



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

**3611/3621 COLLINS AVENUE  
MIAMI BEACH, FLORIDA**



**Kimley»Horn**

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November 2024  
140248012

Traffic Impact Analysis  
for Submittal to  
the City of Miami Beach

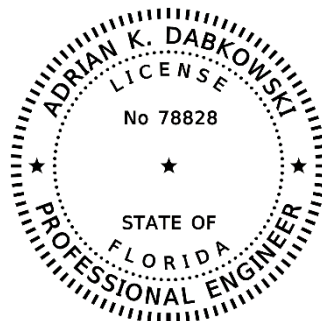
3611/3621 COLLINS AVENUE  
MIAMI BEACH, FLORIDA

*Prepared for:*

36 Collins Holdings, LLC

*Prepared by:*

Kimley-Horn and Associates, Inc.



This item has been digitally signed and sealed by Adrian K. Dabkowski, P.E., PTOE, on the date adjacent to the seal.

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November 2024  
140248012

Adrian K. Dabkowski, P.E., PTOE  
Florida Registration Number 78828  
Kimley-Horn and Associates, Inc.  
8201 Peters Road, Suite 2200  
Plantation, FL 33324

## EXECUTIVE SUMMARY

36 Collins Holdings, LLC is proposing to redevelop the property located at 3611/3621 Collins Avenue in Miami Beach, Florida. Currently, the site proposed for redevelopment is occupied by a vacant 46-room hotel, a vacant mid-rise multifamily residential building containing 106 dwelling units, and an occupied mid-rise condominium building containing eight (8) dwelling units. Note that trip generation credit was not taken for the vacant existing land uses as they have been vacant for more than one (1) year. Additionally, the existing occupied mid-rise condominium building will be maintained as part of the proposed redevelopment. The proposed redevelopment consists of the existing 8-unit condominium building, a 36-room hotel, 23 high-rise multifamily residential units, 13,455 square feet of spa/wellness space, a 289-seat restaurant, 8,507 square feet of bar space, and an on-site parking garage with mechanical stackers for the residential portion. The project is expected to be completed by year 2027.

Access to the proposed redevelopment will be provided via one (1) full-access driveway along 36<sup>th</sup> Street east of Collins Avenue. The driveway will provide access to the on-site parking garage. All vehicles will be required to valet. Note that the project will provide two (2) porte-cocheres, i.) a residential porte-cochere will be provided on 36<sup>th</sup> Street and ii.) a porte-cochere for non-residential uses (hotel, spa, restaurant, and bar areas) will be provided on Collins Avenue. Residential vehicles will be parked in the on-site parking garage and non-residential valet vehicles will be parked in an off-site parking garage. The location for the off-site parking garage is yet to be determined.

Trip generation for the existing development and the proposed redevelopment were calculated using rates and/or equations contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11<sup>th</sup> Edition. The project is expected to generate 50 net new vehicle trips during the weekday A.M. peak hour and 143 net new vehicle trips during the weekday P.M. peak hour.

The results of the intersection capacity analysis indicate that all study intersections are expected to operate at level of service (LOS) C or better during the peak hours under all analysis scenarios.

The results of the non-residential valet operations analysis demonstrate that two (2) valet attendants would be required during the A.M. peak hour and nine (9) valet attendants would be required during the P.M. peak hour to ensure that valet queues do not exceed the storage

provided. The results of the residential valet operations analysis demonstrate that two (2) valet attendants would be required during the A.M. peak hour and one (1) valet attendant would be required during the P.M. peak hour to ensure that valet queues do not exceed the storage provided.

The applicant will commit to providing the following Transportation Demand Management (TDM) strategies:

- Creation of an Employee Transportation Coordinator position to run the transportation demand management (TDM) programs.
- Providing eight (8) short-term and 26 long-term secure bicycle parking spaces (bicycle racks and lockers).
- Providing elevators that can accommodate bikes.
- Providing a bicycle drop-off/valet service.

The required parking for the site, based on the City of Miami Beach *Code of Ordinances*, is 174 parking spaces. As part of the proposed redevelopment, the project will provide five (5) ADA spaces, five (5) conventional parking spaces, and 52 mechanical lifts parking spaces for a total 116 parking spaces within the proposed on-site parking garage. The remaining parking space requirement will be provided via an agreement with an off-site parking garage. An agreement with an off-site parking garage has not yet been reached.

The maneuverability analysis was prepared using a passenger (P) vehicle for the proposed porte-cocheres and driveways and a single-unit 30-foot truck (SU-30) vehicle for the proposed loading area. The maneuverability analysis determined that passenger vehicles and loading vehicles will be able to ingress, egress, and travel through the site and loading area without conflict.



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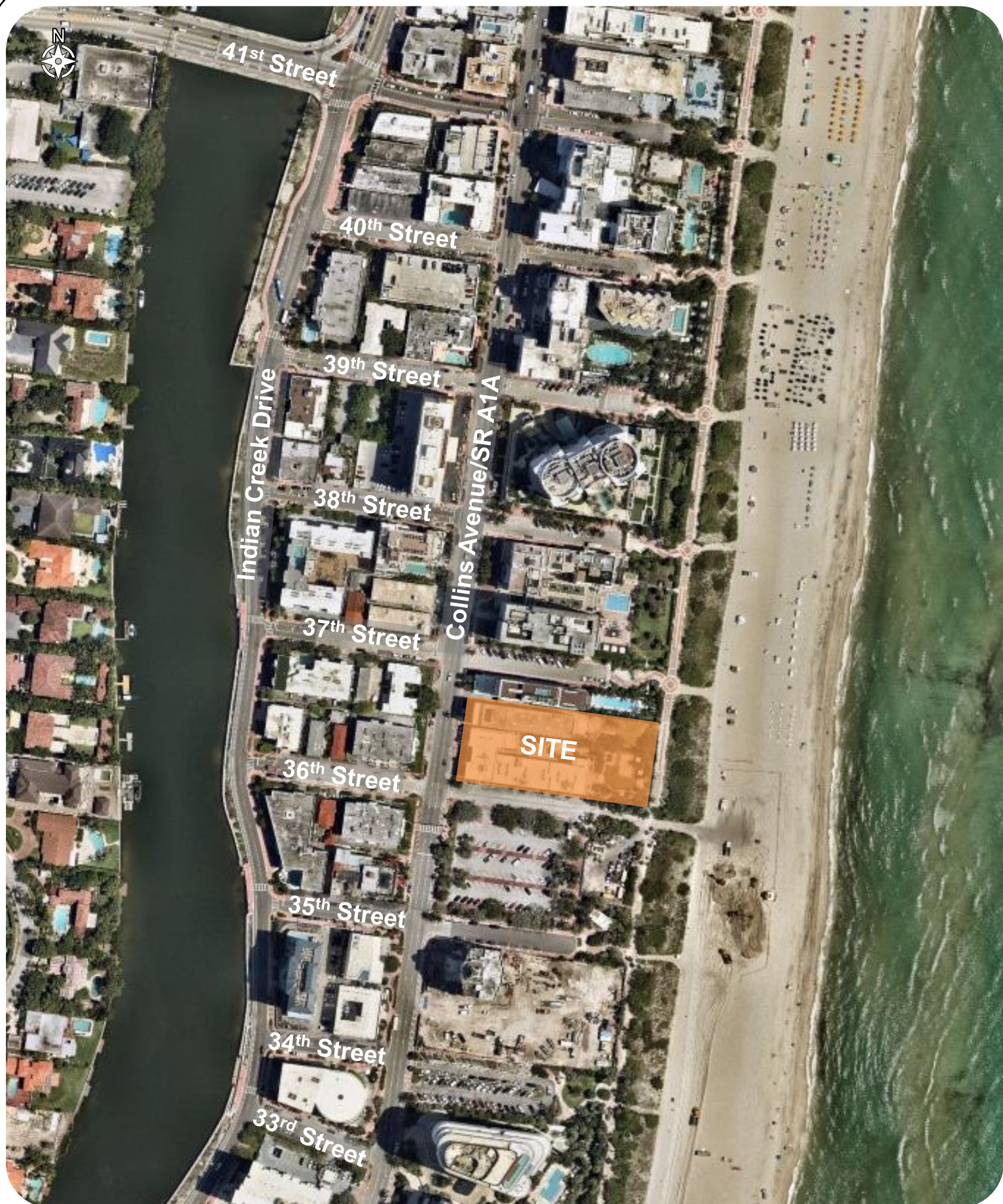
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## INTRODUCTION

36 Collins Holdings, LLC is proposing to redevelop the property located at 3611/3621 Collins Avenue in Miami Beach, Florida. Currently, the site proposed for redevelopment is occupied by a vacant 46-room hotel, a vacant mid-rise multifamily residential building containing 106 dwelling units, and an occupied mid-rise condominium building containing eight (8) dwelling units. Note that trip generation credit was not taken for the vacant existing land uses as they have been vacant for more than one (1) year. Additionally, the existing occupied mid-rise condominium building will be maintained as part of the proposed redevelopment. The proposed redevelopment consists of the existing 8-unit condominium building, a 36-room hotel, 23 high-rise multifamily residential units, 13,455 square feet of spa/wellness space, a 289-seat restaurant, 8,507 square feet of bar space, and an on-site parking garage with mechanical stackers for the residential portion. The project is expected to be completed by year 2027. The project will provide two (2) porte-cocheres, i.) a residential porte-cochere will be provided on 36<sup>th</sup> Street and ii.) a porte-cochere for non-residential uses (hotel, spa, restaurant, and bar areas) will be provided on Collins Avenue. All vehicles will be required to valet. A project location map is provided as Figure 1. A site plan is provided in Appendix A.

Kimley-Horn and Associates, Inc. has completed this traffic impact analysis for submittal to the City of Miami Beach. The purpose of the study is to assess the project's impact on the surrounding roadway network. The study's methodology is consistent with the requirements of the City of Miami Beach. The approved methodology correspondence detailing the traffic study requirements is included in Appendix B.





## EXISTING TRAFFIC

A.M. peak period (7:30 A.M. to 9:30 A.M.) and P.M. peak period (4:00 P.M. to 6:00 P.M.) turning movement counts were collected on February 28, 2024 (Wednesday) at the following intersections:

- SR A1A/Collins Avenue and 41<sup>st</sup> Street
- SR A1A/Collins Avenue and 37<sup>th</sup> Street
- SR A1A/Collins Avenue and 36<sup>th</sup> Street
- Indian Creek Drive and 36<sup>th</sup> Street

All traffic volumes were collected in 15-minute intervals and the peak hour was determined for each intersection. Turning movement counts also included pedestrian and bicycle data. The appropriate Florida Department of Transportation (FDOT) peak season conversion factor (PSCF) of 1.00 was applied to the turning movement counts.

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 A.M. and P.M. peak hours.

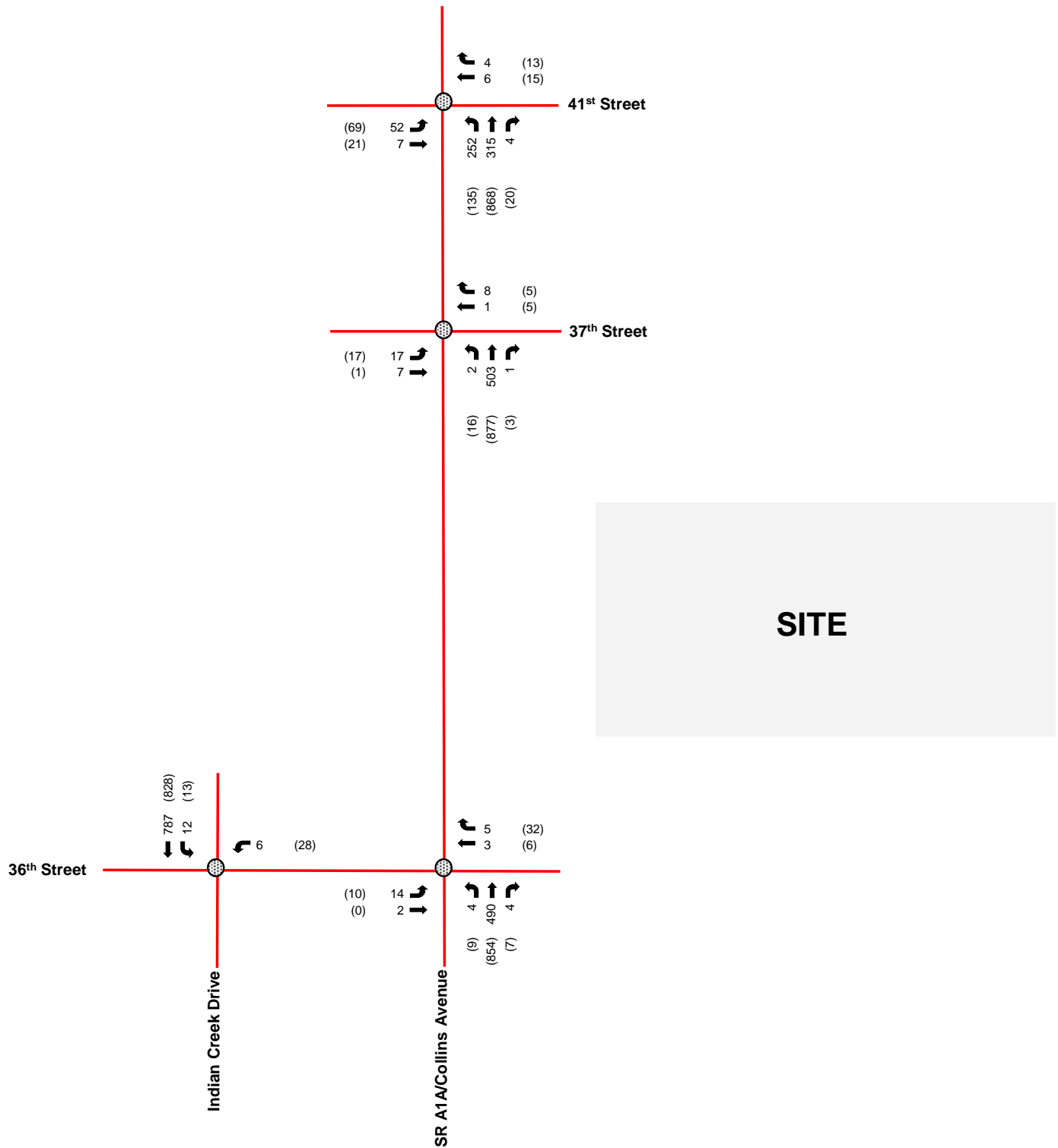




NOT TO SCALE

### Legend

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





## FUTURE BACKGROUND TRAFFIC

Future background traffic conditions are defined as expected traffic conditions on the roadway network in the year 2027 without the completion of the proposed redevelopment. Future background traffic volumes used in the analysis are the sum of the existing traffic and additional traffic generated by growth in the study area. Refer to Figure 3 for the future background 2027 peak hour traffic volumes.

## BACKGROUND AREA GROWTH

Traffic growth on the transportation network was determined based upon (a) historical growth trends at nearby FDOT traffic count stations and (b) traffic volume comparisons from the year 2015 and 2045 Florida Standard Urban Transportation Model Structure (FSUTMS) - Southeast Florida Regional Planning Model (SERPM). FDOT count stations referenced in this analysis include:

- FDOT count station no. 2646 located on Indian Creek Drive, south of 38<sup>th</sup> Street
- FDOT count station no. 5171 located on SR A1A/Collins Avenue, north of 35<sup>th</sup> Street

The historical growth rate analysis, based on the FDOT count stations, examined linear, exponential, and decaying exponential growth rates for the most recent five (5) year and 10-year periods. The linear growth trend yielded a growth rate of negative 5.03 percent (-5.03%) over the most recent five (5) year period and negative 3.37 percent (-3.37%) over the most recent 10-year period. The exponential growth trend yielded a growth rate of negative 5.52 percent (-5.52%) over the most recent five (5) year period and negative -3.92 percent (-3.92%) over the most recent 10-year period. The decaying exponential growth trend yielded a growth rate of negative 5.50 percent (5.50%) over the most recent five (5) year period and negative 3.68 percent (-3.68%) over the most recent 10-year period. The calculated growth rate with the highest  $R^2$  value was determined to be the five (5) year decaying exponential growth trend which yielded a growth rate of negative 5.52 percent (-5.52%).

Based on the forecasted volumes obtained from the 2015 and 2045 FSUTMS SERPM 8.542, an annual growth rate of 1.40 percent (1.40%) in the vicinity of the redevelopment was calculated.

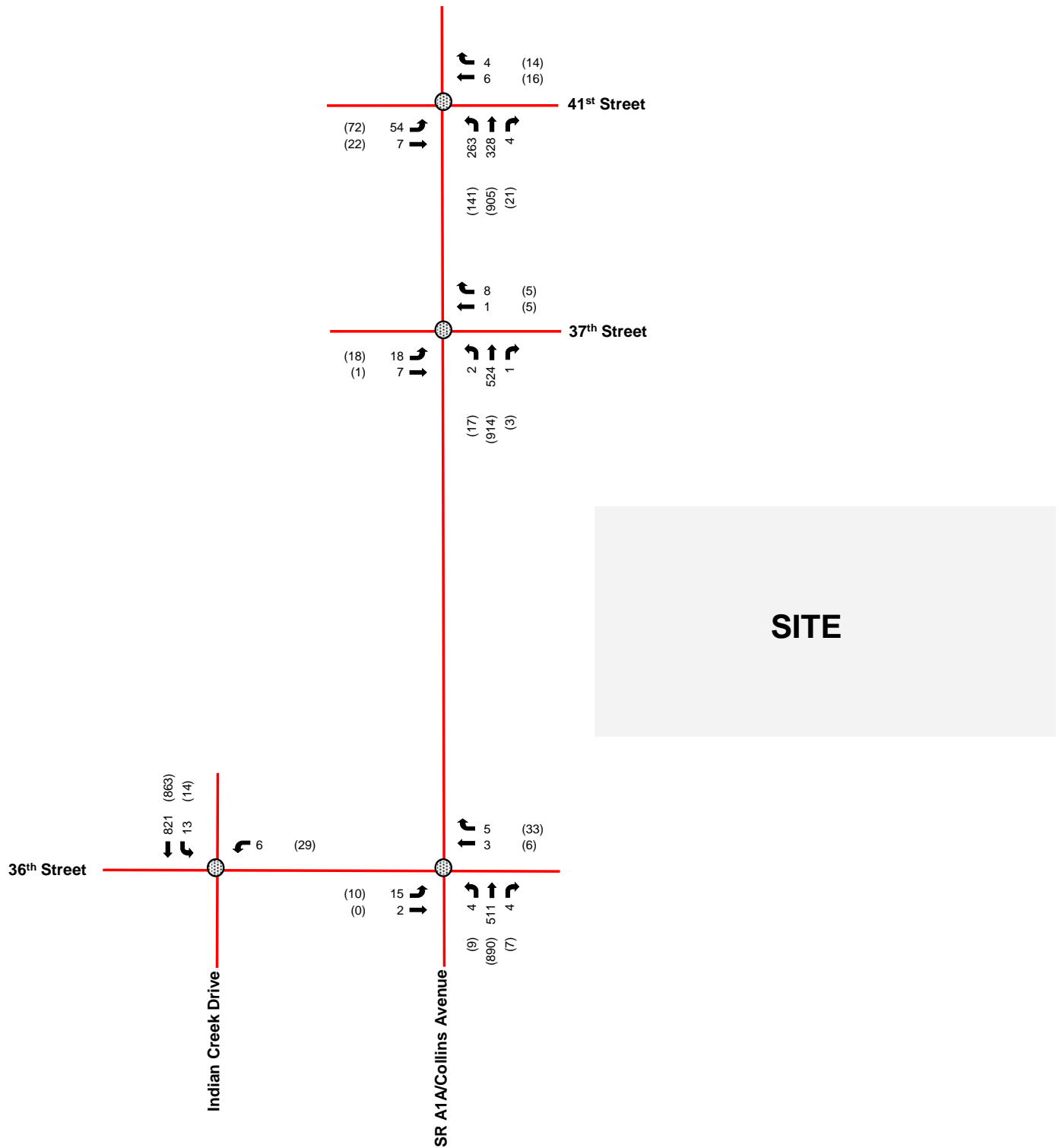
To provide a conservative analysis, the SERPM growth rate of 1.40 percent (1.40%) was applied annually to the existing traffic volumes to establish future (2027) background conditions. Detailed growth calculations are contained in Appendix D.



NOT TO SCALE

### Legend

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



## PROJECT TRAFFIC

Project traffic used in this analysis 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 USE

Currently, the site proposed for redevelopment is occupied by a vacant 46-room hotel, a vacant mid-rise multifamily residential building containing 106 dwelling units, and an occupied mid-rise condominium building containing eight (8) dwelling units. Note that trip generation credit was not taken for the vacant existing land uses as they have been vacant for more than one (1) year. Additionally, the existing occupied mid-rise condominium building will be maintained as part of the proposed redevelopment. The proposed redevelopment consists of the existing 8-unit condominium building, a 36-room hotel, 23 high-rise multifamily residential units, 13,455 square feet of spa/wellness space, a 289-seat restaurant, 8,507 square feet of bar space, and an on-site parking garage with mechanical stackers for the residential portion.

## PROJECT ACCESS

Access to the proposed redevelopment will be provided via one (1) full-access driveway along 36<sup>th</sup> Street east of Collins Avenue. The driveway will provide access to the on-site parking garage. All vehicles will be required to valet. Note that the project will provide two (2) porte-cocheres, i.) a residential porte-cochere will be provided on 36<sup>th</sup> Street and ii.) a porte-cochere for non-residential uses (hotel, spa, restaurant, and bar areas) will be provided on Collins Avenue. Residential vehicles will be parked in the on-site parking garage and non-residential valet vehicles will be parked in an off-site parking garage. The location for the off-site parking garage is yet to be determined.

## TRIP GENERATION

The trip generation for the existing development was determined using ITE Land Use Code (LUC) 221 (Multi-Family Housing [Mid-Rise]). Credit was not taken for the vacant existing land uses as they have been vacant for more than one (1) year. Additionally, the existing occupied mid-rise condominium building will be maintained as part of the proposed redevelopment. The trip generation for the proposed redevelopment was determined using ITE LUC 310 (Hotel), LUC 221 (Multi-Family Housing [Mid-Rise]), LUC 222 (Multifamily Housing [High-Rise]), LUC 492

(Health/Fitness Club), LUC 931 (Fine Dining Restaurant), and LUC 975 (Drinking Place). Trip generation calculations are provided in Appendix E.

## MULTIMODAL REDUCTION

A multimodal (public transit, bicycle, and pedestrian) factor based on US Census *Means of Transportation to Work* data was reviewed for the census tract in the vicinity of the redevelopment. The US Census data indicated that there is a 23.0 percent (23.0%) multimodal factor within the vicinity of the redevelopment. However, to provide a conservative analysis, a multimodal factor of 20.0 percent (20.0%) was applied to the trip generation calculations instead. It is expected that a portion of residents, guests, employees, and patrons will choose to walk, bike, or use public transit to and from the proposed redevelopment. Detailed census information is provided in Appendix E.

Five (5) Miami-Dade County Department of Transportation and Public Works (DTPW) routes and two (2) City of Miami Beach Trolley routes operate in close proximity (within ½ mile) to the site during the A.M. and P.M. peak hours.

- **DTPW Route 14** operates along SR A1A/Collins Avenue in the vicinity of the site with the nearest stop located just north of 35<sup>th</sup> Street. This route operates with 30-minute headways in the northbound and southbound directions during the A.M. and P.M. peak hours.
- **DTPW Route 36/36A** operates along SR A1A/Collins Avenue in the vicinity of the site with the nearest stop located just north of 35<sup>th</sup> Street. This route operates with 15-minute headways in the northbound and southbound directions during the A.M. and P.M. peak hours.
- **DTPW Route 79** operates along SR A1A/Collins Avenue in the vicinity of the site with the nearest stop located just north of 35<sup>th</sup> Street. This route operates with 15-minute headways in the northbound and southbound directions during the A.M. and P.M. peak hours.
- **DTPW Route 100** operates along SR A1A/Collins Avenue in the vicinity of the site with the nearest stop located just north of 35<sup>th</sup> Street. This route operates with 8-minute headways in the northbound and southbound directions during the A.M. and P.M. peak hours.

- **DTPW Route 150/Miami Beach Airport Express** operates along Indian Creek Drive in the vicinity of the site with the nearest stop located just north of 37<sup>th</sup> Street. This route operates with 30-minute headways in the northbound and southbound directions during the A.M. and P.M. peak hours.
- **The City of Miami Beach Trolley Collins Express** operates along SR A1A/Collins Avenue in the vicinity of the site with the nearest stop located just north of 38<sup>th</sup> Street. This route operates with 20-minute headways in the northbound and southbound directions during the A.M. and P.M. peak hours.
- **The City of Miami Beach Trolley Middle Beach Loop** operates along SR A1A/Collins Avenue in the vicinity of the site with the nearest stop located just north of 38<sup>th</sup> Street. This route operates with 20-minute headways in the northbound and southbound directions during the A.M. and P.M. peak hours.

Detailed transit route information and headway data is provided in Appendix F.

## INTERNAL CAPTURE

A portion of trips generated by the proposed redevelopment will be captured internally within the site. Internal capture trips were determined based upon values contained in the ITE *Trip Generation Handbook*, 3<sup>rd</sup> Edition. The expected internal capture rate for the proposed redevelopment is 3.7 percent (3.7%) during the A.M. peak hour and 16.7 percent (16.7%) during the P.M. peak hour.

## PASS-BY CAPTURE

Pass-by capture trips were determined based on average rates provided in the ITE *Trip Generation Manual*, 11<sup>th</sup> Edition. The pass-by capture rate for the proposed restaurant land use is 44.0 percent (44.0%) during the P.M. peak hour.

## NET NEW PROJECT TRIPS

The net new project trips represent the additional vehicles on the roadway network generated by the proposed redevelopment. As shown in Table 1, the project is expected to generate 50 net new vehicle trips during the weekday A.M. peak hour and 143 net new vehicle trips during the weekday P.M. peak hour. Detailed trip generation calculations are contained in Appendix E.

Table 1: Trip Generation				
<i>A.M. Peak Hour (P.M. Peak Hour)</i>				
Land Use (ITE Code)	Scale	Entering Trips	Exiting Trips	Net New External Trips
<i>Existing Development</i>				
Multifamily Housing (Mid-Rise) (221)	8 dwelling units	1 (1)	1 (1)	2 (2)
<i>Proposed Redevelopment</i>				
Hotel (310)	36 rooms	8 (6)	6 (3)	14 (9)
Multifamily Housing (Mid-Rise) (221)	8 dwelling units	1 (1)	1 (0)	2 (1)
Multifamily Housing (High-Rise) (222)	23 dwelling units	5 (3)	13 (2)	18 (5)
Health/Fitness Club (492)	13,455 square feet	7 (17)	7 (13)	14 (30)
Fine Dining Restaurant (931)	289 seats	2 (22)	2 (10)	4 (32)
Drinking Place (975)	8,507 square feet	0 (46)	0 (22)	0 (68)
Subtotal		23 (95)	29 (50)	52 (145)
<i>Net New Vehicle Trips</i>				
Net New Vehicle Trips		22 (94)	28 (49)	50 (143)

## TRIP DISTRIBUTION AND ASSIGNMENT

The trip distribution was based on an interpolated cardinal trip distribution for the project site's traffic analysis zone (TAZ) obtained from the Miami-Dade Transportation Planning Organization's (TPO's) *2045 Long Range Transportation Plan Directional Trip Distribution Report*. The project is located within TAZ 633. The cardinal distribution is shown in Table 2. Detailed cardinal distribution calculations are contained in Appendix G.

Table 2: Cardinal Trip Distribution	
Cardinal Direction	Percentage of Trips
North-Northeast	7%
East-Northeast	0%
East-Southeast	0%
South-Southeast	0%
South-Southwest	24%
West-Southwest	35%
West-Northwest	17%
North-Northwest	17%
<b>Total</b>	<b>100%</b>

Figure 4 presents the A.M. peak hour project trip distribution and Figure 6 presents the P.M. peak hour project trip distribution. Figure 6 presents the A.M. and P.M. peak hour project trip



assignment. Figure 7 presents the P.M. peak hour pass-by trip distribution and Figure 8 presents the P.M. peak hour pass-by trip assignment. Figure 9 presents the peak hour non-residential valet trip distribution and Figure 10 presents the peak hour non-residential valet trip assignment. Figure 11 presents the peak hour residential valet trip distribution and Figure 12 presents the peak hour residential valet trip assignment.



NOT TO SCALE

**Legend**

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

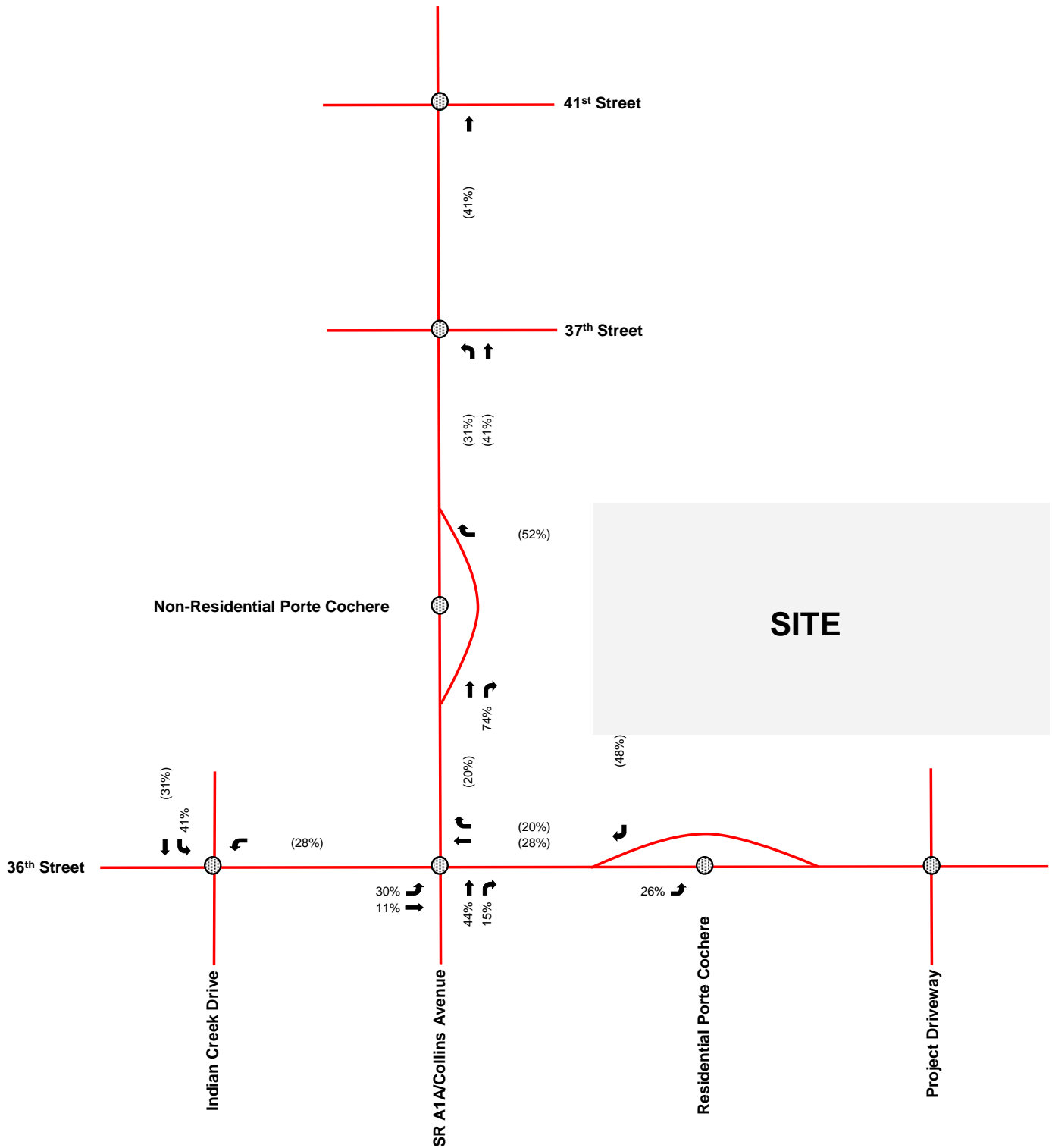


Figure 4  
A.M. Peak Hour Project Trip Distribution  
3611 Collins Avenue  
Miami Beach, Florida



NOT TO SCALE

**Legend**

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

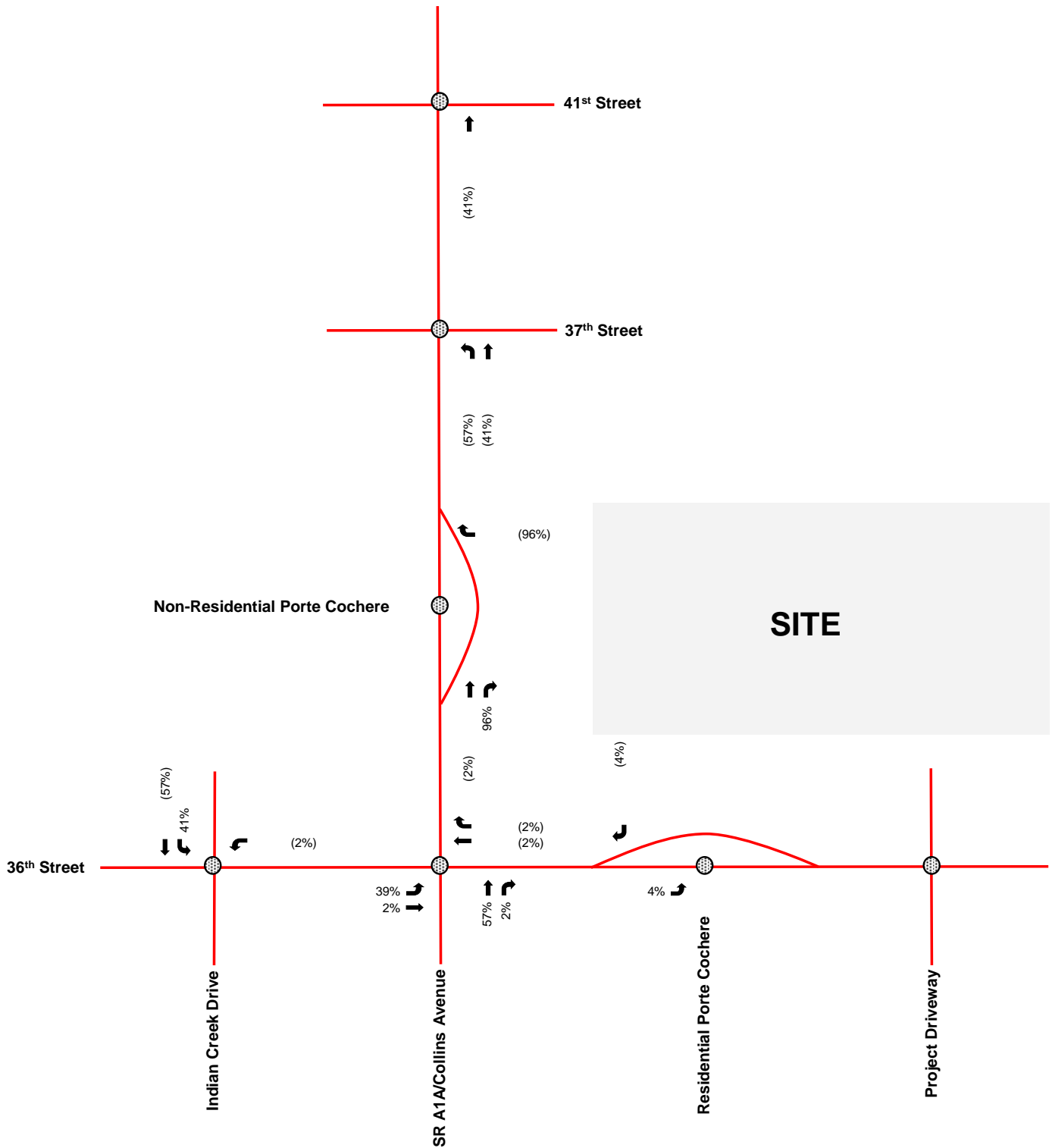
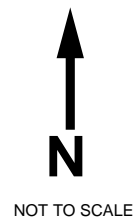


