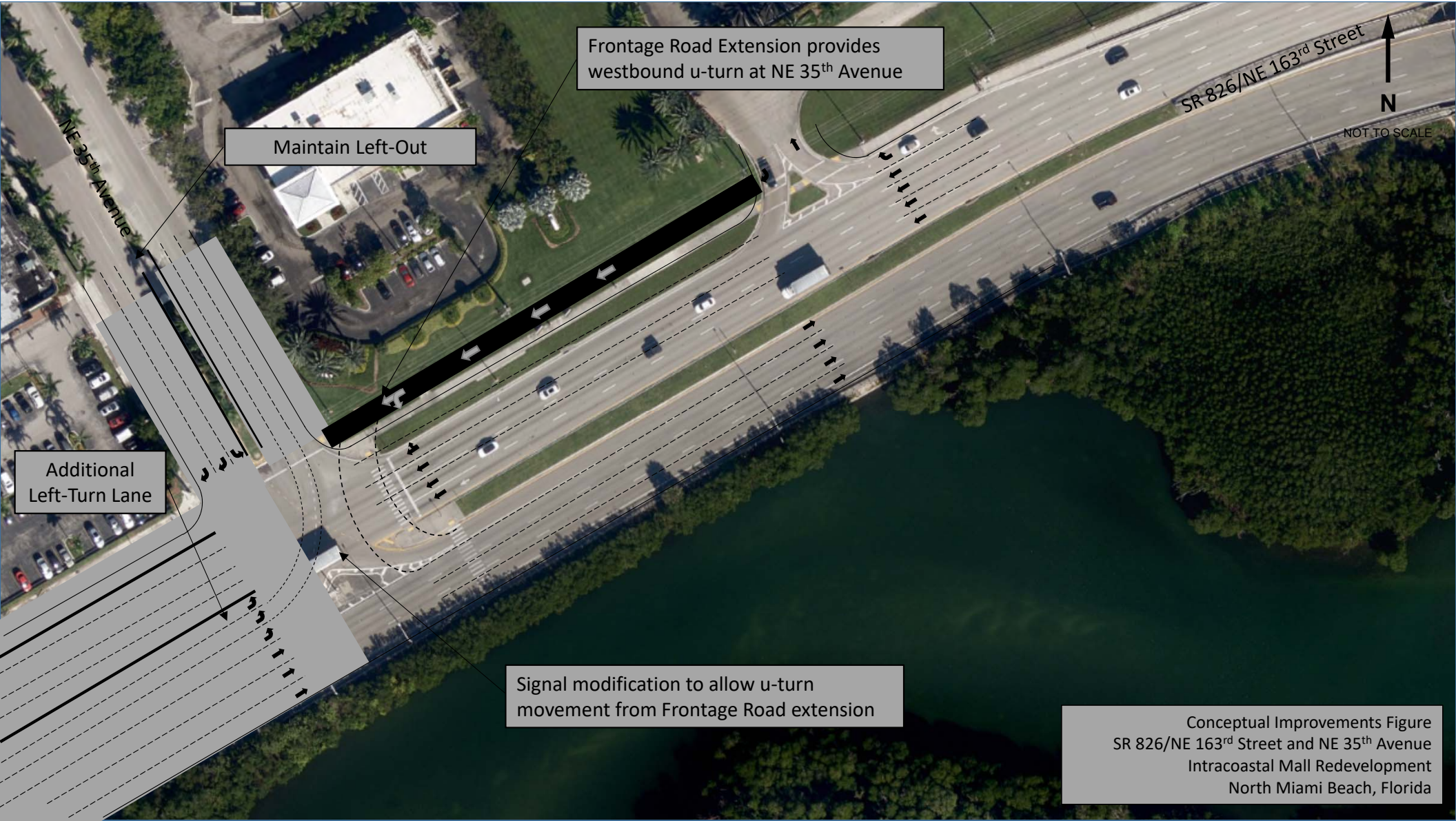
From: Dabkowski, Adrian <Adrian.Dabkowski@Kimley-horn.com>
Sent: Wednesday, July 17, 2019 10:49 AM
To: Proffitt, Justin <Justin.Proffitt@citynmb.com>; joaquin@traftech.biz
Cc: Kanaan, Omar <omar.kanaan@kimley-horn.com>; Hollowed, Maddy <Maddy.Hollowed@kimley-horn.com>; Tracy.Slavens@hklaw.com; Suria Yaffar <suria@zyscovich.com>; Arthur Gallagher <agallagher@dezer.com>; Duron, Mario F. <Mario.Duron@citynmb.com>; Johnston, Sarah <Sarah.Johnston@citynmb.com>; Parada, Ana C. <Ana.Parada@citynmb.com>; DEspino@wsh-law.com; Almonte, Leo <Leo.Almonte@kimley-horn.com>
Subject: RE: Intracoastal Mall Redevelopment | New Alternative 2

Good morning Justin:

We have been coordinating with Joaquin Vargas regarding Alternative 2 on page 9 of the methodology attached. We had initially discussed a concept where we would not signalize the east driveway and maintain it as right-in/right-out but allow for a westbound u-turn maneuver at the intersection of NE 35th Avenue and NE 163rd Street. There were concerns regarding the weaving distance only approximately 300 feet between the right-in/right-out driveway and the intersection of NE 35th Avenue and NE 163rd Street. To mitigate that concern we are now proposing to extend the Frontage Road to the right-in/right-out driveway which would also facilitate the westbound u-turn maneuver at the intersection of NE 35th Avenue and NE 163rd Street. See the attached sketches of the proposed alternative. We believe this is a better solution than the proposed half signal as it does not result in needing a signal variance from FDOT and provides enhanced vehicle mobility by providing an additional access from the site for eastbound and westbound traffic.

Please let us know your thoughts.





Frontage Road Extension provides westbound u-turn at NE 35th Avenue

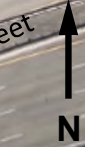
Maintain Left-Out

Additional Left-Turn Lane

Signal modification to allow u-turn movement from Frontage Road extension

SR 826/NE 163rd Street

NE 35th Avenue





NOT TO SCALE

Conceptual Improvements Figure
SR 826/NE 163rd Street and NE 35th Avenue
Intracoastal Mall Redevelopment
North Miami Beach, Florida



MEMORANDUM

To: Justin Proffit, AICP
City of North Miami Beach

From: Adrian K. Dabkowski, P.E., PTOE 
Maddy Hollowed 

Date: May 31, 2019

**Subject: Intracoastal Mall Redevelopment
Traffic Study Methodology**

The purpose of this memorandum is to summarize the traffic study methodology for the proposed redevelopment located at 3789 NE 163rd Street in North Miami Beach, Florida. Currently, the site proposed for redevelopment is occupied by 234,026 square feet of retail space. The proposed redevelopment consists of 345,000 square feet of retail space, 2,000 multifamily residential units, 200,000 square feet of office space, and 35,000 square feet of gym space. A conceptual site plan and a site location map are included in Attachment A. The following sections summarize our proposed traffic study methodology.

TRIP GENERATION

Trip generation calculations for the existing and proposed redevelopment were performed using Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition. Trip generation calculations for the proposed redevelopment were performed using ITE Land Use Codes (LUC) 820 (Shopping Center), 222 (Multifamily Housing [High-Rise]), 221 (Multifamily Housing [Mid-Rise]), 220 (Multifamily Housing [Low-Rise]), 710 (General Office Building), and 492 (Health/Fitness Club).

A multimodal (public transit, bicycle, and pedestrian) reduction of 10.0 percent (10.0%) was applied to the A.M. and P.M. peak hour trip generation calculations to account for the urban character of the area. Please note that Miami-Dade Transit (MDT) provides Metrobus transit Route 105 and Route 108 within the vicinity of the redevelopment. Additionally, the City of North Miami Beach provides the North Miami Beach Line trolley route A which operates within the vicinity of the redevelopment. Furthermore, a water taxi is proposed to operate along the Intracoastal between the proposed redevelopment and Sunny Isles Beach.

Internal capture is expected between the complementary land uses within the project. Internal capture trips for the project were determined based upon methodology contained in the ITE's, *Trip Generation Handbook*, 3rd Edition. Internal capture rates of 5.1 percent (5.1%) for the A.M. peak hour trip generation and 28.8 percent (28.8%) for the P.M. peak hour trip generation are expected for the proposed redevelopment.

Pass-by capture trip rates were determined based on average rates provided in the ITE's *Trip Generation Handbook*, 3rd Edition. The pass-by rate for the shopping center land use is 34 percent (34%) during the P.M. peak hour.

The proposed redevelopment results in 756 net new vehicle trips during the A.M. peak hour and 623 net new vehicle trips during the P.M. peak hour. Detailed trip generation calculations are included in Attachment B.

DATA COLLECTION

The peak periods selected for this study include typical weekday (Tuesday, Wednesday, or Thursday) 7:00 to 9:00 A.M. and 4:00 to 6:00 P.M. peak periods. Turning movement counts will be collected in 15-minute intervals during the peak periods. Turning movement counts will also include pedestrian, bicycle, and truck data. All traffic counts will be adjusted to peak season conditions using the appropriate Florida Department of Transportation (FDOT) peak season category factors. Traffic signal timing information will be obtained from Miami-Dade County Department of Transportation and Public Works – Signals and Signs Division. All traffic data collected will be provided in the Appendix of the traffic impact study.

STUDY AREA

The following intersections will be examined as part of the study area:

- NE 163rd Street/SR 826 and Biscayne Boulevard/US 1
- NE 163rd Street/SR 826 and NE 26th Avenue
- NE 163rd Street/SR 826 and NE 28th Avenue
- NE 163rd Street/SR 826 and NE 2900 Block
- NE 163rd Street/SR 826 and NE 34th Avenue
- NE 163rd Street/SR 826 and NE 35th Avenue
- NE 163rd Street/SR 826 and Intracoastal Mall Driveway
- NE 164th Street and NE 35th Avenue

TRIP DISTRIBUTION

The likely distribution of project traffic was forecast for the trips expected to be generated by the proposed development. The trip distribution was based on an interpolated cardinal trip distribution for the project site's traffic analysis zone (TAZ) for the years 2010 and 2040 for the project's opening year of 2031 obtained from the Miami-Dade Metropolitan Planning Organization's (MPO) *2040 Long Range Transportation Plan Directional Trip Distribution Report*. The project is located within TAZ 91. The cardinal distribution is included in Attachment C.

BACKGROUND GROWTH RATE

A background growth rate will be calculated based on historic growth trends at nearby FDOT traffic count stations. Additionally, growth rates based on the Florida Standard Urban Transportation Model Structure (FSUTMS) Southeast Regional Planning Model (SERPM) projected 2010 and 2040 model network volumes will be examined. The higher of the two (2) growth rates will be used in the analysis.

CAPACITY ANALYSIS

Capacity analyses will be conducted for the A.M. and P.M. peak hours at the study intersections. Intersection analyses will be performed using Trafficware's *Synchro* traffic engineering analysis software, which applies methodologies outlined in the Transportation Research Board's (TRB's) *Highway Capacity Manual* (HCM), 2000/2010/6th Editions.

Capacity analyses will be conducted for five (5) scenarios: existing, build-out year without project, build-out year with project, build-out year with project and Alternative 1 geometry, and build-out year with project and Alternative 2 geometry. Schematic sketches of the proposed roadway alternative improvements are contained in Attachment A. The anticipated build-out year is 2031. If intersection or roadway segment deficiencies are identified, strategies and improvements will be developed as mitigation measures.

The following graphics will be included for the study intersections:

- Existing conditions
- Trip distribution
- Trip assignment
- Future background traffic conditions (with growth rate)
- Future total traffic conditions (with project and without roadway improvements)
- Future total traffic conditions (with project and with Alternative 1 roadway improvements)
- Future total traffic conditions (with project and with Alternative 2 roadway improvements)

TRAFFIC SIGNAL WARRANT ANALYSIS

A traffic signal warrant analysis at the proposed project intersection with SR 826/NE 163rd Street as part of Alternative 2 will be prepared. The analyses will be prepared for future total conditions with the proposed development in place. The signal warrant analyses will apply the project's traffic generation volumes and hourly distribution developed from ITE's *Trip Generation Manual*, 10th Edition, ITE's *Trip Generation Handbook*, 3rd Edition, cardinal distribution, and the trip distribution/assignment to the existing traffic volumes. Those volumes will be compared to the volume traffic signal warrants contained in the of the Federal Highway Administration's (FHWA), *Manual on Uniform Traffic Control Devices* (MUTCD), 2009.

GARAGE ENTRY GATE OPERATIONS ANALYSIS

If entry gates are proposed, an entry gate analysis will be prepared for parking garage entry points. The entry gate queuing analysis will be prepared for the weekday A.M. and P.M. peak hours. Entry gate queuing analysis will be conducted consistent with the procedures outlined in *Parking Structures – Planning, Design, Construction, Maintenance, and Repair*, 2000 and 2011. The purpose of this analysis is to determine any future queue storage deficiencies at the entry gates and provide preliminary recommendations for mitigating these deficiencies.

DOCUMENTATION

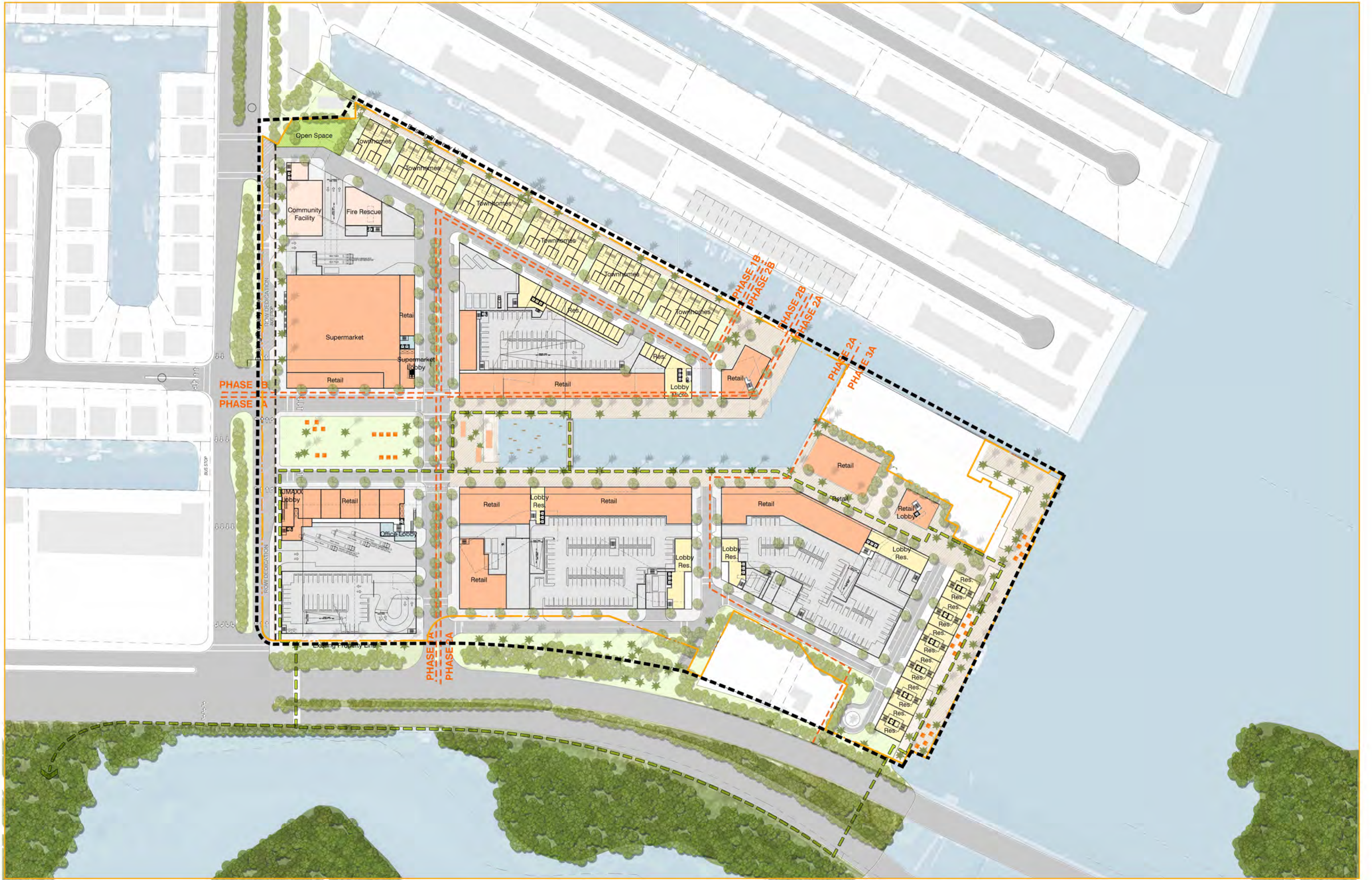
The results of the traffic analysis and signal warrant analysis will be summarized in a report. The report will include supporting documents including signal timings, lane geometry, and software output sheets. The report will also include text and graphics necessary to summarize the assumptions and analysis.

K:\FTL_TPTO\043796003-Intracoastal Mall Redevelopment\Correspondence\2019 05 31 -Traffic Study Methodology.docx

Attachment A

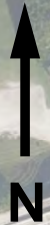
Conceptual Site Plan and Location Map





SR 826/NE 163rd Street FDOT Access Class 2
660-foot Driveway Spacing
1,320-foot Directional Spacing
2,640-foot Full Access/Signal Spacing

Roadway Alignment Modified to Accommodate
Additional Eastbound Left-Turn Lane



NOT TO SCALE

Proposed
Northbound Left-
Turn Lane Closure

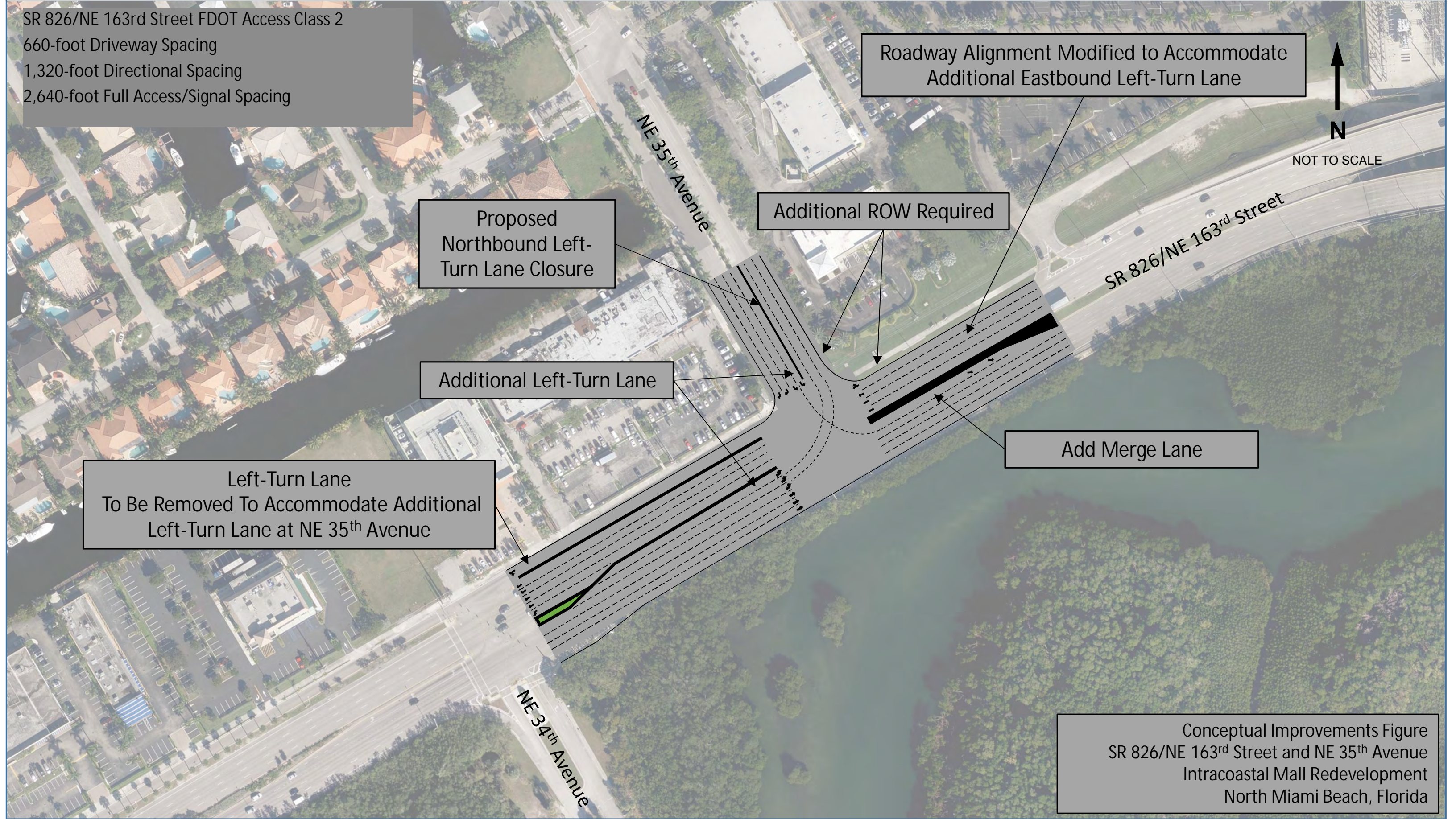
Additional ROW Required

Additional Left-Turn Lane

Add Merge Lane

Left-Turn Lane
To Be Removed To Accommodate Additional
Left-Turn Lane at NE 35th Avenue

Conceptual Improvements Figure
SR 826/NE 163rd Street and NE 35th Avenue
Intracoastal Mall Redevelopment
North Miami Beach, Florida



SR 826/NE 163rd Street FDOT Access Class 2
660-foot Driveway Spacing
1,320-foot Directional Spacing
2,640-foot Full Access/Signal Spacing

Roadway Alignment Modified to Accommodate
Additional Eastbound Left-Turn Lane



NOT TO SCALE

SR 826/NE 163rd Street

Proposed
Northbound Left-
Turn Lane Closure

Additional ROW Required

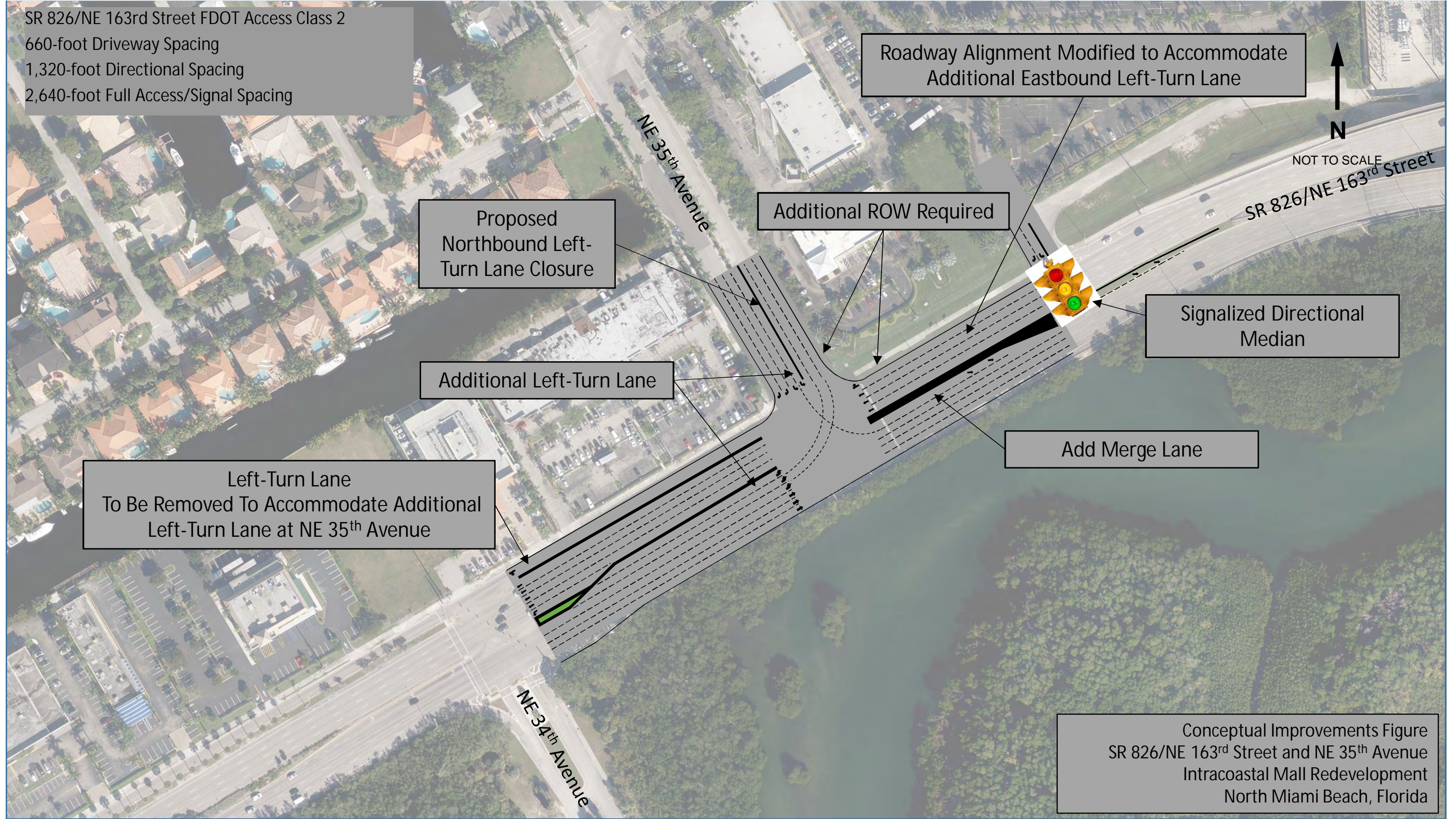
Signalized Directional
Median

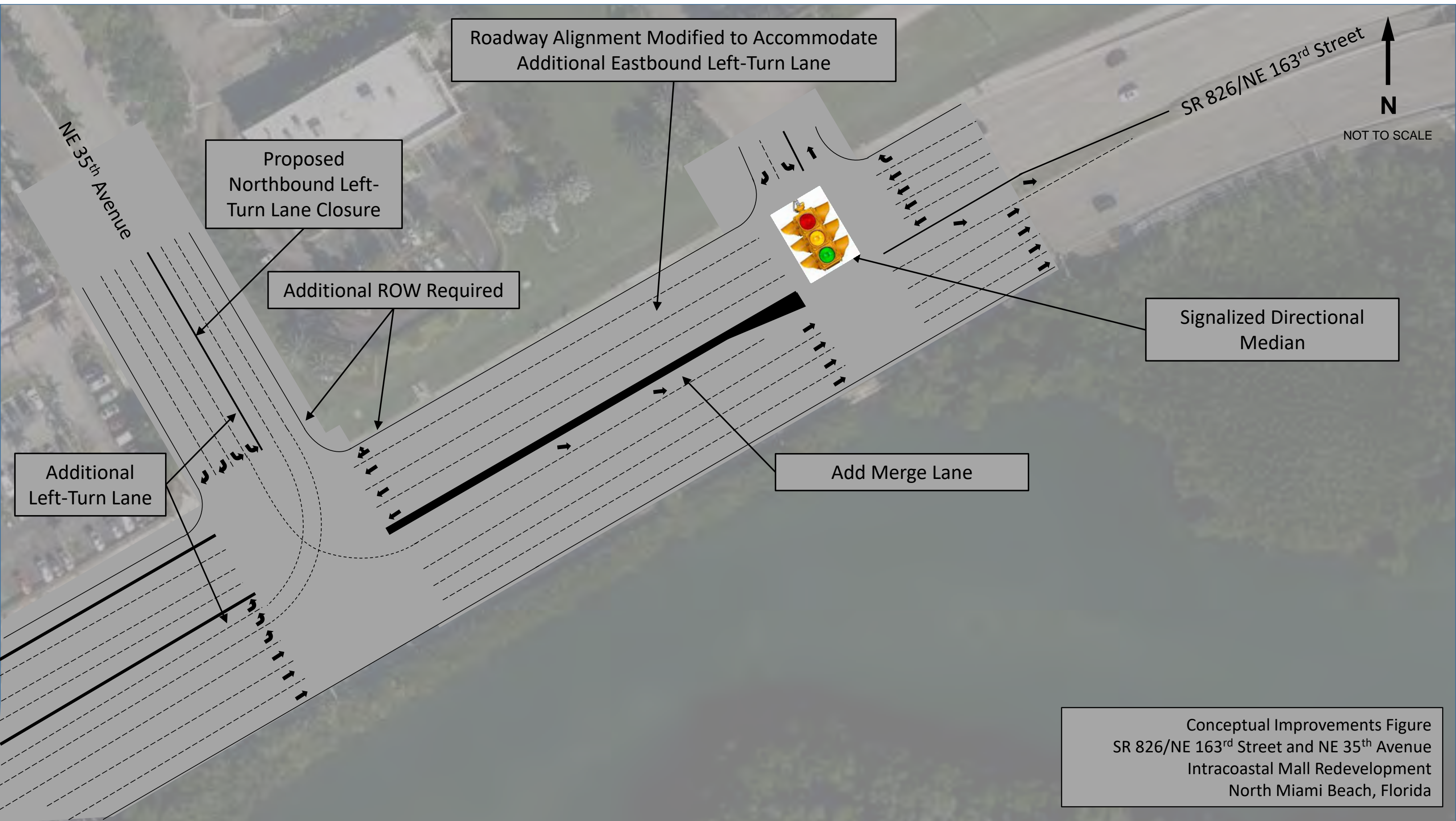
Additional Left-Turn Lane

Add Merge Lane

Left-Turn Lane
To Be Removed To Accommodate Additional
Left-Turn Lane at NE 35th Avenue

Conceptual Improvements Figure
SR 826/NE 163rd Street and NE 35th Avenue
Intracoastal Mall Redevelopment
North Miami Beach, Florida





Attachment B
Trip Generation Calculations

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	Shopping Center	10	820	234,026	ksf	62%	38%	167	102	269	10.0%	27	150	92	242	0.0%	0	150	92	242	0.0%	0	150	92	242		
	2																											
	3																											
	4																											
	5																											
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	9																											
	10																											
	11																											
	12																											
	13																											
	14																											
	15																											
		ITE Land Use Code	Rate or Equation		Total:		167	102	269	10.2%	27	150	92	242	0.0%	0	150	92	242	0.0%	0	150	92	242				
		820	Y=0.5*(X)+151.78																									

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	Shopping Center	10	820	345	ksf	62%	38%	201	123	324	10.0%	32	181	111	292	7.5%	22	169	101	270	0.0%	0	169	101	270		
	2	Multifamily Housing (High-Rise)	10	222	1917	du	24%	76%	132	418	550	10.0%	55	119	376	495	2.3%	12	116	367	483	0.0%	0	116	367	483		
	3	Multifamily Housing (Mid-Rise)	10	221	48	du	26%	74%	4	13	17	10.0%	2	3	12	15	2.3%	0	3	12	15	0.0%	0	3	12	15		
	4	Multifamily Housing (Low-Rise)	10	220	35	du	23%	77%	4	14	18	10.0%	2	3	13	16	2.3%	0	3	13	16	0.0%	0	3	13	16		
	5	General Office Building	10	710	200	ksf	86%	14%	184	30	214	10.0%	21	166	27	193	10.4%	20	154	19	173	0.0%	0	154	19	173		
	6	Health/Fitness Club	10	492	35	ksf	51%	49%	23	23	46	10.0%	5	21	20	41	0.0%	0	21	20	41	0.0%	0	21	20	41		
	7																											
	8																											
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	10																											
	11																											
	12																											
	13																											
	14																											
	15																											
		ITE Land Use Code	Rate or Equation		Total:		548	621	1,169	10.0%	117	493	559	1,052	5.1%	54	466	532	998	0.0%	0	466	532	998				

820 Y=0.5*(X)+151.78
 222 Y=0.28*(X)+12.86
 221 LN(Y) = 0.98*LN(X)+0.98
 220 LN(Y) = 0.95*LN(X)+0.51
 710 Y=0.94*(X)+26.49
 492 Y=1.31(X)

NET NEW TRIPS	IN	OUT	TOTAL
316	440	756	

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 Shopping Center	10	820	234,026	ksf	48%	52%	489	530	1,019	10.0%	102	440	477	917	0.0%	0	440	477	917	34.0%	312	290	315	605		
	2																										
	3																										
	4																										
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	10																										
	11																										
	12																										
	13																										
	14																										
	15																										
ITE Land Use Code		Rate or Equation					Total:			489	530	1,019	10.0%	102	440	477	917	0.0%	0	440	477	917	34.0%	312	290	315	605
820		LN(Y) = 0.74*LN(X)+2.89																									

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 Shopping Center	10	820	345	ksf	48%	52%	652	707	1,359	10.0%	136	587	636	1,223	24.0%	294	485	444	929	34.0%	316	320	293	613		
	2 Multifamily Housing (High-Rise)	10	222	1917	du	61%	39%	403	257	660	10.0%	66	363	231	594	38.0%	227	201	166	367	0.0%	0	201	166	367		
	3 Multifamily Housing (Mid-Rise)	10	221	48	du	61%	39%	13	9	22	10.0%	2	12	8	20	38.0%	7	7	6	13	0.0%	0	7	6	13		
	4 Multifamily Housing (Low-Rise)	10	220	35	du	63%	37%	14	9	23	10.0%	2	13	8	21	38.0%	7	8	6	14	0.0%	0	8	6	14		
	5 General Office Building	10	710	200	ksf	16%	84%	35	185	220	10.0%	22	31	167	198	28.8%	57	10	131	141	0.0%	0	10	131	141		
	6 Health/Fitness Club	10	492	35	ksf	57%	43%	71	53	124	10.0%	12	64	48	112	28.6%	32	47	33	80	0.0%	0	47	33	80		
	7																										
	8																										
	9																										
	10																										
	11																										
	12																										
	13																										
	14																										
	15																										
ITE Land Use Code		Rate or Equation					Total:			1,188	1,220	2,408	10.0%	240	1,070	1,098	2,168	28.8%	624	758	786	1,544	20.5%	316	593	635	1,228
820		LN(Y) = 0.74*LN(X)+2.89																									
222		Y=0.34*(X)+8.56																									
221		LN(Y) = 0.96*LN(X)+0.63																									
220		LN(Y) = 0.89*LN(X)+0.02																									
710		LN(Y) = 0.95*LN(X)+0.36																									
492		LN(Y) = 0.67*LN(X)+2.44																									

NET NEW TRIPS	IN	OUT	TOTAL
	303	320	623

Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour
based on the *Trip Generation Handbook*, 3rd Edition, published by the Institute of
Transportation Engineers

SUMMARY (EXISTING)

GROSS TRIP GENERATION					
INPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
	Office	0	0	0	0
	Retail	150	92	440	477
	Restaurant	0	0	0	0
	Cinema/Entertainment	0	0	0	0
	Residential	0	0	0	0
	Hotel	0	0	0	0
		150	92	440	477
INTERNAL TRIPS					
OUTPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
	Office	0	0	0	0
	Retail	0	0	0	0
	Restaurant	0	0	0	0
	Cinema/Entertainment	0	0	0	0
	Residential	0	0	0	0
	Hotel	0	0	0	0
		0	0	0	0
OUTPUT	<i>Total % Reduction</i>	0.0%		0.0%	
	Office				
	Retail	0.0%		0.0%	
	Restaurant				
	Cinema/Entertainment				
	Residential				
	Hotel				
EXTERNAL TRIPS					
OUTPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
	Office	0	0	0	0
	Retail	150	92	440	477
	Restaurant	0	0	0	0
	Cinema/Entertainment	0	0	0	0
	Residential	0	0	0	0
	Hotel	0	0	0	0
		150	92	440	477

Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour
based on the *Trip Generation Handbook*, 3rd Edition, published by the Institute of
Transportation Engineers

SUMMARY (PROPOSED)

GROSS TRIP GENERATION					
INPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
	Office	166	27	31	167
Retail	181	111	587	636	
Restaurant	0	0	0	0	
Cinema/Entertainment	21	20	64	48	
Residential	125	401	388	247	
Hotel	0	0	0	0	
		493	559	1,070	1,098

INTERNAL TRIPS					
OUTPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
	Office	12	8	21	36
Retail	12	10	102	192	
Restaurant	0	0	0	0	
Cinema/Entertainment	0	0	17	15	
Residential	3	9	172	69	
Hotel	0	0	0	0	
		27	27	312	312

OUTPUT	<i>Total % Reduction</i>	5.1%	28.8%
	Office	10.4%	28.8%
	Retail	7.5%	24.0%
	Restaurant		
	Cinema/Entertainment	0.0%	28.6%
	Residential	2.3%	38.0%
	Hotel		

EXTERNAL TRIPS					
OUTPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
	Office	154	19	10	131
Retail	169	101	485	444	
Restaurant	0	0	0	0	
Cinema/Entertainment	21	20	47	33	
Residential	122	392	216	178	
Hotel	0	0	0	0	
		466	532	758	786

Attachment C

Trip Distribution



MOBILITY OPTIONS
2040 Miami-Dade
Transportation Plan
EYES ON THE FUTURE

MIAMI-DADE 2040

Long Range Transportation Plan

Directional Trip Distribution Report

October 23, 2014



MIAMI-DADE METROPOLITAN
PLANNING ORGANIZATION



Photo by Asad Gilani

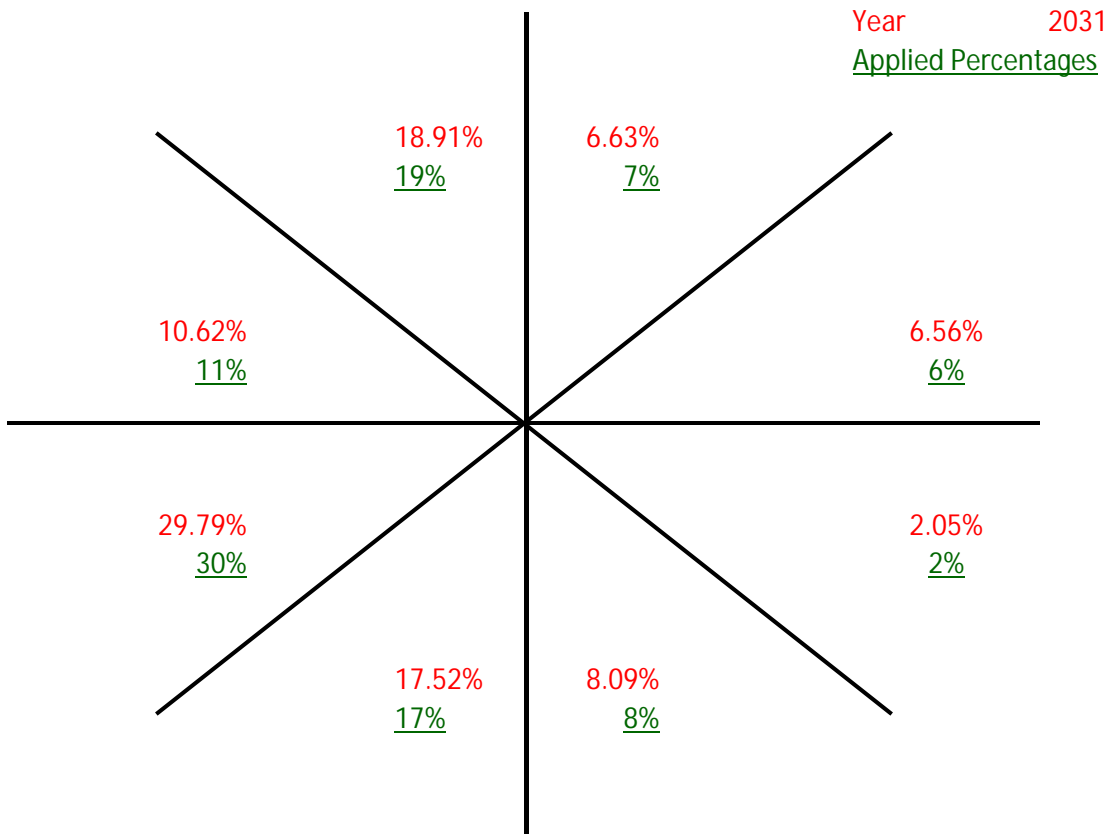
Miami-Dade 2010 Directional Distribution Summary

Origin TAZ			Cardinal Directions								Total
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
83	2983	TRIPS	351	40	1	115	242	220	179	98	1,246
83	2983	PERCENT	28.2	3.2	0.1	9.2	19.4	17.7	14.4	7.9	
84	2984	TRIPS	559	465	153	365	865	746	334	514	4,001
84	2984	PERCENT	14.0	11.6	3.8	9.1	21.6	18.7	8.4	12.9	
85	2985	TRIPS	188	95	250	96	304	63	164	218	1,378
85	2985	PERCENT	13.6	6.9	18.1	7.0	22.1	4.6	11.9	15.8	
86	2986	TRIPS	729	318	175	394	899	1,068	479	705	4,767
86	2986	PERCENT	15.3	6.7	3.7	8.3	18.9	22.4	10.1	14.8	
87	2987	TRIPS	617	93	194	162	635	433	374	357	2,865
87	2987	PERCENT	21.5	3.3	6.8	5.7	22.2	15.1	13.1	12.5	
88	2988	TRIPS	404	39	25	180	295	156	148	172	1,419
88	2988	PERCENT	28.5	2.8	1.8	12.7	20.8	11.0	10.4	12.1	
89	2989	TRIPS	439	194	25	110	400	312	209	409	2,098
89	2989	PERCENT	20.9	9.3	1.2	5.2	19.1	14.9	10.0	19.5	
90	2990	TRIPS	3,896	381	391	963	4,381	3,762	2,705	3,769	20,248
90	2990	PERCENT	19.2	1.9	1.9	4.8	21.6	18.6	13.4	18.6	
91	2991	TRIPS	384	345	57	518	1,028	1,569	711	1,160	5,772
91	2991	PERCENT	6.7	6.0	1.0	9.0	17.8	27.2	12.3	20.1	
92	2992	TRIPS	285	363	90	433	876	827	388	701	3,963
92	2992	PERCENT	7.2	9.2	2.3	10.9	22.1	20.9	9.8	17.7	
93	2993	TRIPS	333	106	3	113	321	270	255	180	1,581
93	2993	PERCENT	21.1	6.7	0.2	7.2	20.3	17.1	16.1	11.4	
94	2994	TRIPS	723	134	78	236	580	389	471	351	2,962
94	2994	PERCENT	24.4	4.5	2.6	8.0	19.6	13.1	15.9	11.9	
95	2995	TRIPS	1,114	208	132	432	836	871	670	535	4,798
95	2995	PERCENT	23.2	4.3	2.8	9.0	17.4	18.2	14.0	11.2	
96	2996	TRIPS	419	66	25	139	406	295	257	194	1,801
96	2996	PERCENT	23.3	3.7	1.4	7.7	22.5	16.4	14.3	10.8	
97	2997	TRIPS	443	23	42	136	434	389	389	247	2,103
97	2997	PERCENT	21.1	1.1	2.0	6.5	20.6	18.5	18.5	11.8	
98	2998	TRIPS	366	342	59	254	480	250	436	317	2,504
98	2998	PERCENT	14.6	13.7	2.4	10.1	19.2	10.0	17.4	12.7	
99	2999	TRIPS	1,032	663	214	768	1,149	754	738	800	6,118
99	2999	PERCENT	16.9	10.8	3.5	12.6	18.8	12.3	12.1	13.1	
100	3000	TRIPS	711	1,020	394	880	939	1,040	645	451	6,080
100	3000	PERCENT	11.7	16.8	6.5	14.5	15.4	17.1	10.6	7.4	
101	3001	TRIPS	2,051	720	290	949	1,366	1,177	1,651	2,084	10,288
101	3001	PERCENT	19.9	7.0	2.8	9.2	13.3	11.4	16.1	20.3	
102	3002	TRIPS	1,290	1,226	338	1,238	1,466	1,285	919	960	8,722
102	3002	PERCENT	14.8	14.1	3.9	14.2	16.8	14.7	10.5	11.0	
103	3003	TRIPS	623	571	316	426	794	561	461	357	4,109

Miami-Dade 2040 Directional Distribution Summary

Origin TAZ			Cardinal Directions								Total
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
83	2983	TRIPS	383	99	16	129	328	292	186	207	1,640
83	2983	PERCENT	23.4	6.0	1.0	7.9	20.0	17.8	11.3	12.6	
84	2984	TRIPS	1,429	1,141	312	896	1,983	1,378	942	1,148	9,229
84	2984	PERCENT	15.5	12.4	3.4	9.7	21.5	14.9	10.2	12.4	
85	2985	TRIPS	279	96	257	122	354	292	200	242	1,842
85	2985	PERCENT	15.2	5.2	14.0	6.6	19.2	15.9	10.9	13.1	
86	2986	TRIPS	1,315	352	210	564	1,270	1,178	538	638	6,065
86	2986	PERCENT	21.7	5.8	3.5	9.3	20.9	19.4	8.9	10.5	
87	2987	TRIPS	766	140	263	149	825	540	447	578	3,708
87	2987	PERCENT	20.7	3.8	7.1	4.0	22.3	14.6	12.1	15.6	
88	2988	TRIPS	555	85	25	152	413	322	203	320	2,075
88	2988	PERCENT	26.8	4.1	1.2	7.3	19.9	15.5	9.8	15.4	
89	2989	TRIPS	452	249	60	114	569	399	244	289	2,376
89	2989	PERCENT	19.0	10.5	2.5	4.8	24.0	16.8	10.3	12.2	
90	2990	TRIPS	5,044	561	691	1,099	5,956	4,093	2,851	4,467	24,762
90	2990	PERCENT	20.4	2.3	2.8	4.4	24.1	16.5	11.5	18.0	
91	2991	TRIPS	461	473	175	538	1,216	2,167	690	1,288	7,008
91	2991	PERCENT	6.6	6.8	2.5	7.7	17.4	30.9	9.9	18.4	
92	2992	TRIPS	393	608	103	397	846	1,178	475	826	4,826
92	2992	PERCENT	8.1	12.6	2.1	8.2	17.5	24.4	9.8	17.1	
93	2993	TRIPS	318	151	40	121	303	398	328	147	1,806
93	2993	PERCENT	17.6	8.4	2.2	6.7	16.8	22.0	18.2	8.1	
94	2994	TRIPS	1,962	549	137	460	2,200	1,423	1,227	1,012	8,970
94	2994	PERCENT	21.9	6.1	1.5	5.1	24.5	15.9	13.7	11.3	
95	2995	TRIPS	1,343	274	186	677	1,205	935	822	658	6,100
95	2995	PERCENT	22.0	4.5	3.1	11.1	19.8	15.3	13.5	10.8	
96	2996	TRIPS	698	306	170	207	513	332	412	351	2,989
96	2996	PERCENT	23.4	10.2	5.7	6.9	17.2	11.1	13.8	11.7	
97	2997	TRIPS	697	158	77	348	739	500	507	332	3,358
97	2997	PERCENT	20.8	4.7	2.3	10.4	22.0	14.9	15.1	9.9	
98	2998	TRIPS	740	391	285	455	713	553	700	567	4,404
98	2998	PERCENT	16.8	8.9	6.5	10.3	16.2	12.6	15.9	12.9	
99	2999	TRIPS	2,877	1,784	1,094	1,735	2,812	2,129	2,402	1,891	16,724
99	2999	PERCENT	17.2	10.7	6.5	10.4	16.8	12.7	14.4	11.3	
100	3000	TRIPS	821	1,023	529	1,273	1,213	1,291	812	488	7,450
100	3000	PERCENT	11.0	13.7	7.1	17.1	16.3	17.3	10.9	6.6	
101	3001	TRIPS	931	487	262	438	656	643	657	899	4,973
101	3001	PERCENT	18.7	9.8	5.3	8.8	13.2	12.9	13.2	18.1	
102	3002	TRIPS	1,303	1,366	533	1,360	1,810	1,412	1,245	1,110	10,139
102	3002	PERCENT	12.9	13.5	5.3	13.4	17.9	13.9	12.3	11.0	
103	3003	TRIPS	746	605	454	475	914	728	452	433	4,807

Cardinal Distribution for TAZ 91



Cardinal Trip Distribution

Cardinal Direction	Percentage of Trips		2031 Interpolated	2031 Rounded
	2010	2040		
North-Northeast	6.7%	6.60%	6.63%	7.00%
East-Northeast	6.0%	6.80%	6.56%	6.00%
East-Southeast	1.0%	2.50%	2.05%	2.00%
South-Southeast	9.0%	7.70%	8.09%	8.00%
South-Southwest	17.8%	17.40%	17.52%	17.00%
West-Southwest	27.2%	30.90%	29.79%	30.00%
West-Northwest	12.3%	9.90%	10.62%	11.00%
North-Northwest	20.1%	18.40%	18.91%	19.00%
Total	100.1%	100.2%	100.17%	100.00%

Appendix C

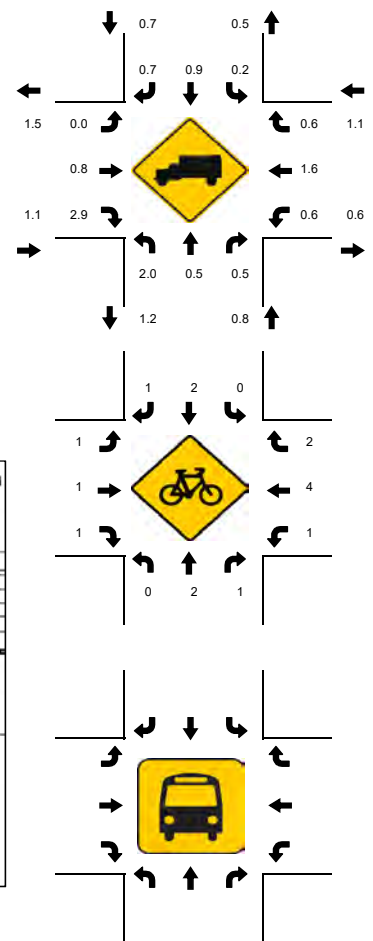
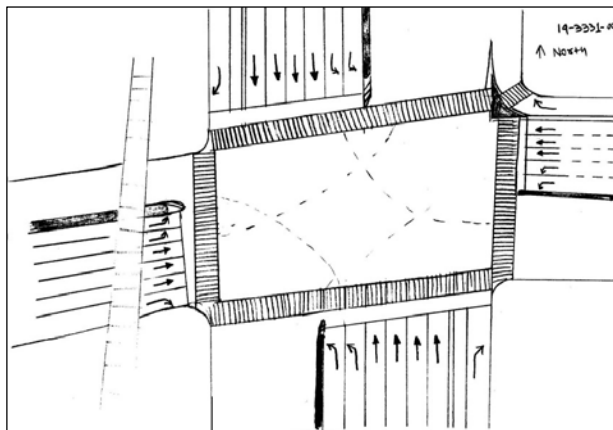
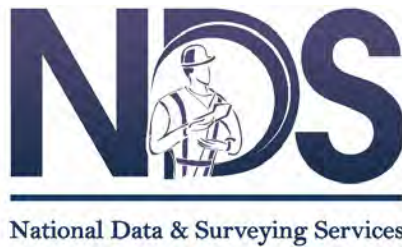
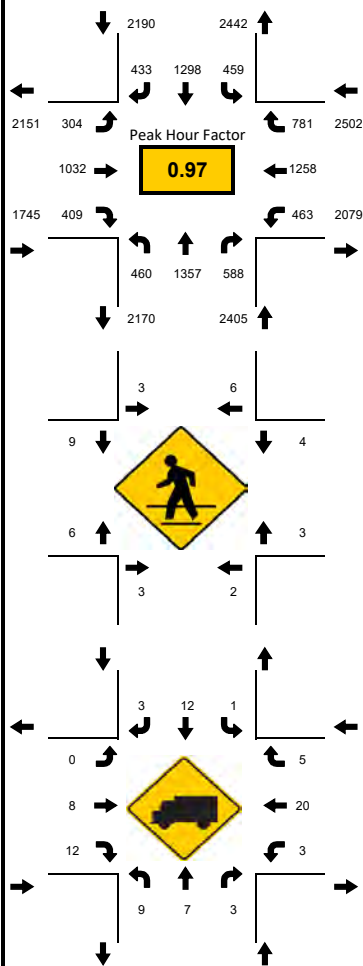
Traffic Data

Turning Movement Counts

LOCATION: Biscayne Blvd/US 1 & NE 163rd St/SR 826
 CITY/STATE: North Miami Beach, FL

PROJECT ID: 19-03331-001
 DATE: 05/14/2019

Peak-Hour: 05:00 PM - 06:00 PM
 Peak 15-Minute: 05:30 PM - 05:45 PM



15-Min Count Period Beginning At	Biscayne Blvd/US 1 Northbound					Biscayne Blvd/US 1 Southbound					NE 163rd St/SR 826 Eastbound				NE 163rd St/SR 826 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	120	281	123	3		109	303	114	0		64	250	86	0		100	363	194	0		2110	8217
04:15 PM	83	333	115	1		100	280	114	2		68	228	84	0		125	267	235	1		2036	8387
04:30 PM	104	310	133	5		94	317	131	4		76	232	94	0		118	287	174	0		2079	8512
04:45 PM	91	260	114	2		101	352	122	2		58	238	78	0		109	281	184	0		1992	8718
05:00 PM	136	358	143	2		119	291	106	4		71	259	124	0		113	345	209	0		2280	8842
05:15 PM	94	391	145	1		82	379	116	3		62	219	88	0		103	269	209	0		2161	6562
05:30 PM	106	298	172	8		116	313	126	2		90	309	113	0		147	303	182	0		2285	4401
05:45 PM	106	310	128	7		128	315	85	5		81	245	84	0		100	341	181	0		2116	2116
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound				Westbound				Total			
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt		U	R*	
All Vehicles	544	1564	688	32		512	1516	504	20		360	1236	496	0		588	1380	836	0		10276	
Heavy Trucks	12	16	4			4	20	8			0	12	16			4	32	8			136	
Pedestrians		8					12					24					12				56	
Bicycles	0	4	4			0	4	4			4	4	4			4	4	4			40	
Railroad																						
Stopped Buses																						

National Data & Surveying Services Intersection Turning Movement Count

Location: NE 26th Ave & NE 163rd St/SR 826
 City: North Miami Beach
 Control:

Project ID: 19-03331-002
 Date: 5/14/2019

NS/EW Streets:		Total																								TOTAL		
		NE 26th Ave					NE 26th Ave					NE 163rd St/SR 826					NE 163rd St/SR 826					WESTBOUND2						
AM		NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					WESTBOUND2					TOTAL	
		NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	ET	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L	W2U	W2L2	W2T2	W2R2		W2U2
	7:00 AM	0	0	0	0	0	3	0	14	0	0	3	400	0	1	0	0	361	5	0	0	0	0	0	1	1	2	791
	7:15 AM	0	0	0	0	0	3	0	16	0	0	10	436	0	0	0	0	361	6	0	0	0	0	0	4	1	4	841
	7:30 AM	0	0	0	0	0	11	0	29	0	0	16	414	0	1	0	0	375	10	0	0	0	0	0	3	3	2	864
	7:45 AM	0	0	0	0	0	10	0	19	0	0	3	422	0	0	0	0	363	5	0	0	0	0	0	4	2	5	833
	8:00 AM	0	0	0	0	0	6	0	14	0	0	3	516	0	0	0	0	478	6	0	0	0	0	0	3	3	0	1029
	8:15 AM	0	0	0	0	0	10	0	22	0	0	12	530	0	0	0	0	455	11	0	0	0	0	0	8	1	3	1052
	8:30 AM	0	0	0	0	0	8	0	18	0	0	8	473	0	0	0	0	464	7	2	0	0	0	0	7	3	2	992
	8:45 AM	0	0	0	0	0	13	0	15	0	0	9	497	0	1	0	0	398	13	0	0	0	0	0	2	0	3	951
TOTAL VOLUMES:		NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	ET	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
APPROACH %'s:		0	0	0	0	0	64	0	147	0	0	64	3688	0	3	0	0	3255	63	2	0	0	0	0	32	14	21	7353
PEAK HR:		08:00 AM - 09:00 AM					30.33%	0.00%	69.67%	0.00%	0.00%	1.70%	98.22%	0.00%	0.08%	0.00%	0.00%	98.04%	1.90%	0.06%	0.00%	0.00%	0.00%	0.00%	47.76%	20.90%	31.34%	TOTAL
PEAK HR VOL:		0	0	0	0	0	37	0	69	0	0	32	2016	0	1	0	0	1795	37	2	0	0	0	0	20	7	8	4024
PEAK HR FACTOR:		0.000	0.000	0.000	0.000	0.000	0.712	0.000	0.784	0.000	0.000	0.667	0.951	0.000	0.250	0.000	0.000	0.939	0.712	0.250	0.000	0.000	0.000	0.000	0.625	0.583	0.667	0.956
							0.828						0.945						0.729									
PM		NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					WESTBOUND2					TOTAL	
		NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	ET	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L	W2U	W2L2	W2T2	W2R2		W2U2
	4:00 PM	0	0	0	0	0	10	0	17	0	0	25	432	0	2	0	0	617	10	1	0	0	0	0	16	9	1	1140
	4:15 PM	0	0	0	0	0	8	0	13	0	0	26	429	0	2	0	0	568	10	0	0	0	0	0	3	10	2	1071
	4:30 PM	0	0	0	0	0	7	0	7	0	0	15	457	0	1	0	0	574	15	0	0	0	0	0	11	3	2	1092
	4:45 PM	0	0	0	0	0	11	0	12	0	0	20	371	0	0	0	0	529	14	0	0	0	0	0	7	6	0	970
	5:00 PM	0	0	0	0	0	10	0	12	0	0	20	505	0	1	0	0	579	13	1	0	0	0	0	16	4	3	1164
	5:15 PM	0	0	0	0	0	12	0	16	0	0	25	440	0	0	0	0	534	8	0	0	0	0	0	11	4	2	1052
	5:30 PM	0	0	0	0	0	12	0	19	0	0	35	541	0	0	0	0	543	12	0	0	0	0	0	10	7	6	1185
	5:45 PM	0	0	0	0	0	16	0	18	0	0	34	444	0	6	0	0	508	18	0	0	0	0	0	10	4	2	1060
TOTAL VOLUMES:		NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	ET	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
APPROACH %'s:		0	0	0	0	0	86	0	114	0	0	200	3619	0	12	0	0	4452	100	2	0	0	0	0	84	47	18	8734
PEAK HR:		05:00 PM - 06:00 PM					43.00%	0.00%	57.00%	0.00%	0.00%	5.22%	94.47%	0.00%	0.31%	0.00%	0.00%	97.76%	2.20%	0.04%	0.00%	0.00%	0.00%	0.00%	56.38%	31.54%	12.08%	TOTAL
PEAK HR VOL:		0	0	0	0	0	50	0	65	0	0	114	1930	0	7	0	0	2164	51	1	0	0	0	0	47	19	13	4461
PEAK HR FACTOR:		0.000	0.000	0.000	0.000	0.000	0.781	0.000	0.855	0.000	0.000	0.814	0.892	0.000	0.292	0.000	0.000	0.934	0.708	0.250	0.000	0.000	0.000	0.000	0.734	0.679	0.542	0.941
							0.846						0.890						0.934									

National Data & Surveying Services Intersection Turning Movement Count

Location: NE 28th Ave & NE 163rd St/SR 826
 City: North Miami Beach
 Control:

Project ID: 19-03331-003
 Date: 5/14/2019

Total

NS/EW Streets	NE 28th Ave						NE 28th Ave						NE 163rd St/SR 826						NE 163rd St/SR 826						WESTBOUND2						TOTAL													
	NORTHBOUND						SOUTHBOUND						EASTBOUND						WESTBOUND						WESTBOUND2																			
AM	NL	NT	NR	NU	NL2	NR2	SL	ST	SR	SU	SL2	SR2	EL	ET	ER	EU	ET2	EU2	WL	WT	WR	WU	WT2	WU2	E2T	E2U	E2L2	E2T2	E2R2	E2U2	W2L	W2T	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL						
7:00 AM	0	0	0	0	0	0	0	0	6	0	0	1	1	428	0	0	0	3	0	344	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	13	0	4	801
7:15 AM	0	0	0	0	0	0	2	0	5	0	0	2	1	410	0	0	0	2	0	334	1	0	2	0	0	0	0	0	0	0	6	0	0	0	11	1	2	779						
7:30 AM	0	0	0	0	0	0	4	0	4	0	0	0	4	431	0	0	0	5	0	373	0	0	0	0	0	0	1	0	0	0	2	0	0	0	11	0	4	841						
7:45 AM	0	0	0	0	0	0	2	0	4	0	0	1	3	447	0	0	0	3	0	369	0	0	2	0	0	0	0	0	0	0	3	0	0	0	13	0	6	853						
8:00 AM	0	0	0	0	0	0	1	0	6	0	0	1	3	505	0	0	0	8	0	436	0	0	6	0	0	0	0	0	0	0	2	0	0	0	11	0	5	984						
8:15 AM	0	0	0	0	0	0	0	0	6	0	0	2	4	545	0	0	0	6	0	472	4	0	4	0	0	0	0	0	0	0	5	0	0	0	14	0	5	1067						
8:30 AM	0	0	0	0	0	0	0	0	5	0	0	0	1	487	0	0	0	4	0	411	0	0	2	0	0	0	0	0	0	0	1	0	0	0	13	0	4	928						
8:45 AM	0	0	0	0	0	0	1	0	1	0	0	2	0	495	0	0	0	4	0	424	0	0	3	0	0	0	0	0	0	0	3	0	0	0	10	1	2	946						
TOTAL VOLUMES	NL	NT	NR	NU	NL2	NR2	SL	ST	SR	SU	SL2	SR2	EL	ET	ER	EU	ET2	EU2	WL	WT	WR	WU	WT2	WU2	E2T	E2U	E2L2	E2T2	E2R2	E2U2	W2L	W2T	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL						
APPROACH %'s	0	0	0	0	0	0	17.86%	0.00%	66.07%	0.00%	16.07%	0.45%	98.63%	0.00%	0.00%	0.52%	0.00%	99.18%	0.16%	0.00%	0.66%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	15.03%	0.00%	0.00%	62.75%	1.31%	20.92%	7199								
PEAK HR VOL	0	0	0	0	0	0	2	0	18	0	0	5	8	2032	0	0	0	22	0	1743	4	0	15	0	0	0	0	0	0	0	0	11	0	0	48	1	16	3925						
PEAK HR FACTOR	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.750	0.000	0.000	0.625	0.500	0.932	0.000	0.000	0.000	0.688	0.000	0.923	0.250	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.550	0.000	0.000	0.857	0.250	0.800	0.920						

National Data & Surveying Services Intersection Turning Movement Count

Location: NE 2900 Blk & NE 163rd SU/SR 826
 City: North Miami Beach
 Control:

Project ID: 19-03331-004
 Date: 5/14/2019

Total

NS/EW Streets	NE 2900 Blk						NE 2900 Blk						NE 163rd SU/SR 826						NE 163rd SU/SR 826						WESTBOUND2						TOTAL							
	NORTHBOUND						SOUTHBOUND						EASTBOUND						WESTBOUND						WESTBOUND2													
AM	NL	NT	NR	NU	NL2	NR2	SL	ST	SR	SU	SL2	SR2	EL	ET	ER	EU	ET2	EU2	WL	WT	WR	WU	WT2	WU2	E2T	E2U	E2L2	E2T2	E2R2	E2U2	W2L	W2T	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	451	0	0	0	4	0	354	0	0	1	0	0	0	0	0	0	0	0	1	0	0	3	0	0	815
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	4	415	0	0	0	3	0	342	0	0	2	0	0	0	0	0	0	0	0	6	0	0	0	0	0	774
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	418	0	0	0	8	0	367	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	797
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	466	0	0	0	2	0	376	0	0	1	0	0	0	0	0	0	0	0	4	0	0	0	0	0	850
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	492	0	0	0	2	0	437	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	2	937
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	550	0	0	0	7	0	480	0	0	5	0	0	0	0	0	0	0	0	4	0	0	1	0	1	1049
8:30 AM	0	0	0	0	0	0	0	0	2	0	0	0	3	464	0	0	0	5	0	433	2	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	1	913
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	1	12	494	0	0	0	3	0	405	1	0	1	0	0	0	0	0	0	0	0	2	0	0	1	0	3	924
TOTAL VOLUMES	NL	NT	NR	NU	NL2	NR2	SL	ST	SR	SU	SL2	SR2	EL	ET	ER	EU	ET2	EU2	WL	WT	WR	WU	WT2	WU2	E2T	E2U	E2L2	E2T2	E2R2	E2U2	W2L	W2T	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
APPROACH %'s	0	0	0	0	0	0	14.29%	0.00%	28.57%	0.00%	0.00%	57.14%	0.38%	98.53%	0.00%	0.00%	0.89%	0.00%	99.50%	0.09%	0.00%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	58.33%	0.00%	0.00%	22.22%	0.00%	19.44%	7059	
PEAK HR VOL	0	0	0	0	0	0	1	0	2	0	0	1	17	2000	0	0	0	17	0	1755	3	0	9	0	0	0	0	0	0	0	0	8	0	0	3	0	7	3823
PEAK HR FACTOR	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.250	0.354	0.909	0.000	0.000	0.000	0.607	0.000	0.914	0.375	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.750	0.000	0.583	0.911

NS/EW Streets	NE 2900 Blk						NE 2900 Blk						NE 163rd SU/SR 826						NE 163rd SU/SR 826						WESTBOUND2						TOTAL							
	NORTHBOUND						SOUTHBOUND						EASTBOUND						WESTBOUND						WESTBOUND2													
PM	NL	NT	NR	NU	NL2	NR2	SL	ST	SR	SU	SL2	SR2	EL	ET	ER	EU	ET2	EU2	WL	WT	WR	WU	WT2	WU2	E2T	E2U	E2L2	E2T2	E2R2	E2U2	W2L	W2T	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
4:00 PM	0	0	0	0	0	0	7	0	5	0	0	2	15	429	0	0	0	9	0	531	2	0	6	0	0	0	0	0	0	0	0	2	0	0	17	0	4	1029
4:15 PM	0	0	0	0	0	0	8	0	7	0	0	1	15	417	0	0	0	7	0	570	4	0	6	0	0	0	0	0	0	0	0	2	0	0	14	0	11	1062
4:30 PM	0	0	0	0	0	0	11	0	12	0	0	1	17	446	0	0	0	11	0	563	2	0	1	0	0	0	0	0	0	0	0	7	0	0	16	1	9	1097
4:45 PM	0	0	0	0	0	0	5	0	7	0	0	0	13	387	0	0	0	9	0	499	4	0	4	0	0	0	0	0	0	0	0	6	0	0	19	0	3	956
5:00 PM	0	0	0	0	0	0	4	0	7	0	0	0	20	465	0	0	0	9	0	595	4	0	5	0	0	0	0	0	0	0	0	5	0	0	20	0	9	1143
5:15 PM	0	0	0	0	0	0	5	0	9	0	0	1	7	422	0	0	0	11	0	526	5	1	3	0	0	0	0	0	0	0	0	6	0	0	20	0	6	1022
5:30 PM	0	0	0	0	0	0	1	0	8	0	0	2	16	537	0	1	0	11	0	512	7	0	4	0	0	0	0	0	0	0	0	3	0	0	14	0	8	1124
5:45 PM	0	0	0	0	0	0	4	0	9	0	0	1	11	448	0	0	0	15	0	501	3	0	8	0	0	0	0	0	0	0	0	7	0	0	20	2	5	1034
TOTAL VOLUMES	NL	NT	NR	NU	NL2	NR2	SL	ST	SR	SU	SL2	SR2	EL	ET	ER	EU	ET2	EU2	WL	WT	WR	WU	WT2	WU2	E2T	E2U	E2L2	E2T2	E2R2	E2U2	W2L	W2T	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
APPROACH %'s	0	0	0	0	0	0	38.46%	0.00%	54.70%	0.00%	0.00%	6.84%	3.04%	94.74%	0.00%	0.03%	0.00%	2.19%	0.00%	98.42%	0.71%	0.02%	0.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.10%	0.00%	0.00%	59.32%	1.27%	23.31%	8467
PEAK HR VOL	0	0	0	0	0	0	14	0	33	0	0	4	54	1872	0	1	0	46	0	2134	19	1	20	0	0	0	0	0	0	0	0	21	0	0	74	2	28	4323
PEAK HR FACTOR	0.000	0.000	0.000	0.000	0.000	0.000	0.700	0.000	0.917	0.000	0.000	0.500	0.675	0.872	0.000	0.250	0.000	0.767	0.000	0.897	0.679	0.250	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.925	0.250	0.778	0.946

National Data & Surveying Services Intersection Turning Movement Count

Location: NE 34th Ave & NE 163rd St/SR 826
 City: North Miami Beach
 Control:

Project ID: 19-03331-005
 Date: 5/14/2019

Total

NS/EW Streets	NE 34th Ave						NE 34th Ave						NE 163rd St/SR 826						NE 163rd St/SR 826						WESTBOUND2						TOTAL														
	NORTHBOUND			SOUTHBOUND			NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND			WESTBOUND2																				
AM	NL	NT	NR	NU	NL2	NR2	SL	ST	SR	SU	SL2	SR2	EL	ET	ER	EU	ET2	EU2	WL	WT	WR	WU	WT2	WU2	E2T	E2U	E2L2	E2T2	E2R2	E2U2	W2L	W2T	W2U	W2L2	W2T2	W2R2	W2U2								
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	438	0	0	0	4	0	334	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	787
7:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	3	416	1	0	0	1	1	335	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	769	
7:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	2	411	2	0	0	1	1	367	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	9	0	0	798	
7:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	3	449	2	0	0	3	0	357	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	0	2	826	
8:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	9	492	4	0	0	1	0	447	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	7	1	1	969	
8:15 AM	2	0	2	0	0	0	0	0	0	0	0	0	9	524	6	0	0	1	1	461	6	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	7	3	0	1028	
8:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	11	440	2	0	0	2	1	463	5	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1	1	942	
8:45 AM	2	0	1	0	0	0	0	0	0	0	0	0	16	486	4	0	0	2	1	391	4	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3	2	2	920	
TOTAL VOLUMES	NL	NT	NR	NU	NL2	NR2	SL	ST	SR	SU	SL2	SR2	EL	ET	ER	EU	ET2	EU2	WL	WT	WR	WU	WT2	WU2	E2T	E2U	E2L2	E2T2	E2R2	E2U2	W2L	W2T	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL							
APPROACH %'s	46.15%	0.00%	53.85%	0.00%	0.00%	0.00%	0	0	0	0	0	0	56	3656	21	0	0	15	5	3155	17	19	10	0	0	0	0	0	0	0	0	11	0	0	47	7	7	7039							
PEAK HR VOL	5	0	4	0	0	0	0	0	0	0	0	0	45	1942	16	0	0	6	3	1762	17	12	8	0	0	0	0	0	0	0	0	5	0	0	23	7	4	3859							
PEAK HR FACTOR	0.625	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.703	0.927	0.667	0.000	0.000	0.750	0.750	0.951	0.708	0.500	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.821	0.583	0.500	0.938						
	0.563						0.930						0.942						0.886																										
PM	NORTHBOUND			SOUTHBOUND			NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND			WESTBOUND2			TOTAL																	
4:00 PM	9	0	2	0	0	0	0	0	0	0	0	0	4	425	2	1	0	2	5	484	0	5	5	0	0	0	0		0	0	0	0	0	0	0	0	0	0	1	0	0	7	0	3	955
4:15 PM	1	0	2	0	0	0	0	0	0	0	0	0	1	427	3	1	0	3	0	576	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	9	0	1	1037	
4:30 PM	6	0	2	0	0	0	0	0	0	0	0	0	0	453	5	0	0	2	3	539	1	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	11	0	2	1038	
4:45 PM	3	0	1	0	0	0	0	0	0	0	0	0	2	391	4	2	0	2	2	502	0	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	9	0	3	936	
5:00 PM	7	0	2	0	1	0	0	0	0	0	0	0	0	472	4	0	0	5	3	578	0	9	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	10	0	4	1109	
5:15 PM	6	0	0	0	0	0	0	0	0	0	0	0	0	414	2	3	0	4	1	518	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	12	0	4	971	
5:30 PM	5	0	0	0	0	0	0	0	0	0	0	0	2	536	7	4	0	2	4	532	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	13	1	3	1122	
5:45 PM	10	0	4	0	0	0	0	0	0	0	0	0	2	455	2	1	0	3	0	483	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	11	0	6	991	
TOTAL VOLUMES	NL	NT	NR	NU	NL2	NR2	SL	ST	SR	SU	SL2	SR2	EL	ET	ER	EU	ET2	EU2	WL	WT	WR	WU	WT2	WU2	E2T	E2U	E2L2	E2T2	E2R2	E2U2	W2L	W2T	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL							
APPROACH %'s	77.05%	0.00%	21.31%	0.00%	1.64%	0.00%	0	0	0	0	0	0	11	3573	29	12	0	23	18	4212	1	44	37	0	0	0	0	0	0	0	0	29	0	0	82	1	26	8159							
PEAK HR VOL	28	0	6	0	1	0	0	0	0	0	0	0	4	1877	15	8	0	14	8	2111	0	21	21	0	0	0	0	0	0	0	0	15	0	0	46	1	17	4193							
PEAK HR FACTOR	0.700	0.000	0.375	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.875	0.536	0.500	0.000	0.700	0.500	0.913	0.000	0.583	0.525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.885	0.250	0.708	0.934						
	0.625						0.870						0.900						0.898																										

National Data & Surveying Services Intersection Turning Movement Count

Location: NE 35th Ave & NE 163rd St/SR 826
 City: North Miami Beach
 Control:

Project ID: 19-03331-006
 Date: 5/14/2019

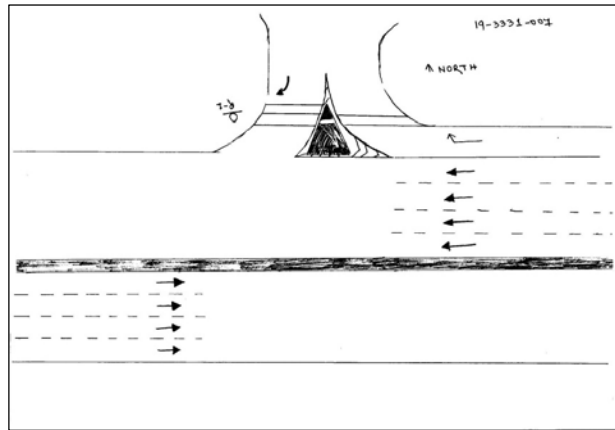
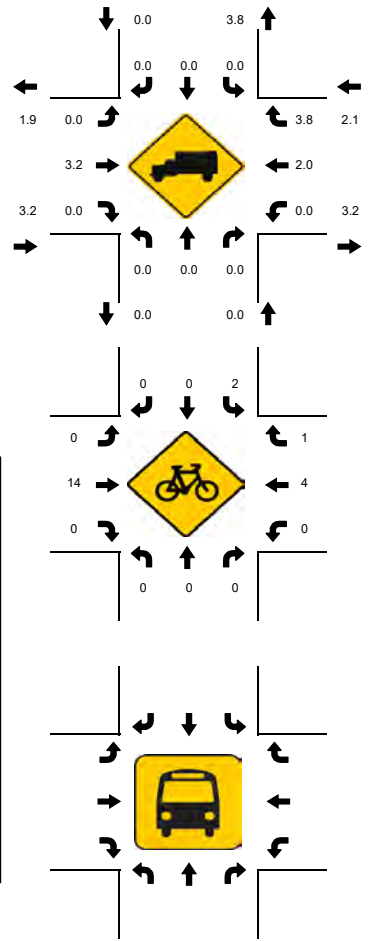
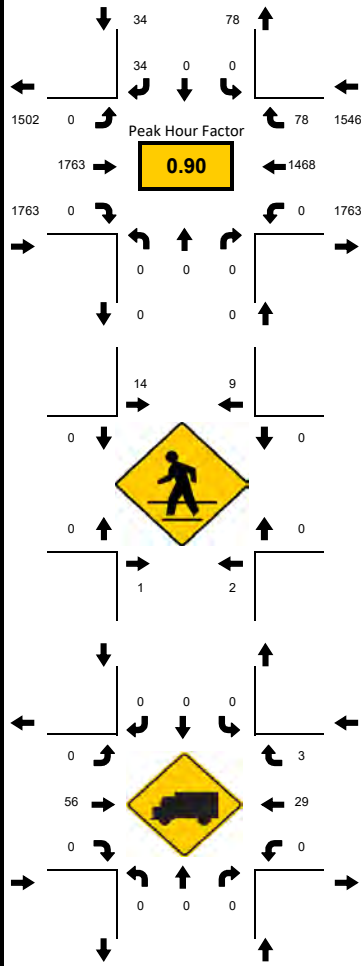
Total

NS/EW Streets:	NE 35th Ave					NE 35th Ave					NE 163rd St/SR 826					NE 163rd St/SR 826															
	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	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	SR2	EL	ET	ER	EU	EU2	WL	WT	WR	WU	WT2	E2U	E2L2	E2T2	E2R2	E2U2	TOTAL					
7:00 AM	0	0	0	0	0	20	0	78	0	1	26	393	0	0	0	0	267	8	0	0	0	0	0	0	0	0	0	0	0	0	793
7:15 AM	0	0	0	0	0	30	0	80	0	2	52	382	0	0	1	0	257	21	0	4	0	0	0	0	0	0	0	0	0	0	829
7:30 AM	0	0	0	0	0	32	0	95	0	4	30	394	0	0	0	0	276	12	0	0	0	0	0	0	0	0	0	0	0	0	843
7:45 AM	0	0	0	0	0	45	0	95	0	2	48	399	0	0	2	0	273	14	0	4	0	0	0	0	0	0	0	0	0	0	882
8:00 AM	0	0	0	0	0	42	0	116	0	4	76	400	0	0	2	0	330	21	0	2	0	0	0	0	0	0	0	0	0	0	993
8:15 AM	0	0	0	0	0	41	0	115	1	0	75	463	0	0	0	0	360	31	0	8	0	0	0	0	0	0	0	0	0	0	1094
8:30 AM	0	0	0	0	0	32	0	109	0	6	87	369	0	0	2	0	364	27	0	10	0	0	0	0	0	0	0	0	0	0	1006
8:45 AM	0	0	0	0	0	33	0	84	0	1	95	383	0	0	8	0	320	22	0	9	0	0	0	0	0	0	0	0	0	0	955
TOTAL VOLUMES:	NL	NT	NR	NU	NL2	SL	ST	SR	SU	SR2	EL	ET	ER	EU	EU2	WL	WT	WR	WU	WT2	E2U	E2L2	E2T2	E2R2	E2U2	TOTAL					
APPROACH %'s:	0	0	0	0	0	275	0	772	1	20	489	3183	0	0	15	0	2447	156	0	37	0	0	0	0	0	7395					
PEAK HR:	08:00 AM - 09:00 AM																														TOTAL
PEAK HR VOL:	0	0	0	0	0	148	0	424	1	11	333	1615	0	0	12	0	1374	101	0	29	0	0	0	0	0	4048					
PEAK HR FACTOR:	0.000	0.000	0.000	0.000	0.000	0.881	0.000	0.914	0.250	0.458	0.876	0.872	0.000	0.000	0.375	0.000	0.944	0.815	0.000	0.725	0.000	0.000	0.000	0.000	0.000	0.925					
								0.901					0.911					0.938													
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	SR2	EL	ET	ER	EU	EU2	WL	WT	WR	WU	WT2	E2U	E2L2	E2T2	E2R2	E2U2	TOTAL					
4:00 PM	0	0	0	0	0	44	0	56	0	1	135	322	0	0	0	0	476	31	0	1	0	0	0	0	0	1066					
4:15 PM	0	0	0	0	0	47	0	74	2	2	104	306	0	0	1	0	492	23	0	1	0	0	0	0	0	1052					
4:30 PM	0	0	0	0	0	48	0	67	0	4	101	340	0	0	2	0	498	18	0	4	0	0	0	0	0	1082					
4:45 PM	0	0	0	0	0	50	0	56	1	5	116	330	0	0	3	0	460	33	1	5	0	0	0	0	0	1060					
5:00 PM	0	0	0	0	0	56	0	78	1	3	97	355	0	0	0	0	510	35	0	2	0	0	0	0	0	1137					
5:15 PM	0	0	0	0	0	52	0	60	0	1	130	317	0	0	2	0	463	36	0	4	0	0	0	0	0	1065					
5:30 PM	0	0	0	0	0	53	0	78	0	3	144	401	0	0	0	0	455	29	0	7	0	0	0	0	0	1170					
5:45 PM	0	0	0	0	0	50	0	67	0	0	126	348	0	0	0	0	433	35	1	4	0	0	0	0	0	1064					
TOTAL VOLUMES:	NL	NT	NR	NU	NL2	SL	ST	SR	SU	SR2	EL	ET	ER	EU	EU2	WL	WT	WR	WU	WT2	E2U	E2L2	E2T2	E2R2	E2U2	TOTAL					
APPROACH %'s:	0	0	0	0	0	400	0	536	4	19	953	2719	0	0	8	0	3787	240	2	28	0	0	0	0	0	8696					
PEAK HR:	05:00 PM - 06:00 PM																														TOTAL
PEAK HR VOL:	0	0	0	0	0	211	0	283	1	7	497	1421	0	0	2	0	1861	135	1	17	0	0	0	0	0	4436					
PEAK HR FACTOR:	0.000	0.000	0.000	0.000	0.000	0.942	0.000	0.907	0.250	0.583	0.863	0.886	0.000	0.000	0.250	0.000	0.912	0.938	0.250	0.607	0.000	0.000	0.000	0.000	0.000	0.948					
								0.909					0.881					0.920													

LOCATION: Intracoastal Mall Dwy & NE 163rd St/SR 826
 CITY/STATE: North Miami Beach, FL

PROJECT ID: 19-03331-007
 DATE: 05/14/2019

Peak-Hour: 08:00 AM - 09:00 AM
 Peak 15-Minute: 08:15 AM - 08:30 AM

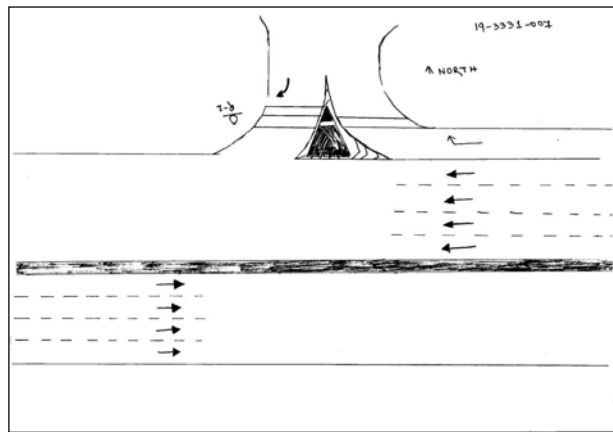
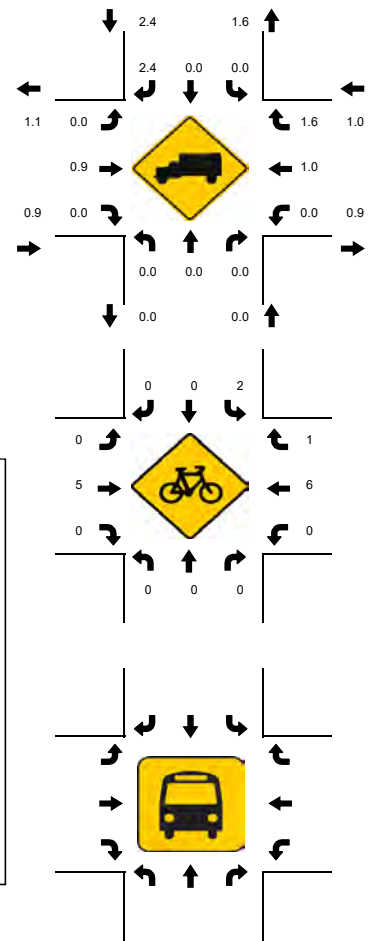
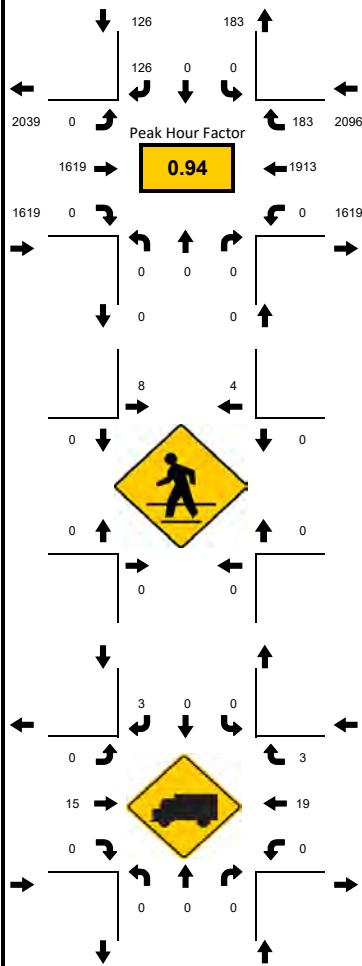


15-Min Count Period Beginning At	Intracoastal Mall Dwy Northbound					Intracoastal Mall Dwy Southbound					NE 163rd St/SR 826 Eastbound					NE 163rd St/SR 826 Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	0	0	0	0	0	0	0	2	0	0	0	414	0	0	0	0	274	5	0	0	695	2862
07:15 AM	0	0	0	0	0	0	0	3	0	0	0	408	0	0	0	0	280	6	0	0	697	2973
07:30 AM	0	0	0	0	0	0	0	2	0	0	0	425	0	0	0	0	284	5	0	0	716	3208
07:45 AM	0	0	0	0	0	0	0	3	0	0	0	450	0	0	0	0	291	10	0	0	754	3291
08:00 AM	0	0	0	0	0	0	0	7	0	0	0	434	0	0	0	0	351	14	0	0	806	3343
08:15 AM	0	0	0	0	0	0	0	5	0	0	0	512	0	0	0	0	392	23	0	0	932	2537
08:30 AM	0	0	0	0	0	0	0	12	0	0	0	389	0	0	0	0	383	15	0	0	799	1605
08:45 AM	0	0	0	0	0	0	0	10	0	0	0	428	0	0	0	0	342	26	0	0	806	806
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	0	0	0	0	0	0	0	48	0	0	0	2048	0	0	0	0	1568	104	0	0	3768	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	108	0	0	0	0	40	4	0	0	152	
Pedestrians		12					28					0					0				40	
Bicycles	0	0	0	0	0	4	0	0	0	0	0	20	0	0	0	0	8	4	0	0	36	
Railroad																						
Stopped Buses																						

LOCATION: Intracoastal Mall Dwy & NE 163rd St/SR 826
 CITY/STATE: North Miami Beach, FL