Figure 5  
P.M. Peak Hour Project Trip Distribution  
3611 Collins Avenue  
Miami Beach, Florida



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

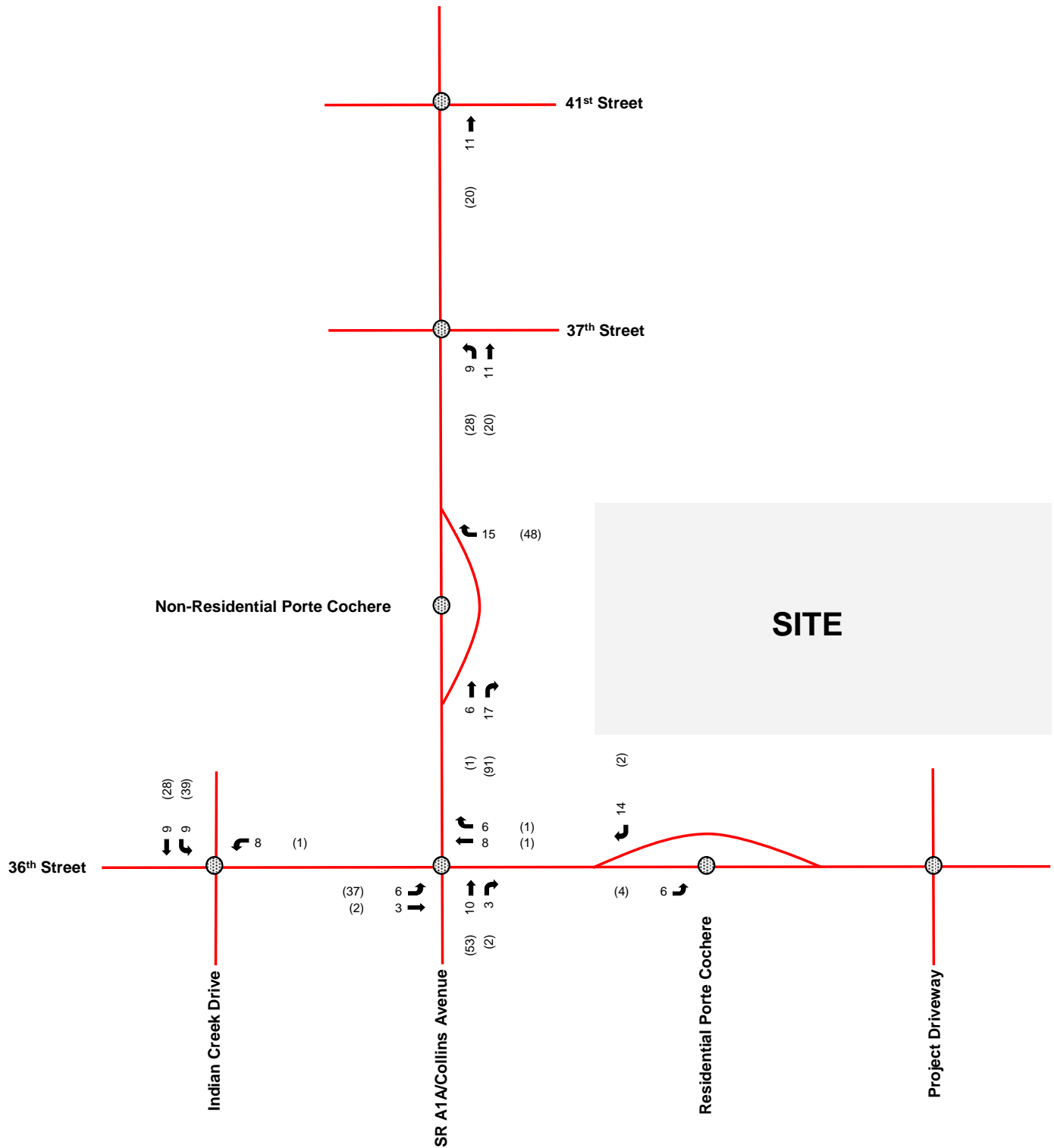




Figure 6  
Peak Hour Project Trip Assignment  
3611 Collins Avenue  
Miami Beach, Florida



NOT TO SCALE

**Legend**

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

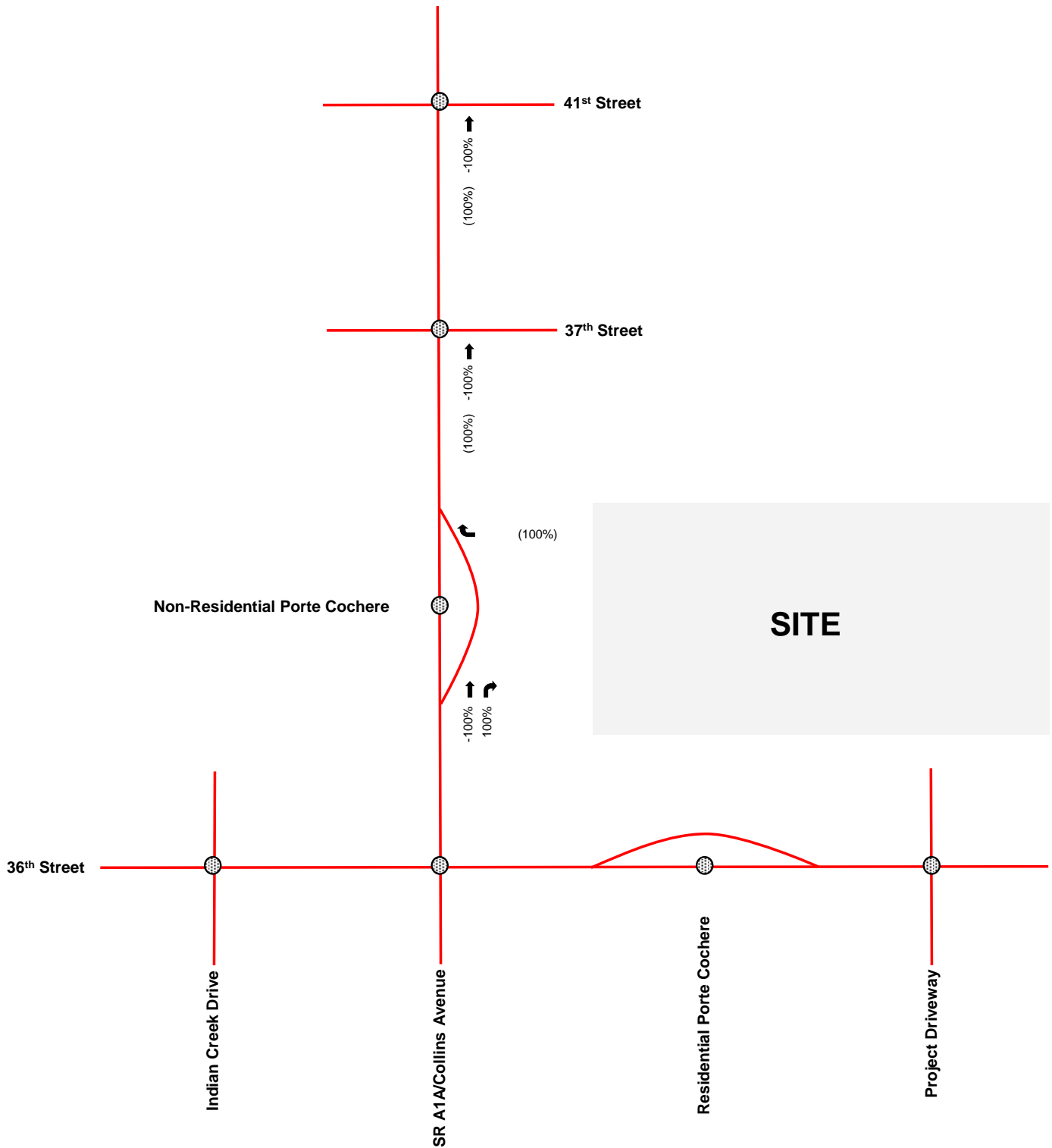




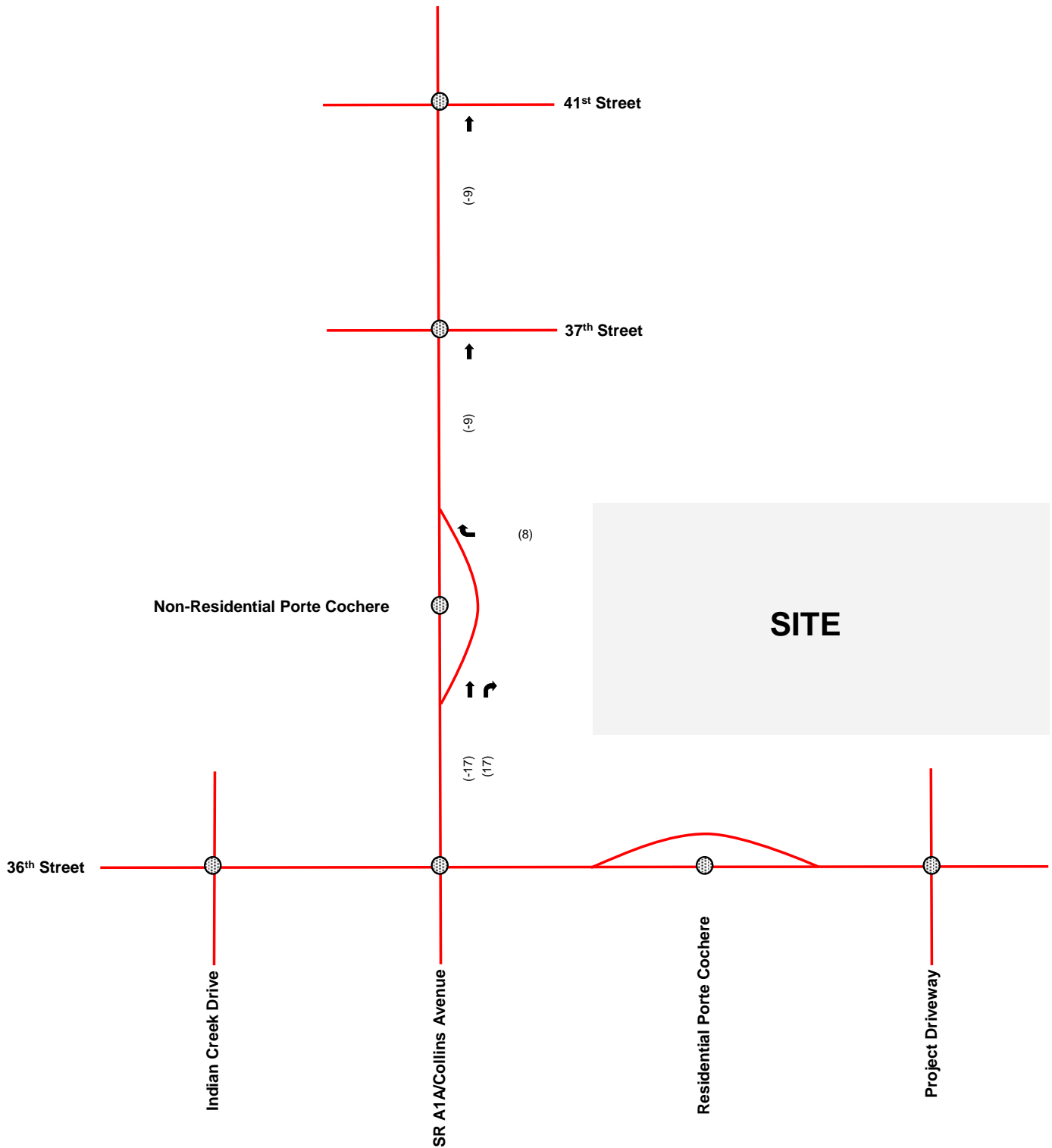
Figure 7  
P.M. Peak Hour Pass-by Trip Distribution  
3611 Collins Avenue  
Miami Beach, Florida



NOT TO SCALE

**Legend**

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









NOT TO SCALE

**Legend**

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

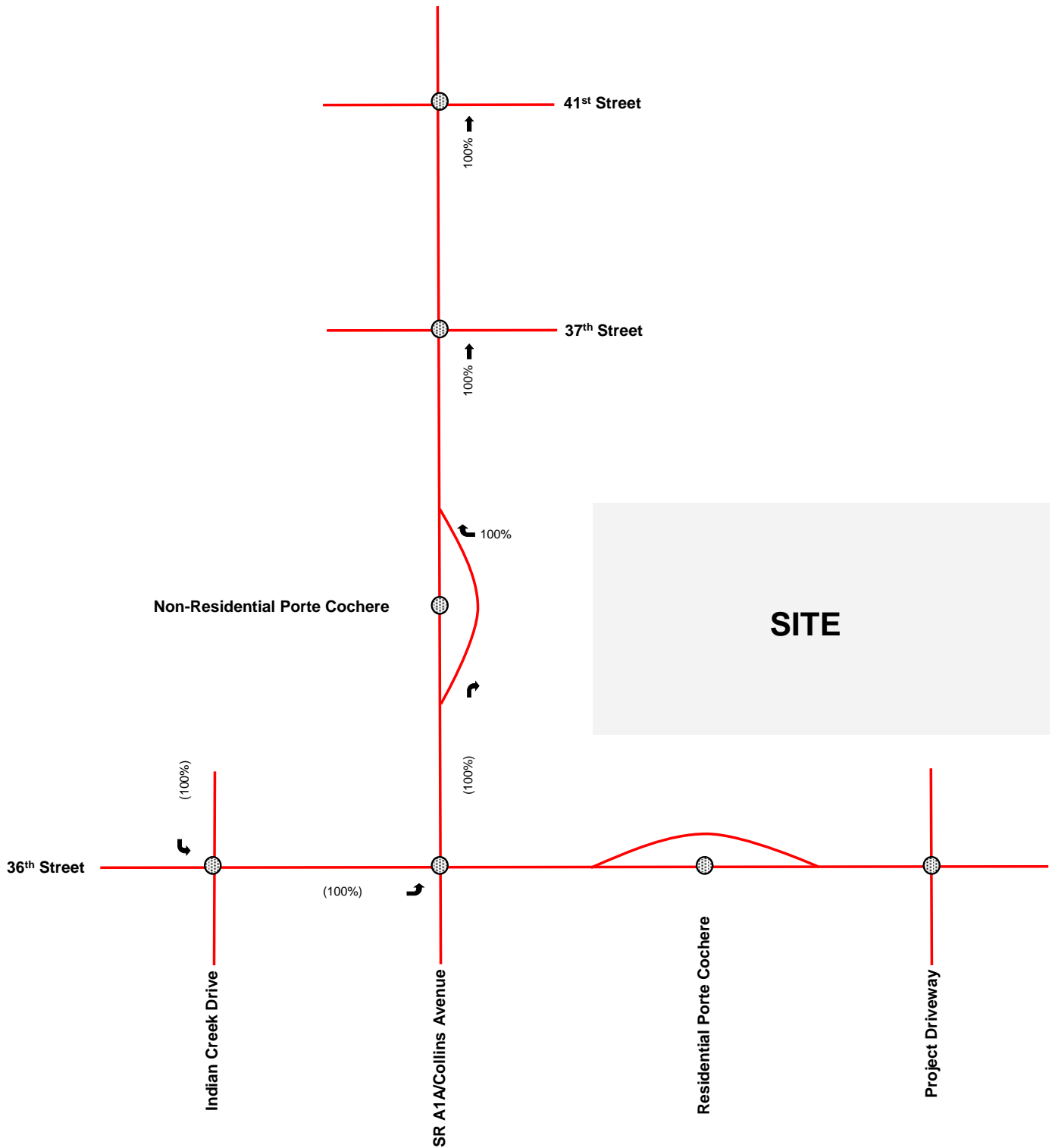




Figure 9  
Peak Hour Non-Residential Valet Trip Distribution  
3611 Collins Avenue  
Miami Beach, Florida



NOT TO SCALE

**Legend**

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

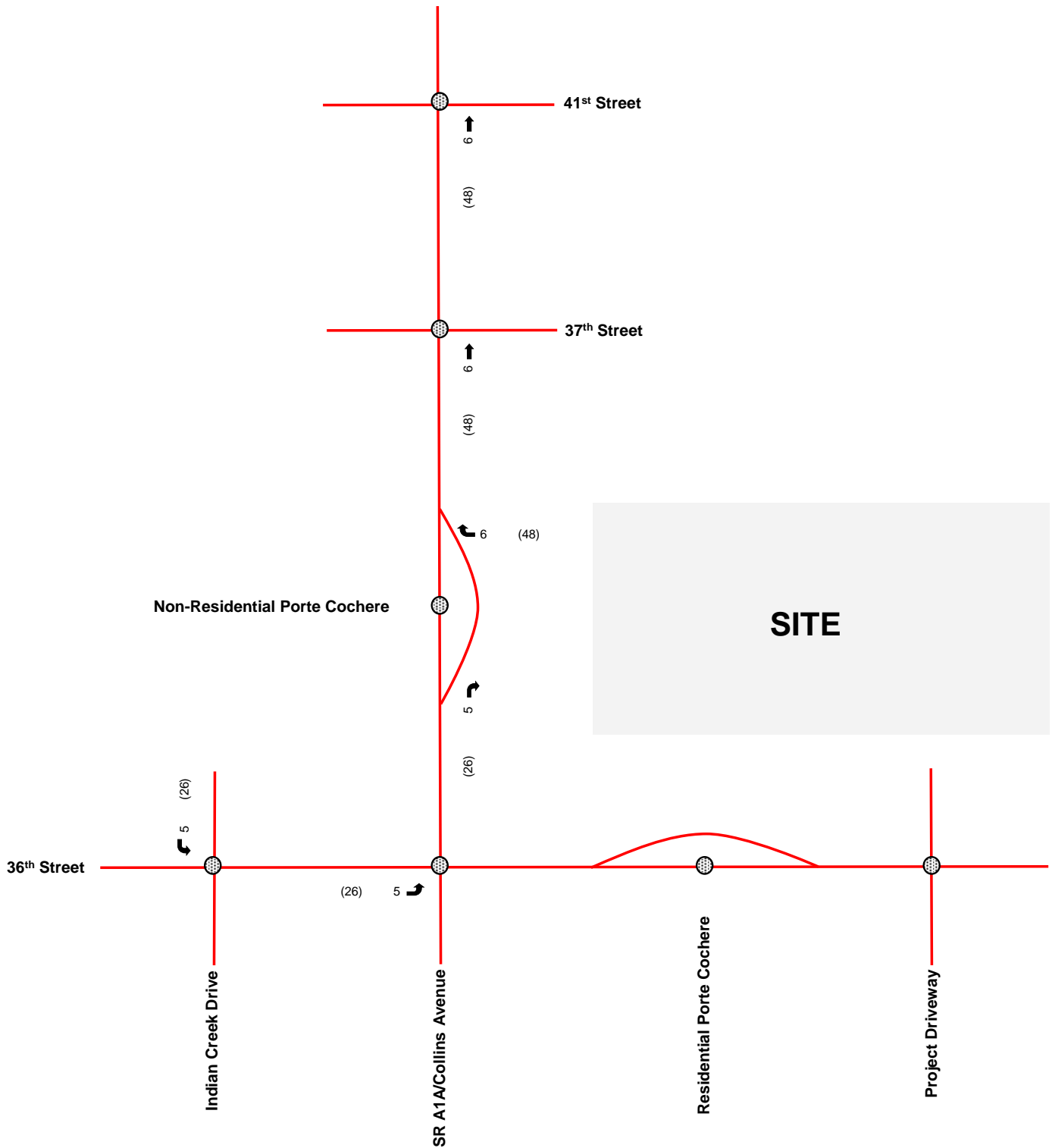




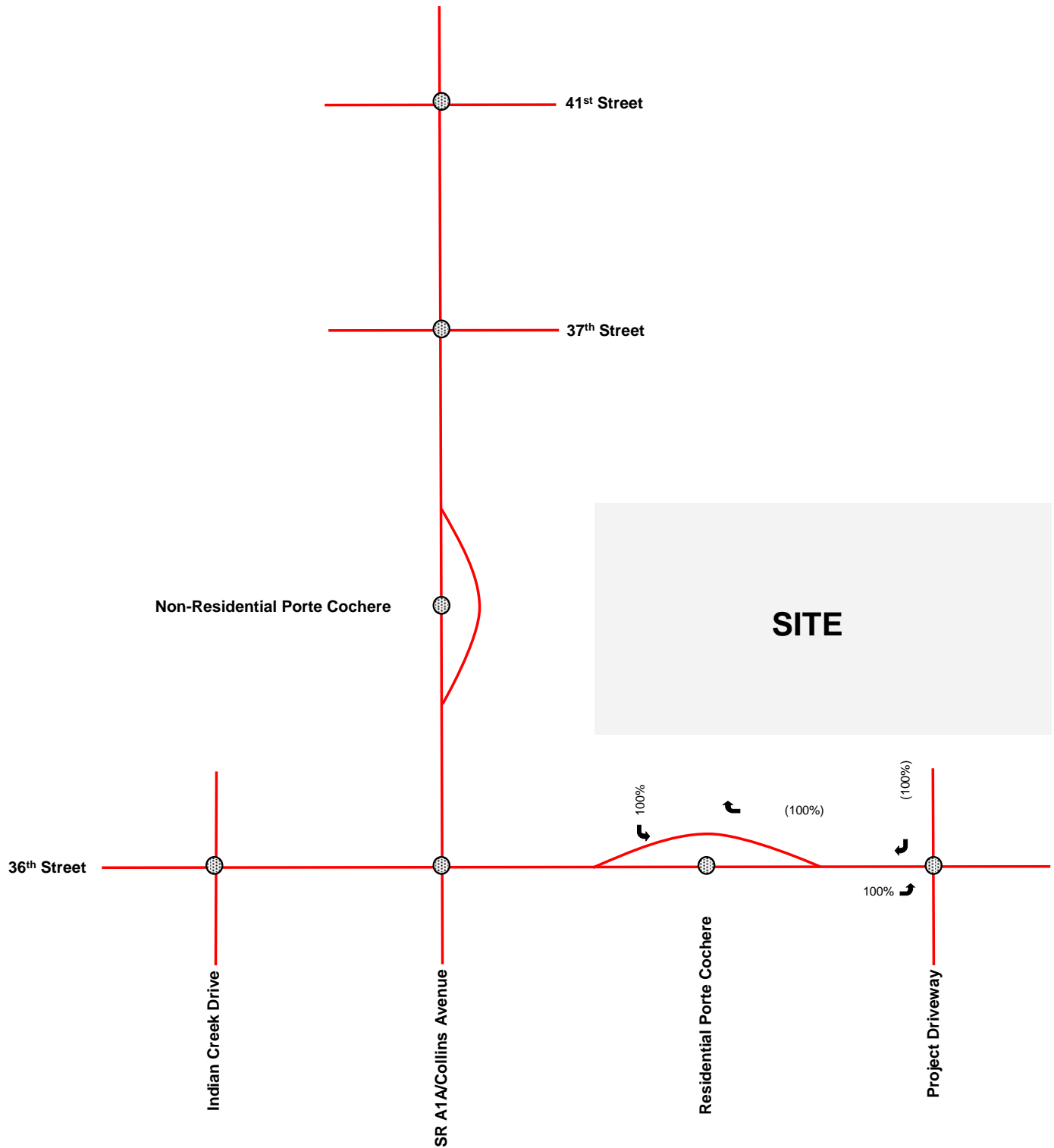
Figure 10  
Peak Hour Non-Residential Valet Trip Assignment  
3611 Collins Avenue  
Miami Beach, Florida



NOT TO SCALE

**Legend**

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





NOT TO SCALE

**Legend**

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

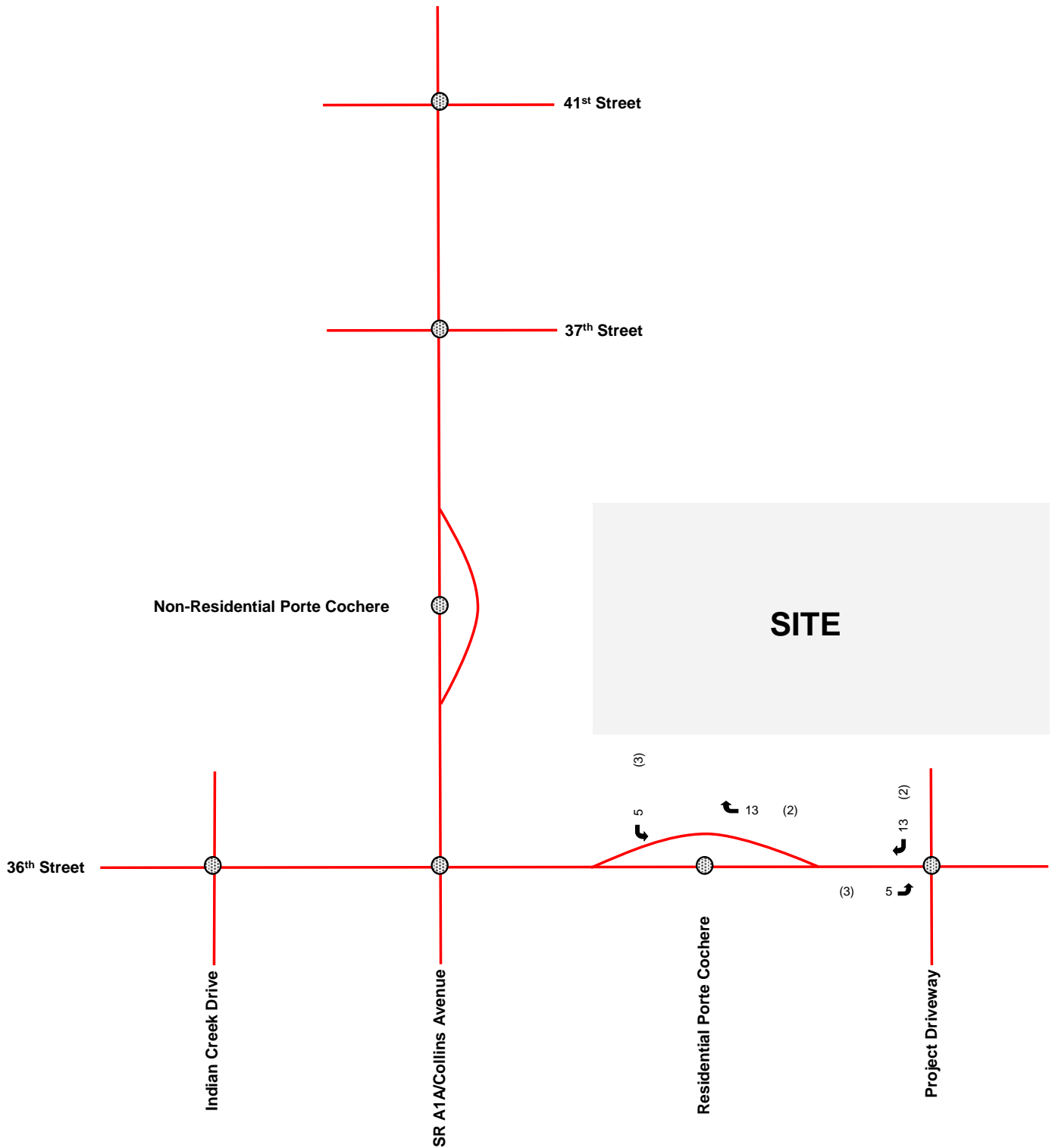


Figure 12  
Peak Hour Residential Valet Trip Assignment  
3611 Collins Avenue  
Miami Beach, Florida

## FUTURE TOTAL TRAFFIC

Future total traffic conditions are defined as the expected traffic conditions in the year 2027 after the opening of the project. Total traffic volumes considered in the analysis for this project are the sum of the future background traffic volumes and the expected project traffic volumes. Figure 13 presents the future total turning movement volumes at the study intersections during the weekday A.M. and P.M. peak hours. Volume development worksheets for the study intersections are included in Appendix H.



NOT TO SCALE

### Legend

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

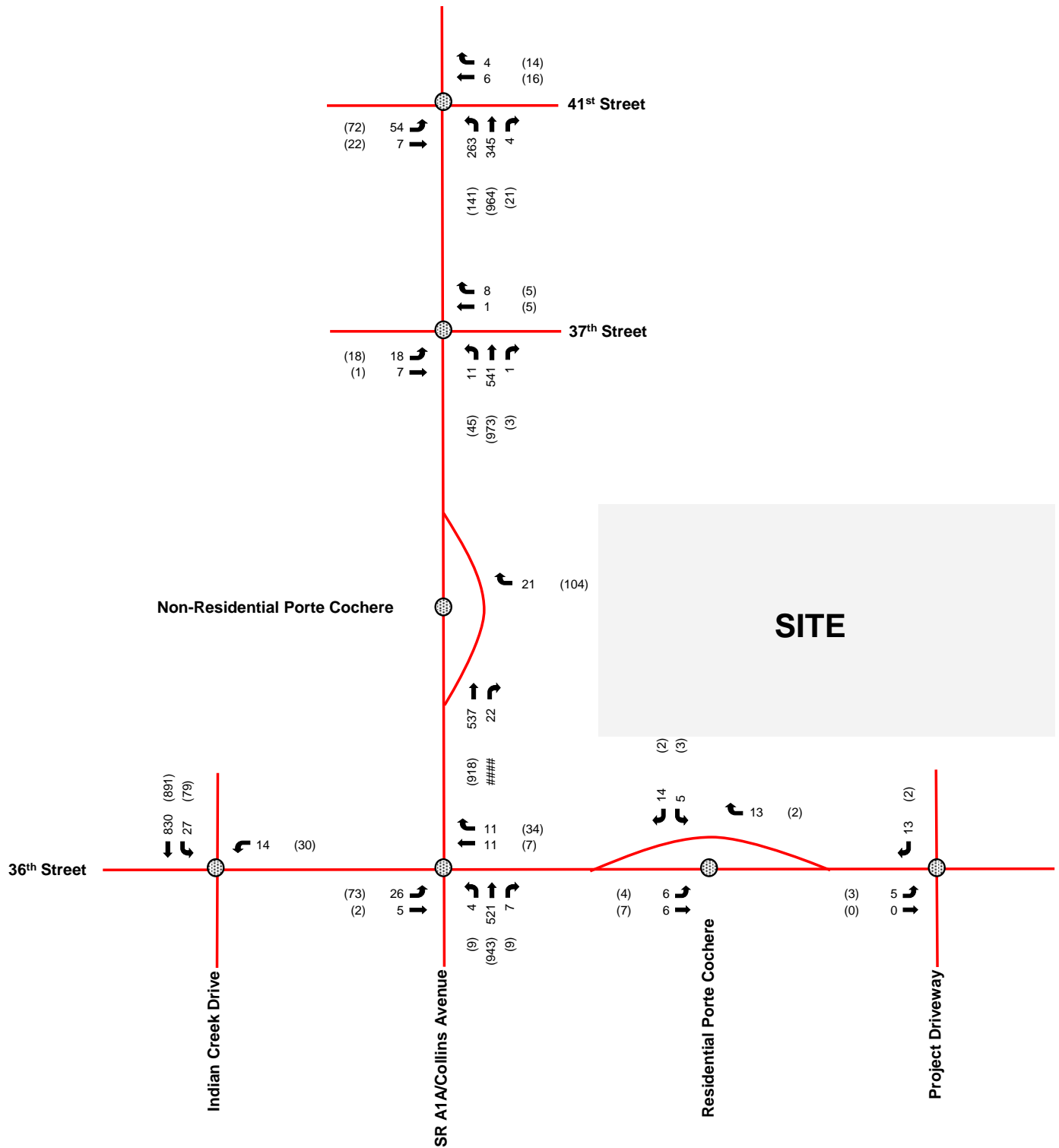


Figure 13  
Future Total Peak Hour Traffic  
3611 Collins Avenue  
Miami Beach, Florida



## INTERSECTION CAPACITY ANALYSIS

The study area intersection operating conditions were analyzed for three (3) scenarios (existing conditions, future background conditions, and future total conditions) using Trafficware's *SYNCHRO* software, which applies methodologies outlined in the Transportation Research Board's (TRB's) *Highway Capacity Manual* (HCM) 7<sup>th</sup> Edition. Synchro worksheets for the study intersections are included in Appendix I.

A summary of the intersection analyses for the A.M. and P.M. peak hours is presented in Table 3 and 4. As Tables 3 and 4 indicate, all overall study intersections are expected to operate at level of service (LOS) C or better during the peak hours under all analysis scenarios.

Table 3: A.M. Peak Hour Intersection Capacity Analysis						
Intersection	Traffic Control	Overall LOS/Delay	Approach LOS/Delay			
			EB	WB	NB	SB
Existing Conditions (Future Background Conditions) [Future Total Conditions]						
SR A1A/Collins Avenue and 41 <sup>st</sup> Street	Signalized	B/12.9 sec (B/12.9 sec) [B/12.8 sec]	D+12% (D+12%) [D+12%]	D+6% (D+6%) [D+6%]	A (A) [A]	(2)
SR A1A/Collins Avenue and 37 <sup>th</sup> Street	Two-Way Stop Control	(1)	B (B) [B]	B (B) [B]	(3)	(2)
SR A1A/Collins Avenue and 36 <sup>th</sup> Street	Two-Way Stop Control	(1)	B (B) [B]	B (B) [B]	(3)	(2)
Indian Creek Drive and 36 <sup>th</sup> Street	Two-Way Stop Control	(1)	(2)	B (B) [B]	(2)	(3)
36 <sup>th</sup> Street and Project Driveway	One-Way Stop Control	(1)	(2) ( <sup>(2)</sup> ) [ <sup>(3)</sup> ]	(3)	(2)	(2) ( <sup>(2)</sup> ) [A]
36 <sup>th</sup> Street and Residential Porte-Cochere	One-Way Stop Control	(1)	(2) ( <sup>(2)</sup> ) [ <sup>(3)</sup> ]	(3)	(2)	(2) ( <sup>(2)</sup> ) [A]
SR A1A/Collins Avenue And Non-Residential Porte-Cochere	One-Way Stop Control	(1)	(2)	(2) ( <sup>(2)</sup> ) [B]	(2) ( <sup>(2)</sup> ) [ <sup>(3)</sup> ]	(2)

- Notes: (1) Overall intersection LOS is not defined, as intersection operates under stop-control conditions.  
 (2) Approach does not exist.  
 (3) Approach operates under free-flow conditions. LOS is not defined.

Table 4: P.M. Peak Hour Intersection Capacity Analysis						
Intersection	Traffic Control	Overall LOS/Delay	Approach LOS/Delay			
			EB	WB	NB	SB
Existing Conditions (Future Background Conditions) [Future Total Conditions]						
SR A1A/Collins Avenue and 41 <sup>st</sup> Street	Signalized	C/20.7 sec (C/20.9 sec) [C/21.0 sec]	E (E) [E]	E (E) [E]	B (B) [B]	(2)
SR A1A/Collins Avenue and 37 <sup>th</sup> Street	Two-Way Stop Control	(1)	B (B) [B]	B (B) [C]	(3)	(2)
SR A1A/Collins Avenue and 36 <sup>th</sup> Street	Two-Way Stop Control	(1)	B (B) [B]	B (B) [B]	(3)	(2)
Indian Creek Drive and 36 <sup>th</sup> Street	Two-Way Stop Control	(1)	(2)	B (B) [B]	(2)	(3)
36 <sup>th</sup> Street and Project Driveway	One-Way Stop Control	(1)	(2) (2) [3]	(3)	(2)	(2) (2) [A]
36 <sup>th</sup> Street and Residential Porte-Cochere	One-Way Stop Control	(1)	(2) (2) [3]	(3)	(2)	(2) (2) [A]
SR A1A/Collins Avenue And Non-Residential Porte-Cochere	One-Way Stop Control	(1)	(2)	(2) (2) [B]	(2) (2) [3]	(2)

Notes: (1) Overall intersection LOS is not defined, as intersection operates under stop-control conditions.  
 (2) Approach does not exist.  
 (3) Approach operates under free-flow conditions. LOS is not defined.

## VALET OPERATIONS ANALYSIS

The valet queuing operations analysis was performed based on the methodology outlined in ITE's *Transportation and Land Development*, 1988. The analysis was performed to determine if valet operations could accommodate vehicular queues without blocking the sidewalk or travel lanes along SR A1A/Collins Avenue for non-residential uses and along 36<sup>th</sup> Street for residential uses. Valet operations were analyzed for the number of valet attendants and required vehicle stacking for the redevelopment proposed traffic for each porte-cochere.

The redevelopment will be served by one (1) full access driveway along 36<sup>th</sup> Street to serve the on-site parking garage east of SR A1A/Collins Avenue. The project will provide two (2) porte-cocheres, i.) a residential porte-cochere will be provided on 36<sup>th</sup> Street and ii.) a porte-cochere for non-residential uses (hotel, spa, restaurant, and bar areas) will be provided on SR A1A/Collins Avenue. The non-residential porte-cochere consists of one (1) valet drop-off/pick-up lane with storage for approximately four (4) to five (5) vehicles and one (1) bypass lane. In order for the bypass lane to not be blocked, a maximum storage of four (4) vehicles was assumed in the analysis. The residential porte-cochere consists of one (1) valet drop-off/pick-up lane with storage for approximately two (2) to four (4) vehicles and one (1) bypass lane. In order for the bypass lane to not be blocked, a maximum storage of two (2) vehicles was assumed.

All vehicles will be required to valet. Residential valet vehicles will be parked in the on-site parking garage and non-residential valet vehicles will be parked in an off-site parking garage. The location for the off-site parking garage is yet to be determined. However, as Section 130-36 of the City of Miami Beach Code of Ordinances requires that off-site parking facilities be located within 1,200 feet of the site, this distance was used as the travel distance in the non-residential valet analysis. Note that a quarter mile was assumed to provide a conservative valet analysis. Valet routing figures are included in Appendix J.

## VALET TRIP GENERATION

All vehicles will be required to valet. Residential vehicles will be parked in the on-site parking garage and non-residential valet vehicles will be parked in an off-site parking garage. The location for the off-site parking garage is yet to be determined. All non-rideshare trips are expected to valet. Based on data collected at the Shelborne Hotel located at 1801 Collins Avenue, Miami Beach,

it is expected that approximately 36.2 percent (36.2%) of non-residential net new project trips will valet during the weekday A.M. and P.M. peak hours.

Table 5 summarizes the project's expected non-residential and residential valet trip generation for the A.M. and P.M. peak hours. As shown in Table 5, the project is expected to generate 11 (6 in/5 out) weekday A.M. peak hour non-residential valet trips, 74 (48 in/26 out) weekday P.M. peak hour non-residential valet trips, 18 (5 in/13 out) weekday A.M. peak hour residential valet trips, and five (5) (3 in/2 out) weekday P.M. peak hour residential valet trips. Detailed valet trip generation calculations are included in Appendix J.

Table 5: Valet Trip Generation			
<i>A.M. Peak Hour (P.M. Peak Hour)</i>			
Valet Area	Entering Trips	Exiting Trips	Net New Valet Trips
Non-Residential Porte-Cochere	6 (48)	5 (26)	11 (74)
Residential Porte-Cochere	5 (3)	13 (2)	18 (5)

## VALET ASSUMPTIONS

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

Valet attendants will be stationed at both valet drop-off/pick-up areas. Valet drop-off trip service time was calculated based on the time it would take a valet parking attendant to obtain and park a drop-off vehicle within the designated parking garage and return to the valet drop-off/pick-up area. Valet pick-up trip service time was calculated based on the time it would take a valet parking attendant to travel to the designated parking garage, retrieve a parked vehicle, and return the vehicle back to a patron at the valet drop-off/pick-up area. Note that it was assumed that valet attendants entering the off-site parking garage will gain access via a proximity card (FOB) reader. It was assumed that the average service rate will be approximately 600 vehicles per hour (6.0 seconds per vehicle or 0.1 minutes per vehicle) for valet attendants based on processing times provided in *Parking Structures 3<sup>rd</sup> Edition: Planning, Design, Construction, Maintenance, and*

*Repair*, 2001. Note that an additional 0.1 minute was added to this time to account for the entry gate opening time. The following summarizes the total valet drop-off and pick-up service times for each valet service.

#### Non-Residential Valet Drop-off/Pick-up Area

The following summarizes the valet drop-off service time:

- Exchange between valet attendant and driver (1.0 minutes)
- Valet attendant drives vehicle from valet drop-off area to the off-site parking garage (1.0 minutes)
- Valet attendant utilizes proximity card reader to access the garage (0.2 minutes)
- Valet attendant returns to valet station (3.0 minutes)
- Total service time: **5.2 minutes**

The following summarizes the valet pick-up service time:

- Valet attendant proceeds to the parking garage to retrieve the vehicle (3.0 minutes)
- Valet attendant uses proximity card reader to access the garage (0.2 minutes)
- Valet attendant drives vehicle from the off-site parking garage to the valet pick-up area (1.0 minutes)
- Exchange between valet attendant and driver (1.0 minutes)
- Total service time: **5.2 minutes**

#### Residential Valet Drop-off/Pick-up Area

The following summarizes the valet drop-off service time:

- Exchange between valet attendant and driver (0.5 minutes)
- Valet attendant drives vehicle from valet drop-off area to the parking garage (0.6 minutes)
- Valet attendant parks vehicle in the mechanical lift parking space (2.0 minutes)
- Valet attendant returns to valet station (0.2 minutes)
- Total service time: **3.3 minutes**

The following summarizes the valet pick-up service time:

- Valet attendant proceeds to the parking garage to retrieve the vehicle (0.2 minutes)
- Valet attendant retrieves vehicle from the mechanical lift parking space (1.7 minutes)
- Valet attendant drives vehicle from the parking garage to the valet pick-up area (0.2 minutes)
- Exchange between valet attendant and driver (0.5 minutes)
- Total service time: **2.6 minutes**

Detailed travel time calculations and mechanical lift processing time calculations are included in Appendix J.

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

The analysis determined the required queue storage,  $M$ , which is exceeded  $P$  percent of the time. This analysis seeks to ensure that the queue length does not exceed the storage provided at a level of confidence of 95 percent (95%). Four (4) vehicle drop-off/pick-up spaces are provided for non-residential valet operations and two (2) vehicle pick-up are spaces provided for residential valet operations.

## VALET ANALYSIS

An iterative approach was used to determine the number of valet attendants required to accommodate the proposed redevelopment demand during the weekday A.M. and P.M. peak hours and ensure that the 95<sup>th</sup> percentile valet queues does not extend beyond the designated valet service areas. Detailed valet analysis worksheets are provided in Appendix J.

The results of the non-residential valet operations analysis demonstrate that two (2) valet attendants would be required during the A.M. peak hour and nine (9) valet attendants would be required during the P.M. peak hour to ensure that valet queues do not exceed the storage provided. The results of the residential valet operations analysis demonstrate that two (2) valet attendants would be required during the A.M. peak hour and one (1) valet attendant would be required during the P.M. peak hour to ensure that valet queues do not exceed the storage provided. If it is determined that valet processing times can be performed more efficiently and/or actual traffic volumes are lower than projected, a reduced number of valet attendants may be adequate to serve the site.

## TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

Transportation Demand Management (TDM) strategies are proposed to reduce the impacts of the project traffic on the surrounding roadway network. Typical measures promote use of public transportation, bicycling and walking, encourage car/vanpooling and offer alternatives to the typical workday hours. Additionally, the applicant will commit to providing the following incentives including:

- Creation of an Employee Transportation Coordinator position to run the transportation demand management (TDM) programs.
- Providing eight (8) short-term and 26 long-term secure bicycle parking spaces (bicycle racks and lockers).
- Providing elevators that can accommodate bikes.
- Providing a bicycle drop-off/valet service.

## PARKING EVALUATION

The required parking for the site, based on the City of Miami Beach *Code of Ordinances*, is 174 parking spaces. As part of the proposed redevelopment, the project will provide five (5) ADA spaces, five (5) conventional parking spaces, and 52 mechanical lifts parking spaces for a total 116 parking spaces within the proposed on-site parking garage. The remaining parking space requirement will be provided via an agreement with an off-site parking garage. An agreement with an off-site parking garage has not yet been reached. Refer to the detailed parking calculations prepared by others contained in Appendix A.



## MANEUVERABILITY ANALYSIS

A maneuverability analysis was prepared for the ground level passenger vehicle circulation areas and loading area. The analysis was performed using Transoft's *AutoTurn 11* software design vehicle turning templates and vehicle turning templates consistent with American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets*, 2018.

The analysis was prepared using a passenger (P) vehicle for the proposed porte-cocheres and driveways and a single-unit 30-foot truck (SU-30) vehicle for the proposed loading area. The maneuverability analysis determined that passenger vehicles and loading vehicles will be able to ingress, egress, and travel through the site and loading area without conflict. Maneuverability analysis plots are included in Appendix K.

## CONCLUSION

36 Collins Holdings, LLC is proposing to redevelop the property located at 3611/3621 Collins Avenue in Miami Beach, Florida. Currently, the site proposed for redevelopment is occupied by a vacant 46-room hotel, a vacant mid-rise multifamily residential building containing 106 dwelling units, and an occupied mid-rise condominium building containing eight (8) dwelling units. Note that trip generation credit was not taken for the vacant existing land uses as they have been vacant for more than one (1) year. Additionally, the existing occupied mid-rise condominium building will be maintained as part of the proposed redevelopment. The proposed redevelopment consists of the existing 8-unit condominium building, a 36-room hotel, 23 high-rise multifamily residential units, 13,455 square feet of spa/wellness space, a 289-seat restaurant, 8,507 square feet of bar space, and an on-site parking garage with mechanical stackers for the residential portion. The project is expected to be completed by year 2027.

Access to the proposed redevelopment will be provided via one (1) full-access driveway along 36<sup>th</sup> Street east of Collins Avenue. The driveway will provide access to the on-site parking garage. All vehicles will be required to valet. Note that the project will provide two (2) porte-cocheres, i.) a residential porte-cochere will be provided on 36<sup>th</sup> Street and ii.) a porte-cochere for non-residential uses (hotel, spa, restaurant, and bar areas) will be provided on Collins Avenue. Residential vehicles will be parked in the on-site parking garage and non-residential valet vehicles will be parked in an off-site parking garage. The location for the off-site parking garage is yet to be determined.

Trip generation for the existing development and the proposed redevelopment were calculated using rates and/or equations contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11<sup>th</sup> Edition. The project is expected to generate 50 net new vehicle trips during the weekday A.M. peak hour and 143 net new vehicle trips during the weekday P.M. peak hour.

The results of the intersection capacity analysis indicate that all study intersections are expected to operate at level of service (LOS) C or better during the peak hours under all analysis scenarios.

The results of the non-residential valet operations analysis demonstrate that two (2) valet attendants would be required during the A.M. peak hour and nine (9) valet attendants would be required during the P.M. peak hour to ensure that valet queues do not exceed the storage

provided. The results of the residential valet operations analysis demonstrate that two (2) valet attendants would be required during the A.M. peak hour and one (1) valet attendant would be required during the P.M. peak hour to ensure that valet queues do not exceed the storage provided.

The applicant will commit to providing the following Transportation Demand Management (TDM) strategies:

- Creation of an Employee Transportation Coordinator position to run the transportation demand management (TDM) programs.
- Providing eight (8) short-term and 26 long-term secure bicycle parking spaces (bicycle racks and lockers).
- Providing elevators that can accommodate bikes.
- Providing a bicycle drop-off/valet service.

The required parking for the site, based on the City of Miami Beach *Code of Ordinances*, is 174 parking spaces. As part of the proposed redevelopment, the project will provide five (5) ADA spaces, five (5) conventional parking spaces, and 52 mechanical lifts parking spaces for a total 116 parking spaces within the proposed on-site parking garage. The remaining parking space requirement will be provided via an agreement with an off-site parking garage. An agreement with an off-site parking garage has not yet been reached.

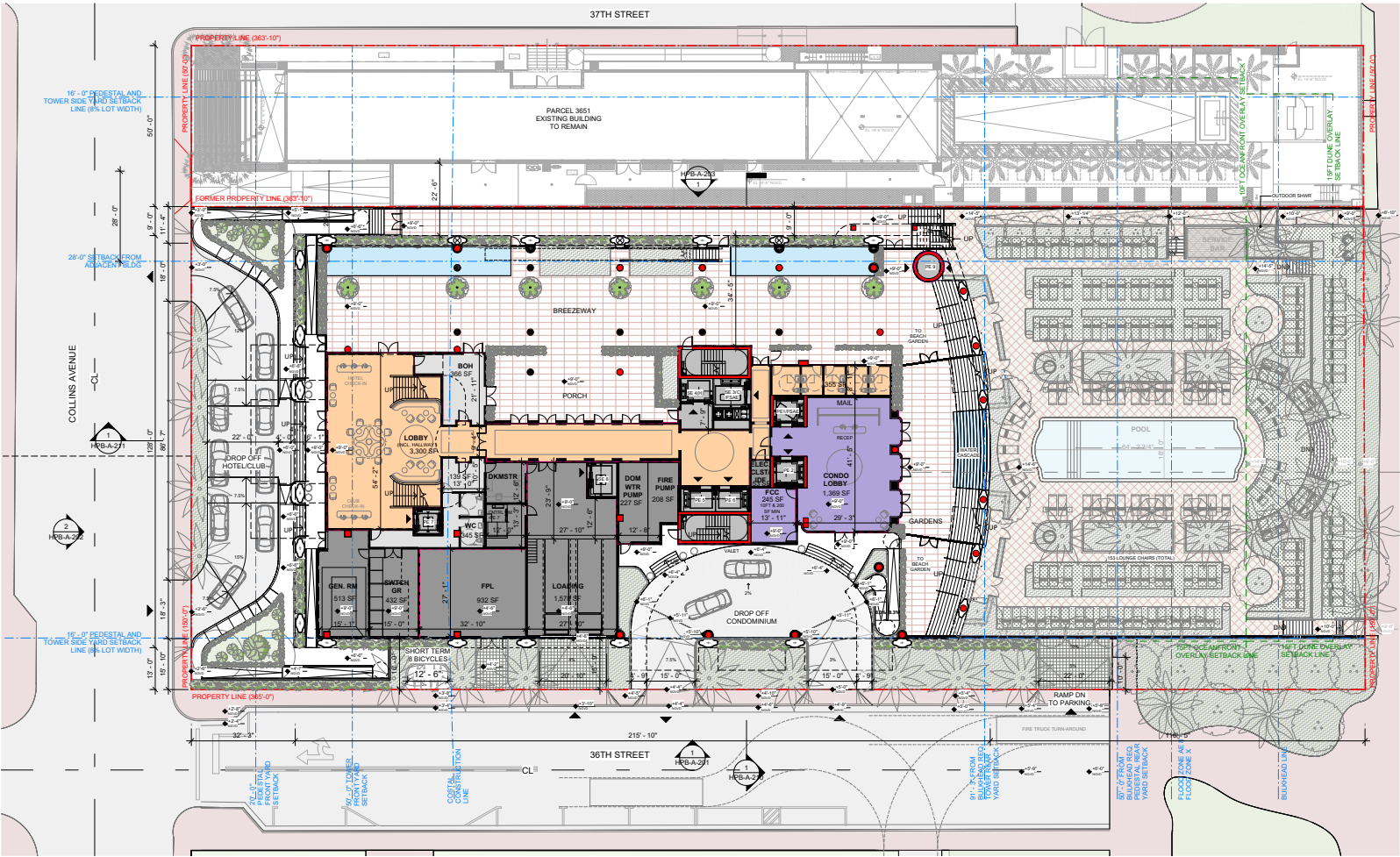
The maneuverability analysis was prepared using a passenger (P) vehicle for the proposed porte-cocheres and driveways and a single-unit 30-foot truck (SU-30) vehicle for the proposed loading area. The maneuverability analysis determined that passenger vehicles and loading vehicles will be able to ingress, egress, and travel through the site and loading area without conflict.

## **Appendix A**

### Site Plan

IN PROGRESS - NOT FOR CONSTRUCTION

POOL SEATING COUNT	
# LOUNGE CHAIRS	153



1 LEVEL 01 (BFE+1)  
1/16" = 1'-0"

Casa Cipriani

3611-3621 Collins Avenue  
Miami Beach, Florida  
CLIENT  
13th Floor Investments  
2850 Tigertail Avenue Suite 701  
Miami, Florida 33133  
ph. 786-220-0460

Cipriani  
30124 Venezia-San Marco 1323  
ph. IT 01836320273

Design Architect  
brandon haw  
architecture  
630 Flushing Avenue, Studio 310  
Brooklyn, NY 11206  
ph. 212-300-8440

ARCHITECT OF RECORD  
Revetta Architecture International  
2950 SW 27th Avenue, Ste.110  
Miami, FL 33133  
ph. 305-590-5000  
STRUCTURAL ENGINEER  
B&J Consulting Engineers, Inc.  
7955 NW 12th Street, S-418  
Miami, Florida 33126  
ph. 786-703-9243  
MEPP ENGINEER  
HNESS Consulting Engineers  
4800 SW 74 Court  
Miami, Florida 33155  
ph. 305-270-9935  
CIVIL ENGINEER  
Langan  
1221 Brickell Avenue Suite 1800  
Miami, Florida 33131  
ph. 786-264-7200  
LANDSCAPE ARCHITECT  
EMEA Landscape Architecture, Inc.  
7636 NE 4th Court, Suite 102  
Miami FL 33138  
ph. 305-576-6702

KEY PLAN		
1	15/DEC/2024	HPB First Submittal
NO	DATE	DESCRIPTION
SUBMITTAL		
HPB 24-0610 12-15-24		
PROGRESS PRINT / INTERIM REVIEW ONLY NOT FOR CONSTRUCTION, REGULATORY APPROVAL, OR PERMITTING		

DRAWING TITLE	
LEVEL 01 FLOOR PLAN	
SCALE	As indicated
DATE	12/15/24
PROJECT NUMBER	2309
DOB DRAWING NUMBER	
DRAWING NUMBER	REV

HPB-A-101

## **Appendix B**

### Methodology Correspondence

Methodology Review



Submittal Status	Received Date	Due Date	Completed Date
Pass	10/21/2024	10/31/2024	10/29/2024

✔ Transportation - LUB Peer Review • Pass • Muthyalagari Govardhan • Completed : 10/29/2024



Due Date	Completed Date
10/29/2024	10/29/2024

Comment

As part of the TIA submittal, please delete the existing trip generation information as the site is being vacant for more than a year as described in the methodology letter.

✔ Transportation - LUB Admin Review • Pass • Webster Grant Harrison • Completed : 10/29/2024

Due Date	Completed Date
10/31/2024	10/29/2024

## MEMORANDUM

To: Grant Webster and Otniel Rodriguez, E.I.  
City of Miami Beach

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



Date: November 15, 2024

**Subject: 3611/3621 Collins Avenue  
Traffic Study Methodology  
HPB24-0610**

The purpose of this memorandum is to summarize the traffic study methodology for the redevelopment located at 3611/3621 Collins Avenue in Miami Beach, Florida. The site proposed for redevelopment is currently occupied by a vacant 46-room hotel, a vacant mid-rise multifamily residential building containing 106 dwelling units, and an occupied mid-rise condominium building containing eight (8) dwelling units. Note that trip generation credit was not taken for the vacant existing land uses as they have been vacant for more than one (1) year. Additionally, the existing occupied mid-rise condominium building will be maintained as part of the proposed redevelopment. The proposed redevelopment consists of the existing 8-unit condominium building, a 36-room hotel, 23 high-rise multifamily residential units, 13,455 square feet of spa/wellness space, a 289-seat restaurant, 8,507 square feet of bar space, and an on-site parking garage with mechanical stackers. The project will provide two (2) porte-cocheres, i.) a residential porte-cochere will be provided on 36<sup>th</sup> Street and ii.) a porte-cochere for non-residential uses (hotel, spa, restaurant, and bar areas) will be provided on Collins Avenue. As the parking garage will have mechanical stackers, it is assumed that on-site parking will be valet only. A conceptual site plan and location map are included in Attachment A. The following sections summarize our proposed methodology.

## TRIP GENERATION

Trip generation calculations for the existing development and proposed redevelopment were performed using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11<sup>th</sup> Edition. The trip generation for the existing development was determined using ITE Land Use Code (LUC) 221 (Multi-Family Housing [Mid-Rise]). The trip generation for the proposed redevelopment was determined using ITE LUC 310 (Hotel), LUC 221 (Multi-Family Housing [Mid-Rise]), LUC 222 (Multifamily Housing [High-Rise]), LUC 492 (Health/Fitness Club), LUC 931 (Fine Dining Restaurant), and LUC 975 (Drinking Place).

A multimodal (public transit, bicycle, and pedestrian) factor based on US Census *Means of Transportation to Work* data was reviewed for the census tract in which the redevelopment is located. The US Census data indicated that there is a 23.0% percent (23.0%) multimodal factor for the redevelopment. Note that to provide a conservative analysis, a multimodal factor of 20.0 percent (20.0%) was applied to the trip generation calculations. It is expected that residents, employees, patrons, and visitors will choose to walk, bike, or use public transit to and from the proposed redevelopment. Transit route information will be documented in the report. Detailed trip generation calculations and US Census *Means of Transportation to Work* data are included in Attachment B.



The project is expected to generate 50 net new vehicle trips during the weekday A.M. peak hour and 143 net new vehicle trips during the P.M. peak hour. Detailed trip generation calculations are included as Attachment B.

## STUDY AREA

The following intersections in addition to the project driveway, are proposed to be analyzed.

1. Collins Avenue/SR A1A and 41<sup>st</sup> Street
2. Collins Avenue/SR A1A and 37<sup>th</sup> Street
3. Collins Avenue/SR A1A and 36<sup>th</sup> Street
4. Indian Creek Drive/SR A1A and 36<sup>th</sup> Street

## DATA COLLECTION

A.M. (7:30 A.M. to 9:30 A.M.) and P.M. (4:00 P.M. to 6:00 P.M.) peak period turning movement counts will be collected at all identified study intersections on a typical weekday (Tuesday, Wednesday, or Thursday). All traffic counts will be adjusted to peak season conditions using the appropriate Florida Department of Transportation (FDOT) peak season conversion factors for Miami-Dade. Turning movement counts will be collected in 15-minute intervals during the analysis peak period and will include pedestrian and bicycle counts and heavy vehicle percentages. Signal timing information will be obtained from Miami-Dade County Department of Transportation and Public Works – Traffic Signals and Signs Division. All collected traffic data will be provided in the Appendix of the traffic impact study.

## TRIP DISTRIBUTION

Trip distribution will be based on an interpolated cardinal trip distribution for the project site's traffic analysis zones (TAZs) obtained from the Miami-Dade Transportation Planning Organization's *2045 LRTP Directional Trip Distribution Report* travel demand model 2015 and 2045 data. The trip distribution for the anticipated build-out year of 2027 was interpolated from the 2015 and 2045 data. The project is located within TAZ 633. The detailed cardinal distribution is provided in Attachment C.

## BACKGROUND GROWTH RATE

A background growth rate will be calculated based on historic growth trends at nearby Florida Department of Transportation (FDOT) traffic count stations for the most recent 5- and 10-year periods. Additionally, growth rates based on Miami-Dade Transportation Planning Organization's (TPO) projected 2015 and 2045 model network volumes will be examined. The higher of the two (2) growth rates will be used in the analysis. Documentation will be provided in the Appendix of the traffic impact study.

## INTERSECTION CAPACITY ANALYSIS

Capacity analyses will be conducted for the analysis period for the study intersections. Intersection analyses will be performed using Trafficware's *Synchro* traffic engineering analysis software which applies the Transportation Research Board's (TRB's), *Highway Capacity Manual* (HCM), 2000 and 6<sup>th</sup> Edition methodologies. Capacity analyses will be conducted for three (3) scenarios: existing, build-out without project, and build-out with project.

The following figures will be included for the study intersections:

- Existing conditions
- Future background traffic conditions (with growth rate and committed development traffic)

- Trip distribution
- Trip assignment
- Future total traffic conditions (with project)

## **TRANSPORTATION DEMAND MANAGEMENT STRATEGIES**

Transportation Demand Management (TDM) strategies will be developed to reduce the impact of project traffic on the surrounding roadway network and promote trip reduction. Typical measures promote bicycling and walking, encourage car/vanpooling and offer alternatives to the typical workday hours.

## **VALET OPERATION ANALYSIS**

A valet operations queuing analysis will be prepared for the residential porte-cochere on 36<sup>th</sup> Street and the non-residential porte-cochere on Collins Avenue to ensure that queues do not spill back into public right-of-way. Rideshare will be incorporated into the valet analysis based on data collected at the Shelbourne Hotel. Detailed data is provided in Attachment D.

Trip generation estimates will be utilized to provide for the highest demand scenario. The valet operations queuing analysis will be conducted consistent with procedures described in ITE's *Transportation and Land Development*, 1988. A traffic circulation figure will be prepared to illustrate the valet routes to and from the vehicle drop-off/pick-up area.

Analysis assumptions and results, including the location of the valet garage and the required number of valet attendants to service the facility under both typical and highest demand will be documented in a traffic report.

The mechanical stacker processing time and specifications will be provided as part of the traffic study as a specific vendor has not been selected at this time.

## **GARAGE ENTRY GATE OPERATIONS ANALYSIS**

A 95<sup>th</sup> percentile entry gate analysis will be prepared for parking garage entry points, if entry gates are provided. 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 ITE's *Transportation and Land Development*, 1988. 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.

## **MANEUVERABILITY ANALYSIS**

A maneuverability analysis for the parking garage and loading areas of the proposed redevelopment will be performed utilizing Transoft Solutions' *AutoTURN* software. Deficiencies related to maneuverability, traffic flow, and vehicular conflicts will be documented in a traffic report.

## **PARKING EVALUATION**

A summary of the proposed parking supply will be prepared and included as part of the traffic study and compared to the number of required parking spaces calculated by the architect per City of Miami Beach requirements. Note that the redevelopment program parking requirements will be documented in the traffic study.

## DOCUMENTATION

The results of the traffic 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\140248012-3611 Collins Ave\correspondence\3611-3621 Collins Avenue Traffic Study Methodology rev2.docx

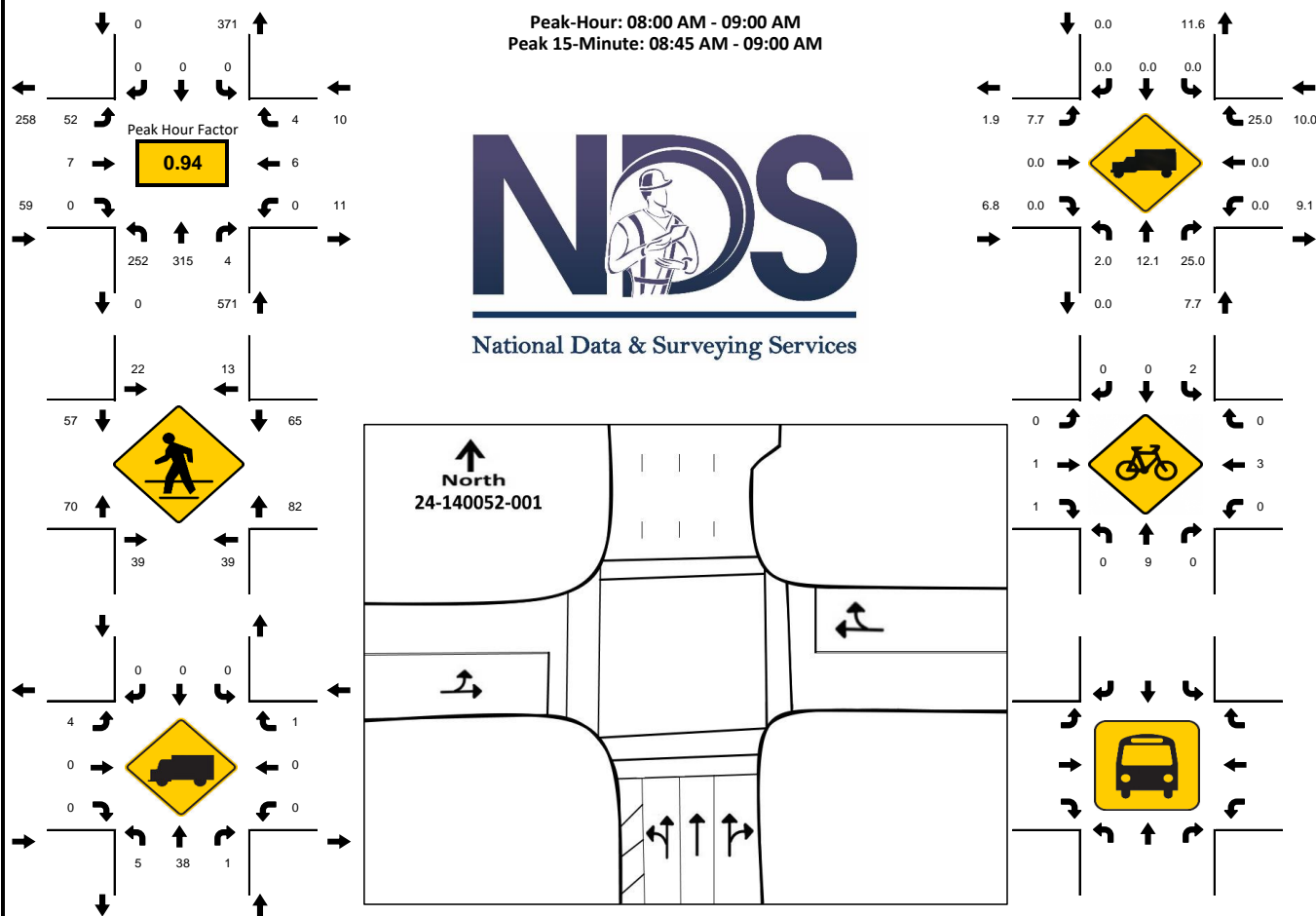
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## **Appendix C**

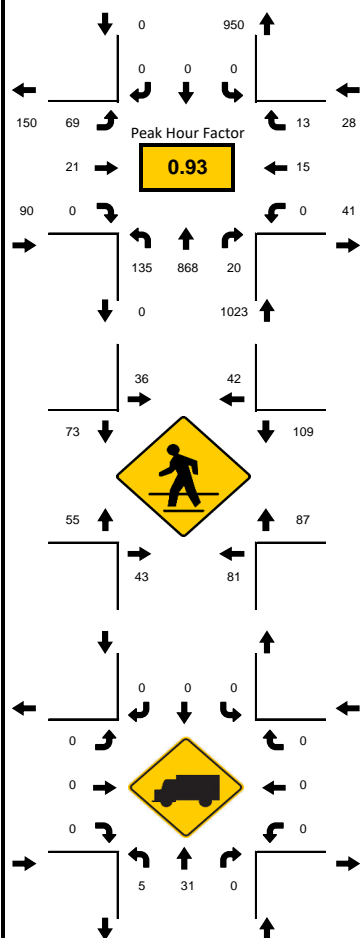
### Traffic Data

## Turning Movement Counts

PROJECT ID: 24-140052-001  
DATE: Wed, Feb 28, 2024

[illegible]

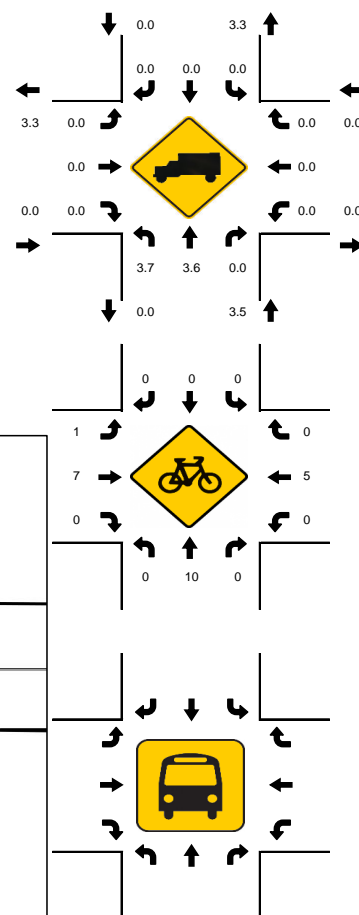
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**DATE:** Wed, Feb 28, 2024



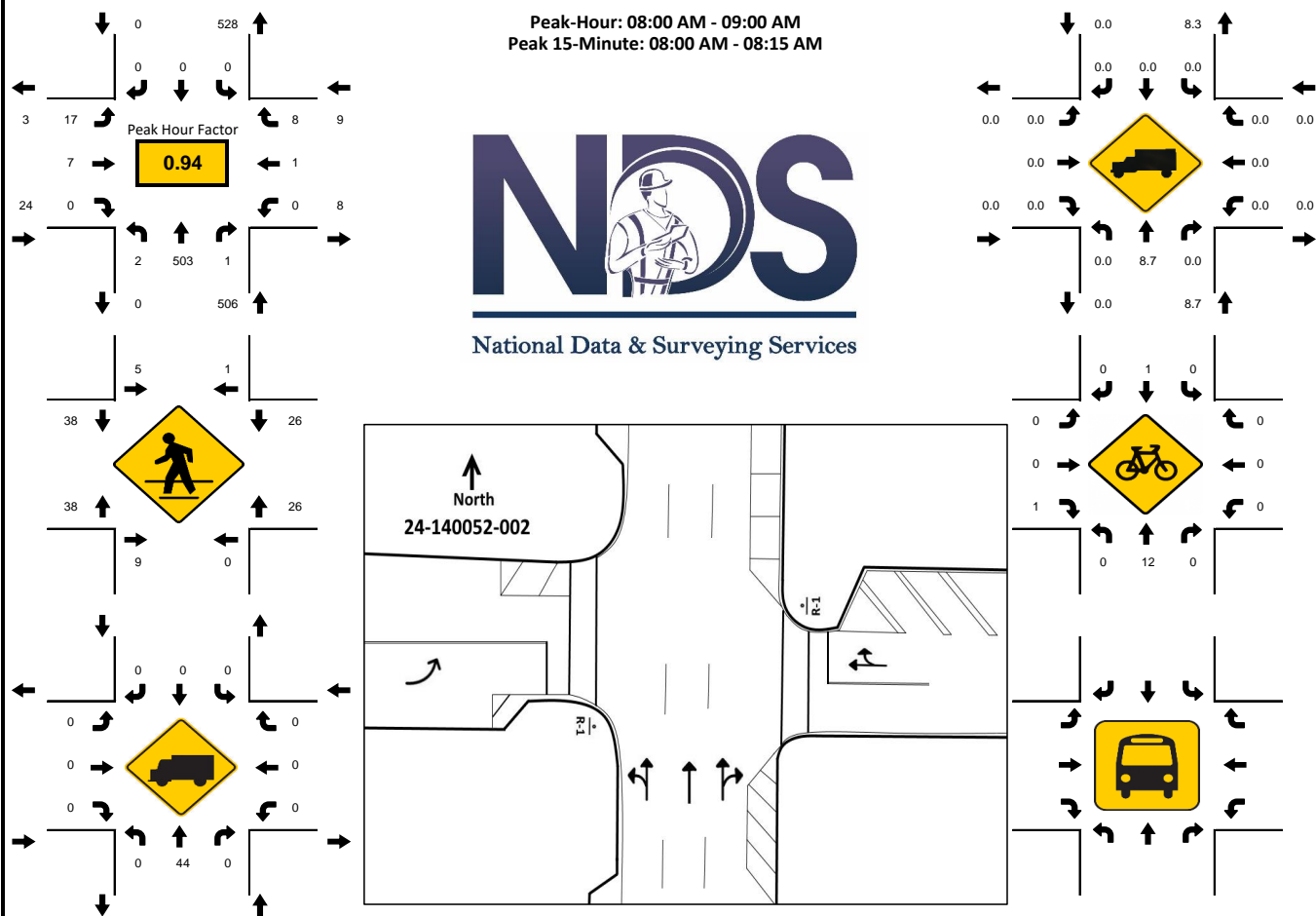
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Peak 15-Minute: 05:30 PM - 05:45 PM