PROJECT ID: 19-03331-007
 DATE: 05/14/2019

Peak-Hour: 04:45 PM - 05:45 PM
 Peak 15-Minute: 05:00 PM - 05:15 PM

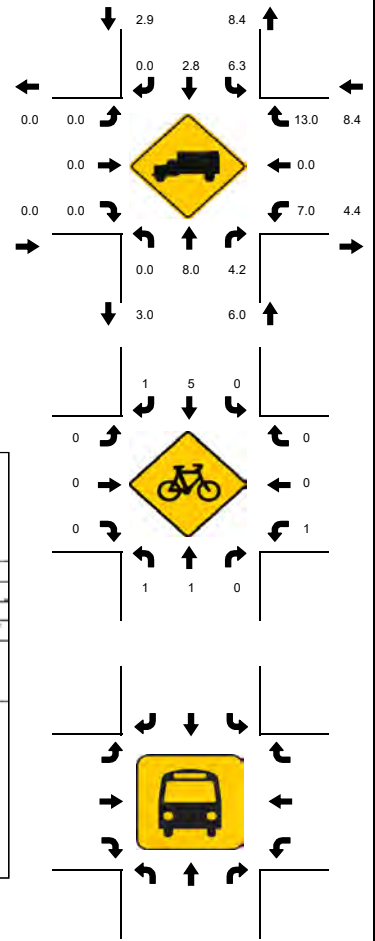
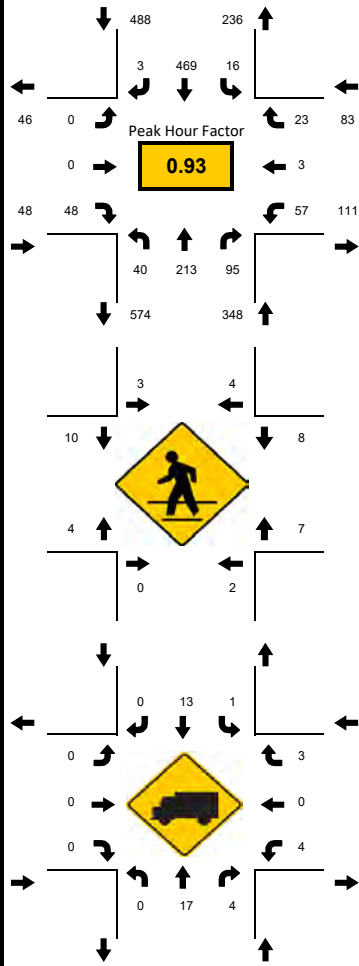


15-Min Count Period Beginning At	Intracoastal Mall Dwy Northbound					Intracoastal Mall Dwy Southbound					NE 163rd St/SR 826 Eastbound					NE 163rd St/SR 826 Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	0	0	0	0	0	0	0	29	0	0	0	374	0	0	0	0	486	38	0	0	927	3691
04:15 PM	0	0	0	0	0	0	0	30	0	0	0	352	0	0	0	0	479	32	0	0	893	3787
04:30 PM	0	0	0	0	0	0	0	16	0	0	0	381	0	0	0	0	509	46	0	0	952	3789
04:45 PM	0	0	0	0	0	0	0	24	0	0	0	384	0	0	0	0	468	43	0	0	919	3841
05:00 PM	0	0	0	0	0	0	0	34	0	0	0	416	0	0	0	0	524	49	0	0	1023	3840
05:15 PM	0	0	0	0	0	0	0	32	0	0	0	360	0	0	0	0	461	42	0	0	895	2817
05:30 PM	0	0	0	0	0	0	0	36	0	0	0	459	0	0	0	0	460	49	0	0	1004	1922
05:45 PM	0	0	0	0	0	0	0	27	0	0	0	401	0	0	0	0	438	52	0	0	918	918
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	0	0	0	0	0	0	0	144	0	0	0	1836	0	0	0	0	2096	196	0	0	4272	
Heavy Trucks	0	0	0	0	0	0	0	4	0	0	0	20	0	0	0	0	36	4	0	0	64	
Pedestrians	0	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	28	
Bicycles	0	0	0	0	0	4	0	0	0	0	0	8	0	0	0	0	8	4	0	0	24	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

LOCATION: NE 35th Ave & NE 164th St
 CITY/STATE: North Miami Beach, FL

PROJECT ID: 19-03331-008
 DATE: 05/14/2019

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

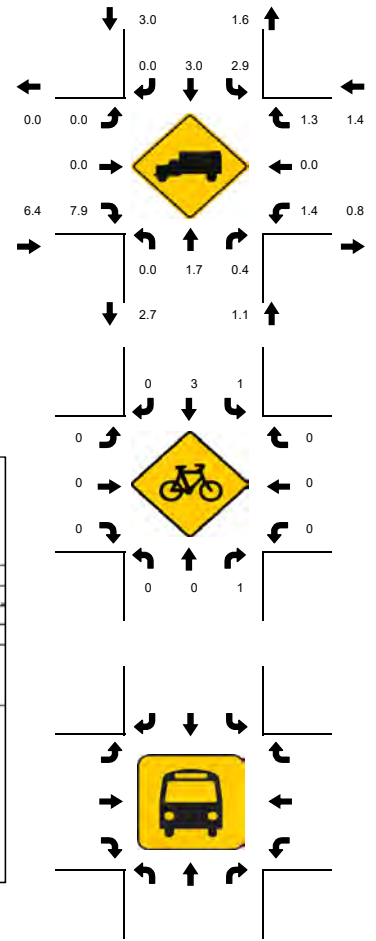
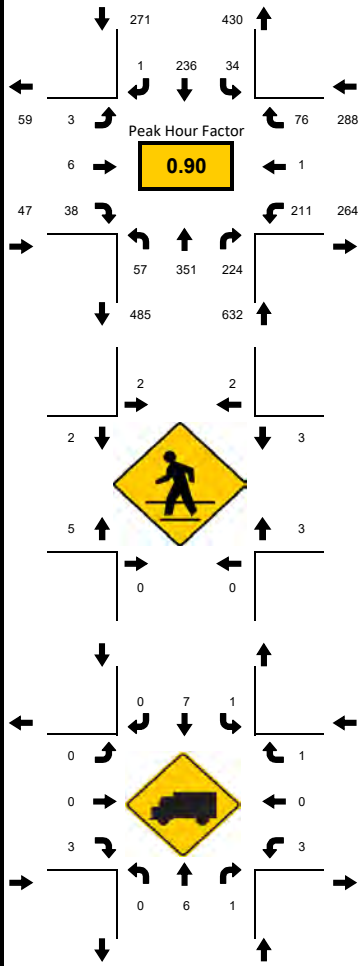


15-Min Count Period Beginning At	NE 35th Ave Northbound				NE 35th Ave Southbound				NE 164th St Eastbound				NE 164th St Westbound				Total	Hourly Total				
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left			Thru	Rgt	U	R*
07:00 AM	2	23	8	0	0	4	90	0	0	0	0	1	9	0	0	2	0	1	0	0	140	713
07:15 AM	5	47	7	0	0	2	103	0	0	0	0	0	9	0	0	6	0	3	0	0	182	832
07:30 AM	3	26	5	0	0	4	114	2	0	0	0	1	11	0	0	8	2	5	0	0	181	895
07:45 AM	7	37	11	0	0	2	121	1	0	0	0	0	21	0	0	8	1	1	0	0	210	936
08:00 AM	7	57	19	1	0	1	148	1	0	0	0	0	13	0	0	12	0	0	0	0	259	967
08:15 AM	12	52	20	0	0	2	117	2	0	0	0	0	14	0	0	13	2	9	2	0	245	708
08:30 AM	10	44	29	0	0	5	106	0	1	0	0	0	11	0	0	12	0	3	1	0	222	463
08:45 AM	10	60	27	0	0	7	98	0	0	0	0	0	10	0	0	17	1	11	0	0	241	241
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total					
All Vehicles	48	240	116	4	0	28	592	8	4	0	0	0	56	0	0	68	8	44	8	0	1224	
Heavy Trucks	0	28	8	0	0	4	20	0	0	0	0	0	0	0	0	8	0	8	0	0	76	
Pedestrians		4					12					20					28				64	
Bicycles	4	4	0			0	12	4			0	0	0			4	0	0			28	
Railroad																						
Stopped Buses																						

LOCATION: NE 35th Ave & NE 164th St
 CITY/STATE: North Miami Beach, FL

PROJECT ID: 19-03331-008
 DATE: 05/14/2019

Peak-Hour: 05:00 PM - 06:00 PM
 Peak 15-Minute: 05:30 PM - 05:45 PM

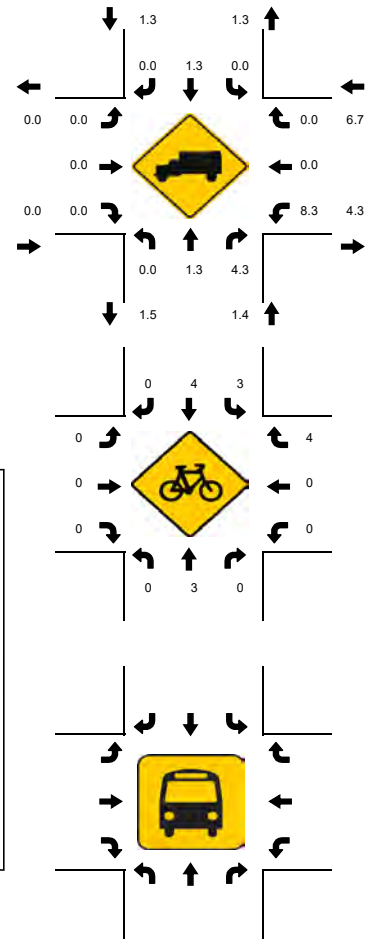
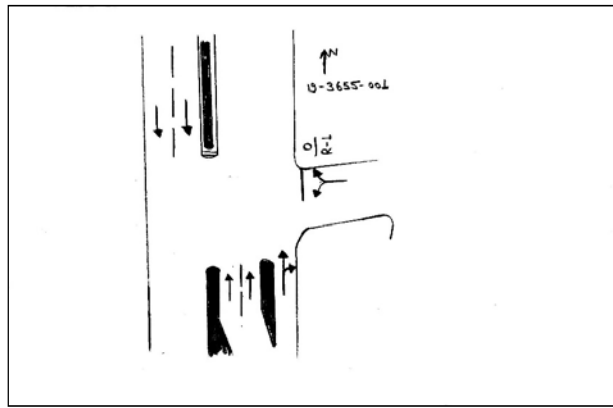
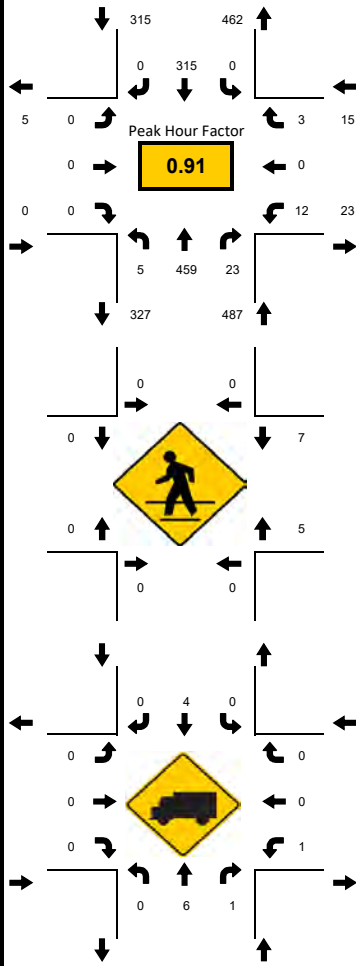


15-Min Count Period Beginning At	NE 35th Ave Northbound					NE 35th Ave Southbound					NE 164th St Eastbound					NE 164th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	10	102	43	0		9	56	1	0		0	0	13	0		32	1	13	0		280	1088
04:15 PM	6	69	47	1		4	66	2	0		1	1	7	0		40	0	22	0		266	1087
04:30 PM	6	74	37	0		6	65	0	1		0	0	7	0		48	1	14	2		261	1123
04:45 PM	8	76	57	0		9	51	0	0		0	0	8	0		57	1	14	0		281	1206
05:00 PM	9	78	39	0		6	60	0	0		0	1	10	0		56	0	19	1		279	1238
05:15 PM	17	87	60	4		3	63	1	0		0	1	7	0		41	0	17	1		302	959
05:30 PM	15	96	63	1		6	59	0	1		3	3	15	0		57	1	23	1		344	657
05:45 PM	11	90	62	0		17	54	0	1		0	1	6	0		54	0	17	0		313	313
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	68	384	252	16		68	252	4	4		12	12	60	0		228	4	92	4		1460	
Heavy Trucks	0	8	4			4	8	0			0	0	8			4	0	4			40	
Pedestrians	0						8					12					8				28	
Bicycles	0	0	4			4	8	0			0	0	0			0	0	0			16	
Railroad																						
Stopped Buses																						

LOCATION: NE 35th Ave & NE 165th St
 CITY/STATE: North Miami Beach, FL

PROJECT ID: 19-03655-001
 DATE: 10/10/2019

Peak-Hour: 05:00 PM - 06:00 PM
 Peak 15-Minute: 05:30 PM - 05:45 PM



15-Min Count Period Beginning At	NE 35th Ave Northbound				NE 35th Ave Southbound				NE 165th St Eastbound				NE 165th 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*
04:00 PM	0	99	0	0	0	0	82	0	0	0	0	0	0	0	0	2	0	0	0	0	183	683
04:15 PM	0	100	4	1	0	0	73	0	0	0	0	0	0	0	0	1	0	1	0	0	180	702
04:30 PM	0	88	1	0	0	0	77	0	0	0	0	0	0	0	0	2	0	1	0	0	169	713
04:45 PM	0	89	4	3	0	0	53	0	0	0	0	0	0	0	0	2	0	0	0	0	151	769
05:00 PM	0	115	6	1	0	0	75	0	0	0	0	0	0	0	0	5	0	0	0	0	202	817
05:15 PM	1	99	2	0	0	0	84	0	0	0	0	0	0	0	0	5	0	0	0	0	191	615
05:30 PM	0	121	10	1	0	0	90	0	0	0	0	0	0	0	0	2	0	1	0	0	225	424
05:45 PM	1	124	5	1	0	0	66	0	0	0	0	0	0	0	0	0	0	2	0	0	199	199
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total					
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left			Thru	Rgt	U	R*
All Vehicles	4	496	40	4	0	0	360	0	0	0	0	0	0	0	0	20	0	8	0	0	932	
Heavy Trucks	0	8	4	0	0	0	8	0	0	0	0	0	0	0	0	4	0	0	0	0	24	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	20	
Bicycles	0	4	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	8	0	0	28	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

24-Hour Continuous Counts

VOLUME

NE 163rd St E/O NW 35th Ave

Day: Thursday
Date: 5/30/2019

City: North Miami Beach
Project #: FL19_3386_001

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	26,695	26,202	52,897					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			100	134	234	12:00			355	390	745			
00:15			73	124	197	12:15			352	372	724			
00:30			60	97	157	12:30			326	371	697			
00:45			68	301	63	418	12:45		337	1370	396	1529	733	2899
01:00			50	56	106	13:00			400	363	763			
01:15			60	50	110	13:15			404	441	845			
01:30			37	39	76	13:30			395	388	783			
01:45			32	179	44	189	13:45		285	1484	378	1570	663	3054
02:00			25	20	45	14:00			423	408	831			
02:15			22	24	46	14:15			343	378	721			
02:30			34	31	65	14:30			511	401	912			
02:45			13	94	25	100	14:45		446	1723	425	1612	871	3335
03:00			14	21	35	15:00			364	467	831			
03:15			12	17	29	15:15			362	518	880			
03:30			15	20	35	15:30			463	561	1024			
03:45			36	77	26	84	15:45		334	1523	533	2079	867	3602
04:00			28	29	57	16:00			440	558	998			
04:15			25	30	55	16:15			390	562	952			
04:30			35	22	57	16:30			366	587	953			
04:45			43	131	20	101	16:45		401	1597	488	2195	889	3792
05:00			52	31	83	17:00			379	503	882			
05:15			62	47	109	17:15			372	514	886			
05:30			105	61	166	17:30			403	569	972			
05:45			149	368	77	216	17:45		413	1567	471	2057	884	3624
06:00			212	88	300	18:00			386	500	886			
06:15			347	101	448	18:15			426	453	879			
06:30			349	159	508	18:30			372	405	777			
06:45			370	1278	198	546	18:45		443	1627	353	1711	796	3338
07:00			442	239	681	19:00			326	378	704			
07:15			381	246	627	19:15			350	385	735			
07:30			466	279	745	19:30			311	325	636			
07:45			443	1732	317	1081	19:45		354	1341	349	1437	703	2778
08:00			449	334	783	20:00			337	336	673			
08:15			521	360	881	20:15			295	333	628			
08:30			467	396	863	20:30			290	232	522			
08:45			488	1925	371	1461	20:45		268	1190	282	1183	550	2373
09:00			437	349	786	21:00			329	255	584			
09:15			394	362	756	21:15			290	242	532			
09:30			453	316	769	21:30			236	213	449			
09:45			365	1649	346	1373	21:45		219	1074	246	956	465	2030
10:00			424	323	747	22:00			238	204	442			
10:15			345	332	677	22:15			229	179	408			
10:30			406	344	750	22:30			223	198	421			
10:45			373	1548	339	1338	22:45		211	901	180	761	391	1662
11:00			322	335	657	23:00			183	255	438			
11:15			340	428	768	23:15			151	188	339			
11:30			346	351	697	23:30			150	146	296			
11:45			394	1402	347	1461	23:45		130	614	155	744	285	1358
TOTALS			10684	8368	19052	TOTALS			16011	17834	33845			
SPLIT %			56.1%	43.9%	36.0%	SPLIT %			47.3%	52.7%	64.0%			

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	26,695	26,202	52,897

AM Peak Hour			08:00	11:15	08:15	PM Peak Hour			14:00	15:45	15:30
AM Pk Volume			1925	1516	3389	PM Pk Volume			1723	2240	3841
Pk Hr Factor			0.924	0.886	0.962	Pk Hr Factor			0.843	0.954	0.938
7 - 9 Volume	0	0	3657	2542	6199	4 - 6 Volume	0	0	3164	4252	7416
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	1925	1461	3386	4 - 6 Pk Volume	0	0	1597	2195	3792
Pk Hr Factor	0.000	0.000	0.924	0.922	0.961	Pk Hr Factor	0.000	0.000	0.907	0.935	0.950

Peak Season Conversion Factor Signal

2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: COUNTY
 CATEGORY: 8700 MIAMI-DADE NORTH

WEEK	DATES	SF	MOCF: 0.98 PSCF
1	01/01/2018 - 01/06/2018	1.03	1.05
2	01/07/2018 - 01/13/2018	1.03	1.05
3	01/14/2018 - 01/20/2018	1.04	1.06
4	01/21/2018 - 01/27/2018	1.02	1.04
5	01/28/2018 - 02/03/2018	1.01	1.03
* 6	02/04/2018 - 02/10/2018	0.99	1.01
* 7	02/11/2018 - 02/17/2018	0.98	1.00
* 8	02/18/2018 - 02/24/2018	0.98	1.00
* 9	02/25/2018 - 03/03/2018	0.98	1.00
*10	03/04/2018 - 03/10/2018	0.97	0.99
*11	03/11/2018 - 03/17/2018	0.97	0.99
*12	03/18/2018 - 03/24/2018	0.97	0.99
*13	03/25/2018 - 03/31/2018	0.97	0.99
*14	04/01/2018 - 04/07/2018	0.97	0.99
*15	04/08/2018 - 04/14/2018	0.97	0.99
*16	04/15/2018 - 04/21/2018	0.97	0.99
*17	04/22/2018 - 04/28/2018	0.98	1.00
*18	04/29/2018 - 05/05/2018	0.99	1.01
19	05/06/2018 - 05/12/2018	1.00	1.02
20	05/13/2018 - 05/19/2018	1.01	1.03
21	05/20/2018 - 05/26/2018	1.01	1.03
22	05/27/2018 - 06/02/2018	1.01	1.03
23	06/03/2018 - 06/09/2018	1.01	1.03
24	06/10/2018 - 06/16/2018	1.01	1.03
25	06/17/2018 - 06/23/2018	1.01	1.03
26	06/24/2018 - 06/30/2018	1.02	1.04
27	07/01/2018 - 07/07/2018	1.02	1.04
28	07/08/2018 - 07/14/2018	1.02	1.04
29	07/15/2018 - 07/21/2018	1.02	1.04
30	07/22/2018 - 07/28/2018	1.02	1.04
31	07/29/2018 - 08/04/2018	1.01	1.03
32	08/05/2018 - 08/11/2018	1.01	1.03
33	08/12/2018 - 08/18/2018	1.00	1.02
34	08/19/2018 - 08/25/2018	1.00	1.02
35	08/26/2018 - 09/01/2018	1.00	1.02
36	09/02/2018 - 09/08/2018	1.01	1.03
37	09/09/2018 - 09/15/2018	1.01	1.03
38	09/16/2018 - 09/22/2018	1.00	1.02
39	09/23/2018 - 09/29/2018	1.00	1.02
40	09/30/2018 - 10/06/2018	1.00	1.02
41	10/07/2018 - 10/13/2018	0.99	1.01
42	10/14/2018 - 10/20/2018	0.99	1.01
43	10/21/2018 - 10/27/2018	1.00	1.02
44	10/28/2018 - 11/03/2018	1.00	1.02
45	11/04/2018 - 11/10/2018	1.01	1.03
46	11/11/2018 - 11/17/2018	1.01	1.03
47	11/18/2018 - 11/24/2018	1.02	1.04
48	11/25/2018 - 12/01/2018	1.02	1.04
49	12/02/2018 - 12/08/2018	1.02	1.04
50	12/09/2018 - 12/15/2018	1.03	1.05
51	12/16/2018 - 12/22/2018	1.03	1.05
52	12/23/2018 - 12/29/2018	1.03	1.05
53	12/30/2018 - 12/31/2018	1.04	1.06

* PEAK SEASON

28-FEB-2019 15:24:23

830UPD

6_8700_PKSEASON.TXT

Signal Timing Data









TOD Schedule Report
for 2010: SR- 826&US 1

Print Date:
5/30/2019

Print Time:
3:52 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>
2010	SR- 826&US 1	DOW-5	TOD	[11] PM PEAK	170	77	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	EBL	WBT	SBL	NBT	WBL	EBT
25	43	26	47	25	43	26	47
							

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	3	3	3	24	24	24	27	27	27	4.8	2
2 SBT	4	4	4	38	38	38	7	7	7	1	1	1	50	50	50	50	50	50	4.8	2.4
3 EBL	0	0	0	0	0	0	5	5	5	3	3	3	25	25	25	34	34	34	4.8	2
4 WBT	4	4	4	47	47	47	7	7	7	2.5	2.5	2.5	55	55	55	55	55	55	4.8	2.9
5 SBL	0	0	0	0	0	0	5	5	5	3	3	3	24	24	24	27	27	27	4.8	2
6 NBT	4	4	4	38	38	38	7	7	7	1	1	1	50	50	50	50	50	50	4.8	2.4
7 WBL	0	0	0	0	0	0	5	5	5	3	3	3	25	25	25	34	34	34	4.8	2
8 EBT	4	4	4	47	47	47	7	7	7	2.5	2.5	2.5	55	55	55	55	55	55	4.8	2.9

Last In Service Date: unknown

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

TOD Schedule Report
for 2010: SR- 826&US 1

Print Date:
5/30/2019

Print Time:
3:52 PM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 NBL	2 SBT	3 EBL	4 WBT	5 SBL	6 NBT	7 WBL	8 EBT		
	23	140	14	48	14	35	14	48	14	35	0	60
0100	22	145	14	53	14	35	14	53	14	35	0	60
0500	7	150	19	48	19	35	19	48	19	35	0	60
0530	4	170	22	44	26	49	22	44	26	49	0	77
1000	3	170	25	43	26	47	25	43	26	47	0	77
1500	11	170	25	43	26	47	25	43	26	47	0	77
2100	6	150	19	48	19	35	19	48	19	35	0	60
2300	23	140	14	48	14	35	14	48	14	35	0	60
	1	140	13	57	14	27	13	57	14	27	0	56
	2	125	15	32	17	32	15	32	17	32	0	107
	5	130	14	32	17	38	14	32	17	38	0	18
	8	105	10	32	13	21	10	32	13	21	0	60
	9	150	24	33	25	39	24	33	25	39	0	71
	10	125	16	32	17	31	16	32	17	31	0	107
	12	115	12	32	14	28	12	32	14	28	0	79
	13	130	14	32	20	35	14	32	20	35	0	54
	14	130	14	32	17	38	14	32	17	38	0	62
	15	150	15	45	22	39	15	45	22	39	0	81
	16	115	10	34	12	30	10	34	12	30	0	56
	25	120	13	33	12	32	14	32	19	26	0	52
	26	135	23	32	17	33	22	33	23	28	0	5
	27	160	23	42	17	48	27	38	28	38	0	34
	28	100	13	31	12	14	12	32	13	14	0	83

Local TOD Schedule		
Time	Plan	DOW
0000	23	M T W Th F
0000	23	Su S
0100	22	Su S
0100	22	M T W Th F
0500	7	M T W Th F
0530	4	M T W Th F
0600	1	Su S
1000	11	Su S
1000	3	M T W Th F
1500	11	M T W Th F
2100	6	M T W Th F
2100	6	Su S
2300	23	M T W Th F

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

Local Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	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 2010: SR- 826&US 1

Print Date:
5/30/2019

Print Time:
3:52 PM

<p><i>No Calendar Defined/Enabled</i></p>
--

TOD Schedule Report
for 4710: SR- 826&NE 26 Av

Print Date:
5/22/2018

Print Time:
3:42 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>
4710	SR- 826&NE 26 Av	DOW-3		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	SBT	-	-	EBT	-	-
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>
	<u>Phase Bank</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	2	2	2	10	5	10	10	5	0	4.8	2
2 WBT	5	5	5	15	15	15	5	5	5	1	1	1	40	35	40	40	30	0	4.8	2
3 SBT	0	0	0	0	0	0	7	7	7	2.5	-2.5	-2.5	20	7	20	20	7	0	4	2
4 -	0	0	0	0	0	0	7	7	7	2.5	-2.5	-2.5	15	7	15	15	7	0	4.8	2
5 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 EBT	0	0	0	0	0	0	5	5	5	1	1	1	40	35	40	40	30	0	4.8	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: unknown

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

<u>Current TOD Schedule</u>	<u>Plan</u>	<u>Cycle</u>	<u>Green Time</u>								<u>Ring Offset</u>	<u>Offset</u>
			1 EBL	2 WBT	3 SBT	4 -	5 -	6 EBT	7 -	8 -		
	6	90	8	38	10	7	0	53	0	0	0	88
	7	130	8	76	10	9	0	91	0	0	0	13
	8	120	7	67	10	9	0	81	0	0	0	38
	9	130	7	79	8	9	0	93	0	0	0	113
	26	130	8	76	10	9	0	91	0	0	0	13

Local TOD Schedule		
<u>Time</u>	<u>Plan</u>	<u>DOW</u>
0000	Free	Su M T W Th F S
0600	6	Su S
0645	7	M T W Th F
0900	8	Su S
1000	8	M T W Th F
1530	9	M T W Th F
2000	6	Su M T W Th F S

TOD Schedule Report
for 4710: SR- 826&NE 26 Av

Print Date:
5/22/2018

Print Time:
3:42 PM

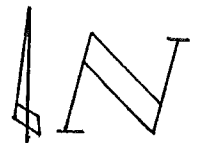
Current Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0600	TOD OUTPUTS	-----1	M T W ThF
0645	TOD OUTPUTS	-----	M T W ThF

Local Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0100	TOD OUTPUTS	-----2-	S
0600	TOD OUTPUTS	-----	Su S
0600	TOD OUTPUTS	-----1	M T W ThF
0645	TOD OUTPUTS	-----	M T W ThF

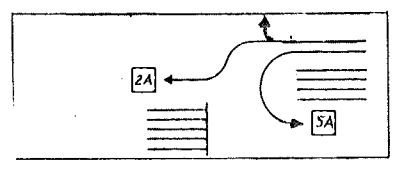
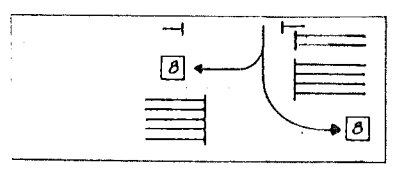
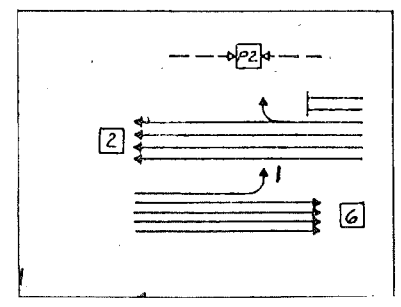
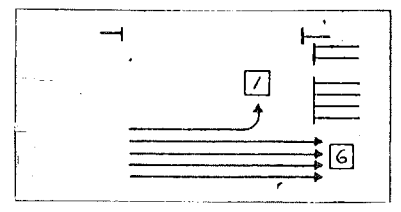
* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

SIGNAL OPERATING PLAN



		SIGNAL HEAD NUMBER							
PHASE	INT	1	2	2A	5A	6	8	PA	
<p>φ 1</p> <p>EBLT</p>	R/W	← R	R	R	R	G	R	DW	
		φ 2	Y	R	R	R	G	R	DW
	TO								
	CLEAR								
<p>φ 2</p> <p>E-W</p>	R/W	G	G	R	R	G	R	W	
	Prod CL	G	G	R	R	G	R	DW	
	TO	φ 3	Y	Y	R	R	Y	R	DW
	CLEAR	φ 4	Y	Y	R	R	Y	R	DW
<p>φ 3</p> <p>S'END</p>	R/W	R	R	R	R	R	G	DW	
	TO	φ 4	R	R	R	R	R	Y	DW
	CLEAR	φ 1	R	R	R	R	R	Y	DW
		φ 2	R	R	R	R	R	Y	DW
<p>φ 4</p> <p>W'END</p> <p>SERVICE ROAD</p>	R/W	R	R	G	G	R	R	DW	
	TO	φ 1	R	R	Y	Y	R	R	DW
	CLEAR	φ 2	R	R	Y	Y	R	R	DW
		5-SEC HEAD FOR EBLT INS INSTALLED							
		BETWEEN 8-27-92 & 3/22/94							



Drawn	Date	METROPOLITAN DADE COUNTY DEPARTMENT OF TRAFFIC AND TRANSPORTATION
CONTRACTOR	1986	ASSET NO: 34710
Check	Date	SR 826 & NE 26 AVE
F. PRATS	11/7/86	
Division Engineer	Date	
		Placed in Service
		Phasing Number
		3

TOD Schedule Report
for 4800: SR- 826&NE 28 Av


Print Date:
5/22/2018

Print Time:
3:59 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>
4800	SR- 826&NE 28 Av	DOW-3		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	SBT	WU-SERV	-	EBT	-	-
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>
	<u>Phase Bank</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	2	2	2	10	5	10	10	5	0	4.8	2
2 WBT	5	5	5	15	15	15	5	5	5	1	1	1	40	35	40	40	30	0	4.8	2
3 SBT	0	0	0	0	0	0	7	7	7	2.5	-2.5	-2.5	20	7	20	20	7	0	4	2
4 WU-	0	0	0	0	0	0	7	7	7	2.5	-2.5	-2.5	15	7	15	15	7	0	4.8	2
5 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 EBT	0	0	0	0	0	0	5	5	5	1	1	1	40	35	40	40	30	0	4.8	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: unknown

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

<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		
			EBL	WBT	SBT	WU-SE	-	EBT	-	-		
	6	90	8	38	8	9	0	53	0	0	0	28
	7	130	8	76	10	9	0	91	0	0	0	128
	8	120	8	68	8	9	0	83	0	0	0	38
	9	130	6	80	8	9	0	93	0	0	0	122
	26	130	8	78	8	9	0	93	0	0	0	128

Local TOD Schedule		
<u>Time</u>	<u>Plan</u>	<u>DOW</u>
0000	Free	Su M T W Th F S
0600	6	Su S
0645	7	M T W Th F
0900	8	Su S
1000	8	M T W Th F
1530	9	M T W Th F
2000	6	Su M T W Th F S

TOD Schedule Report
for 4800: SR- 826&NE 28 Av

Print Date:
5/22/2018

Print Time:
3:59 PM

Current Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0600	TOD OUTPUTS	-----1	M T W ThF
0645	TOD OUTPUTS	-----	M T W ThF

Local Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0100	TOD OUTPUTS	-----2-	S
0600	TOD OUTPUTS	-----	Su S
0600	TOD OUTPUTS	-----1	M T W ThF
0645	TOD OUTPUTS	-----	M T W ThF

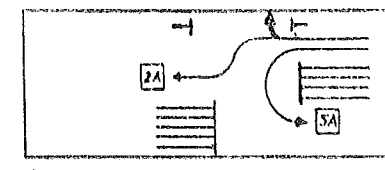
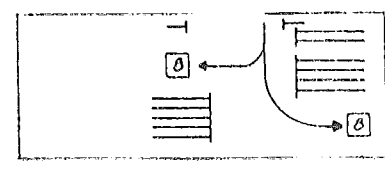
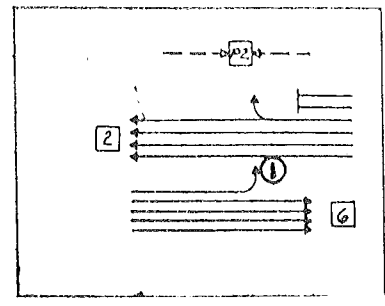
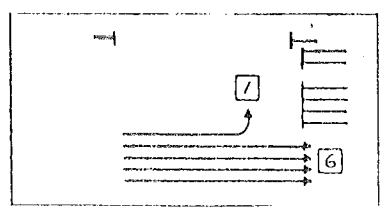
* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

SIGNAL OPERATING PLAN



		SIGNAL HEAD NUMBER									
PHASE	INT	1	2	2A	5A	6	8	PA			
<p>φ 1</p> <p>EBLT</p>	R/W	←	R	R	R	G	R	DW			
	φ 2	Y	R	R	R	G	R	DW			
	TO										
	CLEAR										
<p>φ 2</p> <p>E-W</p>	R/W	G	G	R	R	G	R	W			
	φ 3	Y	Y	R	R	Y	R	DW			
	φ 4	Y	Y	R	R	Y	R	DW			
	TO										
	CLEAR										
<p>φ 3</p> <p>S' BND</p>	R/W	R	R	R	R	R	G	DW			
	φ 4	R	R	R	R	R	Y	DW			
	φ 1	R	R	R	R	R	Y	DW			
	φ 2	R	R	R	R	R	Y	DW			
	TO										
<p>φ 4</p> <p>W' BND</p> <p>SERVICE ROAD</p>	R/W	R	R	G	G	R	R	DW			
	φ 1	R	R	Y	Y	R	R	DW			
	φ 2	R	R	Y	Y	R	R	DW			
	TO										
	CLEAR										



Drawn	Date	METROPOLITAN DADE COUNTY DEPARTMENT OF TRAFFIC AND TRANSPORTATION
CONTRACTOR	12/19/85	4800
Check	Date	ASSET NO. 39194
F. PRATS	12/19/85	SR 826 & NE 28 AVE
Division Engineer	Date	
		Placed In Service
		Phasing Number

TOD Schedule Report
for 4801: SR- 826@NE 2900 Blk

Print Date:
5/22/2018

Print Time:
3:59 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>
4801	SR- 826@NE 2900 Blk	DOW-3		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	WU-SER	SBT	-	EBT	-	-
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>
	<u>Phase Bank</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	2	2	2	10	5	10	10	5	0	4.8	2
2 WBT	0	0	0	0	0	0	15	15	15	1	1	1	40	36	40	40	30	0	4.8	2
3 WU-	0	0	0	0	0	0	7	7	7	2.5	-2.5	-2.5	15	7	15	15	7	0	4.8	2
4 SBT	0	0	0	0	0	0	7	7	7	2.5	-2.5	-2.5	20	7	20	20	7	0	4	2
5 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 EBT	0	0	0	0	0	0	15	15	15	1	1	1	40	36	40	40	30	0	4.8	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: unknown

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

<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		
			EBL	WBT	WU-S	SBT	-	EBT	-	-		
	6	90	5	42	8	8	0	54	0	0	0	35
	7	130	5	84	7	7	0	96	0	0	0	100
	8	120	5	74	7	7	0	86	0	0	0	38
	9	130	5	84	7	7	0	96	0	0	0	109
	26	130	5	84	7	7	0	96	0	0	0	112

Local TOD Schedule		
<u>Time</u>	<u>Plan</u>	<u>DOW</u>
0000	Free	Su M T W Th F S
0600	6	Su S
0645	7	M T W Th F
0900	8	Su S
1000	8	M T W Th F
1530	9	M T W Th F
2000	6	Su M T W Th F S

TOD Schedule Report
for 4801: SR- 826@NE 2900 Blk

Print Date:
5/22/2018

Print Time:
3:59 PM

Current Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0600	TOD OUTPUTS	-----1	M T W ThF
0645	TOD OUTPUTS	-----	M T W ThF

Local Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0100	TOD OUTPUTS	-----2-	S
0600	TOD OUTPUTS	-----	Su S
0600	TOD OUTPUTS	-----1	M T W ThF
0645	TOD OUTPUTS	-----	M T W ThF

* 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

<i>No Calendar Defined/Enabled</i>

SIGNAL OPERATING PLAN



	Direction	EB		WB	WB SERVICE RD		SB	Ped Heads				
Timing Phases	Head No.	1/6	6	2	5A	2A	8				Movements/Display/Actuation	
(1+6) EBLT + EBT SR 826 (ACTUATED)	Dwell	<G/G	G	R	R	R	R					
	C l e a r t o	2+6	<Y/G	G	R	R	R					
(2+6) WBT + EBT SR 826 (RECALL)	Dwell	G	G	G	R	R	R					
	C l e a r t o	(3)	Y	Y	Y	R	R	R				
		(4)	Y	Y	Y	R	R	R				
(3) WB SERVICE RD (ACTUATED)	Dwell	R	R	R	G/<G	G	R					
	C l e a r t o	(4)	R	R	R	Y	Y	R				
		(1+6)	R	R	R	Y	Y	R				
		(2+6)	R	R	R	Y	Y	R				
(4) SB NE 2900 BLK (ACTUATED)	Dwell	R	R	R	R	R	G					
	C l e a r t o	(1+6)	R	R	R	R	R	Y				
		(2+6)	R	R	R	R	R	Y				
	Dwell											
	C l e a r t o											
	Dwell											
	C l e a r t o											

Flashing Operation

FY

FY

FY

FR

FR

FR

Page 1 of 1

Miami-Dade County Public Works Department

Drawn
Erick Zapata

Date
8/14/2018

SR-826 @ NE 2900 BLK

Checked
E. A. Espinal

Date
8/14/2018

Placed in Service
Date _____ By _____

Phasing No.
4

Asset Number
4801

TOD Schedule Report
for 4802: SR- 826&NE 34 Av

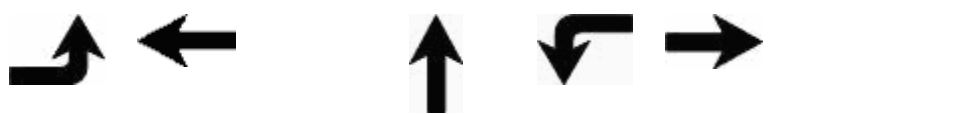
Print Date:
5/22/2018

Print Time:
3:59 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>
4802	SR- 826&NE 34 Av	DOW-3		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	-	-
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>
	<u>Phase Bank</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	2	2	2	10	7	10	10	7	10	4.8	2
2 WBT	0	0	0	0	0	0	15	15	15	1	1	1	40	36	40	40	31	40	4.8	2
3 -	0	0	0	0	0	0	7	7	7	2.5	-2.5	-2.5	15	7	15	15	7	15	4.8	2
4 NBT	5	5	5	28	28	28	7	7	7	2.5	-2.5	-2.5	20	7	20	34	7	20	4	2
5 WBL	0	0	0	0	0	0	5	5	5	2	2	2	10	7	10	10	7	10	4.8	2
6 EBT	0	0	0	0	0	0	15	15	15	1	1	1	40	36	40	40	31	40	4.8	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: unknown

Permitted Phases	
	12345678
Default	123456--
External Permit 0	-----
External Permit 1	-----
External Permit 2	-----

<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		
			EBL	WBT	-	NBT	WBL	EBT	-	-		
	6	90	6	42	6	9	6	42	0	0	0	56
	7	130	7	58	7	31	8	57	0	0	0	63
	8	120	7	48	7	31	9	46	0	0	0	83
	9	130	7	58	7	31	9	56	0	0	0	78
	26	130	7	58	7	31	8	57	0	0	0	63

Local TOD Schedule		
<u>Time</u>	<u>Plan</u>	<u>DOW</u>
0000	Free	Su M T W Th F S
0600	6	Su S
0645	7	M T W Th F
0900	8	Su S
1000	8	M T W Th F
1530	9	M T W Th F
2000	6	Su M T W Th F S

TOD Schedule Report
for 4802: SR- 826&NE 34 Av

Print Date:
5/22/2018

Print Time:
3:59 PM

Current Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0600	TOD OUTPUTS	-----1	M T W ThF
0645	TOD OUTPUTS	-----	M T W ThF

Local Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0100	TOD OUTPUTS	-----2-	S
0600	TOD OUTPUTS	-----	Su S
0600	TOD OUTPUTS	-----1	M T W ThF
0645	TOD OUTPUTS	-----	M T W ThF

* 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 OPERATING PLAN



Timing Phases	Direction	E		W		W		N		Ped Heads	Movements/Display/Actuation
		1/6	6	5/2	2	5A	2A	4			
(1+5) EWLT (Actuated)	Dwell	<G	R	<G/R	R	R	R	R	R	P8	
Clear	(1+6)	<G	R	<Y/R	R	R	R	R	R	DW	
	(2+5)	<Y	R	<G/R	R	R	R	R	R	DW	
	(2+6)	<Y	R	<Y/R	R	R	R	R	R	DW	
(1+6) EBLT (Actuated)	Dwell	<G	G	R	R	R	R	R	R	DW	
Clear	(2+6)	<Y	G	R	R	R	R	R	R	DW	
	(2+5) WBLT (Actuated)	Dwell	<R	R	<G/G	G	R	R	R	DW	
Clear	(2+6)	<R	R	<Y/G	G	R	R	R	R	DW	
	(2+6) E-W (Recall)	Dwell	<G	G	G	G	R	R	R	DW	
Clear	(3)	<Y	Y	Y	Y	R	R	R	R	DW	
	(4+8)	<Y	Y	Y	Y	R	R	R	R	DW	
	Dwell										
	Clear										
	to										
	Dwell										
	Clear										
	to										
3 WB SERVICE Rd	Dwell	<R	R	R	R	G/G	G	R	R	DW	
Clear	4	<R	R	R	R	Y	Y	R	R	DW	
	1+5	<R	R	R	R	Y	Y	R	R	DW	
	1+6	<R	R	R	R	Y	Y	R	R	DW	
	2+5	<R	R	R	R	Y	Y	R	R	DW	
	2+6	<R	R	R	R	Y	Y	R	R	DW	
(4) NB (ACTUATED)	Dwell	<R	R	R	R	R	R	G	R	W/F	
Clear	(1+5)	<R	R	R	R	R	R	Y	R	DW	
	(1+6)	<R	R	R	R	R	R	Y	R	DW	
	(2+5)	<R	R	R	R	R	R	Y	R	DW	
	(2+6)	<R	R	R	R	R	R	Y	R	DW	

Flashing Operation RR FY FY FY FR FR FR Page 1 of 1

Miami-Dade County Public Works Department

Drawn F. PRATS	Date 9/15/09	SR 826 & NE 34 AV		
Checked H. KENWOOD	Date 9/16/09	Placed in Service Date 11/3/09	Phasing No. 2	Asset Number 4802

TOD Schedule Report
for 3671: SR- 826&NE 35 Av

Print Date:
5/22/2018

Print Time:
1:19 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>
3671	SR- 826&NE 35 Av	DOW-3		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	SBL	PED	-	EBT	-	-
0	0	0	0	0	0	0	0

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 EBL	0	0	0	0	0	0	7	7	7	3	3	3	25	15	15	35	12	15	4.8	2
2 WBT	4	4	4	18	18	18	4	4	4	1	1	1	40	48	48	40	38	48	4.8	2
3 SBL	4	4	4	15	15	15	7	7	7	3	3	3	25	17	15	25	12	15	4	2
4 PED	4	4	4	15	15	15	0	0	0	0	0	0	19	19	19	19	19	19	4	2
5 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 EBT	4	4	4	18	18	18	4	4	4	1	1	1	40	48	48	40	38	48	4.8	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: unknown

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

<u>Current TOD Schedule</u>	<u>Plan</u>	<u>Cycle</u>	<u>Green Time</u>								<u>Ring Offset</u>	<u>Offset</u>
			1 EBL	2 WBT	3 SBL	4 PED	5 -	6 EBT	7 -	8 -		
	7	130	8	60	18	18	0	75	0	0	0	55
	8	130	7	59	20	18	0	73	0	0	0	105
	9	130	11	57	18	18	0	75	0	0	0	68
	26	130	7	61	18	18	0	75	0	0	0	55

Local TOD Schedule		
<u>Time</u>	<u>Plan</u>	<u>DOW</u>
0000	Free	Su M T W Th F S
0645	7	M T W Th F
0900	8	Su
1000	8	M T W Th F
1530	9	M T W Th F
2000	Free	Su M T W Th F S

TOD Schedule Report
for 3671: SR- 826&NE 35 Av

Print Date:
5/22/2018

Print Time:
1:19 PM

Current Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0600	TOD OUTPUTS	-----1	SuM T W ThF S
0645	TOD OUTPUTS	-----	M T W ThF
2000	TOD OUTPUTS	-----1	SuM T W ThF S

Local Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0100	TOD OUTPUTS	-----2-	S
0600	TOD OUTPUTS	-----1	SuM T W ThF S
0645	TOD OUTPUTS	-----	M T W ThF
0900	TOD OUTPUTS	-----	Su S
2000	TOD OUTPUTS	-----1	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 OPERATING PLAN

		SIGNAL HEAD NUMBER													
PHASE	INT	1	2	3	6	8				P1	P2	P8			
ϕ (2+6) EAST-WEST Recall TCS A ϕ	R/W	R	G	R	G	R				DW	W	DW	P2		
	Red LL	R	G	R	G	R				DW	F	DW	2 ←		
	TO	$\phi 2$	R	Y	R	G	R				DW	DW	DW	→ 6	
		$\phi 3$	R	Y	R	Y	R				DW	DW	DW		
		$\phi 4$	R	Y	R	G	R				DW	DW	DW		
	CLEAR														
$\phi 3$ (3+8) SBLT Activated by 3 or P8 TCS B ϕ	R/W	R	R	G	G	G				DW	DW	W			
	Red LL	R	R	G	G	G				DW	DW	F			
	TO	$\phi 3$	R	R	Y	Y	G				DW	DW			DW
		$\phi 4$	R	R	Y	G	G				DW	DW			DW
		$\phi 1$	R	R	Y	G	Y				DW	DW			DW
	CLEAR														
$\phi 4$ (1+8) Activated by P1 TCS C ϕ	R/W	G	R	R	R	G				W	DW	W			
	Red LL	G	R	R	R	G				F	DW	F			
	TO	$\phi 1$	Y	R	R	R	Y				DW	DW			DW
	CLEAR														
$\phi(1+6)$ (1+6+8) EBLT Activated by 1 or 8 EXCEPT when $\phi 4$ is TCS C ϕ serves	R/W	G	R	R	G	G				DW	DW	DW			
	$\phi 1$	Y	R	R	G	Y				DW	DW	DW			
	TO														
	CLEAR														
FLASHING OPER		R	Y	R	Y	R							* EXCEPT when $\phi 4$ is served		

Drawn
F. Priats
Date: 3/20/97

Check
E. Lee
Date: 3/20/97

Division Engineer

METROPOLITAN DADE COUNTY
DEPARTMENT OF TRAFFIC AND TRANSPORTATION

ASSET NO. 33671

SR 826 & NE 35 Av

Revision 3/14/08 HH

Placed in Service

Date: 7/24/98

Phasing Number
0

TOD Schedule Report
for 4855: NE 35 Av&NE 164 St

Print Date:
5/22/2018

Print Time:
4:07 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>
4855	NE 35 Av&NE 164 St	DOW-3		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>
-	NBT	EBT	WBT	-	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>
	<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 NBT	0	0	0	0	0	0	15	15	15	1	1	1	40	31	35	40	31	35	4	2
3 EBT	0	0	0	0	0	0	7	7	7	2.5	-2.5	-2.5	20	7	8	20	7	20	4	2
4 WBT	7	7	7	20	20	20	7	7	7	2.5	-2.5	-2.5	7	7	7	18	7	17	4	2
5 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 SBT	0	0	0	0	0	0	15	15	15	1	1	1	40	31	35	40	31	35	4	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: unknown

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

<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		
			-	NBT	EBT	WBT	-	SBT	-	-		
	7	130	0	83	19	10	0	83	0	0	0	116
	8	120	0	73	14	15	0	73	0	0	0	108
	9	130	0	83	14	15	0	83	0	0	0	19
	26	130	0	83	19	10	0	83	0	0	0	116

Local TOD Schedule		
<u>Time</u>	<u>Plan</u>	<u>DOW</u>
0000	Free	Su M T W Th F S
0645	7	M T W Th F
0900	8	Su
1000	8	M T W Th F
1530	9	M T W Th F
2000	Free	Su M T W Th F S

TOD Schedule Report
for 4855: NE 35 Av&NE 164 St

Print Date:
5/22/2018

Print Time:
4:07 PM

Current Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0600	TOD OUTPUTS	-----1	SuM T W ThF S
0645	TOD OUTPUTS	-----	M T W ThF
2000	TOD OUTPUTS	-----3--	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	-----1	SuM T W ThF S
0030	TOD OUTPUTS	-----2-	SuM T W ThF
0100	TOD OUTPUTS	-----2-	S
0600	TOD OUTPUTS	-----1	SuM T W ThF S
0645	TOD OUTPUTS	-----	M T W ThF
0900	TOD OUTPUTS	-----	Su S
2000	TOD OUTPUTS	-----3--	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

Appendix D

Growth Rate Calculations

SERPM Analysis

SERPM Growth Rate Summary					
Street Name	2010	2040	Difference	Growth Rate	Annual Growth Rate
US-1/Biscayne Boulevard	64,271	80,223	15,952	24.82%	0.83%
	62,842	74,152	11,310	18.00%	0.60%
	65,205	84,476	19,271	29.55%	0.99%
SR-A1A/Collins Avenue	47,135	60,451	13,316	28.25%	0.94%
	39,944	50,176	10,232	25.62%	0.85%
	51,285	68,335	17,050	33.25%	1.11%
	49,021	64,320	15,299	31.21%	1.04%
SR-826/NE 163rd Street	45,708	63,539	17,831	39.01%	1.30%
	43,542	61,227	17,685	40.62%	1.35%
	33,072	49,280	16,208	49.01%	1.63%
Total	502,025	656,179	154,154	30.71%	1.02%

FDOT Historic Growth Trends

FDOT Growth Rate Summary

Station Number	Location	Historic Growth- Linear				Historic Growth- Exponential				Historic Growth- Decaying Exponential			
		5-year	R-squared	10-year	R-squared	5-year	R-squared	10-year	R-squared	5-year	R-squared	10-year	R-squared
0269	SR-A1A/Collins Avenue -- 200 feet north of NE 172nd Street	-0.37%	0.97%	1.36%	18.07%	-0.42%	1.16%	1.42%	19.57%	-0.46%	1.40%	2.07%	39.12%
0556	SR-826/NE 163rd Street -- 1,700 feet east of SR-5/US-1	0.91%	5.52%	1.02%	25.00%	0.98%	6.18%	1.00%	25.30%	1.73%	20.35%	1.16%	30.08%
2645	SR-A1A/Collins Avenue -- 200 feet north of Miami Beach Boulevard	0.93%	1.00%	0.60%	2.01%	1.19%	1.51%	0.54%	1.67%	3.09%	10.51%	1.14%	6.99%
5219	SR-5/US-1 -- 300 feet south of NE 163rd Street/Sunny Isles Causeway	2.16%	31.69%	0.13%	0.61%	2.14%	32.69%	0.13%	0.54%	2.27%	52.34%	0.02%	0.00%
8452	NE 35th Avenue -- 200 feet north of NE 166th Street	1.62%	19.76%			1.59%	18.12%			1.27%	9.35%		
Total		1.05%	11.79%	0.78%	11.42%	1.10%	11.93%	0.77%	11.77%	1.58%	18.79%	1.10%	19.05%

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 0269 - SR A1A/COLLINS AV, 300' N NE 172 ST

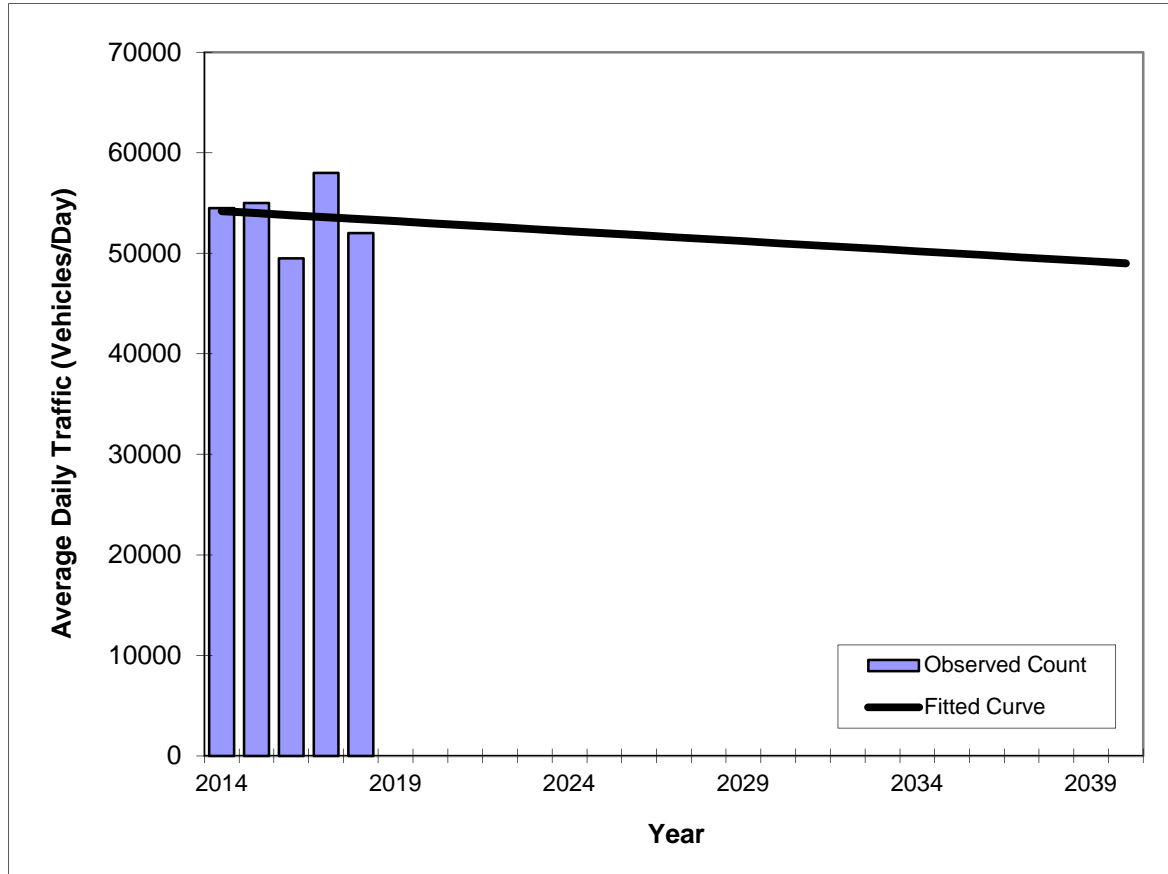
YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	52000 C	N 24000	S 28000	9.00	54.30	5.60
2017	58000 C	N 28000	S 30000	9.00	55.00	5.30
2016	49500 C	N 25500	S 24000	9.00	54.50	7.80
2015	55000 C	N 26500	S 28500	9.00	54.70	4.60
2014	54500 C	N 27500	S 27000	9.00	54.50	5.10
2013	58500 C	N 28000	S 30500	9.00	52.40	6.10
2012	58000 C	N 27000	S 31000	9.00	55.70	8.40
2011	52500 C	N 25500	S 27000	9.00	55.10	7.50
2010	49500 C	N 24500	S 25000	8.98	54.08	8.80
2009	43000 C	N 20500	S 22500	8.99	53.24	8.40
2008	44500 C	N 21000	S 23500	9.09	55.75	5.30
2007	52500 C	N 25500	S 27000	8.01	54.34	4.90
2006	51500 C	N 25000	S 26500	7.97	54.22	2.20
2005	48000 C	N 23500	S 24500	8.80	53.80	5.50
2004	47500 C	N 23500	S 24000	9.00	53.30	8.20
2003	48000 C	N 24000	S 24000	8.80	53.40	4.90

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

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of NE 172nd Street

County:	Miami (87)
Station #:	0269
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	54500	54200
2015	55000	54000
2016	49500	53800
2017	58000	53600
2018	52000	53400

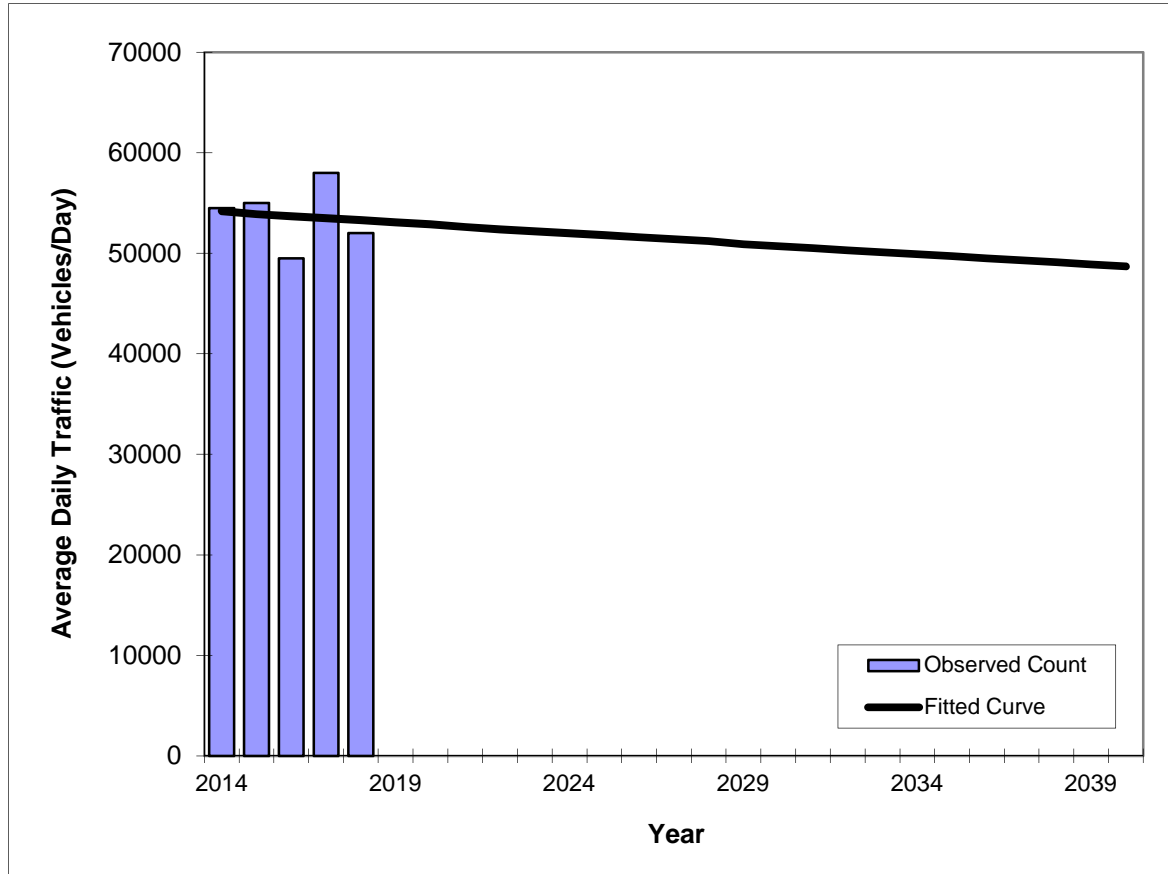
Trend R-squared:	0.97%
Trend Annual Historic Growth Rate:	-0.37%
Printed:	23-Apr-19
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of NE 172nd Street

County:	Miami (87)
Station #:	0269
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	54500	54200
2015	55000	53900
2016	49500	53700
2017	58000	53500
2018	52000	53300

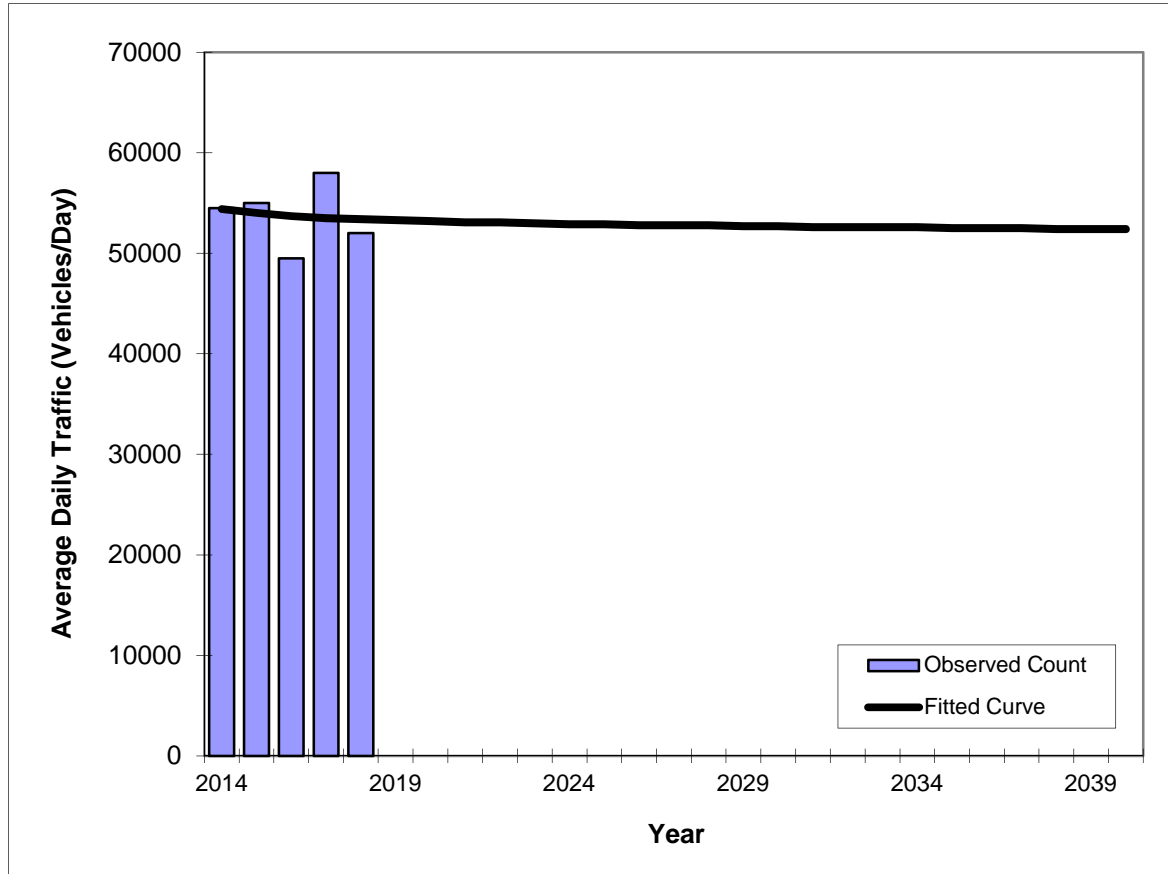
Trend R-squared:	1.16%
Compounded Annual Historic Growth Rate:	-0.42%
Printed:	23-Apr-19
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of NE 172nd Street

County:	Miami (87)
Station #:	0269
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	54500	54400
2015	55000	54000
2016	49500	53700
2017	58000	53500
2018	52000	53400
2019		
2020		
2021		
2022		
2023		
2024		
2025		
2026		
2027		
2028		
2029		
2030		
2031		
2032		
2033		
2034		
2035		
2036		
2037		
2038		
2039		

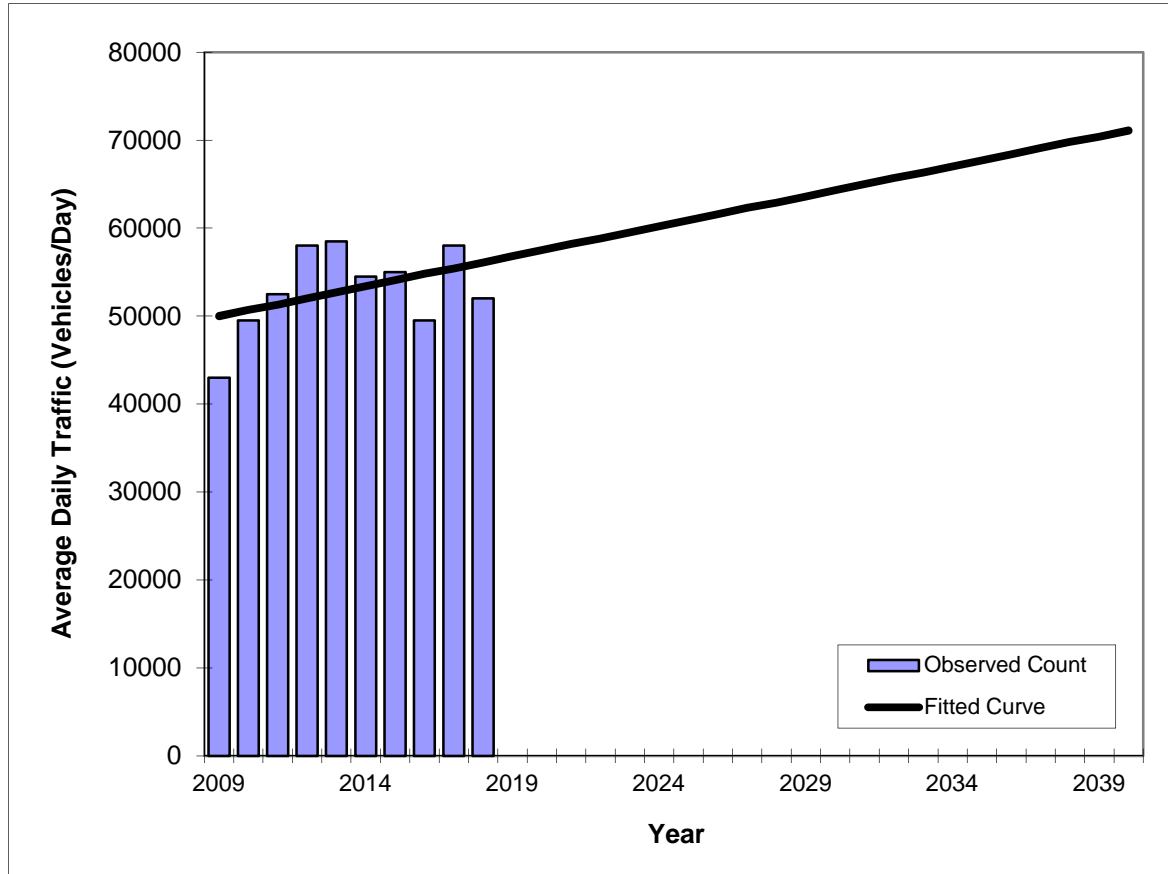
Trend R-squared:	1.40%
Compounded Annual Historic Growth Rate:	-0.46%
Printed:	23-Apr-19
Decaying Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of NE 172nd Street

County:	Miami (87)
Station #:	0269
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	43000	50000
2010	49500	50700
2011	52500	51300
2012	58000	52000
2013	58500	52700
2014	54500	53400
2015	55000	54100
2016	49500	54800
2017	58000	55400
2018	52000	56100

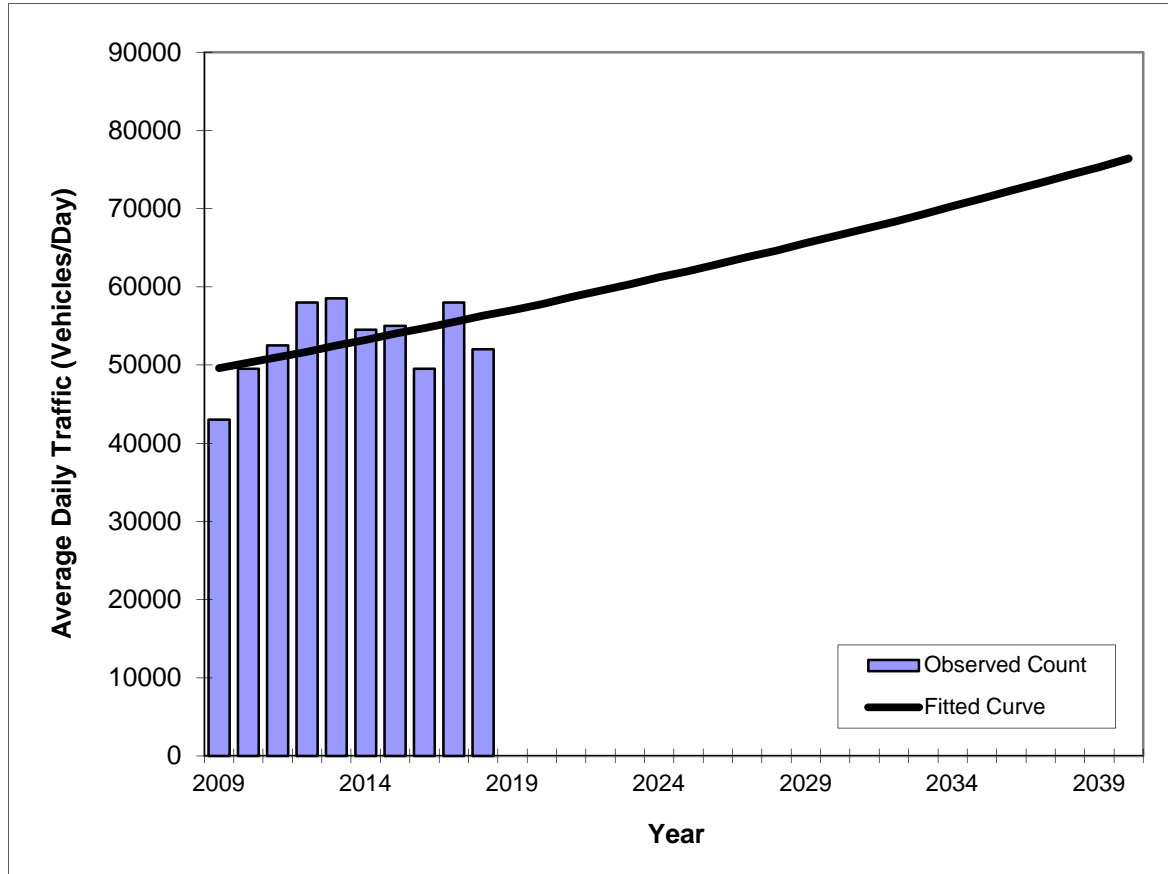
Trend R-squared:	18.07%
Trend Annual Historic Growth Rate:	1.36%
Printed:	23-Apr-19
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of NE 172nd Street

County:	Miami (87)
Station #:	0269
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	43000	49600
2010	49500	50300
2011	52500	51000
2012	58000	51700
2013	58500	52500
2014	54500	53200
2015	55000	54000
2016	49500	54700
2017	58000	55500
2018	52000	56300

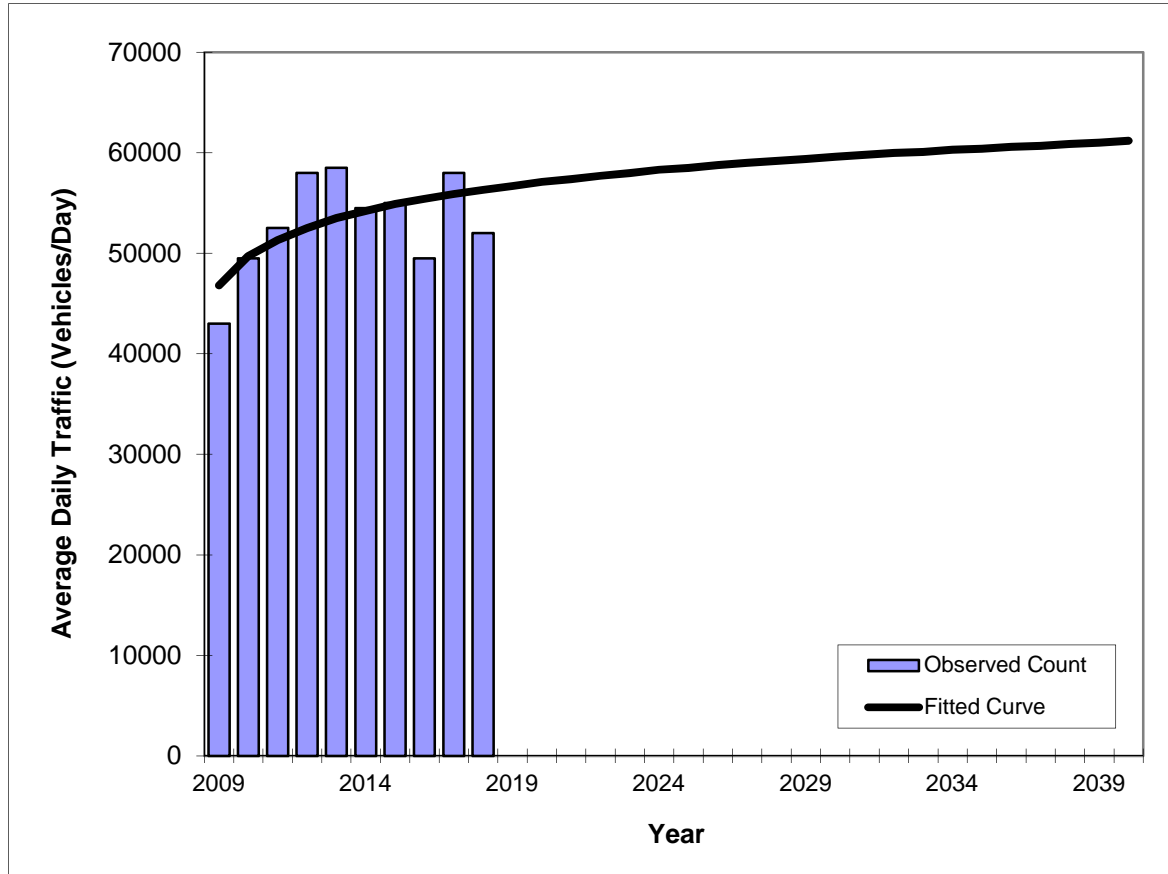
	Trend R-squared: 19.57%
	Compounded Annual Historic Growth Rate: 1.42%
	Printed: 23-Apr-19
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of NE 172nd Street

County:	Miami (87)
Station #:	0269
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	43000	46800
2010	49500	49700
2011	52500	51300
2012	58000	52500
2013	58500	53500
2014	54500	54200
2015	55000	54900
2016	49500	55400
2017	58000	55900
2018	52000	56300

Trend R-squared:	39.12%
Compounded Annual Historic Growth Rate:	2.07%
Printed:	23-Apr-19
Decaying Exponential Growth Option	

*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 0556 - SR 826/NE 163 ST, 1700' E SR 5/US-1

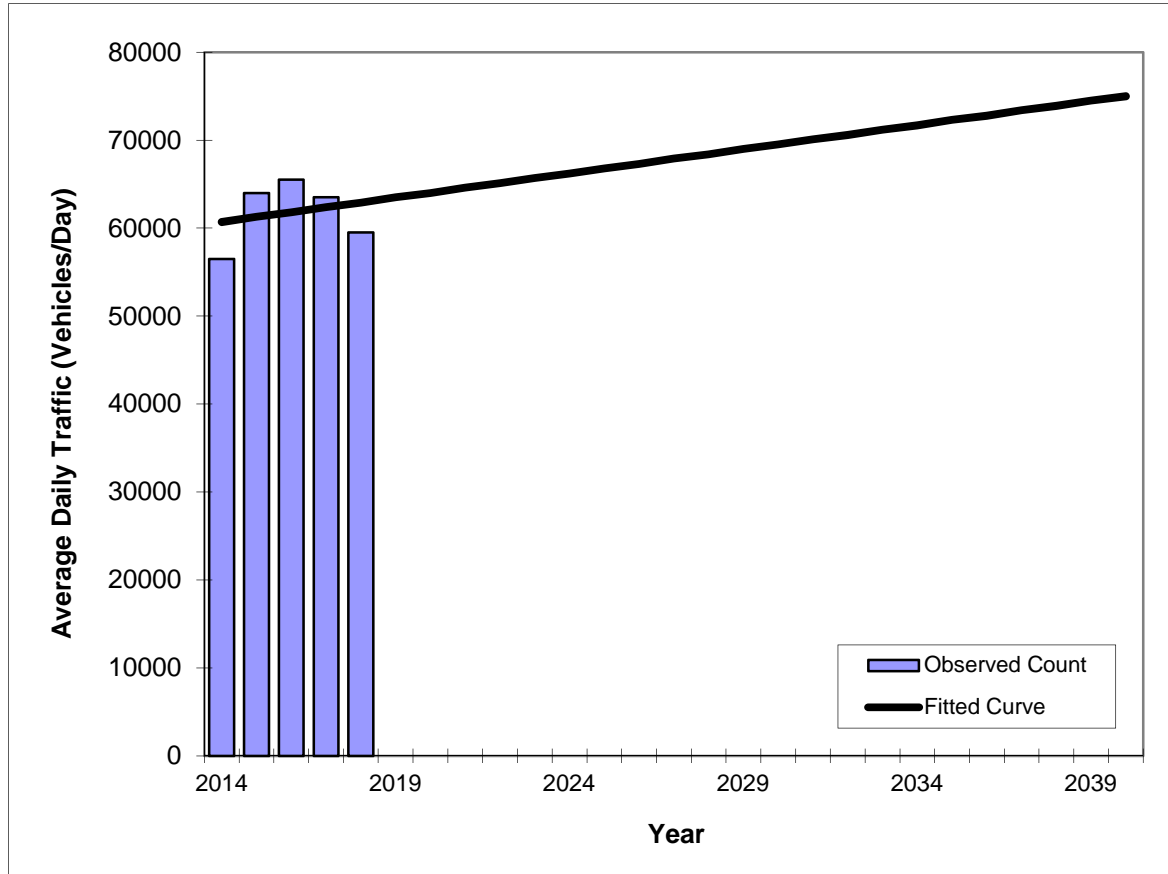
YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	59500 C	E 29500	W 30000	9.00	54.30	5.10
2017	63500 C	E 31000	W 32500	9.00	55.00	3.30
2016	65500 C	E 32000	W 33500	9.00	54.50	3.10
2015	64000 C	E 31500	W 32500	9.00	54.70	6.00
2014	56500 C	E 27500	W 29000	9.00	54.50	6.00
2013	60000 C	E 29000	W 31000	9.00	52.40	6.00
2012	61000 C	E 29500	W 31500	9.00	55.70	3.40
2011	63500 C	E 34000	W 29500	9.00	55.10	4.90
2010	55000 C	E 26500	W 28500	8.98	54.08	4.90
2009	57000 C	E 28500	W 28500	8.99	53.24	2.70
2008	53000 C	E 26500	W 26500	9.09	55.75	2.70
2007	42500 C	E 21000	W 21500	8.01	54.34	3.40
2006	66500 C	E 35500	W 31000	7.97	54.22	2.10
2005	61500 C	E 29000	W 32500	8.80	53.80	14.70
2004	67500 C	E 32500	W 35000	9.00	53.30	14.70
2003	45000 C	E 23000	W 22000	8.80	53.40	3.90

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

Traffic Trends

SR-826/NE 163rd Street -- 1,700 feet east of SR-5/US-1

County:	Miami (87)
Station #:	0556
Highway:	SR-826/NE 163rd Street



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	56500	60700
2015	64000	61300
2016	65500	61800
2017	63500	62400
2018	59500	62900

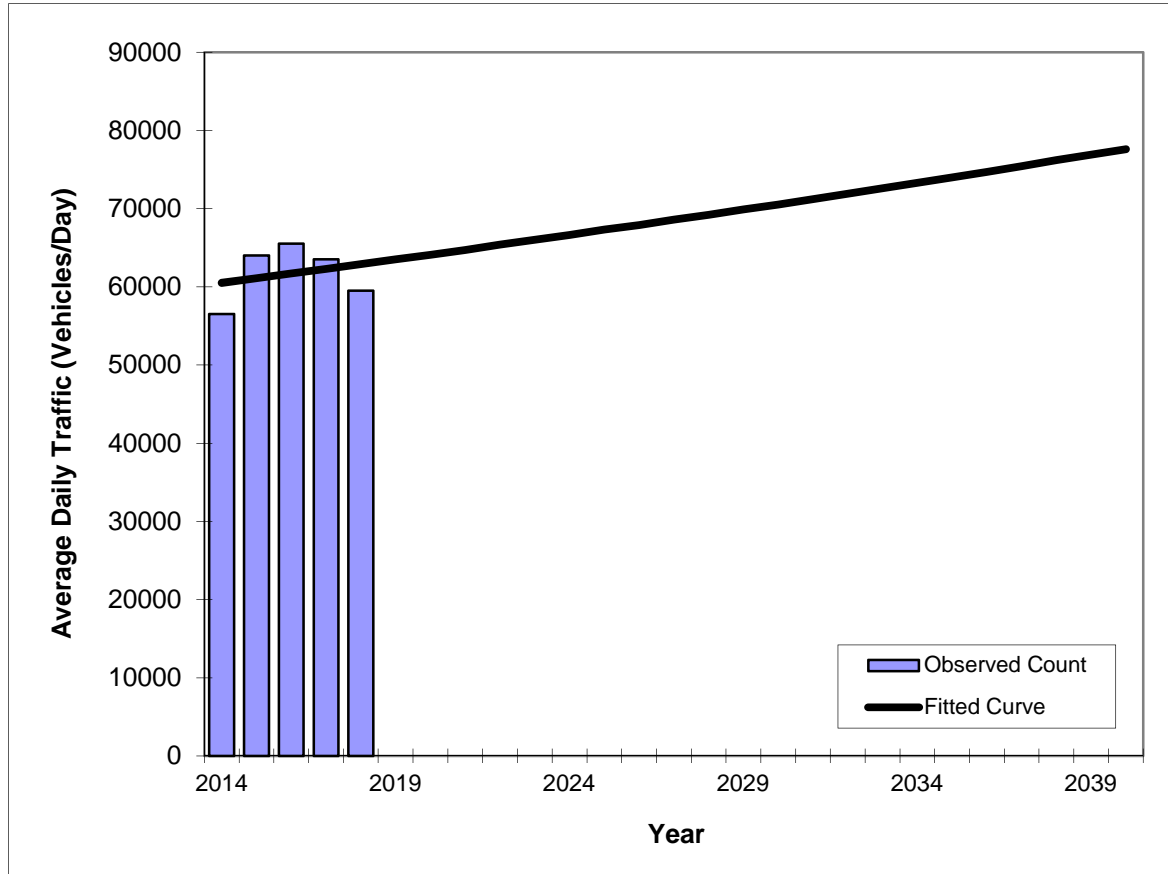
Trend R-squared:	5.52%
Trend Annual Historic Growth Rate:	0.91%
Printed:	23-Apr-19
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends

SR-826/NE 163rd Street -- 1,700 feet east of SR-5/US-1

County:	Miami (87)
Station #:	0556
Highway:	SR-826/NE 163rd Street



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	56500	60500
2015	64000	61100
2016	65500	61700
2017	63500	62300
2018	59500	62900

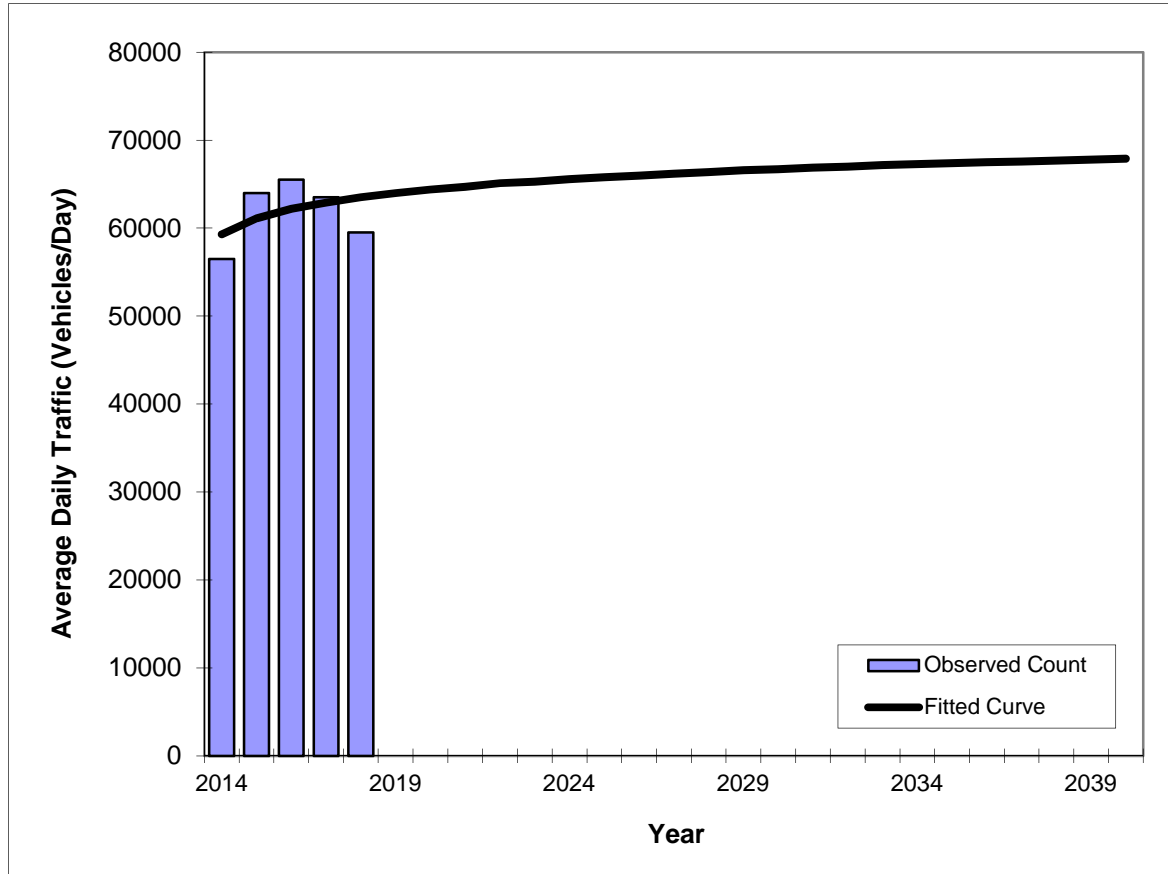
Trend R-squared:	6.18%
Compounded Annual Historic Growth Rate:	0.98%
Printed:	23-Apr-19
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-826/NE 163rd Street -- 1,700 feet east of SR-5/US-1

County:	Miami (87)
Station #:	0556
Highway:	SR-826/NE 163rd Street



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	56500	59300
2015	64000	61100
2016	65500	62200
2017	63500	62900
2018	59500	63500