## National Data & Surveying Services

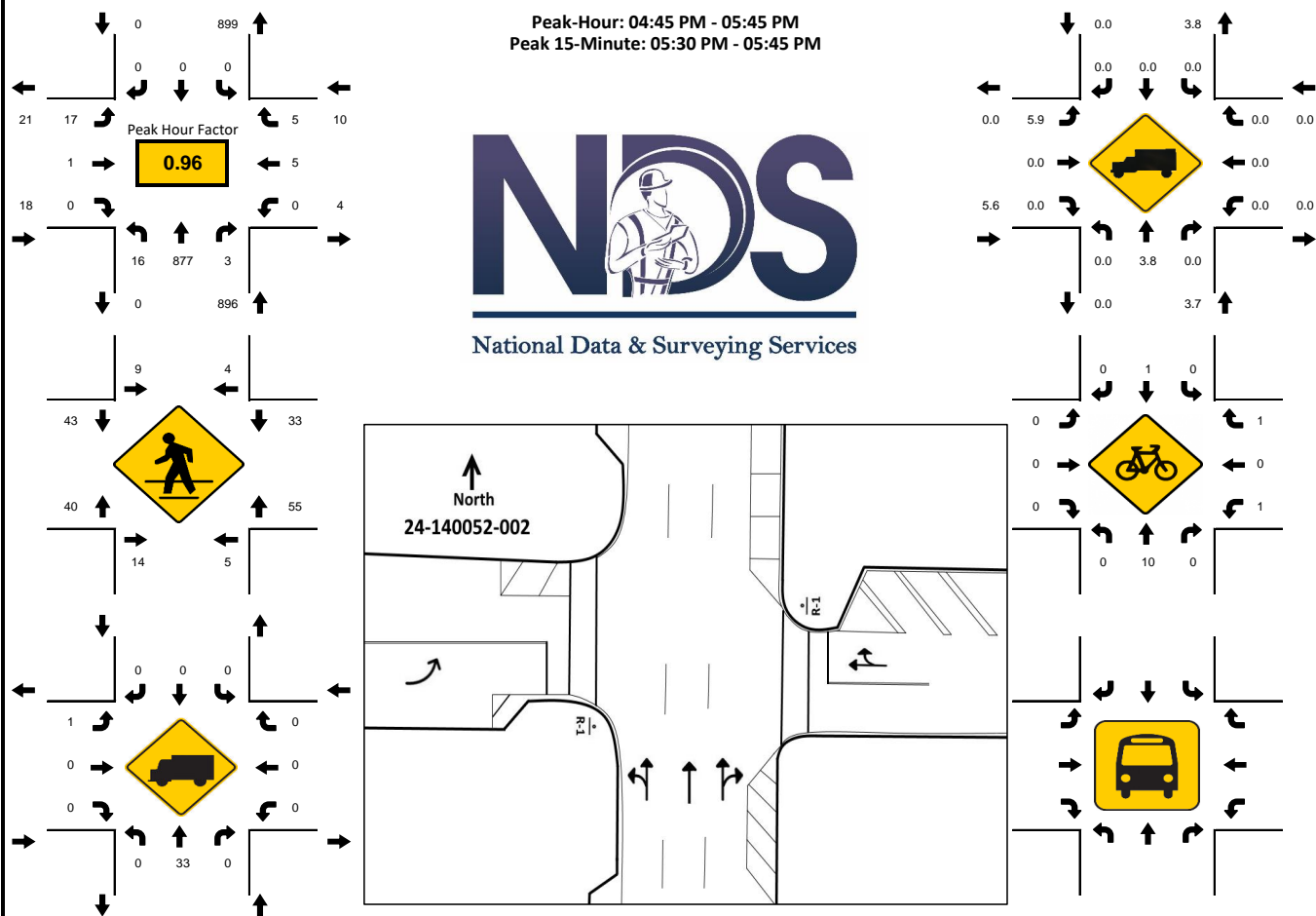
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**PROJECT ID:** 24-140052-002  
**DATE:** Wed, Feb 28, 2024

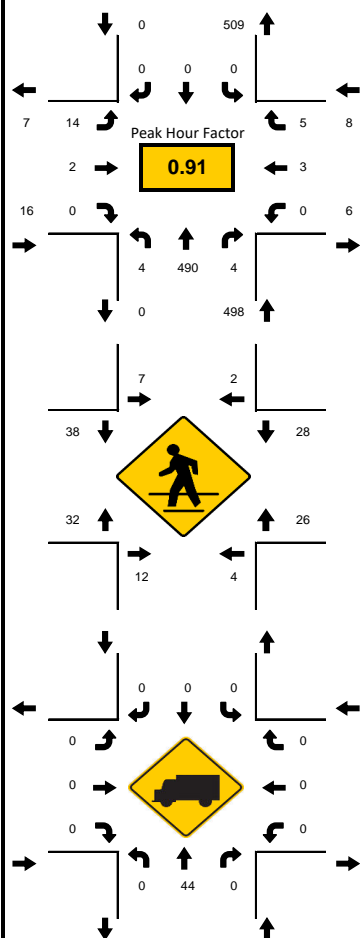
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**PROJECT ID:** 24-140052-002  
**DATE:** Wed, Feb 28, 2024

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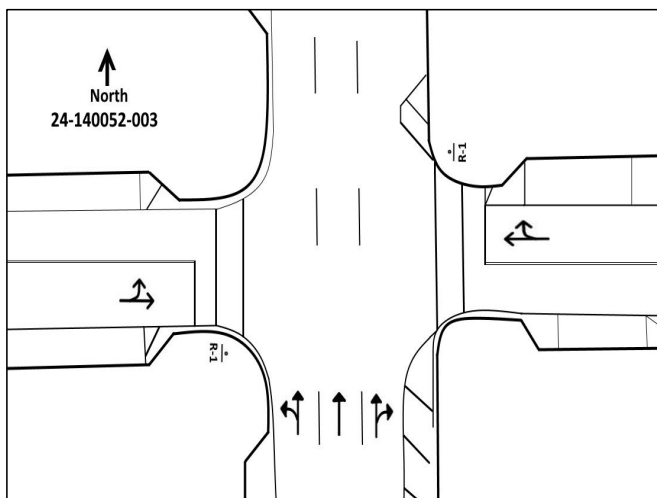
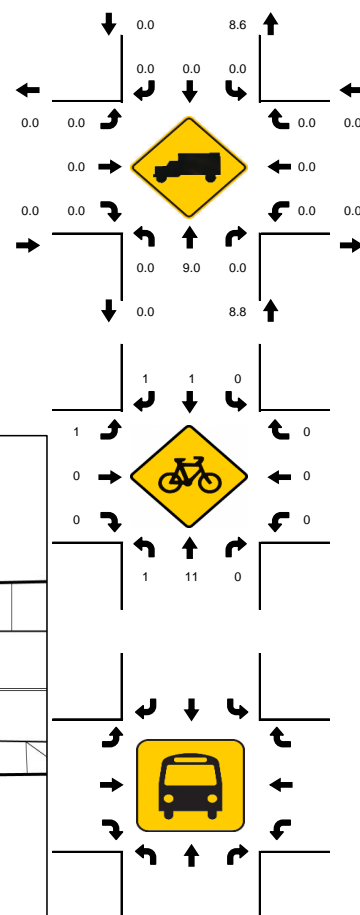
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**DATE:** Wed, Feb 28, 2024



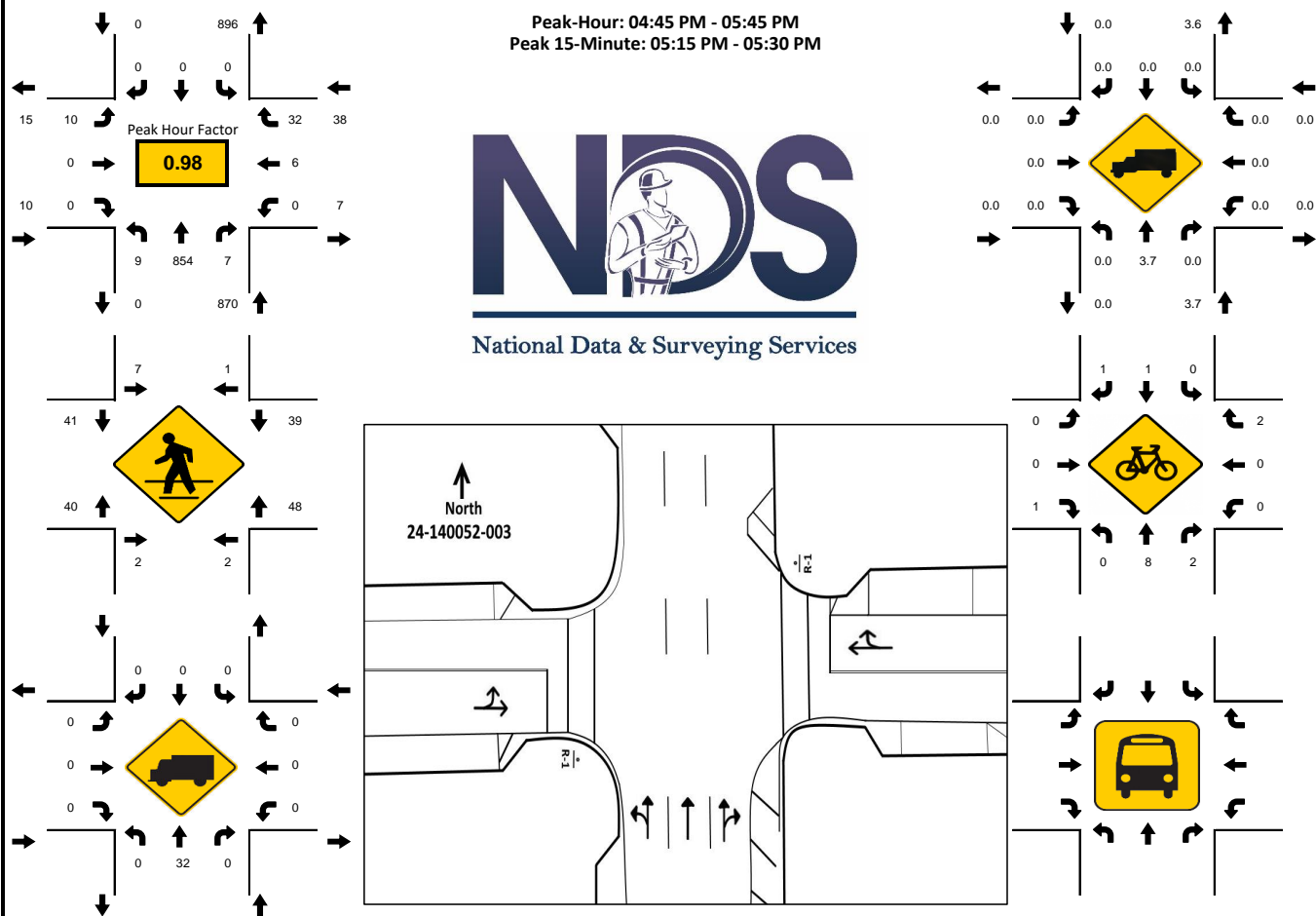
Peak-Hour: 08:00 AM - 09:00 AM  
Peak 15-Minute: 08:45 AM - 09:00 AM



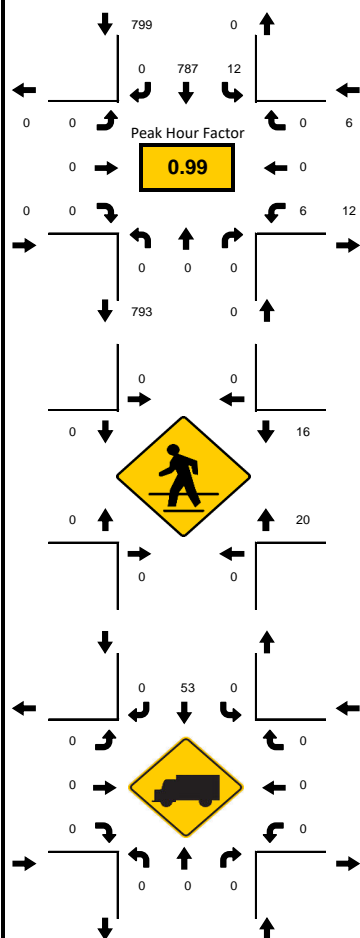
National Data &amp; Surveying Services

[illegible]

**PROJECT ID:** 24-140052-003  
**DATE:** Wed, Feb 28, 2024

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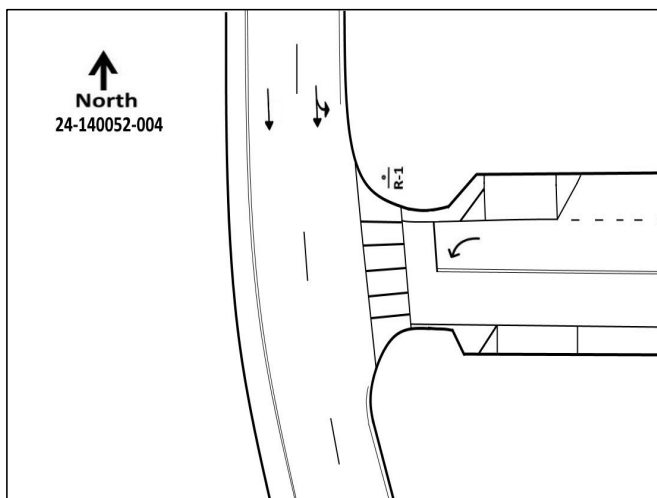
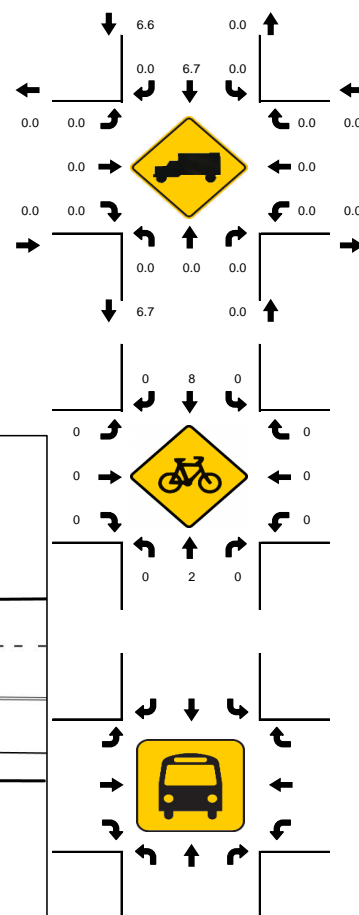
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**DATE:** Wed, Feb 28, 2024



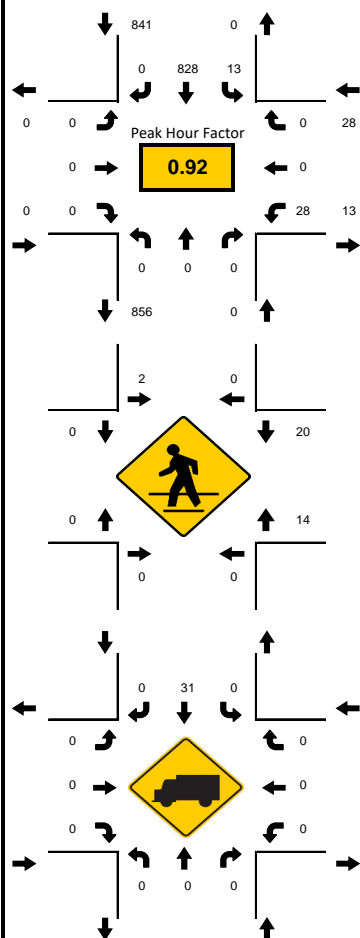
Peak-Hour: 08:15 AM - 09:15 AM  
Peak 15-Minute: 08:45 AM - 09:00 AM



## National Data & Surveying Services

[illegible]

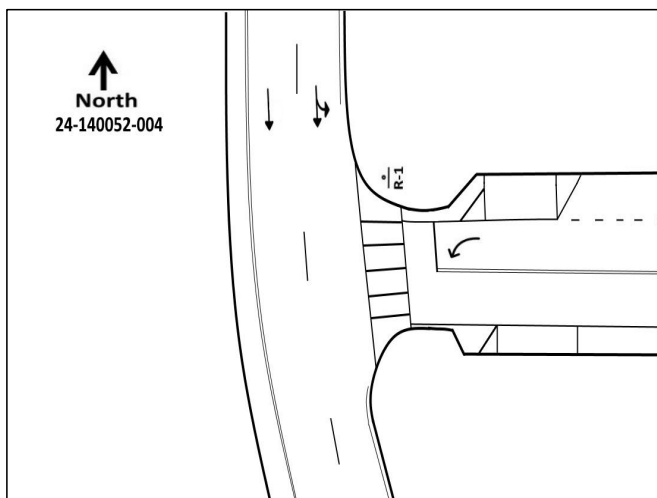
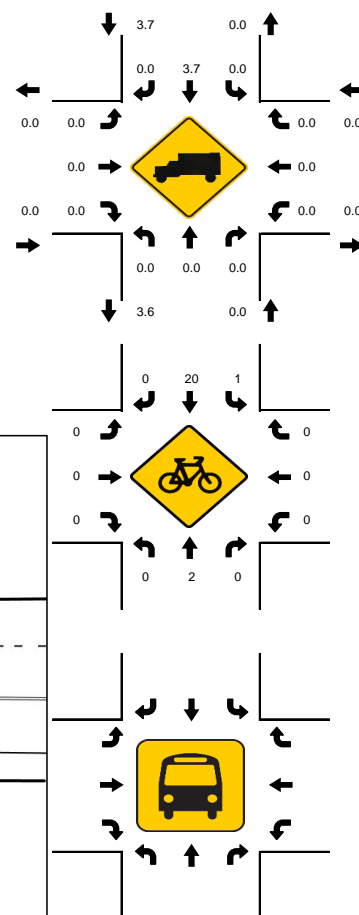
**PROJECT ID:** 24-140052-004  
**DATE:** Wed, Feb 28, 2024



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



National Data &amp; Surveying Services

[illegible]

## Peak Season Category Report

2023 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL  
 CATEGORY: 8700 MIAMI-DADE NORTH

				MOCF: 0.99
WEEK	DATES		SF	PSCF
=====				
1	01/01/2023	- 01/07/2023	1.00	1.01
2	01/08/2023	- 01/14/2023	1.03	1.04
3	01/15/2023	- 01/21/2023	1.05	1.06
4	01/22/2023	- 01/28/2023	1.04	1.05
5	01/29/2023	- 02/04/2023	1.03	1.04
6	02/05/2023	- 02/11/2023	1.01	1.02
7	02/12/2023	- 02/18/2023	1.00	1.01
8	02/19/2023	- 02/25/2023	1.00	1.01
9	02/26/2023	- 03/04/2023	0.99	1.00
10	03/05/2023	- 03/11/2023	0.99	1.00
11	03/12/2023	- 03/18/2023	0.99	1.00
12	03/19/2023	- 03/25/2023	0.99	1.00
13	03/26/2023	- 04/01/2023	0.99	1.00
14	04/02/2023	- 04/08/2023	0.99	1.00
15	04/09/2023	- 04/15/2023	1.00	1.01
16	04/16/2023	- 04/22/2023	0.99	1.00
17	04/23/2023	- 04/29/2023	0.99	1.00
18	04/30/2023	- 05/06/2023	0.99	1.00
19	05/07/2023	- 05/13/2023	0.99	1.00
20	05/14/2023	- 05/20/2023	0.99	1.00
21	05/21/2023	- 05/27/2023	0.99	1.00
22	05/28/2023	- 06/03/2023	1.00	1.01
23	06/04/2023	- 06/10/2023	1.01	1.02
24	06/11/2023	- 06/17/2023	1.02	1.03
25	06/18/2023	- 06/24/2023	1.02	1.03
26	06/25/2023	- 07/01/2023	1.02	1.03
27	07/02/2023	- 07/08/2023	1.02	1.03
28	07/09/2023	- 07/15/2023	1.02	1.03
29	07/16/2023	- 07/22/2023	1.01	1.02
30	07/23/2023	- 07/29/2023	1.00	1.01
31	07/30/2023	- 08/05/2023	0.99	1.00
*32	08/06/2023	- 08/12/2023	0.98	0.99
*33	08/13/2023	- 08/19/2023	0.98	0.99
*34	08/20/2023	- 08/26/2023	0.98	0.99
*35	08/27/2023	- 09/02/2023	0.99	1.00
*36	09/03/2023	- 09/09/2023	1.00	1.01
*37	09/10/2023	- 09/16/2023	1.01	1.02
*38	09/17/2023	- 09/23/2023	1.00	1.01
*39	09/24/2023	- 09/30/2023	0.99	1.00
*40	10/01/2023	- 10/07/2023	0.99	1.00
*41	10/08/2023	- 10/14/2023	0.98	0.99
*42	10/15/2023	- 10/21/2023	0.98	0.99
*43	10/22/2023	- 10/28/2023	0.98	0.99
*44	10/29/2023	- 11/04/2023	0.99	1.00
45	11/05/2023	- 11/11/2023	0.99	1.00
46	11/12/2023	- 11/18/2023	1.00	1.01
47	11/19/2023	- 11/25/2023	1.00	1.01
48	11/26/2023	- 12/02/2023	1.00	1.01
49	12/03/2023	- 12/09/2023	1.00	1.01
50	12/10/2023	- 12/16/2023	1.00	1.01
51	12/17/2023	- 12/23/2023	1.02	1.03
52	12/24/2023	- 12/30/2023	1.04	1.05
53	12/31/2023	- 12/31/2023	1.05	1.06

\* PEAK SEASON

09-MAR-2024 18:41:41

830UPD

6\_8700\_PKSEASON.TXT

## Signal Timings



# TOD Schedule Report

## for 2677: Art Godfrey Rd&Collins Av

Print Date:  
4/12/2024

Print Time:  
2:01 AM

<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>
2677	Art Godfrey Rd&Collins Av	DOW-6	TOD	Free	0	0	N/A	1	Max 1

### Splits

<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>
-	-	-	WBT	-	NBT	-	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 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
3 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 WBT	5 - 5 - 5	16 - 16 - 16	5 - 5 - 5	2.5 - 2.5 - 2.5	22 - 22 - 22	36 - 31 - 31	4	2
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 NBT	5 - 5 - 5	8 - 8 - 8	7 - 7 - 7	1 - 1 - 1	60 - 30 - 60	0 - 0 - 0	4	2
7 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8 EBT	5 - 5 - 5	16 - 16 - 16	5 - 5 - 5	2.5 - 2.5 - 2.5	22 - 22 - 22	36 - 31 - 31	4	2

Last In Service Date: unknown

#### Permitted Phases

**12345678**

Default ---4-6-8  
External Permit 0 ---4-6-8  
External Permit 1 ---4-6-8  
External Permit 2 ---4-6-8

**TOD Schedule Report**  
for 2677: Art Godfrey Rd&Collins Av

Print Date:  
4/12/2024

Print Time:  
2:01 AM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1	2	3	4	5	6	7	8		
			-	-	-	WBT	-	NBT	-	EBT		
	1	180	0	0	0	70	0	98	0	70	0	19
	2	120	0	0	0	52	0	56	0	52	0	74
	4	120	0	0	0	52	0	56	0	52	0	37
	5	130	0	0	0	56	0	62	0	56	0	108
	6	150	0	0	0	55	0	83	0	55	0	141
	7	130	0	0	0	42	0	76	0	42	0	71
	9	150	0	0	0	49	0	89	0	49	0	47
	13	150	0	0	0	53	0	85	0	53	0	105
	25	180	0	0	0	21	0	147	0	21	0	114
	26	190	0	0	0	21	0	157	0	21	0	109
	27	200	0	0	0	21	0	167	0	21	0	133
	28	255	0	0	0	21	0	222	0	21	0	187

**Local TOD Schedule**

Time	Plan	DOW
0000	Free	Su M T W Th F S
0200	Free	Su S
0600	13	M T W Th F
0700	4	Su S
0715	9	M T W Th F
0800	2	Su S
0915	5	M T W Th F
1100	5	S
1145	6	M T W Th F
1230	7	S
1230	5	Su
1345	7	M T W Th F
1430	1	W
1530	1	M T Th F
1800	6	Su S
1930	2	M T W Th F
2100	4	Su S
2300	Free	M T W Th F

**Current Time of Day Function**

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

**Local Time of Day Function**

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

**\* Settings**

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

**No Calendar Defined/Enabled**

# SIGNAL OPERATING PLAN

Timing Phases	Direction	NB	EB	WB	Ped Heads				Movements/Display/Actuation
Head No.		6	8	4	P6	P2	P8	P4	
6 NB COLLINS AV (RECALL)	Dwell	G	R	R	W/F	W/F	DW	DW	
	4+8	Y	R	R	DW	DW	DW	DW	
	C								
	l								
	e								
	Dwell								
	C								
	l								
	e								
	t								
(4+8) E/WB 41 STREET (ACTUATED)	Dwell	R	G	G	DW	DW	W/F	W/F	
	6	R	Y	Y	DW	DW	DW	DW	
	C								
	l								
	e								
	Dwell								
	C								
	l								
	e								
	t								
	Dwell								
	C								
	l								
	e								
	t								
Flashing Operation		Y	R	R					Page 1 of 1
Miami-Dade County Public Works Department									
Drawn WILLIAM RIVERA PAZ		Date 6/10/10		Collins Av & 41 Street					
Checked H. HERNANDEZ		Date 6/10/10		Placed in Service Date 8/26/11		Phasing No. 6		Asset Number 2677	

## **Appendix D**

### Growth Rate Calculations

## FDOT Historical Growth Trends

**FDOT Growth Rate Summary**

Station Number	Location	Historical Growth- Linear				Historical Growth- Exponential				Historical 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
2646	Indian Creek Drive -- 200 feet south of 38 <sup>th</sup> Street	-2.88%	94.12%	-3.53%	83.34%	-3.01%	94.36%	-3.98%	87.02%	-3.16%	96.75%	-4.41%	93.94%
5171	SR A1A/Collins Avenue -- 200 feet north of 35 <sup>th</sup> Street	-7.17%	99.59%	-3.21%	62.30%	-8.03%	99.85%	-3.86%	64.32%	-7.83%	96.37%	-2.95%	39.62%
Total		-5.03%	96.86%	-3.37%	72.82%	-5.52%	97.11%	-3.92%	75.67%	-5.50%	96.56%	-3.68%	66.78%

FLORIDA DEPARTMENT OF TRANSPORTATION  
TRANSPORTATION STATISTICS OFFICE  
2023 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 2646 - INDIAN CREEK DR. 200' SOUTH OF 38 STREET

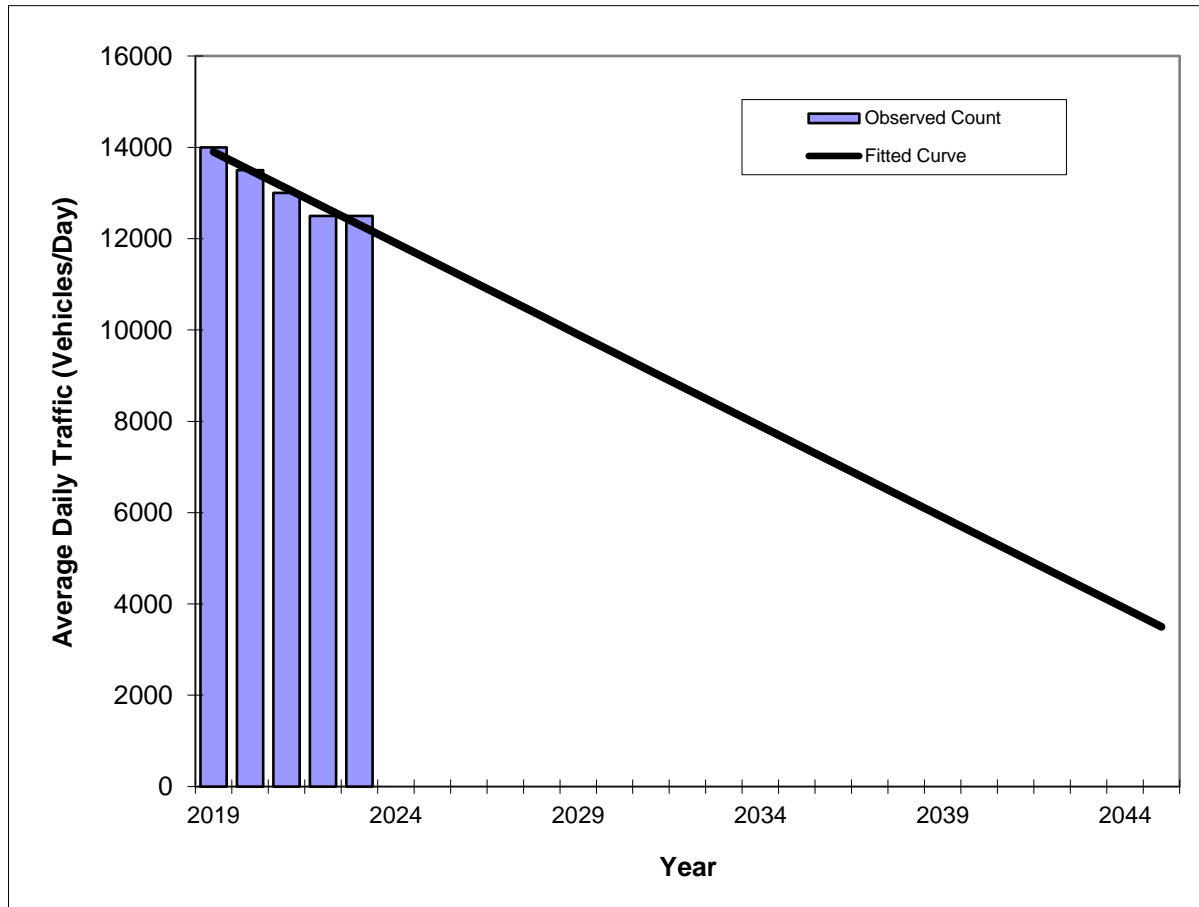
YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----	-----	-----	-----	-----	-----
2023	12500 C	S 12500	0	9.00	99.90	10.90
2022	12500 C	S 12500	0	9.00	99.90	4.50
2021	13000 S	0	0	9.00	99.90	5.40
2020	13500 F	0	0	9.00	99.90	9.20
2019	14000 C	S 14000	0	9.00	99.90	5.00
2018	15000 C	S 15000	0	9.00	99.90	5.60
2017	14000 C	S 14000	0	9.00	99.90	5.30
2016	16000 C	S 16000	0	9.00	99.90	7.80
2015	16000 C	S 16000	0	9.00	99.90	4.60
2014	19000 C	S 19000		9.00	99.90	5.10
2013	16000 C	S 16000	0	9.00	99.90	6.10
2012	15000 C	S 15000	0	9.00	99.90	8.40
2011	10500 C	S 10500	0	9.00	99.90	7.50
2010	12000 C	S 12000	0	8.98	99.99	8.80
2009	14000 C	S 14000	0	8.99	99.99	8.40
2008	13500 C	S 13500	0	9.09	99.99	5.30

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

### Indian Creek Drive -- 200' south of 38th Street

<b>County:</b>	Miami-Dade (87)
<b>Station #:</b>	2646
<b>Highway:</b>	Indian Creek Drive



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2019	14000	13900
2020	13500	13500
2021	13000	13100
2022	12500	12700
2023	12500	12300

Trend R-squared:	94.12%
Trend Annual Historic Growth Rate:	-2.88%
Printed:	14-Nov-24
Straight Line Growth Option	

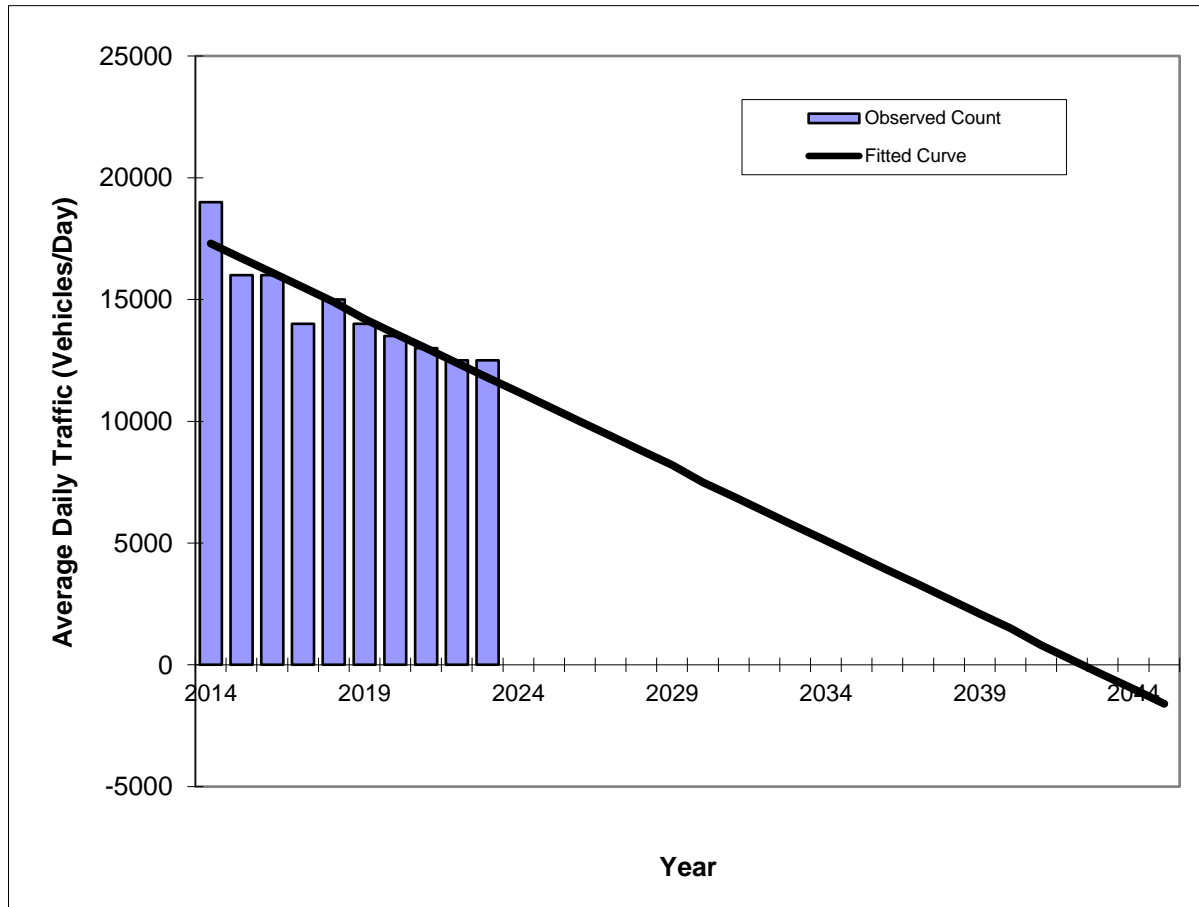
\*Axle-Adjusted



# Traffic Trends

## Indian Creek Drive -- 200' south of 38th Street

County:	Miami-Dade (87)
Station #:	2646
Highway:	Indian Creek Drive



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	19000	17300
2015	16000	16700
2016	16000	16100
2017	14000	15500
2018	15000	14900
2019	14000	14200
2020	13500	13600
2021	13000	13000
2022	12500	12400
2023	12500	11800

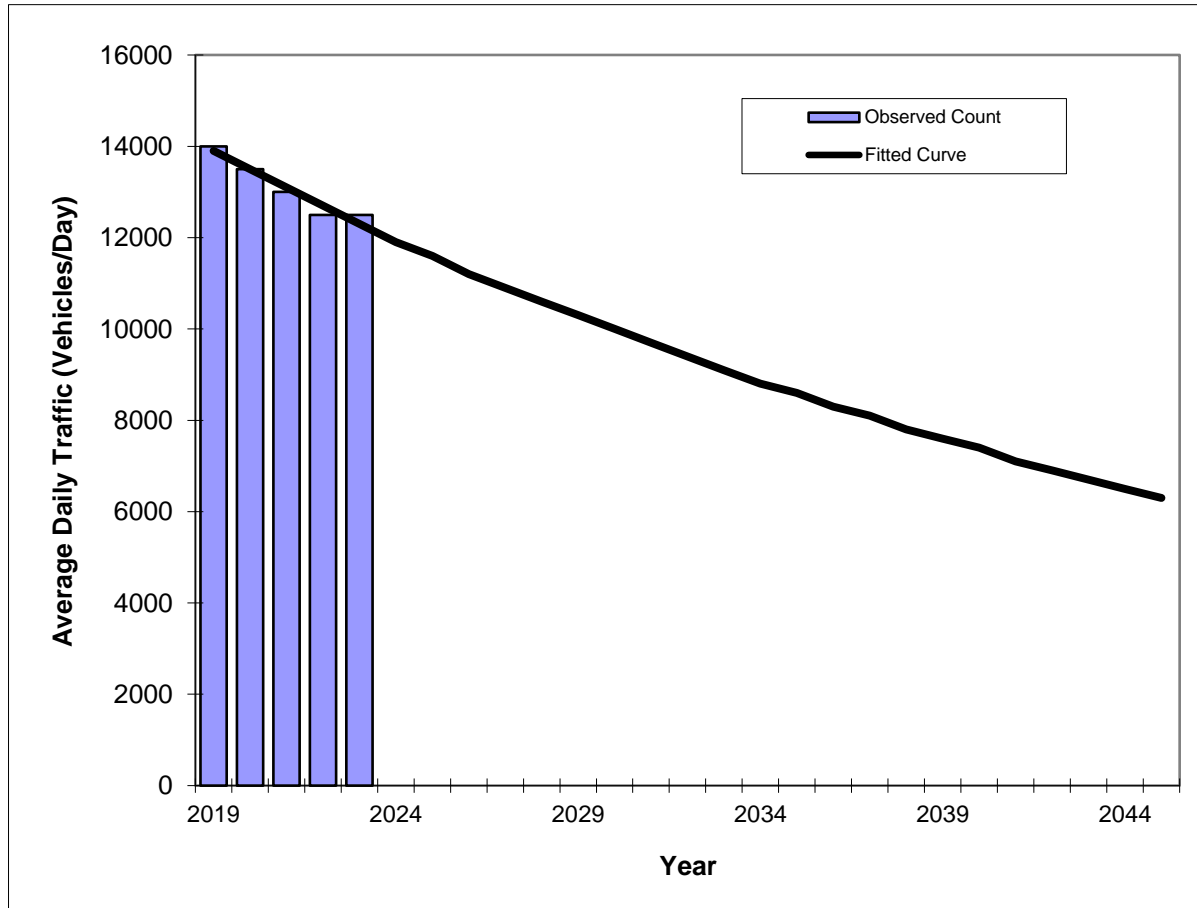
Trend R-squared:	83.34%
Trend Annual Historic Growth Rate:	-3.53%
Printed:	14-Nov-24
Straight Line Growth Option	

\*Axle-Adjusted

## Traffic Trends

### Indian Creek Drive -- 200' south of 38th Street

<b>County:</b>	Miami-Dade (87)
<b>Station #:</b>	2646
<b>Highway:</b>	Indian Creek Drive



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2019	14000	13900
2020	13500	13500
2021	13000	13100
2022	12500	12700
2023	12500	12300

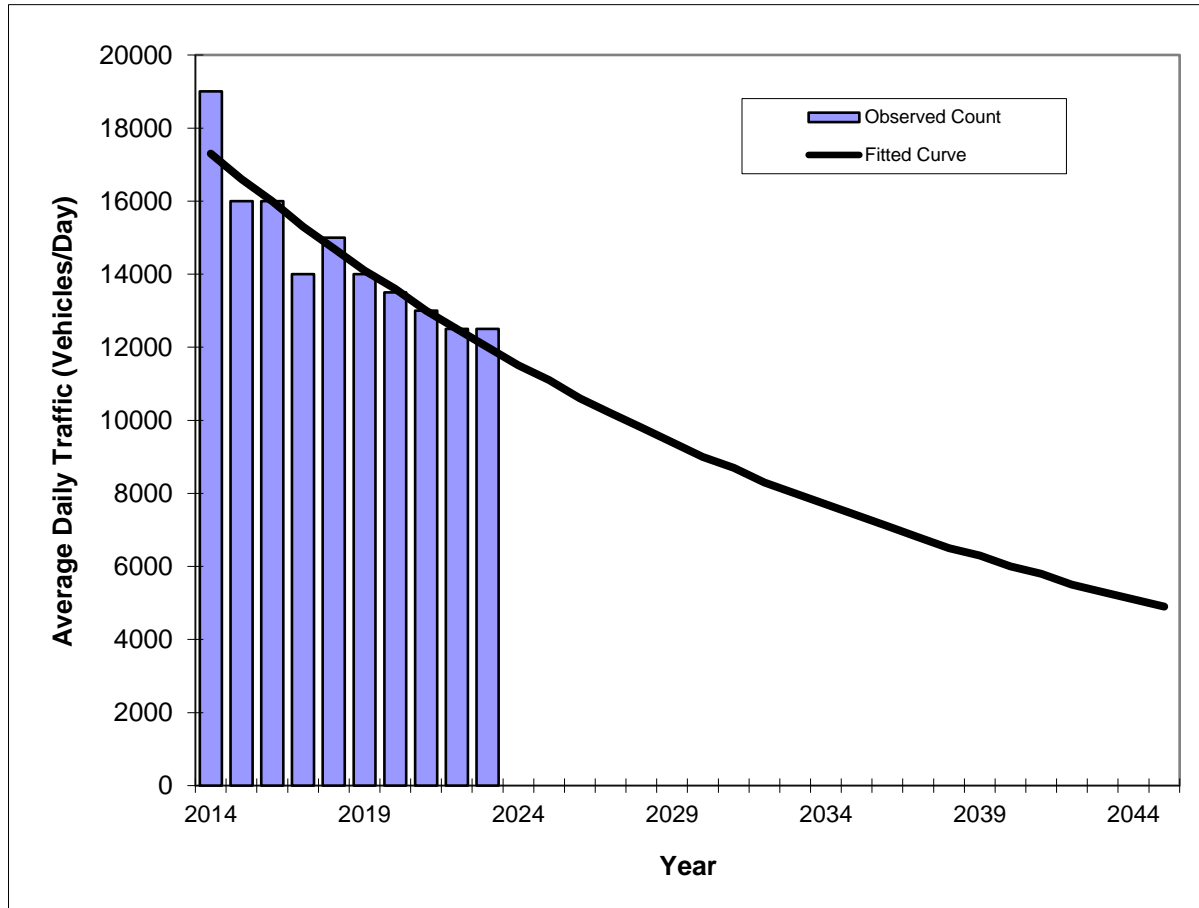
Trend R-squared:	94.36%
Compounded Annual Historic Growth Rate:	-3.01%
Printed:	14-Nov-24
Exponential Growth Option	

\*Axle-Adjusted

# Traffic Trends

## Indian Creek Drive -- 200' south of 38th Street

County:	Miami-Dade (87)
Station #:	2646
Highway:	Indian Creek Drive



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	19000	17300
2015	16000	16600
2016	16000	16000
2017	14000	15300
2018	15000	14700
2019	14000	14100
2020	13500	13600
2021	13000	13000
2022	12500	12500
2023	12500	12000

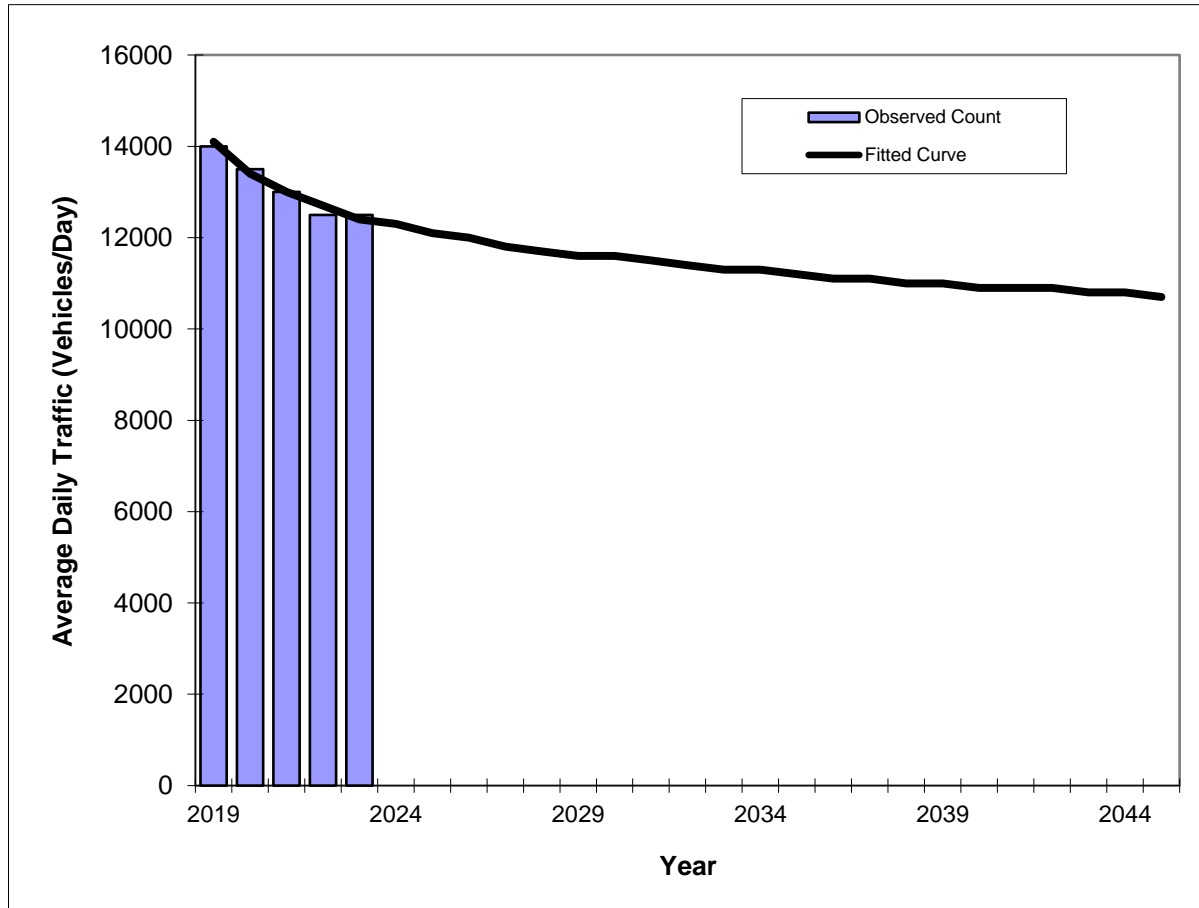
Trend R-squared:	87.02%
Compounded Annual Historic Growth Rate:	-3.98%
Printed:	14-Nov-24
Exponential Growth Option	

\*Axle-Adjusted

# Traffic Trends

## Indian Creek Drive -- 200' south of 38th Street

County:	Miami-Dade (87)
Station #:	2646
Highway:	Indian Creek Drive



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2019	14000	14100
2020	13500	13400
2021	13000	13000
2022	12500	12700
2023	12500	12400

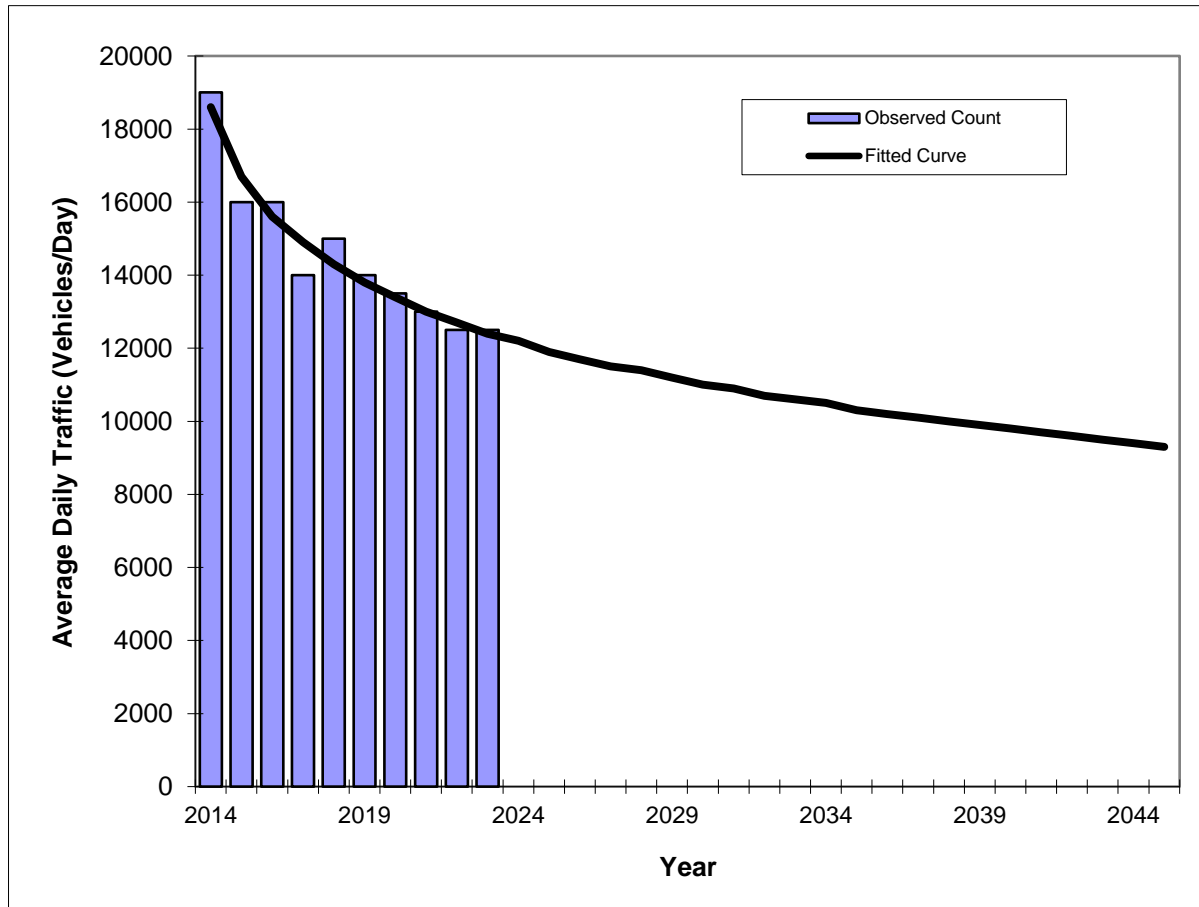
Trend R-squared:	96.75%
Compounded Annual Historic Growth Rate:	-3.16%
Printed:	14-Nov-24
Decaying Exponential Growth Option	

\*Axle-Adjusted

## Traffic Trends

### Indian Creek Drive -- 200' south of 38th Street

<b>County:</b>	Miami-Dade (87)
<b>Station #:</b>	2646
<b>Highway:</b>	Indian Creek Drive



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	19000	18600
2015	16000	16700
2016	16000	15600
2017	14000	14900
2018	15000	14300
2019	14000	13800
2020	13500	13400
2021	13000	13000
2022	12500	12700
2023	12500	12400

Trend R-squared:	93.94%
Compounded Annual Historic Growth Rate:	-4.41%
Printed:	14-Nov-24
Decaying Exponential Growth Option	

\*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION  
TRANSPORTATION STATISTICS OFFICE  
2023 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 5171 - 200' N OF 35 ST. (MIAMI BEACH)

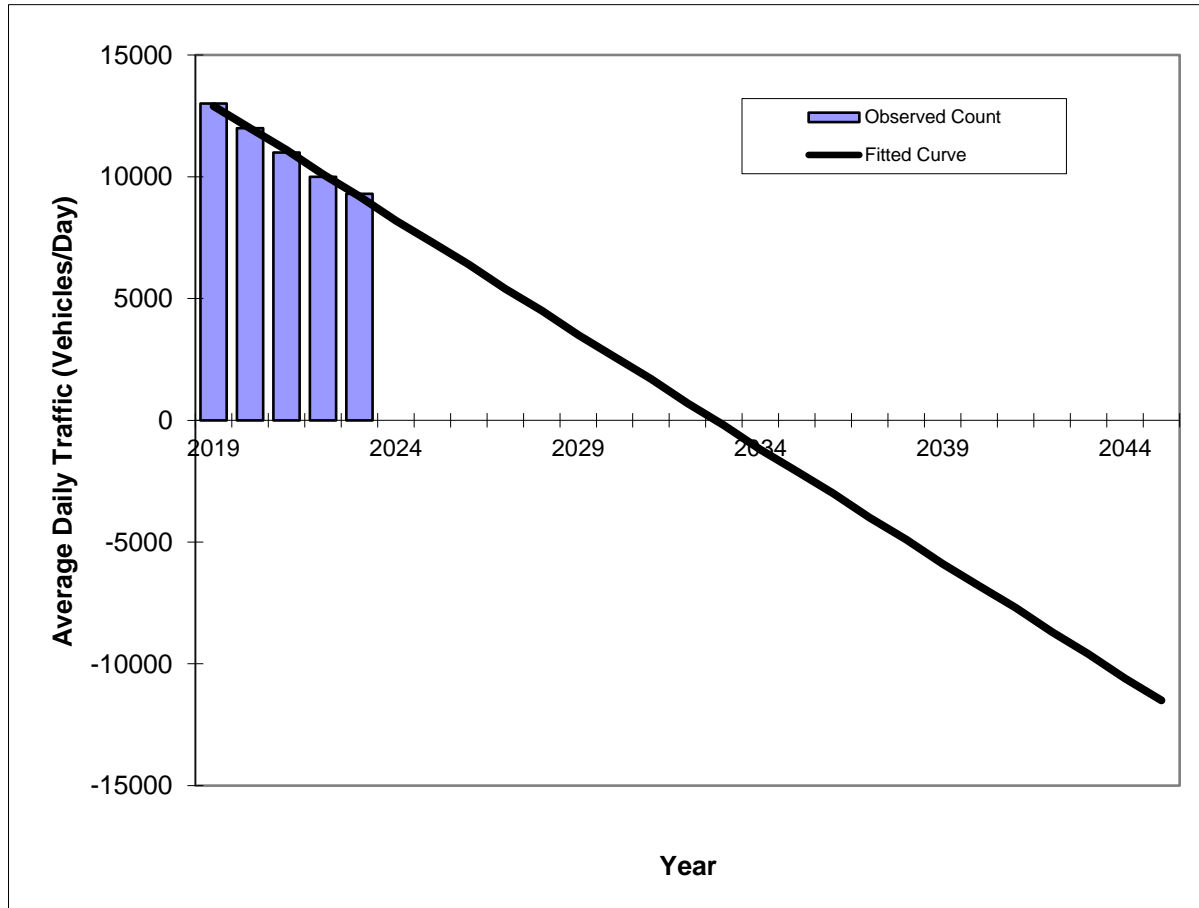
YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----	-----	-----	-----	-----	-----
2023	9300 C	N 9300	0	9.00	99.90	10.90
2022	10000 C	N 10000	0	9.00	99.90	4.50
2021	12000 S	0	0	9.00	99.90	5.40
2020	12500 F	0	0	9.00	99.90	9.20
2019	13000 C	N 13000	0	9.00	99.90	5.00
2018	14000 C	N 14000	0	9.00	99.90	5.60
2017	12000 C	N 12000	0	9.00	99.90	5.30
2016	13000 C	N 13000	0	9.00	99.90	7.80
2015	15000 C	N 15000	0	9.00	99.90	4.60
2014	12500 C	N 12500		9.00	99.90	5.10
2013	14000 C	N 14000	0	9.00	99.90	6.10
2012	13000 C	N 13000	0	9.00	99.90	8.40
2011	12500 C	N 12500	0	9.00	99.90	7.50
2010	10500 C	N 10500	0	8.98	99.99	8.80

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' north of 35th Street

County:	Miami-Dade (87)
Station #:	5171
Highway:	SR A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2019	13000	12900
2020	12000	12000
2021	11000	11100
2022	10000	10100
2023	9300	9200

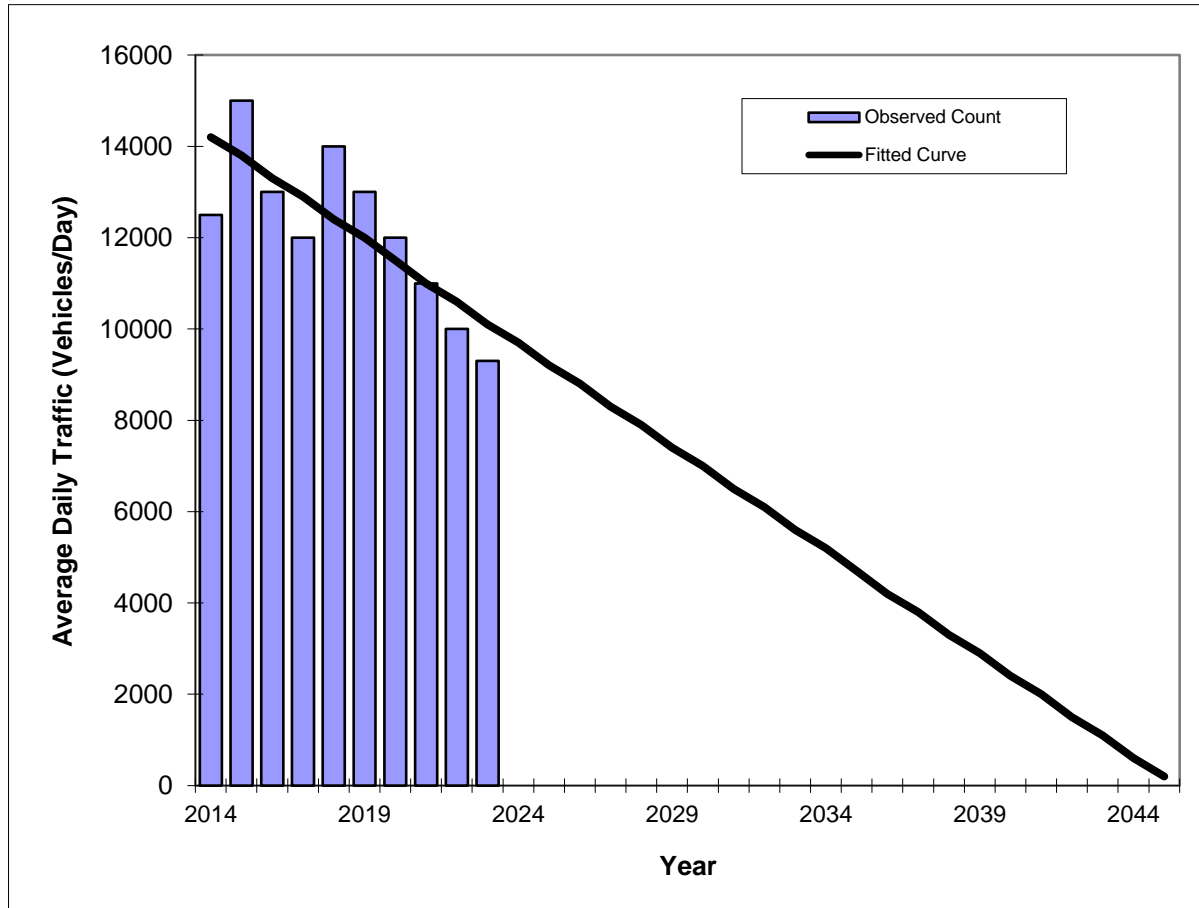
Trend R-squared:	99.59%
Trend Annual Historic Growth Rate:	-7.17%
Printed:	14-Nov-24
Straight Line Growth Option	

\*Axle-Adjusted

# Traffic Trends

## SR A1A/Collins Avenue -- 200' north of 35th Street

County:	Miami-Dade (87)
Station #:	5171
Highway:	SR A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	12500	14200
2015	15000	13800
2016	13000	13300
2017	12000	12900
2018	14000	12400
2019	13000	12000
2020	12000	11500
2021	11000	11000
2022	10000	10600
2023	9300	10100

Trend R-squared:	62.30%
Trend Annual Historic Growth Rate:	-3.21%
Printed:	14-Nov-24
Straight Line Growth Option	

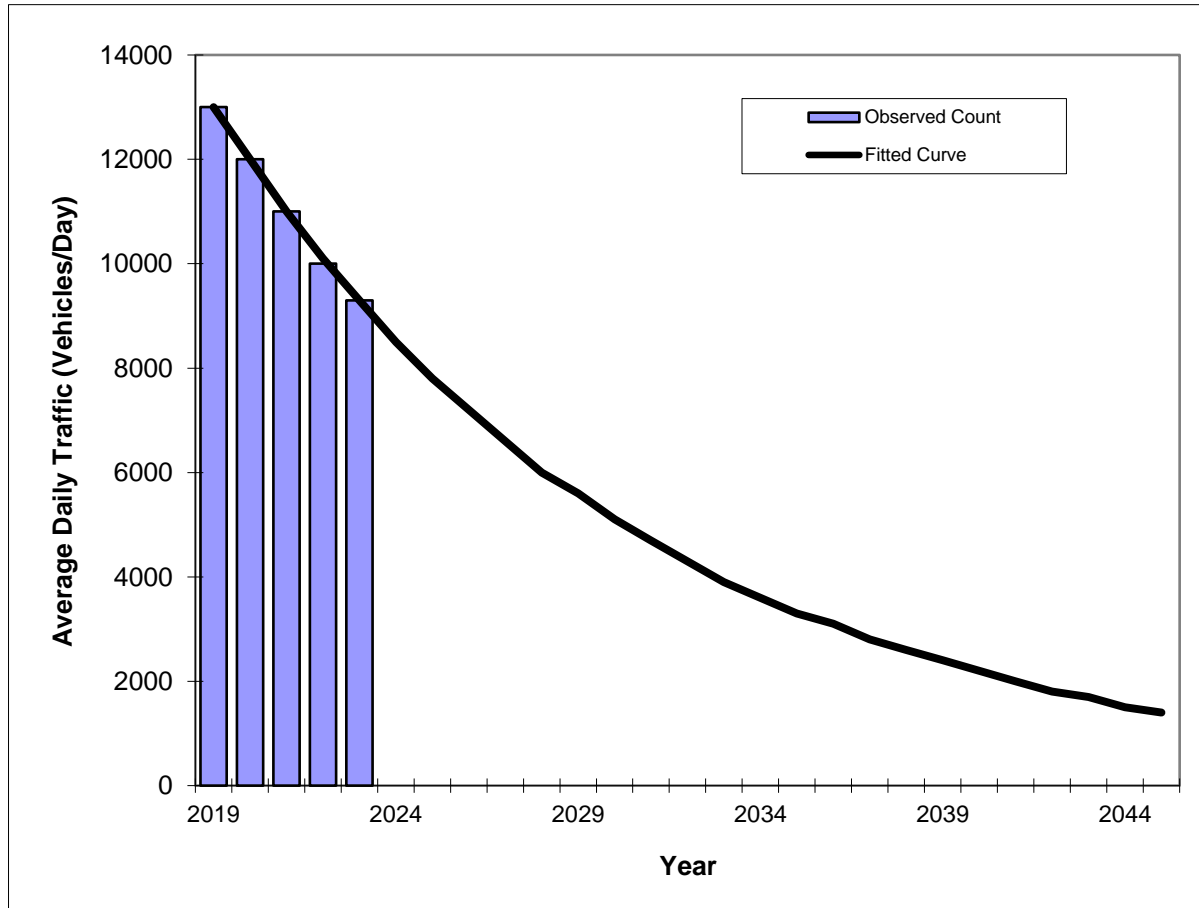
\*Axle-Adjusted



# Traffic Trends

## SR A1A/Collins Avenue -- 200' north of 35th Street

County:	Miami-Dade (87)
Station #:	5171
Highway:	SR A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2019	13000	13000
2020	12000	12000
2021	11000	11000
2022	10000	10100
2023	9300	9300

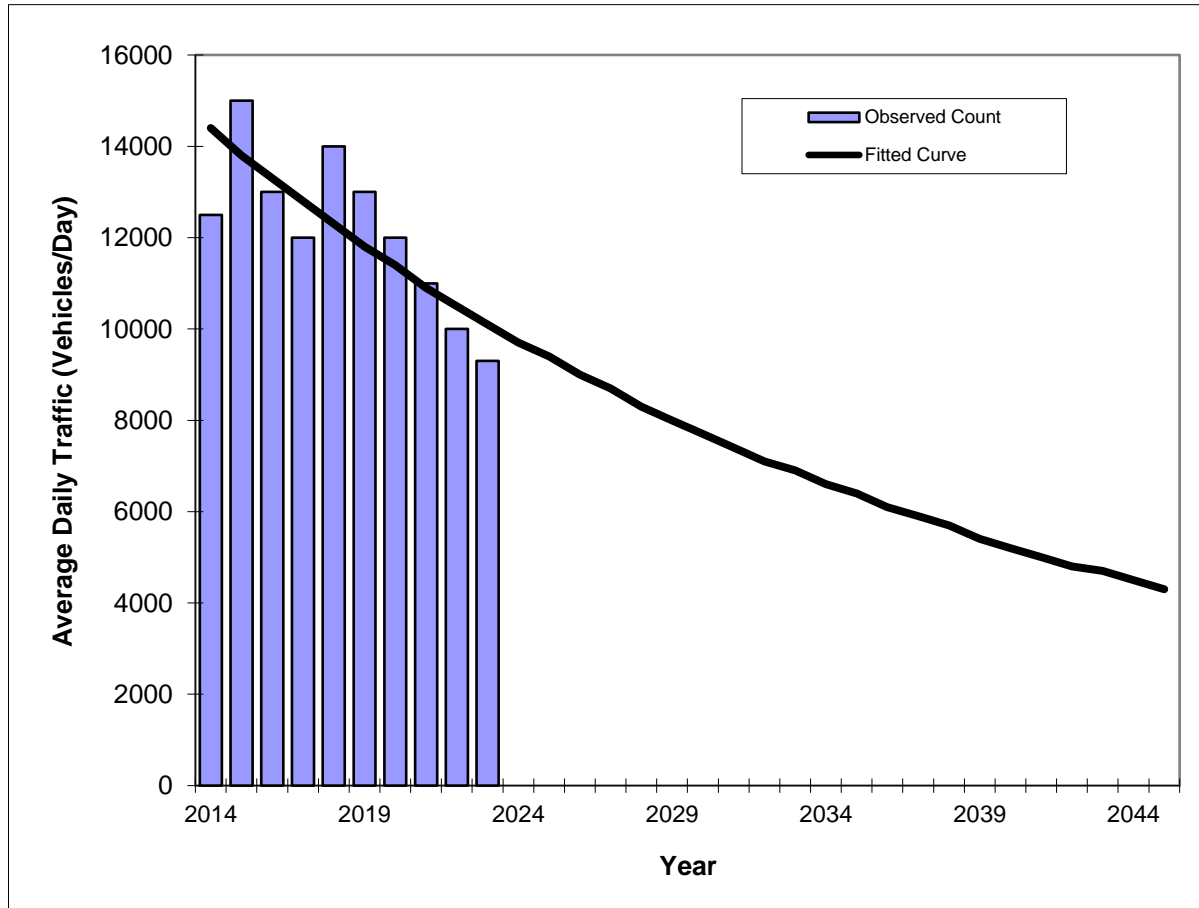
Trend R-squared:	99.85%
Compounded Annual Historic Growth Rate:	-8.03%
Printed:	14-Nov-24
Exponential Growth Option	

\*Axle-Adjusted

# Traffic Trends

## SR A1A/Collins Avenue -- 200' north of 35th Street

County:	Miami-Dade (87)
Station #:	5171
Highway:	SR A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	12500	14400
2015	15000	13800
2016	13000	13300
2017	12000	12800
2018	14000	12300
2019	13000	11800
2020	12000	11400
2021	11000	10900
2022	10000	10500
2023	9300	10100

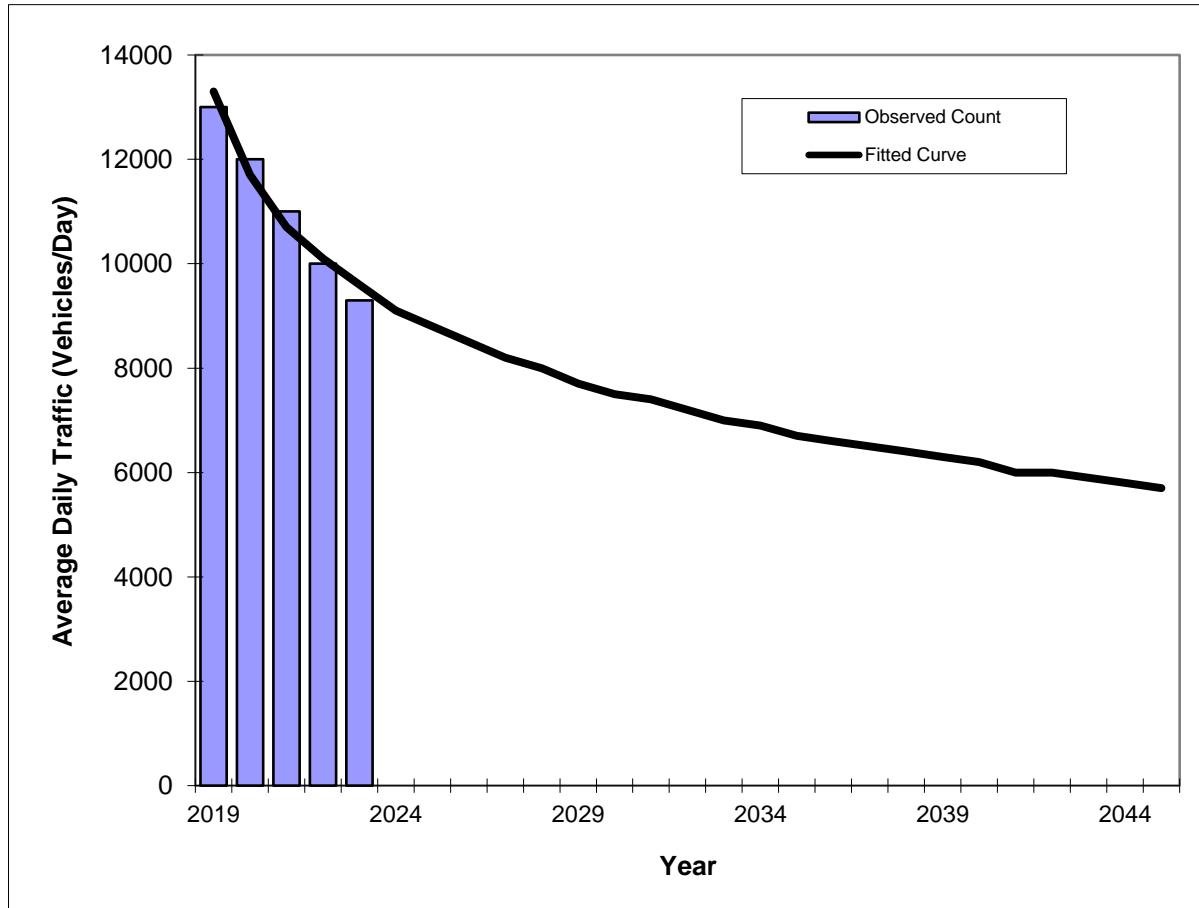
Trend R-squared:	64.32%
Compounded Annual Historic Growth Rate:	-3.86%
Printed:	14-Nov-24
Exponential Growth Option	