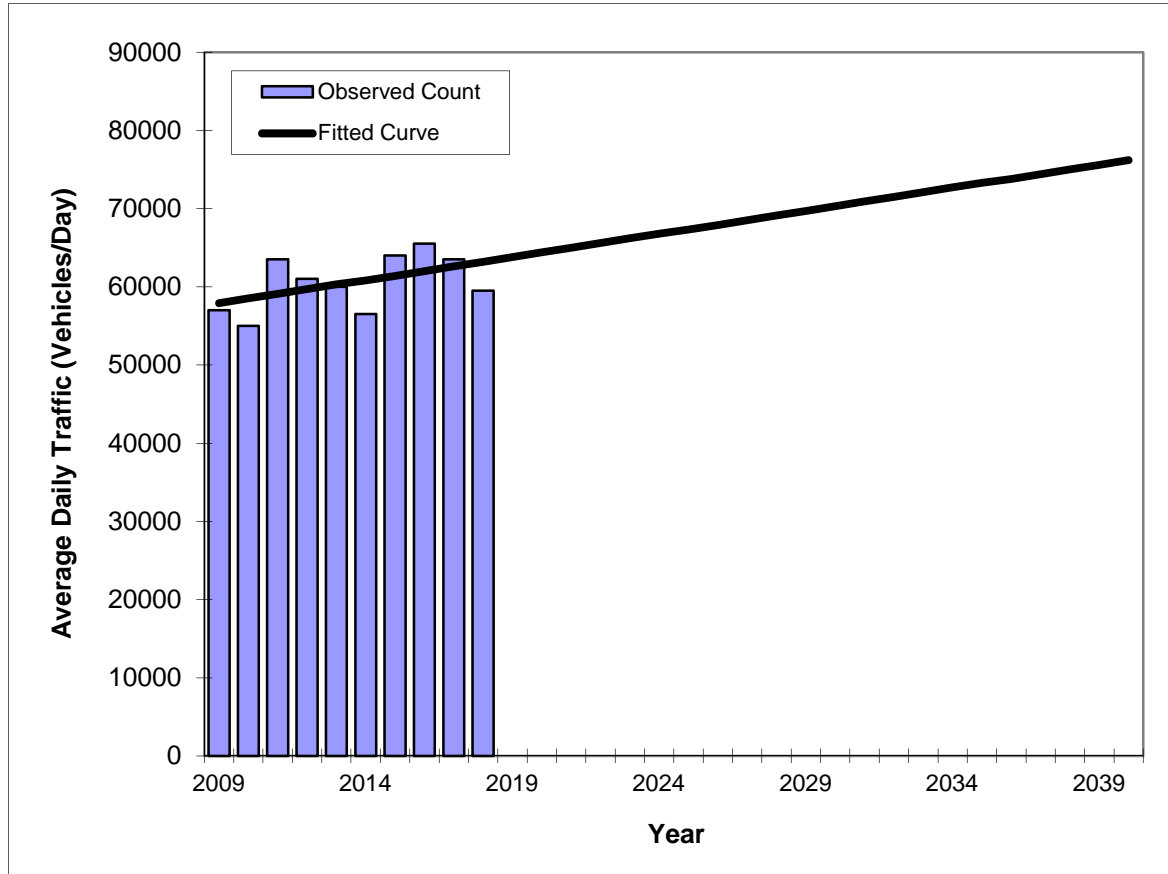
Trend R-squared:	20.35%
Compounded Annual Historic Growth Rate:	1.73%
Printed:	23-Apr-19
Decaying Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-826/NE 163rd Street -- 1,700 feet east of SR-5/US-1

County:	Miami (87)
Station #:	0556
Highway:	SR-826/NE 163rd Street



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	57000	57900
2010	55000	58500
2011	63500	59100
2012	61000	59700
2013	60000	60300
2014	56500	60800
2015	64000	61400
2016	65500	62000
2017	63500	62600
2018	59500	63200

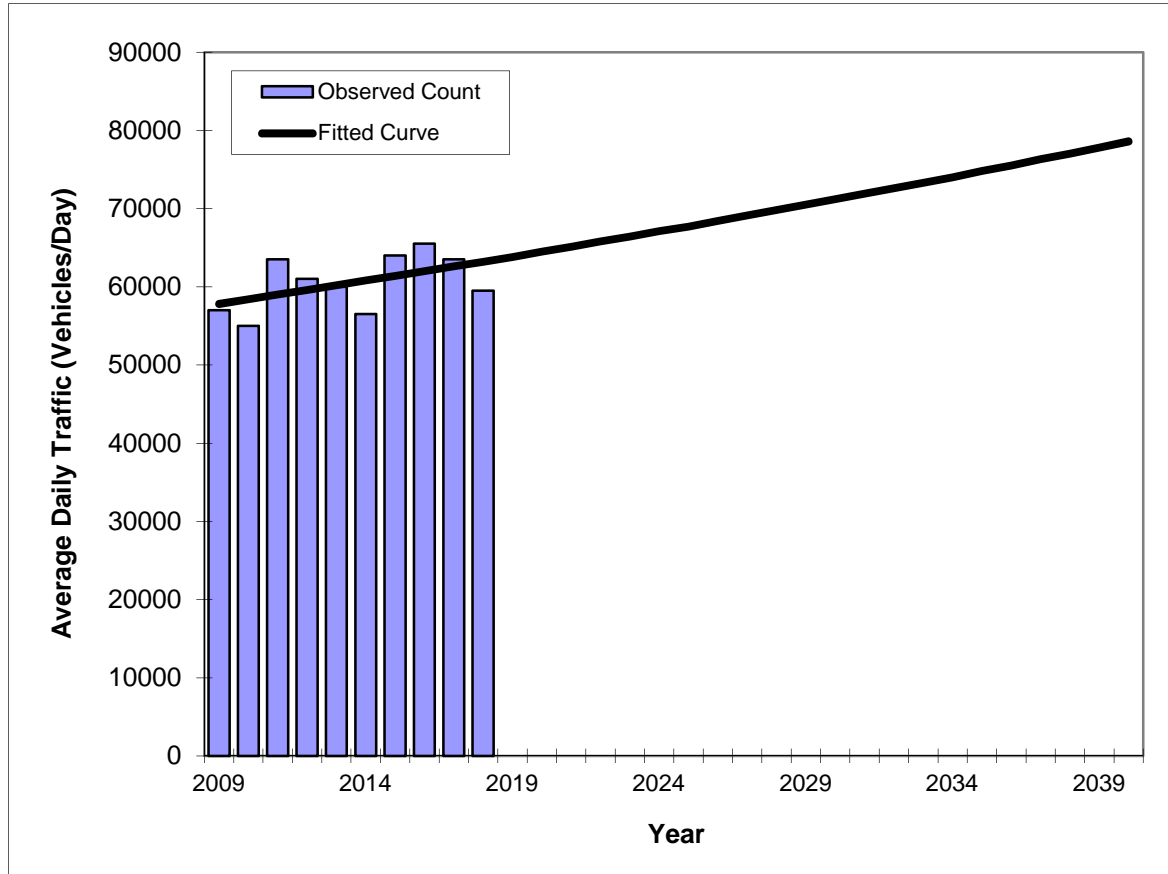
Trend R-squared:	25.00%
Trend Annual Historic Growth Rate:	1.02%
Printed:	23-Apr-19
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends

SR-826/NE 163rd Street -- 1,700 feet east of SR-5/US-1

County:	Miami (87)
Station #:	0556
Highway:	SR-826/NE 163rd Street



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	57000	57800
2010	55000	58400
2011	63500	59000
2012	61000	59600
2013	60000	60200
2014	56500	60800
2015	64000	61400
2016	65500	62000
2017	63500	62600
2018	59500	63200

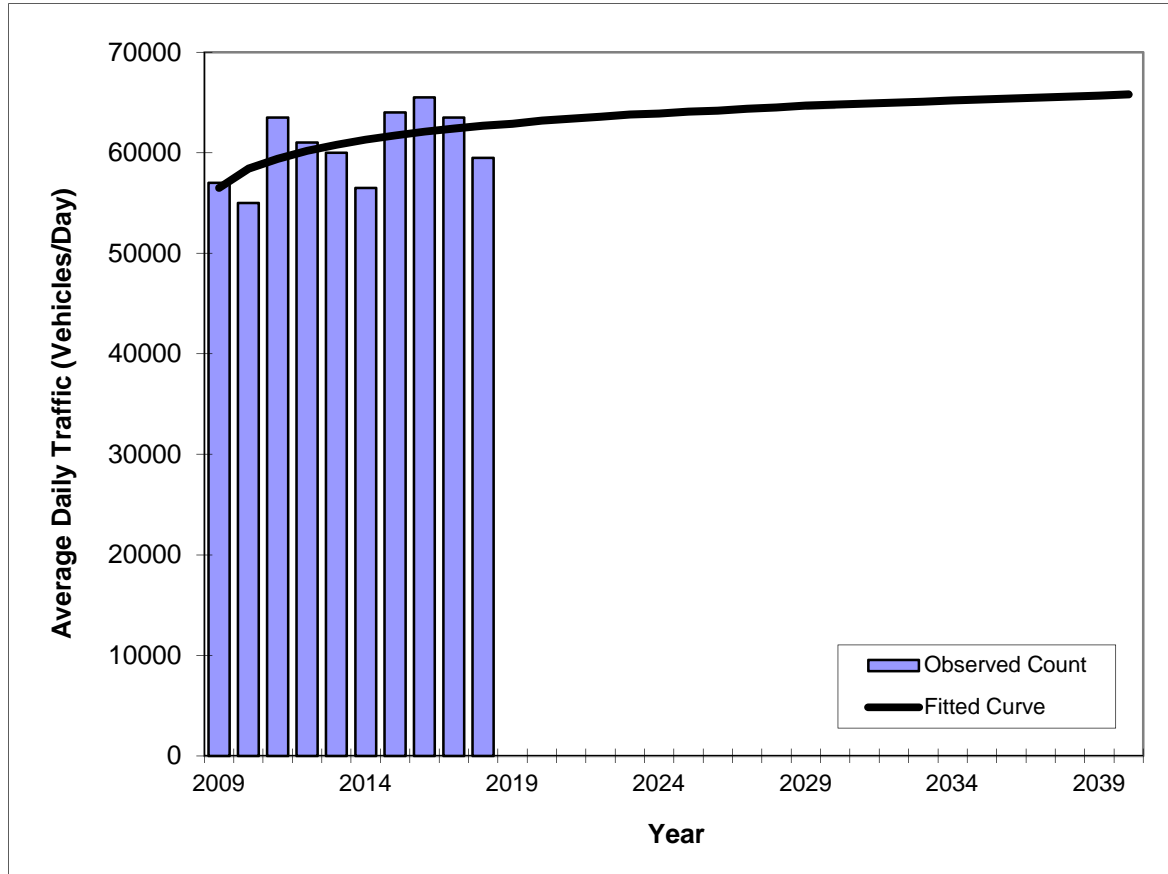
Trend R-squared:	25.30%
Compounded Annual Historic Growth Rate:	1.00%
Printed:	23-Apr-19
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-826/NE 163rd Street -- 1,700 feet east of SR-5/US-1

County:	Miami (87)
Station #:	0556
Highway:	SR-826/NE 163rd Street



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	57000	56500
2010	55000	58400
2011	63500	59400
2012	61000	60200
2013	60000	60800
2014	56500	61300
2015	64000	61700
2016	65500	62100
2017	63500	62400
2018	59500	62700

Trend R-squared:	30.08%
Compounded Annual Historic Growth Rate:	1.16%
Printed:	23-Apr-19
Decaying Exponential Growth Option	

*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 2645 - SR A1A/COLLINS AVE, 200' N OF MIAMI BEACH BLVD

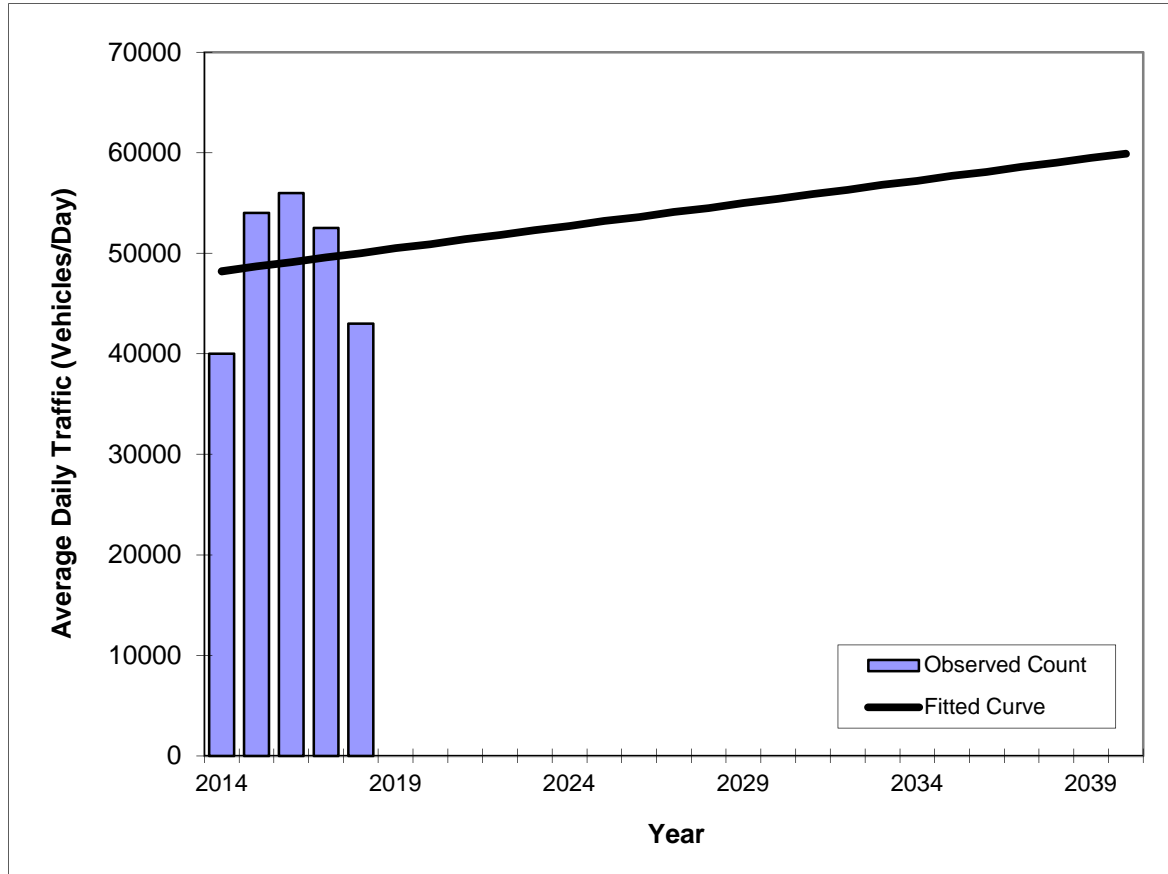
YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	43000 C	N 20500	S 22500	9.00	54.30	5.60
2017	52500 C	N 26000	S 26500	9.00	55.00	5.30
2016	56000 C	N 28500	S 27500	9.00	54.50	7.80
2015	54000 C	N 27000	S 27000	9.00	54.70	4.60
2014	40000 C	N 19500	S 20500	9.00	54.50	5.10
2013	56500 C	N 28000	S 28500	9.00	52.40	6.10
2012	56000 C	N 28000	S 28000	9.00	55.70	8.40
2011	48500 C	N 23500	S 25000	9.00	55.10	7.50
2010	46000 C	N 22000	S 24000	8.98	54.08	8.80
2009	44500 C	N 21500	S 23000	8.99	53.24	8.40
2008	45000 C	N 22000	S 23000	9.09	55.75	5.30
2007	52500 C	N 26500	S 26000	8.01	54.34	4.90
2006	51000 C	N 25500	S 25500	7.97	54.22	2.20
2005	49000 C	N 24000	S 25000	8.80	53.80	5.50
2004	48000 C	N 23500	S 24500	9.00	53.30	8.20
2003	50500 C	N 25500	S 25000	8.80	53.40	4.90

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

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of Miami Beach Boulevard

County:	Miami (87)
Station #:	2645
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	40000	48200
2015	54000	48700
2016	56000	49100
2017	52500	49600
2018	43000	50000

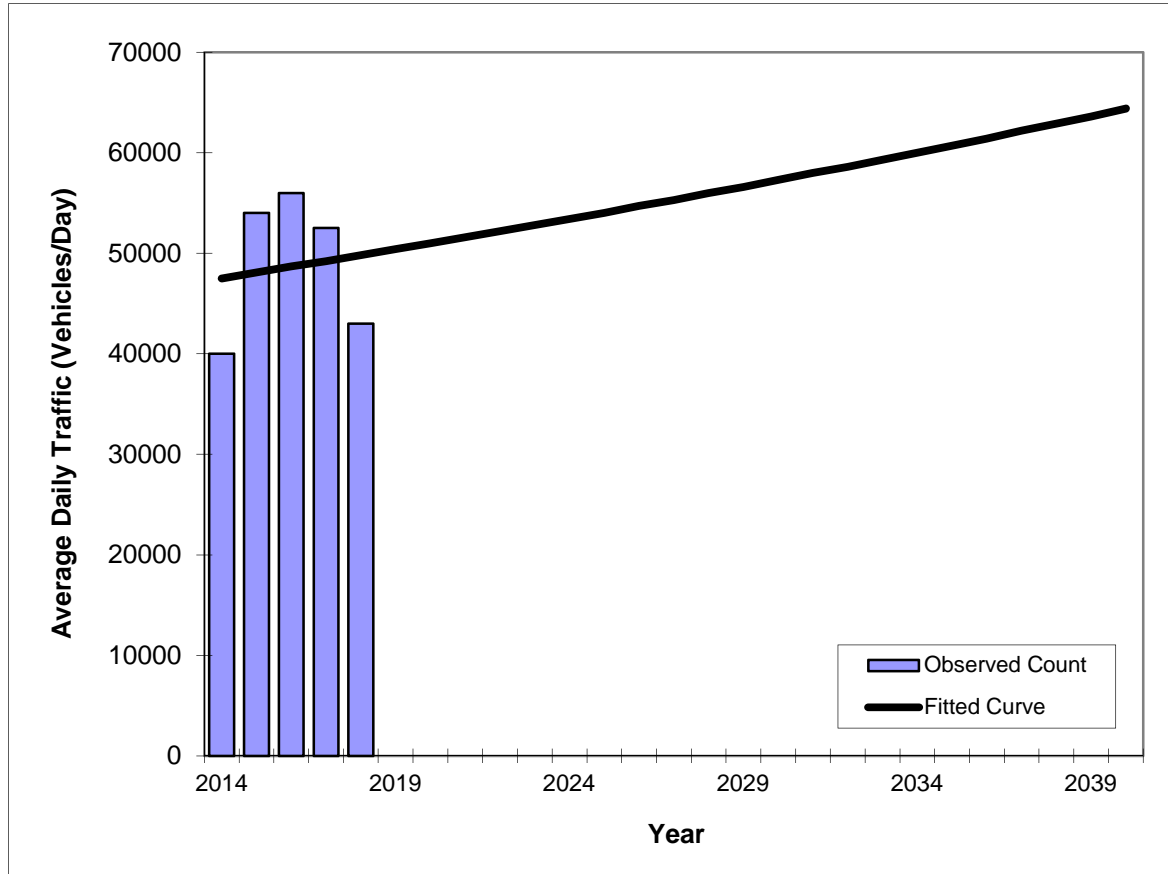
Trend R-squared:	1.00%
Trend Annual Historic Growth Rate:	0.93%
Printed:	23-Apr-19
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of Miami Beach Boulevard

County:	Miami (87)
Station #:	2645
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	40000	47500
2015	54000	48100
2016	56000	48700
2017	52500	49200
2018	43000	49800

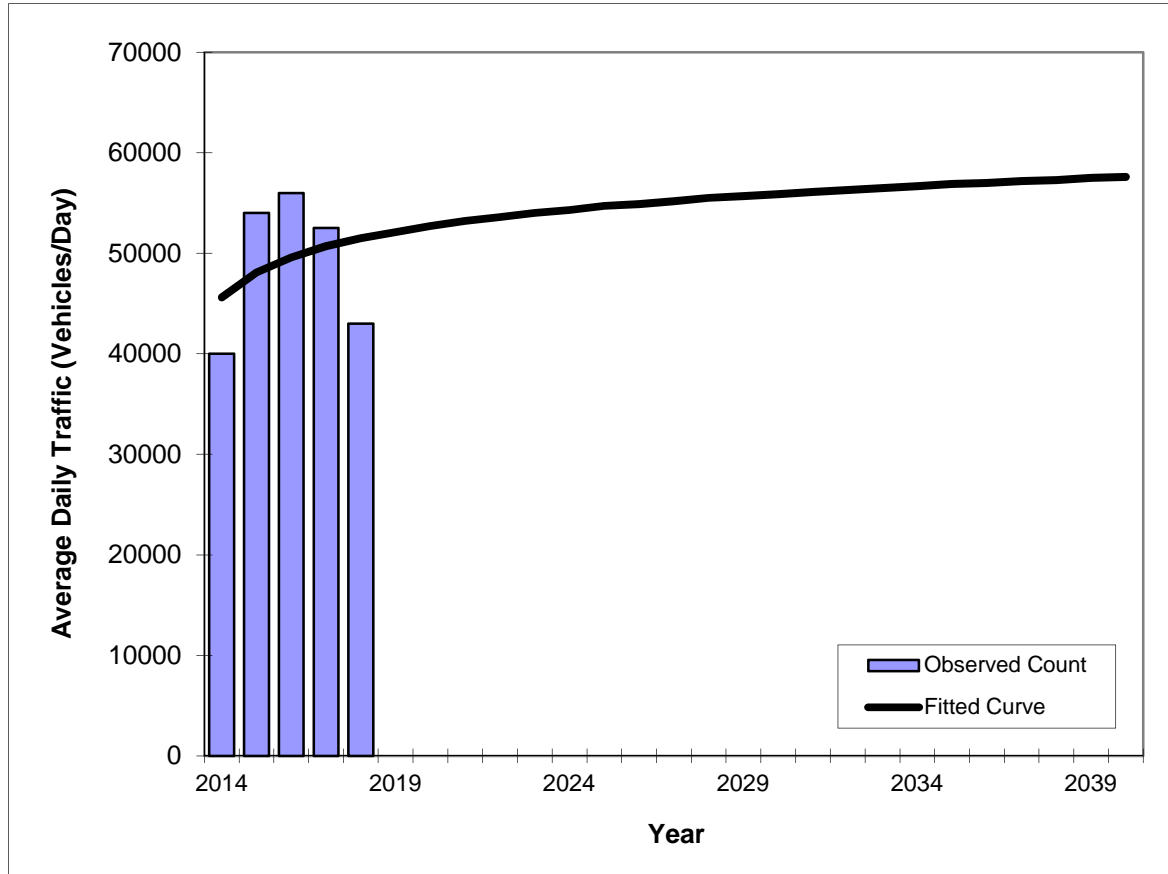
Trend R-squared:	1.51%
Compounded Annual Historic Growth Rate:	1.19%
Printed:	23-Apr-19
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of Miami Beach Boulevard

County:	Miami (87)
Station #:	2645
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	40000	45600
2015	54000	48100
2016	56000	49600
2017	52500	50700
2018	43000	51500

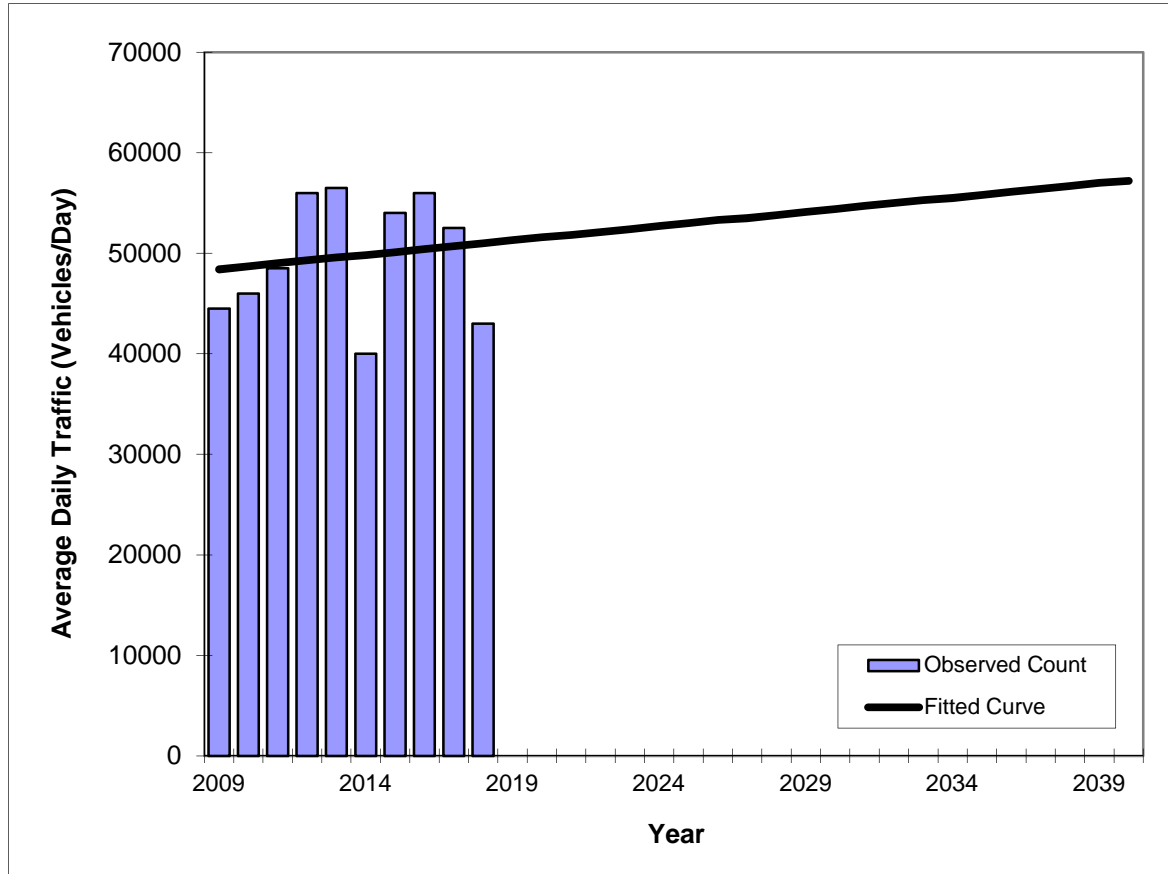
Trend R-squared:	10.51%
Compounded Annual Historic Growth Rate:	3.09%
Printed:	23-Apr-19
Decaying Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of Miami Beach Boulevard

County:	Miami (87)
Station #:	2645
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	44500	48400
2010	46000	48700
2011	48500	49000
2012	56000	49300
2013	56500	49600
2014	40000	49800
2015	54000	50100
2016	56000	50400
2017	52500	50700
2018	43000	51000

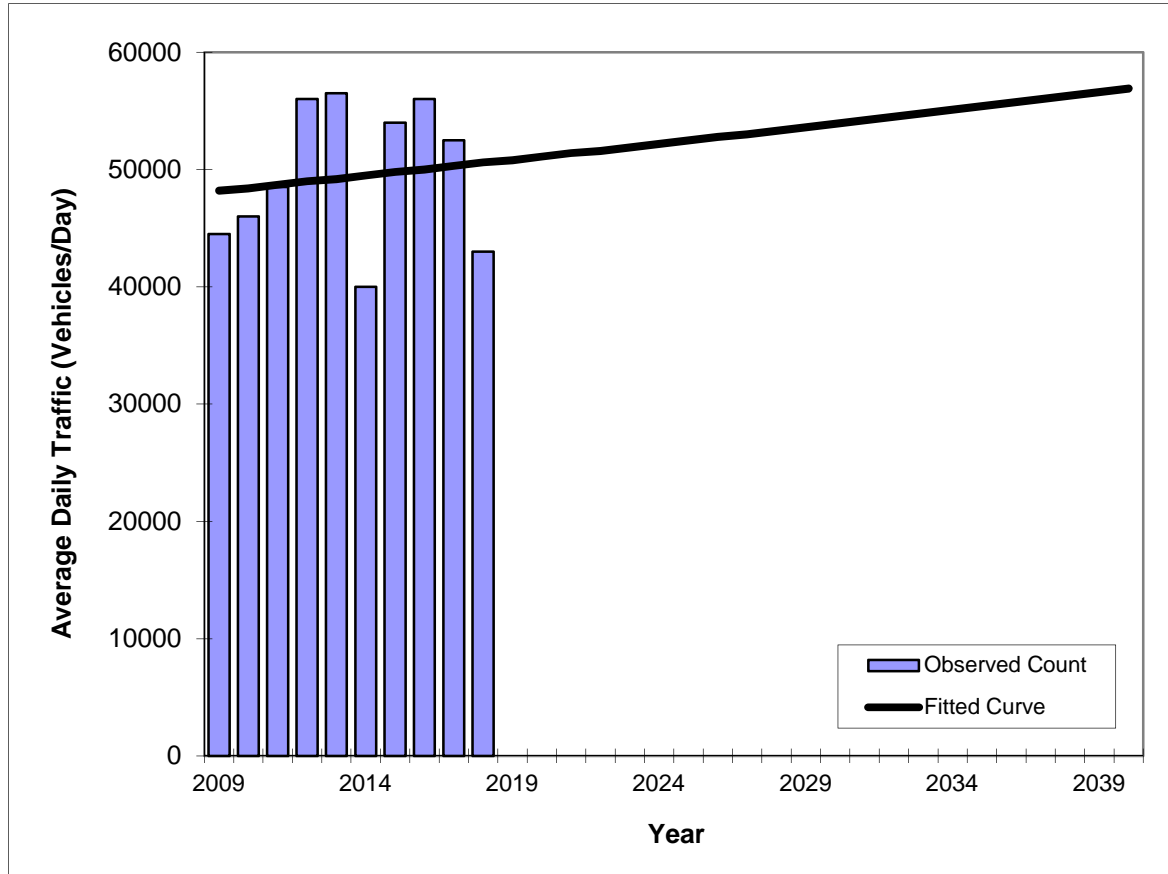
Trend R-squared:	2.01%
Trend Annual Historic Growth Rate:	0.60%
Printed:	23-Apr-19
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of Miami Beach Boulevard

County:	Miami (87)
Station #:	2645
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	44500	48200
2010	46000	48400
2011	48500	48700
2012	56000	49000
2013	56500	49200
2014	40000	49500
2015	54000	49800
2016	56000	50000
2017	52500	50300
2018	43000	50600

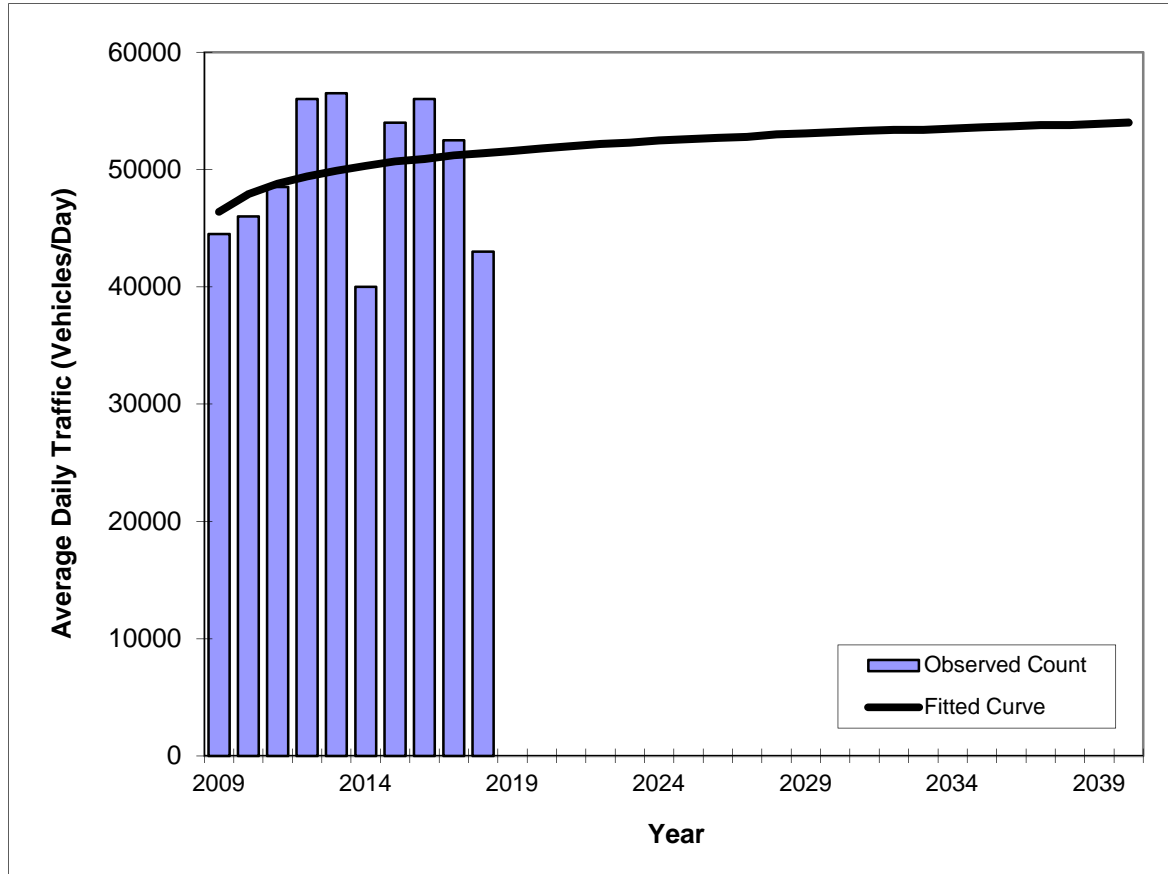
Trend R-squared:	1.67%
Compounded Annual Historic Growth Rate:	0.54%
Printed:	23-Apr-19
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-A1A/Collins Avenue -- 200 feet north of Miami Beach Boulevard

County:	Miami (87)
Station #:	2645
Highway:	SR-A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	44500	46400
2010	46000	47900
2011	48500	48800
2012	56000	49400
2013	56500	49900
2014	40000	50300
2015	54000	50700
2016	56000	50900
2017	52500	51200
2018	43000	51400

Trend R-squared:	6.99%
Compounded Annual Historic Growth Rate:	1.14%
Printed:	23-Apr-19
Decaying Exponential Growth Option	

*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 5219 - SR 5/US-1, 300' S NE 163 ST/SUNNY ISLES CSWY

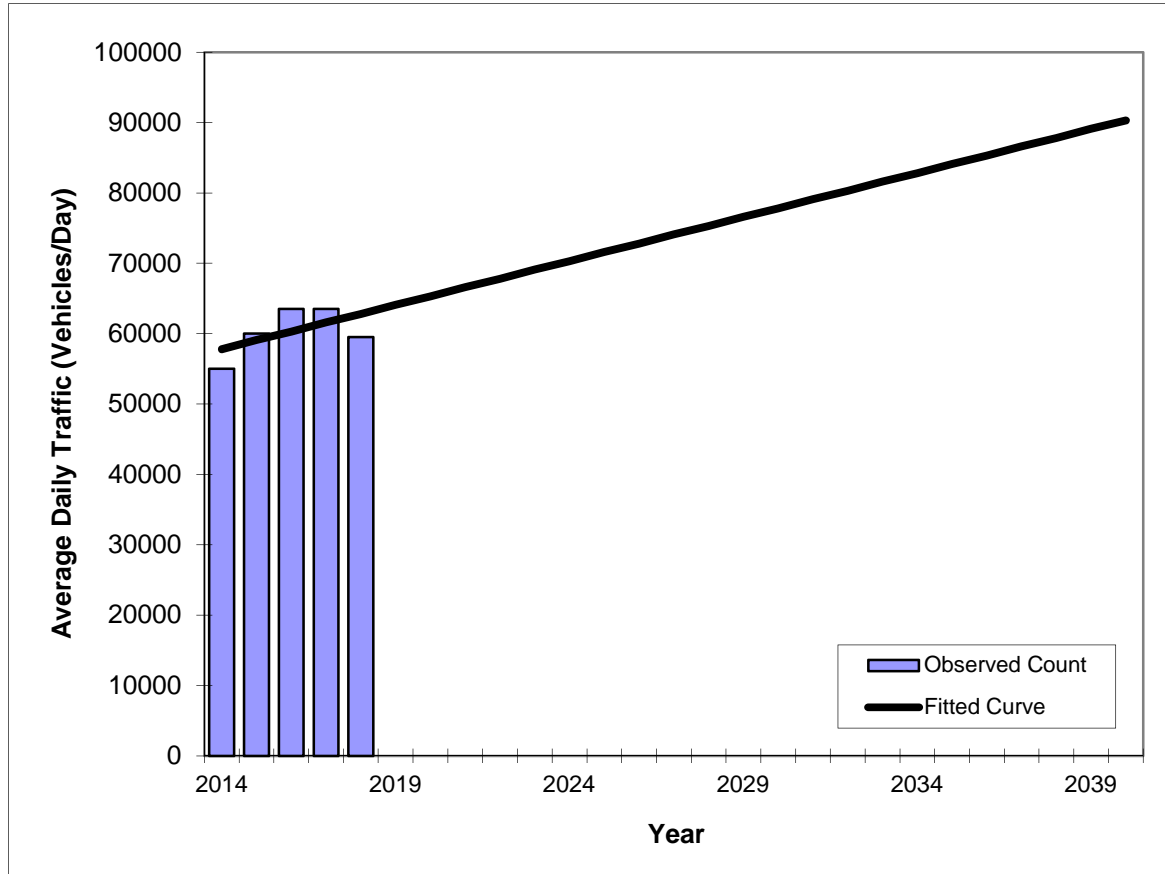
YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	59500 C	N 29500	S 30000	9.00	54.30	2.40
2017	63500 C	N 31500	S 32000	9.00	55.00	2.30
2016	63500 C	N 31000	S 32500	9.00	54.50	2.00
2015	60000 C	N 29500	S 30500	9.00	54.70	2.00
2014	55000 C	N 25500	S 29500	9.00	54.50	4.90
2013	54000 C	N 25000	S 29000	9.00	52.40	3.50
2012	64000 C	N 31000	S 33000	9.00	55.70	4.80
2011	61500 C	N 30500	S 31000	9.00	55.10	3.90
2010	60000 C	N 30000	S 30000	8.98	54.08	3.90
2009	60500 C	N 29500	S 31000	8.99	53.24	3.40
2008	55000 C	N 27000	S 28000	9.09	55.75	4.70
2007	60500 C	N 29000	S 31500	8.01	54.34	5.90
2006	58000 C	N 29000	S 29000	7.97	54.22	4.20
2005	57500 C	N 28500	S 29000	8.80	53.80	7.70
2004	50000 C	N 24000	S 26000	9.00	53.30	7.70
2003	44500 C	N 22000	S 22500	8.80	53.40	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

Traffic Trends

SR-5/US-1 -- 300 feet south of NE 163rd Street/Sunny Isles Causeway

County:	Miami (87)
Station #:	5219
Highway:	SR-5/US-1



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	55000	57800
2015	60000	59100
2016	63500	60300
2017	63500	61600
2018	59500	62800

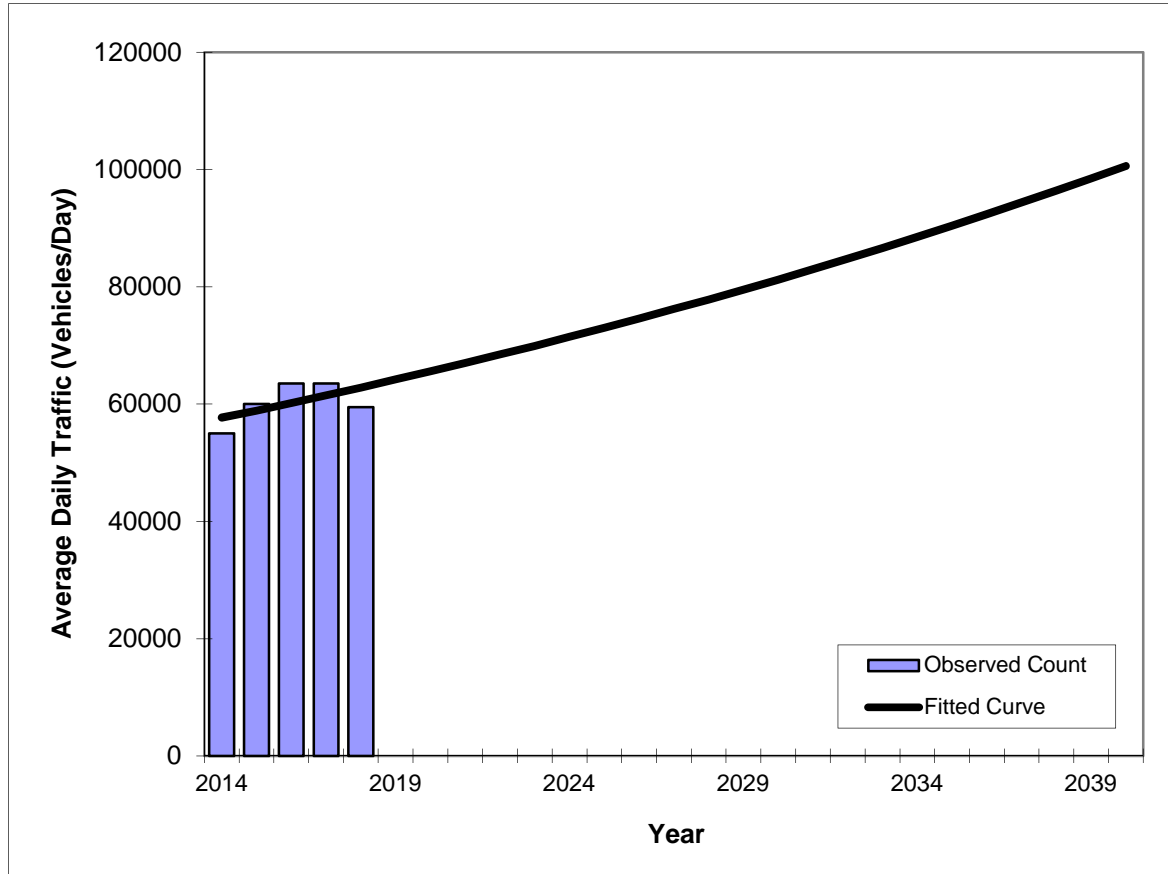
Trend R-squared:	31.69%
Trend Annual Historic Growth Rate:	2.16%
Printed:	23-Apr-19
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends

SR-5/US-1 -- 300 feet south of NE 163rd Street/Sunny Isles Causeway

County:	Miami (87)
Station #:	5219
Highway:	SR-5/US-1



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	55000	57700
2015	60000	58900
2016	63500	60200
2017	63500	61500
2018	59500	62800

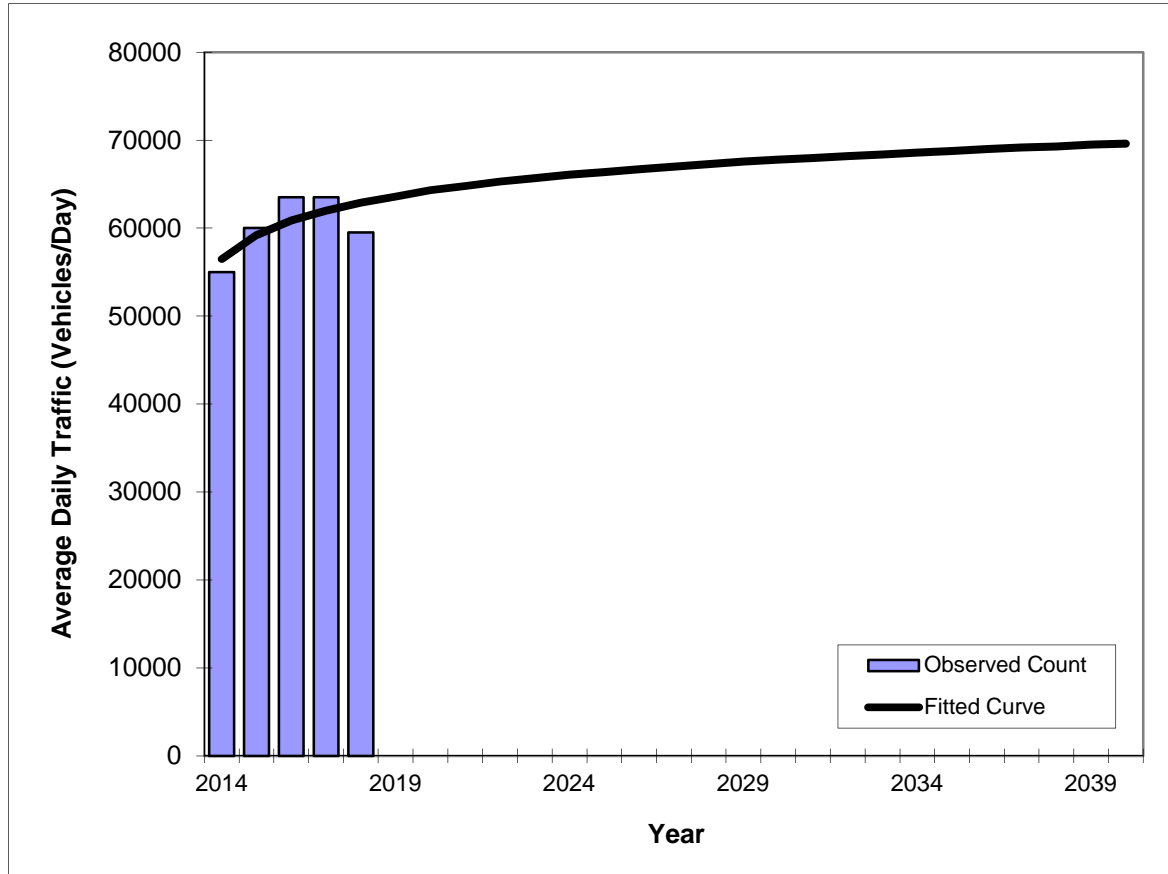
Trend R-squared:	32.69%
Compounded Annual Historic Growth Rate:	2.14%
Printed:	23-Apr-19
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-5/US-1 -- 300 feet south of NE 163rd Street/Sunny Isles Causeway

County:	Miami (87)
Station #:	5219
Highway:	SR-5/US-1



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	55000	56500
2015	60000	59200
2016	63500	60900
2017	63500	62000
2018	59500	62900

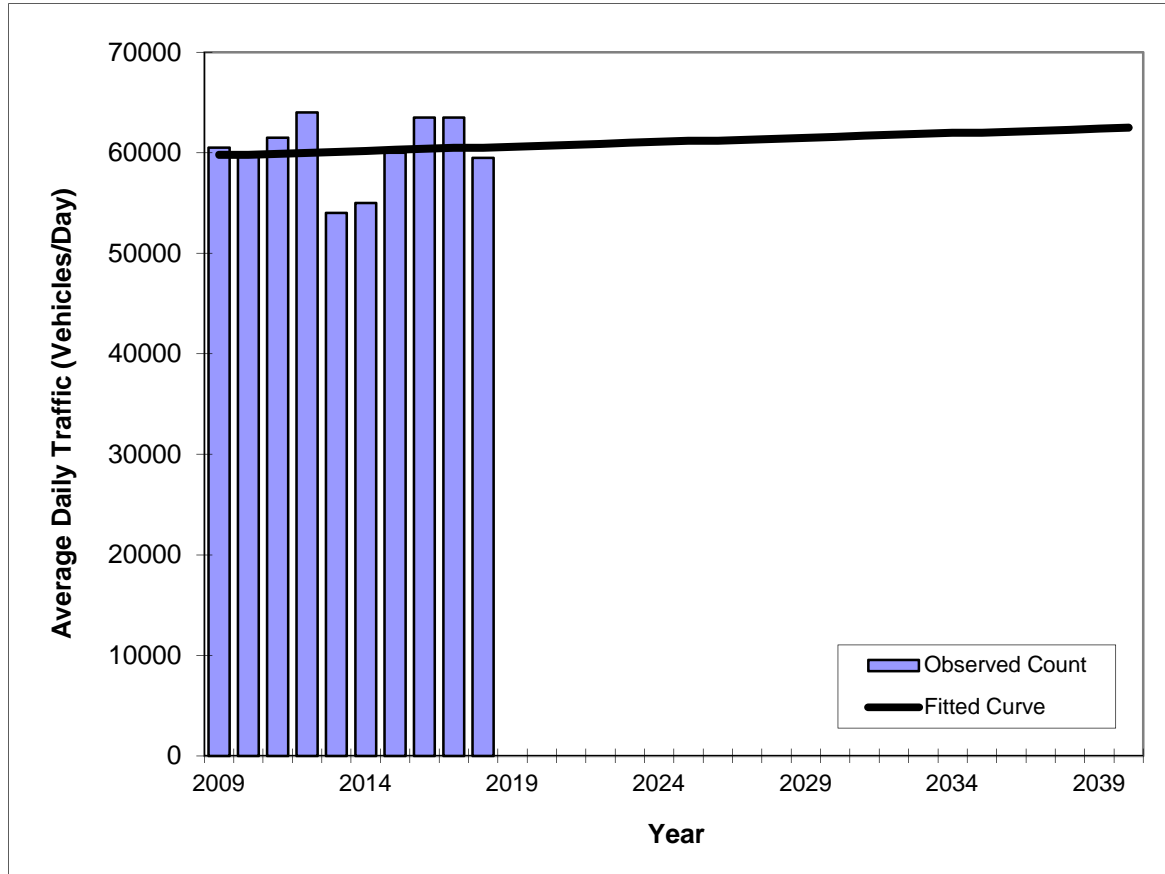
Trend R-squared:	52.34%
Compounded Annual Historic Growth Rate:	2.72%
Printed:	23-Apr-19
Decaying Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-5/US-1 -- 300 feet south of NE 163rd Street/Sunny Isles Causeway

County:	Miami (87)
Station #:	5219
Highway:	SR-5/US-1



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	60500	59800
2010	60000	59800
2011	61500	59900
2012	64000	60000
2013	54000	60100
2014	55000	60200
2015	60000	60300
2016	63500	60400
2017	63500	60500
2018	59500	60500

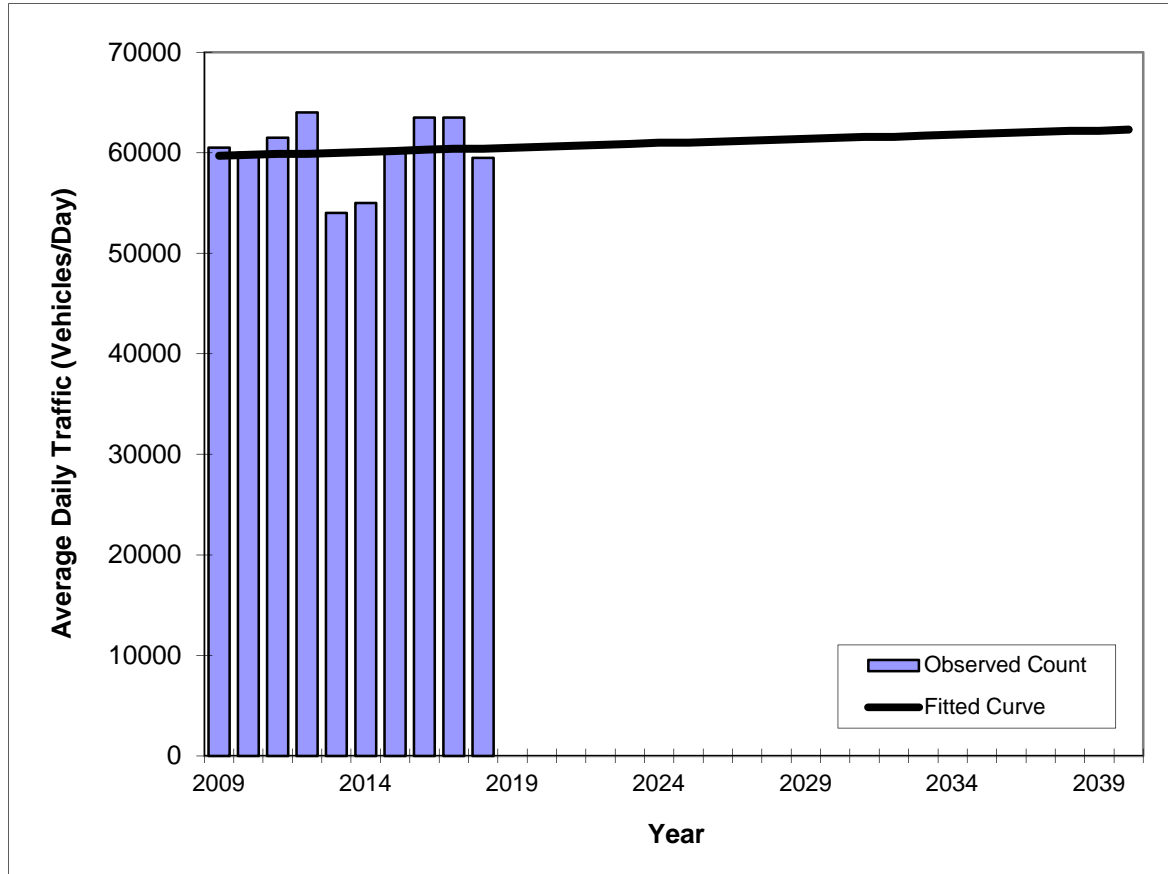
Trend R-squared:	0.61%
Trend Annual Historic Growth Rate:	0.13%
Printed:	23-Apr-19
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends

SR-5/US-1 -- 300 feet south of NE 163rd Street/Sunny Isles Causeway

County:	Miami (87)
Station #:	5219
Highway:	SR-5/US-1



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	60500	59700
2010	60000	59800
2011	61500	59900
2012	64000	59900
2013	54000	60000
2014	55000	60100
2015	60000	60200
2016	63500	60300
2017	63500	60400
2018	59500	60400

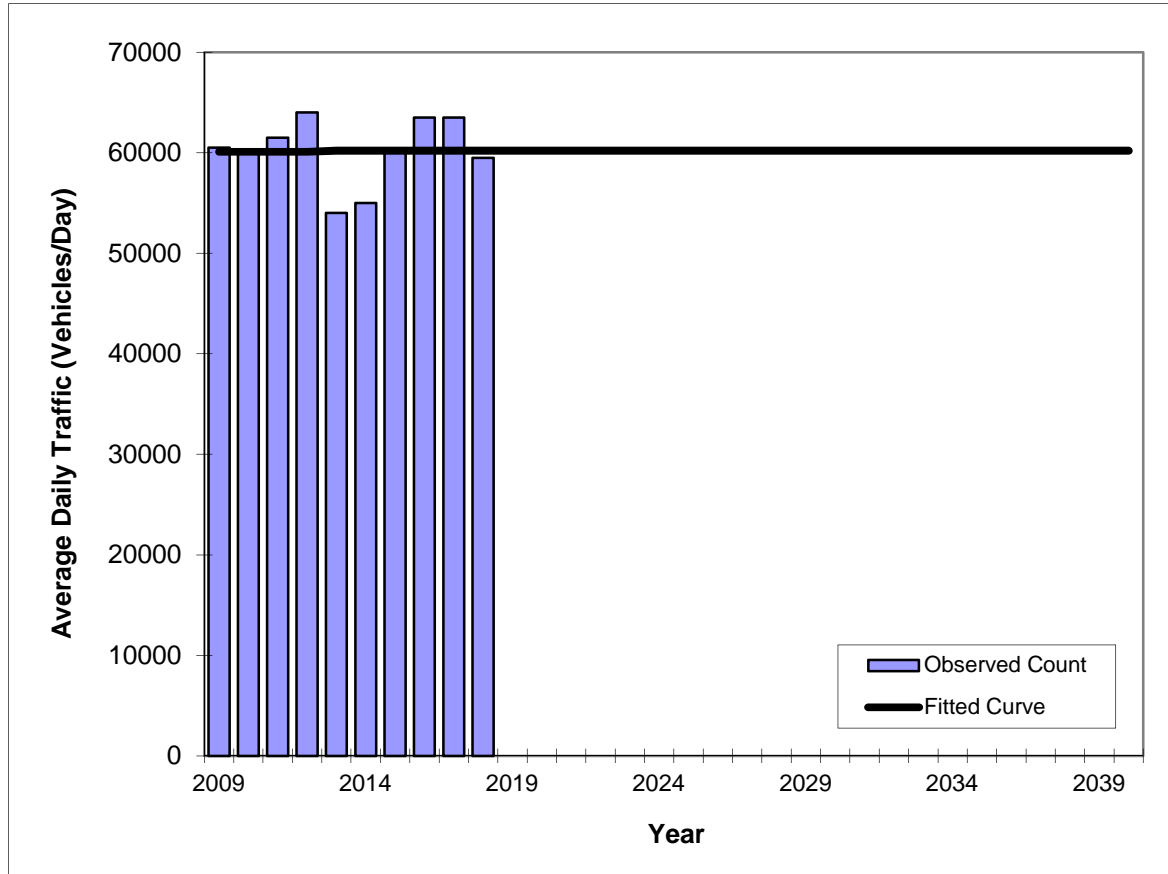
Trend R-squared:	0.54%
Compounded Annual Historic Growth Rate:	0.13%
Printed:	23-Apr-19
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

SR-5/US-1 -- 300 feet south of NE 163rd Street/Sunny Isles Causeway

County:	Miami (87)
Station #:	5219
Highway:	SR-5/US-1



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2009	60500	60100
2010	60000	60100
2011	61500	60100
2012	64000	60100
2013	54000	60200
2014	55000	60200
2015	60000	60200
2016	63500	60200
2017	63500	60200
2018	59500	60200

Trend R-squared:	0.00%
Compounded Annual Historic Growth Rate:	0.02%
Printed:	23-Apr-19
Decaying Exponential Growth Option	

*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8452 - NE 35 AVE, 200 FT N OF NE 166 ST (2011 OFF SYSTEM CYCLE)

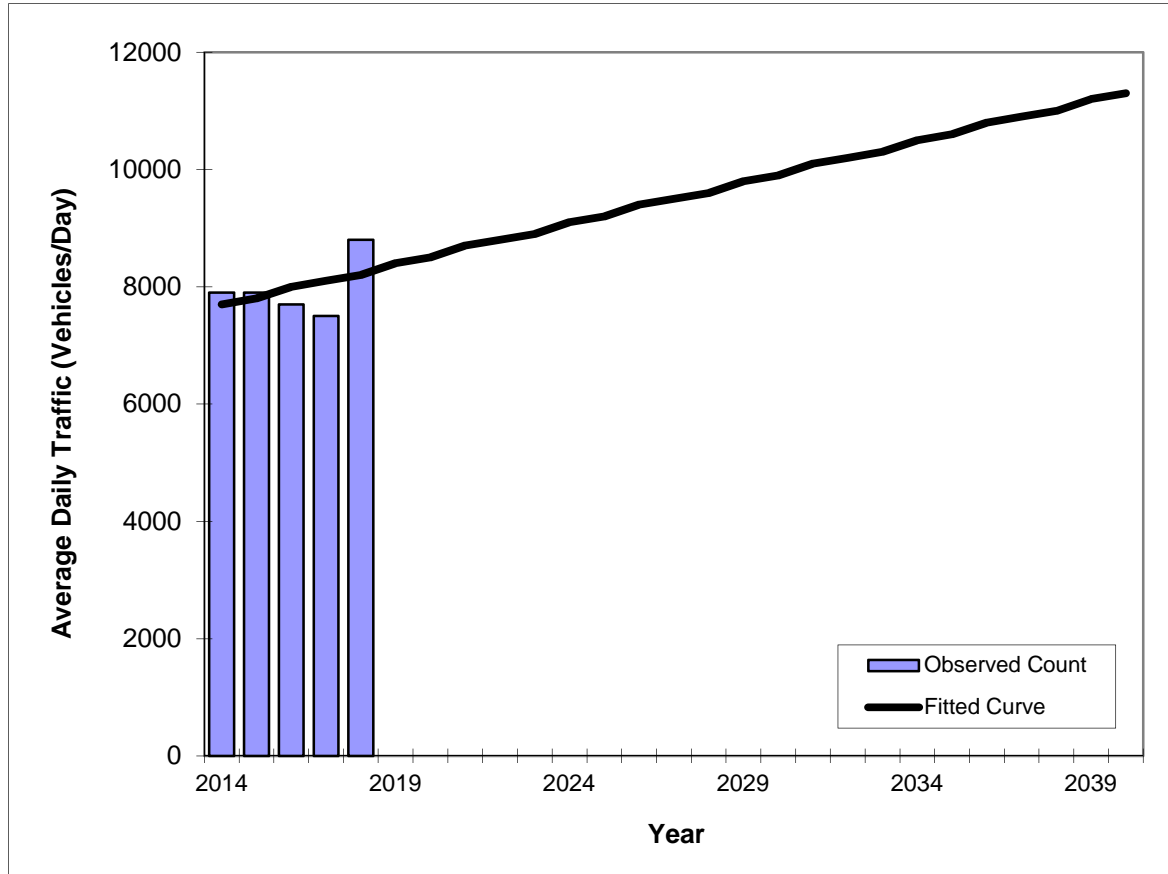
YEAR	AADT	DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
----	-----	-----	-----	-----	-----	-----	-----	-----
2018	8800 C	N	4500	S	4300	9.00	54.30	2.30
2017	7500 T	N	3800	S	3700	9.00	56.10	5.10
2016	7700 S	N	3900	S	3800	9.00	56.10	3.80
2015	7900 F	N	4000	S	3900	9.00	57.40	4.10
2014	7900 C	N	4000	S	3900	9.00	59.30	6.70
2013	7800 F	N	3900	S	3900	9.00	58.90	16.20
2012	7800 C	N	3900	S	3900	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

Traffic Trends

NE 35th Avenue -- 200 feet north of NE 166th Street

County:	Miami (87)
Station #:	8452
Highway:	NE 35th Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	7900	7700
2015	7900	7800
2016	7700	8000
2017	7500	8100
2018	8800	8200

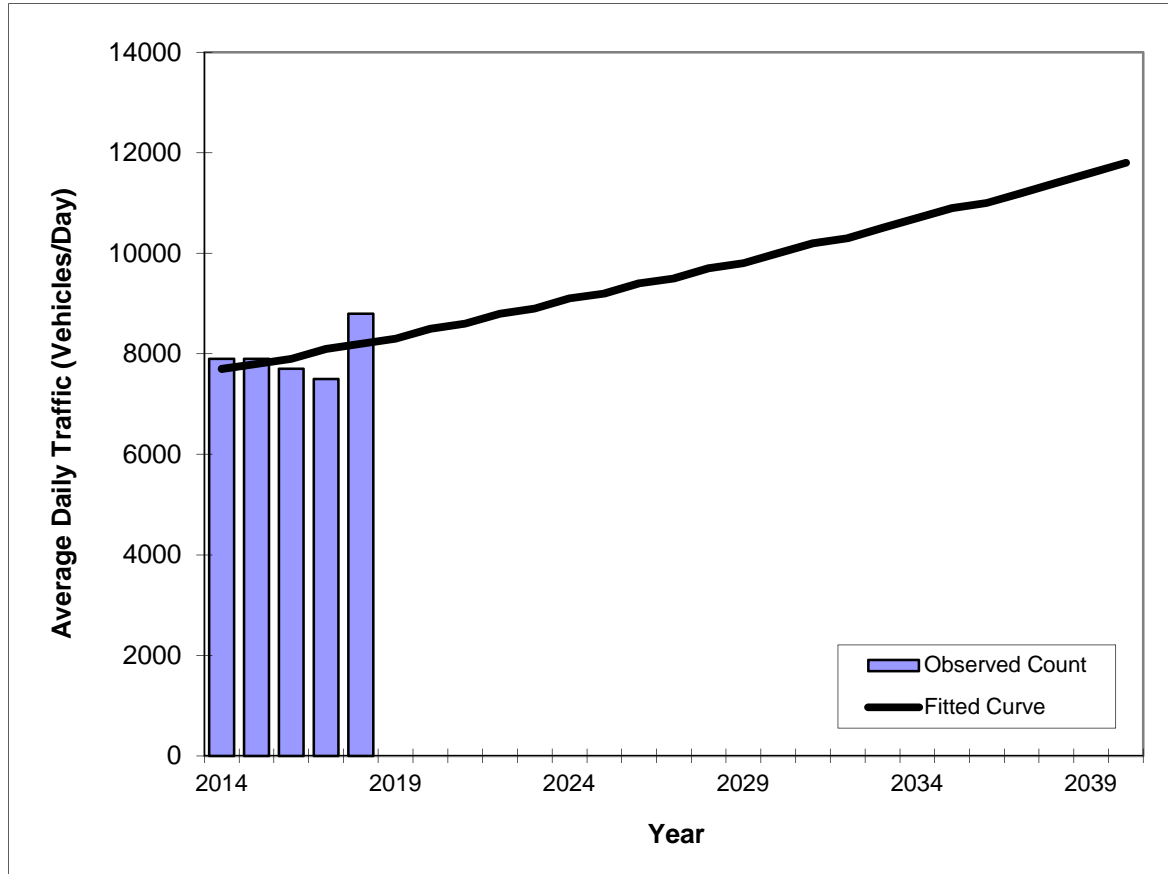
Trend R-squared:	19.76%
Trend Annual Historic Growth Rate:	1.62%
Printed:	23-Apr-19
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends

NE 35th Avenue -- 200 feet north of NE 166th Street

County:	Miami (87)
Station #:	8452
Highway:	NE 35th Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	7900	7700
2015	7900	7800
2016	7700	7900
2017	7500	8100
2018	8800	8200

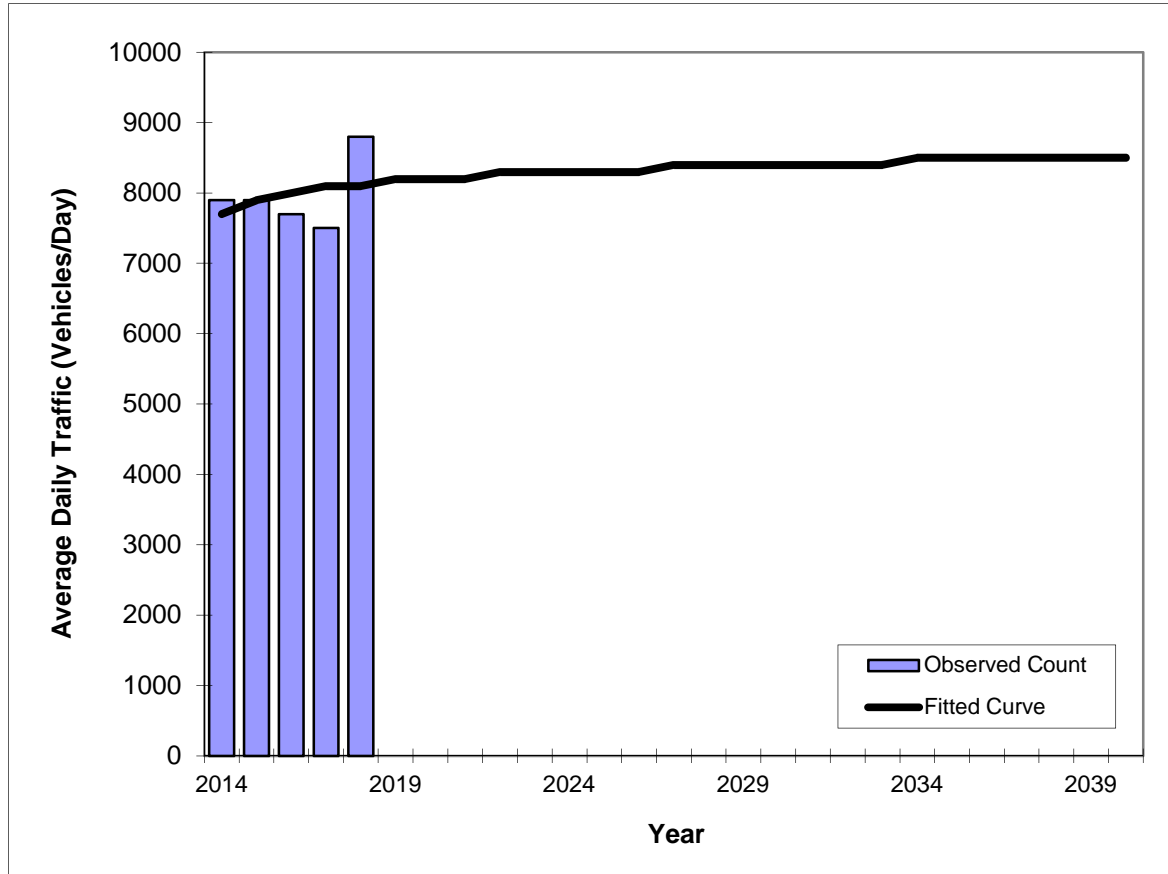
Trend R-squared:	18.12%
Compounded Annual Historic Growth Rate:	1.59%
Printed:	23-Apr-19
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends

NE 35th Avenue -- 200 feet north of NE 166th Street

County:	Miami (87)
Station #:	8452
Highway:	NE 35th Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	7900	7700
2015	7900	7900
2016	7700	8000
2017	7500	8100
2018	8800	8100

Trend R-squared:	9.35%
Compounded Annual Historic Growth Rate:	1.27%
Printed:	23-Apr-19
Decaying Exponential Growth Option	

*Axle-Adjusted

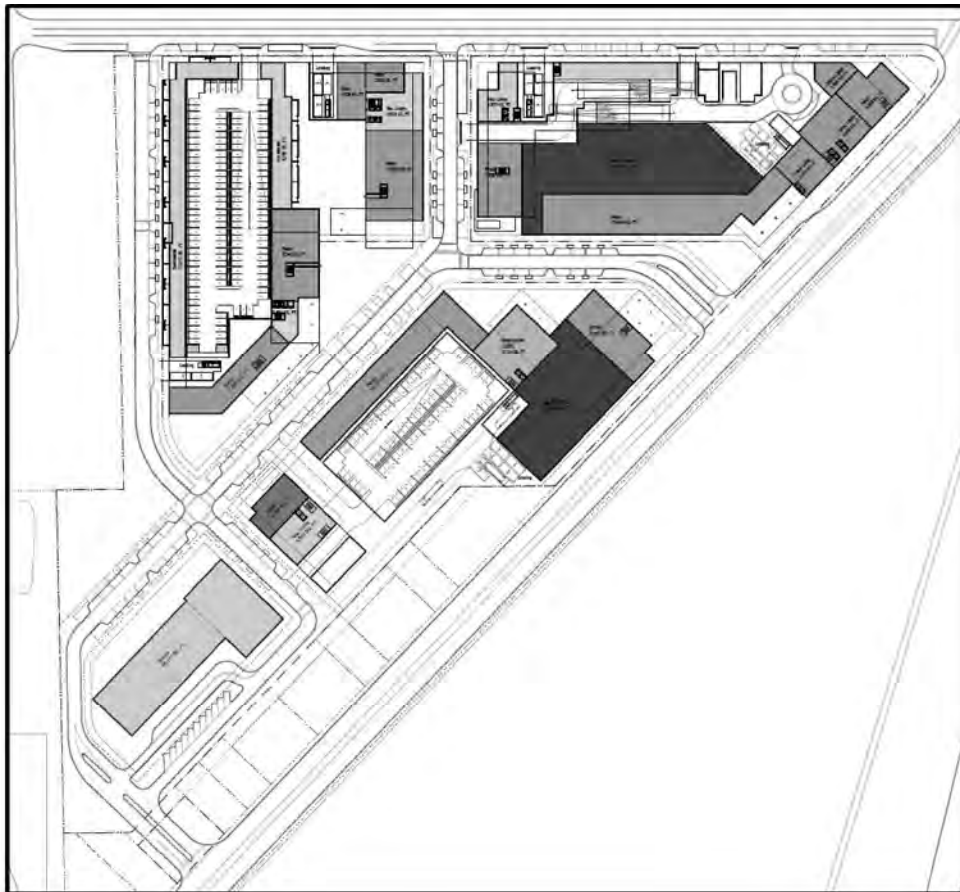
Appendix E

Committed Development Traffic



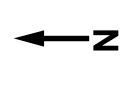
*Traffic Impact Analysis for
Submittal to the
City of North Miami Beach*

15780 West Dixie Highway
North Miami Beach, Florida



Kimley»»Horn

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Revised May 2018
March 2018
043932000



- Legend**
- Study Roadway
 - Study Intersection
 - XX A.M. Peak Hour Project Trip Assignment

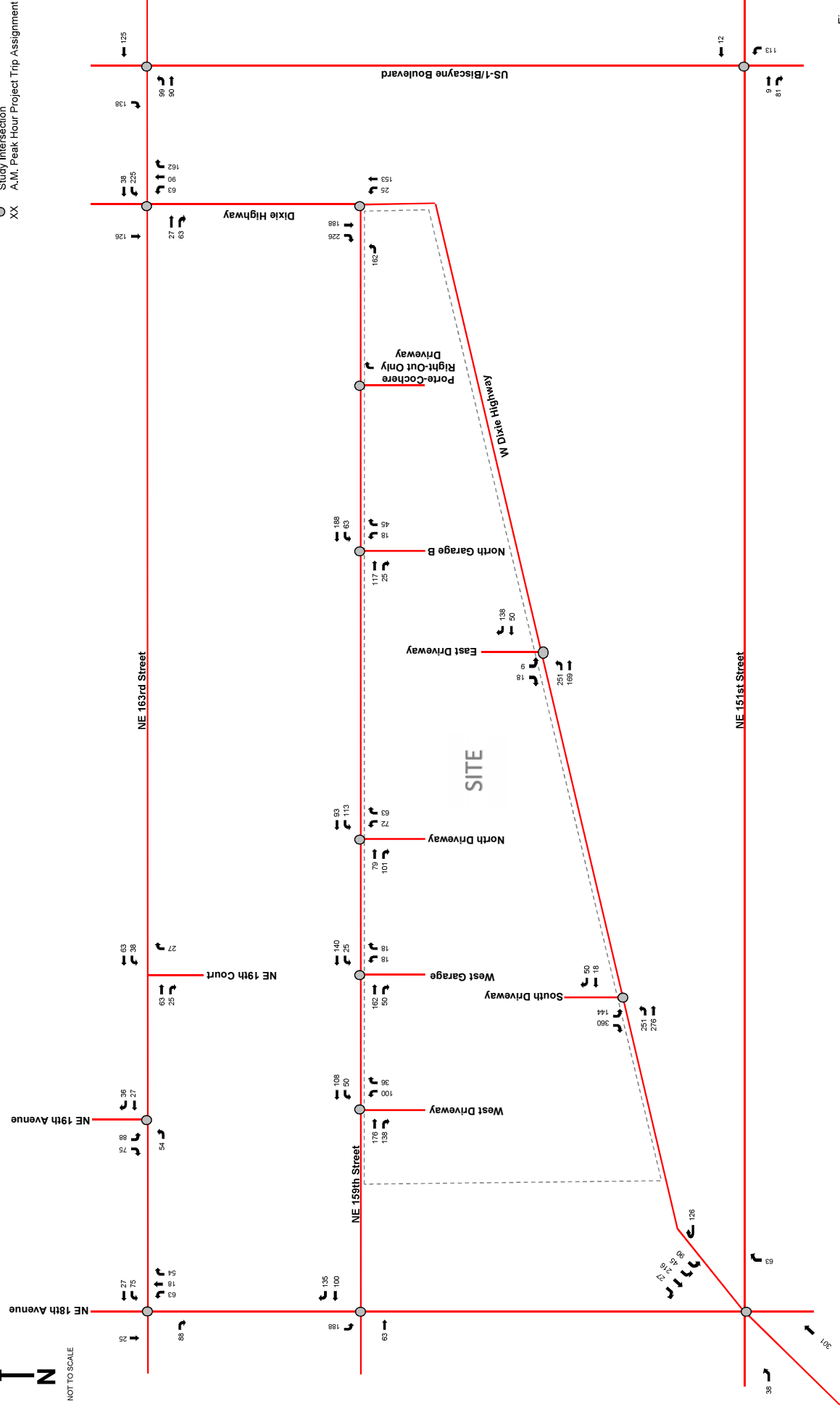
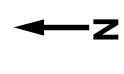


Figure 9
 A.M. Peak Hour Net New Trip Assignment
 15780 West Dixie Highway
 North Miami Beach, Florida



- Legend**
- Study Roadway
 - Study Intersection
 - XX P.M. Peak Hour Project Trip Assignment

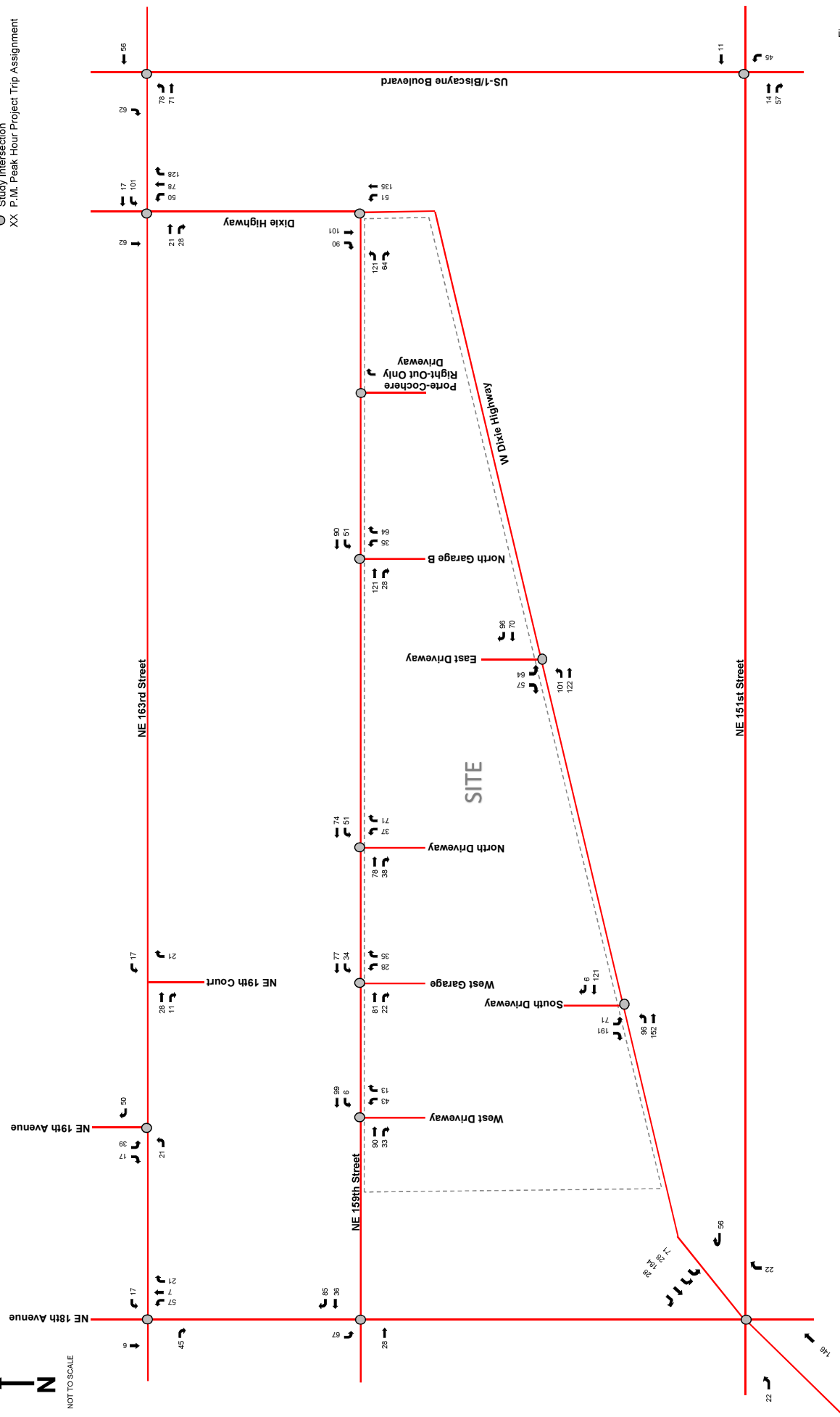


Figure 11
P.M. Peak Hour Net New Trip Assignment
15780 West Dixie Highway
North Miami Beach, Florida



Traffic Impact Analysis

Uptown Biscayne North Miami Beach, Florida



Kimley»»Horn

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Updated October 2017
043745000

Legend

- Study Roadway
- Study Intersection
- XX A.M. Peak Hour Project Trips
- (XX) P.M. Peak Hour Project Trips

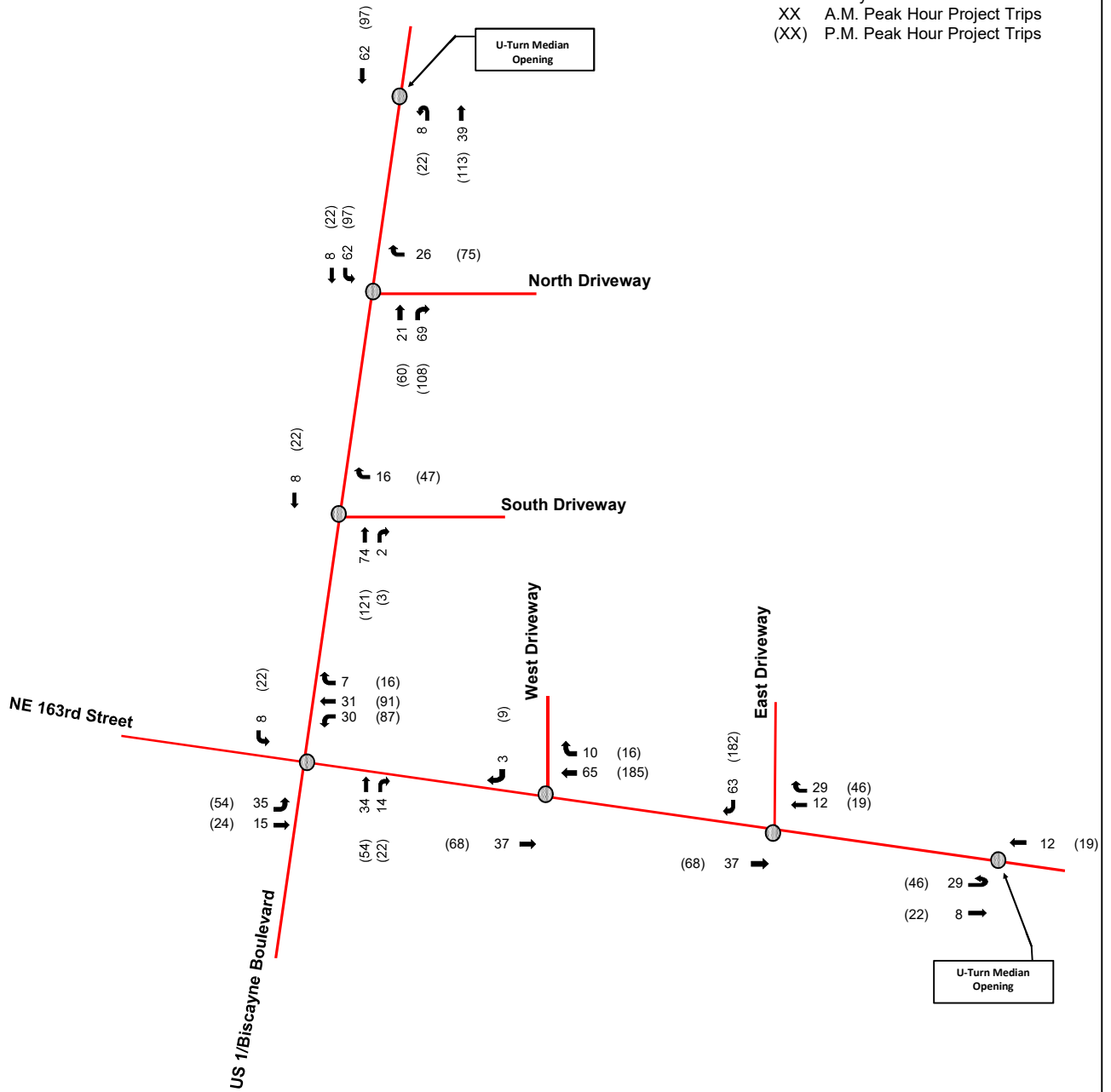


Figure 13
 Project Trip Assignment - Scenario 3
 A.M. and P.M. Peak Hours
 Uptown Biscayne
 North Miami Beach, Florida

Legend

- Study Roadway
- Study Intersection
- XX A.M. Peak Hour Pass-By Trips
- (XX) P.M. Peak Hour Pass-By Trips

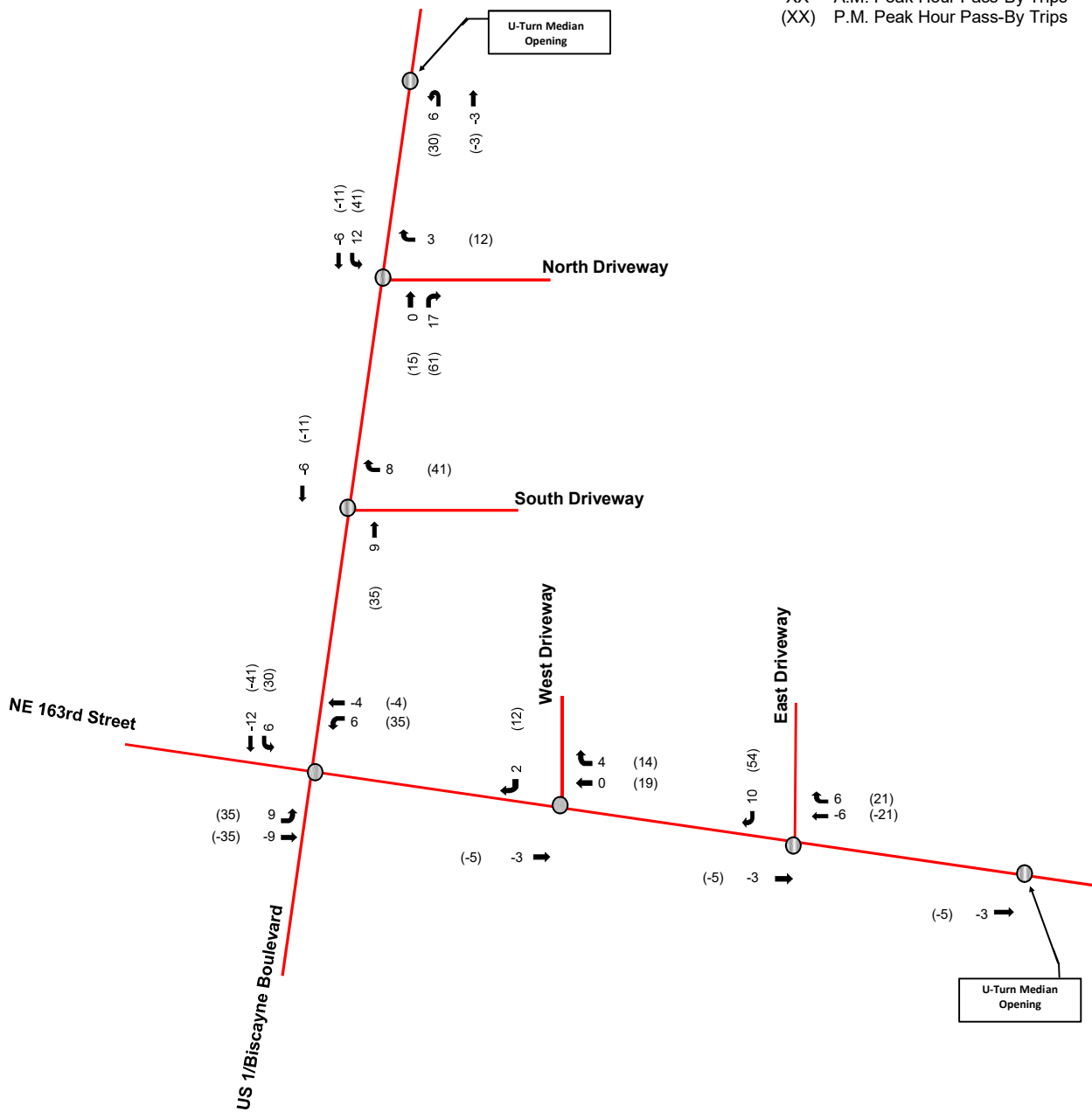


Figure 15
 Pass-By Trip Assignment - Scenario 3
 A.M. and P.M. Peak Hours
 Uptown Biscayne
 North Miami Beach, Florida

Appendix F

Volume Development Worksheets

No Roadway Improvements

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and Biscayne Boulevard/US 1
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.99
 PM PEAK HOUR FACTOR: 0.97