\*Axle-Adjusted

# Traffic Trends

## SR A1A/Collins Avenue -- 200' north of 35th Street

County:	Miami-Dade (87)
Station #:	5171
Highway:	SR A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2019	13000	13300
2020	12000	11700
2021	11000	10700
2022	10000	10100
2023	9300	9600

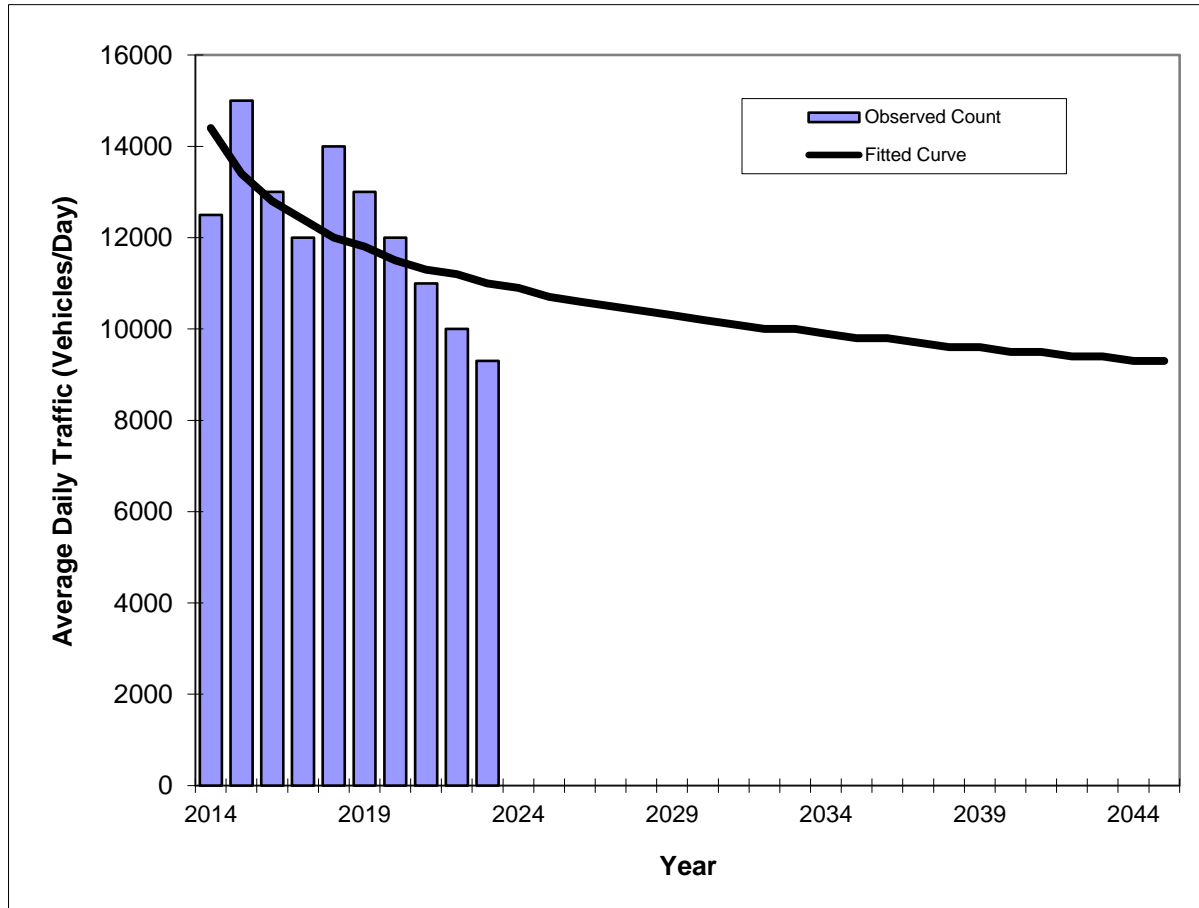
Trend R-squared:	96.37%
Compounded Annual Historic Growth Rate:	-7.83%
Printed:	14-Nov-24
Decaying Exponential Growth Option	

\*Axle-Adjusted

# Traffic Trends

## SR A1A/Collins Avenue -- 200' north of 35th Street

County:	Miami-Dade (87)
Station #:	5171
Highway:	SR A1A/Collins Avenue



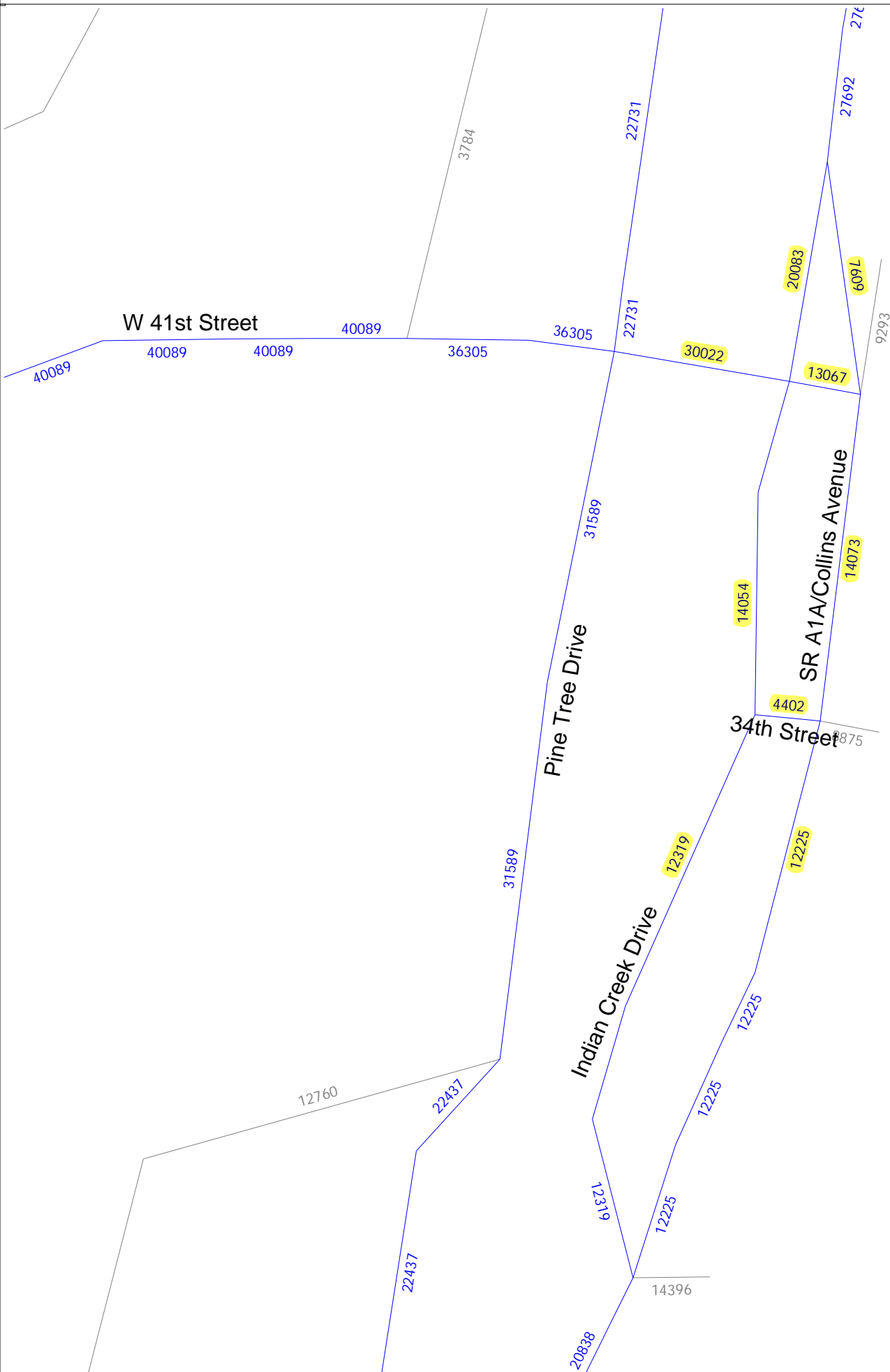
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	12500	14400
2015	15000	13400
2016	13000	12800
2017	12000	12400
2018	14000	12000
2019	13000	11800
2020	12000	11500
2021	11000	11300
2022	10000	11200
2023	9300	11000

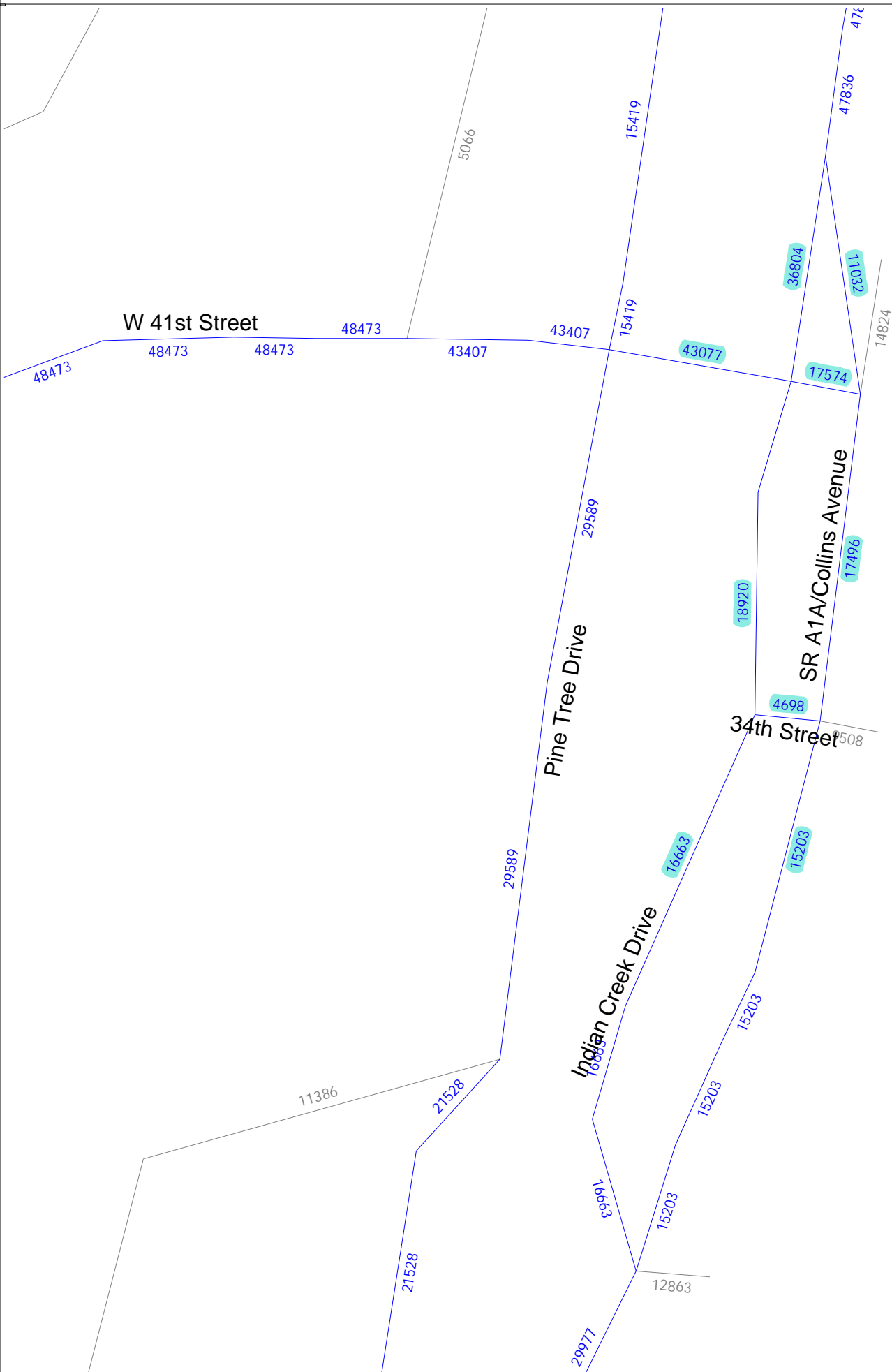
Trend R-squared:	39.62%
Compounded Annual Historic Growth Rate:	-2.95%
Printed:	14-Nov-24
Decaying Exponential Growth Option	

\*Axle-Adjusted

## SERPM Analysis

SERPM Growth Rate Summary					
Street Name	2015	2045	Difference	Growth Rate	Annual Growth Rate
Indian Creek Drive	20,083	36,804	16,721	83.26%	2.78%
	14,054	18,920	4,866	34.62%	1.15%
	12,319	16,663	4,344	35.26%	1.18%
SR A1A/Collins Avenue	7,609	11,032	3,423	44.99%	1.50%
	14,073	17,496	3,423	24.32%	0.81%
	12,225	15,203	2,978	24.36%	0.81%
41 <sup>st</sup> Street	30,022	43,077	13,055	43.48%	1.45%
	13,067	17,574	4,507	34.49%	1.15%
34 <sup>th</sup> Street	4,402	4,698	296	6.72%	0.22%
Total	127,854	181,467	53,613	41.93%	1.40%







## **Appendix E**

### Trip Generation Calculations

# 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																			
GROUP 1	1	Multifamily Housing (Mid-Rise)	11	221	8	du	23%	77%	1	2	3	20.0%	1	1	1	2	0.0%	0	1	1	2	0.0%	0	1	1	2
	2																									
	3																									
	4																									
	5																									
	6																									
	7																									
	8																									
	9																									
	10																									
	11																									
	12																									
	13																									
	14																									
	15																									
ITE Land Use Code		Rate or Equation				Total:		1	2	3	20.0%	1	1	1	2	0.0%	0	1	1	2	0.0%	0	1	1	2	
221		Y=0.37(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																			
GROUP 2	1	Hotel	11	310	36	room	56%	44%	10	7	17	20.0%	3	8	6	14	0.0%	0	8	6	14	0.0%	0	8	6	14
	2	Multifamily Housing (Mid-Rise)	11	221	8	du	23%	77%	1	2	3	20.0%	1	1	1	2	4.8%	0	1	1	2	0.0%	0	1	1	2
	3	Multifamily Housing (High-Rise)	11	222	23	du	26%	74%	6	18	24	20.0%	5	5	14	19	4.8%	1	5	13	18	0.0%	0	5	13	18
	4	Health/Fitness Club	11	492	13.455	ksf	51%	49%	9	9	18	20.0%	4	7	7	14	0.0%	0	7	7	14	0.0%	0	7	7	14
	5	Fine Dining Restaurant	11	931	289	seat	69%	31%	4	2	6	20.0%	1	3	2	5	20.0%	1	2	2	4	0.0%	0	2	2	4
	6	Drinking Place	11	975	8.507	ksf	50%	50%	0	0	0	20.0%	0	0	0	0	20.0%	0	0	0	0	0.0%	0	0	0	0
	7																									
	8																									
	9																									
	10																									
	11																									
	12																									
	13																									
	14																									
	15																									
ITE Land Use Code		Rate or Equation		Total:		30	38	68	20.0%	14	24	30	54	3.7%	2	23	29	52	0.0%	0	23	29	52			
310		Y=0.46(X)		Note: <sup>(1)</sup> The drinking place land use is closed during the A.M. peak hour																						
221		Y=0.37(X)																								
222		Y=0.22*(X)+18.85																								
492		Y=1.31(X)																								
931		Y=0.02(X)																								
975		Y=0(X) <sup>(1)</sup>																								
																						IN	OUT	TOTAL		
NET NEW TRIPS																						22	28	50		

# 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																			
GROUP 1	1	Multifamily Housing (Mid-Rise)	11	221	8	du	61%	39%	2	1	3	20.0%	1	1	1	2	0.0%	0	1	1	2	0.0%	0	1	1	2
	2																									
	3																									
	4																									
	5																									
	6																									
	7																									
	8																									
	9																									
	10																									
	11																									
	12																									
	13																									
	14																									
	15																									
ITE Land Use Code		Rate or Equation				Total:		2	1	3	20.0%	1	1	1	2	0.0%	0	1	1	2	0.0%	0	1	1	2	
221		Y=0.39(X)																								

## 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																						
GROUP 2	1 Hotel	11	310	36	room	51%	49%	11	10	21	20.0%	4	9	8	17	47.1%	8	6	3	9	0.0%	0	6	3	9			
	2 Multifamily Housing (Mid-Rise)	11	221	8	du	61%	39%	2	1	3	20.0%	1	1	1	2	25.0%	1	1	0	1	0.0%	0	1	0	1			
	3 Multifamily Housing (High-Rise)	11	222	23	du	62%	38%	4	3	7	20.0%	1	4	2	6	25.0%	1	3	2	5	0.0%	0	3	2	5			
	4 Health/Fitness Club	11	492	13.455	ksf	57%	43%	26	20	46	20.0%	9	21	16	37	18.9%	7	17	13	30	0.0%	0	17	13	30			
	5 Fine Dining Restaurant	11	931	289	seat	67%	33%	54	27	81	20.0%	16	43	22	65	12.0%	8	39	18	57	44.0%	25	22	10	32			
	6 Drinking Place	11	975	8.507	ksf	66%	34%	64	33	97	20.0%	20	51	26	77	12.0%	9	46	22	68	0.0%	0	46	22	68			
	7																											
	8																											
	9																											
	10																											
	11																											
	12																											
	13																											
	14																											
	15																											
ITE Land Use Code						Rate or Equation		Total:			161	94	255	20.0%	51	129	75	204	16.7%	34	112	58	170	14.7%	25	95	50	145
310						Y=0.59(X)																						
221						Y=0.39(X)																						
222						Y=0.32(X)																						
492						Y=3.45(X)																						
931						Y=0.28(X)																						
975						Y=11.36(X)																						
																								IN	OUT	TOTAL		
NET NEW TRIPS																						94		49	143			

# 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	0	0	0	0
	Retail	0	0	0	0
	Restaurant	3	2	94	48
	Cinema/Entertainment	7	7	21	16
	Residential	6	15	5	3
	Hotel	8	6	9	8
		24	30	129	75

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	1	0	9	8
	Cinema/Entertainment	0	0	4	3
	Residential	0	1	1	1
	Hotel	0	0	3	5
		1	1	17	17

OUTPUT	Total % Reduction	3.7%		16.7%	
	Office				
	Retail				
	Restaurant	20.0%		12.0%	
	Cinema/Entertainment	0.0%		18.9%	
	Residential	4.8%		25.0%	
	Hotel	0.0%		47.1%	

EXTERNAL 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	2	2	85	40
	Cinema/Entertainment	7	7	17	13
	Residential	6	14	4	2
	Hotel	8	6	6	3
		23	29	112	58

# Means of Transportation to Work

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

$$(197+65) / 1,140 = 23\%$$

Census Tract 41.03; Miami-Dade County; Florida

Label	Estimate	Margin of Error
▼ Total:	1,140	±488
▼ Car, truck, or van:	718	±441
Drove alone	660	±435
▼ Carpooled:	58	±52
In 2-person carpool	58	±52
In 3-person carpool	0	±15
In 4-person carpool	0	±15
In 5- or 6-person carpool	0	±15
In 7-or-more-person carpool	0	±15
▼ Public transportation (excluding taxicab):	65	±76
Bus	65	±76
Subway or elevated rail	0	±15
Long-distance train or commuter rail	0	±15
Light rail, streetcar or trolley (carro público in Puerto Rico)	0	±15
Ferryboat	0	±15
Taxicab	52	±52
Motorcycle	0	±15
Bicycle	0	±15
Walked	197	±111
Other means	6	±13
Worked from home	102	±78

# Table Notes

## Means of Transportation to Work

**Survey/Program:** American Community Survey

**Universe:** Workers 16 years and over

**Year:** 2022

**Estimates:** 5-Year

**Table ID:** B08301

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, the decennial census is the official source of population totals for April 1st of each decennial year. In between censuses, the Census Bureau's Population Estimates Program produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Information about the American Community Survey (ACS) can be found on the ACS website. Supporting documentation including code lists, subject definitions, data accuracy, and statistical testing, and a full list of ACS tables and table shells (without estimates) can be found on the Technical Documentation section of the ACS website.

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

Source: U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates

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

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

Several means of transportation to work categories were updated in 2019. For more information, see: [Change to Means of Transportation](#).

The 2018-2022 American Community Survey (ACS) data generally reflect the March 2020 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on 2020 Census data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

- The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself.
- N  
The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.
- (X)  
The estimate or margin of error is not applicable or not available.
- median-  
The median falls in the lowest interval of an open-ended distribution (for example "2,500-")
- median+  
The median falls in the highest interval of an open-ended distribution (for example "250,000+").
- \*\*  
The margin of error could not be computed because there were an insufficient number of sample observations.
- \*\*\*  
The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.
- \*\*\*\*\*

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

## **Appendix F**

### Transit Service Information



# SERVICE FREQUENCIES

FRECUENCIAS DE SERVICIO / FREKANS SÈVIS YO

	FROM DESDE / DE	TO HASTA / A	EVERY CADA / CHAK
<b>WEEKDAY</b> DIAS LABORABLES LASEMÈN	<b>5:30 a.m.</b>	<b>10:00 p.m.</b>	<b>30 min</b>
<b>SATURDAY</b> SÁBADO SAMDI	<b>6:00 a.m.</b>	<b>10:00 p.m.</b>	<b>30 min</b>
<b>SUNDAY</b> DOMINGO DIMANCH	<b>6:00 a.m.</b>	<b>10:00 p.m.</b>	<b>30 min</b>

**Frequencies are approximate and may vary depending on traffic and road conditions.**  
Las frecuencias son aproximadas, pues dependen del tráfico y otras condiciones de las vías.  
Asosye yo apwoksimatif epi yo ka varye selon kondisyon sikilasyon sou wout yo.



## YOUR FREE AND DIRECT CONNECTION TO BETTER BUS



SCAN TO DOWNLOAD THE APP OR CALL  
**786-321-5842**






**Language Assistance:** Miami-Dade Transit (MDT) is committed to providing information about its transit services to passengers with limited English as part of its non-discrimination program. MDT publishes route information in Spanish and Haitian Creole and offers assistance in both languages at our Call Center at 3-1-1 or 305-468-5900. For more information, call MDT's Office of Civil Rights & Labor Relations at 786-469-5486.

Miami-Dade County provides equal access and equal opportunity in employment and does not discriminate on the basis of disability in its programs or services. Auxiliary aids and services for communication are available with five days' advance notice. For material in alternate format (audiotape, Braille or computer disk), a signlanguage interpreter or other accommodations, please contact: Miami-Dade Transit, Office of Civil Rights and Labor Relations, 701 NW 1st Court, Suite 1700, Miami, FL 33136. Attention: ADA Coordinator. Telephone: 786-469-5225, Fax: 786-469-5589. E-mail: DTPW-ADA@miamidade.gov.

**Español:** El Departamento de Transporte Público de Miami-Dade (MDT, su sigla en inglés) está dedicado a proveer información sobre sus servicios a los pasajeros que no hablan inglés. MDT publica información sobre sus rutas de autobús en español y creole haitiano y ofrece asistencia en ambos idiomas en nuestro Centro de Llamadas en el 3-1-1 o 305-468-5900. Para más información, llame la Oficina de Derechos Humanos y Relaciones Laborales de MDT al 786-469-5486.

El Condado de Miami-Dade ofrece igualdad de acceso y de oportunidades en el empleo y no practica la discriminación por discapacidad, en sus programas o servicios. Los dispositivos y servicios de ayuda auditiva para la comunicación están disponibles previa solicitud, con cinco días de anticipación. Para obtener materiales en formato alternativo (cinta de audio, Braille o disco de computadora), para solicitar un intérprete del lenguaje de las señas u otros servicios similares sírvase llamar a: Transporte de Miami-Dade, Oficina de Derechos Civiles y Relaciones Laborales, 701 NW 1st Court, Suite 1700, Miami, FL 33136. Atención: ADA Coordinator. Teléfono: 786-469-5225, Fax: 786-469-5589. Correo electrónico: DTPW-ADA@miamidade.gov.

**Kreyòl Ayisyen:** Miami-Dade Transit (MDT) angaje li a bay pasaje ak konesans limite an Anglè yo tout enfòmasyon sou sèvis transpò piblik nan lang pa yo. MDT pibliye enfòmasyon sou trajè otobis yo an Espanyòl ak an Kreyòl Ayisyen epi li bay asistans nan toude lang yo nan Sant Repons nou an 3-1-1 oswa 305-468-5900. Pou plis enfòmasyon, rele Biwo Dwa Sivik ak Relasyon Travay MDT la nan 786-469-5486.

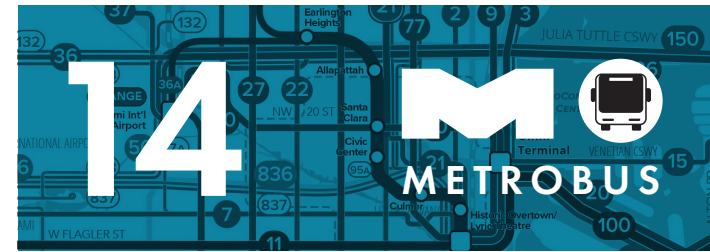
Konte Miami-Dade bay aksè ak opòtinite egal ego nan anplwa epi li pa fè diskriminasyon baze sou enfi mite nan pwogram li yo ak sèvis li yo. Aparèy ak sèvis komunikasyon pou moun ki pa tande/wè byen yo disponib ak yon preyavi senk jou. Pou jwenn dokiman nan lòt fòm (tep odyo, Bray oswa disk konpit), sèvis yon entèprèt ki pale lang siy oswa lòt akomodasyon, tanpri kontakte: Miami-Dade Transit, Biwo Dwa Civil ak Relasyon Travay, 701 NW 1st Court, Suite 1700, Miami, FL 33136. Atansyon: ADA Coordinator. Telefòn: 786-469-5225, Faks: 786-469-5589. Imel: DTPW-ADA@miamidade.gov.



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**MARCH 2024** **MARZO 2024** | **MAS 2024**

- Local service seven days a week.
- Travels from Mt. Sinai Medical Center to Omni Metrobus Terminal / Adrienne Arsht Center Metromover Station along Collins Ave, Washington Ave, and the MacArthur Causeway.



- Servicio local los siete días de la semana.
- Va desde Mt. Sinai Medical Center hasta la terminal Omni del Metrobús/estación Adrienne Arsht Center del Metromover, pasando por Collins Ave, Washington Ave y MacArthur Causeway.

- Sèvis lokal sèt jou sou sèt.
- Vwayaje soti nan Mt. Sinai Medical Center pou rive nan Omni Metrobus Terminal / Adrienne Arsht Center Metromover Station sou Collins Ave, Washington Ave, ak MacArthur Causeway.



**MORE INFORMATION**  
MÁS INFORMACIÓN | PLUS ENFÒMASYON

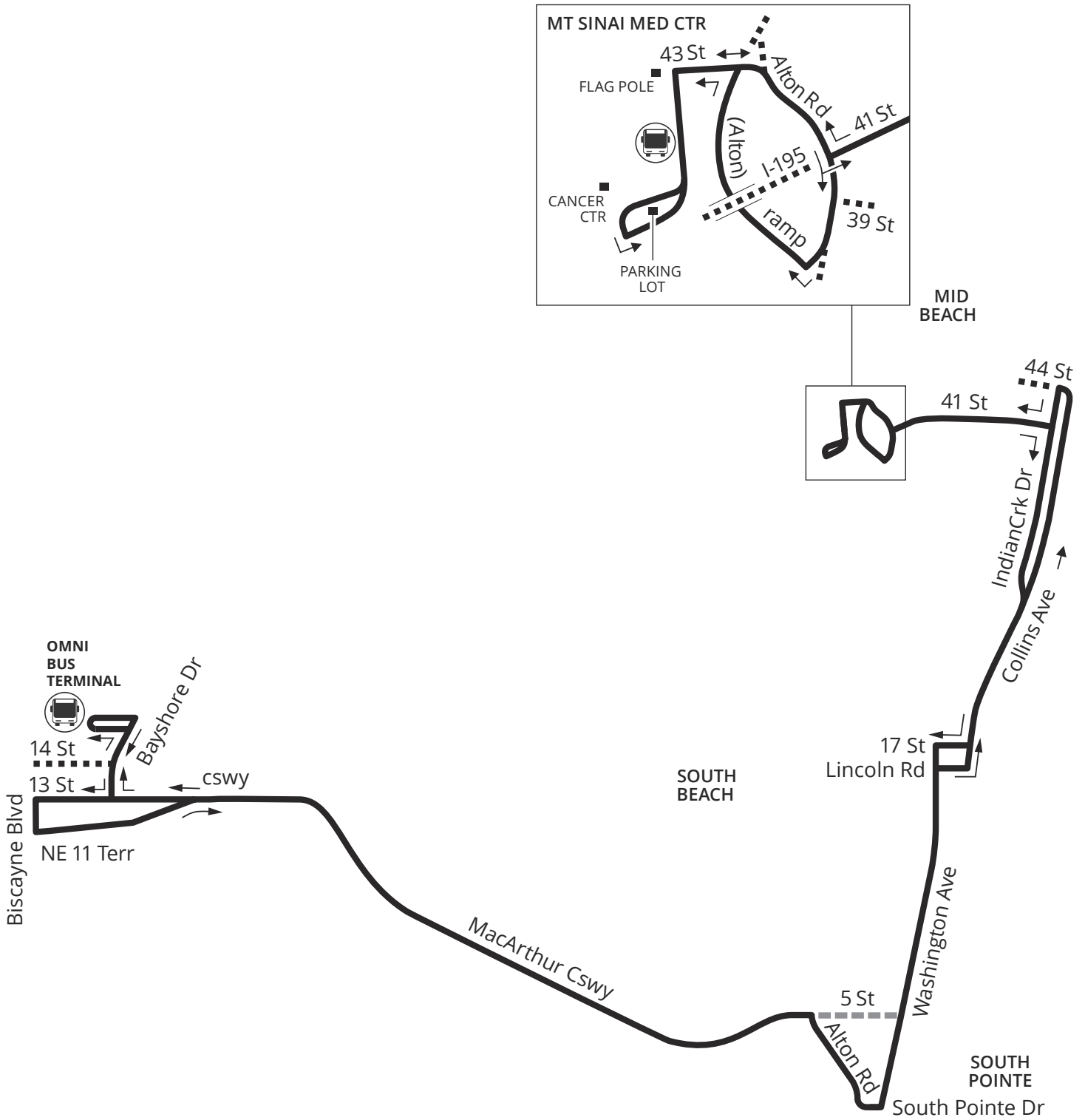
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DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS



# 14



**NORTH**

11/2023

SERVICE FREQUENCIES

FRECUENCIAS DE SERVICIO / FREKANS SÈVIS YO

	FROM DESDE / DE	TO HASTA / A	EVERY CADA / CHAK
WEEKDAY DIAS LABORABLES LASEMÈN	4:00 a.m.	6:00 a.m.	30 min (36+36A) 60 min (36) 60 min (36A)
	6:00 a.m.	10:00 p.m.	15 min (36+36A) 30 min (36) 30 min (36A)
	10:00 p.m.	12:00 a.m.	30 min (36+36A) 60 min (36) 60 min (36A)
SATURDAY SÁBADO SAMDI	5:00 a.m.	7:00 a.m.	30 min (36+36A) 60 min (36) 60 min (36A)
	7:00 a.m.	10:00 p.m.	15 min (36+36A) 30 min (36) 30 min (36A)
	10:00 p.m.	12:00 a.m.	30 min (36+36A) 60 min (36) 60 min (36A)
SUNDAY DOMINGO DIMANCH	5:00 a.m.	6:00 a.m.	60 min (36A)
	6:00 a.m.	8:00 a.m.	30 min (36+36A) 60 min (36) 60 min (36A)
	8:00 a.m.	8:00 p.m.	20 min (36+36A) 40 min (36) 40 min (36A)
	8:00 p.m.	12:00 a.m.	60 min (36A)

Frequencies are approximate and may vary depending on traffic and road conditions. Las frecuencias son aproximadas, pues dependen del tráfico y otras condiciones de las vías. Asosye yo apwoksimatif epi yo ka varye selon kondisyon sikilasyon sou wout yo.

**Language Assistance:** Miami-Dade Transit (MDT) is committed to providing information about its transit services to passengers with limited English as part of its non-discrimination program. MDT publishes route information in Spanish and Haitian Creole and offers assistance in both languages at our Call Center at 3-1-1 or 305- 468-5900. For more information, call MDT's Office of Civil Rights & Labor Relations at 786-469-5486.

Miami-Dade County provides equal access and equal opportunity in employment and does not discriminate on the basis of disability in its programs or services. Auxiliary aids and services for communication are available with five days' advance notice. For material in alternate format (audiotape, Braille or computer disk), a signlanguage interpreter or other accommodations, please contact: Miami-Dade Transit, Office of Civil Rights and Labor Relations, 701 NW 1st Court, Suite 1700, Miami, FL 33136. Attention: ADA Coordinator. Telephone: 786-469-5225, Fax: 786-469-5589. E-mail: DTPW-ADA@miamidade.gov.

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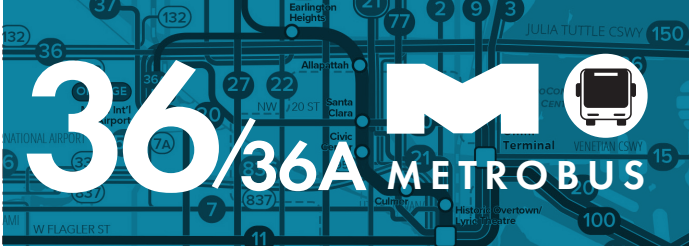
El Condado de Miami-Dade ofrece igualdad de acceso y de oportunidades en el empleo y no practica la discriminación por discapacidad, en sus programas o servicios. Los dispositivos y servicios de ayuda auditiva para la comunicación están disponibles previa solicitud, con cinco días de anticipación. Para obtener materiales en formato alternativo (cinta de audio, Braille o disco de computadora), para solicitar un intérprete del lenguaje de las señas u otros servicios similares sírvase llamar a: Transporte de Miami-Dade, Oficina de Derechos Civiles y Relaciones Laborales, 701 NW 1st Court, Suite 1700, Miami, FL 33136. Atención: ADA Coordinator. Teléfono: 786-469-5225, Fax: 786-469-5589. Correo electrónico: DTPW-ADA@miamidade.gov.

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MARCH 2024 MARZO 2024 | MAS 2024

- Local service seven days a week.
- Travels from Downtown Doral to South Beach along NW/NE 36 St, the Julia Tuttle Causeway and Collins Ave.
- Route 36A travels from Miami International Airport station.
- Stops include Allapattah Metrorail station.



- Servicio local los siete días de la semana.
- Va desde el downtown del Doral hasta South Beach, pasando por NW/NE 36 St, Julia Tuttle Causeway y Collins Ave.
- La ruta 36A comienza en la estación del Aeropuerto Internacional de Miami.
- Con parada en la estación de Allapattah del Metrorail.



- Sèvis lokal sèt jou sou sèt.
- Vwayaje soti nan Downtown Doral rive nan South Beach sou NW/NE 36 St, Julia Tuttle Causeway ak Collins Ave.
- Wout 36A vwayaje soti nan estasyon Ayewopò Entènasyonal Miami.
- Arè yo gen ladan estasyon Allapattah Metrorail.