"AM EXISTING TRAFFIC"																	
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
AM Raw Turning Movements	218	1,142	280		397	971	553		224	980	464		438	1,393	433		
Peak Season Correction Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	
AM EXISTING CONDITIONS		225	1,176	288		409	1,000	570		231	1,009	478		451	1,435	446	
"PM EXISTING TRAFFIC"																	
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
PM Raw Turning Movements		304	1,032	409		463	1,258	781		460	1,357	588		459	1,298	433	
Peak Season Correction Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	
PM EXISTING CONDITIONS		313	1,063	421		477	1,296	804		474	1,398	606		473	1,337	446	
"AM BACKGROUND TRAFFIC"																	
TECO	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Uptown Biscayne		99	90			30	31	7			34	14		8		138	
		35	15														
TOTAL "VESTED" TRAFFIC		134	105	0		30	156	7		0	34	14		8	0	138	
Years To Buildout	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
Yearly Growth Rate	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	
AM BACKGROUND TRAFFIC GROWTH		32	165	40		57	140	80		32	142	67		63	201	63	
AM NON-PROJECT TRAFFIC		391	1,446	328		496	1,296	657		263	1,185	559		522	1,636	647	
"PM BACKGROUND TRAFFIC"																	
TECO	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Uptown Biscayne		78	71			87	91	16			54	22		22		62	
		54	24														
TOTAL "VESTED" TRAFFIC		132	95	0		87	147	16		0	54	22		22	0	62	
Years To Buildout	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
Yearly Growth Rate	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	
PM BACKGROUND TRAFFIC GROWTH		44	149	59		67	182	113		66	196	85		66	188	63	
PM NON-PROJECT TRAFFIC		489	1,307	480		631	1,625	933		540	1,648	713		561	1,525	571	
"AM PROJECT DISTRIBUTION"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																
	Exiting																
Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering			21.0%									32.0%		22.0%		
	Exiting					32.0%	21.0%	22.0%									
"PM PROJECT DISTRIBUTION"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering							-51.0%									
	Exiting							51.0%									
Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering			21.0%									32.0%		22.0%		
	Exiting					32.0%	21.0%	22.0%									
"AM PROJECT TRAFFIC"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trips	Pass - By																
	Valet																
	Net New			76			151	100	104				116		80		
AM TOTAL PROJECT TRAFFIC		0	76	0		151	100	104		0	0	116		80	0	0	
AM TOTAL TRAFFIC		391	1,522	328		647	1,396	761		263	1,185	675		602	1,636	647	
"PM PROJECT TRAFFIC"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trips	Pass - By							-12									
	Valet																
	Net New			71			110	72	75				108		74		
PM TOTAL PROJECT TRAFFIC		0	71	0		110	60	75		0	0	108		74	0	0	
PM TOTAL TRAFFIC		489	1,378	480		741	1,685	1,008		540	1,648	821		635	1,525	571	

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and NE 26th Avenue
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.96
 PM PEAK HOUR FACTOR: 0.94

"AM EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
AM Raw Turning Movements	1	32	2,016	0		0	1,797	37	8	20	0	7		37	69	0
Peak Season Correction Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030

AM EXISTING CONDITIONS	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
	1	33	2,076	0		0	1,851	38	8	21	0	7		38	71	0

"PM EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
PM Raw Turning Movements	7	114	1,930	0		0	2,165	51	13	47	0	19		50	65	0
Peak Season Correction Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030

PM EXISTING CONDITIONS	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
	7	117	1,988	0		0	2,230	53	13	48	0	20		52	67	0

"AM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
TECO			90				125									
Uptown Biscayne			8				12									
TOTAL "VESTED" TRAFFIC	0	0	98	0		0	137	0	0	0	0	0		0	0	0

Years To Buildout	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Yearly Growth Rate	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%
AM BACKGROUND TRAFFIC GROWTH	0	5	291	0		0	260	5	1	3	0	1		5	10	0

AM NON-PROJECT TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
	1	38	2,465	0		0	2,248	43	9	24	0	8		43	81	0

"PM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
TECO			71				56									
Uptown Biscayne			22				19									
TOTAL "VESTED" TRAFFIC	0	0	93	0		0	75	0	0	0	0	0		0	0	0

Years To Buildout	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Yearly Growth Rate	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%
PM BACKGROUND TRAFFIC GROWTH	1	16	279	0		0	313	7	2	7	0	3		7	9	0

PM NON-PROJECT TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
	8	133	2,360	0		0	2,618	60	15	55	0	23		59	76	0

"AM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
LAND USE	TYPE																
Pass-By Distribution	Entering																
	Exiting																
Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering			75.0%													
	Exiting						75.0%										

"PM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
LAND USE	TYPE																
Pass-By Distribution	Entering							-51.0%									
	Exiting							51.0%									
Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering			75.0%													
	Exiting						75.0%										

"AM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
LAND USE	TYPE																
AM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By																
	Valet																
	Net New			272				355									
AM TOTAL PROJECT TRAFFIC		0	0	272	0		0	355	0	0	0	0	0		0	0	0

AM TOTAL TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
	1	38	2,737	0		0	2,603	43	9	24	0	8		43	81	0

"PM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
LAND USE	TYPE																
PM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By							-12									
	Valet																
	Net New			253				257									
PM TOTAL PROJECT TRAFFIC		0	0	253	0		0	245	0	0	0	0	0		0	0	0

PM TOTAL TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SR2
	8	133	2,613	0		0	2,863	60	15	55	0	23		59	76	0

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and NE 28th Avenue
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.92
 PM PEAK HOUR FACTOR: 0.93

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
AM Raw Turning Movements		22	8	2,032	0		1,743	15	4	16	48	11	1		2	18	5		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS		23	8	2,093	0		1,795	15	4	16	49	11	1		2	19	5		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
PM Raw Turning Movements		7	21	1,947	0		2,228	8	8	14	33	19	2		11	16	5		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS		7	22	2,005	0		2,295	8	8	14	34	20	2		12	16	5		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
TECO				90			125												
Uptown Biscayne				8			12												
TOTAL "VESTED" TRAFFIC		0	0	98	0		137	0	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH		3	1	294	0		252	2	1	2	7	2	0		0	3	1		
AM NON-PROJECT TRAFFIC		26	9	2,485	0		2,184	17	5	18	56	13	1		2	22	6		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
TECO				71			56												
Uptown Biscayne				22			19												
TOTAL "VESTED" TRAFFIC		0	0	93	0		75	0	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH		1	3	281	0		322	1	1	2	5	3	0		2	2	1		
PM NON-PROJECT TRAFFIC		8	25	2,379	0		2,692	9	9	16	39	23	2		14	18	6		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering								-51.0%										
	Exiting								51.0%										
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New			272				355											
AM TOTAL PROJECT TRAFFIC		0	0	272	0		355	0	0	0	0	0	0		0	0	0		
AM TOTAL TRAFFIC		26	9	2,757	0		2,539	17	5	18	56	13	1		2	22	6		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By								-12										
	Valet																		
	Net New			253				257											
PM TOTAL PROJECT TRAFFIC		0	0	253	0		245	0	0	0	0	0	0		0	0	0		
PM TOTAL TRAFFIC		8	25	2,632	0		2,937	9	9	16	39	23	2		14	18	6		

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and NE 2900 Block
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.91
 PM PEAK HOUR FACTOR: 0.95

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
AM Raw Turning Movements		17	17	2,000	0		1,755	9	3	7	3	8	0		1	2	1		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS		18	18	2,060	0		1,808	9	3	7	3	8	0		1	2	1		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
PM Raw Turning Movements		47	54	1,872	0		2,135	20	19	28	74	21	2		14	33	4		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS		48	56	1,928	0		2,199	21	20	29	76	22	2		14	34	4		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
TECO				90			125												
Uptown Biscayne				8			12												
TOTAL "VESTED" TRAFFIC		0	0	98	0		137	0	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH		3	3	289	0		254	1	0	1	0	1	0		0	0	0		
AM NON-PROJECT TRAFFIC		21	21	2,447	0		2,199	10	3	8	3	9	0		1	2	1		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
TECO				71			56												
Uptown Biscayne				22			19												
TOTAL "VESTED" TRAFFIC		0	0	93	0		75	0	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH		7	8	270	0		308	3	3	4	11	3	0		2	5	1		
PM NON-PROJECT TRAFFIC		55	64	2,291	0		2,582	24	23	33	87	25	2		16	39	5		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering								-51.0%										
	Exiting								51.0%										
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New			272				355											
AM TOTAL PROJECT TRAFFIC				0	0	272	0		355	0	0	0	0	0		0	0	0	
AM TOTAL TRAFFIC		21	21	2,719	0		2,554	10	3	8	3	9	0		1	2	1		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By								-12										
	Valet																		
	Net New			253				257											
PM TOTAL PROJECT TRAFFIC				0	0	253	0		245	0	0	0	0	0		0	0	0	
PM TOTAL TRAFFIC		55	64	2,544	0		2,827	24	23	33	87	25	2		16	39	5		

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and NE 34th Avenue
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.94
 PM PEAK HOUR FACTOR: 0.93

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R		
AM Raw Turning Movements		6	45	1,942	16	12	3	1,762	8	17	5	0	4	4	23	5	7		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS		6	46	2,000	16	12	3	1,815	8	18	5	0	4	4	24	5	7		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R		
PM Raw Turning Movements		22	4	1,877	15	21	8	2,111	21	0	28	1	6	17	46	15	1		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS		23	4	1,933	15	22	8	2,174	22	0	29	1	6	18	47	15	1		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R		
TECO				90				125											
Uptown Biscayne				8				12											
TOTAL "VESTED" TRAFFIC		0	0	98	0	0	0	137	0	0	0	0	0	0	0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH		1	6	281	2	2	0	255	1	3	1	0	1	1	3	1	1		
AM NON-PROJECT TRAFFIC		7	52	2,379	18	14	3	2,207	9	21	6	0	5	5	27	6	8		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R		
TECO				71				56											
Uptown Biscayne				22				19											
TOTAL "VESTED" TRAFFIC		0	0	93	0	0	0	75	0	0	0	0	0	0	0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH		3	1	271	2	3	1	305	3	0	4	0	1	3	7	2	0		
PM NON-PROJECT TRAFFIC		26	5	2,297	17	25	9	2,554	25	0	33	1	7	21	54	17	1		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R
Pass-By Distribution	Entering									-51.0%									
	Exiting									51.0%									
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New			272						355									
AM TOTAL PROJECT TRAFFIC		0	0	272	0	0	0	355	0	0	0	0	0	0	0	0	0	0	
AM TOTAL TRAFFIC		7	52	2,651	18	14	3	2,562	9	21	6	0	5	5	27	6	8		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By									-12									
	Valet																		
	Net New			253						257									
PM TOTAL PROJECT TRAFFIC		0	0	253	0	0	0	245	0	0	0	0	0	0	0	0	0	0	
PM TOTAL TRAFFIC		26	5	2,550	17	25	9	2,799	25	0	33	1	7	21	54	17	1		

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and NE 35th Avenue
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.93
 PM PEAK HOUR FACTOR: 0.95

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2			
AM Raw Turning Movements			345	1,615	0		1,374	29	101		0	0	0		149	424	11			
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030			
AM EXISTING CONDITIONS			355	1,663	0		1,415	30	104		0	0	0		153	437	11			
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2			
PM Raw Turning Movements			499	1,421	0		1,862	17	135		0	0	0		212	283	7			
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030			
PM EXISTING CONDITIONS			514	1,464	0		1,918	18	139		0	0	0		219	291	7			
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2			
TECO				90			125													
Uptown Biscayne				8			12													
TOTAL "VESTED" TRAFFIC			0	98	0		137	0	0		0	0	0		0	0	0			
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12			
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%			
AM BACKGROUND TRAFFIC GROWTH			50	233	0		199	4	15		0	0	0		21	61	2			
AM NON-PROJECT TRAFFIC			405	1,994	0		1,751	34	119		0	0	0		174	498	13			
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2			
TECO				71			56													
Uptown Biscayne				22			19													
TOTAL "VESTED" TRAFFIC			0	93	0		75	0	0		0	0	0		0	0	0			
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12			
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%			
PM BACKGROUND TRAFFIC GROWTH			72	205	0		269	3	19		0	0	0		31	41	1			
PM NON-PROJECT TRAFFIC			586	1,762	0		2,262	21	158		0	0	0		250	332	8			
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2	
Pass-By Distribution	Entering																			
	Exiting																			
Valet Distribution	Entering																			
	Exiting																			
Net New Distribution	Entering		75.0%							6.0%						21.0%		37.0%		
	Exiting							38.0%												
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2	
Pass-By Distribution	Entering		48.0%	-48.0%					-48.0%		19.0%						-1.0%		-3.0%	
	Exiting								29.0%								49.0%		22.0%	
Valet Distribution	Entering																			
	Exiting																			
Net New Distribution	Entering		75.0%							6.0%										
	Exiting							38.0%												
AM TRAFFIC DIVERSIONS																				
Project Trips	Pass - By																			
	Valet																			
	Net New		272					180		22						99		175		
AM TOTAL PROJECT TRAFFIC			272	0	0		180	0	22		0	0	0		99	175	0			
AM TOTAL TRAFFIC			677	1,994	0		1,931	34	141		0	0	0		273	673	13			
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2	
AM TRAFFIC DIVERSIONS																				
Project Trips	Pass - By		98	-98					-45		39						88		33	
	Valet																			
	Net New		253					130		20						72		127		
PM TOTAL PROJECT TRAFFIC			351	-98	0		85	0	59		0	0	0		160	160	0			
PM TOTAL TRAFFIC			937	1,664	0		2,347	21	217		0	0	0		410	492	8			

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and Intracoastal Mall Driveway
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.9
 PM PEAK HOUR FACTOR: 0.94

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
AM Raw Turning Movements			0	1,763	0		0	1,468	78		0	0	0	0	0	0	34		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS			0	1,816	0		0	1,512	80		0	0	0	0	0	0	35		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
PM Raw Turning Movements			0	1,619	0		0	1,913	183		0	0	0	0	0	0	126		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS			0	1,668	0		0	1,970	188		0	0	0	0	0	0	130		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO				90				125											
Uptown Biscayne				8				12											
TOTAL "VESTED" TRAFFIC			0	98	0		0	137	0		0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH			0	255	0		0	212	11		0	0	0		0	0	5		
AM NON-PROJECT TRAFFIC			0	2,169	0		0	1,861	91		0	0	0		0	0	40		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO				71				56											
Uptown Biscayne				22				19											
TOTAL "VESTED" TRAFFIC			0	93	0		0	75	0		0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH			0	234	0		0	276	26		0	0	0		0	0	18		
PM NON-PROJECT TRAFFIC			0	1,995	0		0	2,321	214		0	0	0		0	0	148		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering							6.0%	15.0%										
	Exiting			21.0%															38.0%
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering			-49.0%						-29.0%	29.0%								
	Exiting			49.0%															29.0%
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering							6.0%	15.0%										
	Exiting			21.0%															38.0%
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New			99					22	55									180
AM TOTAL PROJECT TRAFFIC					0	99	0		0	22	55		0	0	0		0	0	180
AM TOTAL TRAFFIC					0	2,268	0		0	1,883	146		0	0	0		0	0	220
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By			-10						-59	59								53
	Valet																		
	Net New			72					20	50									130
PM TOTAL PROJECT TRAFFIC					0	62	0		0	-39	109		0	0	0		0	0	183
PM TOTAL TRAFFIC					0	2,057	0		0	2,282	323		0	0	0		0	0	331

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: NE 164th Street and NE 35th Avenue
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.93
 PM PEAK HOUR FACTOR: 0.9

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
AM Raw Turning Movements			0	0	48		57	3	23		40	213	95		16	469	3		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS			0	0	49		59	3	24		41	219	98		16	483	3		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
PM Raw Turning Movements			3	6	38		211	1	76		57	351	224		34	236	1		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS			3	6	39		217	1	78		59	362	231		35	243	1		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO																			
Uptown Biscayne																			
TOTAL "VESTED" TRAFFIC			0	0	0		0	0	0		0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH			0	0	7		8	0	3		6	31	14		2	68	0		
AM NON-PROJECT TRAFFIC			0	0	56		67	3	27		47	250	112		18	551	3		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO																			
Uptown Biscayne																			
TOTAL "VESTED" TRAFFIC			0	0	0		0	0	0		0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH			0	1	5		30	0	11		8	51	32		5	34	0		
PM NON-PROJECT TRAFFIC			3	7	44		247	1	89		67	413	263		40	277	1		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering													81.0%		4.0%			
	Exiting							58.0%		2.0%									
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering														67.0%		4.0%	-4.0%	
	Exiting								71.0%										
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering													81.0%		4.0%			
	Exiting							58.0%		2.0%									
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New							274		10					294		15		
AM TOTAL PROJECT TRAFFIC			0	0	0			274	0	10		0	0	294		15	0	0	
AM TOTAL TRAFFIC			0	0	56			341	3	37		47	250	406		33	551	3	
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By								130						137		9	-9	
	Valet																		
	Net New							199		7					273		13		
PM TOTAL PROJECT TRAFFIC			0	0	0			329	0	7		0	0	410		22	-9	0	
PM TOTAL TRAFFIC			3	7	44			576	1	96		67	413	673		62	268	1	

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: Intracoastal Mall Drive North/NE 165th Street and NE 35th Avenue
 COUNT DATE: October 10, 2019
 AM PEAK HOUR FACTOR: 0.92
 PM PEAK HOUR FACTOR: 0.91

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
AM Raw Turning Movements		0	0	0	0	7	0	2	2	0	170	10	0	476	0				
Peak Season Correction Factor		1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010		
AM EXISTING CONDITIONS		0	0	0	0	7	0	2	2	0	172	10	0	481	0				
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
PM Raw Turning Movements			0	0	0	12	0	3	2	2	459	23	0	315	0				
Peak Season Correction Factor		1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010		
PM EXISTING CONDITIONS		0	0	0	0	12	0	3	2	2	464	23	0	318	0				
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO																			
Uptown Biscayne																			
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH		0	0	0	0	1	0	0	0	0	24	1	0	67	0				
AM NON-PROJECT TRAFFIC		0	0	0	0	8	0	2	2	0	196	11	0	548	0				
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO																			
Uptown Biscayne																			
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH		0	0	0	0	2	0	0	0	0	65	3	0	45	0				
PM NON-PROJECT TRAFFIC		0	0	0	0	14	0	3	2	2	529	26	0	363	0				
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering																	4.0%	
	Exiting									2.0%		2.0%							
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering																	4.0%	
	Exiting									2.0%		2.0%							
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New									9				10				15	
AM TOTAL PROJECT TRAFFIC			0	0	0			0	0	9	0	0	10	0		0	15	0	
AM TOTAL TRAFFIC			0	0	0			8	0	11	2	0	206	11		0	563	0	
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New									7			7					13	
PM TOTAL PROJECT TRAFFIC			0	0	0			0	0	7	0	0	7	0		0	13	0	
PM TOTAL TRAFFIC			0	0	0			14	0	10	2	2	536	26		0	376	0	

With Improvements

TRAFFIC VOLUMES WITH PROPOSED IMPROVEMENTS AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and Biscayne Boulevard/US 1
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.99
 PM PEAK HOUR FACTOR: 0.97

"AM EXISTING TRAFFIC"																	
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
AM Raw Turning Movements		218	1,142	280		397	971	553		224	980	464		438	1,393	433	
Peak Season Correction Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	
AM EXISTING CONDITIONS		225	1,176	288		409	1,000	570		231	1,009	478		451	1,435	446	
"PM EXISTING TRAFFIC"																	
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
PM Raw Turning Movements		304	1,032	409		463	1,258	781		460	1,357	588		459	1,298	433	
Peak Season Correction Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	
PM EXISTING CONDITIONS		313	1,063	421		477	1,296	804		474	1,398	606		473	1,337	446	
"AM BACKGROUND TRAFFIC"																	
TECO	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Uptown Biscayne		99	90			30	31	7			34	14		8		138	
		35	15														
TOTAL "VESTED" TRAFFIC		134	105	0		30	156	7		0	34	14		8	0	138	
Years To Buildout	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
Yearly Growth Rate	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	
AM BACKGROUND TRAFFIC GROWTH		32	165	40		57	140	80		32	142	67		63	201	63	
AM NON-PROJECT TRAFFIC		391	1,446	328		496	1,296	657		263	1,185	559		522	1,636	647	
"PM BACKGROUND TRAFFIC"																	
TECO	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Uptown Biscayne		78	71			87	91	16			54	22		22		62	
		54	24														
TOTAL "VESTED" TRAFFIC		132	95	0		87	147	16		0	54	22		22	0	62	
Years To Buildout	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
Yearly Growth Rate	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	
PM BACKGROUND TRAFFIC GROWTH		44	149	59		67	182	113		66	196	85		66	188	63	
PM NON-PROJECT TRAFFIC		489	1,307	480		631	1,625	933		540	1,648	713		561	1,525	571	
"AM PROJECT DISTRIBUTION"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																
	Exiting																
Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering			21.0%									32.0%		22.0%		
	Exiting					32.0%	21.0%	22.0%									
"PM PROJECT DISTRIBUTION"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering							-51.0%									
	Exiting							51.0%									
Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering			21.0%									32.0%		22.0%		
	Exiting					32.0%	21.0%	22.0%									
"AM PROJECT TRAFFIC"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By																
	Valet																
	Net New			69			141	93	97				106		73		
AM TOTAL PROJECT TRAFFIC		0	69	0		141	93	97		0	0	106		73	0	0	
AM TOTAL TRAFFIC		391	1,515	328		637	1,389	754		263	1,185	665		595	1,636	647	
"PM PROJECT TRAFFIC"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By							-11									
	Valet																
	Net New			62			97	64	67				94		64		
PM TOTAL PROJECT TRAFFIC		0	62	0		97	53	67		0	0	94		64	0	0	
PM TOTAL TRAFFIC		489	1,369	480		728	1,678	1,000		540	1,648	807		625	1,525	571	

TRAFFIC VOLUMES WITH PROPOSED IMPROVEMENTS AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and NE 26th Avenue
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.96
 PM PEAK HOUR FACTOR: 0.94

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
AM Raw Turning Movements		1	32	2,016	0	0	0	1,797	37	8	20	0	7		37	69	0		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS		1	33	2,076	0	0	0	1,851	38	8	21	0	7		38	71	0		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
PM Raw Turning Movements		7	114	1,930	0	0	0	2,165	51	13	47	0	19		50	65	0		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS		7	117	1,988	0	0	0	2,230	53	13	48	0	20		52	67	0		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
TECO				90				125											
Uptown Biscayne				8				12											
TOTAL "VESTED" TRAFFIC		0	0	98	0	0	0	137	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH		0	5	291	0	0	0	260	5	1	3	0	1		5	10	0		
AM NON-PROJECT TRAFFIC		1	38	2,465	0	0	0	2,248	43	9	24	0	8		43	81	0		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
TECO				71				56											
Uptown Biscayne				22				19											
TOTAL "VESTED" TRAFFIC		0	0	93	0	0	0	75	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH		1	16	279	0	0	0	313	7	2	7	0	3		7	9	0		
PM NON-PROJECT TRAFFIC		8	133	2,360	0	0	0	2,618	60	15	55	0	23		59	76	0		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering									-51.0%									
	Exiting									51.0%									
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New			248				331											
AM TOTAL PROJECT TRAFFIC				0	0	248	0	0	0	331	0	0	0	0	0	0	0	0	0
AM TOTAL TRAFFIC		1	38	2,713	0	0	0	2,579	43	9	24	0	8		43	81	0		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By									-11									
	Valet																		
	Net New			220				228											
PM TOTAL PROJECT TRAFFIC				0	0	220	0	0	0	217	0	0	0	0	0	0	0	0	0
PM TOTAL TRAFFIC		8	133	2,580	0	0	0	2,835	60	15	55	0	23		59	76	0		

TRAFFIC VOLUMES WITH PROPOSED IMPROVEMENTS AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and NE 28th Avenue
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.92
 PM PEAK HOUR FACTOR: 0.93

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
AM Raw Turning Movements		22	8	2,032	0		1,743	15	4	16	48	11	1		2	18	5		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS		23	8	2,093	0		1,795	15	4	16	49	11	1		2	19	5		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
PM Raw Turning Movements		7	21	1,947	0		2,228	8	8	14	33	19	2		11	16	5		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS		7	22	2,005	0		2,295	8	8	14	34	20	2		12	16	5		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
TECO				90			125												
Uptown Biscayne				8			12												
TOTAL "VESTED" TRAFFIC		0	0	98	0		137	0	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH		3	1	294	0		252	2	1	2	7	2	0		0	3	1		
AM NON-PROJECT TRAFFIC		26	9	2,485	0		2,184	17	5	18	56	13	1		2	22	6		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
TECO				71			56												
Uptown Biscayne				22			19												
TOTAL "VESTED" TRAFFIC		0	0	93	0		75	0	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH		1	3	281	0		322	1	1	2	5	3	0		2	2	1		
PM NON-PROJECT TRAFFIC		8	25	2,379	0		2,692	9	9	16	39	23	2		14	18	6		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering								-51.0%										
	Exiting								51.0%										
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New			248				331											
AM TOTAL PROJECT TRAFFIC				0	0	248	0		331	0	0	0	0	0		0	0	0	
AM TOTAL TRAFFIC		26	9	2,733	0		2,515	17	5	18	56	13	1		2	22	6		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By								-11										
	Valet																		
	Net New			220				228											
PM TOTAL PROJECT TRAFFIC				0	0	220	0		217	0	0	0	0	0		0	0	0	
PM TOTAL TRAFFIC		8	25	2,599	0		2,909	9	9	16	39	23	2		14	18	6		

TRAFFIC VOLUMES WITH PROPOSED IMPROVEMENTS AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and NE 2900 Block
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.91
 PM PEAK HOUR FACTOR: 0.95

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
AM Raw Turning Movements		17	17	2,000	0		1,755	9	3	7	3	8	0		1	2	1		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS		18	18	2,060	0		1,808	9	3	7	3	8	0		1	2	1		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
PM Raw Turning Movements		47	54	1,872	0		2,135	20	19	28	74	21	2		14	33	4		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS		48	56	1,928	0		2,199	21	20	29	76	22	2		14	34	4		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
TECO				90			125												
Uptown Biscayne				8			12												
TOTAL "VESTED" TRAFFIC		0	0	98	0		137	0	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH		3	3	289	0		254	1	0	1	0	1	0		0	0	0		
AM NON-PROJECT TRAFFIC		21	21	2,447	0		2,199	10	3	8	3	9	0		1	2	1		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2		
TECO				71			56												
Uptown Biscayne				22			19												
TOTAL "VESTED" TRAFFIC		0	0	93	0		75	0	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH		7	8	270	0		308	3	3	4	11	3	0		2	5	1		
PM NON-PROJECT TRAFFIC		55	64	2,291	0		2,582	24	23	33	87	25	2		16	39	5		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering								-51.0%										
	Exiting								51.0%										
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New			248				331											
AM TOTAL PROJECT TRAFFIC				0	0	248	0		331	0	0	0	0	0		0	0	0	
AM TOTAL TRAFFIC		21	21	2,695	0		2,530	10	3	8	3	9	0		1	2	1		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	WB2U	WB2L	WB2T	WB2R	SBU	SBL	SBR	SBR2
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By								-11										
	Valet																		
	Net New			220				228											
PM TOTAL PROJECT TRAFFIC				0	0	220	0		217	0	0	0	0	0		0	0	0	
PM TOTAL TRAFFIC		55	64	2,511	0		2,799	24	23	33	87	25	2		16	39	5		

TRAFFIC VOLUMES WITH PROPOSED IMPROVEMENTS AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and NE 34th Avenue
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.94
 PM PEAK HOUR FACTOR: 0.93

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R		
AM Raw Turning Movements		6	45	1,942	16	12	3	1,762	8	17	5	0	4	4	23	5	7		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS		6	46	2,000	16	12	3	1,815	8	18	5	0	4	4	24	5	7		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R		
PM Raw Turning Movements		22	4	1,877	15	21	8	2,111	21	0	28	1	6	17	46	15	1		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS		23	4	1,933	15	22	8	2,174	22	0	29	1	6	18	47	15	1		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R		
TECO				90				125											
Uptown Biscayne				8				12											
TOTAL "VESTED" TRAFFIC		0	0	98	0	0	0	137	0	0	0	0	0	0	0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH		1	6	281	2	2	0	255	1	3	1	0	1	1	3	1	1		
AM NON-PROJECT TRAFFIC		7	52	2,379	18	14	3	2,207	9	21	6	0	5	5	27	6	8		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R		
TECO				71				56											
Uptown Biscayne				22				19											
TOTAL "VESTED" TRAFFIC		0	0	93	0	0	0	75	0	0	0	0	0	0	0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH		3	1	271	2	3	1	305	3	0	4	0	1	3	7	2	0		
PM NON-PROJECT TRAFFIC		26	5	2,297	17	25	9	2,554	25	0	33	1	7	21	54	17	1		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R
Pass-By Distribution	Entering									-51.0%									
	Exiting									51.0%									
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering			75.0%															
	Exiting							75.0%											
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
AM TOTAL PROJECT TRAFFIC		0	0	248	0	0	0	331	0	0	0	0	0	0	0	0	0	0	
AM TOTAL TRAFFIC		7	52	2,627	18	14	3	2,538	9	21	6	0	5	5	27	6	8		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	WB2U	WB2L	WB2T	WB2R
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By									-11									
	Valet																		
PM TOTAL PROJECT TRAFFIC		0	0	220	0	0	0	217	0	0	0	0	0	0	0	0	0	0	
PM TOTAL TRAFFIC		26	5	2,517	17	25	9	2,771	25	0	33	1	7	21	54	17	1		

TRAFFIC VOLUMES WITH PROPOSED IMPROVEMENTS AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and NE 35th Avenue
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.93
 PM PEAK HOUR FACTOR: 0.95

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2		
AM Raw Turning Movements			345	1,615	0		1,374	29	101		0	0	0		149	424	11		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS			355	1,663	0		1,415	30	104		0	0	0		153	437	11		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2		
PM Raw Turning Movements			499	1,421	0		1,862	17	135		0	0	0		212	283	7		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS			514	1,464	0		1,918	18	139		0	0	0		219	291	7		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2		
TECO				90			125												
Uptown Biscayne				8			12												
TOTAL "VESTED" TRAFFIC			0	98	0		137	0	0		0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH			50	233	0		199	4	15		0	0	0		21	61	2		
AM NON-PROJECT TRAFFIC			405	1,994	0		1,751	34	119		0	0	0		174	498	13		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2		
TECO				71			56												
Uptown Biscayne				22			19												
TOTAL "VESTED" TRAFFIC			0	93	0		75	0	0		0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH			72	205	0		269	3	19		0	0	0		31	41	1		
PM NON-PROJECT TRAFFIC			586	1,762	0		2,262	21	158		0	0	0		250	332	8		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering		20.0%	55.0%						6.0%							2.0%	37.0%	
	Exiting							38.0%											
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2
Pass-By Distribution	Entering		23.0%	-23.0%					-48.0%		19.0%						-1.0%	-3.0%	
	Exiting								29.0%								23.0%	22.0%	
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering		20.0%	55.0%						6.0%									
	Exiting							38.0%											
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New		66	182				168		20						9	163		
AM TOTAL PROJECT TRAFFIC			66	182	0			168	0	20		0	0	0		-47	163	0	
AM TOTAL TRAFFIC			471	2,176	0		1,919	34	139		0	0	0		127	661	13		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBT	WBR	WBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBR	SBR2
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By		44	-44					-43		37						38	32	
	Valet																		
	Net New		59	161				116		17						6	112		
PM TOTAL PROJECT TRAFFIC			103	117	0			73	0	54		0	0	0		-60	144	0	
PM TOTAL TRAFFIC			689	1,879	0		2,335	21	212		0	0	0		190	476	8		

TRAFFIC VOLUMES WITH PROPOSED IMPROVEMENTS AT STUDY INTERSECTIONS

INTERSECTION: NE 163rd Street/SR 826 and Intracoastal Mall Driveway
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.9
 PM PEAK HOUR FACTOR: 0.94

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
AM Raw Turning Movements			0	1,763	0		0	1,468	78		0	0	0		0	0	34		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS			0	1,816	0		0	1,512	80		0	0	0		0	0	35		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
PM Raw Turning Movements			0	1,619	0		0	1,913	183		0	0	0		0	0	126		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS			0	1,668	0		0	1,970	188		0	0	0		0	0	130		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO				90				125											
Uptown Biscayne				8				12											
TOTAL "VESTED" TRAFFIC			0	98	0		0	137	0		0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH			0	255	0		0	212	11		0	0	0		0	0	5		
AM NON-PROJECT TRAFFIC			0	2,169	0		0	1,861	91		0	0	0		0	0	40		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO				71				56											
Uptown Biscayne				22				19											
TOTAL "VESTED" TRAFFIC			0	93	0		0	75	0		0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH			0	234	0		0	276	26		0	0	0		0	0	18		
PM NON-PROJECT TRAFFIC			0	1,995	0		0	2,321	214		0	0	0		0	0	148		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering		55.0%					6.0%	15.0%							19.0%		38.0%	
	Exiting			2.0%															
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering		25.0%	-49.0%						-29.0%	29.0%								
	Exiting			23.0%												26.0%		29.0%	
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering		55.0%					6.0%	15.0%							19.0%		38.0%	
	Exiting			2.0%															
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM TRAFFIC DIVERSIONS						-56											56		
Project Trips	Pass - By																		
	Valet																		
	Net New		182	9				20	49							83		168	
AM TOTAL PROJECT TRAFFIC				182	-47	0		0	20	49		0	0	0		139	0	168	
AM TOTAL TRAFFIC				182	2,122	0		0	1,881	140		0	0	0		139	0	208	
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM TRAFFIC DIVERSIONS						-104											104		
Project Trips	Pass - By		48	-54						-56	56					45		50	
	Valet																		
	Net New		161	6				17	44							58		116	
PM TOTAL PROJECT TRAFFIC				209	-152	0		0	-39	100		0	0	0		207	0	166	
PM TOTAL TRAFFIC				209	1,843	0		0	2,282	314		0	0	0		207	0	314	

TRAFFIC VOLUMES WITH PROPOSED IMPROVEMENTS AT STUDY INTERSECTIONS

INTERSECTION: NE 164th Street and NE 35th Avenue
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.93
 PM PEAK HOUR FACTOR: 0.9

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR				
AM Raw Turning Movements			0	0	48		57	3	23		40	213	95		16	469	3				
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030				
AM EXISTING CONDITIONS			0	0	49		59	3	24		41	219	98		16	483	3				
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR				
PM Raw Turning Movements			3	6	38		211	1	76		57	351	224		34	236	1				
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030				
PM EXISTING CONDITIONS			3	6	39		217	1	78		59	362	231		35	243	1				
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR				
TECO																					
Uptown Biscayne																					
TOTAL "VESTED" TRAFFIC			0	0	0		0	0	0		0	0	0		0	0	0				
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12				
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%				
AM BACKGROUND TRAFFIC GROWTH			0	0	7		8	0	3		6	31	14		2	68	0				
AM NON-PROJECT TRAFFIC			0	0	56		67	3	27		47	250	112		18	551	3				
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR				
TECO																					
Uptown Biscayne																					
TOTAL "VESTED" TRAFFIC			0	0	0		0	0	0		0	0	0		0	0	0				
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12				
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%				
PM BACKGROUND TRAFFIC GROWTH			0	1	5		30	0	11		8	51	32		5	34	0				
PM NON-PROJECT TRAFFIC			3	7	44		247	1	89		67	413	263		40	277	1				
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
Pass-By Distribution	Entering																				
	Exiting																				
Valet Distribution	Entering																				
	Exiting																				
Net New Distribution	Entering														16.0%		4.0%				
	Exiting							29.0%		2.0%	10.0%										
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
Pass-By Distribution	Entering														19.0%		4.0%	-4.0%			
	Exiting								22.0%			23.0%									
Valet Distribution	Entering																				
	Exiting																				
Net New Distribution	Entering														16.0%		4.0%				
	Exiting							29.0%		2.0%	10.0%										
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
AM TRAFFIC DIVERSIONS									-50										-6		
Project Trips	Pass - By																				
	Valet																				
	Net New							128		9	44				53		13				
AM TOTAL PROJECT TRAFFIC					0	0	0		78	0	9	44	0	0	53		13	-6	0		
AM TOTAL TRAFFIC					0	0	56		145	3	36	44	47	250	165		31	545	3		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
PM TRAFFIC DIVERSIONS									-99											-5	
Project Trips	Pass - By								38			40			37		8		-8		
	Valet																				
	Net New							88		6	30				47		12				
PM TOTAL PROJECT TRAFFIC					0	0	0		27	0	6	70	0	0	84		20	-13	0		
PM TOTAL TRAFFIC					3	7	44		274	1	95	70	67	413	347		60	264	1		

TRAFFIC VOLUMES WITH PROPOSED IMPROVEMENTS AT STUDY INTERSECTIONS

INTERSECTION: Intracoastal Mall Drive North/NE 165th Street and NE 35th Avenue
 COUNT DATE: October 10, 2019
 AM PEAK HOUR FACTOR: 0.92
 PM PEAK HOUR FACTOR: 0.91

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
AM Raw Turning Movements		0	0	0	0	7	0	2	2	0	170	10	2	0	476	0	0		
Peak Season Correction Factor		1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010		
AM EXISTING CONDITIONS		0	0	0		7	0	2	2	0	172	10		0	481	0			
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
PM Raw Turning Movements		0	0	0	0	12	0	3	2	2	459	23		0	315	0			
Peak Season Correction Factor		1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010		
PM EXISTING CONDITIONS		0	0	0		12	0	3	2	2	464	23		0	318	0			
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO																			
Uptown Biscayne																			
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH		0	0	0		1	0	0	0	0	24	1		0	67	0			
AM NON-PROJECT TRAFFIC		0	0	0		8	0	2	2	0	196	11		0	548	0			
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO																			
Uptown Biscayne																			
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0	0	0	0	0	0		0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH		0	0	0		2	0	0	0	0	65	3		0	45	0			
PM NON-PROJECT TRAFFIC		0	0	0		14	0	3	2	2	529	26		0	363	0			
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering																		4.0%
	Exiting									2.0%			2.0%						
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering																		4.0%
	Exiting									2.0%			2.0%						
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM TRAFFIC DIVERSIONS									-6										
Project Trips	Pass - By																		
	Valet																		
	Net New									9			9					13	
AM TOTAL PROJECT TRAFFIC				0	0	0			-6	0	9	0	0	9	0		0	13	0
AM TOTAL TRAFFIC		0	0	0		2	0	11	2	0	205	11		0	561	0			
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM TRAFFIC DIVERSIONS									-5										
Project Trips	Pass - By																		
	Valet																		
	Net New									6			6					12	
PM TOTAL PROJECT TRAFFIC				0	0	0			-5	0	6	0	0	6	0		0	12	0
PM TOTAL TRAFFIC		0	0	0		9	0	9	2	2	535	26		0	375	0			

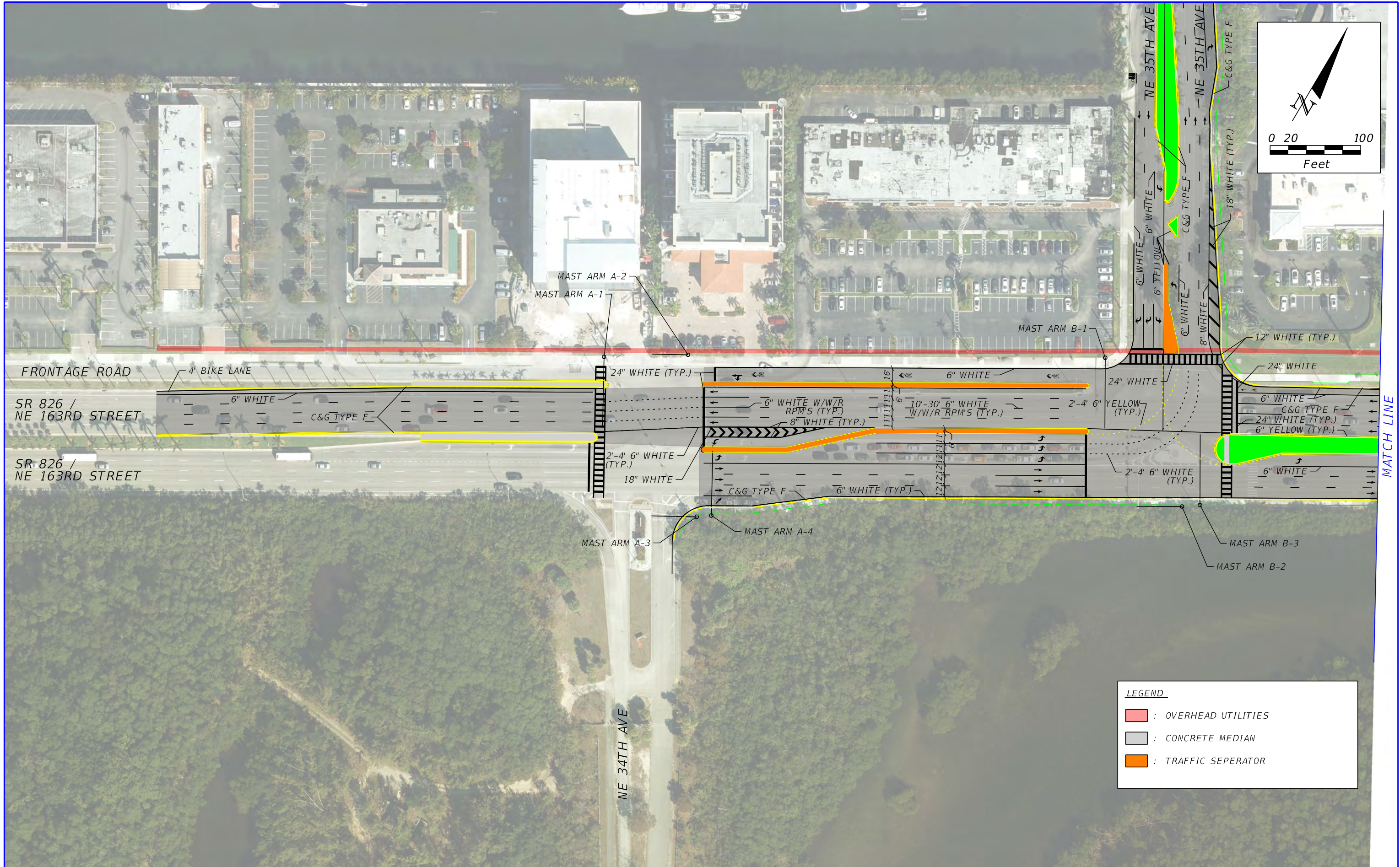
TRAFFIC VOLUMES WITH PROPOSED IMPROVEMENTS AT STUDY INTERSECTIONS

INTERSECTION: Intracoastal Mall Drive South and NE 35th Avenue
 COUNT DATE: May 14, 2019
 AM PEAK HOUR FACTOR: 0.92
 PM PEAK HOUR FACTOR: 0.92

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
AM Raw Turning Movements		0	0	0	0	0	0	0	0	0	446	0	0	0	574	0	0		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
AM EXISTING CONDITIONS		0	0	0	0	0	0	0	0	0	459	0	0	0	591	0	0		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
PM Raw Turning Movements		0	0	0	0	0	0	0	0	0	634	0	0	0	485	0	0		
Peak Season Correction Factor		1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030		
PM EXISTING CONDITIONS		0	0	0	0	0	0	0	0	0	653	0	0	0	500	0	0		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO																			
Uptown Biscayne																			
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
AM BACKGROUND TRAFFIC GROWTH		0	0	0	0	0	0	0	0	0	64	0	0	0	83	0	0		
AM NON-PROJECT TRAFFIC		0	0	0	0	0	0	0	0	0	523	0	0	0	674	0	0		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TECO																			
Uptown Biscayne																			
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Years To Buildout		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
Yearly Growth Rate		1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%		
PM BACKGROUND TRAFFIC GROWTH		0	0	0	0	0	0	0	0	0	92	0	0	0	70	0	0		
PM NON-PROJECT TRAFFIC		0	0	0	0	0	0	0	0	0	745	0	0	0	570	0	0		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering												16.0%	10.0%					
	Exiting									10.0%								39.0%	
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering													19.0%	23.0%				-4.0%
	Exiting										23.0%								45.0%
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering												16.0%	10.0%					
	Exiting									10.0%									39.0%
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New									44				53	33			172	
AM TOTAL PROJECT TRAFFIC				0	0	0	0	0	0	44		0	53	33		0	172	0	
AM TOTAL TRAFFIC				0	0	0	0	0	0	44		0	576	33		0	846	0	
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By										40			37	44			70	
	Valet																		
	Net New										30			47	29			118	
PM TOTAL PROJECT TRAFFIC				0	0	0	0	0	0	70		0	84	73		0	188	0	
PM TOTAL TRAFFIC				0	0	0	0	0	0	70		0	829	73		0	758	0	

Appendix G

Conceptual Improvements



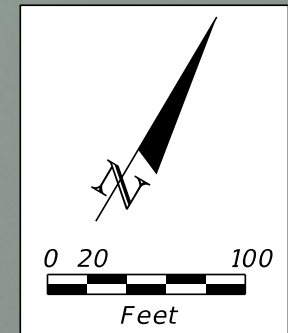
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn
 355 Alhambra Circle, Suite 1400
 Coral Gables, FL 33134
 (305) 673-2025
 CA No. : 696

INTRACOASTAL MALL
 ROAD NO. SR 826
 COUNTY MIAMI-DADE

**ROADWAY IMPROVEMENT
 CONCEPT - ALTERNATIVE 4**

SHEET NO.
 01



MATCH LINE

LEGEND	
—	OVERHEAD UTILITIES
	CONCRETE MEDIAN
	TRAFFIC SEPERATOR

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

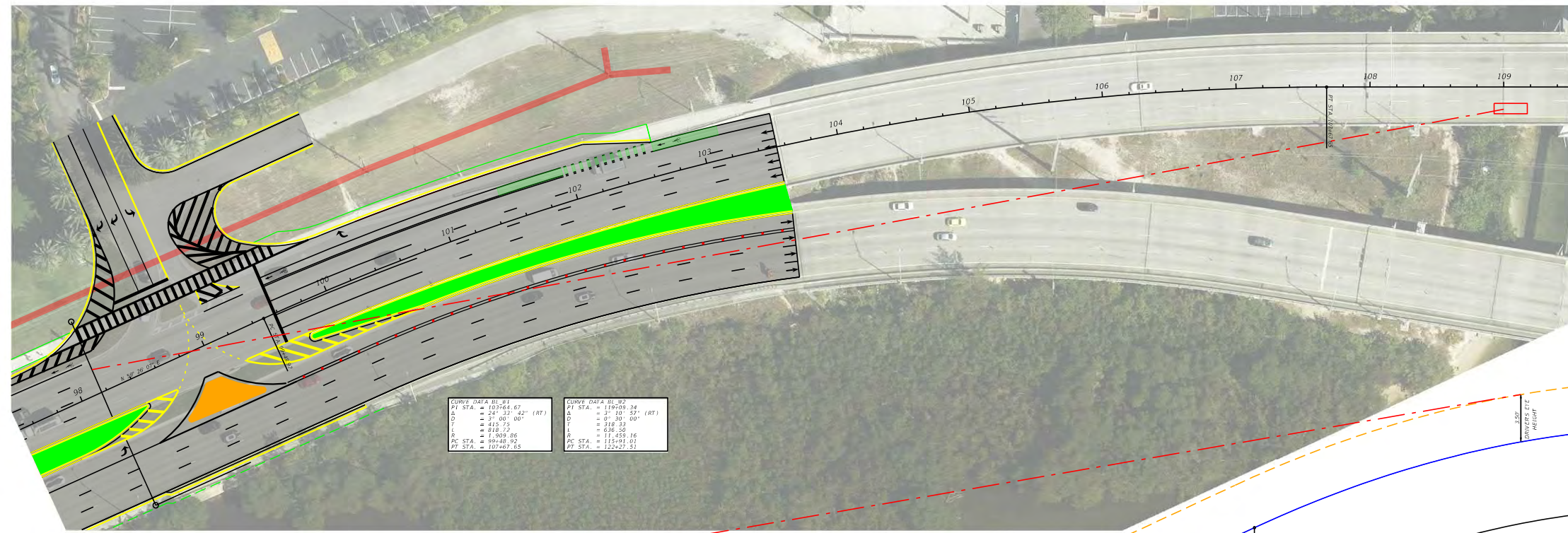
Kimley»Horn
 355 Alhambra Circle, Suite 1400
 Coral Gables, FL 33134
 (305) 673-2025
 CA No. : 696

INTRACOASTAL MALL	
ROAD NO.	COUNTY
SR 826	MIAMI-DADE

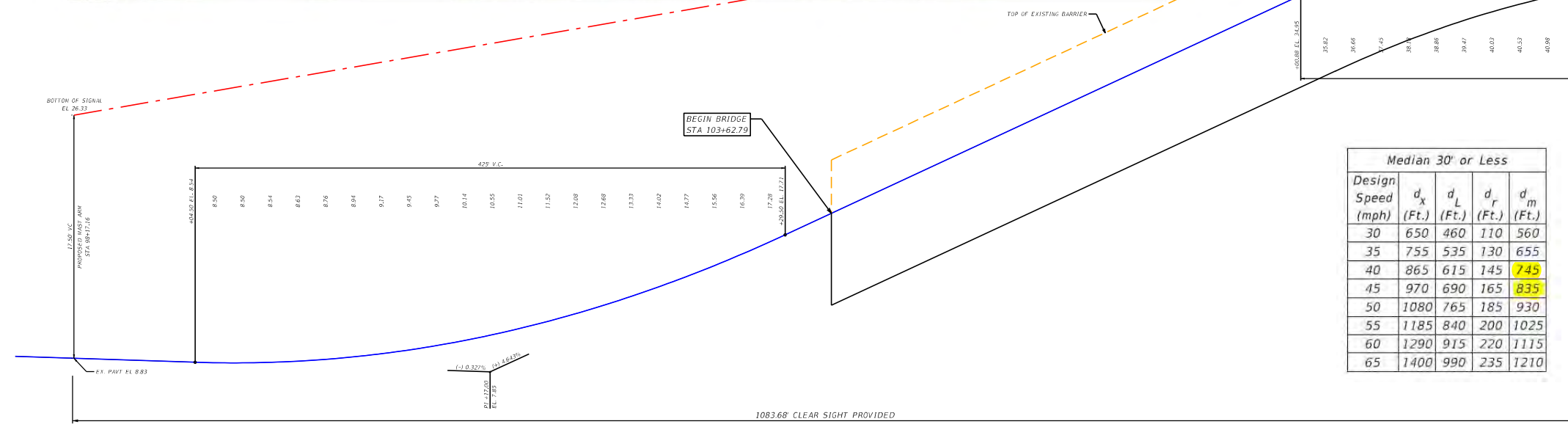
**ROADWAY IMPROVEMENT
 CONCEPT - ALTERNATIVE 4**

SHEET
NO.

02

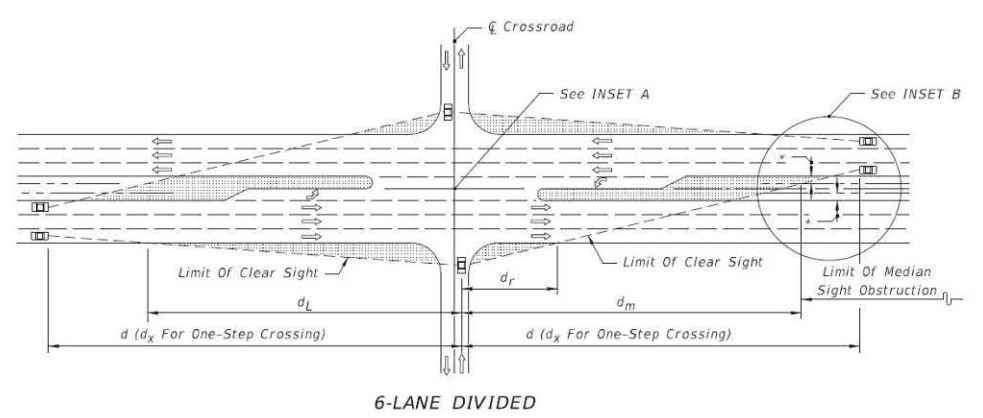


View from Top of Bridge



Median 30' or Less				
Design Speed (mph)	d_x (Ft.)	d_L (Ft.)	d_r (Ft.)	d_m (Ft.)
30	650	460	110	560
35	755	535	130	655
40	865	615	145	745
45	970	690	165	835
50	1080	765	185	930
55	1185	840	200	1025
60	1290	915	220	1115
65	1400	990	235	1210

INTERSECTION SIGHT DISTANCE: 6-LANE DIVIDED



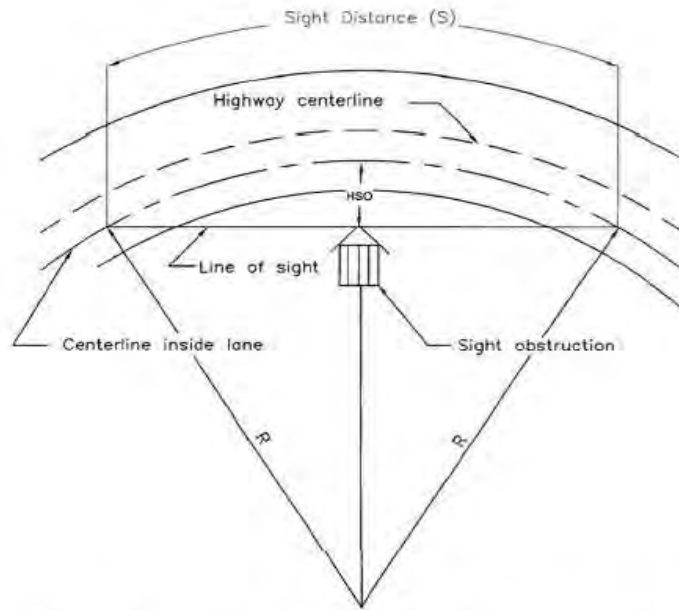


Exhibit 3-54. Diagram Illustrating Components for Determining Horizontal Sight Distance

US Customary	
$HSO = R \left[1 - \cos \frac{28.65S}{R} \right] \quad (3-38)$	
where:	
S	= Stopping sight distance, ft
R	= Radius of curve, ft
HSO	= Horizontal sightline offset, ft

$S = 389.2$ ft Per FDM Table 210.11.1 **DS=40 mph**, 5% downgrade, $S = 326$ ft (req'd)
 $R = 1892$ ft Radius = $1885.86 + 12/2 = 1915.86$ ft (Radius along centerline of inside lane)
 $HSO = 10.00$ ft
 Lane Width = 12 ft
 Shoulder Width = 4.00 ft Existing shoulder width = 4-ft, **Criteria met for DS=40mph**

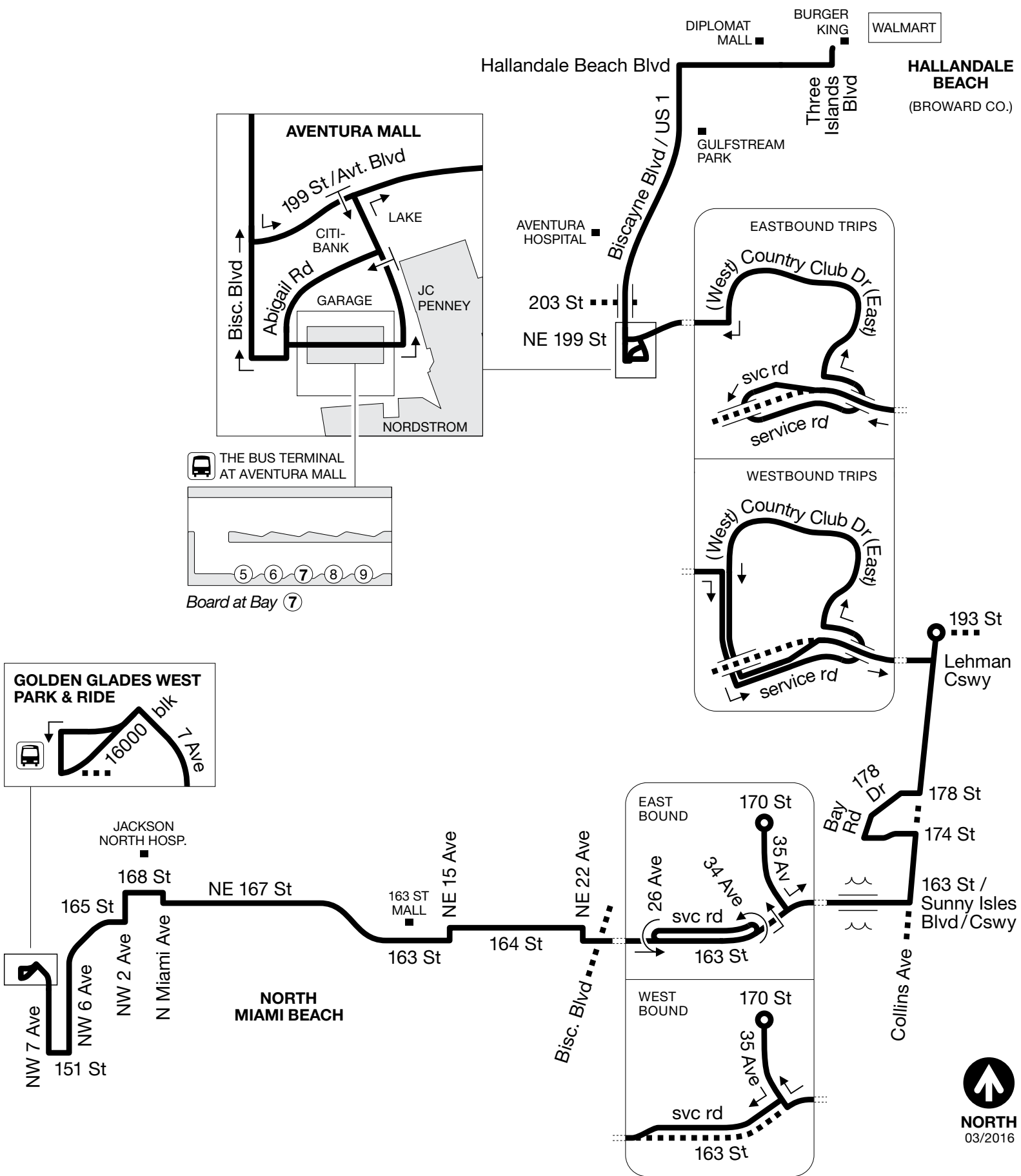
$S = 389.2$ ft Per FDM Table 210.11.1 **DS=45 mph**, 5% downgrade, $S = 392$ ft (req'd)
 $R = 1892$ ft Radius = $1885.86 + 12/2 = 1915.86$ ft (Radius along centerline of inside lane)
 $HSO = 10.0$ ft
 Lane Width = 12 ft
 Shoulder Width = 4.00 ft Existing shoulder width = 4-ft

Existing shoulder width is 99.3% compliant ($389.2/392 * 100\%$) for **DS=45 mph**

Appendix H

Transit Route Information

Route E





Bus Routes Schedule



105 (Eastbound) WEEKDAY

GOLDEN GLADES P&R (WEST LOT)	NW 168 ST & 1 AV	NE 164 ST & 15 AV	NE 163 ST & BISCAYNE BLVD	COLLINS AV AT 16900 BLK	N BAY RD & 174 ST	COLLINS AV & 185 ST	BUS TERMINAL AT AVENTURA MALL	THREE IS BLVD & HALLANDALE BCH BLVD
05:55AM	06:06AM	06:16AM	06:24AM	06:45AM	06:49AM	06:54AM	07:09AM	07:30AM
06:33AM	06:44AM	06:54AM	07:02AM	07:23AM	07:27AM	07:32AM	07:47AM	08:08AM
07:10AM	07:21AM	07:31AM	07:39AM	08:00AM	08:04AM	08:09AM	08:24AM	08:45AM
07:40AM	07:51AM	08:01AM	08:09AM	08:30AM	08:34AM	08:39AM	08:54AM	09:18AM
08:10AM	08:21AM	08:31AM	08:39AM	09:00AM	09:05AM	09:10AM	09:25AM	09:49AM
08:45AM	08:56AM	09:07AM	09:15AM	09:36AM	09:41AM	09:46AM	10:01AM	10:25AM
09:25AM	09:36AM	09:47AM	09:55AM	10:16AM	10:21AM	10:26AM	10:41AM	11:05AM
10:10AM	10:21AM	10:32AM	10:40AM	11:01AM	11:06AM	11:11AM	11:26AM	11:50AM
11:00AM	11:11AM	11:22AM	11:30AM	11:51AM	11:56AM	12:01PM	12:16PM	12:40PM
11:50AM	12:01PM	12:12PM	12:20PM	12:41PM	12:46PM	12:51PM	01:06PM	01:30PM
12:35PM	12:46PM	12:57PM	01:05PM	01:26PM	01:31PM	01:36PM	01:51PM	02:15PM

01:20PM	01:31PM	01:42PM	01:50PM	02:11PM	02:16PM	02:21PM	02:36PM	03:03PM
02:10PM	02:21PM	02:32PM	02:40PM	03:01PM	03:06PM	03:11PM	03:26PM	03:53PM
02:50PM	03:03PM	03:15PM	03:23PM	03:44PM	03:49PM	03:54PM	04:09PM	04:36PM
03:25PM	03:38PM	03:50PM	03:58PM	04:19PM	04:24PM	04:29PM	04:44PM	05:11PM
03:55PM	04:08PM	04:20PM	04:28PM	04:49PM	04:54PM	04:59PM	05:14PM	05:41PM
04:25PM	04:38PM	04:50PM	04:58PM	05:19PM	05:24PM	05:29PM	05:44PM	06:11PM
04:55PM	05:08PM	05:20PM	05:28PM	05:49PM	05:54PM	05:59PM	06:14PM	06:41PM
05:30PM	05:43PM	05:55PM	06:03PM	06:24PM	06:29PM	06:34PM	06:49PM	07:16PM
06:00PM	06:13PM	06:25PM	06:33PM	06:54PM	06:59PM	07:04PM	07:19PM	07:40PM
06:30PM	06:43PM	06:55PM	07:03PM	07:22PM	07:27PM	07:31PM	07:46PM	08:07PM
07:30PM	07:41PM	07:51PM	07:58PM	08:17PM	08:22PM	08:26PM	08:41PM	09:02PM
08:30PM	08:41PM	08:51PM	08:58PM	09:17PM	09:22PM	09:26PM	09:41PM	10:02PM

[Back to previous page](#)



TRANSPORTATION & PUBLIC WORKS



Bus Routes Schedule



105 (Westbound) WEEKDAY

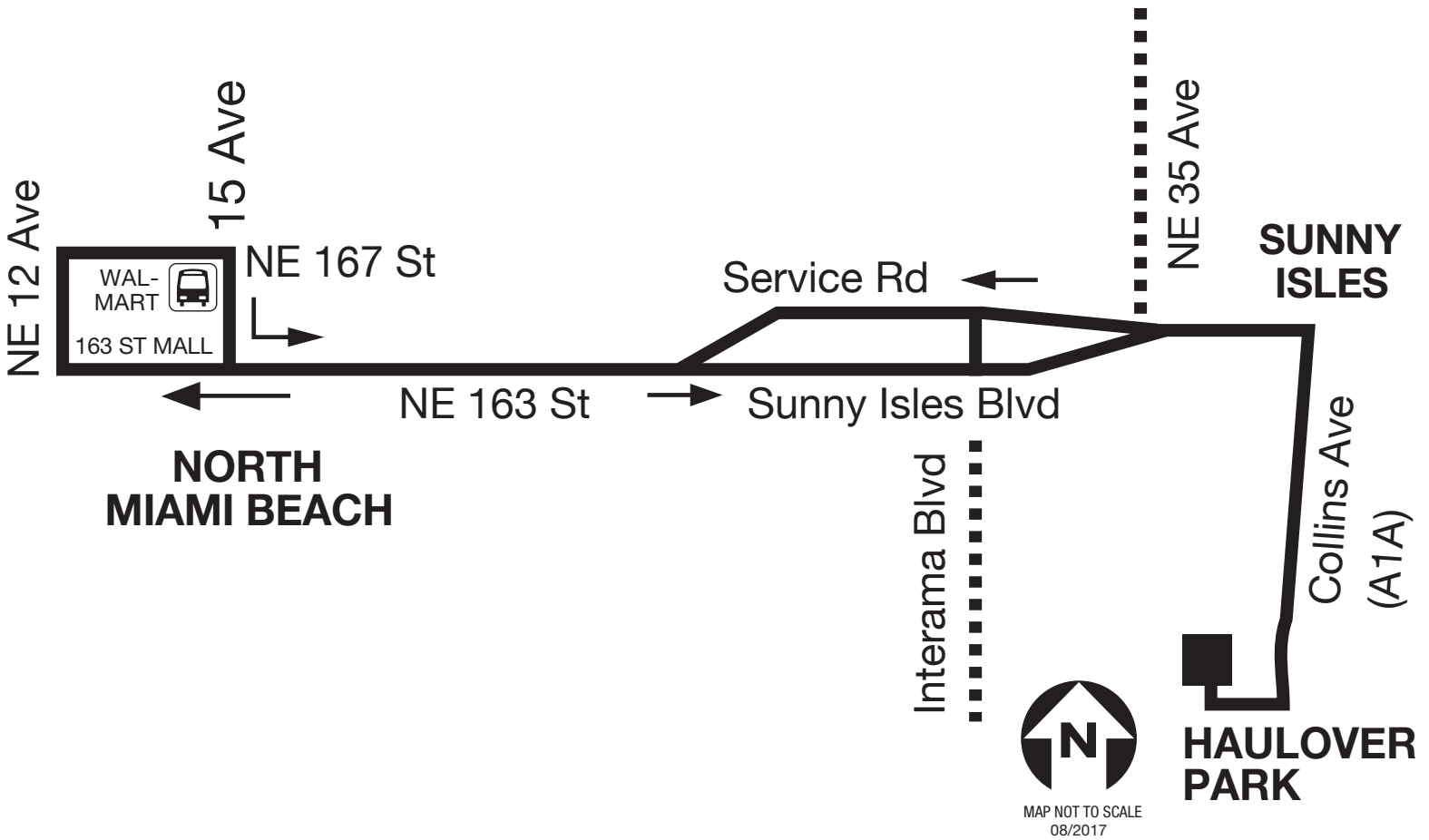
THREE IS BLVD & HALLANDALE BCH BLVD	BUS TERMINAL AT AVENTURA MALL	COLLINS AV & 185 ST	N BAY RD & 174 ST	NE 163 ST & COLLINS AV	NE 163 ST & BISCAYNE BLVD	NE 164 ST & 15 AV	NW 168 ST & 1 AV	GOLDEN GLADES P&R (WEST LOT)
-	05:47AM	06:08AM	06:12AM	06:17AM	06:32AM	06:39AM	06:50AM	07:00AM
06:01AM	06:17AM	06:38AM	06:42AM	06:47AM	07:02AM	07:09AM	07:20AM	07:30AM
06:31AM	06:47AM	07:08AM	07:12AM	07:17AM	07:32AM	07:39AM	07:50AM	08:00AM
07:03AM	07:19AM	07:40AM	07:44AM	07:49AM	08:05AM	08:12AM	08:25AM	08:35AM
07:41AM	07:57AM	08:20AM	08:24AM	08:29AM	08:45AM	08:52AM	09:05AM	09:15AM
08:19AM	08:42AM	09:05AM	09:09AM	09:14AM	09:30AM	09:37AM	09:50AM	10:00AM
09:09AM	09:32AM	09:55AM	09:59AM	10:04AM	10:20AM	10:27AM	10:40AM	10:50AM
09:54AM	10:17AM	10:40AM	10:44AM	10:49AM	11:05AM	11:12AM	11:25AM	11:35AM
10:44AM	11:07AM	11:30AM	11:34AM	11:39AM	11:55AM	12:02PM	12:15PM	12:25PM
11:29AM	11:52AM	12:15PM	12:19PM	12:24PM	12:40PM	12:47PM	01:00PM	01:10PM
12:19PM	12:42PM	01:05PM	01:09PM	01:14PM	01:30PM	01:37PM	01:50PM	02:00PM

01:14PM	01:37PM	02:00PM	02:04PM	02:09PM	02:25PM	02:32PM	02:45PM	02:55PM
01:49PM	02:12PM	02:35PM	02:39PM	02:44PM	03:01PM	03:08PM	03:24PM	03:35PM
02:28PM	02:51PM	03:15PM	03:19PM	03:24PM	03:41PM	03:48PM	04:04PM	04:15PM
02:54PM	03:21PM	03:45PM	03:49PM	03:54PM	04:11PM	04:18PM	04:34PM	04:45PM
03:24PM	03:51PM	04:15PM	04:19PM	04:24PM	04:41PM	04:48PM	05:04PM	05:15PM
03:54PM	04:21PM	04:45PM	04:49PM	04:54PM	05:11PM	05:18PM	05:34PM	05:45PM
04:24PM	04:51PM	05:15PM	05:19PM	05:24PM	05:41PM	05:48PM	06:04PM	06:15PM
04:54PM	05:21PM	05:45PM	05:49PM	05:54PM	06:11PM	06:18PM	06:34PM	06:45PM
05:26PM	05:53PM	06:17PM	06:21PM	06:26PM	06:43PM	06:50PM	07:06PM	07:15PM
06:06PM	06:33PM	06:57PM	07:01PM	07:05PM	07:19PM	07:25PM	07:36PM	07:45PM
06:38PM	07:05PM	07:27PM	07:31PM	07:35PM	07:49PM	07:55PM	08:06PM	08:15PM
07:30PM	07:50PM	08:12PM	08:16PM	08:20PM	08:34PM	08:40PM	08:51PM	09:00PM
08:20PM	08:40PM	09:02PM	09:06PM	09:10PM	09:24PM	09:30PM	09:41PM	09:50PM
09:20PM	09:40PM	10:02PM	10:05PM	10:08PM	10:20PM	10:25PM	10:34PM	10:40PM
10:06PM	10:23PM	-	-	-	-	-	-	-

[Back to previous page](#)



H





Bus Routes Schedule

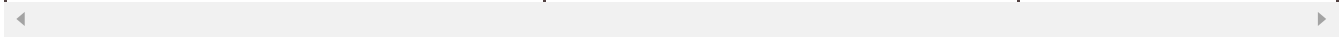


108 (Northbound) WEEKDAY

HAULOVER CLUB PARKING LOT	COLLINS AV & ATLANTIC AV	NE 167 ST & 15 AV
05:40AM	05:45AM	05:59AM
06:10AM	06:15AM	06:33AM
06:45AM	06:50AM	07:11AM
07:15AM	07:20AM	07:41AM
07:45AM	07:50AM	08:11AM
08:15AM	08:20AM	08:41AM
08:45AM	08:50AM	09:12AM
09:15AM	09:20AM	09:42AM
09:45AM	09:50AM	10:12AM
10:15AM	10:20AM	10:42AM
10:45AM	10:50AM	11:12AM
11:15AM	11:20AM	11:42AM
11:45AM	11:50AM	12:13PM

12:15PM	12:20PM	12:43PM
12:45PM	12:50PM	01:13PM
01:15PM	01:20PM	01:43PM
01:45PM	01:50PM	02:13PM
02:15PM	02:20PM	02:43PM
02:45PM	02:50PM	03:13PM
03:15PM	03:20PM	03:43PM
03:45PM	03:50PM	04:13PM
04:15PM	04:20PM	04:43PM
04:45PM	04:50PM	05:13PM
05:15PM	05:20PM	05:43PM
05:45PM	05:50PM	06:13PM
06:15PM	06:20PM	06:43PM
06:45PM	06:50PM	07:13PM
07:15PM	07:20PM	07:39PM
07:45PM	07:50PM	08:09PM
08:15PM	08:20PM	08:36PM
08:45PM	08:50PM	09:06PM
09:15PM	09:20PM	09:36PM
09:50PM	09:55PM	10:11PM

10:20PM	10:25PM	10:41PM
10:50PM	10:55PM	11:11PM
11:20PM	11:25PM	11:41PM
12:00AM	12:05AM	12:19AM
12:30AM	12:35AM	12:49AM



[Back to previous page](#)



TRANSPORTATION & PUBLIC WORKS

Alice N. Bravo, P.E., Director

Overtown Transit Village North

701 NW 1st Court, Suite 1700, Miami, FL 33136

786-469-5675 |

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Bus Routes Schedule

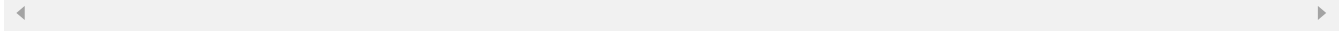


108 (Southbound) WEEKDAY

NE 167 ST & 15 AV	COLLINS AV & 163 ST	HAULOVER CLUB PARKING LOT
05:13AM	05:28AM	05:33AM
05:42AM	05:57AM	06:02AM
06:12AM	06:27AM	06:32AM
06:39AM	06:57AM	07:02AM
07:06AM	07:27AM	07:32AM
07:36AM	07:57AM	08:02AM
08:04AM	08:27AM	08:32AM
08:34AM	08:57AM	09:02AM
09:04AM	09:27AM	09:32AM
09:34AM	09:57AM	10:02AM
10:04AM	10:27AM	10:32AM
10:34AM	10:57AM	11:02AM
11:04AM	11:27AM	11:32AM

11:34AM	11:57AM	12:02PM
12:04PM	12:27PM	12:32PM
12:34PM	12:57PM	01:02PM
01:04PM	01:27PM	01:32PM
01:34PM	01:57PM	02:02PM
02:04PM	02:27PM	02:32PM
02:34PM	02:57PM	03:02PM
03:04PM	03:27PM	03:32PM
03:34PM	03:57PM	04:02PM
04:04PM	04:27PM	04:32PM
04:34PM	04:57PM	05:02PM
05:04PM	05:27PM	05:32PM
05:34PM	05:57PM	06:02PM
06:04PM	06:27PM	06:32PM
06:34PM	06:57PM	07:02PM
07:08PM	07:27PM	07:32PM
07:38PM	07:57PM	08:02PM
08:15PM	08:32PM	08:37PM
08:45PM	09:02PM	09:07PM
09:20PM	09:37PM	09:42PM

09:50PM	10:07PM	10:12PM
10:20PM	10:37PM	10:42PM
10:50PM	11:07PM	11:12PM
11:30PM	11:47PM	11:52PM
12:02AM	12:17AM	12:22AM



[Back to previous page](#)



TRANSPORTATION & PUBLIC WORKS

Alice N. Bravo, P.E., Director

Overtown Transit Village North
 701 NW 1st Court, Suite 1700, Miami, FL 33136
 786-469-5675 |
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Key to major locations in NMB

- 163rd Mall Main Entrance 19
- ATM High School 10
- Biscayne Commons Plaza 15
- City Hall/Victory Pool McDonald Center Y.E.S. Center 10
- David Lawrence, Jr. K-8 Center 8
- FIU 9
- Fulford Elem/Allen Park 3
- Greynolds Park Elementary 4
- Intracoastal Mall 1
- NMB Library 9 17 2
- NMB Sr High/JFK Middle 20 20
- Nova S. University 14
- Post Office/Laurenzo's 7 12
- Skylake Shops 7
- Spanish Monastery/Snyder Tennis Center 12
- Walmart 10 1 1



TROLLEYS SCHEDULE
MONDAY - SATURDAY
 7:30 A.M. TO 7:30 P.M.

Includes a map with major locations in NMB



Route A

Stops from Intracoastal Mall, Eastern Shores, Stratford House, Post Office, Laurenzo's Market, Inland Towers, NMB Library, 163rd Street Mall, and more!

Route B

Stops from 163rd Street Mall, Mishcon Athletic Field, Shops at Skylake, City Hall, Spanish Monastery, Nova University, NMB Library, NMB Senior High and more!

Route C

Stops from NMB Library, Allen Park, Fulford Elementary, Taylor Park, Alonzo & Tracy Mourning Senior High School, FIU North Campus, Highland Park, and more!

@CityNMB
 #IamNMB

NMB-Line Routes & Schedules

NMB-Line will not be providing service on the following holidays: New Year's Day, MLK Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day.

ROUTE A

1	2	3	4	5	1	6	7	8	9	10	9	11	7	6	1
Intracoastal Mall	NE 35 Ave. & 166 St.	NE 35 Ave. & 169 St.	NE 35 Ave. & 170 St.	NE 35 Ave. & 171 St.	Intracoastal Mall	Stratford House	Post Office / Laurozo's Market	Inland Towers	NMB Library / Three Seasons	Walmart	NMB Library / Three Seasons	Inland Towers	NE 22 Ave. & 164 St.	Stratford House	Intracoastal Mall
ARRIVAL	DEPARTURE				ARRIVAL	DEPARTURE									
7:30 AM	7:32 AM	7:35 AM	7:37 AM	7:40 AM	7:43 AM	7:48 AM	7:51 AM	7:55 AM	7:58 AM	8:01 AM	8:04 AM	8:06 AM	8:08 AM	8:10 AM	8:14 AM
8:30 AM	8:32 AM	8:35 AM	8:37 AM	8:40 AM	8:43 AM	8:48 AM	8:51 AM	8:55 AM	8:58 AM	9:01 AM	9:04 AM	9:06 AM	9:08 AM	9:10 AM	9:14 AM
9:30 AM	9:32 AM	9:35 AM	9:37 AM	9:40 AM	9:43 AM	9:48 AM	9:51 AM	9:55 AM	9:58 AM	10:01 AM	10:04 AM	10:06 AM	10:08 AM	10:10 AM	10:14 AM
10:30 AM	10:32 AM	10:35 AM	10:37 AM	10:40 AM	10:43 AM	10:48 AM	10:51 AM	10:55 AM	10:58 AM	11:01 AM	11:04 AM	11:06 AM	11:08 AM	11:10 AM	11:14 AM
11:30 AM	11:32 AM	11:35 AM	11:37 AM	11:40 AM	11:43 AM	11:48 AM	11:51 AM	11:55 AM	11:58 AM	12:01 PM	12:04 PM	12:06 PM	12:08 PM	12:10 PM	12:14 PM
12:30 PM	12:32 PM	12:35 PM	12:37 PM	12:40 PM	12:43 PM	12:48 PM	12:51 PM	12:55 PM	12:58 PM	1:01 PM	1:04 PM	1:06 PM	1:08 PM	1:10 PM	1:14 PM
1:30 PM	1:32 PM	1:35 PM	1:37 PM	1:40 PM	1:43 PM	1:48 PM	1:51 PM	1:55 PM	1:58 PM	2:01 PM	2:04 PM	2:06 PM	2:08 PM	2:10 PM	2:14 PM
2:30 PM	2:32 PM	2:35 PM	2:37 PM	2:40 PM	2:43 PM	2:48 PM	2:51 PM	2:55 PM	2:58 PM	3:01 PM	3:04 PM	3:06 PM	3:08 PM	3:10 PM	3:14 PM
3:30 PM	3:32 PM	3:35 PM	3:37 PM	3:40 PM	3:43 PM	3:48 PM	3:51 PM	3:55 PM	3:58 PM	4:01 PM	4:04 PM	4:06 PM	4:08 PM	4:10 PM	4:14 PM
4:30 PM	4:32 PM	4:35 PM	4:37 PM	4:40 PM	4:43 PM	4:48 PM	4:51 PM	4:55 PM	4:58 PM	5:01 PM	5:04 PM	5:06 PM	5:08 PM	5:10 PM	5:14 PM
5:30 PM	5:32 PM	5:35 PM	5:37 PM	5:40 PM	5:43 PM	5:48 PM	5:51 PM	5:55 PM	5:58 PM	6:01 PM	6:04 PM	6:06 PM	6:08 PM	6:10 PM	6:14 PM
6:30 PM	6:32 PM	6:35 PM	6:37 PM	6:40 PM	6:43 PM	6:48 PM	6:51 PM	6:55 PM	6:58 PM	7:01 PM	7:04 PM	7:06 PM	7:08 PM	7:10 PM	7:14 PM

Riding the B is Free!

Take the sting out of paying high gas prices and ride the B-Line for free. This service operates Monday thru Saturday in North Miami Beach, and anyone can ride. Check the schedule, download our new NMB Transit App, or visit www.citynmb.com and hop on the trolley at marked B-Line bus stops.

Make the Connection

The B-Line has expanded service with two new routes and more connections than ever before. Connect with the City of North Miami and Sunny Isles Beach shuttle services, as well as Miami-Dade Transit, all along the new routes and at their Terminal at 163rd Street Mall. The B-Line is a great free-B in NMB.

It's a Cool Ride

Enjoy an air-conditioned ride with free Wifi on board to the store, mall, park, library, city hall or any of the many destinations offered.

We're Accessible

All of the B-Line trolleys are equipped to accommodate conventional and motorized wheelchairs.

ROUTE B

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Walmart	NE 170 St. & 15 Ave.	NE 175 St. & 15 Ave.	Grenyolds Park Elem.	NE 181 St. & 12 Ave.	NE 185 St. 1700 Block	Skylake Shops	NE 183 St. & 19 Ave.	NE 175 St. & 19 Ave.	Victory Pool. & City Hall	NE 171 St. & 23 Ave.	Tennis Ctr./ Monastery	NE 167 St. & 22 Ave.	Nova SE University	NE 167 St. & 19 Ave.	NE 164 St. & 19 Ave.	NMB Public Library	NE 164 St. & 15 Ave.	163rd St. Mall & Main Entrance	NMB High & JFK Middle	
ARRIVAL	DEPARTURE																			
8:10 AM	8:16 AM	8:17 AM	8:20 AM	8:21 AM	8:23 AM	8:24 AM	8:28 AM	8:31 AM	8:33 AM	8:35 AM	8:36 AM	8:38 AM	8:39 AM	8:41 AM	8:44 AM	8:46 AM	8:47 AM	8:48 AM	8:51 AM	8:54 AM
8:56 AM	9:02 AM	9:04 AM	9:06 AM	9:07 AM	9:09 AM	9:10 AM	9:16 AM	9:20 AM	9:21 AM	9:24 AM	9:25 AM	9:27 AM	9:28 AM	9:30 AM	9:32 AM	9:34 AM	9:36 AM	9:37 AM	9:40 AM	9:43 AM
9:45 AM	9:51 AM	9:52 AM	9:55 AM	9:56 AM	9:58 AM	9:59 AM	10:03 AM	10:06 AM	10:07 AM	10:09 AM	10:11 AM	10:12 AM	10:13 AM	10:16 AM	10:18 AM	10:20 AM	10:21 AM	10:23 AM	10:25 AM	10:28 AM
10:30 AM	10:36 AM	10:38 AM	10:40 AM	10:41 AM	10:43 AM	10:44 AM	10:48 AM	10:51 AM	10:53 AM	10:55 AM	10:56 AM	10:58 AM	10:59 AM	11:01 AM	11:04 AM	11:06 AM	11:07 AM	11:08 AM	11:11 AM	11:14 AM
11:16 AM	11:22 AM	11:23 AM	11:26 AM	11:27 AM	11:29 AM	11:30 AM	11:34 AM	11:37 AM	11:38 AM	11:40 AM	11:42 AM	11:43 AM	11:44 AM	11:47 AM	11:49 AM	11:51 AM	11:53 AM	11:54 AM	11:56 AM	12:00 PM
12:02 PM	12:08 PM	12:09 PM	12:12 PM	12:13 PM	12:14 PM	12:15 PM	12:19 PM	12:23 PM	12:24 PM	12:26 PM	12:28 PM	12:29 PM	12:30 PM	12:32 PM	12:35 PM	12:37 PM	12:38 PM	12:40 PM	12:42 PM	12:45 PM
12:47 PM	12:53 PM	12:55 PM	12:57 PM	12:58 PM	1:00 PM	1:01 PM	1:05 PM	1:08 PM	1:09 PM	1:11 PM	1:13 PM	1:14 PM	1:16 PM	1:18 PM	1:20 PM	1:22 PM	1:24 PM	1:25 PM	1:28 PM	1:31 PM
1:33 PM	1:39 PM	1:40 PM	1:43 PM	1:44 PM	1:46 PM	1:47 PM	1:50 PM	1:54 PM	1:55 PM	1:57 PM	1:59 PM	2:00 PM	2:01 PM	2:04 PM	2:06 PM	2:08 PM	2:09 PM	2:11 PM	2:13 PM	2:17 PM
2:19 PM	2:25 PM	2:26 PM	2:29 PM	2:30 PM	2:32 PM	2:33 PM	2:37 PM	2:40 PM	2:41 PM	2:43 PM	2:45 PM	2:47 PM	2:48 PM	2:50 PM	2:52 PM	2:54 PM	2:56 PM	2:57 PM	3:00 PM	3:03 PM
3:05 PM	3:11 PM	3:13 PM	3:15 PM	3:16 PM	3:18 PM	3:19 PM	3:23 PM	3:27 PM	3:28 PM	3:30 PM	3:32 PM	3:33 PM	3:34 PM	3:37 PM	3:39 PM	3:41 PM	3:42 PM	3:44 PM	3:46 PM	3:49 PM
3:52 PM	3:58 PM	3:59 PM	4:02 PM	4:03 PM	4:04 PM	4:05 PM	4:09 PM	4:12 PM	4:16 PM	4:16 PM	4:18 PM	4:19 PM	4:20 PM	4:22 PM	4:25 PM	4:27 PM	4:28 PM	4:30 PM	4:32 PM	4:35 PM
4:37 PM	4:43 PM	4:45 PM	4:47 PM	4:48 PM	4:50 PM	4:51 PM	4:55 PM	4:58 PM	4:59 PM	5:01 PM	5:03 PM	5:04 PM	5:06 PM	5:08 PM	5:10 PM	5:12 PM	5:14 PM	5:15 PM	5:18 PM	5:21 PM
5:23 PM	5:29 PM	5:30 PM	5:33 PM	5:34 PM	5:35 PM	5:36 PM	5:40 PM	5:44 PM	5:45 PM	5:47 PM	5:49 PM	5:50 PM	5:51 PM	5:54 PM	5:56 PM	5:58 PM	5:59 PM	6:01 PM	6:03 PM	6:06 PM
6:08 PM	6:14 PM	6:16 PM	6:18 PM	6:19 PM	6:21 PM	6:22 PM	6:26 PM	6:29 PM	6:30 PM	6:33 PM	6:34 PM	6:36 PM	6:37 PM	6:39 PM	6:41 PM	6:43 PM	6:45 PM	6:46 PM	6:49 PM	6:52 PM
6:54 PM	7:00 PM	7:01 PM	7:04 PM	7:05 PM	7:07 PM	7:08 PM	7:12 PM	7:15 PM	7:16 PM	7:18 PM	7:20 PM	7:21 PM	7:22 PM	7:25 PM	7:27 PM	7:29 PM	7:30 PM	7:32 PM	7:34 PM	7:37 PM
7:39 PM																				



Special Rules to Remember:

- Shop for only as much as you can carry yourself.
- No more than four(4) plastic or two(2) paper grocery bags allowed per person.
- The driver can not carry your packages or leave the van unattended.
- Please, no tipping.

NMB-LINE

Is operated by

The City of North Miami Beach
Public Works Department

For more information call:

(305) 537-4173
(305) RIDENMB
743-3662

or visit us on line at

www.citynmb.com

ROUTE C

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Walmart	NMB Public Library	Fulford Elem. Allen Park	NE 157 St. & NE 18 Ave.	NE 153 Terr. & NE 16 Ave.	W. Dixie Hwy. & NE 151 St.	NE 151 St. W. Dixie Hwy.	David Lawrence Jr.	FIU North Campus	ATM High School	NE 151 St. & US1	NE 146 St. & US1	Highland Park	NE 141 St. & US1	NE 146 St. & US1	W. Dixie Hwy. & NE 18 Ave.	NE 152 Terr. & NE 14 Ct.	NE 154 St. & NE 13 Ave.	NE 158 St. & NE 12 Ave.	NMB High & JFK Middle	
ARRIVAL	DEPARTURE																			
7:56 AM	8:04 AM	8:06 AM	8:09 AM	8:11 AM	8:13 AM	8:15 AM	8:17 AM	8:20 AM	8:23 AM	8:26 AM	8:28 AM	8:30 AM	8:34 AM	8:36 AM	8:37 AM	8:43 AM	8:47 AM	8:50 AM	8:53 AM	8:56 AM
8:59 AM	9:07 AM	9:10 AM	9:13 AM	9:14 AM	9:17 AM	9:19 AM	9:21 AM	9:24 AM	9:26 AM	9:29 AM	9:32 AM	9:33 AM	9:37 AM	9:39 AM	9:41 AM	9:46 AM	9:51 AM	9:53 AM	9:56 AM	10:00 AM
10:03 AM	10:11 AM	10:13 AM	10:16 AM	10:17 AM	10:20 AM	10:22 AM	10:24 AM	10:27 AM	10:29 AM	10:32 AM	10:35 AM	10:36 AM	10:40 AM	10:42 AM	10:44 AM	10:49 AM	10:54 AM	10:56 AM	10:59 AM	11:03 AM
11:06 AM	11:14 AM	11:16 AM	11:19 AM	11:21 AM	11:23 AM	11:25 AM	11:27 AM	11:30 AM	11:32 AM	11:35 AM	11:38 AM	11:40 AM	11:43 AM	11:45 AM	11:47 AM	11:52 AM	11:57 AM	12:00 PM	12:03 PM	12:06 PM
12:09 AM	12:17 PM	12:19 PM	12:22 PM	12:24 PM	12:26 PM	12:28 PM	12:30 PM	12:33 PM	12:35 PM	12:38 PM	12:41 PM	12:43 PM	12:46 PM	12:48 PM	12:50 PM	12:55 PM	1:00 PM	1:03 PM	1:06 PM	1:09 PM
1:12 PM	1:20 PM	1:22 PM	1:25 PM	1:27 PM	1:30 PM	1:32 PM	1:34 PM	1:37 PM	1:39 PM	1:43 PM	1:45 PM	1:47 PM	1:51 PM	1:53 PM	1:54 PM	2:00 PM	2:05 PM	2:07 PM	2:10 PM	2:14 PM
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3:21 PM	3:29 PM	3:32 PM	3:35 PM	3:37 PM	3:39 PM	3:41 PM	3:43 PM	3:46 PM	3:48 PM	3:51 PM	3:54 PM	3:56 PM	3:59 PM	4:01 PM	4:03 PM	4:08 PM	4:13 PM	4:16 PM	4:19 PM	4:22 PM
4:25 PM	4:33 PM	4:35 PM	4:38 PM	4:40 PM	4:42 PM	4:44 PM	4:46 PM	4:49 PM	4:51 PM	4:54 PM	4:57 PM	4:59 PM	5:02 PM	5:04 PM	5:06 PM	5:11 PM	5:16 PM	5:19 PM	5:22 PM	5:25 PM
5:28 PM	5:36 PM	5:38 PM	5:41 PM	5:43 PM	5:46 PM	5:47 PM	5:49 PM	5:52 PM	5:54 PM	5:58 PM	6:00 PM	6:02 PM	6:05 PM	6:07 PM	6:09 PM	6:15 PM	6:19 PM	6:22 PM	6:25 PM	6:28 PM
6:34 PM	6:39 PM	6:41 PM	6:44 PM	6:46 PM	6:49 PM	6:50 PM	6:52 PM	6:55 PM	6:57 PM	7:01 PM	7:03 PM	7:05 PM	7:09 PM	7:11 PM	7:12 PM	7:18 PM	7:22 PM	7:25 PM	7:18 PM	7:30 PM

Appendix I

Trip Generation

AM PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY AM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		BASELINE TRIPS			MULTIMODAL REDUCTION		GROSS TRIPS			INTERNAL CAPTURE		EXTERNAL VEHICLE 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																					
G R O U P 1	1	Shopping Center	10	820	189,026	ksf	62%	38%	153	93	246	10.0%	25	138	83	221	0.0%	0	138	83	221	0.0%	0	138	83	221		
	2	Supermarket	10	850	45	ksf	60%	40%	103	69	172	10.0%	17	93	62	155	0.0%	0	93	62	155	0.0%	0	93	62	155		
	3																											
	4																											
	5																											
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	9																											
	10																											
	11																											
	12																											
	13																											
	14																											
	15																											
ITE Land Use Code		Rate or Equation					Total:			256	162	418	10.0%	42	231	145	376	0.0%	0	231	145	376	0.0%	0	231	145	376	
820		Y=0.5*(X)+151.78																										
850		Y=3.82(X)																										

PROPOSED WEEKDAY AM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		BASELINE TRIPS			MULTIMODAL REDUCTION		GROSS TRIPS			INTERNAL CAPTURE		EXTERNAL VEHICLE 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																					
G R O U P 2	1	General Office Building	10	710	200	ksf	86%	14%	184	30	214	15.0%	32	156	26	182	12.6%	23	140	19	159	0.0%	0	140	19	159		
	2	Shopping Center	10	820	280	ksf	62%	38%	163	100	263	15.0%	39	139	85	224	6.5%	15	129	80	209	0.0%	0	129	80	209		
	3	Supermarket	10	850	50	ksf	60%	40%	115	76	191	15.0%	29	98	64	162	6.5%	10	91	61	152	0.0%	0	91	61	152		
	4	Health/Fitness Club	10	492	45	ksf	51%	49%	30	29	59	15.0%	9	25	25	50	0.0%	0	25	25	50	0.0%	0	25	25	50		
	5	Multifamily Housing (High-Rise)	10	222	1917	du	24%	76%	132	418	550	15.0%	82	112	356	468	2.2%	11	110	347	457	0.0%	0	110	347	457		
	6	Multifamily (Mid-Rise)	10	221	48	du	26%	74%	4	13	17	15.0%	3	3	11	14	2.2%	0	3	11	14	0.0%	0	3	11	14		
	7	Multifamily Housing (Low-Rise)	10	220	35	du	23%	77%	4	14	18	15.0%	3	3	12	15	2.2%	0	3	12	15	0.0%	0	3	12	15		
	8	Hotel	10	310	250	room	59%	41%	71	49	120	15.0%	18	60	42	102	10.8%	11	60	31	91	0.0%	0	60	31	91		
	9																											
	10																											
	11																											
	12																											
	13																											
	14																											
	15																											
ITE Land Use Code		Rate or Equation					Total:			703	729	1,432	15.0%	215	596	621	1,217	5.8%	70	561	586	1,147	0.0%	0	561	586	1,147	
710		Y=0.94*(X)+26.49																										
820		Y=0.94(X)																										
850		Y=3.82(X)																										
492		Y=1.31(X)																										
222		Y=0.28*(X)+12.86																										
221		LN(Y) = 0.98*LN(X)+0.98																										
220		LN(Y) = 0.95*LN(X)+0.51																										
310		Y=0.5*(X)+5.34																										

NET NEW TRIPS	IN	OUT	TOTAL
	330	441	771

PM PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY PM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS						DIRECTIONAL DISTRIBUTION		BASELINE TRIPS			MULTIMODAL REDUCTION		GROSS TRIPS			INTERNAL CAPTURE		EXTERNAL VEHICLE 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																									
G R O U P 1	1 Shopping Center	10	820	189,026	ksf	48%	52%	418	452	870	10.0%	87	376	407	783	0.0%	0	376	407	783	34.0%	266	248	269	517							
	2 Supermarket	10	850	45	ksf	51%	49%	220	211	431	10.0%	43	198	190	388	0.0%	0	198	190	388	36.0%	140	127	121	248							
	3																															
	4																															
	5																															
	6																															
	7																															
	8																															
	9																															
	10																															
	11																															
	12																															
	13																															
	14																															
	15																															
ITE Land Use Code						Rate or Equation						Total:			638	663	1,301	10.0%	130	574	597	1,171	0.0%	0	574	597	1,171	34.7%	406	375	390	765
820						LN(Y) = 0.74*LN(X)+2.89																										
850						LN(Y) = 0.75*LN(X)+3.21																										

PROPOSED WEEKDAY PM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS						DIRECTIONAL DISTRIBUTION		BASELINE TRIPS			MULTIMODAL REDUCTION		GROSS TRIPS			INTERNAL CAPTURE		EXTERNAL VEHICLE 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																										
G R O U P 2	1 General Office Building	10	710	200	ksf	16%	84%	35	185	220	15.0%	33	30	157	187	28.3%	53	11	123	134	0.0%	0	11	123	134								
	2 Shopping Center	10	820	280	ksf	48%	52%	559	605	1,164	15.0%	175	475	514	989	23.7%	234	391	364	755	34.0%	257	258	240	498								
	3 Supermarket	10	850	50	ksf	51%	49%	238	228	466	15.0%	70	202	194	396	23.7%	94	165	137	302	36.0%	109	105	88	193								
	4 Health/Fitness Club	10	492	45	ksf	57%	43%	84	63	147	15.0%	22	71	54	125	28.0%	35	53	37	90	0.0%	0	53	37	90								
	5 Multifamily Housing (High-Rise)	10	222	1917	du	61%	39%	403	257	660	15.0%	99	343	218	561	43.2%	242	179	140	319	0.0%	0	179	140	319								
	6 Multifamily (Mid-Rise)	10	221	48	du	61%	39%	13	9	22	15.0%	3	11	8	19	43.2%	8	6	5	11	0.0%	0	6	5	11								
	7 Multifamily Housing (Low-Rise)	10	220	35	du	63%	37%	14	9	23	15.0%	3	12	8	20	43.2%	9	6	5	11	0.0%	0	6	5	11								
	8 Hotel	10	310	250	room	51%	49%	82	79	161	15.0%	24	70	67	137	22.6%	31	50	56	106	0.0%	0	50	56	106								
	9																																
	10																																
	11																																
	12																																
	13																																
	14																																
	15																																
ITE Land Use Code						Rate or Equation						Total:			1,428	1,435	2,863	15.0%	429	1,214	1,220	2,434	29.0%	706	861	867	1,728	21.2%	366	668	694	1,362	
710						LN(Y) = 0.95*LN(X)+0.36																											
820						LN(Y) = 0.74*LN(X)+2.89																											
850						LN(Y) = 0.75*LN(X)+3.21																											
492						LN(Y) = 0.67*LN(X)+2.44																											
222						Y=-0.34*(X)+8.56																											
221						LN(Y) = 0.96*LN(X)+0.63																											
220						LN(Y) = 0.89*LN(X)+0.02																											
310						Y=0.75*(X)+26.02																											

NET NEW TRIPS	IN	OUT	TOTAL
	293	304	597

Internal Capture Reduction Calculations

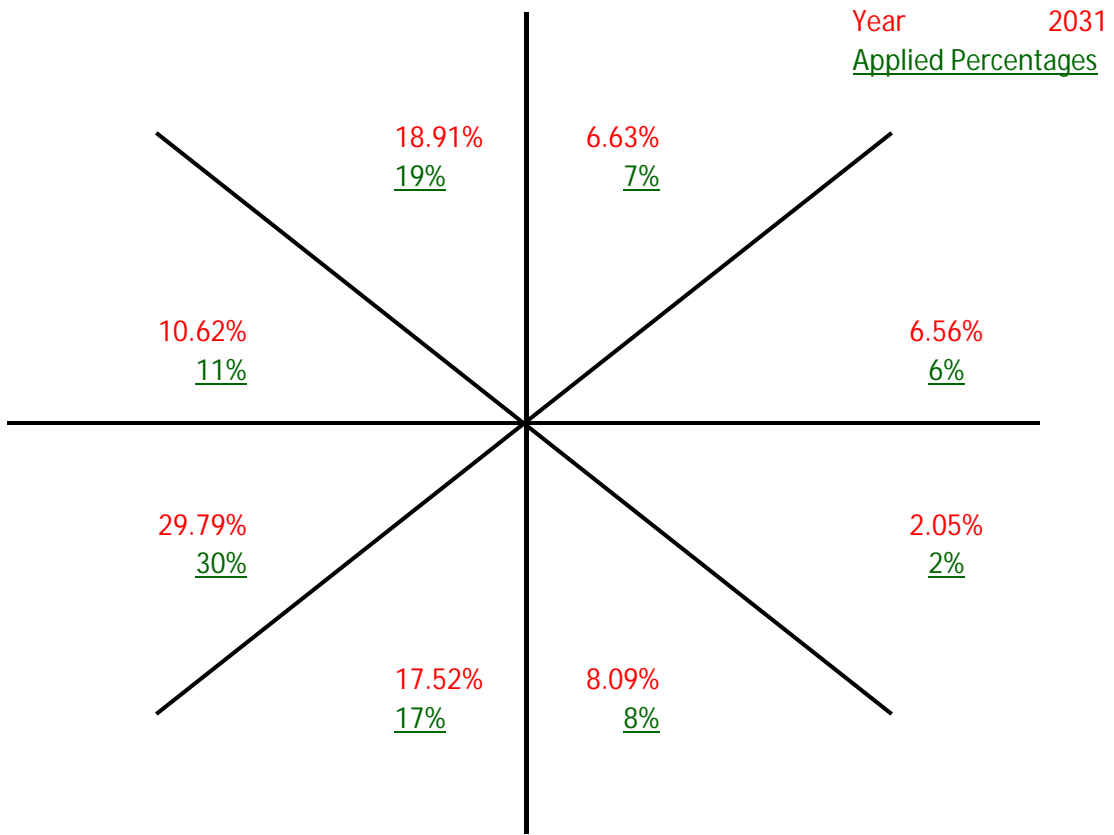
Methodology for A.M. Peak Hour and P.M. Peak Hour based on the Trip Generation Handbook, 3rd Edition, published by the Institute of Transportation Engineers

SUMMARY (PROPOSED)					
	GROSS TRIP GENERATION				
INPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
	Office	156	26	30	157
	Retail	237	149	677	708
	Restaurant	0	0	0	0
	Cinema/Entertainment	25	25	71	54
	Residential	118	379	366	234
	Hotel	60	42	70	67
		596	621	1,214	1,220
	INTERNAL TRIPS				
OUTPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
	Office	16	7	19	34
	Retail	17	8	121	207
	Restaurant	0	0	0	0
	Cinema/Entertainment	0	0	18	17
	Residential	2	9	175	84
	Hotel	0	11	20	11
		35	35	353	353
OUTPUT	Total % Reduction	5.8%		29.0%	
	Office	12.6%		28.3%	
	Retail	6.5%		23.7%	
	Restaurant				
	Cinema/Entertainment	0.0%		28.0%	
	Residential	2.2%		43.2%	
	Hotel	10.8%		22.6%	
	EXTERNAL TRIPS				
OUTPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
	Office	140	19	11	123
	Retail	220	141	556	501
	Restaurant	0	0	0	0
	Cinema/Entertainment	25	25	53	37
	Residential	116	370	191	150
	Hotel	60	31	50	56
		561	586	861	867

Appendix J

Cardinal Trip Distribution

Cardinal Distribution for TAZ 91



Cardinal Trip Distribution

Cardinal Direction	Percentage of Trips		2031 Interpolated	2031 Rounded
	2010	2040		
North-Northeast	6.7%	6.60%	6.63%	7.00%
East-Northeast	6.0%	6.80%	6.56%	6.00%
East-Southeast	1.0%	2.50%	2.05%	2.00%
South-Southeast	9.0%	7.70%	8.09%	8.00%
South-Southwest	17.8%	17.40%	17.52%	17.00%
West-Southwest	27.2%	30.90%	29.79%	30.00%
West-Northwest	12.3%	9.90%	10.62%	11.00%
North-Northwest	20.1%	18.40%	18.91%	19.00%
Total	100.1%	100.2%	100.17%	100.00%

Miami-Dade 2010 Directional Distribution Summary

Origin TAZ			Cardinal Directions								Total
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
83	2983	TRIPS	351	40	1	115	242	220	179	98	1,246
83	2983	PERCENT	28.2	3.2	0.1	9.2	19.4	17.7	14.4	7.9	
84	2984	TRIPS	559	465	153	365	865	746	334	514	4,001
84	2984	PERCENT	14.0	11.6	3.8	9.1	21.6	18.7	8.4	12.9	
85	2985	TRIPS	188	95	250	96	304	63	164	218	1,378
85	2985	PERCENT	13.6	6.9	18.1	7.0	22.1	4.6	11.9	15.8	
86	2986	TRIPS	729	318	175	394	899	1,068	479	705	4,767
86	2986	PERCENT	15.3	6.7	3.7	8.3	18.9	22.4	10.1	14.8	
87	2987	TRIPS	617	93	194	162	635	433	374	357	2,865
87	2987	PERCENT	21.5	3.3	6.8	5.7	22.2	15.1	13.1	12.5	
88	2988	TRIPS	404	39	25	180	295	156	148	172	1,419
88	2988	PERCENT	28.5	2.8	1.8	12.7	20.8	11.0	10.4	12.1	
89	2989	TRIPS	439	194	25	110	400	312	209	409	2,098
89	2989	PERCENT	20.9	9.3	1.2	5.2	19.1	14.9	10.0	19.5	
90	2990	TRIPS	3,896	381	391	963	4,381	3,762	2,705	3,769	20,248
90	2990	PERCENT	19.2	1.9	1.9	4.8	21.6	18.6	13.4	18.6	
91	2991	TRIPS	384	345	57	518	1,028	1,569	711	1,160	5,772
91	2991	PERCENT	6.7	6.0	1.0	9.0	17.8	27.2	12.3	20.1	
92	2992	TRIPS	285	363	90	433	876	827	388	701	3,963
92	2992	PERCENT	7.2	9.2	2.3	10.9	22.1	20.9	9.8	17.7	
93	2993	TRIPS	333	106	3	113	321	270	255	180	1,581
93	2993	PERCENT	21.1	6.7	0.2	7.2	20.3	17.1	16.1	11.4	
94	2994	TRIPS	723	134	78	236	580	389	471	351	2,962
94	2994	PERCENT	24.4	4.5	2.6	8.0	19.6	13.1	15.9	11.9	
95	2995	TRIPS	1,114	208	132	432	836	871	670	535	4,798
95	2995	PERCENT	23.2	4.3	2.8	9.0	17.4	18.2	14.0	11.2	
96	2996	TRIPS	419	66	25	139	406	295	257	194	1,801
96	2996	PERCENT	23.3	3.7	1.4	7.7	22.5	16.4	14.3	10.8	
97	2997	TRIPS	443	23	42	136	434	389	389	247	2,103
97	2997	PERCENT	21.1	1.1	2.0	6.5	20.6	18.5	18.5	11.8	
98	2998	TRIPS	366	342	59	254	480	250	436	317	2,504
98	2998	PERCENT	14.6	13.7	2.4	10.1	19.2	10.0	17.4	12.7	
99	2999	TRIPS	1,032	663	214	768	1,149	754	738	800	6,118
99	2999	PERCENT	16.9	10.8	3.5	12.6	18.8	12.3	12.1	13.1	
100	3000	TRIPS	711	1,020	394	880	939	1,040	645	451	6,080
100	3000	PERCENT	11.7	16.8	6.5	14.5	15.4	17.1	10.6	7.4	
101	3001	TRIPS	2,051	720	290	949	1,366	1,177	1,651	2,084	10,288
101	3001	PERCENT	19.9	7.0	2.8	9.2	13.3	11.4	16.1	20.3	
102	3002	TRIPS	1,290	1,226	338	1,238	1,466	1,285	919	960	8,722
102	3002	PERCENT	14.8	14.1	3.9	14.2	16.8	14.7	10.5	11.0	
103	3003	TRIPS	623	571	316	426	794	561	461	357	4,109

Miami-Dade 2040 Directional Distribution Summary

Origin TAZ			Cardinal Directions								Total
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
83	2983	TRIPS	383	99	16	129	328	292	186	207	1,640
83	2983	PERCENT	23.4	6.0	1.0	7.9	20.0	17.8	11.3	12.6	
84	2984	TRIPS	1,429	1,141	312	896	1,983	1,378	942	1,148	9,229
84	2984	PERCENT	15.5	12.4	3.4	9.7	21.5	14.9	10.2	12.4	
85	2985	TRIPS	279	96	257	122	354	292	200	242	1,842
85	2985	PERCENT	15.2	5.2	14.0	6.6	19.2	15.9	10.9	13.1	
86	2986	TRIPS	1,315	352	210	564	1,270	1,178	538	638	6,065
86	2986	PERCENT	21.7	5.8	3.5	9.3	20.9	19.4	8.9	10.5	
87	2987	TRIPS	766	140	263	149	825	540	447	578	3,708
87	2987	PERCENT	20.7	3.8	7.1	4.0	22.3	14.6	12.1	15.6	
88	2988	TRIPS	555	85	25	152	413	322	203	320	2,075
88	2988	PERCENT	26.8	4.1	1.2	7.3	19.9	15.5	9.8	15.4	
89	2989	TRIPS	452	249	60	114	569	399	244	289	2,376
89	2989	PERCENT	19.0	10.5	2.5	4.8	24.0	16.8	10.3	12.2	
90	2990	TRIPS	5,044	561	691	1,099	5,956	4,093	2,851	4,467	24,762
90	2990	PERCENT	20.4	2.3	2.8	4.4	24.1	16.5	11.5	18.0	
91	2991	TRIPS	461	473	175	538	1,216	2,167	690	1,288	7,008
91	2991	PERCENT	6.6	6.8	2.5	7.7	17.4	30.9	9.9	18.4	
92	2992	TRIPS	393	608	103	397	846	1,178	475	826	4,826
92	2992	PERCENT	8.1	12.6	2.1	8.2	17.5	24.4	9.8	17.1	
93	2993	TRIPS	318	151	40	121	303	398	328	147	1,806
93	2993	PERCENT	17.6	8.4	2.2	6.7	16.8	22.0	18.2	8.1	
94	2994	TRIPS	1,962	549	137	460	2,200	1,423	1,227	1,012	8,970
94	2994	PERCENT	21.9	6.1	1.5	5.1	24.5	15.9	13.7	11.3	
95	2995	TRIPS	1,343	274	186	677	1,205	935	822	658	6,100
95	2995	PERCENT	22.0	4.5	3.1	11.1	19.8	15.3	13.5	10.8	
96	2996	TRIPS	698	306	170	207	513	332	412	351	2,989
96	2996	PERCENT	23.4	10.2	5.7	6.9	17.2	11.1	13.8	11.7	
97	2997	TRIPS	697	158	77	348	739	500	507	332	3,358
97	2997	PERCENT	20.8	4.7	2.3	10.4	22.0	14.9	15.1	9.9	
98	2998	TRIPS	740	391	285	455	713	553	700	567	4,404
98	2998	PERCENT	16.8	8.9	6.5	10.3	16.2	12.6	15.9	12.9	
99	2999	TRIPS	2,877	1,784	1,094	1,735	2,812	2,129	2,402	1,891	16,724
99	2999	PERCENT	17.2	10.7	6.5	10.4	16.8	12.7	14.4	11.3	
100	3000	TRIPS	821	1,023	529	1,273	1,213	1,291	812	488	7,450
100	3000	PERCENT	11.0	13.7	7.1	17.1	16.3	17.3	10.9	6.6	
101	3001	TRIPS	931	487	262	438	656	643	657	899	4,973
101	3001	PERCENT	18.7	9.8	5.3	8.8	13.2	12.9	13.2	18.1	
102	3002	TRIPS	1,303	1,366	533	1,360	1,810	1,412	1,245	1,110	10,139
102	3002	PERCENT	12.9	13.5	5.3	13.4	17.9	13.9	12.3	11.0	
103	3003	TRIPS	746	605	454	475	914	728	452	433	4,807

Appendix K

Intersection Capacity Analysis Worksheets

A.M. Peak Hour

Existing Conditions

Timings
1: Biscayne Boulevard/US 1 & NE 163rd Street

Existing Conditions
 A.M. Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	1176	288	409	1000	570	231	1009	478	451	1435	446
Future Volume (vph)	225	1176	288	409	1000	570	231	1009	478	451	1435	446
Turn Type	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases			8			Free			6			2
Detector Phase	3	8	1	7	4		1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	7.0	5.0	5.0	7.0	5.0
Minimum Split (s)	11.8	56.7	11.8	11.8	56.7		11.8	49.2	11.8	11.8	49.2	11.8
Total Split (s)	33.0	57.0	29.0	33.0	57.0		29.0	51.0	33.0	29.0	51.0	33.0
Total Split (%)	19.4%	33.5%	17.1%	19.4%	33.5%		17.1%	30.0%	19.4%	17.1%	30.0%	19.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8		4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.0	2.9	2.0	2.0	2.9		2.0	2.4	2.0	2.0	2.4	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	0.0
Total Lost Time (s)	6.8	7.7	6.8	6.8	7.7		6.8	7.2	6.8	6.8	7.2	6.8
Lead/Lag	Lead	Lag	Lead	Lead	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

Intersection Summary

























Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 77 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Biscayne Boulevard/US 1 & NE 163rd Street

29 s	51 s	33 s	57 s
29 s	51 s	33 s	57 s

HCM 6th Signalized Intersection Summary
 1: Biscayne Boulevard/US 1 & NE 163rd Street

Existing Conditions
 A.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	1176	288	409	1000	570	231	1009	478	451	1435	446
Future Volume (veh/h)	225	1176	288	409	1000	570	231	1009	478	451	1435	446
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	227	1188	291	413	1010	0	233	1019	483	456	1449	451
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	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	1375	547	460	1646		279	1926	677	451	2246	678
Arrive On Green	0.08	0.27	0.27	0.13	0.32	0.00	0.11	0.40	0.40	0.17	0.46	0.46
Sat Flow, veh/h	3456	5106	1557	3456	5106	1585	3456	6434	1557	3456	6434	1580
Grp Volume(v), veh/h	227	1188	291	413	1010	0	233	1019	483	456	1449	451
Grp Sat Flow(s),veh/h/ln	1728	1702	1557	1728	1702	1585	1728	1609	1557	1728	1609	1580
Q Serve(g_s), s	11.0	37.7	25.4	20.0	28.4	0.0	11.2	20.5	43.7	22.2	29.3	36.8
Cycle Q Clear(g_c), s	11.0	37.7	25.4	20.0	28.4	0.0	11.2	20.5	43.7	22.2	29.3	36.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	1375	547	460	1646		279	1926	677	451	2246	678
V/C Ratio(X)	0.82	0.86	0.53	0.90	0.61		0.83	0.53	0.71	1.01	0.65	0.66
Avail Cap(c_a), veh/h	533	1481	580	533	1646		451	1926	677	451	2246	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.0	59.2	44.2	72.5	48.7	0.0	74.7	42.0	34.2	70.2	37.5	31.4
Incr Delay (d2), s/veh	6.0	5.1	0.6	15.2	0.6	0.0	7.1	1.0	6.3	45.0	1.4	5.1
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(50%),veh/ln	5.2	17.0	10.0	9.9	12.3	0.0	5.2	8.1	16.9	12.4	11.3	14.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.0	64.3	44.8	87.8	49.2	0.0	81.9	43.1	40.5	115.2	38.9	36.5
LnGrp LOS	F	E	D	F	D		F	D	D	F	D	D
Approach Vol, veh/h		1706			1423	A		1735			2356	
Approach Delay, s/veh		63.4			60.4			47.6			53.2	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.5	66.6	20.4	62.5	29.0	58.1	29.4	53.5				
Change Period (Y+Rc), s	6.8	* 7.2	6.8	* 7.7	6.8	* 7.2	6.8	* 7.7				
Max Green Setting (Gmax), s	22.2	* 44	26.2	* 49	22.2	* 44	26.2	* 49				
Max Q Clear Time (g_c+I1), s	13.2	38.8	13.0	30.4	24.2	45.7	22.0	39.7				
Green Ext Time (p_c), s	0.5	2.6	0.6	6.0	0.0	0.0	0.6	5.4				

Intersection Summary

HCM 6th Ctrl Delay	55.7
HCM 6th LOS	E

Notes

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

Timings
2: NE 163rd Street & NE 26th Avenue

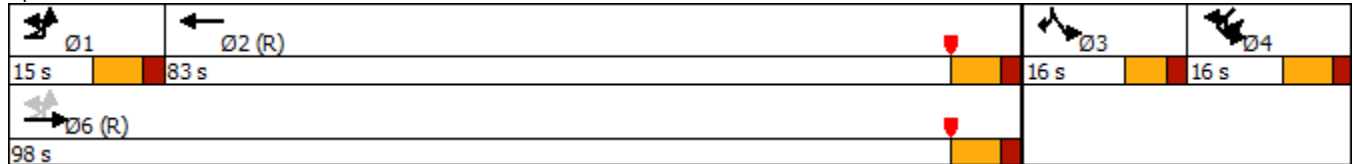
Existing Conditions
 A.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	1	33	2076	1851	38	71	21	0
Future Volume (vph)	1	33	2076	1851	38	71	21	0
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	15.0	15.0	98.0	83.0	16.0	16.0	16.0	16.0
Total Split (%)	11.5%	11.5%	75.4%	63.8%	12.3%	12.3%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 13 (10%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated




















Splits and Phases: 2: NE 163rd Street & NE 26th Avenue



HCM Signalized Intersection Capacity Analysis

2: NE 163rd Street & NE 26th Avenue

Existing Conditions
A.M. Peak Hour

												
Movement	EBU	EBL2	EBT	WBT	WBR2	SBL	SBR	SWU	SWL	SWR	SWR2	
Lane Configurations												
Traffic Volume (vph)	1	33	2076	1851	38	38	71	8	21	0	7	
Future Volume (vph)	1	33	2076	1851	38	38	71	8	21	0	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Lane Util. Factor		1.00	0.86	0.86		1.00	1.00		1.00	1.00		
Frbp, ped/bikes		1.00	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	1.00		
Frt		1.00	1.00	1.00		1.00	0.85		1.00	0.85		
Flt Protected		0.95	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (prot)		1770	6408	6384		1770	1583		1770	1583		
Flt Permitted		0.07	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (perm)		127	6408	6384		1770	1583		1770	1583		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Adj. Flow (vph)	1	34	2162	1928	40	40	74	8	22	0	7	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	35	2163	1968	0	40	74	0	30	7	0	
Confl. Peds. (#/hr)		5			5						5	
Turn Type	pm+pt	pm+pt	NA	NA		Prot	Prot	Prot	Prot	Prot		
Protected Phases	1	1	6	2		3	3	4	4	4		
Permitted Phases	6	6										
Actuated Green, G (s)		97.7	97.7	87.5		7.8	7.8		4.9	4.9		
Effective Green, g (s)		97.7	97.7	87.5		7.8	7.8		4.9	4.9		
Actuated g/C Ratio		0.75	0.75	0.67		0.06	0.06		0.04	0.04		
Clearance Time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Vehicle Extension (s)		2.0	1.0	1.0		2.5	2.5		2.5	2.5		
Lane Grp Cap (vph)		138	4815	4296		106	94		66	59		
v/s Ratio Prot		0.01	c0.34	0.31		0.02	c0.05		c0.02	0.00		
v/s Ratio Perm		0.18										
v/c Ratio		0.25	0.45	0.46		0.38	0.79		0.45	0.12		
Uniform Delay, d1		6.0	6.1	10.0		58.8	60.3		61.2	60.5		
Progression Factor		1.00	1.00	0.13		1.00	1.00		0.97	0.98		
Incremental Delay, d2		0.4	0.3	0.3		1.6	33.1		3.5	0.6		
Delay (s)		6.4	6.4	1.6		60.4	93.4		62.9	60.0		
Level of Service		A	A	A		E	F		E	E		
Approach Delay (s)			6.4	1.6		81.8			62.3			
Approach LOS			A	A		F			E			
Intersection Summary												
HCM 2000 Control Delay			6.7			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			26.4			
Intersection Capacity Utilization			58.1%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Timings
3: NE 163rd Street & NE 28th Avenue

Existing Conditions
A.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	23	8	2093	1795	2	19	49	11
Future Volume (vph)	23	8	2093	1795	2	19	49	11
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	15.0	15.0	98.0	83.0	16.0	16.0	16.0	16.0
Total Split (%)	11.5%	11.5%	75.4%	63.8%	12.3%	12.3%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 128 (98%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 3: NE 163rd Street & NE 28th Avenue

Ø1	Ø2 (R)	Ø3	Ø4
15 s	83 s	16 s	16 s
Ø6 (R)			
98 s			

HCM Signalized Intersection Capacity Analysis

3: NE 163rd Street & NE 28th Avenue

Existing Conditions
A.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	23	8	2093	1795	15	4	2	19	5	16	49	11	
Future Volume (vph)	23	8	2093	1795	15	4	2	19	5	16	49	11	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6396			1770	1583			1770	1583	
Flt Permitted		0.07	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		127	6408	6396			1770	1583			1770	1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	25	9	2275	1951	16	4	2	21	5	17	53	12	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	34	2275	1971	0	0	2	26	0	0	70	13	
Confl. Peds. (#/hr)		3				3							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			3	3		4	4	4	
Permitted Phases	6	6											
Actuated Green, G (s)		97.6	97.6	87.4			5.0	5.0			7.8	7.8	
Effective Green, g (s)		97.6	97.6	87.4			5.0	5.0			7.8	7.8	
Actuated g/C Ratio		0.75	0.75	0.67			0.04	0.04			0.06	0.06	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		138	4810	4300			68	60			106	94	
v/s Ratio Prot		0.01	c0.36	0.31			0.00	c0.02			c0.04	0.01	
v/s Ratio Perm		0.18											
v/c Ratio		0.25	0.47	0.46			0.03	0.43			0.66	0.14	
Uniform Delay, d1		6.0	6.3	10.1			60.2	61.1			59.8	57.9	
Progression Factor		1.25	0.87	0.20			1.00	1.00			1.04	1.07	
Incremental Delay, d2		0.3	0.3	0.3			0.1	3.6			13.0	0.5	
Delay (s)		7.9	5.7	2.3			60.3	64.7			75.1	62.2	
Level of Service		A	A	A			E	E			E	E	
Approach Delay (s)			5.8	2.3			64.4				73.1		
Approach LOS			A	A			E				E		
Intersection Summary													
HCM 2000 Control Delay			5.9		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.52										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			58.3%		ICU Level of Service						B		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 3: NE 163rd Street & NE 28th Avenue
















Existing Conditions
 A.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	1
Future Volume (vph)	1
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	1
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	3
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
4: NE 163rd Street & NE 2900 Block

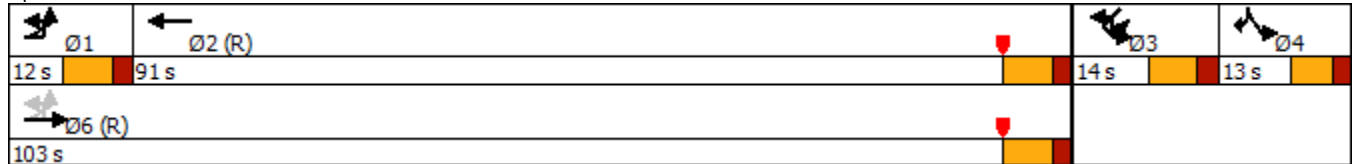
Existing Conditions
A.M. Peak Hour

								
Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	18	18	2060	1808	1	2	3	8
Future Volume (vph)	18	18	2060	1808	1	2	3	8
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	4	4	3	3
Permitted Phases	6	6						
Detector Phase	1	1	6	2	4	4	3	3
Switch Phase								
Minimum Initial (s)	5.0	5.0	15.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	21.8	21.8	13.0	13.0	13.8	13.8
Total Split (s)	12.0	12.0	103.0	91.0	13.0	13.0	14.0	14.0
Total Split (%)	9.2%	9.2%	79.2%	70.0%	10.0%	10.0%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 100 (77%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 4: NE 163rd Street & NE 2900 Block



HCM Signalized Intersection Capacity Analysis

4: NE 163rd Street & NE 2900 Block

Existing Conditions
A.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	18	18	2060	1808	9	3	1	2	1	7	3	8	
Future Volume (vph)	18	18	2060	1808	9	3	1	2	1	7	3	8	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6401			1770	1583			1770	1583	
Flt Permitted		0.07	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		130	6408	6401			1770	1583			1770	1583	
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)	20	20	2264	1987	10	3	1	2	1	8	3	9	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	40	2264	2000	0	0	1	3	0	0	11	9	
Confl. Peds. (#/hr)		4				4							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			4	4		3	3	3	
Permitted Phases	6	6											
Actuated Green, G (s)		106.2	106.2	95.3			1.4	1.4			2.8	2.8	
Effective Green, g (s)		106.2	106.2	95.3			1.4	1.4			2.8	2.8	
Actuated g/C Ratio		0.82	0.82	0.73			0.01	0.01			0.02	0.02	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		157	5234	4692			19	17			38	34	
v/s Ratio Prot		0.01	c0.35	0.31			0.00	c0.00			c0.01	0.01	
v/s Ratio Perm		0.20											
v/c Ratio		0.25	0.43	0.43			0.05	0.18			0.29	0.26	
Uniform Delay, d1		3.6	3.4	6.7			63.6	63.7			62.6	62.6	
Progression Factor		2.71	3.05	0.02			1.00	1.00			0.67	0.68	
Incremental Delay, d2		0.3	0.2	0.3			0.8	3.6			3.0	3.0	
Delay (s)		10.2	10.5	0.4			64.5	67.3			45.2	45.5	
Level of Service		B	B	A			E	E			D	D	
Approach Delay (s)			10.5	0.4			66.6				45.3		
Approach LOS			B	A			E				D		
Intersection Summary													
HCM 2000 Control Delay			6.1		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.45										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			57.9%		ICU Level of Service						B		
Analysis Period (min)			15										
c Critical Lane Group													

Timings
5: NE 34th Avenue & NE 163rd Street

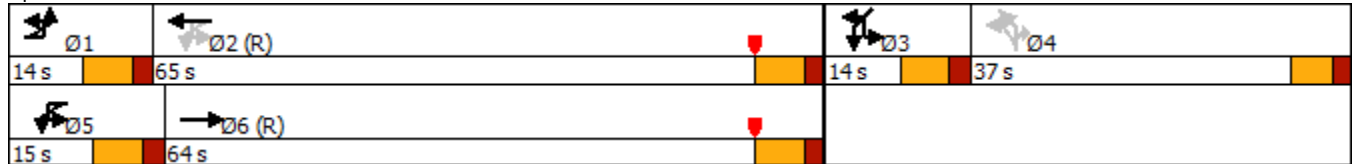
Existing Conditions
A.M. Peak Hour

Lane Group	EBL2	EBT	WBU	WBL	WBT	NBL	NBR2	SWL	SWR
Lane Configurations									
Traffic Volume (vph)	46	2000	12	3	1815	0	4	24	5
Future Volume (vph)	46	2000	12	3	1815	0	4	24	5
Turn Type	Prot	NA	pm+pt	pm+pt	NA	Perm	Perm	Prot	Prot
Protected Phases	1	6	5	5	2			3	3
Permitted Phases			2	2		4	4		
Detector Phase	1	6	5	5	2	4	4	3	3
Switch Phase									
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	21.8	11.8	11.8	21.8	37.0	37.0	13.8	13.8
Total Split (s)	14.0	64.0	15.0	15.0	65.0	37.0	37.0	14.0	14.0
Total Split (%)	10.8%	49.2%	11.5%	11.5%	50.0%	28.5%	28.5%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	6.8	6.8		6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 63 (48%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 105
 Control Type: Actuated-Coordinated



















Splits and Phases: 5: NE 34th Avenue & NE 163rd Street



HCM Signalized Intersection Capacity Analysis







5: NE 34th Avenue & NE 163rd Street

Existing Conditions
A.M. Peak Hour

												
Movement	EBU	EBL2	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL2	NBL	NBR2
Lane Configurations												
Traffic Volume (vph)	6	46	2000	16	12	3	1815	8	18	5	0	4
Future Volume (vph)	6	46	2000	16	12	3	1815	8	18	5	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8			6.8	6.8				6.0	6.0
Lane Util. Factor		1.00	0.86			1.00	0.86				1.00	1.00
Frbp, 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	1.00			1.00	1.00				1.00	0.85
Flt Protected		0.95	1.00			0.95	1.00				0.95	1.00
Satd. Flow (prot)		1770	6399			1770	6394				1770	1583
Flt Permitted		0.95	1.00			0.07	1.00				0.95	1.00
Satd. Flow (perm)		1770	6399			122	6394				1770	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	6	49	2128	17	13	3	1931	9	19	5	0	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	4
Lane Group Flow (vph)	0	55	2145	0	0	16	1959	0	0	0	5	0
Confl. Peds. (#/hr)						1						
Confl. Bikes (#/hr)				2								
Turn Type	Prot	Prot	NA		pm+pt	pm+pt	NA			Perm	Perm	Perm
Protected Phases	1	1	6		5	5	2					
Permitted Phases					2	2				4	4	4
Actuated Green, G (s)		7.5	94.4			91.1	89.0				2.8	2.8
Effective Green, g (s)		7.5	94.4			91.1	89.0				2.8	2.8
Actuated g/C Ratio		0.06	0.73			0.70	0.68				0.02	0.02
Clearance Time (s)		6.8	6.8			6.8	6.8				6.0	6.0
Vehicle Extension (s)		2.0	1.0			2.0	1.0				2.5	2.5
Lane Grp Cap (vph)		102	4646			112	4377				38	34
v/s Ratio Prot		c0.03	c0.34			0.00	0.31					
v/s Ratio Perm						0.10					c0.00	0.00
v/c Ratio		0.54	0.46			0.14	0.45				0.13	0.00
Uniform Delay, d1		59.6	7.3			6.1	9.3				62.4	62.2
Progression Factor		0.98	0.80			0.61	0.60				1.00	1.00
Incremental Delay, d2		2.6	0.3			0.2	0.3				1.1	0.0
Delay (s)		60.7	6.2			3.9	5.9				63.6	62.3
Level of Service		E	A			A	A				E	E
Approach Delay (s)			7.5				5.8					
Approach LOS			A				A					
Intersection Summary												
HCM 2000 Control Delay			7.5									A
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			130.0						26.4			
Intersection Capacity Utilization			62.9%									B
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
5: NE 34th Avenue & NE 163rd Street











Existing Conditions
A.M. Peak Hour

				
Movement	SWL2	SWL	SWR	SWR2
Lane Configurations				
Traffic Volume (vph)	4	24	5	7
Future Volume (vph)	4	24	5	7
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8	
Lane Util. Factor		1.00	1.00	
Frbp, ped/bikes		1.00	1.00	
Flpb, ped/bikes		1.00	1.00	
Frt		1.00	0.85	
Flt Protected		0.95	1.00	
Satd. Flow (prot)		1770	1583	
Flt Permitted		0.95	1.00	
Satd. Flow (perm)		1770	1583	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94
Adj. Flow (vph)	4	26	5	7
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	0	30	12	0
Confl. Peds. (#/hr)				10
Confl. Bikes (#/hr)				
Turn Type	Prot	Prot	Prot	
Protected Phases	3	3	3	
Permitted Phases				
Actuated Green, G (s)		4.3	4.3	
Effective Green, g (s)		4.3	4.3	
Actuated g/C Ratio		0.03	0.03	
Clearance Time (s)		6.8	6.8	
Vehicle Extension (s)		2.5	2.5	
Lane Grp Cap (vph)		58	52	
v/s Ratio Prot		0.02	0.01	
v/s Ratio Perm				
v/c Ratio		0.52	0.23	
Uniform Delay, d1		61.8	61.2	
Progression Factor		1.06	1.09	
Incremental Delay, d2		5.2	1.5	
Delay (s)		70.9	68.0	
Level of Service		E	E	
Approach Delay (s)		70.1		
Approach LOS		E		

Intersection Summary

Timings
6: NE 163rd Street & NE 35th Avenue

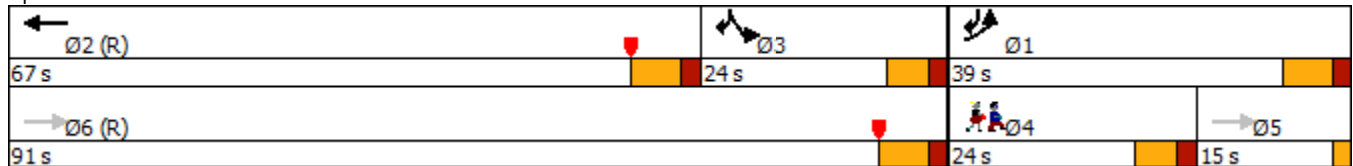
Existing Conditions
A.M. Peak Hour

						Ø4	Ø5	Ø6
Lane Group	EBL	EBT	WBT	SBL	SBR			
Lane Configurations								
Traffic Volume (vph)	355	1663	1415	153	437			
Future Volume (vph)	355	1663	1415	153	437			
Turn Type	Prot	NA	NA	Prot	pt+ov			
Protected Phases	1		2	3	1 3	4	5	6
Permitted Phases		5 6						
Detector Phase	1	5 6	2	3	1 3			
Switch Phase								
Minimum Initial (s)	7.0		4.0	7.0		1.0	4.0	4.0
Minimum Split (s)	13.8		28.8	24.0		24.0	6.0	28.8
Total Split (s)	39.0		67.0	24.0		24.0	15.0	91.0
Total Split (%)	30.0%		51.5%	18.5%		18%	12%	70%
Yellow Time (s)	4.8		4.8	4.0		4.0	2.0	4.8
All-Red Time (s)	2.0		2.0	2.0		2.0	0.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.8		6.8	6.0				
Lead/Lag			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes	Yes		Yes	Yes	
Recall Mode	None		C-Max	None		None	None	C-Max

Intersection Summary






Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 55 (42%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated

Splits and Phases: 6: NE 163rd Street & NE 35th Avenue



Queues
6: NE 163rd Street & NE 35th Avenue

Existing Conditions
A.M. Peak Hour

					
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	382	1788	1666	165	482
v/c Ratio	0.70	0.35	0.48	0.67	0.50
Control Delay	66.7	0.3	18.5	63.6	33.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	66.7	0.3	18.5	63.6	33.6
Queue Length 50th (ft)	173	0	236	137	190
Queue Length 95th (ft)	230	0	295	#223	235
Internal Link Dist (ft)		488	387	465	
Turn Bay Length (ft)	275			300	
Base Capacity (vph)	850	5085	3490	245	1204
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.45	0.35	0.48	0.67	0.40























Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis







6: NE 163rd Street & NE 35th Avenue

Existing Conditions
A.M. Peak Hour

										
Movement	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER
Lane Configurations	 	  	  				 	 		
Traffic Volume (vph)	355	1663	1415	30	104	153	437	11	0	0
Future Volume (vph)	355	1663	1415	30	104	153	437	11	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	2.0	6.8			6.0	6.8			
Lane Util. Factor	0.97	0.91	0.86			1.00	0.88			
Frbp, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Flpb, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Frt	1.00	1.00	0.99			1.00	0.85			
Flt Protected	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (prot)	3433	5085	6313			1770	2787			
Flt Permitted	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (perm)	3433	5085	6313			1770	2787			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	382	1788	1522	32	112	165	470	12	0	0
RTOR Reduction (vph)	0	0	7	0	0	0	0	0	0	0
Lane Group Flow (vph)	382	1788	1659	0	0	165	482	0	0	0
Confl. Peds. (#/hr)	5				5					
Turn Type	Prot	NA	NA			Prot	pt+ov			
Protected Phases	1		2			3	1 3			
Permitted Phases		5 6								
Actuated Green, G (s)	20.7	130.0	71.7			18.0	44.7			
Effective Green, g (s)	20.7	123.2	71.7			18.0	38.7			
Actuated g/C Ratio	0.16	0.95	0.55			0.14	0.30			
Clearance Time (s)	6.8		6.8			6.0				
Vehicle Extension (s)	3.0		1.0			3.0				
Lane Grp Cap (vph)	546	4819	3481			245	829			
v/s Ratio Prot	c0.11		c0.26			c0.09	0.17			
v/s Ratio Perm		0.35								
v/c Ratio	0.70	0.37	0.48			0.67	0.58			
Uniform Delay, d1	51.7	0.3	17.7			53.2	38.8			
Progression Factor	1.17	1.00	1.00			0.92	0.95			
Incremental Delay, d2	3.7	0.0	0.5			7.1	1.0			
Delay (s)	64.0	0.3	18.2			56.2	37.8			
Level of Service	E	A	B			E	D			
Approach Delay (s)		11.5	18.2			42.5		0.0		
Approach LOS		B	B			D		A		
Intersection Summary										
HCM 2000 Control Delay			18.5			HCM 2000 Level of Service			B	
HCM 2000 Volume to Capacity ratio			0.56							
Actuated Cycle Length (s)			130.0			Sum of lost time (s)		20.8		
Intersection Capacity Utilization			57.7%			ICU Level of Service			B	
Analysis Period (min)			15							
c Critical Lane Group										

HCM Unsignalized Intersection Capacity Analysis
7: NE 163rd Street & Intracoastal Mall Driveway

Existing Conditions
A.M. Peak Hour

										
Movement	EBL	EBT	WBT	WBR	SBL	SBR				
Lane Configurations		↑↑↑	↑↑↑	↗		↗				
Traffic Volume (veh/h)	0	1816	1134	80	0	35				
Future Volume (Veh/h)	0	1816	1134	80	0	35				
Sign Control		Free	Free		Stop					
Grade		0%	0%		0%					
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				
Hourly flow rate (vph)	0	2018	1260	89	0	39				
Pedestrians						23				
Lane Width (ft)					12.0					
Walking Speed (ft/s)					3.5					
Percent Blockage					2					
Right turn flare (veh)										
Median type		None	None							
Median storage (veh)										
Upstream signal (ft)		467								
pX, platoon unblocked										
vC, conflicting volume	1283				1788	443				
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1283				1788	443				
tC, single (s)	4.1				6.8	6.9				
tC, 2 stage (s)										
tF (s)	2.2				3.5	3.3				
p0 queue free %	100				100	93				
cM capacity (veh/h)	525				71	550				
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	SB 1	
Volume Total	504	504	504	504	420	420	420	89	39	
Volume Left	0	0	0	0	0	0	0	0	0	
Volume Right	0	0	0	0	0	0	0	89	39	
cSH	1700	1700	1700	1700	1700	1700	1700	1700	550	
Volume to Capacity	0.30	0.30	0.30	0.30	0.25	0.25	0.25	0.05	0.07	
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	6	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	
Lane LOS									B	
Approach Delay (s)	0.0				0.0				12.0	
Approach LOS									B	
Intersection Summary										
Average Delay			0.1							
Intersection Capacity Utilization			31.9%		ICU Level of Service				A	
Analysis Period (min)			15							

Timings
8: NE 35th Avenue & NE 164th Street

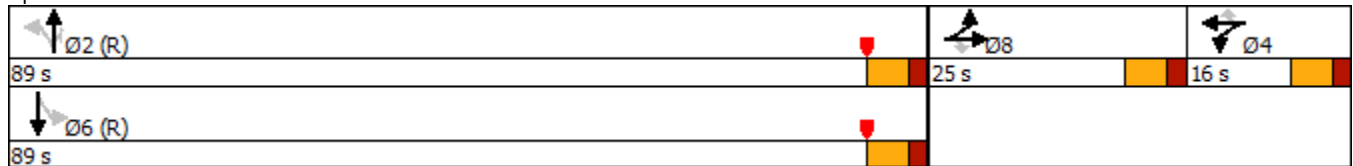
Existing Conditions
 A.M. Peak Hour

Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	49	59	3	24	41	219	98	16	483
Future Volume (vph)	49	59	3	24	41	219	98	16	483
Turn Type	Perm	Split	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		4	4			2			6
Permitted Phases	8			4	2		2	6	
Detector Phase	8	4	4	4	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.0	16.0	16.0	16.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	25.0	16.0	16.0	16.0	89.0	89.0	89.0	89.0	89.0
Total Split (%)	19.2%	12.3%	12.3%	12.3%	68.5%	68.5%	68.5%	68.5%	68.5%
Yellow Time (s)	4.0	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	2.0
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)	6.0	6.0	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	C-Max

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 116 (89%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 50
 Control Type: Actuated-Coordinated

Splits and Phases: 8: NE 35th Avenue & NE 164th Street



HCM 6th Signalized Intersection Summary

8: NE 35th Avenue & NE 164th Street

Existing Conditions
A.M. Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	49	59	3	24	41	219	98	16	483	3
Future Volume (veh/h)	0	0	49	59	3	24	41	219	98	16	483	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.98	1.00		0.98
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	53	65	0	26	44	235	105	17	519	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	86	70	195	0	84	723	2704	1184	844	2756	16
Arrive On Green	0.00	0.00	0.05	0.05	0.00	0.05	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	0	1870	1523	3563	0	1524	878	3554	1556	1037	3622	21
Grp Volume(v), veh/h	0	0	53	65	0	26	44	235	105	17	255	267
Grp Sat Flow(s),veh/h/ln	0	1870	1523	1781	0	1524	878	1777	1556	1037	1777	1866
Q Serve(g_s), s	0.0	0.0	4.5	2.3	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	4.5	2.3	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	86	70	195	0	84	723	2704	1184	844	1352	1420
V/C Ratio(X)	0.00	0.00	0.76	0.33	0.00	0.31	0.06	0.09	0.09	0.02	0.19	0.19
Avail Cap(c_a), veh/h	0	273	223	274	0	117	723	2704	1184	844	1352	1420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	61.3	59.1	0.0	59.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	11.7	0.7	0.0	1.5	0.1	0.0	0.1	0.0	0.3	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(50%),veh/ln	0.0	0.0	2.0	1.1	0.0	0.9	0.0	0.0	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	73.0	59.9	0.0	60.6	0.1	0.0	0.1	0.0	0.3	0.3
LnGrp LOS	A	A	E	E	A	E	A	A	A	A	A	A
Approach Vol, veh/h		53			91			384			539	
Approach Delay, s/veh		73.0			60.1			0.1			0.3	
Approach LOS		E			E			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		104.9		13.1		104.9		12.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		83.0		10.0		83.0		19.0				
Max Q Clear Time (g_c+I1), s		2.0		4.3		2.0		6.5				
Green Ext Time (p_c), s		0.7		0.1		1.1		0.1				

Intersection Summary

HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

HCM 6th TWSC
 9: NE 35th Avenue & Intracoastal Mall North Drive

Existing Conditions
 A.M. Peak Hour

Intersection

Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TTT			TT
Traffic Vol, veh/h	7	2	172	10	0	481
Future Vol, veh/h	7	2	172	10	0	481
Conflicting Peds, #/hr	0	0	0	10	10	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	8	2	187	11	0	523

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	465	109	0	0	-
Stage 1	203	-	-	-	-
Stage 2	262	-	-	-	-
Critical Hdwy	5	5	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3	3	-	-	-
Pot Cap-1 Maneuver	759	1079	-	-	0
Stage 1	897	-	-	-	0
Stage 2	873	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	751	1069	-	-	-
Mov Cap-2 Maneuver	751	-	-	-	-
Stage 1	888	-	-	-	-
Stage 2	873	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	804
HCM Lane V/C Ratio	-	-	0.012
HCM Control Delay (s)	-	-	9.5
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Future Background Conditions

Timings

Future Background Conditions

1: Biscayne Boulevard/US 1 & NE 163rd Street

A.M. Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	391	1446	328	496	1296	657	263	1185	559	522	1636	647
Future Volume (vph)	391	1446	328	496	1296	657	263	1185	559	522	1636	647
Turn Type	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases			8			Free			6			2
Detector Phase	3	8	1	7	4		1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	7.0	5.0	5.0	7.0	5.0
Minimum Split (s)	11.8	56.7	11.8	11.8	56.7		11.8	49.2	11.8	11.8	49.2	11.8
Total Split (s)	33.0	57.0	29.0	33.0	57.0		29.0	51.0	33.0	29.0	51.0	33.0
Total Split (%)	19.4%	33.5%	17.1%	19.4%	33.5%		17.1%	30.0%	19.4%	17.1%	30.0%	19.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8		4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.0	2.9	2.0	2.0	2.9		2.0	2.4	2.0	2.0	2.4	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	0.0
Total Lost Time (s)	6.8	7.7	6.8	6.8	7.7		6.8	7.2	6.8	6.8	7.2	6.8
Lead/Lag	Lead	Lag	Lead	Lead	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

Intersection Summary

























Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 77 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Biscayne Boulevard/US 1 & NE 163rd Street

29 s	51 s	33 s	57 s
29 s	51 s	33 s	57 s

HCM 6th Signalized Intersection Summary
 1: Biscayne Boulevard/US 1 & NE 163rd Street

Future Background Conditions
 A.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	391	1446	328	496	1296	657	263	1185	559	522	1636	647
Future Volume (veh/h)	391	1446	328	496	1296	657	263	1185	559	522	1636	647
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	395	1461	331	501	1309	0	266	1197	565	527	1653	654
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	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	443	1481	595	533	1613		312	1658	645	451	1917	674
Arrive On Green	0.13	0.29	0.29	0.15	0.32	0.00	0.12	0.34	0.34	0.17	0.40	0.40
Sat Flow, veh/h	3456	5106	1557	3456	5106	1585	3456	6434	1556	3456	6434	1579
Grp Volume(v), veh/h	395	1461	331	501	1309	0	266	1197	565	527	1653	654
Grp Sat Flow(s),veh/h/ln	1728	1702	1557	1728	1702	1585	1728	1609	1556	1728	1609	1579
Q Serve(g_s), s	19.1	48.4	28.4	24.4	40.1	0.0	12.8	27.6	43.8	22.2	40.1	50.6
Cycle Q Clear(g_c), s	19.1	48.4	28.4	24.4	40.1	0.0	12.8	27.6	43.8	22.2	40.1	50.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	443	1481	595	533	1613		312	1658	645	451	1917	674
V/C Ratio(X)	0.89	0.99	0.56	0.94	0.81		0.85	0.72	0.88	1.17	0.86	0.97
Avail Cap(c_a), veh/h	533	1481	595	533	1613		451	1658	645	451	1917	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.9	60.0	41.4	71.1	53.5	0.0	73.7	50.6	41.9	70.2	48.1	42.5
Incr Delay (d2), s/veh	15.1	20.2	1.0	21.7	2.6	0.0	10.2	2.8	15.4	97.1	5.4	28.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	23.7	11.2	12.5	17.7	0.0	6.0	11.1	25.4	15.7	16.2	33.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.0	80.2	42.4	92.8	56.1	0.0	83.9	53.3	57.3	167.3	53.5	70.7
LnGrp LOS	F	F	D	F	E		F	D	E	F	D	E
Approach Vol, veh/h		2187			1810	A		2028			2834	
Approach Delay, s/veh		75.9			66.3			58.4			78.7	
Approach LOS		E			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.2	57.8	28.6	61.4	29.0	51.0	33.0	57.0				
Change Period (Y+Rc), s	6.8	* 7.2	6.8	* 7.7	6.8	* 7.2	6.8	* 7.7				
Max Green Setting (Gmax), s	22.2	* 44	26.2	* 49	22.2	* 44	26.2	* 49				
Max Q Clear Time (g_c+I1), s	14.8	52.6	21.1	42.1	24.2	45.8	26.4	50.4				
Green Ext Time (p_c), s	0.5	0.0	0.7	4.3	0.0	0.0	0.0	0.0				

Intersection Summary
















HCM 6th Ctrl Delay	70.8
HCM 6th LOS	E

Notes

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

Timings
2: NE 163rd Street & NE 26th Avenue

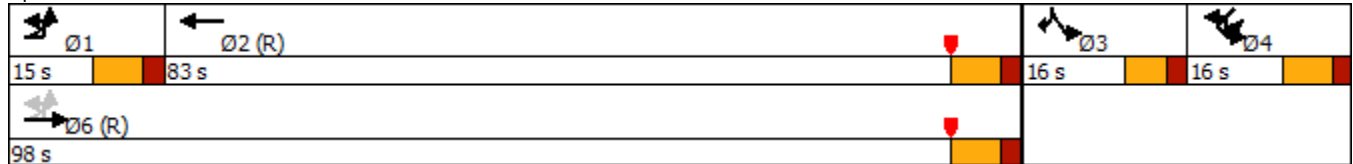
Future Background Conditions
A.M. Peak Hour

								
Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	1	38	2465	2248	43	81	24	0
Future Volume (vph)	1	38	2465	2248	43	81	24	0
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	15.0	15.0	98.0	83.0	16.0	16.0	16.0	16.0
Total Split (%)	11.5%	11.5%	75.4%	63.8%	12.3%	12.3%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 13 (10%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NE 163rd Street & NE 26th Avenue






















HCM Signalized Intersection Capacity Analysis

2: NE 163rd Street & NE 26th Avenue
















Future Background Conditions

A.M. Peak Hour

												
Movement	EBU	EBL2	EBT	WBT	WBR2	SBL	SBR	SWU	SWL	SWR	SWR2	
Lane Configurations												
Traffic Volume (vph)	1	38	2465	2248	43	43	81	9	24	0	8	
Future Volume (vph)	1	38	2465	2248	43	43	81	9	24	0	8	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Lane Util. Factor		1.00	0.86	0.86		1.00	1.00		1.00	1.00		
Frbp, ped/bikes		1.00	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	1.00		
Frt		1.00	1.00	1.00		1.00	0.85		1.00	0.85		
Flt Protected		0.95	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (prot)		1770	6408	6385		1770	1583		1770	1583		
Flt Permitted		0.04	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (perm)		81	6408	6385		1770	1583		1770	1583		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Adj. Flow (vph)	1	40	2568	2342	45	45	84	9	25	0	8	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	41	2568	2387	0	45	84	0	34	8	0	
Confl. Peds. (#/hr)		5			5						5	
Turn Type	pm+pt	pm+pt	NA	NA		Prot	Prot	Prot	Prot	Prot		
Protected Phases	1	1	6	2		3	3	4	4	4		
Permitted Phases	6	6										
Actuated Green, G (s)		96.0	96.0	84.7		9.4	9.4		5.0	5.0		
Effective Green, g (s)		96.0	96.0	84.7		9.4	9.4		5.0	5.0		
Actuated g/C Ratio		0.74	0.74	0.65		0.07	0.07		0.04	0.04		
Clearance Time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Vehicle Extension (s)		2.0	1.0	1.0		2.5	2.5		2.5	2.5		
Lane Grp Cap (vph)		118	4732	4160		127	114		68	60		
v/s Ratio Prot		0.01	c0.40	c0.37		0.03	c0.05		c0.02	0.01		
v/s Ratio Perm		0.24										
v/c Ratio		0.35	0.54	0.57		0.35	0.74		0.50	0.13		
Uniform Delay, d1		9.3	7.4	12.6		57.4	59.1		61.3	60.4		
Progression Factor		1.00	1.00	0.11		1.00	1.00		0.91	0.95		
Incremental Delay, d2		0.6	0.5	0.5		1.2	20.6		4.1	0.7		
Delay (s)		10.0	7.9	1.9		58.6	79.7		59.9	58.1		
Level of Service		A	A	A		E	E		E	E		
Approach Delay (s)			7.9	1.9		72.4			59.5			
Approach LOS			A	A		E			E			
Intersection Summary												
HCM 2000 Control Delay			7.2			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			26.4			
Intersection Capacity Utilization			63.7%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Timings
3: NE 163rd Street & NE 28th Avenue

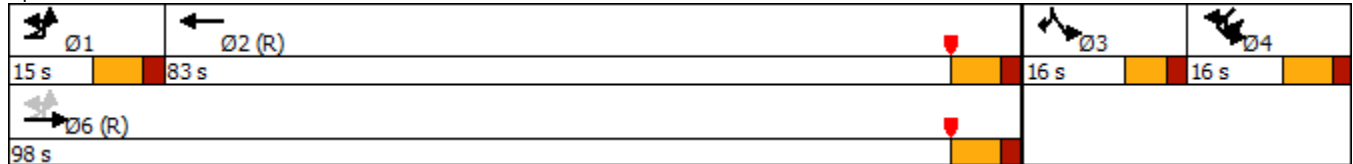
Future Background Conditions
A.M. Peak Hour

								
Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	26	9	2485	2184	2	22	56	13
Future Volume (vph)	26	9	2485	2184	2	22	56	13
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	15.0	15.0	98.0	83.0	16.0	16.0	16.0	16.0
Total Split (%)	11.5%	11.5%	75.4%	63.8%	12.3%	12.3%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 128 (98%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 3: NE 163rd Street & NE 28th Avenue



HCM Signalized Intersection Capacity Analysis

3: NE 163rd Street & NE 28th Avenue

Future Background Conditions

A.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	26	9	2485	2184	17	5	2	22	6	18	56	13	
Future Volume (vph)	26	9	2485	2184	17	5	2	22	6	18	56	13	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6397			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		82	6408	6397			1770	1583			1770	1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	28	10	2701	2374	18	5	2	24	7	20	61	14	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	38	2701	2397	0	0	2	31	0	0	81	15	
Confl. Peds. (#/hr)		3				3							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			3	3		4	4	4	
Permitted Phases	6	6											
Actuated Green, G (s)		95.8	95.8	84.5			5.2	5.2			9.4	9.4	
Effective Green, g (s)		95.8	95.8	84.5			5.2	5.2			9.4	9.4	
Actuated g/C Ratio		0.74	0.74	0.65			0.04	0.04			0.07	0.07	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		118	4722	4158			70	63			127	114	
v/s Ratio Prot		0.01	c0.42	0.37			0.00	c0.02			c0.05	0.01	
v/s Ratio Perm		0.23											
v/c Ratio		0.32	0.57	0.58			0.03	0.49			0.64	0.13	
Uniform Delay, d1		9.3	7.8	12.7			60.0	61.1			58.6	56.5	
Progression Factor		2.98	0.83	0.19			1.00	1.00			1.03	1.04	
Incremental Delay, d2		0.5	0.4	0.5			0.1	4.3			8.9	0.4	
Delay (s)		28.1	6.9	3.0			60.1	65.5			69.0	59.3	
Level of Service		C	A	A			E	E			E	E	
Approach Delay (s)			7.2	3.0			65.1				67.5		
Approach LOS			A	A			E				E		
Intersection Summary													
HCM 2000 Control Delay			6.8		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.61										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			64.0%		ICU Level of Service						C		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 3: NE 163rd Street & NE 28th Avenue
















Future Background Conditions
 A.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	1
Future Volume (vph)	1
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	1
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	3
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
4: NE 163rd Street & NE 2900 Block

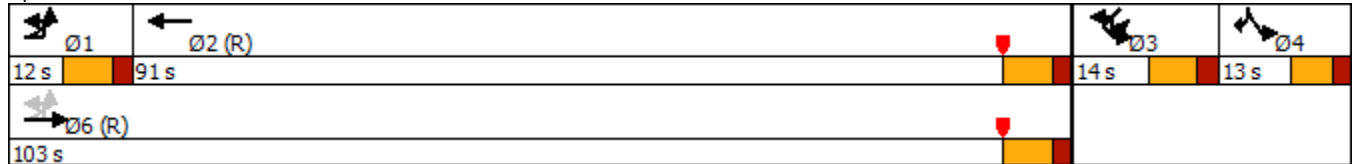
Future Background Conditions
A.M. Peak Hour

								
Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	21	21	2447	2199	1	2	3	9
Future Volume (vph)	21	21	2447	2199	1	2	3	9
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	4	4	3	3
Permitted Phases	6	6						
Detector Phase	1	1	6	2	4	4	3	3
Switch Phase								
Minimum Initial (s)	5.0	5.0	15.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	21.8	21.8	13.0	13.0	13.8	13.8
Total Split (s)	12.0	12.0	103.0	91.0	13.0	13.0	14.0	14.0
Total Split (%)	9.2%	9.2%	79.2%	70.0%	10.0%	10.0%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 100 (77%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 4: NE 163rd Street & NE 2900 Block























HCM Signalized Intersection Capacity Analysis

4: NE 163rd Street & NE 2900 Block

Future Background Conditions

A.M. Peak Hour

													
Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	21	21	2447	2199	10	3	1	2	1	8	3	9	
Future Volume (vph)	21	21	2447	2199	10	3	1	2	1	8	3	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6401			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		74	6408	6401			1770	1583			1770	1583	
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)	23	23	2689	2416	11	3	1	2	1	9	3	10	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	46	2689	2430	0	0	1	3	0	0	12	10	
Confl. Peds. (#/hr)		4				4							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			4	4		3	3	3	
Permitted Phases	6	6											
Actuated Green, G (s)		104.8	104.8	93.9			1.4	1.4			4.2	4.2	
Effective Green, g (s)		104.8	104.8	93.9			1.4	1.4			4.2	4.2	
Actuated g/C Ratio		0.81	0.81	0.72			0.01	0.01			0.03	0.03	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		113	5165	4623			19	17			57	51	
v/s Ratio Prot		0.01	c0.42	0.38			0.00	c0.00			c0.01	0.01	
v/s Ratio Perm		0.31											
v/c Ratio		0.41	0.52	0.53			0.05	0.18			0.21	0.20	
Uniform Delay, d1		6.5	4.2	8.1			63.6	63.7			61.3	61.3	
Progression Factor		1.44	3.08	0.02			1.00	1.00			0.58	0.58	
Incremental Delay, d2		0.7	0.3	0.4			0.8	3.6			1.3	1.3	
Delay (s)		10.1	13.3	0.5			64.5	67.3			37.0	36.9	
Level of Service		B	B	A			E	E			D	D	
Approach Delay (s)			13.2	0.5			66.6				37.0		
Approach LOS			B	A			E				D		
Intersection Summary													
HCM 2000 Control Delay			7.4		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.54										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					26.4			
Intersection Capacity Utilization			63.5%		ICU Level of Service					B			
Analysis Period (min)			15										
c Critical Lane Group													

Timings
5: NE 34th Avenue & NE 163rd Street

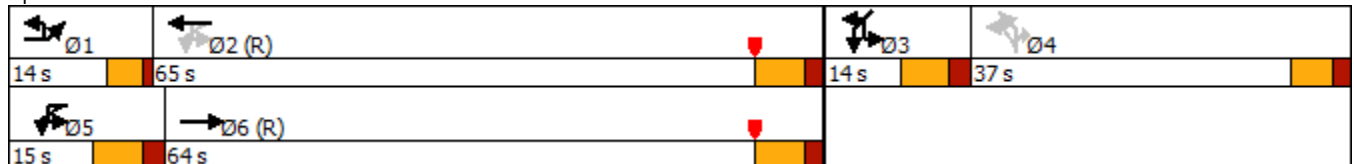
Future Background Conditions
A.M. Peak Hour

Lane Group	EBL	EBT	WBU	WBL	WBT	NBL	NBR2	SWL	SWR
Lane Configurations									
Traffic Volume (vph)	52	2379	14	3	2207	0	5	27	6
Future Volume (vph)	52	2379	14	3	2207	0	5	27	6
Turn Type	Prot	NA	pm+pt	pm+pt	NA	Perm	Perm	Prot	Prot
Protected Phases	1	6	5	5	2			3	3
Permitted Phases			2	2		4	4		
Detector Phase	1	6	5	5	2	4	4	3	3
Switch Phase									
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	9.5	21.8	11.8	11.8	21.8	37.0	37.0	13.8	13.8
Total Split (s)	14.0	64.0	15.0	15.0	65.0	37.0	37.0	14.0	14.0
Total Split (%)	10.8%	49.2%	11.5%	11.5%	50.0%	28.5%	28.5%	10.8%	10.8%
Yellow Time (s)	3.5	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
All-Red Time (s)	1.0	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
Total Lost Time (s)	4.5	6.8		6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None

Intersection Summary



















Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 63 (48%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 115
 Control Type: Actuated-Coordinated

Splits and Phases: 5: NE 34th Avenue & NE 163rd Street



HCM Signalized Intersection Capacity Analysis
5: NE 34th Avenue & NE 163rd Street







Future Background Conditions
A.M. Peak Hour

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL2	NBL	NBR2
Lane Configurations												
Traffic Volume (vph)	7	52	2379	18	14	3	2207	9	21	6	0	5
Future Volume (vph)	7	52	2379	18	14	3	2207	9	21	6	0	5
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	6.8			6.8	6.8				6.0	6.0
Lane Util. Factor		1.00	0.86			1.00	0.86				1.00	1.00
Frbp, 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	1.00			1.00	1.00				1.00	0.85
Flt Protected		0.95	1.00			0.95	1.00				0.95	1.00
Satd. Flow (prot)		1770	6400			1770	6395				1770	1583
Flt Permitted		0.95	1.00			0.05	1.00				0.95	1.00
Satd. Flow (perm)		1770	6400			84	6395				1770	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Adj. Flow (vph)	7	55	2531	19	15	3	2348	10	23	6	0	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	5
Lane Group Flow (vph)	0	62	2550	0	0	18	2381	0	0	0	6	0
Confl. Peds. (#/hr)						1						
Confl. Bikes (#/hr)				2								
Turn Type	Prot	Prot	NA		pm+pt	pm+pt	NA			Perm	Perm	Perm
Protected Phases	1	1	6		5	5	2					
Permitted Phases					2	2				4	4	4
Actuated Green, G (s)		8.7	93.0			90.8	88.7				2.8	2.8
Effective Green, g (s)		8.7	93.0			90.8	88.7				2.8	2.8
Actuated g/C Ratio		0.07	0.72			0.70	0.68				0.02	0.02
Clearance Time (s)		4.5	6.8			6.8	6.8				6.0	6.0
Vehicle Extension (s)		3.0	1.0			2.0	1.0				2.5	2.5
Lane Grp Cap (vph)		118	4578			85	4363				38	34
v/s Ratio Prot		c0.04	c0.40			0.00	0.37					
v/s Ratio Perm						0.14					c0.00	0.00
v/c Ratio		0.53	0.56			0.21	0.55				0.16	0.00
Uniform Delay, d1		58.7	8.8			7.0	10.5				62.4	62.2
Progression Factor		0.91	0.89			0.76	0.51				1.00	1.00
Incremental Delay, d2		3.7	0.4			0.4	0.4				1.4	0.0
Delay (s)		57.2	8.2			5.7	5.8				63.9	62.3
Level of Service		E	A			A	A				E	E
Approach Delay (s)			9.4				5.8					
Approach LOS			A				A					
Intersection Summary												
HCM 2000 Control Delay			8.3									A
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			130.0							26.4		
Intersection Capacity Utilization			68.4%									C
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
5: NE 34th Avenue & NE 163rd Street











Future Background Conditions

A.M. Peak Hour

				
Movement	SWL2	SWL	SWR	SWR2
Lane Configurations				
Traffic Volume (vph)	5	27	6	8
Future Volume (vph)	5	27	6	8
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8	
Lane Util. Factor		1.00	1.00	
Frbp, ped/bikes		1.00	1.00	
Flpb, ped/bikes		1.00	1.00	
Frt		1.00	0.85	
Flt Protected		0.95	1.00	
Satd. Flow (prot)		1770	1583	
Flt Permitted		0.95	1.00	
Satd. Flow (perm)		1770	1583	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	29	6	9
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	0	34	15	0
Confl. Peds. (#/hr)				10
Confl. Bikes (#/hr)				
Turn Type	Prot	Prot	Prot	
Protected Phases	3	3	3	
Permitted Phases				
Actuated Green, G (s)		5.7	5.7	
Effective Green, g (s)		5.7	5.7	
Actuated g/C Ratio		0.04	0.04	
Clearance Time (s)		6.8	6.8	
Vehicle Extension (s)		2.5	2.5	
Lane Grp Cap (vph)		77	69	
v/s Ratio Prot		0.02	0.01	
v/s Ratio Perm				
v/c Ratio		0.44	0.22	
Uniform Delay, d1		60.6	60.0	
Progression Factor		1.02	1.02	
Incremental Delay, d2		2.4	1.0	
Delay (s)		64.3	61.9	
Level of Service		E	E	
Approach Delay (s)		63.5		
Approach LOS		E		
Intersection Summary				

Timings
6: NE 163rd Street & NE 35th Avenue

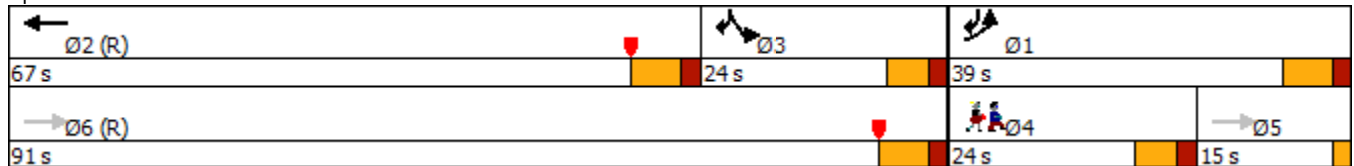
Future Background Conditions
A.M. Peak Hour

								
Lane Group	EBL	EBT	WBT	SBL	SBR	Ø4	Ø5	Ø6
Lane Configurations								
Traffic Volume (vph)	405	1994	1751	174	498			
Future Volume (vph)	405	1994	1751	174	498			
Turn Type	Prot	NA	NA	Prot	pt+ov			
Protected Phases	1		2	3	1 3	4	5	6
Permitted Phases		5 6						
Detector Phase	1	5 6	2	3	1 3			
Switch Phase								
Minimum Initial (s)	7.0		4.0	7.0		1.0	4.0	4.0
Minimum Split (s)	13.8		28.8	24.0		24.0	10.8	28.8
Total Split (s)	39.0		67.0	24.0		24.0	15.0	91.0
Total Split (%)	30.0%		51.5%	18.5%		18%	12%	70%
Yellow Time (s)	4.8		4.8	4.0		4.0	2.0	4.8
All-Red Time (s)	2.0		2.0	2.0		2.0	0.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.8		6.8	6.0				
Lead/Lag			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes	Yes		Yes	Yes	
Recall Mode	None		C-Max	None		None	None	C-Max

Intersection Summary






Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 55 (42%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 6: NE 163rd Street & NE 35th Avenue



Queues
6: NE 163rd Street & NE 35th Avenue

Future Background Conditions
A.M. Peak Hour

					
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	435	2144	2048	187	549
v/c Ratio	0.71	0.42	0.61	0.76	0.54
Control Delay	65.0	0.4	22.3	70.1	32.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	0.4	22.3	70.1	32.9
Queue Length 50th (ft)	197	0	334	156	215
Queue Length 95th (ft)	257	0	411	#266	261
Internal Link Dist (ft)		488	387	465	
Turn Bay Length (ft)	275			300	
Base Capacity (vph)	850	5085	3375	245	1204
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.51	0.42	0.61	0.76	0.46

Intersection Summary
























95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

6: NE 163rd Street & NE 35th Avenue







Future Background Conditions

A.M. Peak Hour

											
Movement	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	
Lane Configurations	 	  	  			 	 				
Traffic Volume (vph)	405	1994	1751	34	119	174	498	13	0	0	
Future Volume (vph)	405	1994	1751	34	119	174	498	13	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.8	2.0	6.8			6.0	6.8				
Lane Util. Factor	0.97	0.91	0.86			1.00	0.88				
Frbp, ped/bikes	1.00	1.00	1.00			1.00	1.00				
Flpb, ped/bikes	1.00	1.00	1.00			1.00	1.00				
Frt	1.00	1.00	0.99			1.00	0.85				
Flt Protected	0.95	1.00	1.00			0.95	1.00				
Satd. Flow (prot)	3433	5085	6320			1770	2787				
Flt Permitted	0.95	1.00	1.00			0.95	1.00				
Satd. Flow (perm)	3433	5085	6320			1770	2787				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	435	2144	1883	37	128	187	535	14	0	0	
RTOR Reduction (vph)	0	0	7	0	0	0	0	0	0	0	
Lane Group Flow (vph)	435	2144	2041	0	0	187	549	0	0	0	
Confl. Peds. (#/hr)	5				5						
Turn Type	Prot	NA	NA			Prot	pt+ov				
Protected Phases	1		2			3	1 3				
Permitted Phases		5 6									
Actuated Green, G (s)	23.1	130.0	69.3			18.0	47.1				
Effective Green, g (s)	23.1	123.2	69.3			18.0	41.1				
Actuated g/C Ratio	0.18	0.95	0.53			0.14	0.32				
Clearance Time (s)	6.8		6.8			6.0					
Vehicle Extension (s)	3.0		1.0			3.0					
Lane Grp Cap (vph)	610	4819	3369			245	881				
v/s Ratio Prot	c0.13		c0.32			c0.11	0.20				
v/s Ratio Perm		0.42									
v/c Ratio	0.71	0.44	0.61			0.76	0.62				
Uniform Delay, d1	50.3	0.3	20.9			53.9	37.9				
Progression Factor	1.18	1.00	1.00			0.92	0.95				
Incremental Delay, d2	3.5	0.0	0.8			13.0	1.4				
Delay (s)	63.0	0.3	21.8			62.7	37.2				
Level of Service	E	A	C			E	D				
Approach Delay (s)		10.9	21.8			43.7			0.0		
Approach LOS		B	C			D			A		
Intersection Summary											
HCM 2000 Control Delay			19.5			HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.66								
Actuated Cycle Length (s)			130.0			Sum of lost time (s)		20.8			
Intersection Capacity Utilization			65.5%			ICU Level of Service		C			
Analysis Period (min)			15								
c Critical Lane Group											



















HCM Unsignalized Intersection Capacity Analysis
7: NE 163rd Street & Intracoastal Mall Driveway

Future Background Conditions
A.M. Peak Hour

										
Movement	EBL	EBT	WBT	WBR	SBL	SBR				
Lane Configurations		↑↑↑	↑↑↑	↗		↗				
Traffic Volume (veh/h)	0	2169	1396	91	0	40				
Future Volume (Veh/h)	0	2169	1396	91	0	40				
Sign Control		Free	Free		Stop					
Grade		0%	0%		0%					
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				
Hourly flow rate (vph)	0	2410	1551	101	0	44				
Pedestrians						23				
Lane Width (ft)					12.0					
Walking Speed (ft/s)					3.5					
Percent Blockage					2					
Right turn flare (veh)										
Median type		None	None							
Median storage (veh)										
Upstream signal (ft)		467								
pX, platoon unblocked										
vC, conflicting volume	1574				2176	540				
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1574				2176	540				
tC, single (s)	4.1				6.8	6.9				
tC, 2 stage (s)										
tF (s)	2.2				3.5	3.3				
p0 queue free %	100				100	91				
cM capacity (veh/h)	406				39	475				
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	SB 1	
Volume Total	602	602	602	602	517	517	517	101	44	
Volume Left	0	0	0	0	0	0	0	0	0	
Volume Right	0	0	0	0	0	0	0	101	44	
cSH	1700	1700	1700	1700	1700	1700	1700	1700	475	
Volume to Capacity	0.35	0.35	0.35	0.35	0.30	0.30	0.30	0.06	0.09	
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	8	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	
Lane LOS									B	
Approach Delay (s)	0.0				0.0				13.3	
Approach LOS									B	
Intersection Summary										
Average Delay			0.1							
Intersection Capacity Utilization			37.0%		ICU Level of Service				A	
Analysis Period (min)			15							

Timings
8: NE 35th Avenue & NE 164th Street

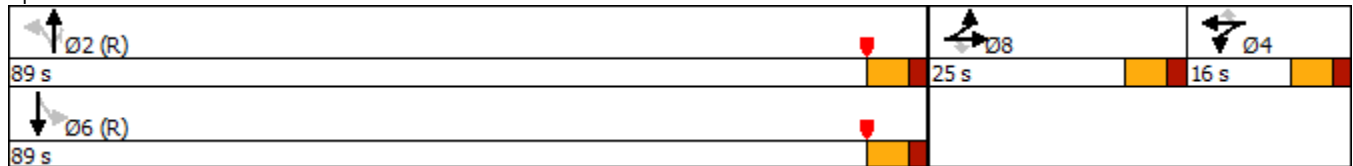
Future Background Conditions
 A.M. Peak Hour

									
Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	56	67	3	27	47	250	112	18	551
Future Volume (vph)	56	67	3	27	47	250	112	18	551
Turn Type	Perm	Split	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		4	4			2			6
Permitted Phases	8			4	2		2	6	
Detector Phase	8	4	4	4	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.0	16.0	16.0	16.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	25.0	16.0	16.0	16.0	89.0	89.0	89.0	89.0	89.0
Total Split (%)	19.2%	12.3%	12.3%	12.3%	68.5%	68.5%	68.5%	68.5%	68.5%
Yellow Time (s)	4.0	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	2.0
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 116 (89%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 50
 Control Type: Actuated-Coordinated

Splits and Phases: 8: NE 35th Avenue & NE 164th Street



HCM 6th Signalized Intersection Summary
8: NE 35th Avenue & NE 164th Street

Future Background Conditions
A.M. Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	56	67	3	27	47	250	112	18	551	3
Future Volume (veh/h)	0	0	56	67	3	27	47	250	112	18	551	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.98	1.00		0.98
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	60	74	0	29	51	269	120	19	592	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	91	74	198	0	85	677	2692	1179	806	2746	14
Arrive On Green	0.00	0.00	0.05	0.06	0.00	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	0	1870	1523	3563	0	1525	820	3554	1556	991	3625	18
Grp Volume(v), veh/h	0	0	60	74	0	29	51	269	120	19	290	305
Grp Sat Flow(s),veh/h/ln	0	1870	1523	1781	0	1525	820	1777	1556	991	1777	1867
Q Serve(g_s), s	0.0	0.0	5.1	2.6	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	5.1	2.6	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	91	74	198	0	85	677	2692	1179	806	1346	1414
V/C Ratio(X)	0.00	0.00	0.81	0.37	0.00	0.34	0.08	0.10	0.10	0.02	0.22	0.22
Avail Cap(c_a), veh/h	0	273	223	274	0	117	677	2692	1179	806	1346	1414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	0.63	0.63	0.63	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	61.2	59.2	0.0	59.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	14.2	0.9	0.0	1.8	0.1	0.0	0.1	0.1	0.4	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(50%),veh/ln	0.0	0.0	2.3	1.2	0.0	1.0	0.0	0.0	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	75.5	60.1	0.0	60.9	0.1	0.0	0.1	0.1	0.4	0.3
LnGrp LOS	A	A	E	E	A	E	A	A	A	A	A	A
Approach Vol, veh/h		60			103			440			614	
Approach Delay, s/veh		75.5			60.3			0.1			0.3	
Approach LOS		E			E			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		104.5		13.2		104.5		12.3				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		83.0		10.0		83.0		19.0				
Max Q Clear Time (g_c+I1), s		2.0		4.6		2.0		7.1				
Green Ext Time (p_c), s		0.8		0.1		1.3		0.1				

Intersection Summary

HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

HCM 6th TWSC
 9: NE 35th Avenue & Intracoastal Mall North Drive

Future Background Conditions
 A.M. Peak Hour

Intersection

Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↙		↑↑↑			↑↑
Traffic Vol, veh/h	8	2	196	11	0	548
Future Vol, veh/h	8	2	196	11	0	548
Conflicting Peds, #/hr	0	0	0	10	10	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	9	2	213	12	0	596

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	527	123	0	0	-
Stage 1	229	-	-	-	-
Stage 2	298	-	-	-	-
Critical Hdwy	5	5	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3	3	-	-	-
Pot Cap-1 Maneuver	713	1064	-	-	0
Stage 1	864	-	-	-	0
Stage 2	836	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	706	1054	-	-	-
Mov Cap-2 Maneuver	706	-	-	-	-
Stage 1	855	-	-	-	-
Stage 2	836	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	756
HCM Lane V/C Ratio	-	-	0.014
HCM Control Delay (s)	-	-	9.8
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Future Total Conditions