MORE INFORMATION  
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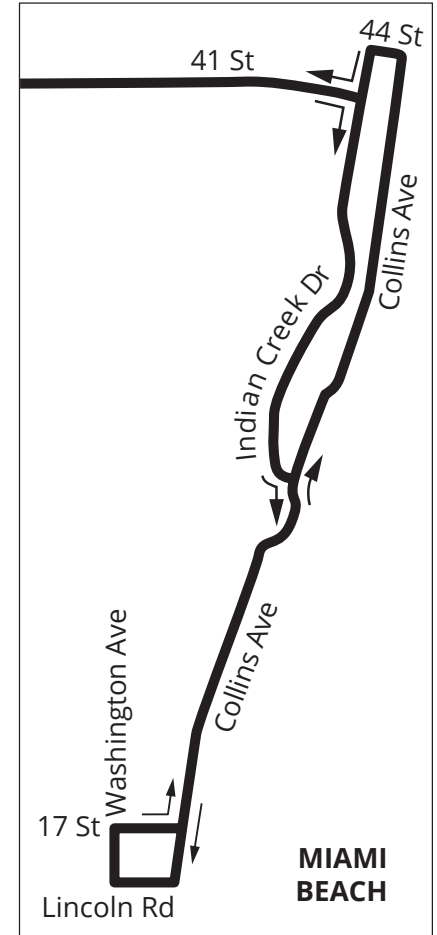
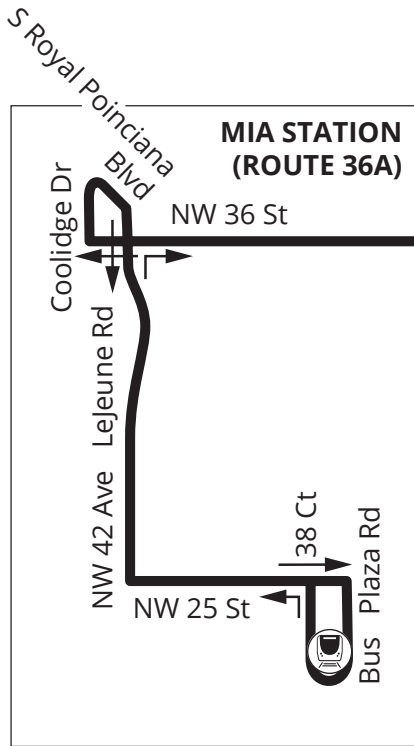
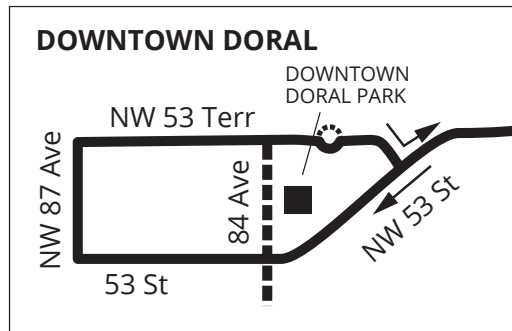
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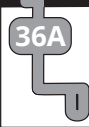


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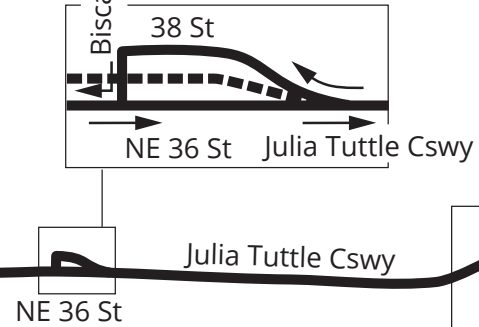


NW 53 St  
NW 79 Ave  
NW 72 Ave  
NW 25 St

36



NW 36 St



NE 36 St

Julia Tuttle Cswy

41 St

# SERVICE FREQUENCIES

FRECUENCIAS DE SERVICIO / FREKANS SÈVIS YO

	FROM DESDE / DE	TO HASTA / A	EVERY CADA / CHAK
WEEKDAY DIAS LABORABLES LASEMÈN	12:00 a.m.	4:00 a.m.	60 min (Northside-M Beach)
	4:00 a.m.	6:00 a.m.	30 min (Hialeah-M Beach)
	6:00 a.m.	10:00 p.m.	15 min (Hialeah-M Beach)
	10:00 p.m.	12:00a.m.	30 min (Hialeah-M Beach)
SATURDAY SÁBADO SAMDI	12:00 a.m.	5:00 a.m.	60 min (Northside-M Beach)
	5:00 a.m.	7:00 a.m.	30 min (Hialeah-M Beach)
	7:00 a.m.	10:00 p.m.	15 min (Hialeah-M Beach)
	10:00 p.m.	12:00 a.m.	30 min (Hialeah-M Beach)
SUNDAY DOMINGO DIMANCH	12:00 a.m.	5:00 a.m.	60 min (Northside-M Beach)
	5:00 a.m.	8:00 a.m.	30 min (Hialeah-M Beach)
	8:00 a.m.	8:00 p.m.	20 min (Hialeah-M Beach)
	8:00 p.m.	12:00 a.m.	60 min (Hialeah-M Beach)

Frequencies are approximate and may vary depending on traffic and road conditions.  
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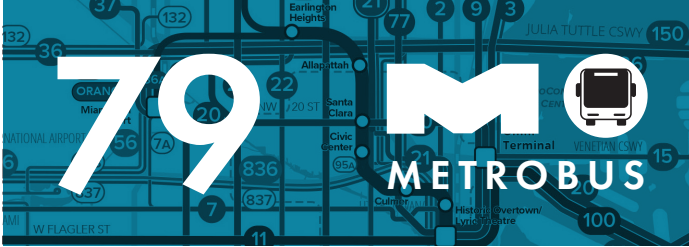
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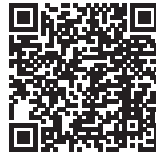
APRIL 2024 ABRIL 2024 | AVRIL 2024

- Local service seven days a week.
- Travels from Hialeah Metrorail Station to South Beach along NW/NE 79 St, the 79th Street Causeway and Collins Ave
- Overnight trips travel from Northside Metrorail Station



- Servicio local los siete días de la semana.
- Va desde la estación de Hialeah del Metrorail hasta South Beach, pasando por NW/NE 79 St, 79th Street Causeway y Collins Ave.
- En el horario nocturno el recorrido comienza en la estación Northside del Metrorail.

- Sèvis lokal sèt jou sou sèt.
- Vwayaje soti nan estasyon Hialeah Metrorail pou rive nan South Beach sou NW/NE 79 St, 79th Street Causeway ak Collins Ave.
- Vwayaj lannwit yo fèt soti nan estasyon Northside Metrorail.



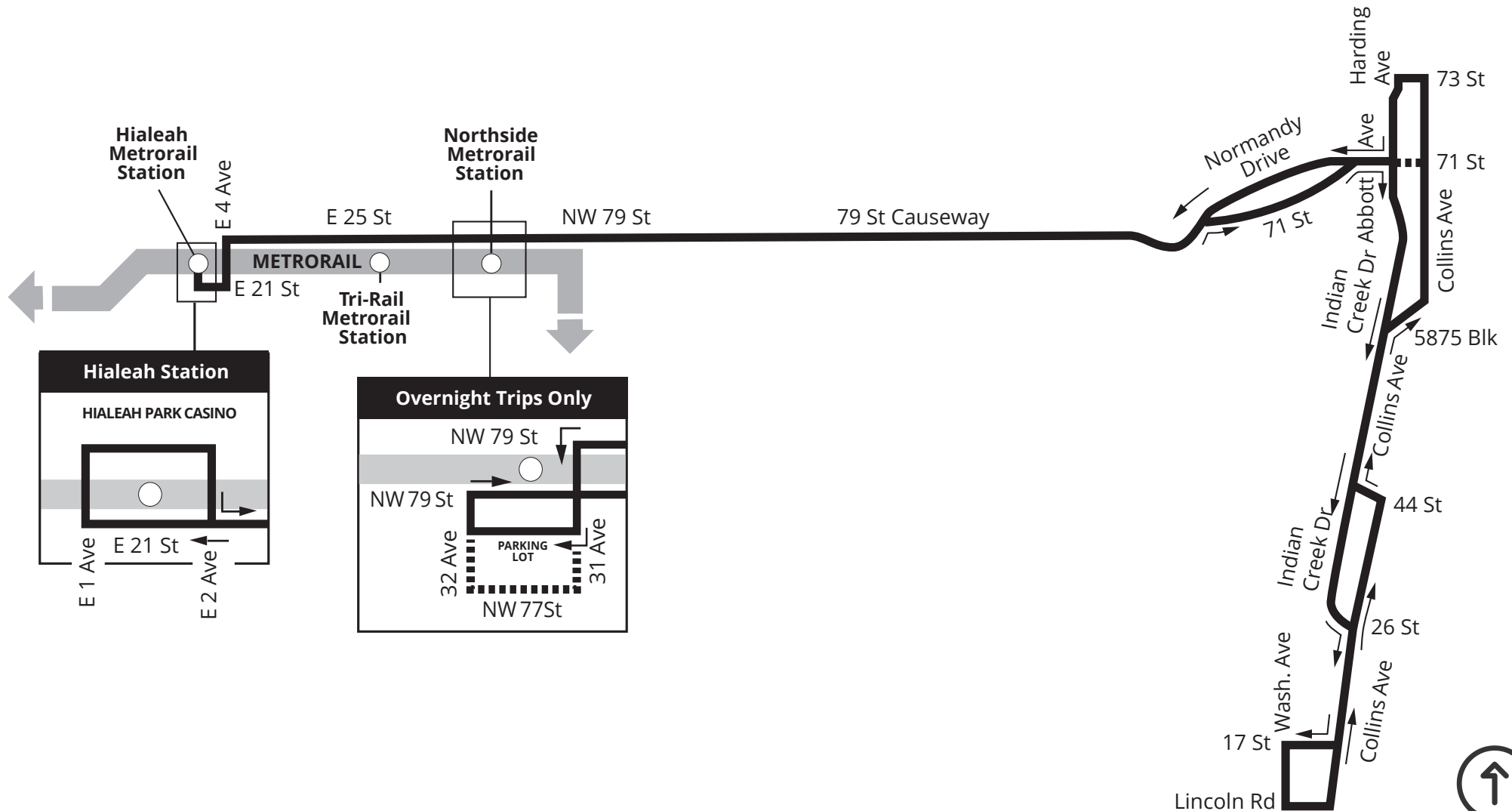
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DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS



# 79



**NORTH**  
11/2023



# SERVICE FREQUENCIES

FRECUENCIAS DE SERVICIO / FREKANS SÈVIS YO

	FROM DESDE / DE	TO HASTA / A	EVERY CADA / CHAK
WEEKDAY DIAS LABORABLES LASEMÈN	12:00 a.m.	4:00 a.m.	60 min (Aventura-Downtown)
	4:00 a.m.	5:00 a.m.	15 min (Aventura-Downtown)
	5:00 a.m.	6:30 p.m.	8 min (Haulover-Downtown) 10 min (Aventura-Haulover)
	6:30 p.m.	10:00 p.m.	10 min (Aventura-Downtown)
	10:00 p.m.	12:00 a.m.	20 min (Aventura-Downtown)
SATURDAY SÁBADO SAMDI	12:00 a.m.	5:00 a.m.	60 min (Aventura-Downtown)
	5:00 a.m.	7:00 a.m.	15 min (Haulover-Downtown) 30 min (Aventura-Haulover)
	7:00 a.m.	10:00 p.m.	7.5 min (Haulover-Downtown) 15 min (Aventura-Haulover)
	10:00 p.m.	12:00 a.m.	15 min (Haulover-Downtown) 30 min (Aventura-Haulover)
SUNDAY DOMINGO DIMANCH	12:00 a.m.	5:00 a.m.	60 min (Aventura-Downtown)
	5:00 a.m.	6:00 a.m.	30 min (Haulover-Downtown) 60 min (Aventura-Haulover)
	6:00 a.m.	8:00 a.m.	15 min (Haulover-Downtown) 30 min (Aventura-Haulover)
	8:00 a.m.	8:00 p.m.	10 min (Haulover-Downtown) 30 min (Aventura-Haulover)
	8:00 p.m.	12:00 a.m.	30 min (Haulover-Downtown) 60 min (Aventura-Haulover)

Frequencies are approximate and may vary depending on traffic and road conditions.  
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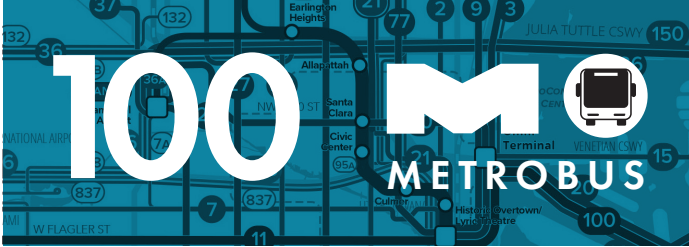
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APRIL 2024 ABRIL 2024 | AVRIL 2024

- Local service seven days a week.
- Travels from the Bus Terminal at Aventura Mall to Downtown Miami through Miami Beach.
- Stops include the Adrienne Arsht Center Metromover station / Omni Metrobus terminal, and Government Center Metrorail / Metromover station.



- Servicio local los siete días de la semana.
- Va desde la terminal de autobuses en Aventura Mall hasta el downtown de Miami, pasando por Miami Beach.
- Con paradas en la estación Adrienne Arsht Center del Metromover/terminal Omni del Metrobús y la estación Government Center del Metrorail y el Metromover.



- Sèvis lokal sèt jou psou sèt.
- Vwayaje soti nan Tèminal Otobis la nan Aventura Mall pou rive nan Downtown Miami atravè Miami Beach.
- Arè yo gen ladan estasyon Adrienne Arsht Center Metromover / Omni Metrobus tèminal, ak estasyon Metrorail / Metromover Government Center.



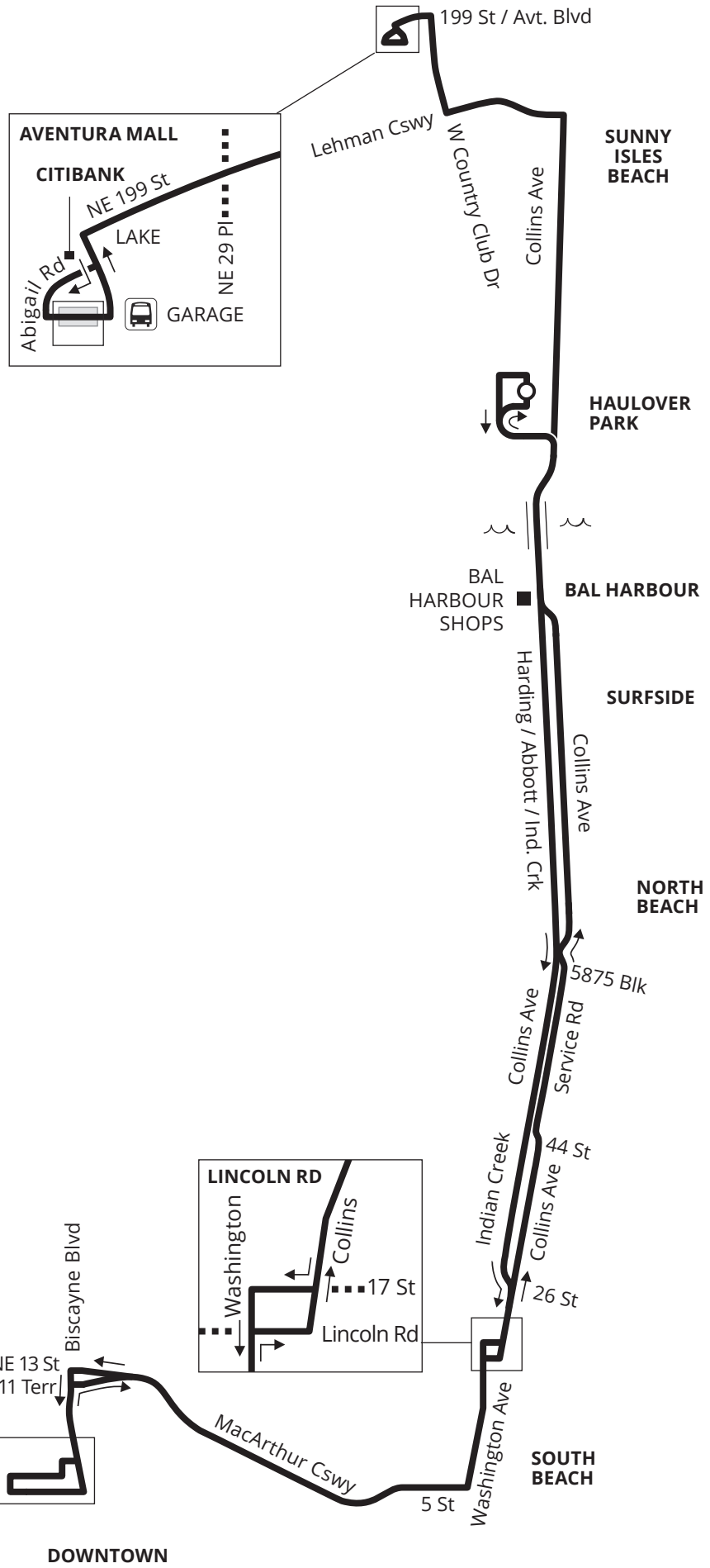
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DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS



# 100



**NORTH**  
11/2023



# SERVICE FREQUENCIES

FRECUENCIAS DE SERVICIO / FREKANS SÈVIS YO

	FROM DESDE / DE	TO HASTA / A	EVERY CADA / CHAK
SEVEN DAYS A WEEK LOS SIETE DIAS SET JOU YON SEMEN	5:00 a.m.	11:00 p.m.	30 min

Frequencies are approximate and may vary depending on traffic and road conditions  
/ Frecuencias son aproximadas, pues dependen del tráfico y otras condiciones de las vías / Asosye  
yo apwoksimatif epi yo ka varye selon kondisyon sikilasyon sou wout yo



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Miami-Dade County provides equal access and equal opportunity in employment and does not discriminate on the basis of disability in its programs or services. Auxiliary aids and services for communication are available with five days' advance notice. For material in alternate format (audiotape, Braille or computer disk), a signlanguage interpreter or other accommodations, please contact: Miami-Dade Transit, Office of Civil Rights and Labor Relations, 701 NW 1st Court, Suite 1700, Miami, FL 33136. Attention: ADA Coordinator. Telephone: 786-469-5225, Fax: 786-469-5589. E-mail: DTPW-ADA@miamidade.gov.

**Español:** El Departamento de Transporte Público de Miami-Dade (MDT, su sigla en inglés) está dedicado a proveer información sobre sus servicios a los pasajeros que no hablan inglés. MDT publica información sobre sus rutas de autobús en español y creole haitiano y ofrece asistencia en ambos idiomas en nuestro Centro de Llamadas en el 3-1-1 o 305-468-5900. Para más información, llame la Oficina de Derechos Humanos y Relaciones Laborales de MDT al 786-469-5486.

El Condado de Miami-Dade ofrece igualdad de acceso y de oportunidades en el empleo y no practica la discriminación por discapacidad, en sus programas o servicios. Los dispositivos y servicios de ayuda auditiva para la comunicación están disponibles previa solicitud, con cinco días de anticipación. Para obtener materiales en formato alternativo (cinta de audio, Braille o disco de computadora), para solicitar un intérprete del lenguaje de las señas u otros servicios similares sírvase llamar a: Transporte de Miami-Dade, Oficina de Derechos Civiles y Relaciones Laborales, 701 NW 1st Court, Suite 1700, Miami, FL 33136. Atención: ADA Coordinator. Teléfono: 786-469-5225, Fax: 786-469-5589. Correo electrónico: DTPW-ADA@miamidade.gov.

**Kreyòl Ayisyen:** Miami-Dade Transit (MDT) angaje li a bay pasaje ak konseans limite an Anglè yo tout enfòmasyon sou sèvis transpò piblik nan lang pa yo. MDT pibliye enfòmasyon sou trajè otobis yo an Espanyòl ak an Kreyòl Ayisyen epi li bay asistans nan toude lang yo nan Sant Repons nou an 3-1-1 oswa 305-468-5900. Pou plis enfòmasyon, rele Biwo Dwa Sivik ak Relasyon Travay MDT la nan 786-469-5486.

Konte Miami-Dade bay aksè ak opòtinite egal ego nan anplwa epi li pa fè diskriminasyon baze sou enfi mite nan pwogram li yo ak sèvis li yo. Aparèy ak sèvis komunikasyon pou moun ki pa tande/wè byen yo disponib ak yon preyavi senk jou. Pou jwenn dokiman nan lòt fòm (tep odyo, Bray oswa disk konpit), sèvis yon entèprèt ki pale lang siy oswa lòt akomodasyon, tanpri kontakte: Miami-Dade Transit, Biwo Dwa Civil ak Relasyon Travay, 701 NW 1st Court, Suite 1700, Miami, FL 33136. Atansyon: ADA Coordinator. Telefòn: 786-469-5225, Faks: 786-469-5589. Imel: DTPW-ADA@miamidade.gov.



**miamidade.gov/transportation**

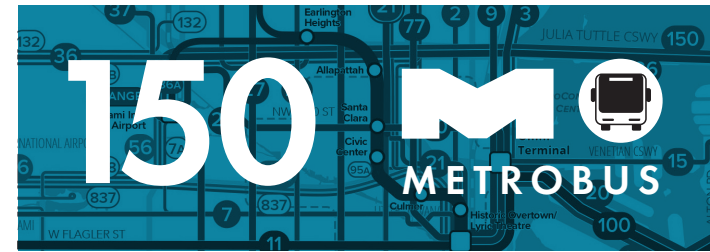
Information • Información • Enfòmasyon  
311 (305.468.5900) TTY/Florida Relay: 711



@GoMiamiDade



GO Miami-Dade Transit



NOVEMBER 2023 | NOVIEMBRE 2023 | NOVANM 2023

## MIAMI BEACH AIRPORT EXPRESS

- Express service and limited-stop service, seven days a week.
- Express service from Miami International Airport Metrorail station to Mid Beach along the Julia Tuttle Causeway.
- Limited-stop service from Mid Beach to South Beach along Collins Ave / Indian Creek Dr and Washington Ave.



- Servicio expreso y con paradas limitadas, los siete días de la semana.
- Servicio expreso desde la estación del Metrorail del Aeropuerto Internacional de Miami hasta Mid Beach por Julia Tuttle Causeway.
- Servicio con paradas limitadas desde Mid Beach hasta South Beach por Collins Ave/Indian Creek Dr y Washington Ave.

- Sèvis ekspres ak sèvis arè limite, sèt jou sou sèt.
- Sèvis ekspres soti nan estasyon Metrorail Ayewopò Entènasyonal Miami rive nan Mid Beach sou Julia Tuttle Causeway.
- Sèvis arè limite soti nan Mid Beach rive nan South Beach sou Collins Ave / Indian Creek Dr ak Washington Ave.



MORE INFORMATION  
MÁS INFORMACIÓN | PLUS ENFOMASYON



DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

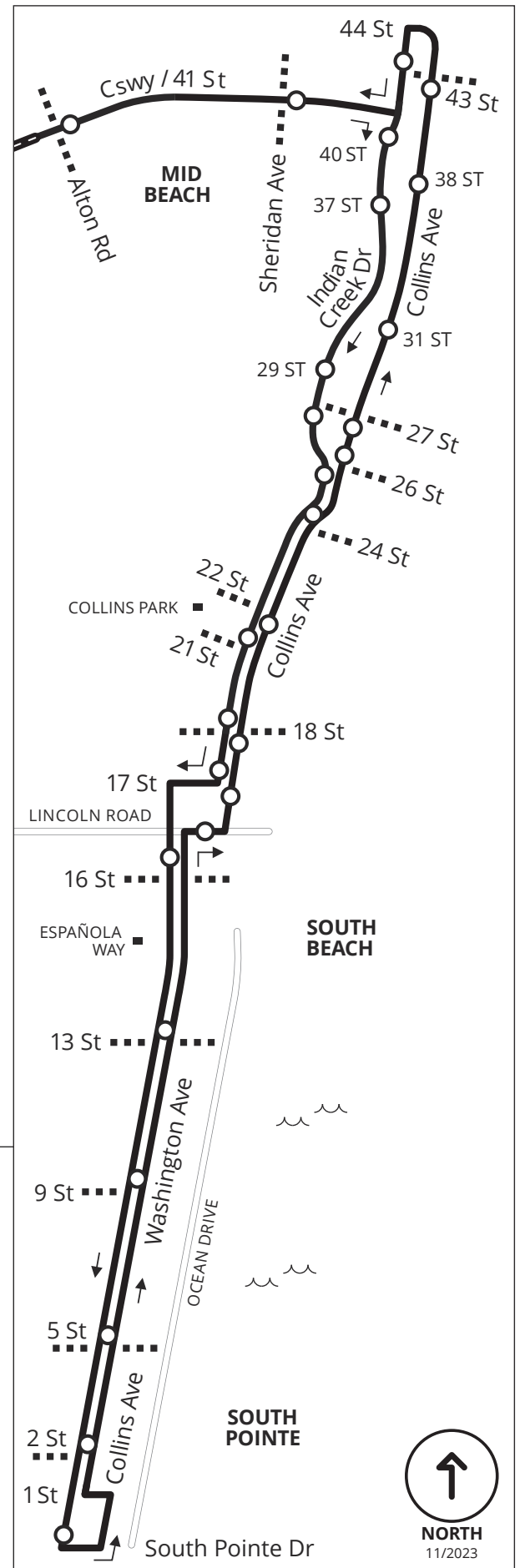
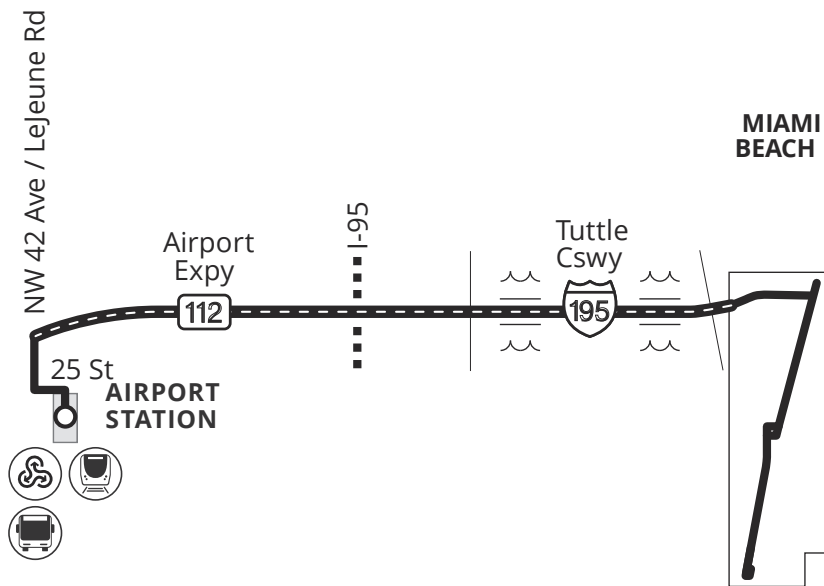


# 150

## MIAMI BEACH AIRPORT EXPRESS



**LIMITED STOPS**  
*entire route*



# MIAMI-DADE COUNTY METROBUS SYSTEM

## Metrobus routes

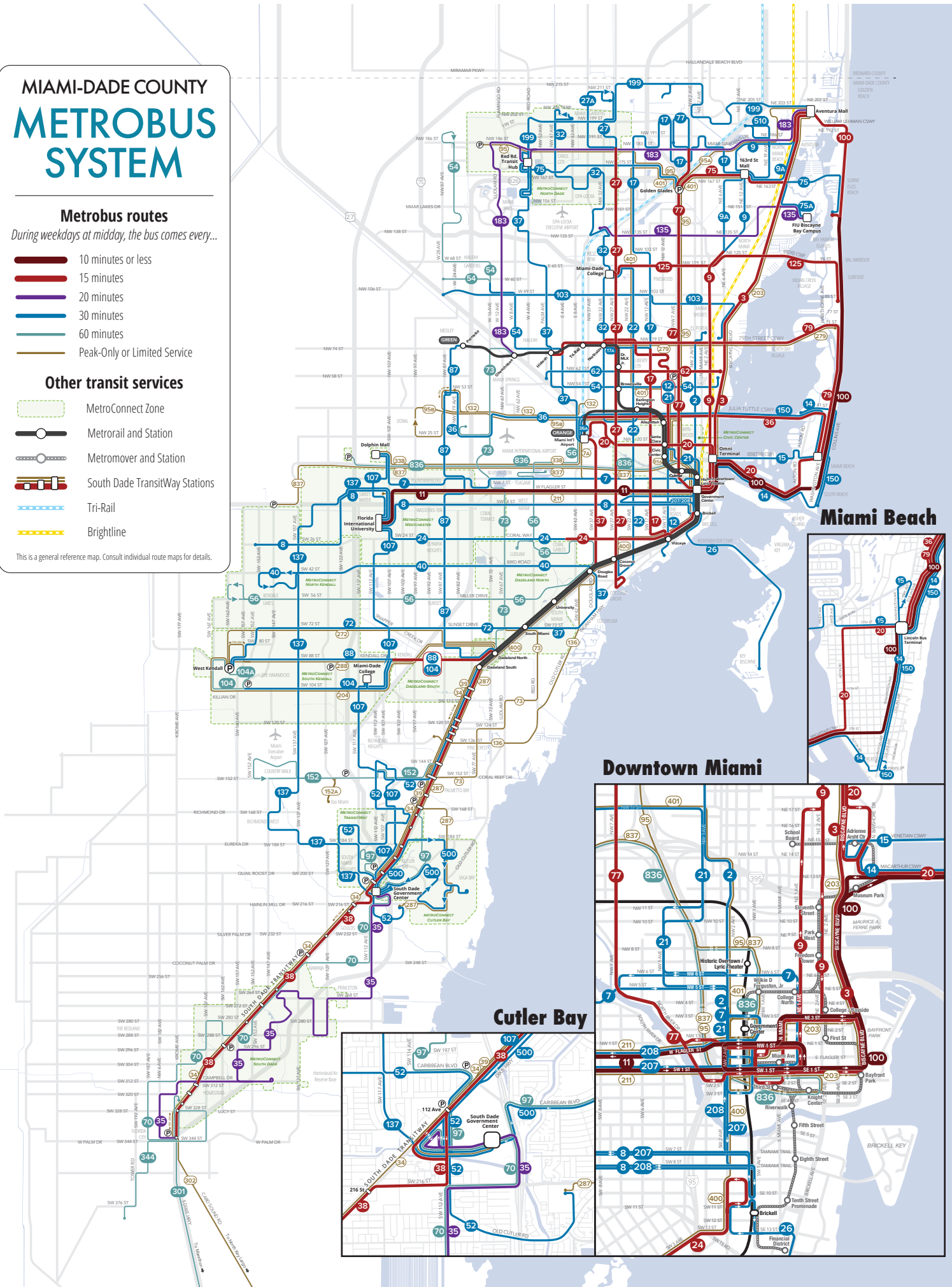
During weekdays at midday, the bus comes every...

- 10 minutes or less
- 15 minutes
- 20 minutes
- 30 minutes
- 60 minutes
- Peak-Only or Limited Service

## Other transit services

- MetroConnect Zone
- Metrorail and Station
- Metromover and Station
- South Dade TransitWay Stations
- - - Tri-Rail
- - - Brightline

This is a general reference map. Consult individual route maps for details.



## Miami Beach

## Downtown Miami

## Cutler Bay



# COLLINS EXPRESS



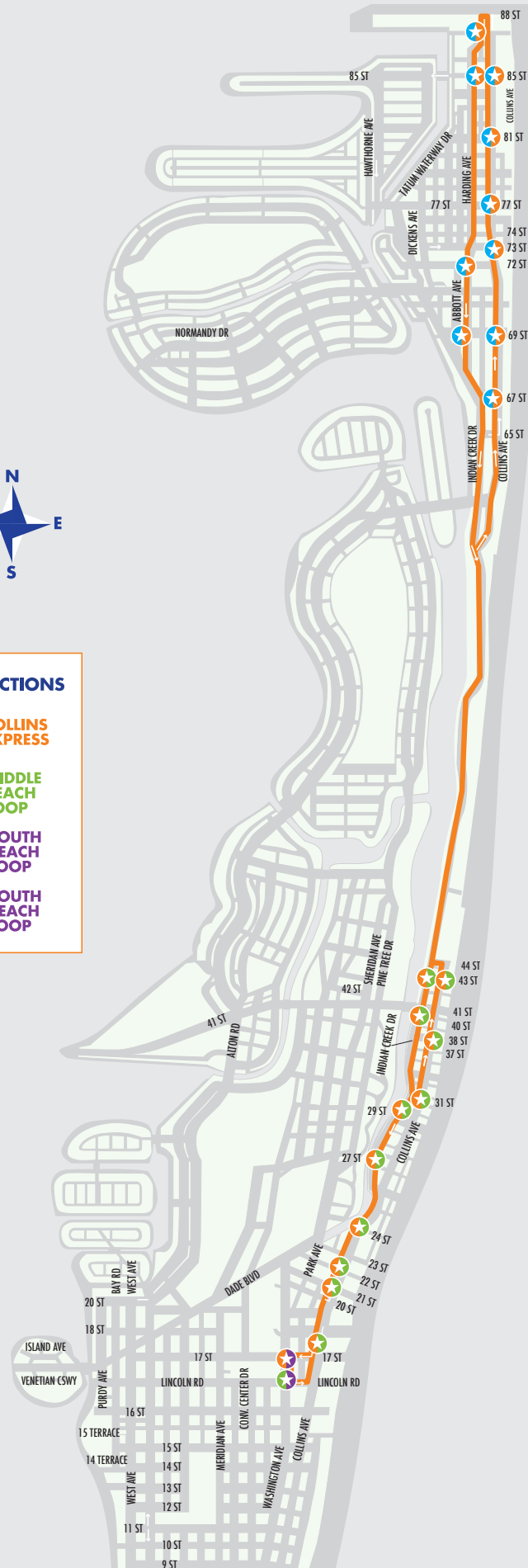
## TROLLEY CONNECTIONS

**NORTH BEACH LOOP**  **COLLINS EXPRESS**

**COLLINS EXPRESS**  **MIDDLE BEACH LOOP**

**MIDDLE BEACH LOOP**  **SOUTH BEACH LOOP**

**COLLINS EXPRESS**  **SOUTH BEACH LOOP**







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Contact



Search the city site



## CITYWIDE FREE TROLLEY

[HOME](#) > [CITY HALL](#) > [TRANSPORTATION AND MOBILITY](#) > CITYWIDE FREE TROLLEY



## MIAMI BEACH TROLLEY

The citywide trolley service currently operates 15 hours a day, from 8 a.m. to 11 p.m., 7 days a week at approximately 20-minute average service frequency along each route.

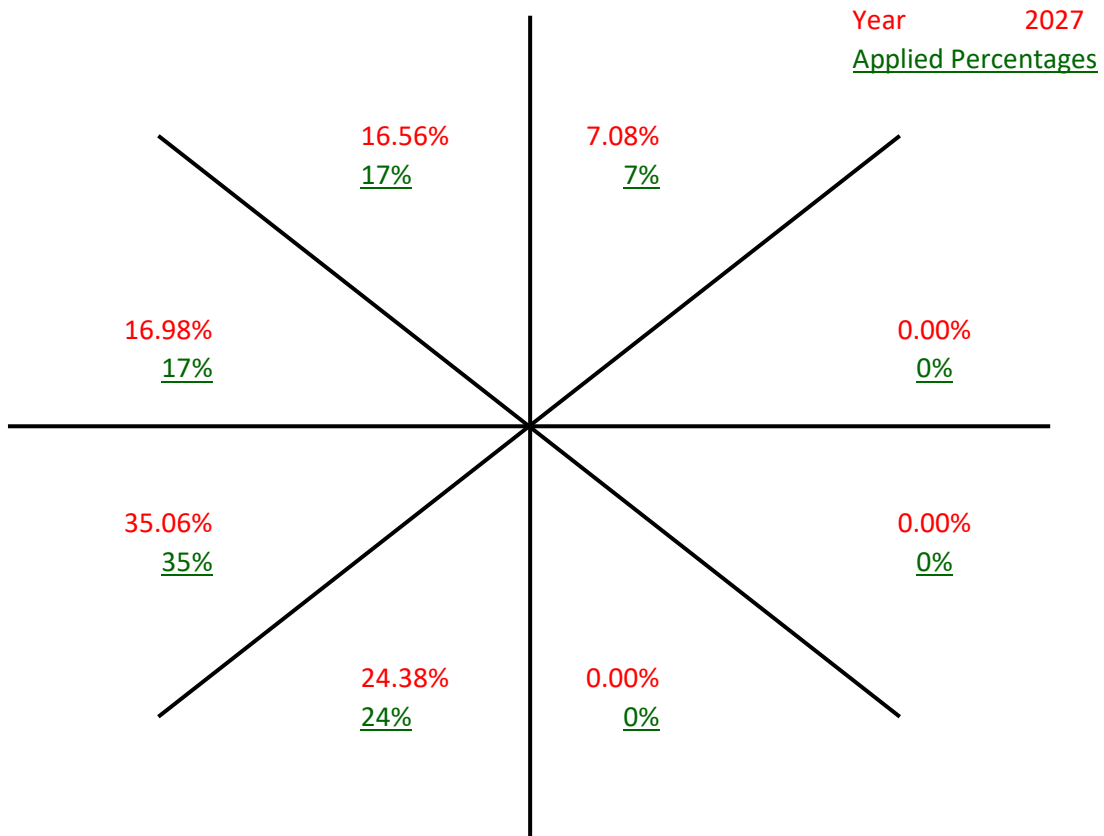
We thank you for your continued support and are looking forward to serving you!