Timings
1: Biscayne Boulevard/US 1 & NE 163rd Street

Future Total Conditions
A.M. Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	391	1522	328	647	1396	761	263	1185	675	602	1636	647
Future Volume (vph)	391	1522	328	647	1396	761	263	1185	675	602	1636	647
Turn Type	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases			8			Free			6			2
Detector Phase	3	8	1	7	4		1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	7.0	5.0	5.0	7.0	5.0
Minimum Split (s)	11.8	56.7	11.8	11.8	56.7		11.8	49.2	11.8	11.8	49.2	11.8
Total Split (s)	33.0	57.0	29.0	33.0	57.0		29.0	51.0	33.0	29.0	51.0	33.0
Total Split (%)	19.4%	33.5%	17.1%	19.4%	33.5%		17.1%	30.0%	19.4%	17.1%	30.0%	19.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8		4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.0	2.9	2.0	2.0	2.9		2.0	2.4	2.0	2.0	2.4	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	0.0
Total Lost Time (s)	6.8	7.7	6.8	6.8	7.7		6.8	7.2	6.8	6.8	7.2	6.8
Lead/Lag	Lead	Lag	Lead	Lead	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

Intersection Summary

Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 77 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Biscayne Boulevard/US 1 & NE 163rd Street

29 s	51 s	33 s	57 s
29 s	51 s	33 s	57 s

HCM 6th Signalized Intersection Summary
 1: Biscayne Boulevard/US 1 & NE 163rd Street

Future Total Conditions
 A.M. Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	391	1522	328	647	1396	761	263	1185	675	602	1636	647
Future Volume (veh/h)	391	1522	328	647	1396	761	263	1185	675	602	1636	647
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	395	1537	331	654	1410	0	266	1197	682	608	1653	654
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	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	443	1481	595	533	1613		312	1658	645	451	1917	674
Arrive On Green	0.13	0.29	0.29	0.15	0.32	0.00	0.12	0.34	0.34	0.17	0.40	0.40
Sat Flow, veh/h	3456	5106	1557	3456	5106	1585	3456	6434	1556	3456	6434	1579
Grp Volume(v), veh/h	395	1537	331	654	1410	0	266	1197	682	608	1653	654
Grp Sat Flow(s),veh/h/ln	1728	1702	1557	1728	1702	1585	1728	1609	1556	1728	1609	1579
Q Serve(g_s), s	19.1	49.3	28.4	26.2	44.4	0.0	12.8	27.6	43.8	22.2	40.1	50.6
Cycle Q Clear(g_c), s	19.1	49.3	28.4	26.2	44.4	0.0	12.8	27.6	43.8	22.2	40.1	50.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	443	1481	595	533	1613		312	1658	645	451	1917	674
V/C Ratio(X)	0.89	1.04	0.56	1.23	0.87		0.85	0.72	1.06	1.35	0.86	0.97
Avail Cap(c_a), veh/h	533	1481	595	533	1613		451	1658	645	451	1917	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.73	0.73	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.9	60.4	41.4	71.9	55.0	0.0	73.7	50.6	45.9	70.2	48.1	42.5
Incr Delay (d2), s/veh	15.1	33.9	1.0	114.5	4.2	0.0	10.2	2.8	51.5	170.5	5.4	28.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	25.9	11.2	20.1	19.7	0.0	6.0	11.1	37.1	20.3	16.2	33.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.0	94.2	42.4	186.4	59.1	0.0	83.9	53.3	97.4	240.7	53.5	70.7
LnGrp LOS	F	F	D	F	E		F	D	F	F	D	E
Approach Vol, veh/h		2263			2064	A		2145			2915	
Approach Delay, s/veh		85.6			99.5			71.1			96.4	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.2	57.8	28.6	61.4	29.0	51.0	33.0	57.0				
Change Period (Y+Rc), s	6.8	* 7.2	6.8	* 7.7	6.8	* 7.2	6.8	* 7.7				
Max Green Setting (Gmax), s	22.2	* 44	26.2	* 49	22.2	* 44	26.2	* 49				
Max Q Clear Time (g_c+I1), s	14.8	52.6	21.1	46.4	24.2	45.8	28.2	51.3				
Green Ext Time (p_c), s	0.5	0.0	0.7	2.1	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	88.7
HCM 6th LOS	F

Notes

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

Timings
2: NE 163rd Street & NE 26th Avenue

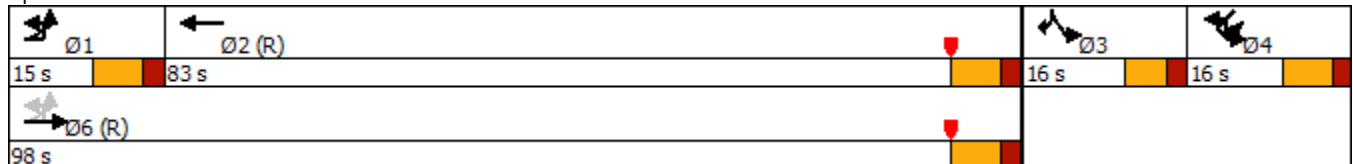
Future Total Conditions
A.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	1	38	2737	2603	43	81	24	0
Future Volume (vph)	1	38	2737	2603	43	81	24	0
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	15.0	15.0	98.0	83.0	16.0	16.0	16.0	16.0
Total Split (%)	11.5%	11.5%	75.4%	63.8%	12.3%	12.3%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary




















Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 13 (10%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NE 163rd Street & NE 26th Avenue



HCM Signalized Intersection Capacity Analysis
2: NE 163rd Street & NE 26th Avenue

Future Total Conditions
A.M. Peak Hour

												
Movement	EBU	EBL2	EBT	WBT	WBR2	SBL	SBR	SWU	SWL	SWR	SWR2	
Lane Configurations												
Traffic Volume (vph)	1	38	2737	2603	43	43	81	9	24	0	8	
Future Volume (vph)	1	38	2737	2603	43	43	81	9	24	0	8	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Lane Util. Factor		1.00	0.86	0.86		1.00	1.00		1.00	1.00		
Frbp, ped/bikes		1.00	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	1.00		
Frt		1.00	1.00	1.00		1.00	0.85		1.00	0.85		
Flt Protected		0.95	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (prot)		1770	6408	6388		1770	1583		1770	1583		
Flt Permitted		0.04	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (perm)		81	6408	6388		1770	1583		1770	1583		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Adj. Flow (vph)	1	40	2851	2711	45	45	84	9	25	0	8	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	41	2851	2756	0	45	84	0	34	8	0	
Confl. Peds. (#/hr)		5			5						5	
Turn Type	pm+pt	pm+pt	NA	NA		Prot	Prot	Prot	Prot	Prot		
Protected Phases	1	1	6	2		3	3	4	4	4		
Permitted Phases	6	6										
Actuated Green, G (s)		96.0	96.0	84.7		9.4	9.4		5.0	5.0		
Effective Green, g (s)		96.0	96.0	84.7		9.4	9.4		5.0	5.0		
Actuated g/C Ratio		0.74	0.74	0.65		0.07	0.07		0.04	0.04		
Clearance Time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Vehicle Extension (s)		2.0	1.0	1.0		2.5	2.5		2.5	2.5		
Lane Grp Cap (vph)		118	4732	4162		127	114		68	60		
v/s Ratio Prot		0.01	c0.44	c0.43		0.03	c0.05		c0.02	0.01		
v/s Ratio Perm		0.24										
v/c Ratio		0.35	0.60	0.66		0.35	0.74		0.50	0.13		
Uniform Delay, d1		11.8	8.0	13.9		57.4	59.1		61.3	60.4		
Progression Factor		1.00	1.00	0.10		1.00	1.00		0.89	0.91		
Incremental Delay, d2		0.6	0.6	0.7		1.2	20.6		4.0	0.7		
Delay (s)		12.5	8.6	2.0		58.6	79.7		58.3	55.6		
Level of Service		B	A	A		E	E		E	E		
Approach Delay (s)			8.6	2.0		72.4			57.8			
Approach LOS			A	A		E			E			
Intersection Summary												
HCM 2000 Control Delay			7.3		HCM 2000 Level of Service					A		
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					26.4		
Intersection Capacity Utilization			67.7%		ICU Level of Service					C		
Analysis Period (min)			15									
c Critical Lane Group												

Timings
3: NE 163rd Street & NE 28th Avenue

Future Total Conditions
A.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	26	9	2757	2539	2	22	56	13
Future Volume (vph)	26	9	2757	2539	2	22	56	13
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	15.0	15.0	98.0	83.0	16.0	16.0	16.0	16.0
Total Split (%)	11.5%	11.5%	75.4%	63.8%	12.3%	12.3%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 128 (98%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 3: NE 163rd Street & NE 28th Avenue

Ø1	Ø2 (R)	Ø3	Ø4
15 s	83 s	16 s	16 s
Ø6 (R)			
98 s			

HCM Signalized Intersection Capacity Analysis

3: NE 163rd Street & NE 28th Avenue

Future Total Conditions
A.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	26	9	2757	2539	17	5	2	22	6	18	56	13	
Future Volume (vph)	26	9	2757	2539	17	5	2	22	6	18	56	13	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6398			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		82	6408	6398			1770	1583			1770	1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	28	10	2997	2760	18	5	2	24	7	20	61	14	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	38	2997	2783	0	0	2	31	0	0	81	15	
Confl. Peds. (#/hr)		3				3							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			3	3		4	4	4	
Permitted Phases	6	6											
Actuated Green, G (s)		95.8	95.8	84.5			5.2	5.2			9.4	9.4	
Effective Green, g (s)		95.8	95.8	84.5			5.2	5.2			9.4	9.4	
Actuated g/C Ratio		0.74	0.74	0.65			0.04	0.04			0.07	0.07	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		118	4722	4158			70	63			127	114	
v/s Ratio Prot		0.01	c0.47	c0.43			0.00	c0.02			c0.05	0.01	
v/s Ratio Perm		0.23											
v/c Ratio		0.32	0.63	0.67			0.03	0.49			0.64	0.13	
Uniform Delay, d1		11.9	8.5	14.1			60.0	61.1			58.6	56.5	
Progression Factor		2.85	0.80	0.19			1.00	1.00			1.02	1.05	
Incremental Delay, d2		0.5	0.6	0.7			0.1	4.3			8.8	0.4	
Delay (s)		34.5	7.3	3.4			60.1	65.5			68.6	59.5	
Level of Service		C	A	A			E	E			E	E	
Approach Delay (s)			7.6	3.4			65.1				67.2		
Approach LOS			A	A			E				E		
Intersection Summary													
HCM 2000 Control Delay			6.9		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.68										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			68.0%		ICU Level of Service						C		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 3: NE 163rd Street & NE 28th Avenue
















Future Total Conditions
 A.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	1
Future Volume (vph)	1
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	1
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	3
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
4: NE 163rd Street & NE 2900 Block






Future Total Conditions
A.M. Peak Hour

								
Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	21	21	2719	2554	1	2	3	9
Future Volume (vph)	21	21	2719	2554	1	2	3	9
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	4	4	3	3
Permitted Phases	6	6						
Detector Phase	1	1	6	2	4	4	3	3
Switch Phase								
Minimum Initial (s)	5.0	5.0	15.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	21.8	21.8	13.0	13.0	13.8	13.8
Total Split (s)	12.0	12.0	103.0	91.0	13.0	13.0	14.0	14.0
Total Split (%)	9.2%	9.2%	79.2%	70.0%	10.0%	10.0%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 100 (77%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 4: NE 163rd Street & NE 2900 Block

 Ø1	 Ø2 (R)	 Ø3	 Ø4
12 s	91 s	14 s	13 s
 Ø6 (R)			
103 s			

HCM Signalized Intersection Capacity Analysis

4: NE 163rd Street & NE 2900 Block

Future Total Conditions
A.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	21	21	2719	2554	10	3	1	2	1	8	3	9	
Future Volume (vph)	21	21	2719	2554	10	3	1	2	1	8	3	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6402			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		74	6408	6402			1770	1583			1770	1583	
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)	23	23	2988	2807	11	3	1	2	1	9	3	10	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	46	2988	2821	0	0	1	3	0	0	12	10	
Confl. Peds. (#/hr)		4				4							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			4	4		3	3	3	
Permitted Phases	6	6											
Actuated Green, G (s)		104.8	104.8	93.9			1.4	1.4			4.2	4.2	
Effective Green, g (s)		104.8	104.8	93.9			1.4	1.4			4.2	4.2	
Actuated g/C Ratio		0.81	0.81	0.72			0.01	0.01			0.03	0.03	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		113	5165	4624			19	17			57	51	
v/s Ratio Prot		0.01	c0.47	c0.44			0.00	c0.00			c0.01	0.01	
v/s Ratio Perm		0.31											
v/c Ratio		0.41	0.58	0.61			0.05	0.18			0.21	0.20	
Uniform Delay, d1		8.7	4.6	9.0			63.6	63.7			61.3	61.3	
Progression Factor		1.34	2.94	0.02			1.00	1.00			0.56	0.56	
Incremental Delay, d2		0.7	0.4	0.5			0.8	3.6			1.3	1.3	
Delay (s)		12.4	13.8	0.7			64.5	67.3			35.4	35.4	
Level of Service		B	B	A			E	E			D	D	
Approach Delay (s)			13.8	0.7			66.6				35.4		
Approach LOS			B	A			E				D		
Intersection Summary													
HCM 2000 Control Delay			7.6		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.61										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			67.4%		ICU Level of Service						C		
Analysis Period (min)			15										
c Critical Lane Group													

Timings
5: NE 34th Avenue & NE 163rd Street

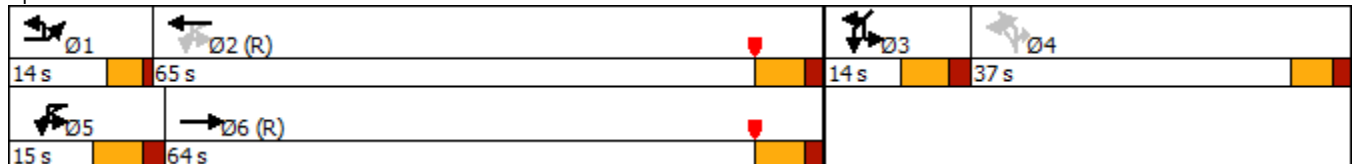
Future Total Conditions
A.M. Peak Hour

Lane Group	EBL	EBT	WBU	WBL	WBT	NBL	NBR2	SWL	SWR
Lane Configurations									
Traffic Volume (vph)	52	2651	14	3	2562	0	5	27	6
Future Volume (vph)	52	2651	14	3	2562	0	5	27	6
Turn Type	Prot	NA	pm+pt	pm+pt	NA	Perm	Perm	Prot	Prot
Protected Phases	1	6	5	5	2			3	3
Permitted Phases			2	2		4	4		
Detector Phase	1	6	5	5	2	4	4	3	3
Switch Phase									
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	9.5	21.8	11.8	11.8	21.8	37.0	37.0	13.8	13.8
Total Split (s)	14.0	64.0	15.0	15.0	65.0	37.0	37.0	14.0	14.0
Total Split (%)	10.8%	49.2%	11.5%	11.5%	50.0%	28.5%	28.5%	10.8%	10.8%
Yellow Time (s)	3.5	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
All-Red Time (s)	1.0	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
Total Lost Time (s)	4.5	6.8		6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 63 (48%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 125
 Control Type: Actuated-Coordinated



















Splits and Phases: 5: NE 34th Avenue & NE 163rd Street



HCM Signalized Intersection Capacity Analysis







5: NE 34th Avenue & NE 163rd Street

Future Total Conditions
A.M. Peak Hour

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL2	NBL	NBR2
Lane Configurations												
Traffic Volume (vph)	7	52	2651	18	14	3	2562	9	21	6	0	5
Future Volume (vph)	7	52	2651	18	14	3	2562	9	21	6	0	5
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	6.8			6.8	6.8				6.0	6.0
Lane Util. Factor		1.00	0.86			1.00	0.86				1.00	1.00
Frbp, 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	1.00			1.00	1.00				1.00	0.85
Flt Protected		0.95	1.00			0.95	1.00				0.95	1.00
Satd. Flow (prot)		1770	6401			1770	6397				1770	1583
Flt Permitted		0.95	1.00			0.05	1.00				0.95	1.00
Satd. Flow (perm)		1770	6401			84	6397				1770	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	7	55	2820	19	15	3	2726	10	22	6	0	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	5
Lane Group Flow (vph)	0	62	2839	0	0	18	2758	0	0	0	6	0
Confl. Peds. (#/hr)						1						
Confl. Bikes (#/hr)				2								
Turn Type	Prot	Prot	NA		pm+pt	pm+pt	NA			Perm	Perm	Perm
Protected Phases	1	1	6		5	5	2					
Permitted Phases					2	2				4	4	4
Actuated Green, G (s)		8.7	93.0			90.8	88.7				2.8	2.8
Effective Green, g (s)		8.7	93.0			90.8	88.7				2.8	2.8
Actuated g/C Ratio		0.07	0.72			0.70	0.68				0.02	0.02
Clearance Time (s)		4.5	6.8			6.8	6.8				6.0	6.0
Vehicle Extension (s)		3.0	1.0			2.0	1.0				2.5	2.5
Lane Grp Cap (vph)		118	4579			85	4364				38	34
v/s Ratio Prot		c0.04	c0.44			0.00	0.43					
v/s Ratio Perm						0.14					c0.00	0.00
v/c Ratio		0.53	0.62			0.21	0.63				0.16	0.00
Uniform Delay, d1		58.7	9.5			7.9	11.5				62.4	62.2
Progression Factor		0.92	1.04			0.59	0.49				1.00	1.00
Incremental Delay, d2		3.6	0.6			0.3	0.5				1.4	0.0
Delay (s)		57.4	10.4			4.9	6.1				63.9	62.3
Level of Service		E	B			A	A				E	E
Approach Delay (s)			11.4				6.1					
Approach LOS			B				A					
Intersection Summary												
HCM 2000 Control Delay			9.3									A
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			130.0							26.4		
Intersection Capacity Utilization			72.4%									C
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
5: NE 34th Avenue & NE 163rd Street

Future Total Conditions
A.M. Peak Hour

				
Movement	SWL2	SWL	SWR	SWR2
Lane Configurations				
Traffic Volume (vph)	5	27	6	8
Future Volume (vph)	5	27	6	8
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8	
Lane Util. Factor		1.00	1.00	
Frbp, ped/bikes		1.00	1.00	
Flpb, ped/bikes		1.00	1.00	
Frt		1.00	0.85	
Flt Protected		0.95	1.00	
Satd. Flow (prot)		1770	1583	
Flt Permitted		0.95	1.00	
Satd. Flow (perm)		1770	1583	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	29	6	9
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	0	34	15	0
Confl. Peds. (#/hr)				10
Confl. Bikes (#/hr)				
Turn Type	Prot	Prot	Prot	
Protected Phases	3	3	3	
Permitted Phases				
Actuated Green, G (s)		5.7	5.7	
Effective Green, g (s)		5.7	5.7	
Actuated g/C Ratio		0.04	0.04	
Clearance Time (s)		6.8	6.8	
Vehicle Extension (s)		2.5	2.5	
Lane Grp Cap (vph)		77	69	
v/s Ratio Prot		0.02	0.01	
v/s Ratio Perm				
v/c Ratio		0.44	0.22	
Uniform Delay, d1		60.6	60.0	
Progression Factor		0.94	0.93	
Incremental Delay, d2		2.0	0.8	
Delay (s)		58.8	56.7	
Level of Service		E	E	
Approach Delay (s)		58.2		
Approach LOS		E		

Intersection Summary

Timings
6: NE 163rd Street & NE 35th Avenue

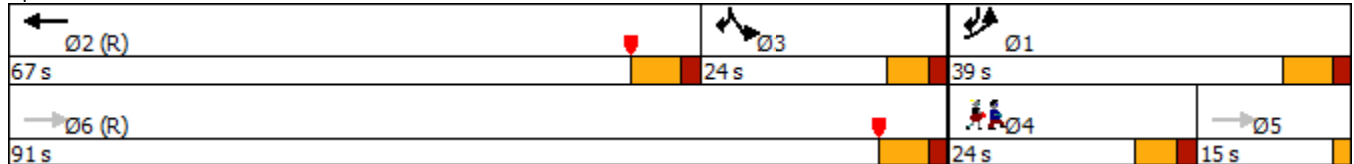
Future Total Conditions
A.M. Peak Hour

Lane Group	EBL	EBT	WBT	SBL	SBR	Ø4	Ø5	Ø6
Lane Configurations								
Traffic Volume (vph)	677	1994	1931	273	673			
Future Volume (vph)	677	1994	1931	273	673			
Turn Type	Prot	NA	NA	Prot	pt+ov			
Protected Phases	1		2	3	1 3	4	5	6
Permitted Phases		5 6						
Detector Phase	1	5 6	2	3	1 3			
Switch Phase								
Minimum Initial (s)	7.0		4.0	7.0		1.0	4.0	4.0
Minimum Split (s)	13.8		28.8	24.0		24.0	10.8	28.8
Total Split (s)	39.0		67.0	24.0		24.0	15.0	91.0
Total Split (%)	30.0%		51.5%	18.5%		18%	12%	70%
Yellow Time (s)	4.8		4.8	4.0		4.0	2.0	4.8
All-Red Time (s)	2.0		2.0	2.0		2.0	0.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.8		6.8	6.0				
Lead/Lag			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes	Yes		Yes	Yes	
Recall Mode	None		C-Max	None		None	None	C-Max

Intersection Summary






Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 55 (42%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated

Splits and Phases: 6: NE 163rd Street & NE 35th Avenue



Queues
6: NE 163rd Street & NE 35th Avenue

Future Total Conditions
A.M. Peak Hour

					
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	728	2144	2265	294	738
v/c Ratio	0.88	0.42	0.76	1.20	0.62
Control Delay	66.7	0.2	30.6	162.4	35.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	66.7	0.2	30.6	162.4	35.1
Queue Length 50th (ft)	293	0	451	~305	315
Queue Length 95th (ft)	#410	0	497	#491	389
Internal Link Dist (ft)		488	387	465	
Turn Bay Length (ft)	275			300	
Base Capacity (vph)	850	5085	2971	245	1204
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.86	0.42	0.76	1.20	0.61
















Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis







6: NE 163rd Street & NE 35th Avenue

Future Total Conditions
A.M. Peak Hour

										
Movement	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER
Lane Configurations										
Traffic Volume (vph)	677	1994	1931	34	141	273	673	13	0	0
Future Volume (vph)	677	1994	1931	34	141	273	673	13	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	2.0	6.8			6.0	6.8			
Lane Util. Factor	0.97	0.91	0.86			1.00	0.88			
Frbp, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Flpb, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Frt	1.00	1.00	0.99			1.00	0.85			
Flt Protected	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (prot)	3433	5085	6317			1770	2787			
Flt Permitted	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (perm)	3433	5085	6317			1770	2787			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	728	2144	2076	37	152	294	724	14	0	0
RTOR Reduction (vph)	0	0	8	0	0	0	0	0	0	0
Lane Group Flow (vph)	728	2144	2257	0	0	294	738	0	0	0
Confl. Peds. (#/hr)	5				5					
Turn Type	Prot	NA	NA			Prot	pt+ov			
Protected Phases	1		2			3	1 3			
Permitted Phases		5 6								
Actuated Green, G (s)	31.4	130.0	61.0			18.0	55.4			
Effective Green, g (s)	31.4	123.2	61.0			18.0	49.4			
Actuated g/C Ratio	0.24	0.95	0.47			0.14	0.38			
Clearance Time (s)	6.8		6.8			6.0				
Vehicle Extension (s)	3.0		1.0			3.0				
Lane Grp Cap (vph)	829	4819	2964			245	1059			
v/s Ratio Prot	c0.21		c0.36			c0.17	0.26			
v/s Ratio Perm		0.42								
v/c Ratio	0.88	0.44	0.76			1.20	0.70			
Uniform Delay, d1	47.5	0.3	28.5			56.0	34.0			
Progression Factor	1.17	1.00	1.00			0.84	1.12			
Incremental Delay, d2	9.0	0.0	1.9			121.1	1.9			
Delay (s)	64.7	0.3	30.4			168.2	39.9			
Level of Service	E	A	C			F	D			
Approach Delay (s)		16.6	30.4			76.5			0.0	
Approach LOS		B	C			E			A	
Intersection Summary										
HCM 2000 Control Delay			31.7			HCM 2000 Level of Service			C	
HCM 2000 Volume to Capacity ratio			0.88							
Actuated Cycle Length (s)			130.0			Sum of lost time (s)		20.8		
Intersection Capacity Utilization			81.7%			ICU Level of Service		D		
Analysis Period (min)			15							
c Critical Lane Group										

HCM Unsignalized Intersection Capacity Analysis
 7: NE 163rd Street & Intracoastal Mall Driveway

Future Total Conditions
 A.M. Peak Hour

									
Movement	EBL	EBT	WBT	WBR	SBL	SBR			
Lane Configurations		↑↑↑	↑↑↑	↗		↗			
Traffic Volume (veh/h)	0	2268	1412	146	0	220			
Future Volume (Veh/h)	0	2268	1412	146	0	220			
Sign Control		Free	Free		Stop				
Grade		0%	0%		0%				
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90			
Hourly flow rate (vph)	0	2520	1569	162	0	244			
Pedestrians						23			
Lane Width (ft)					12.0				
Walking Speed (ft/s)					3.5				
Percent Blockage					2				
Right turn flare (veh)									
Median type		None	None						
Median storage (veh)									
Upstream signal (ft)		467							
pX, platoon unblocked									
vC, conflicting volume	1592				2222	546			
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol	1592				2222	546			
tC, single (s)	4.1				6.8	6.9			
tC, 2 stage (s)									
tF (s)	2.2				3.5	3.3			
p0 queue free %	100				100	48			
cM capacity (veh/h)	399				36	471			
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	630	630	630	630	523	523	523	162	244
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	162	244
cSH	1700	1700	1700	1700	1700	1700	1700	1700	471
Volume to Capacity	0.37	0.37	0.37	0.37	0.31	0.31	0.31	0.10	0.52
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	73
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.6
Lane LOS									C
Approach Delay (s)	0.0				0.0				20.6
Approach LOS									C
Intersection Summary									
Average Delay			1.1						
Intersection Capacity Utilization			47.6%		ICU Level of Service				A
Analysis Period (min)			15						

Timings
8: NE 35th Avenue & NE 164th Street

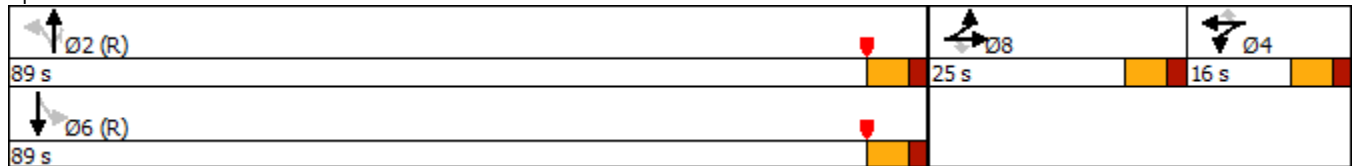
Future Total Conditions
 A.M. Peak Hour

Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	56	341	3	37	47	250	406	33	551
Future Volume (vph)	56	341	3	37	47	250	406	33	551
Turn Type	Perm	Split	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		4	4			2			6
Permitted Phases	8			4	2		2	6	
Detector Phase	8	4	4	4	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.0	16.0	16.0	16.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	25.0	16.0	16.0	16.0	89.0	89.0	89.0	89.0	89.0
Total Split (%)	19.2%	12.3%	12.3%	12.3%	68.5%	68.5%	68.5%	68.5%	68.5%
Yellow Time (s)	4.0	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	2.0
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 116 (89%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 50
 Control Type: Actuated-Coordinated

Splits and Phases: 8: NE 35th Avenue & NE 164th Street



HCM 6th Signalized Intersection Summary
8: NE 35th Avenue & NE 164th Street

Future Total Conditions
A.M. Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	56	341	3	37	47	250	406	33	551	3
Future Volume (veh/h)	0	0	56	341	3	37	47	250	406	33	551	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.98	1.00		0.98
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	60	369	0	40	51	269	437	35	592	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	91	74	274	0	119	656	2615	1145	599	2668	14
Arrive On Green	0.00	0.00	0.05	0.08	0.00	0.08	0.98	0.98	0.98	0.98	0.98	0.98
Sat Flow, veh/h	0	1870	1523	3563	0	1542	820	3554	1556	740	3625	18
Grp Volume(v), veh/h	0	0	60	369	0	40	51	269	437	35	290	305
Grp Sat Flow(s),veh/h/ln	0	1870	1523	1781	0	1542	820	1777	1556	740	1777	1867
Q Serve(g_s), s	0.0	0.0	5.1	10.0	0.0	3.2	0.2	0.2	1.2	0.2	0.6	0.6
Cycle Q Clear(g_c), s	0.0	0.0	5.1	10.0	0.0	3.2	0.8	0.2	1.2	0.4	0.6	0.6
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	91	74	274	0	119	656	2615	1145	599	1308	1374
V/C Ratio(X)	0.00	0.00	0.81	1.35	0.00	0.34	0.08	0.10	0.38	0.06	0.22	0.22
Avail Cap(c_a), veh/h	0	273	223	274	0	119	656	2615	1145	599	1308	1374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	0.36	0.36	0.36	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	61.2	60.0	0.0	56.9	0.4	0.4	0.4	0.4	0.4	0.4
Incr Delay (d2), s/veh	0.0	0.0	14.2	178.2	0.0	1.2	0.1	0.0	0.3	0.2	0.4	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(50%),veh/ln	0.0	0.0	2.3	11.3	0.0	1.3	0.0	0.1	0.3	0.0	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	75.5	238.2	0.0	58.1	0.5	0.4	0.7	0.6	0.8	0.7
LnGrp LOS	A	A	E	F	A	E	A	A	A	A	A	A
Approach Vol, veh/h		60			409			757			630	
Approach Delay, s/veh		75.5			220.6			0.6			0.7	
Approach LOS		E			F			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		101.7		16.0		101.7		12.3				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		83.0		10.0		83.0		19.0				
Max Q Clear Time (g_c+I1), s		3.2		12.0		2.6		7.1				
Green Ext Time (p_c), s		1.0		0.0		1.4		0.1				

Intersection Summary

HCM 6th Ctrl Delay	51.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

HCM 6th TWSC
 9: NE 35th Avenue & Intracoastal Mall North Drive

Future Total Conditions
 A.M. Peak Hour

Intersection

Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	11	206	11	0	563
Future Vol, veh/h	8	11	206	11	0	563
Conflicting Peds, #/hr	0	0	0	10	10	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	9	12	224	12	0	612

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	546	128	0	0	-
Stage 1	240	-	-	-	-
Stage 2	306	-	-	-	-
Critical Hdwy	5	5	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3	3	-	-	-
Pot Cap-1 Maneuver	700	1059	-	-	0
Stage 1	850	-	-	-	0
Stage 2	828	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	693	1049	-	-	-
Mov Cap-2 Maneuver	693	-	-	-	-
Stage 1	842	-	-	-	-
Stage 2	828	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	862
HCM Lane V/C Ratio	-	-	0.024
HCM Control Delay (s)	-	-	9.3
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

Future Total with Improvements Conditions

Timings

Future Total Conditions with Improvements

1: Biscayne Boulevard/US 1 & NE 163rd Street

A.M. Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	391	1515	328	637	1389	754	263	1185	665	595	1636	647
Future Volume (vph)	391	1515	328	637	1389	754	263	1185	665	595	1636	647
Turn Type	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases			8			Free			6			2
Detector Phase	3	8	1	7	4		1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	7.0	5.0	5.0	7.0	5.0
Minimum Split (s)	11.8	56.7	11.8	11.8	56.7		11.8	49.2	11.8	11.8	49.2	11.8
Total Split (s)	33.0	57.0	29.0	33.0	57.0		29.0	51.0	33.0	29.0	51.0	33.0
Total Split (%)	19.4%	33.5%	17.1%	19.4%	33.5%		17.1%	30.0%	19.4%	17.1%	30.0%	19.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8		4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.0	2.9	2.0	2.0	2.9		2.0	2.4	2.0	2.0	2.4	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	0.0
Total Lost Time (s)	6.8	7.7	6.8	6.8	7.7		6.8	7.2	6.8	6.8	7.2	6.8
Lead/Lag	Lead	Lag	Lead	Lead	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

Intersection Summary

























Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 77 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Biscayne Boulevard/US 1 & NE 163rd Street

29 s	51 s	33 s	57 s
29 s	51 s	33 s	57 s

HCM 6th Signalized Intersection Summary
 1: Biscayne Boulevard/US 1 & NE 163rd Street

Future Total Conditions with Improvements
 A.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	391	1515	328	637	1389	754	263	1185	665	595	1636	647
Future Volume (veh/h)	391	1515	328	637	1389	754	263	1185	665	595	1636	647
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	395	1530	331	643	1403	0	266	1197	672	601	1653	654
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	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	443	1481	595	533	1613		312	1658	645	451	1917	674
Arrive On Green	0.13	0.29	0.29	0.15	0.32	0.00	0.12	0.34	0.34	0.17	0.40	0.40
Sat Flow, veh/h	3456	5106	1557	3456	5106	1585	3456	6434	1556	3456	6434	1579
Grp Volume(v), veh/h	395	1530	331	643	1403	0	266	1197	672	601	1653	654
Grp Sat Flow(s),veh/h/ln	1728	1702	1557	1728	1702	1585	1728	1609	1556	1728	1609	1579
Q Serve(g_s), s	19.1	49.3	28.4	26.2	44.1	0.0	12.8	27.6	43.8	22.2	40.1	50.6
Cycle Q Clear(g_c), s	19.1	49.3	28.4	26.2	44.1	0.0	12.8	27.6	43.8	22.2	40.1	50.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	443	1481	595	533	1613		312	1658	645	451	1917	674
V/C Ratio(X)	0.89	1.03	0.56	1.21	0.87		0.85	0.72	1.04	1.33	0.86	0.97
Avail Cap(c_a), veh/h	533	1481	595	533	1613		451	1658	645	451	1917	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.74	0.74	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.9	60.4	41.4	71.9	54.9	0.0	73.7	50.6	45.9	70.2	48.1	42.5
Incr Delay (d2), s/veh	15.1	32.4	1.0	106.1	4.0	0.0	10.2	2.8	46.7	163.9	5.4	28.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	25.7	11.2	19.5	19.6	0.0	6.0	11.1	36.2	19.9	16.2	33.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.0	92.8	42.4	178.0	58.9	0.0	83.9	53.3	92.6	234.1	53.5	70.7
LnGrp LOS	F	F	D	F	E		F	D	F	F	D	E
Approach Vol, veh/h		2256			2046	A		2135			2908	
Approach Delay, s/veh		84.5			96.3			69.5			94.7	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.2	57.8	28.6	61.4	29.0	51.0	33.0	57.0				
Change Period (Y+Rc), s	6.8	* 7.2	6.8	* 7.7	6.8	* 7.2	6.8	* 7.7				
Max Green Setting (Gmax), s	22.2	* 44	26.2	* 49	22.2	* 44	26.2	* 49				
Max Q Clear Time (g_c+I1), s	14.8	52.6	21.1	46.1	24.2	45.8	28.2	51.3				
Green Ext Time (p_c), s	0.5	0.0	0.7	2.3	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	86.9
HCM 6th LOS	F

Notes

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

Timings
2: NE 163rd Street & NE 26th Avenue

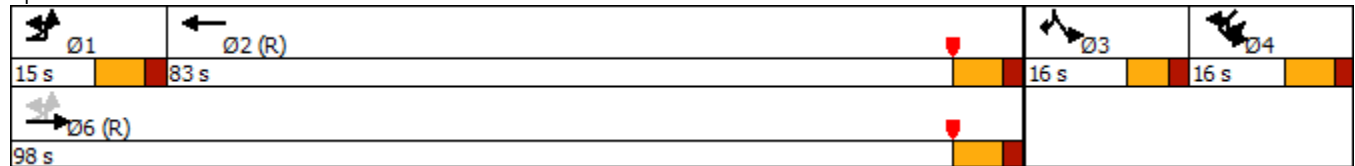
Future Total Conditions with Improvements
A.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	1	38	2713	2579	43	81	24	0
Future Volume (vph)	1	38	2713	2579	43	81	24	0
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	15.0	15.0	98.0	83.0	16.0	16.0	16.0	16.0
Total Split (%)	11.5%	11.5%	75.4%	63.8%	12.3%	12.3%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 13 (10%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NE 163rd Street & NE 26th Avenue






















HCM Signalized Intersection Capacity Analysis

2: NE 163rd Street & NE 26th Avenue

Future Total Conditions with Improvements

A.M. Peak Hour

												
Movement	EBU	EBL2	EBT	WBT	WBR2	SBL	SBR	SWU	SWL	SWR	SWR2	
Lane Configurations												
Traffic Volume (vph)	1	38	2713	2579	43	43	81	9	24	0	8	
Future Volume (vph)	1	38	2713	2579	43	43	81	9	24	0	8	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Lane Util. Factor		1.00	0.86	0.86		1.00	1.00		1.00	1.00		
Frbp, ped/bikes		1.00	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	1.00		
Frt		1.00	1.00	1.00		1.00	0.85		1.00	0.85		
Flt Protected		0.95	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (prot)		1770	6408	6388		1770	1583		1770	1583		
Flt Permitted		0.04	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (perm)		81	6408	6388		1770	1583		1770	1583		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Adj. Flow (vph)	1	40	2826	2686	45	45	84	9	25	0	8	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	41	2826	2731	0	45	84	0	34	8	0	
Confl. Peds. (#/hr)		5			5						5	
Turn Type	pm+pt	pm+pt	NA	NA		Prot	Prot	Prot	Prot	Prot		
Protected Phases	1	1	6	2		3	3	4	4	4		
Permitted Phases	6	6										
Actuated Green, G (s)		96.0	96.0	84.7		9.4	9.4		5.0	5.0		
Effective Green, g (s)		96.0	96.0	84.7		9.4	9.4		5.0	5.0		
Actuated g/C Ratio		0.74	0.74	0.65		0.07	0.07		0.04	0.04		
Clearance Time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Vehicle Extension (s)		2.0	1.0	1.0		2.5	2.5		2.5	2.5		
Lane Grp Cap (vph)		118	4732	4162		127	114		68	60		
v/s Ratio Prot		0.01	c0.44	c0.43		0.03	c0.05		c0.02	0.01		
v/s Ratio Perm		0.24										
v/c Ratio		0.35	0.60	0.66		0.35	0.74		0.50	0.13		
Uniform Delay, d1		11.6	8.0	13.8		57.4	59.1		61.3	60.4		
Progression Factor		1.00	1.00	0.25		1.00	1.00		0.89	0.92		
Incremental Delay, d2		0.6	0.6	0.6		1.2	20.6		4.0	0.7		
Delay (s)		12.3	8.5	4.0		58.6	79.7		58.4	56.5		
Level of Service		B	A	A		E	E		E	E		
Approach Delay (s)			8.6	4.0		72.4			58.0			
Approach LOS			A	A		E			E			
Intersection Summary												
HCM 2000 Control Delay			8.2		HCM 2000 Level of Service					A		
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			130.0		Sum of lost time (s)				26.4			
Intersection Capacity Utilization			67.3%		ICU Level of Service				C			
Analysis Period (min)			15									
c Critical Lane Group												

Timings
3: NE 163rd Street & NE 28th Avenue

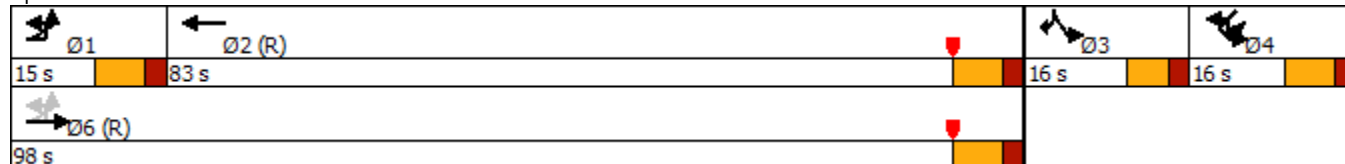
Future Total Conditions with Improvements
A.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	26	9	2733	2515	2	22	56	13
Future Volume (vph)	26	9	2733	2515	2	22	56	13
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	15.0	15.0	98.0	83.0	16.0	16.0	16.0	16.0
Total Split (%)	11.5%	11.5%	75.4%	63.8%	12.3%	12.3%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 128 (98%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 3: NE 163rd Street & NE 28th Avenue



HCM Signalized Intersection Capacity Analysis

3: NE 163rd Street & NE 28th Avenue

Future Total Conditions with Improvements

A.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	26	9	2733	2515	17	5	2	22	6	18	56	13	
Future Volume (vph)	26	9	2733	2515	17	5	2	22	6	18	56	13	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6398			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		82	6408	6398			1770	1583			1770	1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	28	10	2971	2734	18	5	2	24	7	20	61	14	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	38	2971	2757	0	0	2	31	0	0	81	15	
Confl. Peds. (#/hr)		3				3							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			3	3		4	4	4	
Permitted Phases	6	6											
Actuated Green, G (s)		95.8	95.8	84.5			5.2	5.2			9.4	9.4	
Effective Green, g (s)		95.8	95.8	84.5			5.2	5.2			9.4	9.4	
Actuated g/C Ratio		0.74	0.74	0.65			0.04	0.04			0.07	0.07	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		118	4722	4158			70	63			127	114	
v/s Ratio Prot		0.01	c0.46	c0.43			0.00	c0.02			c0.05	0.01	
v/s Ratio Perm		0.23											
v/c Ratio		0.32	0.63	0.66			0.03	0.49			0.64	0.13	
Uniform Delay, d1		11.7	8.4	14.0			60.0	61.1			58.6	56.5	
Progression Factor		2.86	0.80	0.48			1.00	1.00			1.03	1.05	
Incremental Delay, d2		0.5	0.5	0.7			0.1	4.3			8.8	0.4	
Delay (s)		34.0	7.3	7.4			60.1	65.5			69.1	59.4	
Level of Service		C	A	A			E	E			E	E	
Approach Delay (s)			7.6	7.4			65.1				67.6		
Approach LOS			A	A			E				E		
Intersection Summary													
HCM 2000 Control Delay			8.8		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.68										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			67.6%		ICU Level of Service						C		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 3: NE 163rd Street & NE 28th Avenue

Future Total Conditions with Improvements
 A.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	1
Future Volume (vph)	1
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	1
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	3
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
4: NE 163rd Street & NE 2900 Block

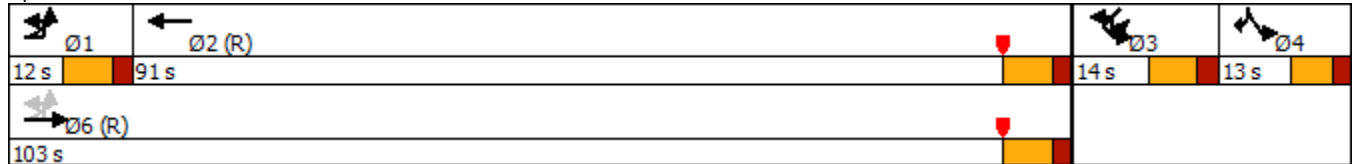
Future Total Conditions with Improvements
A.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	21	21	2695	2530	1	2	3	9
Future Volume (vph)	21	21	2695	2530	1	2	3	9
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	4	4	3	3
Permitted Phases	6	6						
Detector Phase	1	1	6	2	4	4	3	3
Switch Phase								
Minimum Initial (s)	5.0	5.0	15.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	21.8	21.8	13.0	13.0	13.8	13.8
Total Split (s)	12.0	12.0	103.0	91.0	13.0	13.0	14.0	14.0
Total Split (%)	9.2%	9.2%	79.2%	70.0%	10.0%	10.0%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 100 (77%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 4: NE 163rd Street & NE 2900 Block



HCM Signalized Intersection Capacity Analysis

4: NE 163rd Street & NE 2900 Block

Future Total Conditions with Improvements

A.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	21	21	2695	2530	10	3	1	2	1	8	3	9	
Future Volume (vph)	21	21	2695	2530	10	3	1	2	1	8	3	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6402			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		74	6408	6402			1770	1583			1770	1583	
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)	23	23	2962	2780	11	3	1	2	1	9	3	10	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	46	2962	2794	0	0	1	3	0	0	12	10	
Confl. Peds. (#/hr)		4				4							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			4	4		3	3	3	
Permitted Phases	6	6											
Actuated Green, G (s)		104.8	104.8	93.9			1.4	1.4			4.2	4.2	
Effective Green, g (s)		104.8	104.8	93.9			1.4	1.4			4.2	4.2	
Actuated g/C Ratio		0.81	0.81	0.72			0.01	0.01			0.03	0.03	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		113	5165	4624			19	17			57	51	
v/s Ratio Prot		0.01	c0.46	c0.44			0.00	c0.00			c0.01	0.01	
v/s Ratio Perm		0.31											
v/c Ratio		0.41	0.57	0.60			0.05	0.18			0.21	0.20	
Uniform Delay, d1		8.5	4.5	8.9			63.6	63.7			61.3	61.3	
Progression Factor		1.36	2.95	0.02			1.00	1.00			0.58	0.59	
Incremental Delay, d2		0.7	0.4	0.5			0.8	3.6			1.2	1.2	
Delay (s)		12.3	13.8	0.7			64.5	67.3			37.0	37.2	
Level of Service		B	B	A			E	E			D	D	
Approach Delay (s)			13.7	0.7			66.6				37.1		
Approach LOS			B	A			E				D		
Intersection Summary													
HCM 2000 Control Delay			7.6		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.61										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			67.1%		ICU Level of Service						C		
Analysis Period (min)			15										
c Critical Lane Group													

Timings
5: NE 34th Avenue & NE 163rd Street

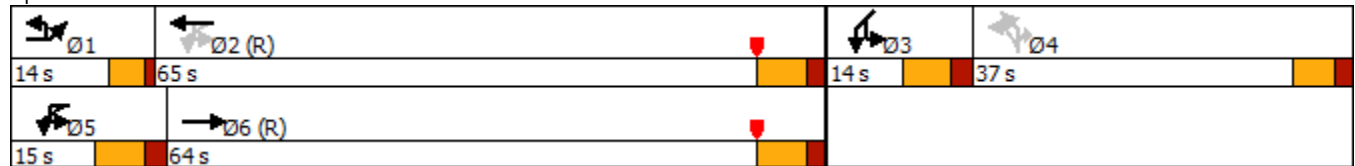
Future Total Conditions with Improvements
A.M. Peak Hour

Lane Group	EBL	EBT	WBU	WBL	WBT	NBL	NBR2	SWL
Lane Configurations								
Traffic Volume (vph)	52	2627	14	3	2538	0	5	27
Future Volume (vph)	52	2627	14	3	2538	0	5	27
Turn Type	Prot	NA	pm+pt	pm+pt	NA	Perm	Perm	Prot
Protected Phases	1	6	5	5	2			3
Permitted Phases			2	2		4	4	
Detector Phase	1	6	5	5	2	4	4	3
Switch Phase								
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	7.0	7.0	7.0
Minimum Split (s)	9.5	21.8	11.8	11.8	21.8	37.0	37.0	13.8
Total Split (s)	14.0	64.0	15.0	15.0	65.0	37.0	37.0	14.0
Total Split (%)	10.8%	49.2%	11.5%	11.5%	50.0%	28.5%	28.5%	10.8%
Yellow Time (s)	3.5	4.8	4.8	4.8	4.8	4.0	4.0	4.8
All-Red Time (s)	1.0	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)	4.5	6.8		6.8	6.8	6.0	6.0	6.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 63 (48%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 125
 Control Type: Actuated-Coordinated

Splits and Phases: 5: NE 34th Avenue & NE 163rd Street





















HCM Signalized Intersection Capacity Analysis

5: NE 34th Avenue & NE 163rd Street

Future Total Conditions with Improvements

A.M. Peak Hour

													
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	WBR2	NBL2	NBL	NBR2	
Lane Configurations													
Traffic Volume (vph)	7	52	2627	18	14	3	2538	9	21	6	0	5	
Future Volume (vph)	7	52	2627	18	14	3	2538	9	21	6	0	5	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.5	6.8			6.8	6.8				6.0	6.0	
Lane Util. Factor		1.00	0.86			1.00	0.86				1.00	1.00	
Frbp, 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	1.00			1.00	1.00				1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00				0.95	1.00	
Satd. Flow (prot)		1770	6400			1770	6397				1770	1583	
Flt Permitted		0.95	1.00			0.05	1.00				0.95	1.00	
Satd. Flow (perm)		1770	6400			84	6397				1770	1583	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	7	55	2795	19	15	3	2700	10	22	6	0	5	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	5	
Lane Group Flow (vph)	0	62	2814	0	0	18	2732	0	0	0	6	0	
Confl. Peds. (#/hr)						1							
Confl. Bikes (#/hr)				2									
Turn Type	Prot	Prot	NA		pm+pt	pm+pt	NA			Perm	Perm	Perm	
Protected Phases	1	1	6		5	5	2						
Permitted Phases					2	2				4	4	4	
Actuated Green, G (s)		8.7	92.9			90.7	88.6				2.8	2.8	
Effective Green, g (s)		8.7	92.9			90.7	88.6				2.8	2.8	
Actuated g/C Ratio		0.07	0.71			0.70	0.68				0.02	0.02	
Clearance Time (s)		4.5	6.8			6.8	6.8				6.0	6.0	
Vehicle Extension (s)		3.0	1.0			2.0	1.0				2.5	2.5	
Lane Grp Cap (vph)		118	4573			85	4359				38	34	
v/s Ratio Prot		c0.04	c0.44			0.00	0.43						
v/s Ratio Perm						0.14					c0.00	0.00	
v/c Ratio		0.53	0.62			0.21	0.63				0.16	0.00	
Uniform Delay, d1		58.7	9.4			7.8	11.5				62.4	62.2	
Progression Factor		0.91	1.03			1.67	1.73				1.00	1.00	
Incremental Delay, d2		3.6	0.5			0.3	0.5				1.4	0.0	
Delay (s)		57.3	10.2			13.3	20.3				63.9	62.3	
Level of Service		E	B			B	C				E	E	
Approach Delay (s)			11.3				20.3						
Approach LOS			B				C						
Intersection Summary													
HCM 2000 Control Delay			16.2									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.63										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	26.4
Intersection Capacity Utilization			72.0%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
5: NE 34th Avenue & NE 163rd Street

Future Total Conditions with Improvements

A.M. Peak Hour

Movement	SWL2	SWL	SWR	SWR2
Lane Configurations				
Traffic Volume (vph)	5	27	6	8
Future Volume (vph)	5	27	6	8
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.8		
Lane Util. Factor		1.00		
Frbp, ped/bikes		0.96		
Flpb, ped/bikes		1.00		
Frt		0.96		
Flt Protected		0.97		
Satd. Flow (prot)		1657		
Flt Permitted		0.97		
Satd. Flow (perm)		1657		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	29	6	9
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	0	49	0	0
Confl. Peds. (#/hr)				10
Confl. Bikes (#/hr)				
Turn Type	Prot	Prot		
Protected Phases	3	3		
Permitted Phases				
Actuated Green, G (s)		5.8		
Effective Green, g (s)		5.8		
Actuated g/C Ratio		0.04		
Clearance Time (s)		6.8		
Vehicle Extension (s)		2.5		
Lane Grp Cap (vph)		73		
v/s Ratio Prot		c0.03		
v/s Ratio Perm				
v/c Ratio		0.67		
Uniform Delay, d1		61.2		
Progression Factor		0.95		
Incremental Delay, d2		13.6		
Delay (s)		72.0		
Level of Service		E		
Approach Delay (s)		72.0		
Approach LOS		E		
Intersection Summary				

Timings
6: NE 163rd Street & NE 35th Avenue

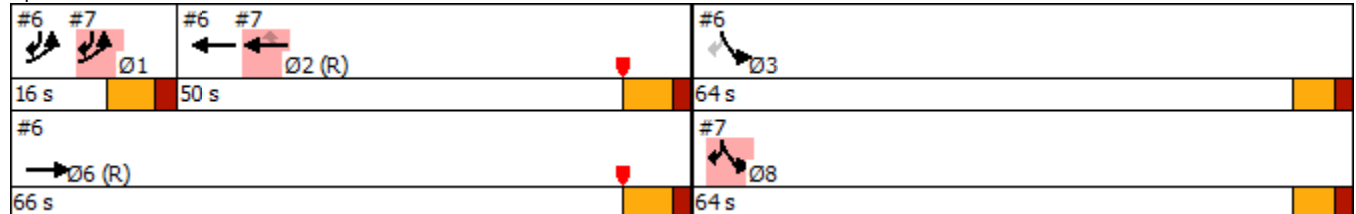
Future Total Conditions with Improvements
A.M. Peak Hour

Lane Group	EBL	EBT	WBT	SBL	SBR	Ø8
Lane Configurations						
Traffic Volume (vph)	471	2176	1919	127	661	
Future Volume (vph)	471	2176	1919	127	661	
Turn Type	Prot	NA	NA	Prot	pm+ov	
Protected Phases	1	6	2	3	1	8
Permitted Phases					3	
Detector Phase	1	6	2	3	1	
Switch Phase						
Minimum Initial (s)	7.0	4.0	4.0	7.0	7.0	7.0
Minimum Split (s)	13.8	28.8	28.8	24.0	13.8	13.0
Total Split (s)	16.0	66.0	50.0	64.0	16.0	64.0
Total Split (%)	12.3%	50.8%	38.5%	49.2%	12.3%	49%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.8	6.8	6.8	6.0	6.8	
Lead/Lag	Lead		Lag		Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	
Recall Mode	None	C-Max	C-Max	None	None	None

Intersection Summary






Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 91 (70%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 6: NE 163rd Street & NE 35th Avenue



Queues
6: NE 163rd Street & NE 35th Avenue

Future Total Conditions with Improvements
A.M. Peak Hour
















					
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	506	2340	2249	137	725
v/c Ratio	0.38	0.60	0.79	0.60	0.58
Control Delay	36.6	5.5	12.0	61.3	33.8
Queue Delay	0.0	0.2	0.0	0.0	0.6
Total Delay	36.6	5.7	12.0	61.3	34.4
Queue Length 50th (ft)	153	282	99	114	295
Queue Length 95th (ft)	103	3	134	177	336
Internal Link Dist (ft)		488	388	245	
Turn Bay Length (ft)	275			300	
Base Capacity (vph)	1344	3921	2847	789	1242
Starvation Cap Reductn	0	585	23	0	0
Spillback Cap Reductn	0	0	0	0	208
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.70	0.80	0.17	0.70
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

6: NE 163rd Street & NE 35th Avenue

Future Total Conditions with Improvements

A.M. Peak Hour

										
Movement	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER
Lane Configurations										
Traffic Volume (vph)	471	2176	1919	34	139	127	661	13	0	0
Future Volume (vph)	471	2176	1919	34	139	127	661	13	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8	6.8			6.0	6.8			
Lane Util. Factor	0.94	0.91	0.86			1.00	0.88			
Frbp, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Flpb, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Frt	1.00	1.00	0.99			1.00	0.85			
Flt Protected	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (prot)	4990	5085	6318			1770	2787			
Flt Permitted	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (perm)	4990	5085	6318			1770	2787			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	506	2340	2063	37	149	137	711	14	0	0
RTOR Reduction (vph)	0	0	7	0	0	0	0	0	0	0
Lane Group Flow (vph)	506	2340	2242	0	0	137	725	0	0	0
Confl. Peds. (#/hr)	5				5					
Turn Type	Prot	NA	NA			Prot	pm+ov			
Protected Phases	1	6	2			3	1			
Permitted Phases							3			
Actuated Green, G (s)	35.0	100.3	58.5			16.9	51.9			
Effective Green, g (s)	35.0	100.3	58.5			16.9	51.9			
Actuated g/C Ratio	0.27	0.77	0.45			0.13	0.40			
Clearance Time (s)	6.8	6.8	6.8			6.0	6.8			
Vehicle Extension (s)	3.0	1.0	1.0			3.0	3.0			
Lane Grp Cap (vph)	1343	3923	2843			230	1112			
v/s Ratio Prot	0.10	c0.46	c0.35			0.08	c0.18			
v/s Ratio Perm							0.08			
v/c Ratio	0.38	0.60	0.79			0.60	0.65			
Uniform Delay, d1	38.6	6.3	30.5			53.3	31.7			
Progression Factor	0.91	0.72	0.33			0.97	1.17			
Incremental Delay, d2	0.2	0.6	1.7			4.0	1.4			
Delay (s)	35.3	5.1	11.8			55.7	38.5			
Level of Service	D	A	B			E	D			
Approach Delay (s)		10.5	11.8			41.2			0.0	
Approach LOS		B	B			D			A	
Intersection Summary										
HCM 2000 Control Delay			15.4			HCM 2000 Level of Service			B	
HCM 2000 Volume to Capacity ratio			0.73							
Actuated Cycle Length (s)			130.0			Sum of lost time (s)		19.6		
Intersection Capacity Utilization			65.7%			ICU Level of Service		C		
Analysis Period (min)			15							
c Critical Lane Group										

Timings
7: NE 163rd Street & Intracoastal Mall Driveway

Future Total Conditions with Improvements
A.M. Peak Hour

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3	Ø6
Lane Configurations								
Traffic Volume (vph)	182	2122	1881	140	139	208		
Future Volume (vph)	182	2122	1881	140	139	208		
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov		
Protected Phases	1		2		8	8 1	3	6
Permitted Phases		Free		2				
Detector Phase	1		2	2	8	8 1		
Switch Phase								
Minimum Initial (s)	7.0		4.0	4.0	7.0		7.0	4.0
Minimum Split (s)	13.8		28.8	28.8	13.0		24.0	28.8
Total Split (s)	16.0		50.0	50.0	64.0		64.0	66.0
Total Split (%)	12.3%		38.5%	38.5%	49.2%		49%	51%
Yellow Time (s)	4.8		4.8	4.8	4.0		4.0	4.8
All-Red Time (s)	2.0		2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0			
Total Lost Time (s)	6.8		6.8	6.8	6.0			
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None		C-Max	C-Max	None		None	C-Max

Intersection Summary







Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 91 (70%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 7: NE 163rd Street & Intracoastal Mall Driveway

#6 #7 Ø1	#6 #7 Ø2 (R)	#6 Ø3
16 s	50 s	64 s
#6 Ø6 (R)		#7 Ø8
66 s		64 s

Queues
7: NE 163rd Street & Intracoastal Mall Driveway

Future Total Conditions with Improvements
A.M. Peak Hour



















						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	202	2358	2090	156	154	231
v/c Ratio	0.42	0.46	0.73	0.23	0.67	0.18
Control Delay	47.2	0.3	31.3	12.2	67.4	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	0.3	31.3	12.2	67.4	21.6
Queue Length 50th (ft)	124	0	385	36	125	68
Queue Length 95th (ft)	179	0	493	91	189	87
Internal Link Dist (ft)		388	319		49	
Turn Bay Length (ft)	250			155		
Base Capacity (vph)	476	5085	2880	689	789	1287
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	3	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.46	0.73	0.23	0.20	0.18
Intersection Summary						

HCM Signalized Intersection Capacity Analysis

7: NE 163rd Street & Intracoastal Mall Driveway

Future Total Conditions with Improvements

A.M. Peak Hour

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		  	   			 
Traffic Volume (vph)	182	2122	1881	140	139	208
Future Volume (vph)	182	2122	1881	140	139	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	4.0	6.8	6.8	6.0	6.0
Lane Util. Factor	1.00	0.91	0.86	1.00	1.00	0.88
Frpb, ped/bikes	1.00	1.00	1.00	0.91	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	5085	6408	1441	1770	2787
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	5085	6408	1441	1770	2787
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	202	2358	2090	156	154	231
RTOR Reduction (vph)	0	0	0	42	0	0
Lane Group Flow (vph)	202	2358	2090	114	154	231
Confl. Peds. (#/hr)				23		
Confl. Bikes (#/hr)				4		
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	1		2		8	8 1
Permitted Phases		Free		2		
Actuated Green, G (s)	35.0	130.0	58.5	58.5	16.9	57.9
Effective Green, g (s)	35.0	130.0	58.5	58.5	16.9	57.9
Actuated g/C Ratio	0.27	1.00	0.45	0.45	0.13	0.45
Clearance Time (s)	6.8		6.8	6.8	6.0	
Vehicle Extension (s)	3.0		1.0	1.0	3.0	
Lane Grp Cap (vph)	476	5085	2883	648	230	1241
v/s Ratio Prot	0.11		c0.33		c0.09	0.08
v/s Ratio Perm		c0.46		0.08		
v/c Ratio	0.42	0.46	0.72	0.18	0.67	0.19
Uniform Delay, d1	39.2	0.0	29.2	21.3	53.9	21.8
Progression Factor	1.10	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.3	1.6	0.6	7.2	0.1
Delay (s)	43.6	0.3	30.8	21.9	61.1	21.9
Level of Service	D	A	C	C	E	C
Approach Delay (s)		3.7	30.2		37.6	
Approach LOS		A	C		D	
Intersection Summary						
HCM 2000 Control Delay			17.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.66			
Actuated Cycle Length (s)			130.0		Sum of lost time (s)	19.6
Intersection Capacity Utilization			61.4%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Timings
8: NE 35th Avenue & NE 164th Street

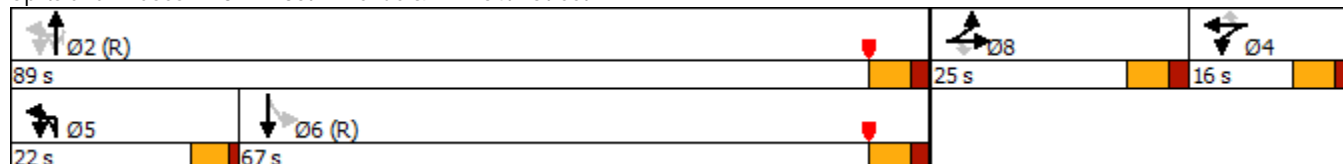
Future Total Conditions with Improvements
A.M. Peak Hour

Lane Group										
Lane Configurations										
Traffic Volume (vph)	56	145	3	36	44	47	250	165	31	545
Future Volume (vph)	56	145	3	36	44	47	250	165	31	545
Turn Type	Perm	Split	NA	Perm	pm+pt	pm+pt	NA	Perm	Perm	NA
Protected Phases		4	4		5	5	2			6
Permitted Phases	8			4	2	2		2	6	
Detector Phase	8	4	4	4	5	5	2	2	6	6
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.0	16.0	16.0	16.0	9.5	9.5	21.0	21.0	21.0	21.0
Total Split (s)	25.0	16.0	16.0	16.0	22.0	22.0	89.0	89.0	67.0	67.0
Total Split (%)	19.2%	12.3%	12.3%	12.3%	16.9%	16.9%	68.5%	68.5%	51.5%	51.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	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
Total Lost Time (s)	6.0	6.0	6.0	6.0			4.5	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead			Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 116 (89%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 8: NE 35th Avenue & NE 164th Street



HCM Signalized Intersection Capacity Analysis

8: NE 35th Avenue & NE 164th Street

Future Total Conditions with Improvements

A.M. Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	0	56	145	3	36	44	47	250	165	31	545
Future Volume (vph)	0	0	56	145	3	36	44	47	250	165	31	545
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			6.0	6.0	6.0	6.0		4.5	6.0	6.0	6.0	6.0
Lane Util. Factor			1.00	0.95	0.95	1.00		1.00	0.95	1.00	1.00	0.95
Frbp, ped/bikes			0.97	1.00	1.00	0.96		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt			0.85	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00
Flt Protected			1.00	0.95	0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)			1543	1681	1688	1522		1768	3539	1554	1761	3536
Flt Permitted			1.00	0.95	0.95	1.00		0.39	1.00	1.00	0.59	1.00
Satd. Flow (perm)			1543	1681	1688	1522		724	3539	1554	1086	3536
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	60	156	3	39	47	51	269	177	33	586
RTOR Reduction (vph)	0	0	57	0	0	36	0	0	0	47	0	0
Lane Group Flow (vph)	0	0	3	80	79	3	0	98	269	130	33	589
Confl. Peds. (#/hr)	7		2	2		7	2	14		15	15	
Confl. Bikes (#/hr)										1		
Turn Type			Perm	Split	NA	Perm	pm+pt	pm+pt	NA	Perm	Perm	NA
Protected Phases	8	8		4	4		5	5	2			6
Permitted Phases			8			4	2	2		2	6	
Actuated Green, G (s)			5.6	11.2	11.2	11.2		95.2	95.2	95.2	83.1	83.1
Effective Green, g (s)			5.6	11.2	11.2	11.2		95.2	95.2	95.2	83.1	83.1
Actuated g/C Ratio			0.04	0.09	0.09	0.09		0.73	0.73	0.73	0.64	0.64
Clearance Time (s)			6.0	6.0	6.0	6.0		4.5	6.0	6.0	6.0	6.0
Vehicle Extension (s)			2.5	2.5	2.5	2.5		3.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)			66	144	145	131		591	2591	1138	694	2260
v/s Ratio Prot				c0.05	0.05			c0.01	0.08			c0.17
v/s Ratio Perm			c0.00			0.00		0.11		0.08	0.03	
v/c Ratio			0.04	0.56	0.54	0.03		0.17	0.10	0.11	0.05	0.26
Uniform Delay, d1			59.6	57.0	57.0	54.4		5.2	5.0	5.1	8.7	10.1
Progression Factor			1.00	1.00	1.00	1.00		1.66	1.65	8.34	1.00	1.00
Incremental Delay, d2			0.2	3.7	3.3	0.1		0.1	0.1	0.2	0.1	0.3
Delay (s)			59.8	60.7	60.2	54.5		8.8	8.4	42.6	8.9	10.4
Level of Service			E	E	E	D		A	A	D	A	B
Approach Delay (s)		59.8			59.3				19.6			10.3
Approach LOS		E			E				B			B
Intersection Summary												
HCM 2000 Control Delay			22.8									C
HCM 2000 Volume to Capacity ratio			0.27									
Actuated Cycle Length (s)			130.0						22.5			
Intersection Capacity Utilization			51.1%									A
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 8: NE 35th Avenue & NE 164th Street

Future Total Conditions with Improvements
 A.M. Peak Hour

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	3
Future Volume (vph)	3
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	3
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	14
Confl. Bikes (#/hr)	5
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM 6th TWSC
 9: NE 35th Avenue & Intracoastal Mall North Drive

Future Total Conditions with Improvements
 A.M. Peak Hour

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑↑			↑↑
Traffic Vol, veh/h	2	11	205	11	0	561
Future Vol, veh/h	2	11	205	11	0	561
Conflicting Peds, #/hr	0	0	0	10	10	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	2	12	223	12	0	610

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	544	128	0	0	-
Stage 1	239	-	-	-	-
Stage 2	305	-	-	-	-
Critical Hdwy	5	5	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3	3	-	-	-
Pot Cap-1 Maneuver	701	1059	-	-	0
Stage 1	852	-	-	-	0
Stage 2	829	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	694	1049	-	-	-
Mov Cap-2 Maneuver	694	-	-	-	-
Stage 1	843	-	-	-	-
Stage 2	829	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	972
HCM Lane V/C Ratio	-	-	0.015
HCM Control Delay (s)	-	-	8.8
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

HCM 6th TWSC
 10: NE 35th Avenue & Intracoastal Mall South Driveway

Future Total Conditions with Improvements
 A.M. Peak Hour

Intersection

Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑
Traffic Vol, veh/h	0	44	576	33	0	846
Future Vol, veh/h	0	44	576	33	0	846
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	48	626	36	0	920

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	331	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	5	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3	-	-	-
Pot Cap-1 Maneuver	0	867	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	867	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	867
HCM Lane V/C Ratio	-	-	0.055
HCM Control Delay (s)	-	-	9.4
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.2

P.M. Peak Hour

Existing Conditions

Timings
1: Biscayne Boulevard/US 1 & NE 163rd Street

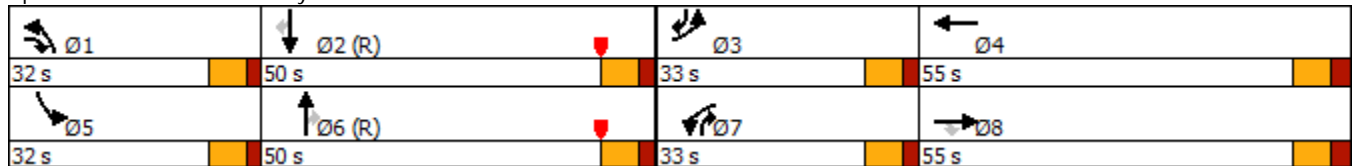
Existing Conditions
 P.M. Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	313	1063	421	477	1296	804	474	1398	606	473	1337	446
Future Volume (vph)	313	1063	421	477	1296	804	474	1398	606	473	1337	446
Turn Type	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases			8			Free			6			2
Detector Phase	3	8	1	7	4		1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	7.0	5.0	5.0	7.0	5.0
Minimum Split (s)	11.8	54.7	11.8	11.8	54.7		11.8	49.2	11.8	11.8	49.2	11.8
Total Split (s)	33.0	55.0	32.0	33.0	55.0		32.0	50.0	33.0	32.0	50.0	33.0
Total Split (%)	19.4%	32.4%	18.8%	19.4%	32.4%		18.8%	29.4%	19.4%	18.8%	29.4%	19.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8		4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.0	2.9	2.0	2.0	2.9		2.0	2.4	2.0	2.0	2.4	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	0.0
Total Lost Time (s)	6.8	7.7	6.8	6.8	7.7		6.8	7.2	6.8	6.8	7.2	6.8
Lead/Lag	Lead	Lag	Lead	Lead	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

Intersection Summary

Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 77 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Biscayne Boulevard/US 1 & NE 163rd Street



HCM 6th Signalized Intersection Summary
 1: Biscayne Boulevard/US 1 & NE 163rd Street

Existing Conditions
 P.M. Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	1063	421	477	1296	804	474	1398	606	473	1337	446
Future Volume (veh/h)	313	1063	421	477	1296	804	474	1398	606	473	1337	446
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	323	1096	434	492	1336	0	489	1441	625	488	1378	460
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	374	1368	650	528	1596		512	1695	647	512	1695	576
Arrive On Green	0.11	0.27	0.27	0.15	0.31	0.00	0.20	0.35	0.35	0.20	0.35	0.35
Sat Flow, veh/h	3456	5106	1549	3456	5106	1585	3456	6434	1537	3456	6434	1537
Grp Volume(v), veh/h	323	1096	434	492	1336	0	489	1441	625	488	1378	460
Grp Sat Flow(s),veh/h/ln	1728	1702	1549	1728	1702	1585	1728	1609	1537	1728	1609	1537
Q Serve(g_s), s	15.6	34.0	38.6	23.9	41.4	0.0	23.8	35.2	44.8	23.7	33.1	44.8
Cycle Q Clear(g_c), s	15.6	34.0	38.6	23.9	41.4	0.0	23.8	35.2	44.8	23.7	33.1	44.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	374	1368	650	528	1596		512	1695	647	512	1695	576
V/C Ratio(X)	0.86	0.80	0.67	0.93	0.84		0.95	0.85	0.97	0.95	0.81	0.80
Avail Cap(c_a), veh/h	533	1421	666	533	1596		512	1695	647	512	1695	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.77	0.77	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.6	58.0	40.3	71.1	54.4	0.0	67.7	52.1	44.4	67.7	51.4	42.6
Incr Delay (d2), s/veh	10.1	3.2	2.3	19.3	3.1	0.0	28.6	5.6	27.9	28.2	4.4	11.0
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(50%),veh/ln	7.5	15.1	15.3	12.1	18.3	0.0	12.3	14.4	31.5	12.2	13.4	18.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.7	61.2	42.5	90.5	57.5	0.0	96.3	57.7	72.3	95.8	55.8	53.6
LnGrp LOS	F	E	D	F	E		F	E	E	F	E	D
Approach Vol, veh/h		1853			1828	A		2555			2326	
Approach Delay, s/veh		60.9			66.4			68.6			63.8	
Approach LOS		E			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	52.0	25.2	60.8	32.0	52.0	32.8	53.2				
Change Period (Y+Rc), s	6.8	* 7.2	6.8	* 7.7	6.8	* 7.2	6.8	* 7.7				
Max Green Setting (Gmax), s	25.2	* 43	26.2	* 47	25.2	* 43	26.2	* 47				
Max Q Clear Time (g_c+I1), s	25.8	46.8	17.6	43.4	25.7	46.8	25.9	40.6				
Green Ext Time (p_c), s	0.0	0.0	0.7	2.6	0.0	0.0	0.1	4.1				

Intersection Summary
















HCM 6th Ctrl Delay	65.2
HCM 6th LOS	E

Notes

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

Timings
2: NE 163rd Street & NE 26th Avenue

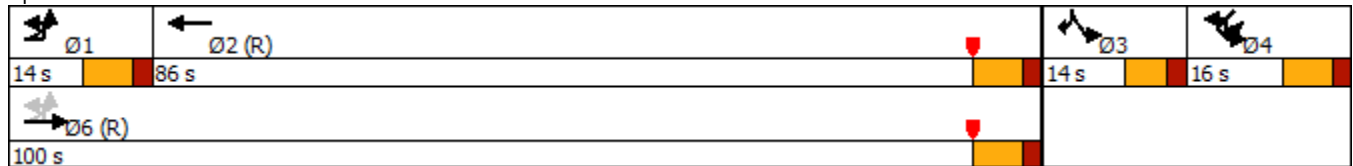
Existing Conditions
P.M. Peak Hour

								
Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	7	117	1988	2230	52	67	48	0
Future Volume (vph)	7	117	1988	2230	52	67	48	0
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	14.0	14.0	100.0	86.0	14.0	14.0	16.0	16.0
Total Split (%)	10.8%	10.8%	76.9%	66.2%	10.8%	10.8%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 113 (87%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated




















Splits and Phases: 2: NE 163rd Street & NE 26th Avenue



HCM Signalized Intersection Capacity Analysis
















2: NE 163rd Street & NE 26th Avenue

Existing Conditions
P.M. Peak Hour

												
Movement	EBU	EBL2	EBT	WBT	WBR2	SBL	SBR	SWU	SWL	SWR	SWR2	
Lane Configurations												
Traffic Volume (vph)	7	117	1988	2230	53	52	67	13	48	0	20	
Future Volume (vph)	7	117	1988	2230	53	52	67	13	48	0	20	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Lane Util. Factor		1.00	0.86	0.86		1.00	1.00		1.00	1.00		
Frbp, ped/bikes		1.00	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	1.00		
Frt		1.00	1.00	1.00		1.00	0.85		1.00	0.85		
Flt Protected		0.95	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (prot)		1770	6408	6379		1770	1583		1770	1583		
Flt Permitted		0.05	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (perm)		84	6408	6379		1770	1583		1770	1583		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	7	124	2115	2372	56	55	71	14	51	0	21	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	131	2115	2428	0	55	71	0	65	21	0	
Confl. Peds. (#/hr)		7			7						7	
Turn Type	pm+pt	pm+pt	NA	NA		Prot	Prot	Prot	Prot	Prot		
Protected Phases	1	1	6	2		3	3	4	4	4		
Permitted Phases	6	6										
Actuated Green, G (s)		95.5	95.5	81.4		7.8	7.8		7.1	7.1		
Effective Green, g (s)		95.5	95.5	81.4		7.8	7.8		7.1	7.1		
Actuated g/C Ratio		0.73	0.73	0.63		0.06	0.06		0.05	0.05		
Clearance Time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Vehicle Extension (s)		2.0	1.0	1.0		2.5	2.5		2.5	2.5		
Lane Grp Cap (vph)		156	4707	3994		106	94		96	86		
v/s Ratio Prot		c0.05	0.33	0.38		0.03	c0.04		c0.04	0.01		
v/s Ratio Perm		c0.57										
v/c Ratio		0.84	0.45	0.61		0.52	0.76		0.68	0.24		
Uniform Delay, d1		31.7	6.8	14.7		59.3	60.2		60.3	58.9		
Progression Factor		1.00	1.00	1.76		1.00	1.00		1.03	1.05		
Incremental Delay, d2		29.7	0.3	0.6		3.2	27.4		15.8	1.1		
Delay (s)		61.4	7.1	26.5		62.5	87.6		77.9	62.9		
Level of Service		E	A	C		E	F		E	E		
Approach Delay (s)			10.3	26.5		76.6			74.2			
Approach LOS			B	C		E			E			
Intersection Summary												
HCM 2000 Control Delay			21.2			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			26.4			
Intersection Capacity Utilization			73.8%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Timings
3: NE 163rd Street & NE 28th Avenue






Existing Conditions
 P.M. Peak Hour

								
Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	7	22	2005	2295	12	16	34	20
Future Volume (vph)	7	22	2005	2295	12	16	34	20
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	13.0	13.0	100.0	87.0	14.0	14.0	16.0	16.0
Total Split (%)	10.0%	10.0%	76.9%	66.9%	10.8%	10.8%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 122 (94%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 3: NE 163rd Street & NE 28th Avenue

 Ø1	 Ø2 (R)	 Ø3	 Ø4
13 s	87 s	14 s	16 s
 Ø6 (R)			
100 s			

HCM Signalized Intersection Capacity Analysis

3: NE 163rd Street & NE 28th Avenue

Existing Conditions
P.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	7	22	2005	2295	8	8	12	16	5	14	34	20	
Future Volume (vph)	7	22	2005	2295	8	8	12	16	5	14	34	20	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6398			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		78	6408	6398			1770	1583			1770	1583	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	8	24	2156	2468	9	9	13	17	5	15	37	22	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	32	2156	2486	0	0	13	22	0	0	52	24	
Confl. Peds. (#/hr)		14				14							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			3	3		4	4	4	
Permitted Phases	6	6											
Actuated Green, G (s)		98.9	98.9	88.8			4.6	4.6			6.9	6.9	
Effective Green, g (s)		98.9	98.9	88.8			4.6	4.6			6.9	6.9	
Actuated g/C Ratio		0.76	0.76	0.68			0.04	0.04			0.05	0.05	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		102	4875	4370			62	56			93	84	
v/s Ratio Prot		0.01	c0.34	c0.39			0.01	c0.01			c0.03	0.02	
v/s Ratio Perm		0.23											
v/c Ratio		0.31	0.44	0.57			0.21	0.39			0.56	0.29	
Uniform Delay, d1		7.9	5.6	10.7			60.9	61.3			60.1	59.2	
Progression Factor		2.77	0.52	0.43			1.00	1.00			0.98	0.99	
Incremental Delay, d2		0.6	0.3	0.5			1.2	3.3			5.7	1.4	
Delay (s)		22.6	3.2	5.0			62.2	64.6			64.6	60.2	
Level of Service		C	A	A			E	E			E	E	
Approach Delay (s)			3.5	5.0			63.7				63.2		
Approach LOS			A	A			E				E		
Intersection Summary													
HCM 2000 Control Delay			5.7		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.57										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			61.5%		ICU Level of Service						B		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 3: NE 163rd Street & NE 28th Avenue
















Existing Conditions
 P.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	2
Future Volume (vph)	2
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	2
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	14
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
4: NE 163rd Street & NE 2900 Block

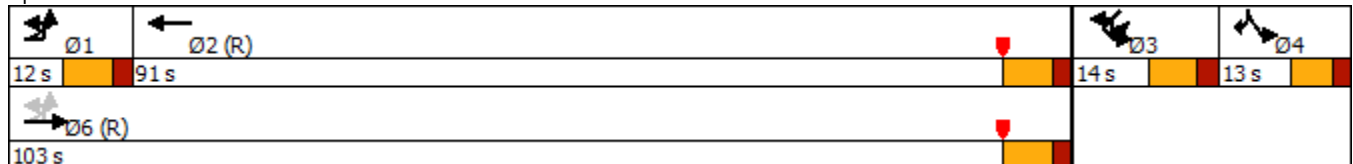
Existing Conditions
P.M. Peak Hour

								
Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	48	56	1928	2199	14	34	76	22
Future Volume (vph)	48	56	1928	2199	14	34	76	22
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	4	4	3	3
Permitted Phases	6	6						
Detector Phase	1	1	6	2	4	4	3	3
Switch Phase								
Minimum Initial (s)	5.0	5.0	15.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	21.8	21.8	13.0	13.0	13.8	13.8
Total Split (s)	12.0	12.0	103.0	91.0	13.0	13.0	14.0	14.0
Total Split (%)	9.2%	9.2%	79.2%	70.0%	10.0%	10.0%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 109 (84%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 4: NE 163rd Street & NE 2900 Block



HCM Signalized Intersection Capacity Analysis

4: NE 163rd Street & NE 2900 Block

Existing Conditions
P.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	48	56	1928	2199	21	20	14	34	4	29	76	22	
Future Volume (vph)	48	56	1928	2199	21	20	14	34	4	29	76	22	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6387			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		81	6408	6387			1770	1583			1770	1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	51	59	2029	2315	22	21	15	36	4	31	80	23	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	110	2029	2358	0	0	15	40	0	0	111	25	
Confl. Peds. (#/hr)		11				11							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			4	4		3	3	3	
Permitted Phases	6	6											
Actuated Green, G (s)		97.6	97.6	85.3			5.6	5.6			7.2	7.2	
Effective Green, g (s)		97.6	97.6	85.3			5.6	5.6			7.2	7.2	
Actuated g/C Ratio		0.75	0.75	0.66			0.04	0.04			0.06	0.06	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		132	4810	4190			76	68			98	87	
v/s Ratio Prot		c0.04	0.32	0.37			0.01	c0.03			c0.06	0.02	
v/s Ratio Perm		c0.59											
v/c Ratio		0.83	0.42	0.56			0.20	0.59			1.13	0.29	
Uniform Delay, d1		26.7	5.9	12.2			60.0	61.1			61.4	58.9	
Progression Factor		1.63	0.87	0.21			1.00	1.00			0.96	0.97	
Incremental Delay, d2		31.0	0.3	0.5			0.9	10.3			131.0	1.3	
Delay (s)		74.4	5.4	3.0			61.0	71.4			190.1	58.3	
Level of Service		E	A	A			E	E			F	E	
Approach Delay (s)			8.9	3.0			68.5				165.8		
Approach LOS			A	A			E				F		
Intersection Summary													
HCM 2000 Control Delay			11.2		HCM 2000 Level of Service						B		
HCM 2000 Volume to Capacity ratio			0.86										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			72.0%		ICU Level of Service						C		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 4: NE 163rd Street & NE 2900 Block


















Existing Conditions
 P.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	2
Future Volume (vph)	2
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	2
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	11
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
5: NE 34th Avenue & NE 163rd Street

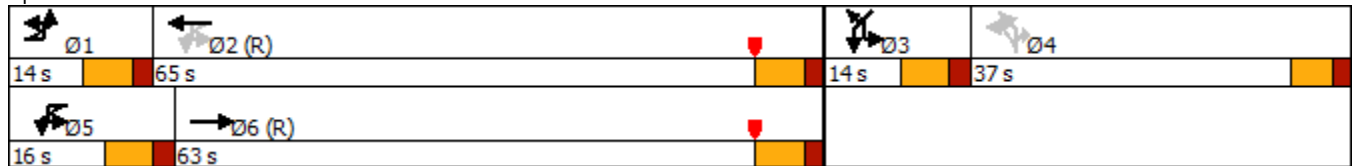
Existing Conditions
P.M. Peak Hour

									
Lane Group	EBL2	EBT	WBU	WBL	WBT	NBL	NBR2	SWL	SWR2
Lane Configurations									
Traffic Volume (vph)	4	1933	22	8	2174	1	6	47	1
Future Volume (vph)	4	1933	22	8	2174	1	6	47	1
Turn Type	Prot	NA	pm+pt	pm+pt	NA	Perm	Perm	Prot	Prot
Protected Phases	1	6	5	5	2			3	3
Permitted Phases			2	2		4	4		
Detector Phase	1	6	5	5	2	4	4	3	3
Switch Phase									
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	21.8	11.8	11.8	21.8	37.0	37.0	13.8	13.8
Total Split (s)	14.0	63.0	16.0	16.0	65.0	37.0	37.0	14.0	14.0
Total Split (%)	10.8%	48.5%	12.3%	12.3%	50.0%	28.5%	28.5%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	6.8	6.8		6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 78 (60%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 105
 Control Type: Actuated-Coordinated



















Splits and Phases: 5: NE 34th Avenue & NE 163rd Street



HCM Signalized Intersection Capacity Analysis

5: NE 34th Avenue & NE 163rd Street

Existing Conditions
P.M. Peak Hour

												
Movement	EBU	EBL2	EBT	EBR	WBU	WBL	WBT	WBR	NBL2	NBL	NBR2	SWL2
Lane Configurations												
Traffic Volume (vph)	23	4	1933	15	22	8	2174	22	29	1	6	18
Future Volume (vph)	23	4	1933	15	22	8	2174	22	29	1	6	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8			6.8	6.8			6.0	6.0	
Lane Util. Factor		1.00	0.86			1.00	0.86			1.00	1.00	
Frbp, 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	1.00			1.00	1.00			1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6399			1770	6398			1770	1583	
Flt Permitted		0.95	1.00			0.06	1.00			0.95	1.00	
Satd. Flow (perm)		1770	6399			118	6398			1770	1583	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	25	4	2078	16	24	9	2338	24	31	1	6	19
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	29	2094	0	0	33	2362	0	0	32	0	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)				2								
Turn Type	Prot	Prot	NA		pm+pt	pm+pt	NA		Perm	Perm	Perm	Prot
Protected Phases	1	1	6		5	5	2					3
Permitted Phases					2	2			4	4	4	
Actuated Green, G (s)		4.7	88.0			89.9	86.6			5.1	5.1	
Effective Green, g (s)		4.7	88.0			89.9	86.6			5.1	5.1	
Actuated g/C Ratio		0.04	0.68			0.69	0.67			0.04	0.04	
Clearance Time (s)		6.8	6.8			6.8	6.8			6.0	6.0	
Vehicle Extension (s)		2.0	1.0			2.0	1.0			2.5	2.5	
Lane Grp Cap (vph)		63	4331			123	4262			69	62	
v/s Ratio Prot		c0.02	0.33			0.01	c0.37					
v/s Ratio Perm						0.18				c0.02	0.00	
v/c Ratio		0.46	0.48			0.27	0.55			0.46	0.00	
Uniform Delay, d1		61.4	10.1			7.2	11.5			61.1	60.0	
Progression Factor		0.86	1.35			1.45	0.36			1.00	1.00	
Incremental Delay, d2		1.8	0.4			0.3	0.4			3.6	0.0	
Delay (s)		54.4	14.0			10.7	4.5			64.7	60.0	
Level of Service		D	B			B	A			E	E	
Approach Delay (s)			14.5				4.6					
Approach LOS			B				A					
Intersection Summary												
HCM 2000 Control Delay			11.7				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)		26.4			
Intersection Capacity Utilization			55.7%				ICU Level of Service		B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 5: NE 34th Avenue & NE 163rd Street











Existing Conditions
 P.M. Peak Hour

	↙	↖	↗
Movement	SWL	SWR	SWR2
Lane Configurations	↙		↗
Traffic Volume (vph)	47	15	1
Future Volume (vph)	47	15	1
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	6.8		6.8
Lane Util. Factor	1.00		1.00
Frbp, ped/bikes	1.00		1.00
Flpb, ped/bikes	1.00		1.00
Frt	0.97		0.85
Flt Protected	0.96		1.00
Satd. Flow (prot)	1740		1583
Flt Permitted	0.96		1.00
Satd. Flow (perm)	1740		1583
Peak-hour factor, PHF	0.93	0.93	0.93
Adj. Flow (vph)	51	16	1
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	86	0	1
Confl. Peds. (#/hr)			3
Confl. Bikes (#/hr)			
Turn Type	Prot		Prot
Protected Phases	3		3
Permitted Phases			
Actuated Green, G (s)	7.2		7.2
Effective Green, g (s)	7.2		7.2
Actuated g/C Ratio	0.06		0.06
Clearance Time (s)	6.8		6.8
Vehicle Extension (s)	2.5		2.5
Lane Grp Cap (vph)	96		87
v/s Ratio Prot	c0.05		0.00
v/s Ratio Perm			
v/c Ratio	0.90		0.01
Uniform Delay, d1	61.0		58.0
Progression Factor	0.96		1.07
Incremental Delay, d2	58.5		0.0
Delay (s)	117.1		61.9
Level of Service	F		E
Approach Delay (s)	116.5		
Approach LOS	F		

Intersection Summary

Timings
6: NE 163rd Street & NE 35th Avenue

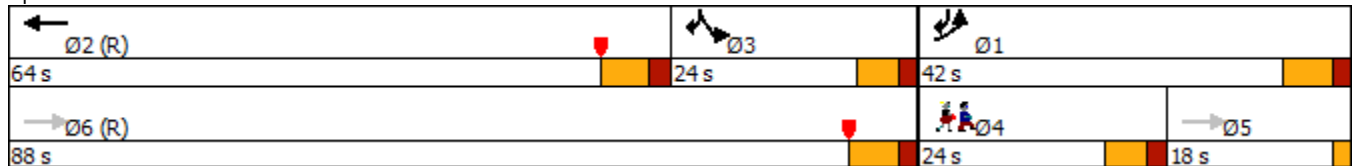
Existing Conditions
P.M. Peak Hour

						Ø4	Ø5	Ø6
Lane Group	EBL	EBT	WBT	SBL	SBR			
Lane Configurations								
Traffic Volume (vph)	514	1464	1918	219	291			
Future Volume (vph)	514	1464	1918	219	291			
Turn Type	Prot	NA	NA	Prot	pt+ov			
Protected Phases	1		2	3	1 3	4	5	6
Permitted Phases		5 6						
Detector Phase	1	5 6	2	3	1 3			
Switch Phase								
Minimum Initial (s)	7.0		4.0	7.0		1.0	4.0	4.0
Minimum Split (s)	13.8		28.8	24.0		24.0	6.0	28.8
Total Split (s)	42.0		64.0	24.0		24.0	18.0	88.0
Total Split (%)	32.3%		49.2%	18.5%		18%	14%	68%
Yellow Time (s)	4.8		4.8	4.0		4.0	2.0	4.8
All-Red Time (s)	2.0		2.0	2.0		2.0	0.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.8		6.8	6.0				
Lead/Lag			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes	Yes		Yes	Yes	
Recall Mode	None		C-Max	None		None	Max	C-Max

Intersection Summary






Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 68 (52%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated

Splits and Phases: 6: NE 163rd Street & NE 35th Avenue



Queues
6: NE 163rd Street & NE 35th Avenue

Existing Conditions
P.M. Peak Hour

					
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	541	1541	2184	231	313
v/c Ratio	0.58	0.30	0.78	0.94	0.25
Control Delay	61.9	0.1	33.4	86.0	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	0.1	33.4	86.0	21.9
Queue Length 50th (ft)	251	0	446	202	123
Queue Length 95th (ft)	309	0	494	#362	169
Internal Link Dist (ft)		488	387	465	
Turn Bay Length (ft)	275			300	
Base Capacity (vph)	929	5085	2790	245	1269
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.58	0.30	0.78	0.94	0.25























Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

6: NE 163rd Street & NE 35th Avenue







Existing Conditions
P.M. Peak Hour

										
Movement	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER
Lane Configurations	 	  	  				 	 		
Traffic Volume (vph)	514	1464	1918	18	139	219	291	7	0	0
Future Volume (vph)	514	1464	1918	18	139	219	291	7	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	2.0	6.8			6.0	6.8			
Lane Util. Factor	0.97	0.91	0.86			1.00	0.88			
Frbp, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Flpb, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Frt	1.00	1.00	0.99			1.00	0.85			
Flt Protected	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (prot)	3433	5085	6321			1770	2787			
Flt Permitted	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (perm)	3433	5085	6321			1770	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	541	1541	2019	19	146	231	306	7	0	0
RTOR Reduction (vph)	0	0	8	0	0	0	0	0	0	0
Lane Group Flow (vph)	541	1541	2176	0	0	231	313	0	0	0
Confl. Peds. (#/hr)	9				9	5				
Confl. Bikes (#/hr)				2	2					
Turn Type	Prot	NA	NA			Prot	pt+ov			
Protected Phases	1		2			3	1 3			
Permitted Phases		5 6								
Actuated Green, G (s)	35.2	130.0	57.2			18.0	59.2			
Effective Green, g (s)	35.2	123.2	57.2			18.0	53.2			
Actuated g/C Ratio	0.27	0.95	0.44			0.14	0.41			
Clearance Time (s)	6.8		6.8			6.0				
Vehicle Extension (s)	3.0		1.0			3.0				
Lane Grp Cap (vph)	929	4819	2781			245	1140			
v/s Ratio Prot	c0.16		c0.34			c0.13	0.11			
v/s Ratio Perm		0.30								
v/c Ratio	0.58	0.32	0.78			0.94	0.27			
Uniform Delay, d1	41.0	0.3	31.1			55.5	25.6			
Progression Factor	1.44	1.00	1.00			0.74	0.98			
Incremental Delay, d2	0.9	0.2	2.3			40.9	0.1			
Delay (s)	59.9	0.4	33.4			81.8	25.1			
Level of Service	E	A	C			F	C			
Approach Delay (s)		15.9	33.4			49.2		0.0		
Approach LOS		B	C			D		A		
Intersection Summary										
HCM 2000 Control Delay			27.6			HCM 2000 Level of Service			C	
HCM 2000 Volume to Capacity ratio			0.75							
Actuated Cycle Length (s)			130.0			Sum of lost time (s)		20.8		
Intersection Capacity Utilization			73.6%			ICU Level of Service		D		
Analysis Period (min)			15							
c Critical Lane Group										

HCM Unsignalized Intersection Capacity Analysis

7: NE 163rd Street & Intracoastal Mall Driveway

Existing Conditions
P.M. Peak Hour

										
Movement	EBL	EBT	WBT	WBR	SBL	SBR				
Lane Configurations		↑↑↑	↑↑↑	↗		↗				
Traffic Volume (veh/h)	0	1668	1478	188	0	130				
Future Volume (Veh/h)	0	1668	1478	188	0	130				
Sign Control		Free	Free		Stop					
Grade		0%	0%		0%					
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				
Hourly flow rate (vph)	0	1774	1572	200	0	138				
Pedestrians						12				
Lane Width (ft)						12.0				
Walking Speed (ft/s)						3.5				
Percent Blockage						1				
Right turn flare (veh)										
Median type		None	None							
Median storage (veh)										
Upstream signal (ft)		467								
pX, platoon unblocked										
vC, conflicting volume	1584				2028	536				
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1584				2028	536				
tC, single (s)	4.1				6.8	6.9				
tC, 2 stage (s)										
tF (s)	2.2				3.5	3.3				
p0 queue free %	100				100	71				
cM capacity (veh/h)	406				49	483				
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	SB 1	
Volume Total	444	444	444	444	524	524	524	200	138	
Volume Left	0	0	0	0	0	0	0	0	0	
Volume Right	0	0	0	0	0	0	0	200	138	
cSH	1700	1700	1700	1700	1700	1700	1700	1700	483	
Volume to Capacity	0.26	0.26	0.26	0.26	0.31	0.31	0.31	0.12	0.29	
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	29	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	
Lane LOS									C	
Approach Delay (s)	0.0				0.0				15.4	
Approach LOS									C	
Intersection Summary										
Average Delay			0.6							
Intersection Capacity Utilization			43.3%		ICU Level of Service				A	
Analysis Period (min)			15							

Timings
8: NE 35th Avenue & NE 164th Street

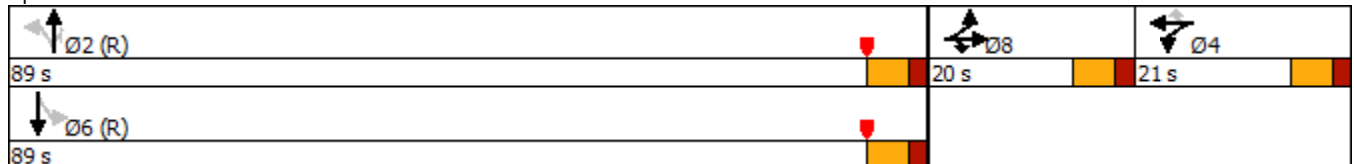
Existing Conditions
 P.M. Peak Hour

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	6	39	217	1	78	59	362	231	35	243
Future Volume (vph)	6	39	217	1	78	59	362	231	35	243
Turn Type	NA	Prot	Split	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	8	8	4	4			2			6
Permitted Phases					4	2		2	6	
Detector Phase	8	8	4	4	4	2	2	2	6	6
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.0	13.0	16.0	16.0	16.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	20.0	20.0	21.0	21.0	21.0	89.0	89.0	89.0	89.0	89.0
Total Split (%)	15.4%	15.4%	16.2%	16.2%	16.2%	68.5%	68.5%	68.5%	68.5%	68.5%
Yellow Time (s)	4.0	4.0	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	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary
























Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 19 (15%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 50
 Control Type: Actuated-Coordinated

Splits and Phases: 8: NE 35th Avenue & NE 164th Street



HCM 6th Signalized Intersection Summary
8: NE 35th Avenue & NE 164th Street

Existing Conditions
P.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	6	39	217	1	78	59	362	231	35	243	1
Future Volume (veh/h)	3	6	39	217	1	78	59	362	231	35	243	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	7	43	242	0	87	66	402	257	39	270	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	59	71	303	0	133	861	2597	1155	618	2653	10
Arrive On Green	0.05	0.05	0.05	0.08	0.00	0.08	0.97	0.97	0.97	0.97	0.97	0.97
Sat Flow, veh/h	553	1290	1550	3563	0	1563	1106	3554	1580	774	3631	13
Grp Volume(v), veh/h	10	0	43	242	0	87	66	402	257	39	132	139
Grp Sat Flow(s),veh/h/ln	1843	0	1550	1781	0	1563	1106	1777	1580	774	1777	1868
Q Serve(g_s), s	0.7	0.0	3.5	8.7	0.0	7.0	0.3	0.5	0.8	0.2	0.3	0.3
Cycle Q Clear(g_c), s	0.7	0.0	3.5	8.7	0.0	7.0	0.6	0.5	0.8	0.7	0.3	0.3
Prop In Lane	0.30		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	85	0	71	303	0	133	861	2597	1155	618	1298	1365
V/C Ratio(X)	0.12	0.00	0.60	0.80	0.00	0.66	0.08	0.15	0.22	0.06	0.10	0.10
Avail Cap(c_a), veh/h	198	0	167	411	0	180	861	2597	1155	618	1298	1365
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	0.0	60.9	58.4	0.0	57.6	0.5	0.5	0.5	0.5	0.5	0.5
Incr Delay (d2), s/veh	0.5	0.0	6.0	6.8	0.0	4.0	0.1	0.1	0.4	0.2	0.2	0.1
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(50%),veh/ln	0.3	0.0	1.5	4.2	0.0	2.9	0.1	0.2	0.3	0.1	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	0.0	66.9	65.2	0.0	61.7	0.6	0.6	0.9	0.7	0.7	0.6
LnGrp LOS	E	A	E	E	A	E	A	A	A	A	A	A
Approach Vol, veh/h		53			329			725			310	
Approach Delay, s/veh		65.6			64.3			0.7			0.7	
Approach LOS		E			E			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		101.0		17.0		101.0		12.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		83.0		15.0		83.0		14.0				
Max Q Clear Time (g_c+I1), s		2.8		10.7		2.7		5.5				
Green Ext Time (p_c), s		1.2		0.4		0.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th TWSC
 9: NE 35th Avenue & Intracoastal Mall North Drive

Existing Conditions
 P.M. Peak Hour

Intersection

Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑↑			↑↑
Traffic Vol, veh/h	12	3	464	23	0	318
Future Vol, veh/h	12	3	464	23	0	318
Conflicting Peds, #/hr	0	0	0	12	12	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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	3	510	25	0	349

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	710	280	0	0	-
Stage 1	535	-	-	-	-
Stage 2	175	-	-	-	-
Critical Hdwy	5	5	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3	3	-	-	-
Pot Cap-1 Maneuver	593	912	-	-	0
Stage 1	554	-	-	-	0
Stage 2	971	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	586	902	-	-	-
Mov Cap-2 Maneuver	586	-	-	-	-
Stage 1	548	-	-	-	-
Stage 2	971	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	630
HCM Lane V/C Ratio	-	-	0.026
HCM Control Delay (s)	-	-	10.9
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Future Background Conditions

Timings
1: Biscayne Boulevard/US 1 & NE 163rd Street

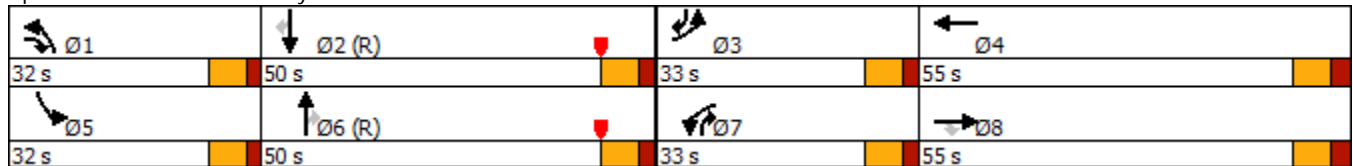
Future Background Conditions
P.M. Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	489	1307	480	631	1625	933	540	1648	713	561	1525	571
Future Volume (vph)	489	1307	480	631	1625	933	540	1648	713	561	1525	571
Turn Type	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases			8			Free			6			2
Detector Phase	3	8	1	7	4		1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	7.0	5.0	5.0	7.0	5.0
Minimum Split (s)	11.8	54.7	11.8	11.8	54.7		11.8	49.2	11.8	11.8	49.2	11.8
Total Split (s)	33.0	55.0	32.0	33.0	55.0		32.0	50.0	33.0	32.0	50.0	33.0
Total Split (%)	19.4%	32.4%	18.8%	19.4%	32.4%		18.8%	29.4%	19.4%	18.8%	29.4%	19.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8		4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.0	2.9	2.0	2.0	2.9		2.0	2.4	2.0	2.0	2.4	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	0.0
Total Lost Time (s)	6.8	7.7	6.8	6.8	7.7		6.8	7.2	6.8	6.8	7.2	6.8
Lead/Lag	Lead	Lag	Lead	Lead	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

Intersection Summary

























Cycle Length: 170
Actuated Cycle Length: 170
Offset: 77 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Biscayne Boulevard/US 1 & NE 163rd Street



HCM 6th Signalized Intersection Summary
 1: Biscayne Boulevard/US 1 & NE 163rd Street

Future Background Conditions
 P.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	489	1307	480	631	1625	933	540	1648	713	561	1525	571
Future Volume (veh/h)	489	1307	480	631	1625	933	540	1648	713	561	1525	571
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	504	1347	495	651	1675	0	557	1699	735	578	1572	589
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	533	1421	666	533	1421		512	1620	631	512	1620	631
Arrive On Green	0.15	0.28	0.28	0.15	0.28	0.00	0.20	0.33	0.33	0.20	0.33	0.33
Sat Flow, veh/h	3456	5106	1550	3456	5106	1585	3456	6434	1536	3456	6434	1536
Grp Volume(v), veh/h	504	1347	495	651	1675	0	557	1699	735	578	1572	589
Grp Sat Flow(s),veh/h/ln	1728	1702	1550	1728	1702	1585	1728	1609	1536	1728	1609	1536
Q Serve(g_s), s	24.6	44.0	45.8	26.2	47.3	0.0	25.2	42.8	42.8	25.2	40.9	42.8
Cycle Q Clear(g_c), s	24.6	44.0	45.8	26.2	47.3	0.0	25.2	42.8	42.8	25.2	40.9	42.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	533	1421	666	533	1421		512	1620	631	512	1620	631
V/C Ratio(X)	0.95	0.95	0.74	1.22	1.18		1.09	1.05	1.17	1.13	0.97	0.93
Avail Cap(c_a), veh/h	533	1421	666	533	1421		512	1620	631	512	1620	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.64	0.64	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.2	60.1	41.1	71.9	61.4	0.0	68.2	56.5	46.6	68.2	55.9	44.4
Incr Delay (d2), s/veh	26.2	13.4	4.3	110.8	85.6	0.0	65.5	36.4	90.7	80.0	16.4	22.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	20.8	18.4	19.9	31.7	0.0	15.5	20.9	43.2	16.6	17.9	28.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.4	73.6	45.4	182.7	146.9	0.0	133.8	92.9	137.4	148.3	72.3	67.2
LnGrp LOS	F	E	D	F	F		F	F	F	F	E	E
Approach Vol, veh/h		2346			2326	A		2991			2739	
Approach Delay, s/veh		72.7			156.9			111.5			87.2	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	50.0	33.0	55.0	32.0	50.0	33.0	55.0				
Change Period (Y+Rc), s	6.8	* 7.2	6.8	* 7.7	6.8	* 7.2	6.8	* 7.7				
Max Green Setting (Gmax), s	25.2	* 43	26.2	* 47	25.2	* 43	26.2	* 47				
Max Q Clear Time (g_c+I1), s	27.2	44.8	26.6	49.3	27.2	44.8	28.2	47.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	106.5
HCM 6th LOS	F

Notes

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

Timings
2: NE 163rd Street & NE 26th Avenue

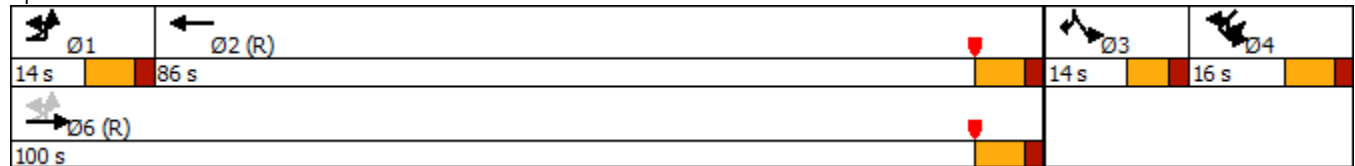
Future Background Conditions
P.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	8	133	2360	2618	59	76	55	0
Future Volume (vph)	8	133	2360	2618	59	76	55	0
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	14.0	14.0	100.0	86.0	14.0	14.0	16.0	16.0
Total Split (%)	10.8%	10.8%	76.9%	66.2%	10.8%	10.8%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 113 (87%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NE 163rd Street & NE 26th Avenue



HCM Signalized Intersection Capacity Analysis

2: NE 163rd Street & NE 26th Avenue

Future Background Conditions

P.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR2	SBL	SBR	SWU	SWL	SWR	SWR2
Lane Configurations											
Traffic Volume (vph)	8	133	2360	2618	60	59	76	15	55	0	23
Future Volume (vph)	8	133	2360	2618	60	59	76	15	55	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86		1.00	1.00		1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00		1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	6408	6380		1770	1583		1770	1583	
Flt Permitted		0.05	1.00	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		85	6408	6380		1770	1583		1770	1583	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	9	141	2511	2785	64	63	81	16	59	0	24
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	150	2511	2849	0	63	81	0	75	24	0
Confl. Peds. (#/hr)		7			7						7
Turn Type	pm+pt	pm+pt	NA	NA		Prot	Prot	Prot	Prot	Prot	
Protected Phases	1	1	6	2		3	3	4	4	4	
Permitted Phases	6	6									
Actuated Green, G (s)		95.1	95.1	80.5		8.0	8.0		7.3	7.3	
Effective Green, g (s)		95.1	95.1	80.5		8.0	8.0		7.3	7.3	
Actuated g/C Ratio		0.73	0.73	0.62		0.06	0.06		0.06	0.06	
Clearance Time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)		163	4687	3950		108	97		99	88	
v/s Ratio Prot		c0.06	0.39	0.45		0.04	c0.05		c0.04	0.02	
v/s Ratio Perm		c0.61									
v/c Ratio		0.92	0.54	0.72		0.58	0.84		0.76	0.27	
Uniform Delay, d1		37.4	7.7	17.0		59.4	60.3		60.5	58.8	
Progression Factor		1.00	1.00	1.39		1.00	1.00		1.03	1.05	
Incremental Delay, d2		47.1	0.4	0.9		6.5	42.6		26.5	1.2	
Delay (s)		84.5	8.1	24.7		65.9	103.0		89.0	63.0	
Level of Service		F	A	C		E	F		F	E	
Approach Delay (s)			12.5	24.7		86.7			82.7		
Approach LOS			B	C		F			F		
Intersection Summary											
HCM 2000 Control Delay			21.6			HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.92								
Actuated Cycle Length (s)			130.0			Sum of lost time (s)				26.4	
Intersection Capacity Utilization			80.4%			ICU Level of Service				D	
Analysis Period (min)			15								
c Critical Lane Group											

Timings
3: NE 163rd Street & NE 28th Avenue

Future Background Conditions
P.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	8	25	2379	2692	14	18	39	23
Future Volume (vph)	8	25	2379	2692	14	18	39	23
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	13.0	13.0	100.0	87.0	14.0	14.0	16.0	16.0
Total Split (%)	10.0%	10.0%	76.9%	66.9%	10.8%	10.8%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 122 (94%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 3: NE 163rd Street & NE 28th Avenue

Ø1 13 s	Ø2 (R) 87 s	Ø3 14 s	Ø4 16 s
Ø6 (R) 100 s			

HCM Signalized Intersection Capacity Analysis

3: NE 163rd Street & NE 28th Avenue

Future Background Conditions

P.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	8	25	2379	2692	9	9	14	18	6	16	39	23	
Future Volume (vph)	8	25	2379	2692	9	9	14	18	6	16	39	23	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6398			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		78	6408	6398			1770	1583			1770	1583	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	9	27	2558	2895	10	10	15	19	6	17	42	25	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	36	2558	2915	0	0	15	25	0	0	59	27	
Confl. Peds. (#/hr)		14				14							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			3	3		4	4	4	
Permitted Phases	6	6											
Actuated Green, G (s)		98.7	98.7	88.5			4.6	4.6			7.1	7.1	
Effective Green, g (s)		98.7	98.7	88.5			4.6	4.6			7.1	7.1	
Actuated g/C Ratio		0.76	0.76	0.68			0.04	0.04			0.05	0.05	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		103	4865	4355			62	56			96	86	
v/s Ratio Prot		0.01	c0.40	c0.46			0.01	c0.02			c0.03	0.02	
v/s Ratio Perm		0.25											
v/c Ratio		0.35	0.53	0.67			0.24	0.45			0.61	0.31	
Uniform Delay, d1		11.1	6.3	12.2			61.0	61.5			60.1	59.1	
Progression Factor		3.08	0.48	0.52			1.00	1.00			0.98	0.99	
Incremental Delay, d2		0.6	0.4	0.6			1.5	4.1			9.4	1.5	
Delay (s)		34.9	3.3	7.0			62.5	65.5			68.4	60.3	
Level of Service		C	A	A			E	E			E	E	
Approach Delay (s)			3.8	7.0			64.4				65.9		
Approach LOS			A	A			E				E		
Intersection Summary													
HCM 2000 Control Delay			6.8		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.67										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			67.3%		ICU Level of Service						C		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 3: NE 163rd Street & NE 28th Avenue

Future Background Conditions
 P.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	2
Future Volume (vph)	2
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	2
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	14
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
4: NE 163rd Street & NE 2900 Block

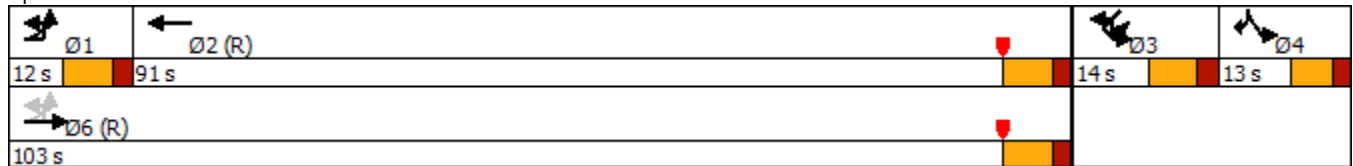
Future Background Conditions
P.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	55	64	2291	2582	16	39	87	25
Future Volume (vph)	55	64	2291	2582	16	39	87	25
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	4	4	3	3
Permitted Phases	6	6						
Detector Phase	1	1	6	2	4	4	3	3
Switch Phase								
Minimum Initial (s)	5.0	5.0	15.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	21.8	21.8	13.0	13.0	13.8	13.8
Total Split (s)	12.0	12.0	103.0	91.0	13.0	13.0	14.0	14.0
Total Split (%)	9.2%	9.2%	79.2%	70.0%	10.0%	10.0%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 109 (84%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 4: NE 163rd Street & NE 2900 Block



HCM Signalized Intersection Capacity Analysis

4: NE 163rd Street & NE 2900 Block

Future Background Conditions

P.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	55	64	2291	2582	24	23	16	39	5	33	87	25	
Future Volume (vph)	55	64	2291	2582	24	23	16	39	5	33	87	25	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6388			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		81	6408	6388			1770	1583			1770	1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	58	67	2412	2718	25	24	17	41	5	35	92	26	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	125	2412	2767	0	0	17	46	0	0	127	28	
Confl. Peds. (#/hr)		11				11							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			4	4		3	3	3	
Permitted Phases	6	6											
Actuated Green, G (s)		97.6	97.6	84.7			5.6	5.6			7.2	7.2	
Effective Green, g (s)		97.6	97.6	84.7			5.6	5.6			7.2	7.2	
Actuated g/C Ratio		0.75	0.75	0.65			0.04	0.04			0.06	0.06	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		140	4810	4162			76	68			98	87	
v/s Ratio Prot		c0.04	0.38	0.43			0.01	c0.03			c0.07	0.02	
v/s Ratio Perm		c0.62											
v/c Ratio		0.89	0.50	0.66			0.22	0.68			1.30	0.32	
Uniform Delay, d1		32.8	6.5	13.9			60.1	61.3			61.4	59.1	
Progression Factor		1.55	0.81	0.15			1.00	1.00			0.95	0.95	
Incremental Delay, d2		40.9	0.3	0.7			1.1	21.5			189.6	1.6	
Delay (s)		91.8	5.6	2.8			61.2	82.8			247.9	57.8	
Level of Service		F	A	A			E	F			F	E	
Approach Delay (s)			9.8	2.8			77.0				213.5		
Approach LOS			A	A			E				F		
Intersection Summary													
HCM 2000 Control Delay			12.8		HCM 2000 Level of Service						B		
HCM 2000 Volume to Capacity ratio			0.93										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			79.3%		ICU Level of Service						D		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 4: NE 163rd Street & NE 2900 Block


















Future Background Conditions
 P.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	2
Future Volume (vph)	2
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	2
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	11
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
5: NE 34th Avenue & NE 163rd Street

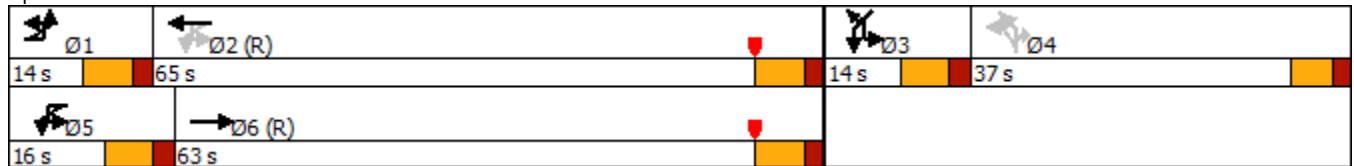
Future Background Conditions
P.M. Peak Hour

									
Lane Group	EBL2	EBT	WBU	WBL	WBT	NBL	NBR2	SWL	SWR2
Lane Configurations									
Traffic Volume (vph)	5	2297	25	9	2554	1	7	54	1
Future Volume (vph)	5	2297	25	9	2554	1	7	54	1
Turn Type	Prot	NA	pm+pt	pm+pt	NA	Perm	Perm	Prot	Prot
Protected Phases	1	6	5	5	2			3	3
Permitted Phases			2	2		4	4		
Detector Phase	1	6	5	5	2	4	4	3	3
Switch Phase									
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	21.8	11.8	11.8	21.8	37.0	37.0	13.8	13.8
Total Split (s)	14.0	63.0	16.0	16.0	65.0	37.0	37.0	14.0	14.0
Total Split (%)	10.8%	48.5%	12.3%	12.3%	50.0%	28.5%	28.5%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	6.8	6.8		6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None

Intersection Summary



















Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 78 (60%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 125
 Control Type: Actuated-Coordinated

Splits and Phases: 5: NE 34th Avenue & NE 163rd Street



HCM Signalized Intersection Capacity Analysis
5: NE 34th Avenue & NE 163rd Street

Future Background Conditions
P.M. Peak Hour

												
Movement	EBU	EBL2	EBT	EBR	WBU	WBL	WBT	WBR	NBL2	NBL	NBR2	SWL2
Lane Configurations												
Traffic Volume (vph)	26	5	2297	17	25	9	2554	25	33	1	7	21
Future Volume (vph)	26	5	2297	17	25	9	2554	25	33	1	7	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8			6.8	6.8			6.0	6.0	
Lane Util. Factor		1.00	0.86			1.00	0.86			1.00	1.00	
Frbp, 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	1.00			1.00	1.00			1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6400			1770	6398			1770	1583	
Flt Permitted		0.95	1.00			0.05	1.00			0.95	1.00	
Satd. Flow (perm)		1770	6400			87	6398			1770	1583	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	28	5	2470	18	27	10	2746	27	35	1	8	23
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	33	2488	0	0	37	2773	0	0	36	0	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)				2								
Turn Type	Prot	Prot	NA		pm+pt	pm+pt	NA		Perm	Perm	Perm	Prot
Protected Phases	1	1	6		5	5	2					3
Permitted Phases					2	2			4	4	4	
Actuated Green, G (s)		4.9	86.6			90.5	86.1			5.4	5.4	
Effective Green, g (s)		4.9	86.6			90.5	86.1			5.4	5.4	
Actuated g/C Ratio		0.04	0.67			0.70	0.66			0.04	0.04	
Clearance Time (s)		6.8	6.8			6.8	6.8			6.0	6.0	
Vehicle Extension (s)		2.0	1.0			2.0	1.0			2.5	2.5	
Lane Grp Cap (vph)		66	4263			117	4237			73	65	
v/s Ratio Prot		c0.02	0.39			0.01	c0.43					
v/s Ratio Perm						0.21				c0.02	0.00	
v/c Ratio		0.50	0.58			0.32	0.65			0.49	0.01	
Uniform Delay, d1		61.3	11.9			8.8	13.1			61.0	59.7	
Progression Factor		0.88	1.39			2.22	0.34			1.00	1.00	
Incremental Delay, d2		1.9	0.5			0.3	0.4			3.8	0.0	
Delay (s)		56.1	17.0			19.9	4.8			64.7	59.7	
Level of Service		E	B			B	A			E	E	
Approach Delay (s)			17.5				5.0					
Approach LOS			B				A					
Intersection Summary												
HCM 2000 Control Delay			14.1				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)		26.4			
Intersection Capacity Utilization			61.3%				ICU Level of Service		B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
5: NE 34th Avenue & NE 163rd Street

Future Background Conditions
P.M. Peak Hour

Movement	SWL	SWR	SWR2
Lane Configurations			
Traffic Volume (vph)	54	17	1
Future Volume (vph)	54	17	1
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	6.8		6.8
Lane Util. Factor	1.00		1.00
Frbp, ped/bikes	1.00		1.00
Flpb, ped/bikes	1.00		1.00
Frt	0.97		0.85
Flt Protected	0.96		1.00
Satd. Flow (prot)	1741		1583
Flt Permitted	0.96		1.00
Satd. Flow (perm)	1741		1583
Peak-hour factor, PHF	0.93	0.93	0.93
Adj. Flow (vph)	58	18	1
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	99	0	1
Confl. Peds. (#/hr)			3
Confl. Bikes (#/hr)			
Turn Type	Prot		Prot
Protected Phases	3		3
Permitted Phases			
Actuated Green, G (s)	7.2		7.2
Effective Green, g (s)	7.2		7.2
Actuated g/C Ratio	0.06		0.06
Clearance Time (s)	6.8		6.8
Vehicle Extension (s)	2.5		2.5
Lane Grp Cap (vph)	96		87
v/s Ratio Prot	c0.06		0.00
v/s Ratio Perm			
v/c Ratio	1.03		0.01
Uniform Delay, d1	61.4		58.0
Progression Factor	0.95		1.01
Incremental Delay, d2	99.9		0.0
Delay (s)	158.4		58.5
Level of Service	F		E
Approach Delay (s)	157.4		
Approach LOS	F		

Intersection Summary

Timings
6: NE 163rd Street & NE 35th Avenue

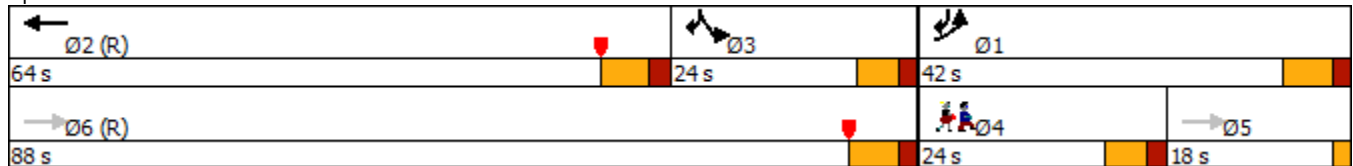
Future Background Conditions
P.M. Peak Hour

						Ø4	Ø5	Ø6
Lane Group	EBL	EBT	WBT	SBL	SBR			
Lane Configurations								
Traffic Volume (vph)	586	1762	2262	250	332			
Future Volume (vph)	586	1762	2262	250	332			
Turn Type	Prot	NA	NA	Prot	pt+ov			
Protected Phases	1		2	3	1 3	4	5	6
Permitted Phases		5 6						
Detector Phase	1	5 6	2	3	1 3			
Switch Phase								
Minimum Initial (s)	7.0		4.0	7.0		1.0	4.0	4.0
Minimum Split (s)	13.8		28.8	24.0		24.0	6.0	28.8
Total Split (s)	42.0		64.0	24.0		24.0	18.0	88.0
Total Split (%)	32.3%		49.2%	18.5%		18%	14%	68%
Yellow Time (s)	4.8		4.8	4.0		4.0	2.0	4.8
All-Red Time (s)	2.0		2.0	2.0		2.0	0.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.8		6.8	6.0				
Lead/Lag			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes	Yes		Yes	Yes	
Recall Mode	None		C-Max	None		None	Max	C-Max

Intersection Summary






Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 68 (52%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated

Splits and Phases: 6: NE 163rd Street & NE 35th Avenue



Queues
6: NE 163rd Street & NE 35th Avenue

Future Background Conditions
P.M. Peak Hour

					
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	617	1855	2569	263	357
v/c Ratio	0.66	0.36	0.92	1.07	0.28
Control Delay	65.4	0.2	40.7	117.7	22.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	65.4	0.2	40.7	117.7	22.1
Queue Length 50th (ft)	286	0	580	~250	142
Queue Length 95th (ft)	345	0	634	#430	192
Internal Link Dist (ft)		488	387	465	
Turn Bay Length (ft)	275			300	
Base Capacity (vph)	929	5085	2790	245	1269
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.66	0.36	0.92	1.07	0.28

Intersection Summary
















- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

6: NE 163rd Street & NE 35th Avenue

Future Background Conditions

P.M. Peak Hour







										
Movement	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER
Lane Configurations										
Traffic Volume (vph)	586	1762	2262	21	158	250	332	8	0	0
Future Volume (vph)	586	1762	2262	21	158	250	332	8	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	2.0	6.8			6.0	6.8			
Lane Util. Factor	0.97	0.91	0.86			1.00	0.88			
Frbp, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Flpb, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Frt	1.00	1.00	0.99			1.00	0.85			
Flt Protected	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (prot)	3433	5085	6324			1770	2787			
Flt Permitted	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (perm)	3433	5085	6324			1770	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	617	1855	2381	22	166	263	349	8	0	0
RTOR Reduction (vph)	0	0	8	0	0	0	0	0	0	0
Lane Group Flow (vph)	617	1855	2561	0	0	263	357	0	0	0
Confl. Peds. (#/hr)	9				9	5				
Confl. Bikes (#/hr)				2	2					
Turn Type	Prot	NA	NA			Prot	pt+ov			
Protected Phases	1		2			3	1 3			
Permitted Phases		5 6								
Actuated Green, G (s)	35.2	130.0	57.2			18.0	59.2			
Effective Green, g (s)	35.2	123.2	57.2			18.0	53.2			
Actuated g/C Ratio	0.27	0.95	0.44			0.14	0.41			
Clearance Time (s)	6.8		6.8			6.0				
Vehicle Extension (s)	3.0		1.0			3.0				
Lane Grp Cap (vph)	929	4819	2782			245	1140			
v/s Ratio Prot	c0.18		c0.41			c0.15	0.13			
v/s Ratio Perm		0.36								
v/c Ratio	0.66	0.38	0.92			1.07	0.31			
Uniform Delay, d1	42.1	0.3	34.3			56.0	26.0			
Progression Factor	1.46	1.00	1.00			0.73	0.97			
Incremental Delay, d2	1.5	0.2	6.4			77.1	0.2			
Delay (s)	63.2	0.5	40.6			118.1	25.3			
Level of Service	E	A	D			F	C			
Approach Delay (s)		16.1	40.6			64.7		0.0		
Approach LOS		B	D			E		A		
Intersection Summary										
HCM 2000 Control Delay			32.6			HCM 2000 Level of Service			C	
HCM 2000 Volume to Capacity ratio			0.87							
Actuated Cycle Length (s)			130.0			Sum of lost time (s)		20.8		
Intersection Capacity Utilization			82.7%			ICU Level of Service		E		
Analysis Period (min)			15							
c	Critical Lane Group									

HCM Unsignalized Intersection Capacity Analysis

7: NE 163rd Street & Intracoastal Mall Driveway

Future Background Conditions

P.M. Peak Hour

									
Movement	EBL	EBT	WBT	WBR	SBL	SBR			
Lane Configurations		↑↑↑	↑↑↑	↗		↗			
Traffic Volume (veh/h)	0	1995	1741	214	0	148			
Future Volume (Veh/h)	0	1995	1741	214	0	148			
Sign Control		Free	Free		Stop				
Grade		0%	0%		0%				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94			
Hourly flow rate (vph)	0	2122	1852	228	0	157			
Pedestrians						12			
Lane Width (ft)						12.0			
Walking Speed (ft/s)						3.5			
Percent Blockage						1			
Right turn flare (veh)									
Median type		None	None						
Median storage (veh)									
Upstream signal (ft)		467							
pX, platoon unblocked									
vC, conflicting volume	1864				2394	629			
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol	1864				2394	629			
tC, single (s)	4.1				6.8	6.9			
tC, 2 stage (s)									
tF (s)	2.2				3.5	3.3			
p0 queue free %	100				100	63			
cM capacity (veh/h)	316				28	420			
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	530	530	530	530	617	617	617	228	157
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	228	157
cSH	1700	1700	1700	1700	1700	1700	1700	1700	420
Volume to Capacity	0.31	0.31	0.31	0.31	0.36	0.36	0.36	0.13	0.37
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	43
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.6
Lane LOS									C
Approach Delay (s)	0.0				0.0				18.6
Approach LOS									C
Intersection Summary									
Average Delay			0.7						
Intersection Capacity Utilization			49.5%		ICU Level of Service				A
Analysis Period (min)			15						

Timings
8: NE 35th Avenue & NE 164th Street

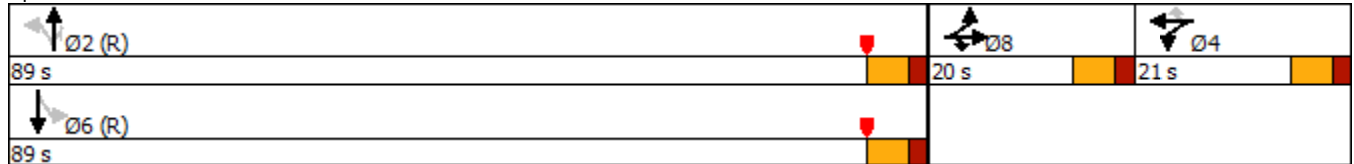
Future Background Conditions
P.M. Peak Hour

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	7	44	247	1	89	67	413	263	40	277
Future Volume (vph)	7	44	247	1	89	67	413	263	40	277
Turn Type	NA	Prot	Split	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	8	8	4	4			2			6
Permitted Phases					4	2		2	6	
Detector Phase	8	8	4	4	4	2	2	2	6	6
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.0	13.0	16.0	16.0	16.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	20.0	20.0	21.0	21.0	21.0	89.0	89.0	89.0	89.0	89.0
Total Split (%)	15.4%	15.4%	16.2%	16.2%	16.2%	68.5%	68.5%	68.5%	68.5%	68.5%
Yellow Time (s)	4.0	4.0	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	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary
























Cycle Length: 130
Actuated Cycle Length: 130
Offset: 19 (15%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 8: NE 35th Avenue & NE 164th Street



HCM 6th Signalized Intersection Summary
8: NE 35th Avenue & NE 164th Street

Future Background Conditions
P.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	7	44	247	1	89	67	413	263	40	277	1
Future Volume (veh/h)	3	7	44	247	1	89	67	413	263	40	277	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	8	49	275	0	99	74	459	292	44	308	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	64	74	334	0	147	820	2559	1138	562	2616	8
Arrive On Green	0.05	0.05	0.05	0.09	0.00	0.09	0.96	0.96	0.96	0.96	0.96	0.96
Sat Flow, veh/h	503	1342	1550	3563	0	1565	1068	3554	1580	711	3633	12
Grp Volume(v), veh/h	11	0	49	275	0	99	74	459	292	44	151	158
Grp Sat Flow(s),veh/h/ln	1845	0	1550	1781	0	1565	1068	1777	1580	711	1777	1868
Q Serve(g_s), s	0.7	0.0	4.0	9.9	0.0	8.0	0.5	0.9	1.3	0.4	0.5	0.5
Cycle Q Clear(g_c), s	0.7	0.0	4.0	9.9	0.0	8.0	1.0	0.9	1.3	1.3	0.5	0.5
Prop In Lane	0.27		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	88	0	74	334	0	147	820	2559	1138	562	1279	1345
V/C Ratio(X)	0.13	0.00	0.66	0.82	0.00	0.67	0.09	0.18	0.26	0.08	0.12	0.12
Avail Cap(c_a), veh/h	199	0	167	411	0	181	820	2559	1138	562	1279	1345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.3	0.0	60.9	57.8	0.0	57.0	0.8	0.8	0.8	0.8	0.8	0.8
Incr Delay (d2), s/veh	0.5	0.0	7.3	9.9	0.0	5.9	0.2	0.1	0.4	0.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	1.7	4.9	0.0	3.4	0.1	0.3	0.4	0.1	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	0.0	68.2	67.7	0.0	62.9	1.0	0.9	1.2	1.1	1.0	1.0
LnGrp LOS	E	A	E	E	A	E	A	A	A	A	A	A
Approach Vol, veh/h		60			374			825			353	
Approach Delay, s/veh		66.7			66.4			1.0			1.0	
Approach LOS		E			E			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		99.6		18.2		99.6		12.2				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		83.0		15.0		83.0		14.0				
Max Q Clear Time (g_c+I1), s		3.3		11.9		3.3		6.0				
Green Ext Time (p_c), s		1.4		0.3		0.8		0.1				

Intersection Summary

HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th TWSC
 9: NE 35th Avenue & Intracoastal Mall North Drive

Future Background Conditions
 P.M. Peak Hour

Intersection

Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑↑			↑↑
Traffic Vol, veh/h	14	3	529	26	0	363
Future Vol, veh/h	14	3	529	26	0	363
Conflicting Peds, #/hr	0	0	0	12	12	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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	3	581	29	0	399

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	808	317	0	0	-
Stage 1	608	-	-	-	-
Stage 2	200	-	-	-	-
Critical Hdwy	5	5	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3	3	-	-	-
Pot Cap-1 Maneuver	537	879	-	-	0
Stage 1	498	-	-	-	0
Stage 2	942	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	531	869	-	-	-
Mov Cap-2 Maneuver	531	-	-	-	-
Stage 1	493	-	-	-	-
Stage 2	942	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	570
HCM Lane V/C Ratio	-	-	0.033
HCM Control Delay (s)	-	-	11.5
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Future Total Conditions

Timings
1: Biscayne Boulevard/US 1 & NE 163rd Street

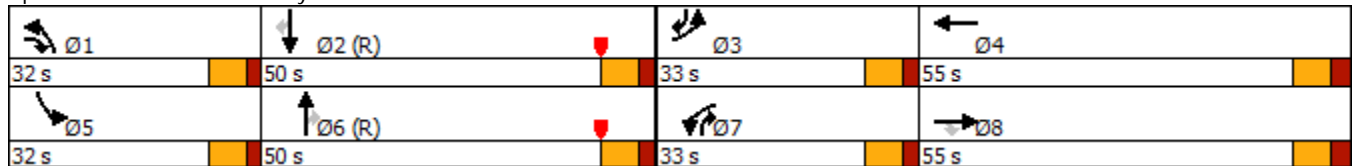
Future Total Conditions
P.M. Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	489	1378	480	741	1685	1008	540	1648	821	635	1525	571
Future Volume (vph)	489	1378	480	741	1685	1008	540	1648	821	635	1525	571
Turn Type	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases			8			Free			6			2
Detector Phase	3	8	1	7	4		1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	7.0	5.0	5.0	7.0	5.0
Minimum Split (s)	11.8	54.7	11.8	11.8	54.7		11.8	49.2	11.8	11.8	49.2	11.8
Total Split (s)	33.0	55.0	32.0	33.0	55.0		32.0	50.0	33.0	32.0	50.0	33.0
Total Split (%)	19.4%	32.4%	18.8%	19.4%	32.4%		18.8%	29.4%	19.4%	18.8%	29.4%	19.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8		4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.0	2.9	2.0	2.0	2.9		2.0	2.4	2.0	2.0	2.4	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	0.0
Total Lost Time (s)	6.8	7.7	6.8	6.8	7.7		6.8	7.2	6.8	6.8	7.2	6.8
Lead/Lag	Lead	Lag	Lead	Lead	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

Intersection Summary

Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 77 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Biscayne Boulevard/US 1 & NE 163rd Street



HCM 6th Signalized Intersection Summary
 1: Biscayne Boulevard/US 1 & NE 163rd Street

Future Total Conditions
 P.M. Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	489	1378	480	741	1685	1008	540	1648	821	635	1525	571
Future Volume (veh/h)	489	1378	480	741	1685	1008	540	1648	821	635	1525	571
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	504	1421	495	764	1737	0	557	1699	846	655	1572	589
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	533	1421	666	533	1421		512	1620	631	512	1620	631
Arrive On Green	0.15	0.28	0.28	0.15	0.28	0.00	0.20	0.33	0.33	0.20	0.33	0.33
Sat Flow, veh/h	3456	5106	1550	3456	5106	1585	3456	6434	1536	3456	6434	1536
Grp Volume(v), veh/h	504	1421	495	764	1737	0	557	1699	846	655	1572	589
Grp Sat Flow(s),veh/h/ln	1728	1702	1550	1728	1702	1585	1728	1609	1536	1728	1609	1536
Q Serve(g_s), s	24.6	47.3	45.8	26.2	47.3	0.0	25.2	42.8	42.8	25.2	40.9	42.8
Cycle Q Clear(g_c), s	24.6	47.3	45.8	26.2	47.3	0.0	25.2	42.8	42.8	25.2	40.9	42.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	533	1421	666	533	1421		512	1620	631	512	1620	631
V/C Ratio(X)	0.95	1.00	0.74	1.43	1.22		1.09	1.05	1.34	1.28	0.97	0.93
Avail Cap(c_a), veh/h	533	1421	666	533	1421		512	1620	631	512	1620	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.55	0.55	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.2	61.4	41.1	71.9	61.4	0.0	68.2	56.5	46.6	68.2	55.9	44.4
Incr Delay (d2), s/veh	26.2	23.9	4.3	201.5	103.9	0.0	65.5	36.4	163.9	139.9	16.4	22.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	23.6	18.4	26.6	34.1	0.0	15.5	20.9	56.0	20.8	17.9	28.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.4	85.3	45.4	273.4	165.2	0.0	133.8	92.9	210.5	208.1	72.3	67.2
LnGrp LOS	F	F	D	F	F		F	F	F	F	E	E
Approach Vol, veh/h		2420			2501	A		3102			2816	
Approach Delay, s/veh		79.6			198.3			132.3			102.8	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	50.0	33.0	55.0	32.0	50.0	33.0	55.0				
Change Period (Y+Rc), s	6.8	* 7.2	6.8	* 7.7	6.8	* 7.2	6.8	* 7.7				
Max Green Setting (Gmax), s	25.2	* 43	26.2	* 47	25.2	* 43	26.2	* 47				
Max Q Clear Time (g_c+I1), s	27.2	44.8	26.6	49.3	27.2	44.8	28.2	49.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	128.1
HCM 6th LOS	F

Notes

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

Timings
2: NE 163rd Street & NE 26th Avenue

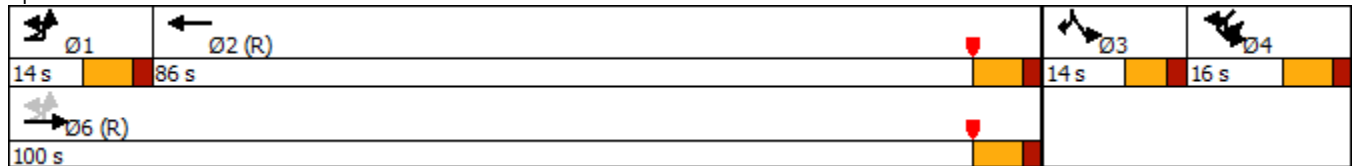
Future Total Conditions
P.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	8	133	2613	2863	59	76	55	0
Future Volume (vph)	8	133	2613	2863	59	76	55	0
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	14.0	14.0	100.0	86.0	14.0	14.0	16.0	16.0
Total Split (%)	10.8%	10.8%	76.9%	66.2%	10.8%	10.8%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 113 (87%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NE 163rd Street & NE 26th Avenue



HCM Signalized Intersection Capacity Analysis
















2: NE 163rd Street & NE 26th Avenue

Future Total Conditions
P.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR2	SBL	SBR	SWU	SWL	SWR	SWR2
Lane Configurations											
Traffic Volume (vph)	8	133	2613	2863	60	59	76	15	55	0	23
Future Volume (vph)	8	133	2613	2863	60	59	76	15	55	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86		1.00	1.00		1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00		1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	6408	6383		1770	1583		1770	1583	
Flt Permitted		0.05	1.00	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		85	6408	6383		1770	1583		1770	1583	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	9	141	2780	3046	64	63	81	16	59	0	24
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	150	2780	3110	0	63	81	0	75	24	0
Confl. Peds. (#/hr)		7			7						7
Turn Type	pm+pt	pm+pt	NA	NA		Prot	Prot	Prot	Prot	Prot	
Protected Phases	1	1	6	2		3	3	4	4	4	
Permitted Phases	6	6									
Actuated Green, G (s)		95.1	95.1	80.5		8.0	8.0		7.3	7.3	
Effective Green, g (s)		95.1	95.1	80.5		8.0	8.0		7.3	7.3	
Actuated g/C Ratio		0.73	0.73	0.62		0.06	0.06		0.06	0.06	
Clearance Time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)		163	4687	3952		108	97		99	88	
v/s Ratio Prot		c0.06	0.43	0.49		0.04	c0.05		c0.04	0.02	
v/s Ratio Perm		c0.61									
v/c Ratio		0.92	0.59	0.79		0.58	0.84		0.76	0.27	
Uniform Delay, d1		38.8	8.3	18.4		59.4	60.3		60.5	58.8	
Progression Factor		1.00	1.00	1.28		1.00	1.00		1.04	1.05	
Incremental Delay, d2		47.1	0.6	1.2		6.5	42.6		26.5	1.2	
Delay (s)		86.0	8.8	24.7		65.9	103.0		89.4	63.2	
Level of Service		F	A	C		E	F		F	E	
Approach Delay (s)			12.8	24.7		86.7			83.0		
Approach LOS			B	C		F			F		
Intersection Summary											
HCM 2000 Control Delay			21.5			HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.92								
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			26.4		
Intersection Capacity Utilization			84.0%			ICU Level of Service			E		
Analysis Period (min)			15								
c Critical Lane Group											

Timings
3: NE 163rd Street & NE 28th Avenue






Future Total Conditions
P.M. Peak Hour

								
Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	8	25	2632	2937	14	18	39	23
Future Volume (vph)	8	25	2632	2937	14	18	39	23
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	13.0	13.0	100.0	87.0	14.0	14.0	16.0	16.0
Total Split (%)	10.0%	10.0%	76.9%	66.9%	10.8%	10.8%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 122 (94%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 3: NE 163rd Street & NE 28th Avenue

 Ø1	 Ø2 (R)	 Ø3	 Ø4
13 s	87 s	14 s	16 s
 Ø6 (R)			
100 s			

HCM Signalized Intersection Capacity Analysis

3: NE 163rd Street & NE 28th Avenue

Future Total Conditions
P.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	8	25	2632	2937	9	9	14	18	6	16	39	23	
Future Volume (vph)	8	25	2632	2937	9	9	14	18	6	16	39	23	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6399			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		78	6408	6399			1770	1583			1770	1583	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	9	27	2830	3158	10	10	15	19	6	17	42	25	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	36	2830	3178	0	0	15	25	0	0	59	27	
Confl. Peds. (#/hr)		14				14							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			3	3		4	4	4	
Permitted Phases	6	6											
Actuated Green, G (s)		98.7	98.7	88.5			4.6	4.6			7.1	7.1	
Effective Green, g (s)		98.7	98.7	88.5			4.6	4.6			7.1	7.1	
Actuated g/C Ratio		0.76	0.76	0.68			0.04	0.04			0.05	0.05	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		103	4865	4356			62	56			96	86	
v/s Ratio Prot		0.01	c0.44	c0.50			0.01	c0.02			c0.03	0.02	
v/s Ratio Perm		0.25											
v/c Ratio		0.35	0.58	0.73			0.24	0.45			0.61	0.31	
Uniform Delay, d1		13.7	6.7	13.2			61.0	61.5			60.1	59.1	
Progression Factor		2.96	0.45	0.50			1.00	1.00			0.99	1.00	
Incremental Delay, d2		0.6	0.4	0.8			1.5	4.1			9.4	1.5	
Delay (s)		41.1	3.4	7.3			62.5	65.5			69.2	60.5	
Level of Service		D	A	A			E	E			E	E	
Approach Delay (s)			3.9	7.3			64.4				66.5		
Approach LOS			A	A			E				E		
Intersection Summary													
HCM 2000 Control Delay			6.9		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.73										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			70.9%		ICU Level of Service						C		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 3: NE 163rd Street & NE 28th Avenue

Future Total Conditions
 P.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	2
Future Volume (vph)	2
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	2
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	14
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
4: NE 163rd Street & NE 2900 Block

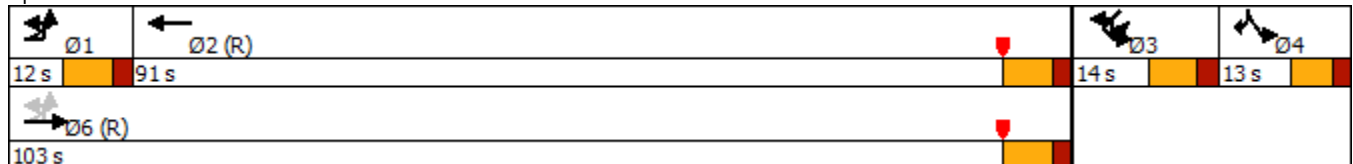
Future Total Conditions
P.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	55	64	2544	2827	16	39	87	25
Future Volume (vph)	55	64	2544	2827	16	39	87	25
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	4	4	3	3
Permitted Phases	6	6						
Detector Phase	1	1	6	2	4	4	3	3
Switch Phase								
Minimum Initial (s)	5.0	5.0	15.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	21.8	21.8	13.0	13.0	13.8	13.8
Total Split (s)	12.0	12.0	103.0	91.0	13.0	13.0	14.0	14.0
Total Split (%)	9.2%	9.2%	79.2%	70.0%	10.0%	10.0%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 109 (84%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 4: NE 163rd Street & NE 2900 Block



HCM Signalized Intersection Capacity Analysis

4: NE 163rd Street & NE 2900 Block

Future Total Conditions
P.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	55	64	2544	2827	24	23	16	39	5	33	87	25	
Future Volume (vph)	55	64	2544	2827	24	23	16	39	5	33	87	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6389			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		81	6408	6389			1770	1583			1770	1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	58	67	2678	2976	25	24	17	41	5	35	92	26	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	125	2678	3025	0	0	17	46	0	0	127	28	
Confl. Peds. (#/hr)		11				11							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			4	4		3	3	3	
Permitted Phases	6	6											
Actuated Green, G (s)		97.6	97.6	84.7			5.6	5.6			7.2	7.2	
Effective Green, g (s)		97.6	97.6	84.7			5.6	5.6			7.2	7.2	
Actuated g/C Ratio		0.75	0.75	0.65			0.04	0.04			0.06	0.06	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		140	4810	4162			76	68			98	87	
v/s Ratio Prot		0.04	c0.42	0.47			0.01	c0.03			c0.07	0.02	
v/s Ratio Perm		c0.62											
v/c Ratio		0.89	0.56	0.73			0.22	0.68			1.30	0.32	
Uniform Delay, d1		34.3	6.9	15.0			60.1	61.3			61.4	59.1	
Progression Factor		1.48	0.81	0.27			1.00	1.00			0.96	0.96	
Incremental Delay, d2		39.8	0.4	0.9			1.1	21.5			189.5	1.6	
Delay (s)		90.6	6.0	4.9			61.2	82.8			248.3	58.2	
Level of Service		F	A	A			E	F			F	E	
Approach Delay (s)			9.8	4.9			77.0				213.9		
Approach LOS			A	A			E				F		
Intersection Summary													
HCM 2000 Control Delay			13.3		HCM 2000 Level of Service						B		
HCM 2000 Volume to Capacity ratio			0.93										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			82.8%		ICU Level of Service						E		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 4: NE 163rd Street & NE 2900 Block


















Future Total Conditions
 P.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	2
Future Volume (vph)	2
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	2
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	11
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
5: NE 34th Avenue & NE 163rd Street

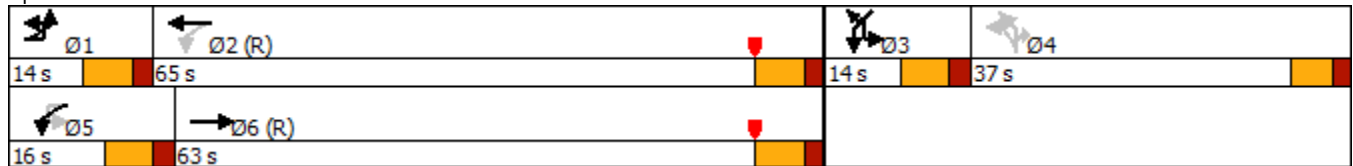
Future Total Conditions
P.M. Peak Hour

									
Lane Group	EBL2	EBT	WBU	WBL	WBT	NBL	NBR2	SWL	SWR2
Lane Configurations									
Traffic Volume (vph)	5	2550	25	9	2799	1	7	54	1
Future Volume (vph)	5	2550	25	9	2799	1	7	54	1
Turn Type	Prot	NA	custom	pm+pt	NA	Perm	Perm	Prot	Prot
Protected Phases	1	6		5	2			3	3
Permitted Phases			5	2		4	4		
Detector Phase	1	6	5	5	2	4	4	3	3
Switch Phase									
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	21.8	11.8	11.8	21.8	37.0	37.0	13.8	13.8
Total Split (s)	14.0	63.0	16.0	16.0	65.0	37.0	37.0	14.0	14.0
Total Split (%)	10.8%	48.5%	12.3%	12.3%	50.0%	28.5%	28.5%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	6.8	6.8		6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 78 (60%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 135
 Control Type: Actuated-Coordinated



















Splits and Phases: 5: NE 34th Avenue & NE 163rd Street



HCM Signalized Intersection Capacity Analysis

5: NE 34th Avenue & NE 163rd Street

Future Total Conditions
P.M. Peak Hour

												
Movement	EBU	EBL2	EBT	EBR	WBU	WBL	WBT	WBR	NBL2	NBL	NBR2	SWL2
Lane Configurations												
Traffic Volume (vph)	26	5	2550	17	25	9	2799	25	33	1	7	21
Future Volume (vph)	26	5	2550	17	25	9	2799	25	33	1	7	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8			6.8	6.8			6.0	6.0	
Lane Util. Factor		1.00	0.86			1.00	0.86			1.00	1.00	
Frbp, 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	1.00			1.00	1.00			1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6401			1770	6399			1770	1583	
Flt Permitted		0.95	1.00			0.05	1.00			0.95	1.00	
Satd. Flow (perm)		1770	6401			87	6399			1770	1583	
Peak-hour factor, PHF	0.93	0.92	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	28	5	2742	18	27	10	3010	27	35	1	8	23
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	33	2760	0	0	37	3037	0	0	36	0	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)				2								
Turn Type	Prot	Prot	NA		custom	pm+pt	NA		Perm	Perm	Perm	Prot
Protected Phases	1	1	6			5	2					3
Permitted Phases					5	2			4	4	4	
Actuated Green, G (s)		4.9	86.6			90.5	86.1			5.4	5.4	
Effective Green, g (s)		4.9	86.6			90.5	86.1			5.4	5.4	
Actuated g/C Ratio		0.04	0.67			0.70	0.66			0.04	0.04	
Clearance Time (s)		6.8	6.8			6.8	6.8			6.0	6.0	
Vehicle Extension (s)		2.0	1.0			2.0	1.0			2.5	2.5	
Lane Grp Cap (vph)		66	4264			117	4238			73	65	
v/s Ratio Prot		c0.02	0.43			0.01	c0.47					
v/s Ratio Perm						0.21				c0.02	0.00	
v/c Ratio		0.50	0.65			0.32	0.72			0.49	0.01	
Uniform Delay, d1		61.3	12.7			10.3	14.1			61.0	59.7	
Progression Factor		0.97	1.26			1.92	0.41			1.00	1.00	
Incremental Delay, d2		1.8	0.6			0.3	0.5			3.8	0.0	
Delay (s)		61.2	16.6			20.0	6.3			64.7	59.7	
Level of Service		E	B			C	A			E	E	
Approach Delay (s)			17.2				6.4					
Approach LOS			B				A					
Intersection Summary												
HCM 2000 Control Delay			14.4									B
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			130.0							26.4		
Intersection Capacity Utilization			64.8%									C
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
5: NE 34th Avenue & NE 163rd Street

Future Total Conditions
P.M. Peak Hour

Movement	SWL	SWR	SWR2
Lane Configurations			
Traffic Volume (vph)	54	17	1
Future Volume (vph)	54	17	1
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	6.8		6.8
Lane Util. Factor	1.00		1.00
Frbp, ped/bikes	1.00		1.00
Flpb, ped/bikes	1.00		1.00
Frt	0.97		0.85
Flt Protected	0.96		1.00
Satd. Flow (prot)	1741		1583
Flt Permitted	0.96		1.00
Satd. Flow (perm)	1741		1583
Peak-hour factor, PHF	0.93	0.93	0.93
Adj. Flow (vph)	58	18	1
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	99	0	1
Confl. Peds. (#/hr)			3
Confl. Bikes (#/hr)			
Turn Type	Prot		Prot
Protected Phases	3		3
Permitted Phases			
Actuated Green, G (s)	7.2		7.2
Effective Green, g (s)	7.2		7.2
Actuated g/C Ratio	0.06		0.06
Clearance Time (s)	6.8		6.8
Vehicle Extension (s)	2.5		2.5
Lane Grp Cap (vph)	96		87
v/s Ratio Prot	c0.06		0.00
v/s Ratio Perm			
v/c Ratio	1.03		0.01
Uniform Delay, d1	61.4		58.0
Progression Factor	0.96		1.03
Incremental Delay, d2	99.7		0.0
Delay (s)	158.9		60.0
Level of Service	F		E
Approach Delay (s)	157.9		
Approach LOS	F		

Intersection Summary

Timings
6: NE 163rd Street & NE 35th Avenue

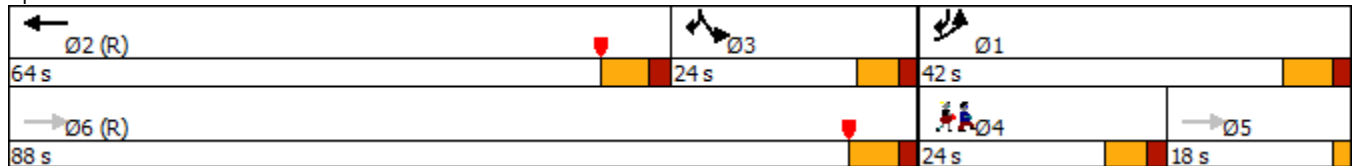
Future Total Conditions
P.M. Peak Hour

						Ø4	Ø5	Ø6
Lane Group	EBL	EBT	WBT	SBL	SBR			
Lane Configurations								
Traffic Volume (vph)	937	1664	2347	410	492			
Future Volume (vph)	937	1664	2347	410	492			
Turn Type	Prot	NA	NA	Prot	pt+ov			
Protected Phases	1		2	3	1 3	4	5	6
Permitted Phases		5 6						
Detector Phase	1	5 6	2	3	1 3			
Switch Phase								
Minimum Initial (s)	7.0		4.0	7.0		1.0	4.0	4.0
Minimum Split (s)	13.8		28.8	24.0		24.0	10.8	28.8
Total Split (s)	42.0		64.0	24.0		24.0	18.0	88.0
Total Split (%)	32.3%		49.2%	18.5%		18%	14%	68%
Yellow Time (s)	4.8		4.8	4.0		4.0	2.0	4.8
All-Red Time (s)	2.0		2.0	2.0		2.0	0.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.8		6.8	6.0				
Lead/Lag			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes	Yes		Yes	Yes	
Recall Mode	None		C-Max	None		None	None	C-Max

Intersection Summary






Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 68 (52%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 140
 Control Type: Actuated-Coordinated

Splits and Phases: 6: NE 163rd Street & NE 35th Avenue



Queues
6: NE 163rd Street & NE 35th Avenue

Future Total Conditions
P.M. Peak Hour

					
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	986	1752	2721	432	526
v/c Ratio	1.06	0.34	0.98	1.76	0.41
Control Delay	104.5	0.1	48.2	380.4	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	104.5	0.1	48.2	380.4	24.5
Queue Length 50th (ft)	~484	0	640	~555	238
Queue Length 95th (ft)	#620	0	#742	m#627	m260
Internal Link Dist (ft)		488	387	465	
Turn Bay Length (ft)	275			300	
Base Capacity (vph)	929	5085	2783	245	1269
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.06	0.34	0.98	1.76	0.41
















Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

6: NE 163rd Street & NE 35th Avenue







Future Total Conditions
P.M. Peak Hour

										
Movement	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER
Lane Configurations										
Traffic Volume (vph)	937	1664	2347	21	217	410	492	8	0	0
Future Volume (vph)	937	1664	2347	21	217	410	492	8	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	2.0	6.8			6.0	6.8			
Lane Util. Factor	0.97	0.91	0.86			1.00	0.88			
Frbp, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Flpb, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Frt	1.00	1.00	0.99			1.00	0.85			
Flt Protected	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (prot)	3433	5085	6302			1770	2787			
Flt Permitted	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (perm)	3433	5085	6302			1770	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	986	1752	2471	22	228	432	518	8	0	0
RTOR Reduction (vph)	0	0	11	0	0	0	0	0	0	0
Lane Group Flow (vph)	986	1752	2710	0	0	432	526	0	0	0
Confl. Peds. (#/hr)	9				9	5				
Confl. Bikes (#/hr)				2	2					
Turn Type	Prot	NA	NA			Prot	pt+ov			
Protected Phases	1		2			3	1 3			
Permitted Phases		5 6								
Actuated Green, G (s)	35.2	130.0	57.2			18.0	59.2			
Effective Green, g (s)	35.2	123.2	57.2			18.0	53.2			
Actuated g/C Ratio	0.27	0.95	0.44			0.14	0.41			
Clearance Time (s)	6.8		6.8			6.0				
Vehicle Extension (s)	3.0		1.0			3.0				
Lane Grp Cap (vph)	929	4819	2772			245	1140			
v/s Ratio Prot	c0.29		c0.43			c0.24	0.19			
v/s Ratio Perm		0.34								
v/c Ratio	1.06	0.36	0.98			1.76	0.46			
Uniform Delay, d1	47.4	0.3	35.8			56.0	28.0			
Progression Factor	1.38	1.00	1.00			0.60	0.99			
Incremental Delay, d2	44.3	0.0	12.6			354.9	0.2			
Delay (s)	109.5	0.3	48.4			388.4	28.0			
Level of Service	F	A	D			F	C			
Approach Delay (s)		39.6	48.4			190.5		0.0		
Approach LOS		D	D			F		A		
Intersection Summary										
HCM 2000 Control Delay			65.8			HCM 2000 Level of Service			E	
HCM 2000 Volume to Capacity ratio			1.14							
Actuated Cycle Length (s)			130.0			Sum of lost time (s)		20.8		
Intersection Capacity Utilization			103.8%			ICU Level of Service		G		
Analysis Period (min)			15							
c Critical Lane Group										

HCM Unsignalized Intersection Capacity Analysis

7: NE 163rd Street & Intracoastal Mall Driveway

Future Total Conditions
P.M. Peak Hour

									
Movement	EBL	EBT	WBT	WBR	SBL	SBR			
Lane Configurations		↑↑↑	↑↑↑	↗		↗			
Traffic Volume (veh/h)	0	2057	1712	323	0	331			
Future Volume (Veh/h)	0	2057	1712	323	0	331			
Sign Control		Free	Free		Stop				
Grade		0%	0%		0%				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94			
Hourly flow rate (vph)	0	2188	1821	344	0	352			
Pedestrians						12			
Lane Width (ft)					12.0				
Walking Speed (ft/s)					3.5				
Percent Blockage					1				
Right turn flare (veh)									
Median type		None	None						
Median storage (veh)									
Upstream signal (ft)		467							
pX, platoon unblocked									
vC, conflicting volume	1833				2380	619			
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol	1833				2380	619			
tC, single (s)	4.1				6.8	6.9			
tC, 2 stage (s)									
tF (s)	2.2				3.5	3.3			
p0 queue free %	100				100	17			
cM capacity (veh/h)	325				28	427			
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	547	547	547	547	607	607	607	344	352
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	344	352
cSH	1700	1700	1700	1700	1700	1700	1700	1700	427
Volume to Capacity	0.32	0.32	0.32	0.32	0.36	0.36	0.36	0.20	0.83
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	193
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.5
Lane LOS									E
Approach Delay (s)	0.0				0.0				42.5
Approach LOS									E
Intersection Summary									
Average Delay			3.2						
Intersection Capacity Utilization			60.2%		ICU Level of Service				B
Analysis Period (min)			15						

Timings
8: NE 35th Avenue & NE 164th Street

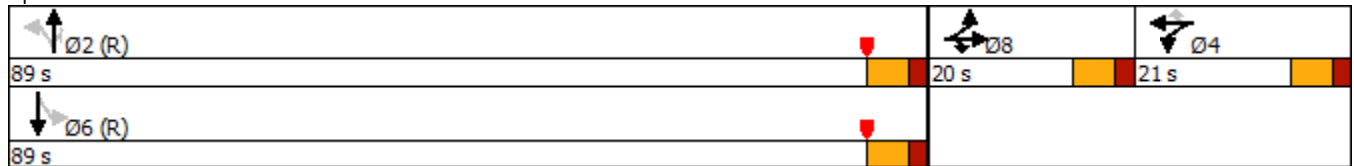
Future Total Conditions
 P.M. Peak Hour

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	7	44	576	1	96	67	413	673	62	268
Future Volume (vph)	7	44	576	1	96	67	413	673	62	268
Turn Type	NA	Prot	Split	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	8	8	4	4			2			6
Permitted Phases					4	2		2	6	
Detector Phase	8	8	4	4	4	2	2	2	6	6
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.0	13.0	16.0	16.0	16.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	20.0	20.0	21.0	21.0	21.0	89.0	89.0	89.0	89.0	89.0
Total Split (%)	15.4%	15.4%	16.2%	16.2%	16.2%	68.5%	68.5%	68.5%	68.5%	68.5%
Yellow Time (s)	4.0	4.0	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	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary
























Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 19 (15%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 8: NE 35th Avenue & NE 164th Street



HCM 6th Signalized Intersection Summary
8: NE 35th Avenue & NE 164th Street

Future Total Conditions
P.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	7	44	576	1	96	67	413	673	62	268	1
Future Volume (veh/h)	3	7	44	576	1	96	67	413	673	62	268	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	8	49	641	0	107	74	459	748	69	298	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	64	74	411	0	181	801	2482	1104	374	2537	9
Arrive On Green	0.05	0.05	0.05	0.12	0.00	0.12	0.93	0.93	0.93	0.93	0.93	0.93
Sat Flow, veh/h	503	1342	1550	3563	0	1569	1078	3554	1580	463	3633	12
Grp Volume(v), veh/h	11	0	49	641	0	107	74	459	748	69	146	153
Grp Sat Flow(s),veh/h/ln	1845	0	1550	1781	0	1569	1078	1777	1580	463	1777	1868
Q Serve(g_s), s	0.7	0.0	4.0	15.0	0.0	8.4	0.8	1.4	11.8	2.1	0.8	0.9
Cycle Q Clear(g_c), s	0.7	0.0	4.0	15.0	0.0	8.4	1.6	1.4	11.8	3.5	0.8	0.9
Prop In Lane	0.27		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	88	0	74	411	0	181	801	2482	1104	374	1241	1305
V/C Ratio(X)	0.13	0.00	0.66	1.56	0.00	0.59	0.09	0.18	0.68	0.18	0.12	0.12
Avail Cap(c_a), veh/h	199	0	167	411	0	181	801	2482	1104	374	1241	1305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.3	0.0	60.9	57.5	0.0	54.6	1.5	1.4	1.8	1.6	1.4	1.4
Incr Delay (d2), s/veh	0.5	0.0	7.3	263.4	0.0	4.4	0.0	0.0	0.3	1.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	1.7	21.8	0.0	3.6	0.2	0.5	1.7	0.3	0.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	0.0	68.2	320.9	0.0	59.0	1.5	1.5	2.1	2.7	1.6	1.6
LnGrp LOS	E	A	E	F	A	E	A	A	A	A	A	A
Approach Vol, veh/h		60			748			1281			368	
Approach Delay, s/veh		66.7			283.4			1.8			1.8	
Approach LOS		E			F			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		96.8		21.0		96.8		12.2				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		83.0		15.0		83.0		14.0				
Max Q Clear Time (g_c+I1), s		13.8		17.0		5.5		6.0				
Green Ext Time (p_c), s		1.7		0.0		1.2		0.1				

Intersection Summary

HCM 6th Ctrl Delay	89.1
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th TWSC
 9: NE 35th Avenue & Intracoastal Mall North Drive

Future Total Conditions
 P.M. Peak Hour

Intersection

Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑↑			↑↑
Traffic Vol, veh/h	14	10	536	26	0	376
Future Vol, veh/h	14	10	536	26	0	376
Conflicting Peds, #/hr	0	0	0	12	12	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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	11	589	29	0	413

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	823	321	0	0	-
Stage 1	616	-	-	-	-
Stage 2	207	-	-	-	-
Critical Hdwy	5	5	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3	3	-	-	-
Pot Cap-1 Maneuver	529	876	-	-	0
Stage 1	493	-	-	-	0
Stage 2	934	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	523	866	-	-	-
Mov Cap-2 Maneuver	523	-	-	-	-
Stage 1	488	-	-	-	-
Stage 2	934	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	626
HCM Lane V/C Ratio	-	-	0.042
HCM Control Delay (s)	-	-	11
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Future Total with Improvements Conditions

Timings

Future Total Conditions with Improvements

1: Biscayne Boulevard/US 1 & NE 163rd Street

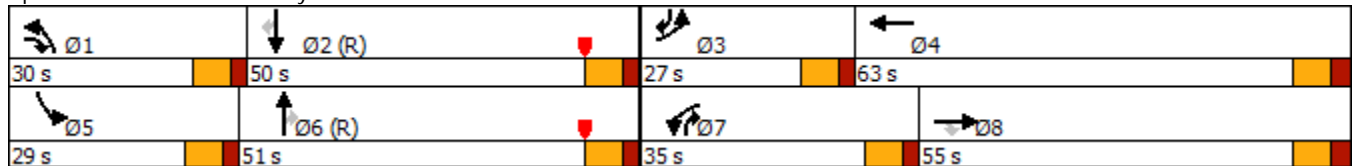
P.M. Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	489	1369	480	728	1678	1000	540	1648	807	625	1525	571
Future Volume (vph)	489	1369	480	728	1678	1000	540	1648	807	625	1525	571
Turn Type	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases			8			Free			6			2
Detector Phase	3	8	1	7	4		1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	7.0	5.0	5.0	7.0	5.0
Minimum Split (s)	11.8	54.7	11.8	11.8	54.7		11.8	49.2	11.8	11.8	49.2	11.8
Total Split (s)	27.0	55.0	30.0	35.0	63.0		30.0	51.0	35.0	29.0	50.0	27.0
Total Split (%)	15.9%	32.4%	17.6%	20.6%	37.1%		17.6%	30.0%	20.6%	17.1%	29.4%	15.9%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8		4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.0	2.9	2.0	2.0	2.9		2.0	2.4	2.0	2.0	2.4	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	0.0
Total Lost Time (s)	6.8	7.7	6.8	6.8	7.7		6.8	7.2	6.8	6.8	7.2	6.8
Lead/Lag	Lead	Lag	Lead	Lead	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

Intersection Summary

Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 77 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Biscayne Boulevard/US 1 & NE 163rd Street



HCM 6th Signalized Intersection Summary
 1: Biscayne Boulevard/US 1 & NE 163rd Street

Future Total Conditions with Improvements
 P.M. Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	489	1369	480	728	1678	1000	540	1648	807	625	1525	571
Future Volume (veh/h)	489	1369	480	728	1678	1000	540	1648	807	625	1525	571
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	504	1411	495	751	1730	0	557	1699	832	644	1572	589
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	411	1421	647	573	1661		472	1658	659	451	1620	575
Arrive On Green	0.12	0.28	0.28	0.17	0.33	0.00	0.18	0.34	0.34	0.17	0.33	0.33
Sat Flow, veh/h	3456	5106	1550	3456	5106	1585	3456	6434	1536	3456	6434	1536
Grp Volume(v), veh/h	504	1411	495	751	1730	0	557	1699	832	644	1572	589
Grp Sat Flow(s),veh/h/ln	1728	1702	1550	1728	1702	1585	1728	1609	1536	1728	1609	1536
Q Serve(g_s), s	20.2	46.9	46.7	28.2	55.3	0.0	23.2	43.8	43.8	22.2	40.9	42.8
Cycle Q Clear(g_c), s	20.2	46.9	46.7	28.2	55.3	0.0	23.2	43.8	43.8	22.2	40.9	42.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	411	1421	647	573	1661		472	1658	659	451	1620	575
V/C Ratio(X)	1.23	0.99	0.76	1.31	1.04		1.18	1.02	1.26	1.43	0.97	1.02
Avail Cap(c_a), veh/h	411	1421	647	573	1661		472	1658	659	451	1620	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.56	0.56	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.9	61.2	42.8	70.9	57.3	0.0	69.6	55.9	45.3	70.2	55.9	48.9
Incr Delay (d2), s/veh	122.2	22.2	5.2	146.6	28.6	0.0	101.5	28.7	130.3	204.7	16.4	43.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.0	23.2	18.9	24.2	28.2	0.0	16.7	20.4	52.3	22.4	17.9	32.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	197.1	83.4	48.0	217.5	86.0	0.0	171.0	84.5	175.5	274.9	72.3	92.8
LnGrp LOS	F	F	D	F	F		F	F	F	F	E	F
Approach Vol, veh/h		2410			2481	A		3088			2805	
Approach Delay, s/veh		99.9			125.8			124.7			123.1	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	50.0	27.0	63.0	29.0	51.0	35.0	55.0				
Change Period (Y+Rc), s	6.8	* 7.2	6.8	* 7.7	6.8	* 7.2	6.8	* 7.7				
Max Green Setting (Gmax), s	23.2	* 43	20.2	* 55	22.2	* 44	28.2	* 47				
Max Q Clear Time (g_c+I1), s	25.2	44.8	22.2	57.3	24.2	45.8	30.2	48.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	119.0
HCM 6th LOS	F

Notes

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

Timings
2: NE 163rd Street & NE 26th Avenue

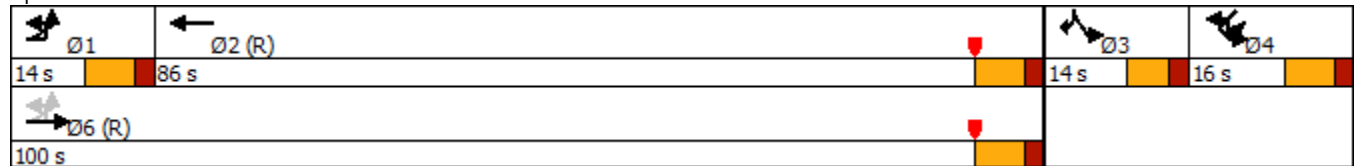
Future Total Conditions with Improvements
P.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	8	133	2580	2835	59	76	55	0
Future Volume (vph)	8	133	2580	2835	59	76	55	0
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	14.0	14.0	100.0	86.0	14.0	14.0	16.0	16.0
Total Split (%)	10.8%	10.8%	76.9%	66.2%	10.8%	10.8%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 113 (87%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NE 163rd Street & NE 26th Avenue






















HCM Signalized Intersection Capacity Analysis

2: NE 163rd Street & NE 26th Avenue

Future Total Conditions with Improvements

P.M. Peak Hour

												
Movement	EBU	EBL2	EBT	WBT	WBR2	SBL	SBR	SWU	SWL	SWR	SWR2	
Lane Configurations												
Traffic Volume (vph)	8	133	2580	2835	60	59	76	15	55	0	23	
Future Volume (vph)	8	133	2580	2835	60	59	76	15	55	0	23	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Lane Util. Factor		1.00	0.86	0.86		1.00	1.00		1.00	1.00		
Frbp, ped/bikes		1.00	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	1.00		
Frt		1.00	1.00	1.00		1.00	0.85		1.00	0.85		
Flt Protected		0.95	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (prot)		1770	6408	6382		1770	1583		1770	1583		
Flt Permitted		0.05	1.00	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (perm)		85	6408	6382		1770	1583		1770	1583		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	9	141	2745	3016	64	63	81	16	59	0	24	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	150	2745	3080	0	63	81	0	75	24	0	
Confl. Peds. (#/hr)		7			7						7	
Turn Type	pm+pt	pm+pt	NA	NA		Prot	Prot	Prot	Prot	Prot		
Protected Phases	1	1	6	2		3	3	4	4	4		
Permitted Phases	6	6										
Actuated Green, G (s)		95.1	95.1	80.5		8.0	8.0		7.3	7.3		
Effective Green, g (s)		95.1	95.1	80.5		8.0	8.0		7.3	7.3		
Actuated g/C Ratio		0.73	0.73	0.62		0.06	0.06		0.06	0.06		
Clearance Time (s)		6.8	6.8	6.8		6.0	6.0		6.8	6.8		
Vehicle Extension (s)		2.0	1.0	1.0		2.5	2.5		2.5	2.5		
Lane Grp Cap (vph)		163	4687	3951		108	97		99	88		
v/s Ratio Prot		c0.06	0.43	0.48		0.04	c0.05		c0.04	0.02		
v/s Ratio Perm		c0.61										
v/c Ratio		0.92	0.59	0.78		0.58	0.84		0.76	0.27		
Uniform Delay, d1		38.7	8.2	18.2		59.4	60.3		60.5	58.8		
Progression Factor		1.00	1.00	1.10		1.00	1.00		1.03	1.04		
Incremental Delay, d2		47.1	0.5	1.2		6.5	42.6		26.5	1.2		
Delay (s)		85.8	8.7	21.3		65.9	103.0		88.8	62.6		
Level of Service		F	A	C		E	F		F	E		
Approach Delay (s)			12.7	21.3		86.7			82.4			
Approach LOS			B	C		F			F			
Intersection Summary												
HCM 2000 Control Delay			19.8		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					26.4		
Intersection Capacity Utilization			83.6%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

Timings
3: NE 163rd Street & NE 28th Avenue

Future Total Conditions with Improvements
P.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	8	25	2599	2909	14	18	39	23
Future Volume (vph)	8	25	2599	2909	14	18	39	23
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	3	3	4	4
Permitted Phases	6	6						
Detector Phase	1	1	6	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	11.8	26.8	13.0	13.0	13.8	13.8
Total Split (s)	13.0	13.0	100.0	87.0	14.0	14.0	16.0	16.0
Total Split (%)	10.0%	10.0%	76.9%	66.9%	10.8%	10.8%	12.3%	12.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 122 (94%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 3: NE 163rd Street & NE 28th Avenue

13 s	87 s	14 s	16 s
100 s			

HCM Signalized Intersection Capacity Analysis

3: NE 163rd Street & NE 28th Avenue

Future Total Conditions with Improvements

P.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	8	25	2599	2909	9	9	14	18	6	16	39	23	
Future Volume (vph)	8	25	2599	2909	9	9	14	18	6	16	39	23	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6399			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		78	6408	6399			1770	1583			1770	1583	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	9	27	2795	3128	10	10	15	19	6	17	42	25	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	36	2795	3148	0	0	15	25	0	0	59	27	
Confl. Peds. (#/hr)		14				14							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			3	3		4	4	4	
Permitted Phases	6	6											
Actuated Green, G (s)		98.7	98.7	88.5			4.6	4.6			7.1	7.1	
Effective Green, g (s)		98.7	98.7	88.5			4.6	4.6			7.1	7.1	
Actuated g/C Ratio		0.76	0.76	0.68			0.04	0.04			0.05	0.05	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		103	4865	4356			62	56			96	86	
v/s Ratio Prot		0.01	c0.44	c0.49			0.01	c0.02			c0.03	0.02	
v/s Ratio Perm		0.25											
v/c Ratio		0.35	0.57	0.72			0.24	0.45			0.61	0.31	
Uniform Delay, d1		13.3	6.7	13.0			61.0	61.5			60.1	59.1	
Progression Factor		3.00	0.45	0.04			1.00	1.00			1.05	1.05	
Incremental Delay, d2		0.6	0.4	0.8			1.5	4.1			9.4	1.5	
Delay (s)		40.6	3.4	1.2			62.5	65.5			72.4	63.7	
Level of Service		D	A	A			E	E			E	E	
Approach Delay (s)			3.9	1.2			64.4				69.7		
Approach LOS			A	A			E				E		
Intersection Summary													
HCM 2000 Control Delay			3.8		HCM 2000 Level of Service						A		
HCM 2000 Volume to Capacity ratio			0.72										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			70.5%		ICU Level of Service						C		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 3: NE 163rd Street & NE 28th Avenue

Future Total Conditions with Improvements
 P.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	2
Future Volume (vph)	2
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	2
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	14
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
4: NE 163rd Street & NE 2900 Block

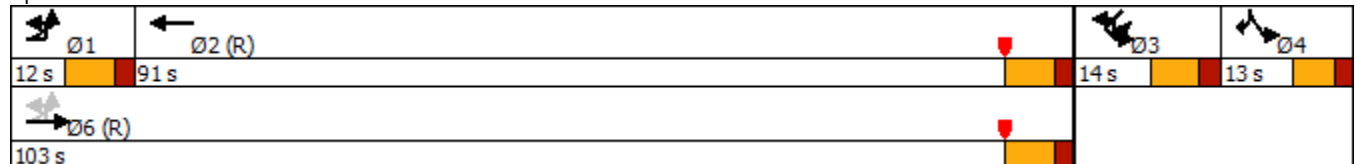
Future Total Conditions with Improvements
P.M. Peak Hour

Lane Group	EBU	EBL2	EBT	WBT	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	55	64	2511	2799	16	39	87	25
Future Volume (vph)	55	64	2511	2799	16	39	87	25
Turn Type	pm+pt	pm+pt	NA	NA	Prot	Prot	Prot	Prot
Protected Phases	1	1	6	2	4	4	3	3
Permitted Phases	6	6						
Detector Phase	1	1	6	2	4	4	3	3
Switch Phase								
Minimum Initial (s)	5.0	5.0	15.0	15.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.8	11.8	21.8	21.8	13.0	13.0	13.8	13.8
Total Split (s)	12.0	12.0	103.0	91.0	13.0	13.0	14.0	14.0
Total Split (%)	9.2%	9.2%	79.2%	70.0%	10.0%	10.0%	10.8%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.0	4.8	4.8
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)		6.8	6.8	6.8	6.0	6.0	6.8	6.8
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 109 (84%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 4: NE 163rd Street & NE 2900 Block



HCM Signalized Intersection Capacity Analysis
4: NE 163rd Street & NE 2900 Block

Future Total Conditions with Improvements

P.M. Peak Hour

Movement	EBU	EBL2	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SWU	SWL	SWR	
Lane Configurations													
Traffic Volume (vph)	55	64	2511	2799	24	23	16	39	5	33	87	25	
Future Volume (vph)	55	64	2511	2799	24	23	16	39	5	33	87	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Lane Util. Factor		1.00	0.86	0.86			1.00	1.00			1.00	1.00	
Frbp, ped/bikes		1.00	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	1.00	
Frt		1.00	1.00	1.00			1.00	0.85			1.00	0.85	
Flt Protected		0.95	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6408	6389			1770	1583			1770	1583	
Flt Permitted		0.04	1.00	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (perm)		81	6408	6389			1770	1583			1770	1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	58	67	2643	2946	25	24	17	41	5	35	92	26	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	125	2643	2995	0	0	17	46	0	0	127	28	
Confl. Peds. (#/hr)		11				11							
Turn Type	pm+pt	pm+pt	NA	NA			Prot	Prot		Prot	Prot	Prot	
Protected Phases	1	1	6	2			4	4		3	3	3	
Permitted Phases	6	6											
Actuated Green, G (s)		97.6	97.6	84.7			5.6	5.6			7.2	7.2	
Effective Green, g (s)		97.6	97.6	84.7			5.6	5.6			7.2	7.2	
Actuated g/C Ratio		0.75	0.75	0.65			0.04	0.04			0.06	0.06	
Clearance Time (s)		6.8	6.8	6.8			6.0	6.0			6.8	6.8	
Vehicle Extension (s)		2.0	1.0	1.0			2.5	2.5			2.5	2.5	
Lane Grp Cap (vph)		140	4810	4162			76	68			98	87	
v/s Ratio Prot		0.04	c0.41	0.47			0.01	c0.03			c0.07	0.02	
v/s Ratio Perm		c0.62											
v/c Ratio		0.89	0.55	0.72			0.22	0.68			1.30	0.32	
Uniform Delay, d1		34.1	6.9	14.9			60.1	61.3			61.4	59.1	
Progression Factor		1.49	0.81	0.49			1.00	1.00			1.00	1.01	
Incremental Delay, d2		39.9	0.4	0.8			1.1	21.5			189.5	1.6	
Delay (s)		90.8	6.0	8.1			61.2	82.8			251.2	61.5	
Level of Service		F	A	A			E	F			F	E	
Approach Delay (s)			9.8	8.1			77.0				216.9		
Approach LOS			A	A			E				F		
Intersection Summary													
HCM 2000 Control Delay			15.1		HCM 2000 Level of Service						B		
HCM 2000 Volume to Capacity ratio			0.93										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)						26.4		
Intersection Capacity Utilization			82.4%		ICU Level of Service						E		
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 4: NE 163rd Street & NE 2900 Block
















Future Total Conditions with Improvements
 P.M. Peak Hour



Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	2
Future Volume (vph)	2
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	2
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	11
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
5: NE 34th Avenue & NE 163rd Street

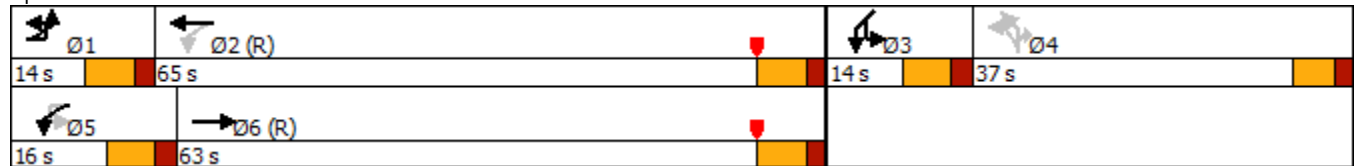
Future Total Conditions with Improvements
P.M. Peak Hour

								
Lane Group	EBL2	EBT	WBU	WBL	WBT	NBL	NBR2	SWL
Lane Configurations								
Traffic Volume (vph)	5	2517	25	9	2771	1	7	54
Future Volume (vph)	5	2517	25	9	2771	1	7	54
Turn Type	Prot	NA	custom	pm+pt	NA	Perm	Perm	Prot
Protected Phases	1	6		5	2			3
Permitted Phases			5	2		4	4	
Detector Phase	1	6	5	5	2	4	4	3
Switch Phase								
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	7.0	7.0	7.0
Minimum Split (s)	11.8	21.8	11.8	11.8	21.8	37.0	37.0	13.8
Total Split (s)	14.0	63.0	16.0	16.0	65.0	37.0	37.0	14.0
Total Split (%)	10.8%	48.5%	12.3%	12.3%	50.0%	28.5%	28.5%	10.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.8
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)	6.8	6.8		6.8	6.8	6.0	6.0	6.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 60 (46%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 135
 Control Type: Actuated-Coordinated

Splits and Phases: 5: NE 34th Avenue & NE 163rd Street





















HCM Signalized Intersection Capacity Analysis

5: NE 34th Avenue & NE 163rd Street

Future Total Conditions with Improvements

P.M. Peak Hour

												
Movement	EBU	EBL2	EBT	EBR	WBU	WBL	WBT	WBR	NBL2	NBL	NBR2	SWL2
Lane Configurations												
Traffic Volume (vph)	26	5	2517	17	25	9	2771	25	33	1	7	21
Future Volume (vph)	26	5	2517	17	25	9	2771	25	33	1	7	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8			6.8	6.8			6.0	6.0	
Lane Util. Factor		1.00	0.86			1.00	0.86			1.00	1.00	
Frbp, 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	1.00			1.00	1.00			1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	6401			1770	6399			1770	1583	
Flt Permitted		0.95	1.00			0.05	1.00			0.95	1.00	
Satd. Flow (perm)		1770	6401			87	6399			1770	1583	
Peak-hour factor, PHF	0.93	0.92	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	28	5	2706	18	27	10	2980	27	35	1	8	23
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	33	2724	0	0	37	3007	0	0	36	0	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)				2								
Turn Type	Prot	Prot	NA		custom	pm+pt	NA		Perm	Perm	Perm	Prot
Protected Phases	1	1	6			5	2					3
Permitted Phases					5	2			4	4	4	
Actuated Green, G (s)		4.9	86.6			90.5	86.1			5.4	5.4	
Effective Green, g (s)		4.9	86.6			90.5	86.1			5.4	5.4	
Actuated g/C Ratio		0.04	0.67			0.70	0.66			0.04	0.04	
Clearance Time (s)		6.8	6.8			6.8	6.8			6.0	6.0	
Vehicle Extension (s)		2.0	1.0			2.0	1.0			2.5	2.5	
Lane Grp Cap (vph)		66	4264			117	4238			73	65	
v/s Ratio Prot		c0.02	0.43			0.01	c0.47					
v/s Ratio Perm						0.21				c0.02	0.00	
v/c Ratio		0.50	0.64			0.32	0.71			0.49	0.01	
Uniform Delay, d1		61.3	12.6			10.0	14.0			61.0	59.7	
Progression Factor		1.19	0.93			1.96	1.11			1.00	1.00	
Incremental Delay, d2		1.8	0.6			0.3	0.6			3.8	0.0	
Delay (s)		74.6	12.3			20.0	16.2			64.7	59.7	
Level of Service		E	B			C	B			E	E	
Approach Delay (s)			13.0				16.2					
Approach LOS			B				B					
Intersection Summary												
HCM 2000 Control Delay			17.6									B
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			130.0							26.4		
Intersection Capacity Utilization			64.4%									C
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
5: NE 34th Avenue & NE 163rd Street

Future Total Conditions with Improvements

P.M. Peak Hour

Movement	SWL	SWR	SWR2
Lane Configurations			
Traffic Volume (vph)	54	17	1
Future Volume (vph)	54	17	1
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	6.8		
Lane Util. Factor	1.00		
Frbp, ped/bikes	0.99		
Flpb, ped/bikes	1.00		
Frt	0.97		
Flt Protected	0.96		
Satd. Flow (prot)	1729		
Flt Permitted	0.96		
Satd. Flow (perm)	1729		
Peak-hour factor, PHF	0.93	0.93	0.93
Adj. Flow (vph)	58	18	1
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	100	0	0
Confl. Peds. (#/hr)			3
Confl. Bikes (#/hr)			
Turn Type	Prot		
Protected Phases	3		
Permitted Phases			
Actuated Green, G (s)	7.2		
Effective Green, g (s)	7.2		
Actuated g/C Ratio	0.06		
Clearance Time (s)	6.8		
Vehicle Extension (s)	2.5		
Lane Grp Cap (vph)	95		
v/s Ratio Prot	c0.06		
v/s Ratio Perm			
v/c Ratio	1.05		
Uniform Delay, d1	61.4		
Progression Factor	0.96		
Incremental Delay, d2	106.6		
Delay (s)	165.5		
Level of Service	F		
Approach Delay (s)	165.5		
Approach LOS	F		
Intersection Summary			

Timings
6: NE 163rd Street & NE 35th Avenue

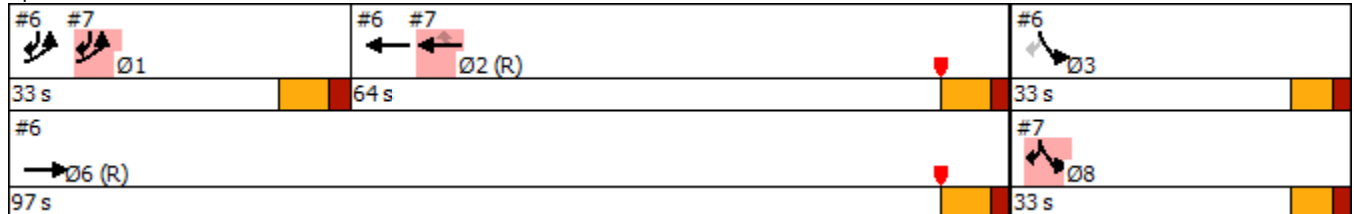
Future Total Conditions with Improvements
P.M. Peak Hour

Lane Group	EBL	EBT	WBT	SBL	SBR	Ø8
Lane Configurations						
Traffic Volume (vph)	689	1879	2335	190	476	
Future Volume (vph)	689	1879	2335	190	476	
Turn Type	Prot	NA	NA	Prot	pm+ov	
Protected Phases	1	6	2	3	1	8
Permitted Phases					3	
Detector Phase	1	6	2	3	1	
Switch Phase						
Minimum Initial (s)	7.0	4.0	4.0	7.0	7.0	7.0
Minimum Split (s)	13.8	28.8	28.8	24.0	13.8	13.0
Total Split (s)	33.0	97.0	64.0	33.0	33.0	33.0
Total Split (%)	25.4%	74.6%	49.2%	25.4%	25.4%	25%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.8	6.8	6.8	6.0	6.8	
Lead/Lag	Lead		Lag		Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	
Recall Mode	None	C-Max	C-Max	None	None	None

Intersection Summary






Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 72 (55%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 6: NE 163rd Street & NE 35th Avenue



Queues
6: NE 163rd Street & NE 35th Avenue

Future Total Conditions with Improvements
P.M. Peak Hour

					
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	725	1978	2703	200	509
v/c Ratio	0.72	0.53	0.88	0.70	0.44
Control Delay	58.3	1.2	16.4	52.5	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	1.2	16.4	52.5	29.1
Queue Length 50th (ft)	165	13	138	142	177
Queue Length 95th (ft)	211	13	#225	202	206
Internal Link Dist (ft)		488	434	237	
Turn Bay Length (ft)	275			300	
Base Capacity (vph)	1047	3761	3065	367	1165
Starvation Cap Reductn	0	190	7	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.69	0.55	0.88	0.54	0.44

Intersection Summary
















95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

6: NE 163rd Street & NE 35th Avenue

Future Total Conditions with Improvements

P.M. Peak Hour

										
Movement	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER
Lane Configurations										
Traffic Volume (vph)	689	1879	2335	21	212	190	476	8	0	0
Future Volume (vph)	689	1879	2335	21	212	190	476	8	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8	6.8			6.0	6.8			
Lane Util. Factor	0.94	0.91	0.86			1.00	0.88			
Frbp, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Flpb, ped/bikes	1.00	1.00	1.00			1.00	1.00			
Frt	1.00	1.00	0.99			1.00	0.85			
Flt Protected	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (prot)	4990	5085	6304			1770	2787			
Flt Permitted	0.95	1.00	1.00			0.95	1.00			
Satd. Flow (perm)	4990	5085	6304			1770	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	725	1978	2458	22	223	200	501	8	0	0
RTOR Reduction (vph)	0	0	10	0	0	0	0	0	0	0
Lane Group Flow (vph)	725	1978	2693	0	0	200	509	0	0	0
Confl. Peds. (#/hr)	9				9	5				
Confl. Bikes (#/hr)				2	2					
Turn Type	Prot	NA	NA			Prot	pm+ov			
Protected Phases	1	6	2			3	1			
Permitted Phases							3			
Actuated Green, G (s)	26.3	96.2	63.1			21.0	47.3			
Effective Green, g (s)	26.3	96.2	63.1			21.0	47.3			
Actuated g/C Ratio	0.20	0.74	0.49			0.16	0.36			
Clearance Time (s)	6.8	6.8	6.8			6.0	6.8			
Vehicle Extension (s)	3.0	1.0	1.0			3.0	3.0			
Lane Grp Cap (vph)	1009	3762	3059			285	1014			
v/s Ratio Prot	c0.15	0.39	c0.43			c0.11	0.10			
v/s Ratio Perm							0.08			
v/c Ratio	0.72	0.53	0.88			0.70	0.50			
Uniform Delay, d1	48.4	7.2	30.1			51.5	32.2			
Progression Factor	1.13	0.09	0.41			0.78	1.03			
Incremental Delay, d2	2.0	0.4	2.8			7.3	0.4			
Delay (s)	56.8	1.1	15.1			47.5	33.5			
Level of Service	E	A	B			D	C			
Approach Delay (s)		16.0	15.1			37.5			0.0	
Approach LOS		B	B			D			A	
Intersection Summary										
HCM 2000 Control Delay			18.1			HCM 2000 Level of Service			B	
HCM 2000 Volume to Capacity ratio			0.81							
Actuated Cycle Length (s)			130.0			Sum of lost time (s)		19.6		
Intersection Capacity Utilization			77.8%			ICU Level of Service		D		
Analysis Period (min)			15							
c Critical Lane Group										

Timings
7: NE 163rd Street & Intracoastal Mall Driveway

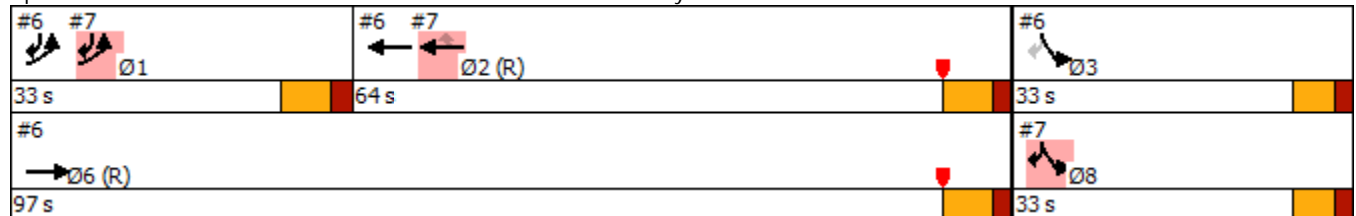
Future Total Conditions with Improvements
P.M. Peak Hour

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3	Ø6
Lane Configurations								
Traffic Volume (vph)	209	1843	2282	314	207	314		
Future Volume (vph)	209	1843	2282	314	207	314		
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov		
Protected Phases	1		2		8	8 1	3	6
Permitted Phases		Free		2				
Detector Phase	1		2	2	8	8 1		
Switch Phase								
Minimum Initial (s)	7.0		4.0	4.0	7.0		7.0	4.0
Minimum Split (s)	13.8		28.8	28.8	13.0		24.0	28.8
Total Split (s)	33.0		64.0	64.0	33.0		33.0	97.0
Total Split (%)	25.4%		49.2%	49.2%	25.4%		25%	75%
Yellow Time (s)	4.8		4.8	4.8	4.0		4.0	4.8
All-Red Time (s)	2.0		2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0			
Total Lost Time (s)	6.8		6.8	6.8	6.0			
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None		C-Max	C-Max	None		None	C-Max

Intersection Summary







Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 72 (55%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 7: NE 163rd Street & Intracoastal Mall Driveway















Queues
7: NE 163rd Street & Intracoastal Mall Driveway

Future Total Conditions with Improvements
P.M. Peak Hour

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	222	1961	2428	334	220	334
v/c Ratio	0.62	0.39	0.78	0.41	0.77	0.29
Control Delay	69.8	0.2	31.0	12.9	69.5	25.0
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	69.8	0.2	31.1	12.9	69.5	25.0
Queue Length 50th (ft)	183	0	505	86	179	100
Queue Length 95th (ft)	272	0	578	172	256	132
Internal Link Dist (ft)		434	283		23	
Turn Bay Length (ft)	250			155		
Base Capacity (vph)	371	5085	3107	808	367	1166
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	96	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.39	0.81	0.41	0.60	0.29
Intersection Summary						

HCM Signalized Intersection Capacity Analysis 7: NE 163rd Street & Intracoastal Mall Driveway

Future Total Conditions with Improvements
P.M. Peak Hour

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	209	1843	2282	314	207	314
Future Volume (vph)	209	1843	2282	314	207	314
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	4.0	6.8	6.8	6.0	6.0
Lane Util. Factor	1.00	0.91	0.86	1.00	1.00	0.88
Frbp, ped/bikes	1.00	1.00	1.00	0.94	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	5085	6408	1490	1770	2787
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	5085	6408	1490	1770	2787
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	222	1961	2428	334	220	334
RTOR Reduction (vph)	0	0	0	86	0	0
Lane Group Flow (vph)	222	1961	2428	248	220	334
Confl. Peds. (#/hr)				12		
Confl. Bikes (#/hr)				6		
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	1		2		8	8 1
Permitted Phases		Free		2		
Actuated Green, G (s)	26.3	130.0	63.1	63.1	21.0	53.3
Effective Green, g (s)	26.3	130.0	63.1	63.1	21.0	53.3
Actuated g/C Ratio	0.20	1.00	0.49	0.49	0.16	0.41
Clearance Time (s)	6.8		6.8	6.8	6.0	
Vehicle Extension (s)	3.0		1.0	1.0	3.0	
Lane Grp Cap (vph)	358	5085	3110	723	285	1142
v/s Ratio Prot	c0.13		c0.38		c0.12	0.12
v/s Ratio Perm		0.39		0.17		
v/c Ratio	0.62	0.39	0.78	0.34	0.77	0.29
Uniform Delay, d1	47.3	0.0	27.7	20.6	52.2	25.7
Progression Factor	1.32	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2	2.0	1.3	12.2	0.1
Delay (s)	65.5	0.2	29.7	21.9	64.4	25.9
Level of Service	E	A	C	C	E	C
Approach Delay (s)		6.8	28.8		41.2	
Approach LOS		A	C		D	
Intersection Summary						
HCM 2000 Control Delay			21.3		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.74			
Actuated Cycle Length (s)			130.0		Sum of lost time (s)	19.6
Intersection Capacity Utilization			72.4%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Timings
8: NE 35th Avenue & NE 164th Street

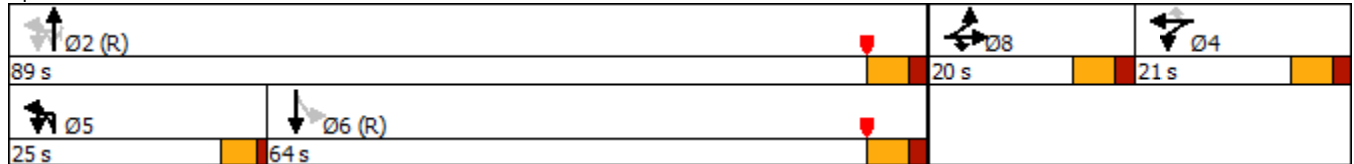
Future Total Conditions with Improvements
P.M. Peak Hour

Lane Group	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	7	44	274	1	95	70	67	413	347	60	264
Future Volume (vph)	7	44	274	1	95	70	67	413	347	60	264
Turn Type	NA	Prot	Split	NA	Perm	pm+pt	pm+pt	NA	Perm	Perm	NA
Protected Phases	8	8	4	4		5	5	2			6
Permitted Phases					4	2	2		2	6	
Detector Phase	8	8	4	4	4	5	5	2	2	6	6
Switch Phase											
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.0	13.0	16.0	16.0	16.0	9.5	9.5	21.0	21.0	21.0	21.0
Total Split (s)	20.0	20.0	21.0	21.0	21.0	25.0	25.0	89.0	89.0	64.0	64.0
Total Split (%)	15.4%	15.4%	16.2%	16.2%	16.2%	19.2%	19.2%	68.5%	68.5%	49.2%	49.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.5	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	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)	6.0	6.0	6.0	6.0	6.0		4.5	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead			Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 19 (15%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 8: NE 35th Avenue & NE 164th Street

























HCM Signalized Intersection Capacity Analysis

8: NE 35th Avenue & NE 164th Street

Future Total Conditions with Improvements

P.M. Peak Hour

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	
Lane Configurations													
Traffic Volume (vph)	3	7	44	274	1	95	70	67	413	347	60	264	
Future Volume (vph)	3	7	44	274	1	95	70	67	413	347	60	264	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0	6.0	6.0	6.0	6.0		4.5	6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes		1.00	1.00	1.00	1.00	0.97		1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99	1.00	0.95	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1838	1583	1681	1686	1540		1768	3539	1560	1767	3537	
Flt Permitted		0.99	1.00	0.95	0.95	1.00		0.54	1.00	1.00	0.49	1.00	
Satd. Flow (perm)		1838	1583	1681	1686	1540		1005	3539	1560	907	3537	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	3	8	49	304	1	106	78	74	459	386	67	293	
RTOR Reduction (vph)	0	0	47	0	0	92	0	0	0	121	0	0	
Lane Group Flow (vph)	0	11	2	152	153	14	0	152	459	265	67	294	
Confl. Peds. (#/hr)	4					4		7		6	6		
Confl. Bikes (#/hr)													
Turn Type	Split	NA	Prot	Split	NA	Perm	pm+pt	pm+pt	NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4		5	5	2			6	
Permitted Phases						4	2	2		2	6		
Actuated Green, G (s)		5.6	5.6	17.0	17.0	17.0		89.4	89.4	89.4	75.6	75.6	
Effective Green, g (s)		5.6	5.6	17.0	17.0	17.0		89.4	89.4	89.4	75.6	75.6	
Actuated g/C Ratio		0.04	0.04	0.13	0.13	0.13		0.69	0.69	0.69	0.58	0.58	
Clearance Time (s)		6.0	6.0	6.0	6.0	6.0		4.5	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		2.5	2.5	2.5	2.5	2.5		3.0	1.0	1.0	1.0	1.0	
Lane Grp Cap (vph)		79	68	219	220	201		745	2433	1072	527	2056	
v/s Ratio Prot		c0.01	0.00	0.09	c0.09			0.01	0.13			0.08	
v/s Ratio Perm						0.01		0.13		c0.17	0.07		
v/c Ratio		0.14	0.03	0.69	0.70	0.07		0.20	0.19	0.25	0.13	0.14	
Uniform Delay, d1		59.9	59.6	54.0	54.0	49.6		7.0	7.3	7.6	12.3	12.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00		0.47	0.50	2.03	1.00	1.00	
Incremental Delay, d2		0.6	0.1	8.5	8.5	0.1		0.1	0.1	0.4	0.5	0.1	
Delay (s)		60.5	59.7	62.5	62.5	49.7		3.4	3.8	16.0	12.8	12.6	
Level of Service		E	E	E	E	D		A	A	B	B	B	
Approach Delay (s)		59.9			59.2				8.4			12.6	
Approach LOS		E			E				A			B	
Intersection Summary													
HCM 2000 Control Delay			22.3									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.32										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	22.5
Intersection Capacity Utilization			55.5%									ICU Level of Service	B
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 8: NE 35th Avenue & NE 164th Street

Future Total Conditions with Improvements
 P.M. Peak Hour

Movement	SBR
Approach	
Lane Configurations	
Traffic Volume (vph)	1
Future Volume (vph)	1
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	1
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	7
Confl. Bikes (#/hr)	3
Control	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Performance	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM 6th TWSC
 9: NE 35th Avenue & Intracoastal Mall North Drive

Future Total Conditions with Improvements
 P.M. Peak Hour

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑↑			↑↑
Traffic Vol, veh/h	9	9	535	26	0	375
Future Vol, veh/h	9	9	535	26	0	375
Conflicting Peds, #/hr	0	0	0	12	12	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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	10	588	29	0	412

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	821	321	0
Stage 1	615	-	-
Stage 2	206	-	-
Critical Hdwy	5	5	-
Critical Hdwy Stg 1	6.64	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3	3	-
Pot Cap-1 Maneuver	530	876	0
Stage 1	493	-	0
Stage 2	935	-	0
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	524	866	-
Mov Cap-2 Maneuver	524	-	-
Stage 1	488	-	-
Stage 2	935	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	653
HCM Lane V/C Ratio	-	-	0.03
HCM Control Delay (s)	-	-	10.7
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

HCM 6th TWSC
 10: NE 35th Avenue & South Intracoastal Mall Driveway

Future Total Conditions with Improvements
 P.M. Peak Hour

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑	↑↑↑			↑↑
Traffic Vol, veh/h	0	70	829	73	0	758
Future Vol, veh/h	0	70	829	73	0	758
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	901	79	0	824

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	490	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	5	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3	-
Pot Cap-1 Maneuver	0	740	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	740	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	740
HCM Lane V/C Ratio	-	-	0.103
HCM Control Delay (s)	-	-	10.4
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.3

Appendix L

Signal Warrant Analysis

Pagone's Theorem			
Situation	Approach Configuration	Condition	Reduction of right turns
1	Shared left/through right	$R > 0.7A$	Reduce R by 60 percent
		$0.7A \geq R > 0.35A$	Reduce R by 30 percent
		$R \leq 0.35A$	Reduce R by 20 percent
2	Exclusive left, shared through/right	$R > 3T$	Reduce R by 60 percent
		$3T \geq R \geq T/3$	Reduce R by 30 percent
		$R \leq T/3$	Reduce R by 20 percent
3	Any configuration with an exclusive right turn lane (usually ≥ 600 feet long)		Reduce R by 75 percent in all cases
4	Shared left/through and shared through/right	$R > (T+L)$	Reduce R by 65 percent
		$L > (T+R)$	Use Situation 2
		$L = T = R (\pm 10 \text{ vehicles})$	Reduce R by 40 percent
		$L = T > 3R$	Reduce R by 20 percent
		$R = T > 3L$	Reduce R by 50 percent
		All other cases	Reduce R by 30 percent
5	Exclusive left, exclusive through and shared through/right	$R > T$	Reduce R by 75 percent
		$T \geq R \geq T/2$	Reduce R by 50 percent
		$T/2 \geq R > T/4$	Reduce R by 30 percent
		$R \leq T/4$	Reduce R by 15 percent

Hour	Raw Existing TMCs						
	Southbound (Project Driveway)		Eastbound (Turbo Lanes) ⁽¹⁾ (SR 826/NE 163rd Street)	Westbound (SR 826/NE 163rd Street)		Major Street	Highest Minor
	Start - End	SBL	SBR	EBT	WBT		
12:00 AM - 1:00 AM					418	418	0
1:00 AM - 2:00 AM					189	189	0
2:00 AM - 3:00 AM					100	100	0
3:00 AM - 4:00 AM					84	84	0
4:00 AM - 5:00 AM					101	101	0
5:00 AM - 6:00 AM					216	216	0
6:00 AM - 7:00 AM					546	546	0
7:00 AM - 8:00 AM					1,081	1,081	0
8:00 AM - 9:00 AM					1,461	1,461	0
9:00 AM - 10:00 AM					1,373	1,373	0
10:00 AM - 11:00 AM					1,338	1,338	0
11:00 AM - 12:00 PM					1,461	1,461	0
12:00 PM - 1:00 PM					1,529	1,529	0
1:00 PM - 2:00 PM					1,570	1,570	0
2:00 PM - 3:00 PM					1,612	1,612	0
3:00 PM - 4:00 PM					2,079	2,079	0
4:00 PM - 5:00 PM					2,195	2,195	0
5:00 PM - 6:00 PM					2,057	2,057	0
6:00 PM - 7:00 PM					1,711	1,711	0
7:00 PM - 8:00 PM					1,437	1,437	0
8:00 PM - 9:00 PM					1,183	1,183	0
9:00 PM - 10:00 PM					956	956	0
10:00 PM - 11:00 PM					761	761	0
11:00 PM - 12:00 AM					744	744	0

Hour	Future Background 2031 TMCs, PSCF = 1.03, Growth = 1.10%						
	Southbound (Project Driveway)		Eastbound (Turbo Lanes) ⁽¹⁾ (SR 826/NE 163rd Street)	Westbound (SR 826/NE 163rd Street)		Major Street	Highest Minor
	Start - End	SBL	SBR	EBT	WBT		
12:00 AM - 1:00 AM					487	487	0
1:00 AM - 2:00 AM					220	220	0
2:00 AM - 3:00 AM					117	117	0
3:00 AM - 4:00 AM					98	98	0
4:00 AM - 5:00 AM					118	118	0
5:00 AM - 6:00 AM					252	252	0
6:00 AM - 7:00 AM					637	637	0
7:00 AM - 8:00 AM					1,260	1,260	0
8:00 AM - 9:00 AM					1,703	1,703	0
9:00 AM - 10:00 AM					1,601	1,601	0
10:00 AM - 11:00 AM					1,560	1,560	0
11:00 AM - 12:00 PM					1,703	1,703	0
12:00 PM - 1:00 PM					1,783	1,783	0
1:00 PM - 2:00 PM					1,831	1,831	0
2:00 PM - 3:00 PM					1,880	1,880	0
3:00 PM - 4:00 PM					2,424	2,424	0
4:00 PM - 5:00 PM					2,559	2,559	0
5:00 PM - 6:00 PM					2,398	2,398	0
6:00 PM - 7:00 PM					1,995	1,995	0
7:00 PM - 8:00 PM					1,675	1,675	0
8:00 PM - 9:00 PM					1,379	1,379	0
9:00 PM - 10:00 PM					1,115	1,115	0
10:00 PM - 11:00 PM					887	887	0
11:00 PM - 12:00 AM					867	867	0

Notes: ⁽¹⁾ Not accounted for as approach operates under free flow conditions

Hour	Project Traffic							Major Street	Highest Minor
	Southbound (Project Driveway)		Eastbound (Turbo Lanes) ⁽¹⁾ (SR 826/NE 163rd Street)	Westbound (SR 826/NE 163rd Street)		Major Street	Highest Minor		
	Start - End	SBL	SBR	EBT	WBT				
12:00 AM - 1:00 AM	6	12			3	7	10	18	
1:00 AM - 2:00 AM	4	7			2	4	6	11	
2:00 AM - 3:00 AM	3	5			1	3	4	8	
3:00 AM - 4:00 AM	4	7			2	4	6	11	
4:00 AM - 5:00 AM	5	11			2	6	8	16	
5:00 AM - 6:00 AM	12	23			5	12	17	35	
6:00 AM - 7:00 AM	26	51			11	28	39	77	
7:00 AM - 8:00 AM	66	131			28	71	99	197	
8:00 AM - 9:00 AM	111	223			34	84	118	334	
9:00 AM - 10:00 AM	47	94			20	51	71	141	
10:00 AM - 11:00 AM	35	71			15	38	53	106	
11:00 AM - 12:00 PM	47	94			20	51	71	141	
12:00 PM - 1:00 PM	65	131			34	84	118	196	
1:00 PM - 2:00 PM	56	111			29	72	101	167	
2:00 PM - 3:00 PM	69	138			36	89	125	207	
3:00 PM - 4:00 PM	75	150			39	97	136	225	
4:00 PM - 5:00 PM	92	184			47	119	166	276	
5:00 PM - 6:00 PM	132	264			40	100	140	396	
6:00 PM - 7:00 PM	96	191			49	123	172	287	
7:00 PM - 8:00 PM	69	138			36	89	125	207	
8:00 PM - 9:00 PM	62	124			32	80	112	186	
9:00 PM - 10:00 PM	44	87			22	56	78	131	
10:00 PM - 11:00 PM	35	70			18	45	63	105	
11:00 PM - 12:00 AM	15	29			7	19	26	44	

Hour	Future Total 2031 TMCs							Including Pagone's Reduction			
	Southbound (Project Driveway)		Eastbound (Turbo Lanes) ⁽¹⁾ (SR 826/NE 163rd Street)	Westbound (SR 826/NE 163rd Street)		Major Street	Highest Minor	Pagone's Reduction	Major Street	Highest Minor	
	Start - End	SBL	SBR	EBT	WBT						WBR
12:00 AM - 1:00 AM	6	12			490	7	497	19	75%	497	9
1:00 AM - 2:00 AM	4	7			222	4	226	11	75%	226	5
2:00 AM - 3:00 AM	3	5			118	3	121	8	75%	121	4
3:00 AM - 4:00 AM	4	7			99	4	103	11	75%	103	5
4:00 AM - 5:00 AM	5	11			120	6	126	16	75%	126	8
5:00 AM - 6:00 AM	12	23			257	12	269	35	75%	269	17
6:00 AM - 7:00 AM	26	51			648	28	675	77	75%	675	39
7:00 AM - 8:00 AM	66	131			1,289	71	1,360	197	75%	1,360	98
8:00 AM - 9:00 AM	111	223			1,737	84	1,821	334	75%	1,821	167
9:00 AM - 10:00 AM	47	94			1,621	51	1,672	141	75%	1,672	70
10:00 AM - 11:00 AM	35	71			1,575	38	1,614	106	75%	1,614	53
11:00 AM - 12:00 PM	47	94			1,724	51	1,774	141	75%	1,774	70
12:00 PM - 1:00 PM	65	131			1,816	84	1,901	196	75%	1,901	98
1:00 PM - 2:00 PM	56	111			1,859	72	1,931	167	75%	1,931	84
2:00 PM - 3:00 PM	69	138			1,915	89	2,004	207	75%	2,004	104
3:00 PM - 4:00 PM	75	150			2,463	97	2,560	225	75%	2,560	113
4:00 PM - 5:00 PM	92	184			2,607	119	2,725	276	75%	2,725	138
5:00 PM - 6:00 PM	132	264			2,438	100	2,539	396	75%	2,539	198
6:00 PM - 7:00 PM	96	191			2,044	123	2,168	287	75%	2,168	144
7:00 PM - 8:00 PM	69	138			1,711	89	1,800	207	75%	1,800	104
8:00 PM - 9:00 PM	62	124			1,411	80	1,491	185	75%	1,491	93
9:00 PM - 10:00 PM	44	87			1,137	56	1,193	131	75%	1,193	65
10:00 PM - 11:00 PM	35	70			905	45	951	105	75%	951	53
11:00 PM - 12:00 AM	15	29			875	19	894	44	75%	894	22

Notes: ⁽¹⁾ Not accounted for as approach operates under free flow conditions

DAILY TRIP GENERATION COMPARISON

EXISTING DAILY TRIP GENERATION

ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		BASELINE TRIPS			MULTIMODAL REDUCTION		GROSS TRIPS			INTERNAL CAPTURE		EXTERNAL VEHICLE 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																			
1 Shopping Center	10	820	189,026	ksf	50%	50%	4,635	4,634	9,269	10.0%	927	4,171	4,171	8,342	0.0%	0	4,171	4,171	8,342	0.0%	0	4,171	4,171	8,342	
2 Supermarket	10	850	45	ksf	50%	50%	2,201	2,202	4,403	10.0%	440	1,981	1,982	3,963	0.0%	0	1,981	1,982	3,963	0.0%	0	1,981	1,982	3,963	
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									
13																									
14																									
15																									
ITE Land Use Code							Rate or Equation		Total:			6,836	6,836	13,672	10.0%	1,367	6,152	6,153	12,305	0.0%	0	6,152	6,153	12,305	
820							LN(Y) = 0.68*LN(X)+5.57																		
850							Y=70.89*(X)+1212.64																		

PROPOSED DAILY TRIP GENERATION

ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		BASELINE TRIPS			MULTIMODAL REDUCTION		GROSS TRIPS			INTERNAL CAPTURE		EXTERNAL VEHICLE 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																			
1 General Office Building	10	710	200	ksf	50%	50%	1,039	1,039	2,078	15.0%	312	883	883	1,766	28.6%	505	603	658	1,261	0.0%	0	603	658	1,261	
2 Shopping Center	10	820	280	ksf	50%	50%	6,054	6,054	12,108	15.0%	1,816	5,146	5,146	10,292	16.6%	1,704	4,288	4,300	8,588	0.0%	0	4,288	4,300	8,588	
3 Supermarket	10	850	50	ksf	50%	50%	2,379	2,378	4,757	15.0%	713	2,022	2,022	4,044	16.6%	670	1,684	1,690	3,374	0.0%	0	1,684	1,690	3,374	
4 Health/Fitness Club	10	492	45	ksf	50%	50%	862	863	1,725	15.0%	259	733	733	1,466	14.6%	213	638	615	1,253	0.0%	0	638	615	1,253	
5 Multifamily Housing (High-Rise)	10	222	1917	du	50%	50%	3,883	3,882	7,765	15.0%	1,165	3,300	3,300	6,600	25.6%	1,690	2,469	2,441	4,910	0.0%	0	2,469	2,441	4,910	
6 Multifamily (Mid-Rise)	10	221	48	du	50%	50%	129	130	259	15.0%	39	110	110	220	25.6%	56	82	82	164	0.0%	0	82	82	164	
7 Multifamily Housing (Low-Rise)	10	220	35	du	50%	50%	112	112	224	15.0%	34	95	95	190	25.6%	49	71	70	141	0.0%	0	71	70	141	
8 Hotel	10	310	250	room	50%	50%	1,198	1,198	2,396	15.0%	359	1,018	1,019	2,037	15.3%	311	873	853	1,726	0.0%	0	873	853	1,726	
9																									
10																									
11																									
12																									
13																									
14																									
15																									
ITE Land Use Code							Rate or Equation		Total:			15,656	15,656	31,312	15.0%	4,697	13,307	13,308	26,615	19.5%	5,198	10,708	10,709	21,417	
710							LN(Y) = 0.97*LN(X)+2.5																		
820							LN(Y) = 0.68*LN(X)+5.57																		
850							Y=70.89*(X)+1212.64																		
492							Y=38.33(X)																		
222							Y=3.94*(X)+211.81																		
221							Y=5.44*(X)+-1.75																		
220							Y=7.56*(X)+40.86																		
310							Y=11.29*(X)+426.97																		

NET NEW TRIPS	IN	OUT	TOTAL
4,556	4,556	9,112	9,112

Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour
based on the *Trip Generation Handbook*, 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

SUMMARY (PROPOSED)

GROSS TRIP GENERATION							
INPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	883	883	156	26	30	157
Retail	7,168	7,168	237	149	677	708	
Restaurant	0	0	0	0	0	0	
Cinema/Entertainment	733	733	25	25	71	54	
Residential	3,505	3,505	118	379	366	234	
Hotel	1,018	1,019	60	42	70	67	
	13,307	13,308	596	621	1,214	1,220	
INTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	280	225	16	7	19	34
Retail	1,196	1,178	17	8	121	207	
Restaurant	0	0	0	0	0	0	
Cinema/Entertainment	95	118	0	0	18	17	
Residential	883	912	2	9	175	84	
Hotel	145	166	0	11	20	11	
	2,599	2,599	35	35	353	353	
OUTPUT	Total % Reduction	19.5%		5.8%		29.0%	
	Office	28.6%		12.6%		28.3%	
	Retail	16.6%		6.5%		23.7%	
	Restaurant						
	Cinema/Entertainment	14.5%		0.0%		28.0%	
	Residential	25.6%		2.2%		43.2%	
	Hotel	15.3%		10.8%		22.6%	
EXTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	603	658	140	19	11	123
Retail	5,972	5,990	220	141	556	501	
Restaurant	0	0	0	0	0	0	
Cinema/Entertainment	638	615	25	25	53	37	
Residential	2,622	2,593	116	370	191	150	
Hotel	873	853	60	31	50	56	
	10,708	10,709	561	586	861	867	

Daily Trip Distribution

Hourly distribution derived from ITE Trip Generation 10th Edition

	LUC 220				LUC 221				LUC 222 ⁽¹⁾				LUC 310				LUC 492 ⁽²⁾				LUC 710				LUC 820				LUC 850			
	% Ins of Daily	% Outs of Daily	% Ins of Ins	% Outs of Outs	% Ins of Daily	% Outs of Daily	% Ins of Ins	% Outs of Outs	% Ins of Daily	% Outs of Daily	% Ins of Ins	% Outs of Outs	% Ins of Daily	% Outs of Daily	% Ins of Ins	% Outs of Outs	% Ins of Daily	% Outs of Daily	% Ins of Ins	% Outs of Outs	% Ins of Daily	% Outs of Daily	% Ins of Ins	% Outs of Outs	% Ins of Daily	% Outs of Daily	% Ins of Ins	% Outs of Outs	% Ins of Daily	% Outs of Daily	% Ins of Ins	% Outs of Outs
0:00	0.2%	0.5%	0.33%	1.06%	0.1%	0.4%	0.26%	0.73%	0.1%	0.4%	0.25%	0.74%	0.6%	0.5%	1.20%	0.98%	0.1%	0.0%	0.09%	0.11%	0.1%	0.0%	0.20%	0.02%	0.1%	0.1%	0.24%	0.16%	0.0%	0.0%	0.00%	0.00%
1:00	0.1%	0.3%	0.2%	0.60%	0.1%	0.2%	0.2%	0.44%	0.1%	0.2%	0.1%	0.44%	0.0%	0.0%	0.0%	0.00%	0.0%	0.0%	0.0%	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.08%	0.0%	0.0%	0.0%
2:00	0.1%	0.2%	0.1%	0.45%	0.1%	0.1%	0.1%	0.29%	0.0%	0.2%	0.1%	0.30%	0.2%	0.1%	0.3%	0.27%	0.0%	0.0%	0.0%	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%	0.0%	0.0%	0.0%	
3:00	0.1%	0.3%	0.2%	0.60%	0.1%	0.2%	0.2%	0.44%	0.1%	0.2%	0.1%	0.44%	0.7%	0.5%	1.3%	1.07%	0.0%	0.0%	0.0%	0.00%	0.1%	0.0%	0.2%	0.02%	0.0%	0.0%	0.0%	0.00%	0.0%	0.0%	0.0%	
4:00	0.1%	0.5%	0.3%	0.91%	0.1%	0.4%	0.3%	0.73%	0.1%	0.4%	0.2%	0.74%	1.2%	0.9%	2.3%	1.87%	0.4%	0.3%	0.7%	0.76%	0.2%	0.0%	0.4%	0.05%	0.0%	0.0%	0.0%	0.00%	0.0%	0.0%	0.0%	
5:00	0.3%	1.0%	0.6%	1.97%	0.4%	1.3%	0.9%	2.48%	0.4%	1.3%	0.8%	2.51%	1.2%	0.8%	2.2%	1.78%	1.2%	1.1%	2.1%	2.50%	0.2%	0.0%	0.4%	0.05%	0.1%	0.0%	0.1%	0.08%	0.0%	0.0%	0.0%	
6:00	0.7%	2.2%	1.4%	4.39%	1.0%	3.0%	2.1%	5.84%	1.0%	3.0%	2.0%	5.92%	1.7%	1.2%	3.2%	2.58%	2.0%	1.9%	3.6%	4.24%	1.9%	0.3%	4.4%	0.54%	0.1%	0.1%	0.2%	0.16%	0.4%	0.2%	0.7%	0.51%
7:00	1.7%	5.7%	3.5%	11.19%	2.0%	5.6%	4.0%	10.94%	1.8%	5.7%	3.7%	11.09%	2.7%	1.9%	5.0%	4.09%	2.3%	2.3%	4.3%	5.00%	6.0%	1.0%	14.1%	1.71%	0.7%	0.4%	1.3%	0.85%	1.9%	1.2%	3.5%	2.66%
8:00	1.4%	4.9%	3.0%	9.53%	1.6%	4.6%	3.3%	9.05%	1.5%	4.7%	3.1%	9.17%	3.7%	2.5%	6.8%	5.52%	3.5%	3.3%	6.3%	7.39%	7.6%	1.2%	17.7%	2.15%	1.2%	0.8%	2.4%	1.55%	3.2%	2.2%	6.1%	4.63%
9:00	1.2%	4.1%	2.5%	8.01%	1.1%	3.2%	2.3%	6.27%	1.0%	3.3%	2.1%	6.36%	4.0%	2.7%	7.3%	5.96%	3.4%	3.2%	6.1%	7.17%	4.6%	0.8%	10.8%	1.32%	2.2%	1.4%	4.4%	2.80%	3.2%	2.1%	6.0%	4.54%
10:00	0.9%	3.1%	1.9%	6.05%	1.0%	2.7%	2.0%	5.40%	0.9%	2.8%	1.8%	5.47%	3.5%	2.5%	6.6%	5.34%	2.9%	2.8%	5.3%	6.19%	5.1%	0.8%	11.9%	1.44%	3.5%	2.1%	6.8%	4.35%	3.1%	2.1%	5.8%	4.45%
11:00	1.2%	4.1%	2.5%	8.01%	1.2%	3.3%	2.4%	6.57%	1.1%	3.4%	2.2%	6.65%	2.3%	1.6%	4.3%	3.47%	2.7%	2.5%	4.8%	5.65%	7.2%	1.2%	16.9%	2.06%	5.1%	3.2%	10.1%	6.45%	4.0%	2.6%	7.4%	5.65%
12:00	3.4%	2.0%	6.9%	3.92%	2.9%	1.8%	5.8%	3.61%	2.9%	1.8%	5.9%	3.57%	2.3%	2.3%	4.3%	4.89%	3.4%	2.5%	6.1%	5.62%	1.7%	8.7%	3.9%	15.28%	4.8%	5.2%	9.4%	10.63%	3.7%	3.6%	7.0%	7.66%
1:00	2.9%	1.7%	5.9%	3.34%	2.7%	1.7%	5.5%	3.38%	2.7%	1.7%	5.5%	3.34%	2.3%	2.3%	4.3%	4.89%	1.4%	1.1%	2.6%	2.38%	1.3%	6.9%	3.1%	12.04%	4.5%	4.8%	8.8%	9.88%	3.7%	3.6%	7.0%	7.66%
2:00	3.6%	2.1%	7.3%	4.14%	3.3%	2.1%	6.7%	4.15%	3.3%	2.1%	6.8%	4.10%	3.1%	2.9%	5.7%	6.38%	1.8%	1.3%	3.2%	2.95%	1.2%	6.3%	2.8%	11.02%	4.3%	4.7%	8.5%	9.57%	3.7%	3.6%	7.0%	7.66%
3:00	3.9%	2.3%	8.0%	4.50%	3.5%	2.3%	7.2%	4.46%	3.5%	2.3%	7.3%	4.40%	4.2%	4.0%	7.7%	8.72%	3.3%	2.5%	6.0%	5.53%	1.2%	6.2%	2.8%	10.87%	4.2%	4.6%	8.3%	9.35%	4.1%	4.0%	7.7%	8.50%
4:00	4.8%	2.8%	9.8%	5.52%	5.1%	3.2%	10.3%	6.38%	5.1%	3.2%	10.5%	6.30%	3.6%	3.4%	6.6%	7.44%	4.1%	3.1%	7.5%	6.86%	1.6%	8.5%	3.8%	14.83%	4.4%	4.8%	8.7%	9.78%	5.3%	5.1%	9.9%	10.91%
5:00	5.7%	3.4%	11.7%	6.61%	6.2%	3.9%	12.6%	7.77%	6.2%	3.9%	12.7%	7.66%	3.6%	3.5%	6.7%	7.55%	7.0%	5.3%	12.8%	11.72%	1.7%	8.7%	3.9%	15.28%	4.5%	4.8%	8.8%	9.88%	5.1%	4.9%	9.5%	10.49%
6:00	5.0%	2.9%	10.2%	5.74%	4.8%	3.1%	9.8%	6.07%	4.8%	3.1%	10.0%	6.00%	2.8%	2.6%	5.1%	5.74%	4.8%	3.7%	8.8%	8.10%	0.4%	2.0%	0.9%	3.53%	3.8%	4.2%	7.5%	8.50%	4.6%	4.4%	8.6%	9.45%
7:00	3.6%	2.1%	7.3%	4.14%	3.8%	2.5%	7.8%	4.84%	3.8%	2.5%	7.9%	4.78%	1.8%	1.8%	3.4%	3.83%	5.6%	4.3%	10.3%	9.44%	0.3%	1.4%	0.6%	2.50%	2.9%	3.2%	5.8%	6.48%	3.2%	3.0%	5.9%	6.51%
8:00	3.2%	1.9%	6.6%	3.71%	3.1%	2.0%	6.3%	3.92%	3.1%	2.0%	6.4%	3.87%	1.4%	1.4%	2.6%	2.98%	3.1%	2.3%	5.6%	5.15%	0.2%	0.8%	0.4%	1.47%	2.1%	2.3%	4.2%	4.68%	2.0%	2.0%	3.8%	4.20%
9:00	2.3%	1.3%	4.6%	2.62%	2.4%	1.5%	4.8%	3.00%	2.4%	1.5%	4.9%	2.96%	2.4%	2.3%	4.4%	5.00%	1.7%	1.3%	3.1%	2.86%	0.2%	0.8%	0.4%	1.47%	1.4%	1.5%	2.7%	3.08%	2.1%	2.0%	3.9%	4.30%
10:00	1.8%	1.1%	3.7%	2.11%	1.6%	1.1%	3.4%	2.08%	1.6%	1.1%	3.4%	2.05%	2.9%	2.7%	5.3%	5.95%	0.2%	0.1%	0.3%	0.29%	0.2%	1.0%	0.4%	1.76%	0.5%	0.6%	1.0%	1.17%	0.1%	0.1%	0.2%	0.21%
11:00	0.8%	0.4%	1.5%	0.87%	0.9%	0.6%	1.9%	1.15%	0.9%	0.6%	1.9%	1.14%	1.8%	1.7%	3.3%	3.72%	0.1%	0.0%	0.1%	0.10%	0.1%	0.3%	0.1%	0.59%	0.2%	0.3%	0.5%	0.53%	0.0%	0.0%	0.0%	0.00%
Total	49.0%	50.9%	100.00%	100.00%	49.1%	50.7%	100.00%	100.00%	48.4%	51.4%	100.00%	100.00%	54.0%	46.1%	100.00%	100.00%	54.8%	45.1%	100.00%	100.00%	42.8%	57.2%	100.00%	100.00%	50.9%	48.9%	100.00%	100.00%	53.4%	46.7%	100.00%	100.00%
AM Directional	23%	77%			26%	74%			24%	76%			59%	41%			51%	49%			86%	14%			62%	38%			60%	40%		
PM Directional	63%	37%			61%	39%			61%	39%			51%	49%			57%	43%			16%	84%			48%	52%			51%	49%		

Notes: ⁽¹⁾ Based on distribution for LUC 221 as distribution for LUC 222 is unavailable

⁽²⁾ Based on distribution for LUC 495 as distribution for LUC 492 is unavailable

LUC 220 Daily Total Applied to Peak Hour Traffic Hourly Distribution

Daily Trips Generated: 141

In: 71

Out: 70

		Hourly Distribution ⁽¹⁾		Adjusted Hourly Dist. ⁽⁴⁾		Total Project Trips ⁽⁸⁾		
		Ins	Outs	Ins	Outs	Ins	Outs	Total
12:00 AM	1:00 AM	0.33%	1.06%	0.34%	0.96%	0	1	1
1:00 AM	2:00 AM	0.19%	0.60%	0.19%	0.55%	0	0	1
2:00 AM	3:00 AM	0.14%	0.45%	0.14%	0.41%	0	0	0
3:00 AM	4:00 AM	0.19%	0.60%	0.19%	0.55%	0	0	1
4:00 AM	5:00 AM	0.28%	0.91%	0.29%	0.82%	0	1	1
5:00 AM	6:00 AM	0.61%	1.97%	0.62%	1.77%	0	1	2
6:00 AM	7:00 AM	1.36%	4.39%	1.39%	3.96%	1	3	4
7:00 AM	8:00 AM	3.48%	11.19%	3.56%	10.10%	3	7	10
8:00 AM	9:00 AM	2.96%	9.53%	4.23%	17.14%	3	12	15
9:00 AM	10:00 AM	2.49%	8.01%	2.55%	7.24%	2	5	7
10:00 AM	11:00 AM	1.88%	6.05%	1.92%	5.46%	1	4	5
11:00 AM	12:00 PM	2.49%	8.01%	2.55%	7.24%	2	5	7
12:00 PM	1:00 PM	6.95%	3.92%	7.11%	3.54%	5	2	8
1:00 PM	2:00 PM	5.92%	3.34%	6.05%	3.02%	4	2	6
2:00 PM	3:00 PM	7.33%	4.14%	7.50%	3.74%	5	3	8
3:00 PM	4:00 PM	7.98%	4.50%	8.16%	4.07%	6	3	9
4:00 PM	5:00 PM	9.78%	5.52%	10.00%	4.99%	7	3	11
5:00 PM	6:00 PM	11.71%	6.61%	8.45%	7.14%	6	5	11
6:00 PM	7:00 PM	10.16%	5.74%	10.40%	5.18%	7	4	11
7:00 PM	8:00 PM	7.33%	4.14%	7.50%	3.74%	5	3	8
8:00 PM	9:00 PM	6.56%	3.71%	6.71%	3.35%	5	2	7
9:00 PM	10:00 PM	4.63%	2.62%	4.74%	2.36%	3	2	5
10:00 PM	11:00 PM	3.73%	2.11%	3.82%	1.90%	3	1	4
11:00 PM	12:00 AM	1.54%	0.87%	1.58%	0.79%	1	1	2
Total		100.00%	100.00%	100.00%	100.00%			
Peak Total ⁽⁵⁾		14.66%	16.14%	12.68%	24.29%			
Non Peak Total ⁽⁶⁾		85.34%	83.86%	87.32%	75.71%			
Peak Difference ⁽⁷⁾		-	-	-1.99%	8.15%			

- Notes:
- ⁽¹⁾ Hourly distribution derived from ITE Trip Generation 10th Edition
 - ⁽²⁾ Peak Hour volumes obtained from Trip Generation Calculations
 - ⁽³⁾ Adjusted Hourly Distribution for peak hours calculated using peak and daily trip generation
 - ⁽⁴⁾ Adjusted Hourly Distribution for non peak hours calculated by proportionally distributing the peak difference
 - ⁽⁵⁾ Peak Hour percentages
 - ⁽⁶⁾ Summation of all non peak hours
 - ⁽⁷⁾ Difference of PM peaks of ITE Hourly Distribution and the the peaks calculated using trip generation volumes
 - ⁽⁸⁾ Adjusted trips calculated with adjusted hourly distribution and daily trips

LUC 221 Daily Total Applied to Peak Hour Traffic Hourly Distribution

Daily Trips Generated: **164**

In: **82**

Out: **82**

		Hourly Distribution ⁽¹⁾		Adjusted Hourly Dist. ⁽⁴⁾		Total Project Trips ⁽⁸⁾		
		Ins	Outs	Ins	Outs	Ins	Outs	Total
12:00 AM	1:00 AM	0.26%	0.73%	0.28%	0.72%	0	1	1
1:00 AM	2:00 AM	0.16%	0.44%	0.17%	0.43%	0	0	0
2:00 AM	3:00 AM	0.11%	0.29%	0.11%	0.29%	0	0	0
3:00 AM	4:00 AM	0.16%	0.44%	0.17%	0.43%	0	0	0
4:00 AM	5:00 AM	0.26%	0.73%	0.28%	0.72%	0	1	1
5:00 AM	6:00 AM	0.90%	2.48%	0.96%	2.46%	1	2	3
6:00 AM	7:00 AM	2.12%	5.84%	2.26%	5.78%	2	5	7
7:00 AM	8:00 AM	3.97%	10.94%	4.24%	10.84%	3	9	12
8:00 AM	9:00 AM	3.28%	9.05%	3.66%	13.41%	3	11	14
9:00 AM	10:00 AM	2.28%	6.27%	2.43%	6.21%	2	5	7
10:00 AM	11:00 AM	1.96%	5.40%	2.09%	5.35%	2	4	6
11:00 AM	12:00 PM	2.38%	6.57%	2.54%	6.50%	2	5	7
12:00 PM	1:00 PM	5.84%	3.61%	6.23%	3.58%	5	3	8
1:00 PM	2:00 PM	5.47%	3.38%	5.83%	3.35%	5	3	8
2:00 PM	3:00 PM	6.71%	4.15%	7.16%	4.11%	6	3	9
3:00 PM	4:00 PM	7.21%	4.46%	7.69%	4.42%	6	4	10
4:00 PM	5:00 PM	10.32%	6.38%	11.00%	6.32%	9	5	14
5:00 PM	6:00 PM	12.55%	7.77%	7.32%	6.10%	6	5	11
6:00 PM	7:00 PM	9.82%	6.07%	10.47%	6.01%	9	5	14
7:00 PM	8:00 PM	7.83%	4.84%	8.35%	4.80%	7	4	11
8:00 PM	9:00 PM	6.34%	3.92%	6.76%	3.88%	6	3	9
9:00 PM	10:00 PM	4.85%	3.00%	5.17%	2.97%	4	2	7
10:00 PM	11:00 PM	3.36%	2.08%	3.58%	2.06%	3	2	5
11:00 PM	12:00 AM	1.86%	1.15%	1.99%	1.14%	2	1	3
Total		100.00%	100.00%	100.73%	101.88%			
Peak Total ⁽⁵⁾		15.84%	16.81%	10.98%	19.51%			
Non Peak Total ⁽⁶⁾		83.47%	81.29%	89.02%	80.49%			
Peak Difference ⁽⁷⁾		-	-	-5.55%	0.80%			

(2)(3)

(2)(3)

Notes:

- (1) Hourly distribution derived from ITE Trip Generation 10th Edition
- (2) Peak Hour volumes obtained from Trip Generation Calculations
- (3) Adjusted Hourly Distribution for peak hours calculated using peak and daily trip generation
- (4) Adjusted Hourly Distribution for non peak hours calculated by proportionally distributing the peak difference
- (5) Peak Hour percentages
- (6) Summation of all non peak hours
- (7) Difference of PM peaks of ITE Hourly Distribution and the the peaks calculated using trip generation volumes
- (8) Adjusted trips calculated with adjusted hourly distribution and daily trips

LUC 222 Daily Total Applied to Peak Hour Traffic Hourly Distribution

Daily Trips Generated: 4,910

In: 2,469

Out: 2,441

		Hourly Distribution ⁽¹⁾		Adjusted Hourly Dist. ⁽⁴⁾		Total Project Trips ⁽⁸⁾		
		Ins	Outs	Ins	Outs	Ins	Outs	Total
12:00 AM	1:00 AM	0.25%	0.74%	0.26%	0.71%	6	17	24
1:00 AM	2:00 AM	0.15%	0.44%	0.16%	0.43%	4	10	14
2:00 AM	3:00 AM	0.10%	0.30%	0.10%	0.28%	3	7	10
3:00 AM	4:00 AM	0.15%	0.44%	0.16%	0.43%	4	10	14
4:00 AM	5:00 AM	0.25%	0.74%	0.26%	0.71%	6	17	24
5:00 AM	6:00 AM	0.84%	2.51%	0.88%	2.42%	22	59	81
6:00 AM	7:00 AM	1.98%	5.92%	2.08%	5.69%	51	139	190
7:00 AM	8:00 AM	3.72%	11.09%	3.90%	10.68%	96	261	357
8:00 AM	9:00 AM	3.07%	9.17%	4.46%	14.22%	110	347	457
9:00 AM	10:00 AM	2.13%	6.36%	2.24%	6.12%	55	149	205
10:00 AM	11:00 AM	1.83%	5.47%	1.92%	5.27%	47	129	176
11:00 AM	12:00 PM	2.23%	6.65%	2.34%	6.41%	58	156	214
12:00 PM	1:00 PM	5.92%	3.57%	6.21%	3.43%	153	84	237
1:00 PM	2:00 PM	5.54%	3.34%	5.81%	3.21%	144	78	222
2:00 PM	3:00 PM	6.80%	4.10%	7.14%	3.94%	176	96	272
3:00 PM	4:00 PM	7.31%	4.40%	7.66%	4.24%	189	103	293
4:00 PM	5:00 PM	10.46%	6.30%	10.97%	6.06%	271	148	419
5:00 PM	6:00 PM	12.73%	7.66%	7.25%	5.74%	179	140	319
6:00 PM	7:00 PM	9.95%	6.00%	10.44%	5.77%	258	141	399
7:00 PM	8:00 PM	7.94%	4.78%	8.32%	4.60%	206	112	318
8:00 PM	9:00 PM	6.43%	3.87%	6.74%	3.73%	166	91	257
9:00 PM	10:00 PM	4.91%	2.96%	5.15%	2.85%	127	70	197
10:00 PM	11:00 PM	3.40%	2.05%	3.57%	1.97%	88	48	136
11:00 PM	12:00 AM	1.89%	1.14%	1.98%	1.10%	49	27	76
Total		100.00%	100.00%	100.00%	100.00%			
Peak Total ⁽⁵⁾		15.80%	16.83%	11.71%	19.95%			
Non Peak Total ⁽⁶⁾		84.20%	83.17%	88.29%	80.05%			
Peak Difference ⁽⁷⁾		-	-	-4.10%	3.12%			

Notes:

- ⁽¹⁾ Hourly distribution derived from ITE Trip Generation 10th Edition
- ⁽²⁾ Peak Hour volumes obtained from Trip Generation Calculations
- ⁽³⁾ Adjusted Hourly Distribution for peak hours calculated using peak and daily trip generation
- ⁽⁴⁾ Adjusted Hourly Distribution for non peak hours calculated by proportionally distributing the peak difference
- ⁽⁵⁾ Peak Hour percentages
- ⁽⁶⁾ Summation of all non peak hours
- ⁽⁷⁾ Difference of PM peaks of ITE Hourly Distribution and the the peaks calculated using trip generation volumes
- ⁽⁸⁾ Adjusted trips calculated with adjusted hourly distribution and daily trips

LUC 310 Daily Total Applied to Peak Hour Traffic Hourly Distribution

Daily Trips Generated: 1,726

In: 873

Out: 853

		Hourly Distribution ⁽¹⁾		Adjusted Hourly Dist. ⁽⁴⁾		Total Project Trips ⁽⁸⁾		
		Ins	Outs	Ins	Outs	Ins	Outs	Total
12:00 AM	1:00 AM	1.20%	0.98%	1.21%	1.01%	11	9	19
1:00 AM	2:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
2:00 AM	3:00 AM	0.33%	0.27%	0.33%	0.28%	3	2	5
3:00 AM	4:00 AM	1.31%	1.07%	1.32%	1.10%	12	9	21
4:00 AM	5:00 AM	2.29%	1.87%	2.32%	1.93%	20	16	37
5:00 AM	6:00 AM	2.18%	1.78%	2.21%	1.84%	19	16	35
6:00 AM	7:00 AM	3.17%	2.58%	3.20%	2.66%	28	23	51
7:00 AM	8:00 AM	5.02%	4.09%	5.08%	4.23%	44	36	80
8:00 AM	9:00 AM	6.77%	5.52%	6.87%	3.63%	60	31	91
9:00 AM	10:00 AM	7.32%	5.96%	7.39%	6.16%	65	53	117
10:00 AM	11:00 AM	6.55%	5.34%	6.62%	5.51%	58	47	105
11:00 AM	12:00 PM	4.26%	3.47%	4.30%	3.58%	38	31	68
12:00 PM	1:00 PM	4.34%	4.89%	4.39%	5.05%	38	43	81
1:00 PM	2:00 PM	4.34%	4.89%	4.39%	5.05%	38	43	81
2:00 PM	3:00 PM	5.67%	6.38%	5.72%	6.59%	50	56	106
3:00 PM	4:00 PM	7.74%	8.72%	7.82%	9.01%	68	77	145
4:00 PM	5:00 PM	6.61%	7.44%	6.68%	7.69%	58	66	124
5:00 PM	6:00 PM	6.70%	7.55%	5.73%	6.57%	50	56	106
6:00 PM	7:00 PM	5.10%	5.74%	5.15%	5.93%	45	51	96
7:00 PM	8:00 PM	3.40%	3.83%	3.43%	3.95%	30	34	64
8:00 PM	9:00 PM	2.64%	2.98%	2.67%	3.07%	23	26	50
9:00 PM	10:00 PM	4.44%	5.00%	4.48%	5.16%	39	44	83
10:00 PM	11:00 PM	5.29%	5.95%	5.34%	6.15%	47	52	99
11:00 PM	12:00 AM	3.30%	3.72%	3.34%	3.84%	29	33	62
Total		100.00%	100.00%	100.00%	100.00%			
Peak Total ⁽⁵⁾		13.48%	13.06%	12.60%	10.20%			
Non Peak Total ⁽⁶⁾		86.52%	86.94%	87.40%	89.80%			
Peak Difference ⁽⁷⁾		-	-	-0.88%	-2.86%			

(2)(3)

(2)(3)

Notes:

- (1) Hourly distribution derived from ITE Trip Generation 10th Edition
- (2) Peak Hour volumes obtained from Trip Generation Calculations
- (3) Adjusted Hourly Distribution for peak hours calculated using peak and daily trip generation
- (4) Adjusted Hourly Distribution for non peak hours calculated by proportionally distributing the peak difference
- (5) Peak Hour percentages
- (6) Summation of all non peak hours
- (7) Difference of PM peaks of ITE Hourly Distribution and the the peaks calculated using trip generation volumes
- (8) Adjusted trips calculated with adjusted hourly distribution and daily trips

LUC 492 Daily Total Applied to Peak Hour Traffic Hourly Distribution

Daily Trips Generated: **1,253**

In: **638**

Out: **615**

		Hourly Distribution ⁽¹⁾		Adjusted Hourly Dist. ⁽⁴⁾		Total Project Trips ⁽⁸⁾		
		Ins	Outs	Ins	Outs	Ins	Outs	Total
12:00 AM	1:00 AM	0.09%	0.11%	0.10%	0.12%	1	1	1
1:00 AM	2:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
2:00 AM	3:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
3:00 AM	4:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
4:00 AM	5:00 AM	0.65%	0.76%	0.71%	0.85%	5	5	10
5:00 AM	6:00 AM	2.14%	2.50%	2.32%	2.78%	15	17	32
6:00 AM	7:00 AM	3.63%	4.24%	3.94%	4.71%	25	29	54
7:00 AM	8:00 AM	4.28%	5.00%	4.65%	5.55%	30	34	64
8:00 AM	9:00 AM	6.33%	7.39%	3.92%	4.07%	25	25	50
9:00 AM	10:00 AM	6.14%	7.17%	6.67%	7.97%	43	49	92
10:00 AM	11:00 AM	5.31%	6.19%	5.76%	6.88%	37	42	79
11:00 AM	12:00 PM	4.84%	5.65%	5.25%	6.28%	34	39	72
12:00 PM	1:00 PM	6.14%	5.62%	6.66%	6.25%	43	38	81
1:00 PM	2:00 PM	2.60%	2.38%	2.82%	2.65%	18	16	34
2:00 PM	3:00 PM	3.23%	2.95%	3.50%	3.28%	22	20	43
3:00 PM	4:00 PM	6.03%	5.53%	6.55%	6.15%	42	38	80
4:00 PM	5:00 PM	7.49%	6.86%	8.13%	7.63%	52	47	99
5:00 PM	6:00 PM	12.80%	11.72%	8.31%	6.02%	53	37	90
6:00 PM	7:00 PM	8.84%	8.10%	9.60%	9.01%	61	55	117
7:00 PM	8:00 PM	10.30%	9.44%	11.18%	10.49%	71	65	136
8:00 PM	9:00 PM	5.62%	5.15%	6.10%	5.72%	39	35	74
9:00 PM	10:00 PM	3.12%	2.86%	3.39%	3.18%	22	20	41
10:00 PM	11:00 PM	0.31%	0.29%	0.34%	0.32%	2	2	4
11:00 PM	12:00 AM	0.10%	0.10%	0.11%	0.11%	1	1	1
Total		100.00%	100.00%	100.00%	100.00%			
Peak Total ⁽⁵⁾		19.13%	19.11%	12.23%	10.08%			
Non Peak Total ⁽⁶⁾		80.87%	80.89%	87.77%	89.92%			
Peak Difference ⁽⁷⁾		-	-	-6.90%	-9.03%			

(2)(3)

(2)(3)

Notes:

- (1) Hourly distribution derived from ITE Trip Generation 10th Edition
- (2) Peak Hour volumes obtained from Trip Generation Calculations
- (3) Adjusted Hourly Distribution for peak hours calculated using peak and daily trip generation
- (4) Adjusted Hourly Distribution for non peak hours calculated by proportionally distributing the peak difference
- (5) Peak Hour percentages
- (6) Summation of all non peak hours
- (7) Difference of PM peaks of ITE Hourly Distribution and the the peaks calculated using trip generation volumes
- (8) Adjusted trips calculated with adjusted hourly distribution and daily trips

LUC 710 Daily Total Applied to Peak Hour Traffic Hourly Distribution

Daily Trips Generated: **1,261**

In: **603**

Out: **658**

		Hourly Distribution ⁽¹⁾		Adjusted Hourly Dist. ⁽⁴⁾		Total Project Trips ⁽⁸⁾		
		Ins	Outs	Ins	Outs	Ins	Outs	Total
12:00 AM	1:00 AM	0.20%	0.02%	0.19%	0.02%	1	0	1
1:00 AM	2:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
2:00 AM	3:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
3:00 AM	4:00 AM	0.20%	0.02%	0.19%	0.02%	1	0	1
4:00 AM	5:00 AM	0.40%	0.05%	0.38%	0.05%	2	0	3
5:00 AM	6:00 AM	0.40%	0.05%	0.38%	0.05%	2	0	3
6:00 AM	7:00 AM	4.42%	0.54%	4.22%	0.51%	25	3	29
7:00 AM	8:00 AM	14.06%	1.71%	13.44%	1.63%	81	11	92
8:00 AM	9:00 AM	17.68%	2.15%	23.22%	2.89%	140	19	159
9:00 AM	10:00 AM	10.85%	1.32%	10.37%	1.26%	63	8	71
10:00 AM	11:00 AM	11.85%	1.44%	11.33%	1.37%	68	9	77
11:00 AM	12:00 PM	16.87%	2.06%	16.13%	1.95%	97	13	110
12:00 PM	1:00 PM	3.89%	15.28%	3.71%	14.51%	22	95	118
1:00 PM	2:00 PM	3.06%	12.04%	2.93%	11.44%	18	75	93
2:00 PM	3:00 PM	2.80%	11.02%	2.68%	10.46%	16	69	85
3:00 PM	4:00 PM	2.77%	10.87%	2.64%	10.32%	16	68	84
4:00 PM	5:00 PM	3.77%	14.83%	3.61%	14.09%	22	93	114
5:00 PM	6:00 PM	3.89%	15.28%	1.82%	18.69%	11	123	134
6:00 PM	7:00 PM	0.90%	3.53%	0.86%	3.35%	5	22	27
7:00 PM	8:00 PM	0.64%	2.50%	0.61%	2.37%	4	16	19
8:00 PM	9:00 PM	0.37%	1.47%	0.36%	1.39%	2	9	11
9:00 PM	10:00 PM	0.37%	1.47%	0.36%	1.39%	2	9	11
10:00 PM	11:00 PM	0.45%	1.76%	0.43%	1.67%	3	11	14
11:00 PM	12:00 AM	0.15%	0.59%	0.14%	0.56%	1	4	5
Total		100.00%	100.00%	100.00%	100.00%			
Peak Total ⁽⁵⁾		21.57%	17.43%	25.04%	21.58%			
Non Peak Total ⁽⁶⁾		78.43%	82.57%	74.96%	78.42%			
Peak Difference ⁽⁷⁾		-	-	3.48%	4.15%			

Notes:

- ⁽¹⁾ Hourly distribution derived from ITE Trip Generation 10th Edition
- ⁽²⁾ Peak Hour volumes obtained from Trip Generation Calculations
- ⁽³⁾ Adjusted Hourly Distribution for peak hours calculated using peak and daily trip generation
- ⁽⁴⁾ Adjusted Hourly Distribution for non peak hours calculated by proportionally distributing the peak difference
- ⁽⁵⁾ Peak Hour percentages
- ⁽⁶⁾ Summation of all non peak hours
- ⁽⁷⁾ Difference of PM peaks of ITE Hourly Distribution and the the peaks calculated using trip generation volumes
- ⁽⁸⁾ Adjusted trips calculated with adjusted hourly distribution and daily trips

LUC 820 Daily Total Applied to Peak Hour Traffic Hourly Distribution

Daily Trips Generated: 8,588

In: 4,288

Out: 4,300

		Hourly Distribution ⁽¹⁾		Adjusted Hourly Dist. ⁽⁴⁾		Total Project Trips ⁽⁸⁾		
		Ins	Outs	Ins	Outs	Ins	Outs	Total
12:00 AM	1:00 AM	0.24%	0.16%	0.25%	0.16%	11	7	18
1:00 AM	2:00 AM	0.12%	0.08%	0.12%	0.08%	5	3	9
2:00 AM	3:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
3:00 AM	4:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
4:00 AM	5:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
5:00 AM	6:00 AM	0.12%	0.08%	0.12%	0.08%	5	3	9
6:00 AM	7:00 AM	0.24%	0.16%	0.25%	0.16%	11	7	18
7:00 AM	8:00 AM	1.34%	0.85%	1.37%	0.89%	59	38	97
8:00 AM	9:00 AM	2.44%	1.55%	3.01%	1.86%	129	80	209
9:00 AM	10:00 AM	4.39%	2.80%	4.50%	2.92%	193	126	318
10:00 AM	11:00 AM	6.82%	4.35%	6.99%	4.55%	300	195	495
11:00 AM	12:00 PM	10.12%	6.45%	10.36%	6.74%	444	290	734
12:00 PM	1:00 PM	9.44%	10.63%	9.67%	11.11%	415	478	892
1:00 PM	2:00 PM	8.77%	9.88%	8.99%	10.33%	386	444	830
2:00 PM	3:00 PM	8.49%	9.57%	8.70%	10.00%	373	430	803
3:00 PM	4:00 PM	8.30%	9.35%	8.51%	9.77%	365	420	785
4:00 PM	5:00 PM	8.68%	9.78%	8.89%	10.22%	381	439	821
5:00 PM	6:00 PM	8.77%	9.88%	6.02%	5.58%	258	240	498
6:00 PM	7:00 PM	7.55%	8.50%	7.73%	8.89%	332	382	714
7:00 PM	8:00 PM	5.76%	6.48%	5.90%	6.78%	253	291	544
8:00 PM	9:00 PM	4.15%	4.68%	4.25%	4.89%	182	210	393
9:00 PM	10:00 PM	2.74%	3.08%	2.80%	3.22%	120	139	259
10:00 PM	11:00 PM	1.04%	1.17%	1.06%	1.22%	46	53	98
11:00 PM	12:00 AM	0.47%	0.53%	0.48%	0.56%	21	24	45
Total		100.00%	100.00%	100.00%	100.00%			
Peak Total ⁽⁵⁾		11.21%	11.44%	9.03%	7.44%			
Non Peak Total ⁽⁶⁾		88.79%	88.56%	90.97%	92.56%			
Peak Difference ⁽⁷⁾		-	-	-2.19%	-4.00%			

(2)(3)

(2)(3)

Notes:

- (1) Hourly distribution derived from ITE Trip Generation 10th Edition
- (2) Peak Hour volumes obtained from Trip Generation Calculations
- (3) Adjusted Hourly Distribution for peak hours calculated using peak and daily trip generation
- (4) Adjusted Hourly Distribution for non peak hours calculated by proportionally distributing the peak difference
- (5) Peak Hour percentages
- (6) Summation of all non peak hours
- (7) Difference of PM peaks of ITE Hourly Distribution and the the peaks calculated using trip generation volumes
- (8) Adjusted trips calculated with adjusted hourly distribution and daily trips

LUC 850 Daily Total Applied to Peak Hour Traffic Hourly Distribution

Daily Trips Generated: 3,374

In: 1,684

Out: 1,690

		Hourly Distribution ⁽¹⁾		Adjusted Hourly Dist. ⁽⁴⁾		Total Project Trips ⁽⁸⁾		
		Ins	Outs	Ins	Outs	Ins	Outs	Total
12:00 AM	1:00 AM	0.24%	0.16%	0.24%	0.16%	4	3	7
1:00 AM	2:00 AM	0.12%	0.08%	0.12%	0.08%	2	1	3
2:00 AM	3:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
3:00 AM	4:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
4:00 AM	5:00 AM	0.00%	0.00%	0.00%	0.00%	0	0	0
5:00 AM	6:00 AM	0.12%	0.08%	0.12%	0.08%	2	1	3
6:00 AM	7:00 AM	0.24%	0.16%	0.24%	0.16%	4	3	7
7:00 AM	8:00 AM	1.34%	0.85%	1.33%	0.88%	22	15	37
8:00 AM	9:00 AM	2.44%	1.55%	5.40%	3.61%	91	61	152
9:00 AM	10:00 AM	4.39%	2.80%	4.37%	2.88%	74	49	122
10:00 AM	11:00 AM	6.82%	4.35%	6.79%	4.48%	114	76	190
11:00 AM	12:00 PM	10.12%	6.45%	10.07%	6.64%	170	112	282
12:00 PM	1:00 PM	9.44%	10.63%	9.39%	10.94%	158	185	343
1:00 PM	2:00 PM	8.77%	9.88%	8.73%	10.18%	147	172	319
2:00 PM	3:00 PM	8.49%	9.57%	8.45%	9.85%	142	166	309
3:00 PM	4:00 PM	8.30%	9.35%	8.26%	9.63%	139	163	302
4:00 PM	5:00 PM	8.68%	9.78%	8.64%	10.07%	145	170	316
5:00 PM	6:00 PM	8.77%	9.88%	6.24%	5.21%	105	88	193
6:00 PM	7:00 PM	7.55%	8.50%	7.51%	8.75%	127	148	274
7:00 PM	8:00 PM	5.76%	6.48%	5.73%	6.67%	96	113	209
8:00 PM	9:00 PM	4.15%	4.68%	4.13%	4.81%	70	81	151
9:00 PM	10:00 PM	2.74%	3.08%	2.72%	3.17%	46	54	99
10:00 PM	11:00 PM	1.04%	1.17%	1.03%	1.20%	17	20	38
11:00 PM	12:00 AM	0.47%	0.53%	0.47%	0.55%	8	9	17
Total		100.00%	100.00%	100.00%	100.00%			
Peak Total ⁽⁵⁾		11.21%	11.44%	11.64%	8.82%			
Non Peak Total ⁽⁶⁾		88.79%	88.56%	88.36%	91.18%			
Peak Difference ⁽⁷⁾		-	-	0.43%	-2.62%			

- Notes:
- (1) Hourly distribution derived from ITE Trip Generation 10th Edition
 - (2) Peak Hour volumes obtained from Trip Generation Calculations
 - (3) Adjusted Hourly Distribution for peak hours calculated using peak and daily trip generation
 - (4) Adjusted Hourly Distribution for non peak hours calculated by proportionally distributing the peak difference
 - (5) Peak Hour percentages
 - (6) Summation of all non peak hours
 - (7) Difference of PM peaks of ITE Hourly Distribution and the the peaks calculated using trip generation volumes
 - (8) Adjusted trips calculated with adjusted hourly distribution and daily trips

**Approach Daily Total Applied to Peak Hour Project Traffic Volumes
SR 826/NE 163rd Street and Intracoastal Mall Driveway**

Time Interval		Net New Project Trips					
		Outs			Ins		
		SBL ⁽²⁾	SBR ⁽²⁾	EBT ⁽²⁾	WBT ⁽³⁾	WBR ⁽³⁾	
		19.0%	38.0%	2.0%	6.0%	15.0%	
12:00 AM	1:00 AM	6	12	1	3	7	
1:00 AM	2:00 AM	4	7	0	2	4	
2:00 AM	3:00 AM	3	5	0	1	3	
3:00 AM	4:00 AM	4	7	0	2	4	
4:00 AM	5:00 AM	5	11	1	2	6	
5:00 AM	6:00 AM	12	23	1	5	12	
6:00 AM	7:00 AM	26	51	3	11	28	
7:00 AM	8:00 AM	66	131	7	28	71	
8:00 AM	9:00 AM	111	223	12	34	84	(1)
9:00 AM	10:00 AM	47	94	5	20	51	
10:00 AM	11:00 AM	35	71	4	15	38	
11:00 AM	12:00 PM	47	94	5	20	51	
12:00 PM	1:00 PM	65	131	7	34	84	
1:00 PM	2:00 PM	56	111	6	29	72	
2:00 PM	3:00 PM	69	138	7	36	89	
3:00 PM	4:00 PM	75	150	8	39	97	
4:00 PM	5:00 PM	92	184	10	47	119	
5:00 PM	6:00 PM	132	264	14	40	100	(1)
6:00 PM	7:00 PM	96	191	10	49	123	
7:00 PM	8:00 PM	69	138	7	36	89	
8:00 PM	9:00 PM	62	124	7	32	80	
9:00 PM	10:00 PM	44	87	5	22	56	
10:00 PM	11:00 PM	35	70	4	18	45	
11:00 PM	12:00 AM	15	29	2	7	19	

Notes: ⁽¹⁾ Peak Hour volumes obtained from Trip Generation Calculations

⁽²⁾ Trips calculated with Outs hourly distribution

⁽³⁾ Trips calculated with Ins hourly distribution

SR 826/NE 163rd Street and Intracoastal Mall Driveway

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [SR 826/NE 163rd Street and Intracoastal Mall Driveway](#)

SCENARIO: [Future Total](#)

MAJOR STREET: [SR 826/NE 163rd Street](#)

OF APPROACH LANES: **5**

MINOR STREET: [Intracoastal Mall Driveway](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST WESTBOUND	MINOR ST SOUTHBOUND	WARRANT 1-A			WARRANT 1-B			COMBINATION OF WARRANT 1-A & 1-B						WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	WARRANT 1-A			WARRANT 1-B				
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100		480	160		720	80			
04:00 AM TO 05:00 AM	126	8														
05:00 AM TO 06:00 AM	269	17														
06:00 AM TO 07:00 AM	675	39	Y						Y							
07:00 AM TO 08:00 AM	1,360	98	Y			Y			Y			Y	Y	Y		
08:00 AM TO 09:00 AM	1,821	167	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
09:00 AM TO 10:00 AM	1,672	70	Y			Y			Y			Y				
10:00 AM TO 11:00 AM	1,614	53	Y			Y			Y			Y				
11:00 AM TO 12:00 PM	1,774	70	Y			Y			Y			Y				
12:00 PM TO 01:00 PM	1,901	98	Y			Y			Y			Y	Y	Y		
01:00 PM TO 02:00 PM	1,931	84	Y			Y			Y			Y	Y	Y		
02:00 PM TO 03:00 PM	2,004	104	Y			Y	Y	Y	Y			Y	Y	Y		
03:00 PM TO 04:00 PM	2,560	113	Y			Y	Y	Y	Y			Y	Y	Y		
04:00 PM TO 05:00 PM	2,725	138	Y			Y	Y	Y	Y			Y	Y	Y	Y	
05:00 PM TO 06:00 PM	2,539	198	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
06:00 PM TO 07:00 PM	2,168	144	Y			Y	Y	Y	Y			Y	Y	Y	Y	
07:00 PM TO 08:00 PM	1,800	104	Y			Y	Y	Y	Y			Y	Y	Y		
	26,939	1,505	0			7			2			10			4	2
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			8 HOURS OF BOTH WARR #1-A AND WARR #1-B NEEDED NOT SATISFIED						4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 -- Eight Hour Vehicular Volume

WARRANT 2 -- Four Hour Vehicular Volume

WARRANT 3 -- Peak Hour

CITY OF NORTH MIAMI BEACH SUPPORT LETTER
DATED JUNE 23, 2020



City of North Miami Beach, Florida

Office of the City Manager

June 23, 2020

Mr. Ali Al-Said, P.E.
Florida Department of Transportation, District Six
District Permits Engineer
1000 NW 111th Avenue, Room 6207
Miami, Florida 33172

**Re: Intracoastal Mall Redevelopment
Driveway/Connection Application
3881 NE 163rd Street, North Miami Beach, Florida**

Dear Mr. Al-Said:

Developer Dezer International, LLC has applied for a development agreement from the City of North Miami Beach for the redevelopment of the Intracoastal Mall at 3881 NE 163rd Street. Accompanying the development agreement is a traffic impact study demonstrating the project's compliance with the City's Code and Comprehensive Plan and numerous improvements to SR 826/NE163rd Street. Also included in the traffic impact study is a plan and analysis for the construction of a signalized intersection providing direct east and west access to and from the Intracoastal Mall and SR 826/NE 163rd Street.

The developer is proposing the signalized intersection to satisfy the City's Zoning Code Sections 24-58.7(O)(2)(e) and 24-58.7(P)(2)(a), which require that a direct east and west access to the Intracoastal Mall be provided to and from SR 826/NE 163rd Street. Furthermore, the proposed improvements on SR 826/NE 163rd Street transform the current suburban characteristics of the roadway into an urban thoroughfare, in line with the urban vision of the City of North Miami Beach. The goal of the SR 826/NE 163rd Street direct east and west access is that NE 35th Avenue is not overburdened.

The City of North Miami Beach supports the proposed signalized intersection at the existing Intracoastal Mall Driveway and SR 826/NE 163rd Street and proposed improvements at the intersection of SR 826/NE 163rd Street and NE 35th Avenue. Therefore, the City of North Miami Beach urges the Florida Department of Transportation to approve the requested signalized intersection at the existing Intracoastal Mall Driveway and SR 826/NE 163rd Street. Please note the development agreement and accompanying traffic circulation plan are subject to the approval of the North Miami Beach City Commission. This letter does not provide a vested right to the applicant.

Please feel free to contact me if you have any questions. We look forward to working with the Department on the approval of this application.

Sincerely,

A handwritten signature in blue ink, appearing to read "Esmond K. Scott". The signature is stylized and includes a long horizontal line extending to the right.

Esmond K. Scott
City Manager