## LET US DO THE DRIVING!

## **Appendix G**

### Cardinal Distribution

# Cardinal Distribution for TAZ 633



Cardinal Trip Distribution

Cardinal Direction	Percentage of Trips		2027 Interpolated	2027 Rounded
	2015	2045		
North-Northeast	7.0%	7.20%	7.08%	7.00%
East-Northeast	0.0%	0.00%	0.00%	0.00%
East-Southeast	0.0%	0.00%	0.00%	0.00%
South-Southeast	0.0%	0.00%	0.00%	0.00%
South-Southwest	26.9%	20.60%	24.38%	24.00%
West-Southwest	32.5%	38.90%	35.06%	35.00%
West-Northwest	17.1%	16.80%	16.98%	17.00%
North-Northwest	16.6%	16.50%	16.56%	17.00%
<b>Total</b>	<b>100.1%</b>	<b>100.0%</b>	<b>100.06%</b>	<b>100.00%</b>





MIAMI-DADE TRANSPORTATION PLANNING ORGANIZATION

# 2045 LRTP

## SUPPORTING DOCUMENTS

### DIRECTIONAL TRIP DISTRIBUTION REPORT

SEPTEMBER 2019

Miami-Dade 2015 Base Year Direction Trip Distribution Summary											
TAZ of Origin		Trips / Percent	Cardinal Directions								Total Trips
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
625	3525	Trips	610	160	-	557	431	1,317	679	1,035	4,961
625	3525	Percent	12.7	3.3	-	11.6	9.0	27.5	14.2	21.6	
626	3526	Trips	122	-	-	-	2,090	2,277	1,198	2,942	9,399
626	3526	Percent	1.4	-	-	-	24.2	26.4	13.9	34.1	
627	3527	Trips	279	-	-	-	2,051	2,578	845	1,965	8,061
627	3527	Percent	3.6	-	-	-	26.6	33.4	11.0	25.5	
628	3528	Trips	298	-	49	79	984	902	332	679	3,579
628	3528	Percent	9.0	-	1.5	2.4	29.6	27.2	10.0	20.5	
629	3529	Trips	1,374	549	344	1,656	1,708	3,707	1,668	2,101	14,261
629	3529	Percent	10.5	4.2	2.6	12.6	13.0	28.3	12.7	16.0	
630	3530	Trips	952	-	210	347	1,696	2,375	794	1,114	8,135
630	3530	Percent	12.7	-	2.8	4.6	22.7	31.7	10.6	14.9	
631	3531	Trips	255	-	-	-	1,215	1,471	440	1,030	4,651
631	3531	Percent	5.8	-	-	-	27.6	33.4	10.0	23.4	
632	3532	Trips	309	-	-	-	1,242	1,751	750	635	4,880
632	3532	Percent	6.6	-	-	-	26.5	37.4	16.0	13.5	
633	3533	Trips	310	-	-	-	1,181	1,428	750	730	4,590
633	3533	Percent	7.0	-	-	-	26.9	32.5	17.1	16.6	
634	3534	Trips	1,502	112	240	837	1,718	1,928	976	1,727	9,998
634	3534	Percent	16.6	1.2	2.7	9.3	19.0	21.3	10.8	19.1	
635	3535	Trips	779	-	-	-	2,021	1,994	952	1,411	8,010
635	3535	Percent	10.9	-	-	-	28.2	27.9	13.3	19.7	
636	3536	Trips	1,041	-	-	686	1,152	2,072	911	1,071	7,384
636	3536	Percent	15.0	-	-	9.9	16.6	29.9	13.1	15.4	
637	3537	Trips	323	31	87	217	126	601	303	290	1,987
637	3537	Percent	16.4	1.6	4.4	11.0	6.4	30.4	15.3	14.7	
638	3538	Trips	152	35	87	86	114	218	162	126	999
638	3538	Percent	15.5	3.6	8.9	8.7	11.6	22.3	16.5	12.9	
639	3539	Trips	825	281	277	1,089	131	1,364	796	599	5,721
639	3539	Percent	15.4	5.2	5.2	20.3	2.4	25.4	14.9	11.2	
640	3540	Trips	344	247	868	104	43	685	405	274	3,053
640	3540	Percent	11.6	8.3	29.2	3.5	1.5	23.1	13.6	9.2	
641	3541	Trips	1,051	1,714	291	723	309	1,572	1,188	916	8,356
641	3541	Percent	13.5	22.1	3.7	9.3	4.0	20.3	15.3	11.8	
642	3542	Trips	1,849	1,404	115	1,263	457	2,697	1,962	1,518	12,299
642	3542	Percent	16.4	12.5	1.0	11.2	4.1	23.9	17.4	13.5	
643	3543	Trips	1,747	551	-	965	479	2,595	1,554	1,715	10,383
643	3543	Percent	18.2	5.7	-	10.1	5.0	27.0	16.2	17.9	
644	3544	Trips	2,022	-	-	-	2,250	4,141	2,585	2,646	15,224
644	3544	Percent	14.8	-	-	-	16.5	30.4	19.0	19.4	
645	3545	Trips	1,268	-	-	-	907	1,498	1,720	1,351	7,018
645	3545	Percent	18.8	-	-	-	13.5	22.2	25.5	20.0	
646	3546	Trips	986	-	156	520	250	1,081	1,094	1,181	5,470
646	3546	Percent	18.7	-	3.0	9.9	4.7	20.5	20.8	22.4	
647	3547	Trips	350	103	114	165	66	354	359	408	1,979
647	3547	Percent	18.2	5.4	5.9	8.6	3.5	18.5	18.7	21.2	
648	3548	Trips	1,027	434	254	401	48	903	1,001	514	4,747
648	3548	Percent	22.4	9.5	5.5	8.8	1.0	19.7	21.9	11.2	
649	3549	Trips	754	192	184	230	41	612	743	427	3,320
649	3549	Percent	23.7	6.0	5.8	7.2	1.3	19.2	23.3	13.4	
650	3550	Trips	45	80	104	0	14	155	304	133	850
650	3550	Percent	5.4	9.6	12.4	0.0	1.6	18.5	36.5	16.0	

Miami-Dade 2045 Cost Feasible Plan Direction Trip Distribution Summary											
TAZ of Origin		Trips / Percent	Cardinal Directions								Total Trips
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
625	3525	Trips	515	114	-	541	802	1,791	829	1,096	5,972
625	3525	Percent	9.1	2.0	-	9.5	14.1	31.5	14.6	19.3	
626	3526	Trips	66	-	-	-	2,417	3,260	1,417	2,993	11,237
626	3526	Percent	0.7	-	-	-	23.8	32.1	14.0	29.5	
627	3527	Trips	174	-	-	-	2,276	3,212	1,138	1,885	9,055
627	3527	Percent	2.0	-	-	-	26.2	37.0	13.1	21.7	
628	3528	Trips	238	-	23	101	1,053	1,266	390	660	4,028
628	3528	Percent	6.4	-	0.6	2.7	28.2	33.9	10.5	17.7	
629	3529	Trips	1,686	621	373	1,692	1,801	6,032	2,362	2,490	18,425
629	3529	Percent	9.9	3.6	2.2	9.9	10.6	35.4	13.9	14.6	
630	3530	Trips	888	-	326	303	1,717	3,876	1,515	1,553	11,277
630	3530	Percent	8.7	-	3.2	3.0	16.9	38.1	14.9	15.3	
631	3531	Trips	296	-	-	-	1,351	2,360	838	1,324	6,591
631	3531	Percent	4.8	-	-	-	21.9	38.3	13.6	21.5	
632	3532	Trips	343	-	-	-	1,500	2,647	1,390	1,098	7,499
632	3532	Percent	4.9	-	-	-	21.5	37.9	19.9	15.7	
633	3533	Trips	368	-	-	-	1,052	1,986	859	841	5,391
633	3533	Percent	7.2	-	-	-	20.6	38.9	16.8	16.5	
634	3534	Trips	1,404	80	149	773	1,637	2,733	1,332	1,712	10,593
634	3534	Percent	14.3	0.8	1.5	7.9	16.7	27.8	13.6	17.4	
635	3535	Trips	566	-	-	-	1,311	2,266	1,228	1,254	7,246
635	3535	Percent	8.5	-	-	-	19.8	34.2	18.5	18.9	
636	3536	Trips	1,066	-	-	607	978	3,045	1,398	1,193	8,805
636	3536	Percent	12.9	-	-	7.3	11.8	36.8	16.9	14.4	
637	3537	Trips	468	44	144	315	198	868	501	309	2,865
637	3537	Percent	16.5	1.6	5.1	11.1	6.9	30.5	17.6	10.9	
638	3538	Trips	127	33	78	94	79	401	285	185	1,342
638	3538	Percent	9.9	2.6	6.1	7.3	6.2	31.3	22.2	14.5	
639	3539	Trips	944	303	253	1,068	176	2,395	1,085	905	7,569
639	3539	Percent	13.2	4.3	3.6	15.0	2.5	33.6	15.2	12.7	
640	3540	Trips	119	74	216	10	30	177	136	147	1,166
640	3540	Percent	13.1	8.2	23.7	1.1	3.4	19.4	14.9	16.2	
641	3541	Trips	1,145	1,056	206	569	242	2,378	1,724	1,142	9,066
641	3541	Percent	13.5	12.5	2.4	6.7	2.9	28.1	20.4	13.5	
642	3542	Trips	1,701	1,196	113	964	433	3,470	2,140	1,631	12,324
642	3542	Percent	14.6	10.3	1.0	8.3	3.7	29.8	18.4	14.0	
643	3543	Trips	1,884	580	-	1,133	631	3,768	2,190	2,157	13,183
643	3543	Percent	15.3	4.7	-	9.2	5.1	30.5	17.7	17.5	
644	3544	Trips	1,948	-	-	-	2,227	5,534	3,264	3,082	17,780
644	3544	Percent	12.1	-	-	-	13.9	34.5	20.3	19.2	
645	3545	Trips	1,314	-	-	-	844	1,661	2,170	1,703	8,075
645	3545	Percent	17.1	-	-	-	11.0	21.6	28.2	22.1	
646	3546	Trips	1,025	-	125	496	263	1,741	1,656	1,299	6,976
646	3546	Percent	15.5	-	1.9	7.5	4.0	26.4	25.1	19.7	
647	3547	Trips	296	122	96	109	79	582	661	405	2,490
647	3547	Percent	12.6	5.2	4.1	4.6	3.4	24.8	28.1	17.3	
648	3548	Trips	943	278	128	313	73	1,525	1,351	576	5,397
648	3548	Percent	18.2	5.4	2.5	6.0	1.4	29.4	26.0	11.1	
649	3549	Trips	643	120	121	216	43	873	952	508	3,661
649	3549	Percent	18.5	3.4	3.5	6.2	1.3	25.1	27.4	14.6	
650	3550	Trips	60	71	65	8	14	279	312	136	969
650	3550	Percent	6.4	7.5	6.9	0.9	1.5	29.5	33.0	14.4	

## **Appendix H**

### Volume Development Worksheets

# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: SR A1A/Collins Avenue and 41st Street  
COUNT DATE: February 28, 2024  
AM PEAK HOUR FACTOR: 0.94  
PM PEAK HOUR FACTOR: 0.93

"AM EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM Raw Turning Movements		52	7	0		0	6	4		252	315	4		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

AM EXISTING CONDITIONS		52	7	0		0	6	4		252	315	4		0	0	0
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"PM EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM Raw Turning Movements		69	21	0		0	15	13		135	868	20		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

PM EXISTING CONDITIONS		69	21	0		0	15	13		135	868	20		0	0	0
------------------------	--	----	----	---	--	---	----	----	--	-----	-----	----	--	---	---	---

"AM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
AM BACKGROUND TRAFFIC GROWTH		2	0	0		0	0	0		11	13	0		0	0	0

AM NON-PROJECT TRAFFIC		54	7	0		0	6	4		263	328	4		0	0	0
------------------------	--	----	---	---	--	---	---	---	--	-----	-----	---	--	---	---	---

"PM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
PM BACKGROUND TRAFFIC GROWTH		3	1	0		0	1	1		6	37	1		0	0	0

PM NON-PROJECT TRAFFIC		72	22	0		0	16	14		141	905	21		0	0	0
------------------------	--	----	----	---	--	---	----	----	--	-----	-----	----	--	---	---	---

"AM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By	Entering																
Distribution	Exiting																
Valet	Entering											100.0%					
Distribution	Exiting																
Residential Valet	Entering																
Distribution	Exiting																
Net New	Entering																
Distribution	Exiting											41.0%					

"PM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By	Entering											-100.0%					
Distribution	Exiting											100.0%					
Valet	Entering											100.0%					
Distribution	Exiting																
Residential Valet	Entering																
Distribution	Exiting																
Net New	Entering																
Distribution	Exiting											41.0%					

"AM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
AM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By																
	Valet											6					
	Residential Valet																
	Net New											11					
AM TOTAL PROJECT TRAFFIC			0	0	0		0	0	0		0	17	0		0	0	0

AM TOTAL TRAFFIC		54	7	0		0	6	4		263	345	4		0	0	0
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"PM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
PM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By											-9					
	Valet											48					
	Residential Valet																
	Net New											20					
PM TOTAL PROJECT TRAFFIC			0	0	0		0	0	0		0	59	0		0	0	0

PM TOTAL TRAFFIC		72	22	0		0	16	14		141	964	21		0	0	0
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# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: SR A1A/Collins Avenue and 37st Street  
COUNT DATE: February 28, 2024  
AM PEAK HOUR FACTOR: 0.94  
PM PEAK HOUR FACTOR: 0.96

"AM EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM Raw Turning Movements		17	7	0		0	1	8		2	503	1		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

AM EXISTING CONDITIONS	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		17	7	0		0	1	8		2	503	1		0	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		17	1	0		0	5	5		16	877	3		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

PM EXISTING CONDITIONS	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		17	1	0		0	5	5		16	877	3		0	0	0

"AM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
AM BACKGROUND TRAFFIC GROWTH		1	0	0		0	0	0		0	21	0		0	0	0

AM NON-PROJECT TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		18	7	0		0	1	8		2	524	1		0	0	0

"PM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
PM BACKGROUND TRAFFIC GROWTH		1	0	0		0	0	0		1	37	0		0	0	0

PM NON-PROJECT TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		18	1	0		0	5	5		17	914	3		0	0	0

"AM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By Distribution	Entering																
	Exiting																
Valet Distribution	Entering											100.0%					
	Exiting																
Residential Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering																
	Exiting										31.0%	41.0%					

"PM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By Distribution	Entering											-100.0%					
	Exiting											100.0%					
Valet Distribution	Entering											100.0%					
	Exiting																
Residential Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering																
	Exiting										57.0%	41.0%					

"AM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
AM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By																
	Valet											6					
	Residential Valet																
	Net New										9	11					
AM TOTAL PROJECT TRAFFIC			0	0	0		0	0	0		9	17	0		0	0	0

AM TOTAL TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		18	7	0		0	1	8		11	541	1		0	0	0

"PM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
PM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By											-9					
	Valet											48					
	Residential Valet																
	Net New										28	20					
PM TOTAL PROJECT TRAFFIC			0	0	0		0	0	0		28	59	0		0	0	0

PM TOTAL TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		18	1	0		0	5	5		45	973	3		0	0	0

# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: SR A1A/Collins Avenue and 36st Street  
COUNT DATE: February 28, 2024  
AM PEAK HOUR FACTOR: 0.91  
PM PEAK HOUR FACTOR: 0.98

"AM EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM Raw Turning Movements		14	2	0		0	3	5		4	490	4		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

AM EXISTING CONDITIONS	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		14	2	0		0	3	5		4	490	4		0	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		10	0	0		0	6	32		9	854	7		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

PM EXISTING CONDITIONS	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		10	0	0		0	6	32		9	854	7		0	0	0

"AM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
AM BACKGROUND TRAFFIC GROWTH		1	0	0		0	0	0		0	21	0		0	0	0

AM NON-PROJECT TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		15	2	0		0	3	5		4	511	4		0	0	0

"PM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
PM BACKGROUND TRAFFIC GROWTH		0	0	0		0	0	1		0	36	0		0	0	0

PM NON-PROJECT TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		10	0	0		0	6	33		9	890	7		0	0	0

"AM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By Distribution	Entering																
	Exiting																
Valet Distribution	Entering																
	Exiting		100.0%														
Residential Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering		30.0%	11.0%								44.0%	15.0%				
	Exiting							28.0%	20.0%								

"PM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By Distribution	Entering																
	Exiting																
Valet Distribution	Entering																
	Exiting		100.0%														
Residential Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering		39.0%	2.0%								57.0%	2.0%				
	Exiting							2.0%	2.0%								

"AM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
AM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By																
	Valet		5														
	Residential Valet																
	Net New		6	3				8	6			10	3				
AM TOTAL PROJECT TRAFFIC			11	3	0		0	8	6		0	10	3		0	0	0

AM TOTAL TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		26	5	0		0	11	11		4	521	7		0	0	0

"PM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
PM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By																
	Valet		26														
	Residential Valet																
	Net New		37	2				1	1			53	2				
PM TOTAL PROJECT TRAFFIC			63	2	0		0	1	1		0	53	2		0	0	0

PM TOTAL TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		73	2	0		0	7	34		9	943	9		0	0	0

# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: Indian Creek Drive and 36th Street  
COUNT DATE: February 28, 2024  
AM PEAK HOUR FACTOR: 0.99  
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		6	0	0		0	0	0		12	787	0		
Peak Season Correction Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
AM EXISTING CONDITIONS			0	0	0		6	0	0		0	0	0		12	787	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		28	0	0		0	0	0		13	828	0		
Peak Season Correction Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PM EXISTING CONDITIONS			0	0	0		28	0	0		0	0	0		13	828	0		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC			0	0	0		0	0	0		0	0	0		0	0	0		
Years To Buildout		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
Yearly Growth Rate		1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%		
AM BACKGROUND TRAFFIC GROWTH			0	0	0		0	0	0		0	0	0		1	34	0		
AM NON-PROJECT TRAFFIC			0	0	0		6	0	0		0	0	0		13	821	0		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC			0	0	0		0	0	0		0	0	0		0	0	0		
Years To Buildout		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
Yearly Growth Rate		1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%		
PM BACKGROUND TRAFFIC GROWTH			0	0	0		1	0	0		0	0	0		1	35	0		
PM NON-PROJECT TRAFFIC			0	0	0		29	0	0		0	0	0		14	863	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															100.0%			
Residential Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering																41.0%		
	Exiting							28.0%										31.0%	
"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																100.0%		
Residential Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering																41.0%		
	Exiting							2.0%										57.0%	
"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																5		
	Residential Valet																		
	Net New							8									9	9	
AM TOTAL PROJECT TRAFFIC			0	0	0		8	0	0		0	0	0		14	9	0		
AM TOTAL TRAFFIC			0	0	0		14	0	0		0	0	0		27	830	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																26		
	Residential Valet																		
	Net New							1									39	28	
PM TOTAL PROJECT TRAFFIC			0	0	0		1	0	0		0	0	0		65	28	0		
PM TOTAL TRAFFIC			0	0	0		30	0	0		0	0	0		79	891	0		



# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: 36th Street and Project Driveway  
COUNT DATE: February 28, 2024  
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		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

AM EXISTING CONDITIONS	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		0	0	0		0	0	0		0	0	0		0	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		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

PM EXISTING CONDITIONS	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		0	0	0		0	0	0		0	0	0		0	0	0

"AM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
AM BACKGROUND TRAFFIC GROWTH		0	0	0		0	0	0		0	0	0		0	0	0

AM NON-PROJECT TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		0	0	0		0	0	0		0	0	0		0	0	0

"PM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
PM BACKGROUND TRAFFIC GROWTH		0	0	0		0	0	0		0	0	0		0	0	0

PM NON-PROJECT TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		0	0	0		0	0	0		0	0	0		0	0	0

"AM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By Distribution	Entering																
	Exiting																
Valet Distribution	Entering																
	Exiting																
Residential Valet Distribution	Entering		100.0%														
	Exiting																100.0%
Net New Distribution	Entering																
	Exiting																

"PM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By Distribution	Entering																
	Exiting																
Valet Distribution	Entering																
	Exiting																
Residential Valet Distribution	Entering		100.0%														
	Exiting																100.0%
Net New Distribution	Entering																
	Exiting																

"AM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
AM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By																
	Valet																
	Residential Valet		5														13
	Net New																
AM TOTAL PROJECT TRAFFIC			5	0	0		0	0	0		0	0	0		0	0	13

AM TOTAL TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		5	0	0		0	0	0		0	0	0		0	0	13

"PM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
PM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By																
	Valet																
	Residential Valet		3														2
	Net New																
PM TOTAL PROJECT TRAFFIC			3	0	0		0	0	0		0	0	0		0	0	2

PM TOTAL TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		3	0	0		0	0	0		0	0	0		0	0	2

# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: 36th Street and Residential Porte Cochere  
COUNT DATE: February 28, 2024  
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	6	0		0	8	0		0	0	0		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

AM EXISTING CONDITIONS		0	6	0		0	8	0		0	0	0		0	0	0
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"PM EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM Raw Turning Movements		0	7	0		0	38	0		0	0	0		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

PM EXISTING CONDITIONS		0	7	0		0	38	0		0	0	0		0	0	0
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"AM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
AM BACKGROUND TRAFFIC GROWTH		0	0	0		0	0	0		0	0	0		0	0	0

AM NON-PROJECT TRAFFIC		0	6	0		0	8	0		0	0	0		0	0	0
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"PM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
PM BACKGROUND TRAFFIC GROWTH		0	0	0		0	2	0		0	0	0		0	0	0

PM NON-PROJECT TRAFFIC		0	7	0		0	40	0		0	0	0		0	0	0
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"AM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By Distribution	Entering																
	Exiting																
Valet Distribution	Entering																
	Exiting																
Residential Valet Distribution	Entering														100.0%		
	Exiting								100.0%								
Net New Distribution	Entering		26.0%														
	Exiting																48.0%

"PM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By Distribution	Entering																
	Exiting																
Valet Distribution	Entering																
	Exiting																
Residential Valet Distribution	Entering														100.0%		
	Exiting								100.0%								
Net New Distribution	Entering		4.0%														
	Exiting																4.0%

"AM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
AM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By																
	Valet																
	Residential Valet								13						5		
	Net New		6														14
AM TOTAL PROJECT TRAFFIC			6	0	0		0	0	13		0	0	0		5	0	14

AM TOTAL TRAFFIC		6	6	0		0	8	13		0	0	0		5	0	14
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"PM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
PM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By																
	Valet																
	Residential Valet								2						3		
	Net New		4														2
PM TOTAL PROJECT TRAFFIC			4	0	0		0	0	2		0	0	0		3	0	2

PM TOTAL TRAFFIC		4	7	0		0	40	2		0	0	0		3	0	2
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# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: Collins Avenue and Hotel/Retail Porte Cochere  
COUNT DATE: February 28, 2024  
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	509	0		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

AM EXISTING CONDITIONS	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		0	0	0		0	0	0		0	509	0		0	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	896	0		0	0	0
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

PM EXISTING CONDITIONS	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		0	0	0		0	0	0		0	896	0		0	0	0

"AM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
AM BACKGROUND TRAFFIC GROWTH		0	0	0		0	0	0		0	22	0		0	0	0

AM NON-PROJECT TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		0	0	0		0	0	0		0	531	0		0	0	0

"PM BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
TOTAL "VESTED" TRAFFIC		0	0	0		0	0	0		0	0	0		0	0	0

Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
PM BACKGROUND TRAFFIC GROWTH		0	0	0		0	0	0		0	38	0		0	0	0

PM NON-PROJECT TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		0	0	0		0	0	0		0	934	0		0	0	0

"AM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By Distribution	Entering																
	Exiting																
Valet Distribution	Entering								100.0%								
	Exiting											100.0%					
Residential Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering											74.0%					
	Exiting								52.0%			20.0%					

"PM PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Pass-By Distribution	Entering											-100.0%	100.0%				
	Exiting								100.0%								
Valet Distribution	Entering								100.0%								
	Exiting											100.0%					
Residential Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering											96.0%					
	Exiting								96.0%			2.0%					

"AM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
AM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By																
	Valet								6				5				
	Residential Valet																
	Net New								15			6	17				
AM TOTAL PROJECT TRAFFIC			0	0	0		0	0	21		0	6	22		0	0	0

AM TOTAL TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		0	0	0		0	0	21		0	537	22		0	0	0

"PM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
PM TRAFFIC DIVERSIONS																	
Project Trips	Pass - By								8			-17	17				
	Valet								48				26				
	Residential Valet																
	Net New								48			1	91				
PM TOTAL PROJECT TRAFFIC			0	0	0		0	0	104		0	-16	134		0	0	0

PM TOTAL TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
		0	0	0		0	0	104		0	918	134		0	0	0

## **Appendix I**

### Intersection Capacity Analysis Worksheets








Existing A.M.

# Timings

## 1: Collins Avenue & 41st Street

A.M. Peak Hour

Existing Conditions

				
Lane Group	EBL	EBT	WBT	NBT
Lane Configurations				
Traffic Volume (vph)	52	7	6	315
Future Volume (vph)	52	7	6	315
Turn Type	Perm	NA	NA	NA
Protected Phases		8	4	6
Permitted Phases	8			
Detector Phase	8	8	4	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	7.0
Minimum Split (s)	27.0	27.0	27.0	22.5
Total Split (s)	55.0	55.0	55.0	95.0
Total Split (%)	36.7%	36.7%	36.7%	63.3%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	C-Max

### Intersection Summary

Cycle Length: 150

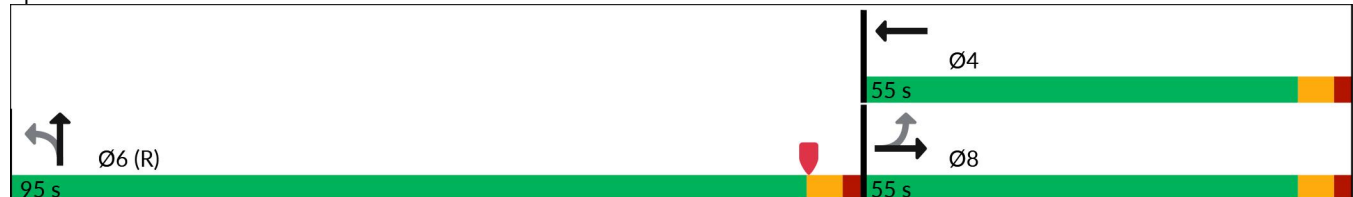
Actuated Cycle Length: 150

Offset: 47 (31%), Referenced to phase 6:NBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

### Splits and Phases: 1: Collins Avenue & 41st Street



















# HCM 7th Signalized Intersection Summary

## 1: Collins Avenue & 41st Street

A.M. Peak Hour

Existing Conditions

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Traffic Volume (veh/h)	52	7	0	0	6	4	252	315	4	0	0	0
Future Volume (veh/h)	52	7	0	0	6	4	252	315	4	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	0.92		1.00	1.00		1.00	1.00		0.89			
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	1.00	0.90	1.00	0.90			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1856	1856	0	0	1856	1856	1856	1856	1856			
Adj Flow Rate, veh/h	55	7	0	0	6	0	268	335	3			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	3	3	0	0	3	3	3	3	3			
Cap, veh/h	184	21	0	0	202	0	944	1969	18			
Arrive On Green	0.12	0.12	0.00	0.00	0.12	0.00	0.79	0.79	0.79			
Sat Flow, veh/h	1146	172	0	0	1670	0	1590	3319	30			
Grp Volume(v), veh/h	62	0	0	0	6	0	268	170	168			
Grp Sat Flow(s),veh/h/ln	1318	0	0	0	1670	0	1590	1689	1660			
Q Serve(g_s), s	6.1	0.0	0.0	0.0	0.5	0.0	6.9	3.7	3.7			
Cycle Q Clear(g_c), s	6.6	0.0	0.0	0.0	0.5	0.0	6.9	3.7	3.7			
Prop In Lane	0.89		0.00	0.00		0.00	1.00		0.02			
Lane Grp Cap(c), veh/h	205	0	0	0	202	0	944	1002	985			
V/C Ratio(X)	0.30	0.00	0.00	0.00	0.03	0.00	0.28	0.17	0.17			
Avail Cap(c_a), veh/h	477	0	0	0	546	0	944	1002	985			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	60.9	0.0	0.0	0.0	58.2	0.0	7.2	6.8	6.8			
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	0.0	0.8	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			
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.0	0.2	0.0	2.3	1.4	1.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.5	0.0	0.0	0.0	58.2	0.0	7.9	7.2	7.2			
LnGrp LOS	E				E		A	A	A			
Approach Vol, veh/h		62			6			606				
Approach Delay, s/veh		61.5			58.2			7.5				
Approach LOS		E			E			A				
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				24.1		95.0		24.1				
Change Period (Y+Rc), s				6.0		6.0		6.0				
Max Green Setting (Gmax), s				49.0		89.0		49.0				
Max Q Clear Time (g_c+I1), s				2.5		8.9		8.6				
Green Ext Time (p_c), s				0.0		1.3		0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			12.9									
HCM 7th LOS			B									

HCM 7th TWSC  
2: Collins Avenue & 37th Street

A.M. Peak Hour  
Existing Conditions

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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Lane Configurations

Traffic Vol, veh/h	17	7	0	0	1	8	2	503	1	0	0	0
Future Vol, veh/h	17	7	0	0	1	8	2	503	1	0	0	0
Conflicting Peds, #/hr	6	0	9	9	0	6	76	0	52	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	18	7	0	0	1	9	2	535	1	0	0	0

Major/Minor	Minor2	Minor1	Major1
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Conflicting Flow All	301	668	-	-	668	326	76	0	0
Stage 1	76	76	-	-	592	-	-	-	-
Stage 2	225	592	-	-	76	-	-	-	-
Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-
Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-
Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-
Pot Cap-1 Maneuver	766	583	0	0	584	703	1061	-	-
Stage 1	-	-	0	0	511	-	-	-	-
Stage 2	698	510	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	698	513	-	-	513	668	985	-	-
Mov Cap-2 Maneuver	698	513	-	-	513	-	-	-	-
Stage 1	-	-	-	-	484	-	-	-	-
Stage 2	686	484	-	-	-	-	-	-	-

Approach	EB	WB	NB
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HCM Control Delay, s/v10.94		10.65	0.05
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
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Capacity (veh/h)	21	-	-	632 646
HCM Lane V/C Ratio	0.002	-	-	0.04 0.015
HCM Control Delay (s/veh)	8.7	0	-	10.9 10.7
HCM Lane LOS	A	A	-	B B
HCM 95th %tile Q(veh)	0	-	-	0.1 0



HCM 7th TWSC  
3: Collins Avenue & 36th Street

A.M. Peak Hour  
Existing Conditions

Intersection

Int Delay, s/veh 0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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Lane Configurations

Traffic Vol, veh/h	14	2	0	0	3	5	4	490	4	0	0	0
Future Vol, veh/h	14	2	0	0	3	5	4	490	4	0	0	0
Conflicting Peds, #/hr	9	0	16	16	0	9	70	0	54	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	15	2	0	0	3	5	4	538	4	0	0	0

Major/Minor	Minor2	Minor1	Major1
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Conflicting Flow All	305	676	-	-	673	334	70	0	0
Stage 1	70	70	-	-	603	-	-	-	-
Stage 2	235	606	-	-	70	-	-	-	-
Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-
Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-
Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-
Pot Cap-1 Maneuver	763	580	0	0	581	698	1068	-	-
Stage 1	-	-	0	0	504	-	-	-	-
Stage 2	688	503	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	699	511	-	-	512	662	997	-	-
Mov Cap-2 Maneuver	699	511	-	-	512	-	-	-	-
Stage 1	-	-	-	-	476	-	-	-	-
Stage 2	674	475	-	-	-	-	-	-	-

Approach	EB	WB	NB
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HCM Control Delay, s/v10.54		11.13	0.11
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
-----------------------	-----	-----	-----	------------

Capacity (veh/h)	42	-	-	668 597
HCM Lane V/C Ratio	0.004	-	-	0.026 0.015
HCM Control Delay (s/veh)	8.6	0	-	10.5 11.1
HCM Lane LOS	A	A	-	B B
HCM 95th %tile Q(veh)	0	-	-	0.1 0

HCM 7th TWSC  
4: 36th Street & Indian Creek Drive

A.M. Peak Hour  
Existing Conditions

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰					↱↱
Traffic Vol, veh/h	6	0	0	0	12	787
Future Vol, veh/h	6	0	0	0	12	787
Conflicting Peds, #/hr	0	0	0	0	36	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	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	6	0	0	0	12	795
Major/Minor	Minor1		Major2			
Conflicting Flow All	458	-			36	0
Stage 1	36	-			-	-
Stage 2	422	-			-	-
Critical Hdwy	4.4	-			4.16	-
Critical Hdwy Stg 1	-	-			-	-
Critical Hdwy Stg 2	5.86	-			-	-
Follow-up Hdwy	3.8	-			2.23	-
Pot Cap-1 Maneuver	683	0			1566	-
Stage 1	-	0			-	-
Stage 2	591	0			-	-
Platoon blocked, %						-
Mov Cap-1 Maneuver	653	-			1512	-
Mov Cap-2 Maneuver	653	-			-	-
Stage 1	-	-			-	-
Stage 2	585	-			-	-
Approach	WB		SB			
HCM Control Delay, s/v	10.57		0.18			
HCM LOS	B					
Minor Lane/Major Mvmt	WBLn1	SBL	SBT			
Capacity (veh/h)	653	54	-			
HCM Lane V/C Ratio	0.009	0.008	-			
HCM Control Delay (s/veh)	10.6	7.4	0.1			
HCM Lane LOS	B	A	A			
HCM 95th %tile Q(veh)	0	0	-			








Future Background A.M.

# Timings

## 1: Collins Avenue & 41st Street

A.M. Peak Hour

Future Background Conditions

				
Lane Group	EBL	EBT	WBT	NBT
Lane Configurations				
Traffic Volume (vph)	54	7	6	328
Future Volume (vph)	54	7	6	328
Turn Type	Perm	NA	NA	NA
Protected Phases		8	4	6
Permitted Phases	8			
Detector Phase	8	8	4	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	7.0
Minimum Split (s)	27.0	27.0	27.0	22.5
Total Split (s)	55.0	55.0	55.0	95.0
Total Split (%)	36.7%	36.7%	36.7%	63.3%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	C-Max

### Intersection Summary

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 47 (31%), Referenced to phase 6:NBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

### Splits and Phases: 1: Collins Avenue & 41st Street



















# HCM 7th Signalized Intersection Summary

## 1: Collins Avenue & 41st Street




A.M. Peak Hour

Future Background Conditions

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Traffic Volume (veh/h)	54	7	0	0	6	4	263	328	4	0	0	0
Future Volume (veh/h)	54	7	0	0	6	4	263	328	4	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	0.92		1.00	1.00		1.00	1.00		0.89			
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	1.00	0.90	1.00	0.90			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1856	1856	0	0	1856	1856	1856	1856	1856			
Adj Flow Rate, veh/h	57	7	0	0	6	0	280	349	3			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	3	3	0	0	3	3	3	3	3			
Cap, veh/h	185	20	0	0	203	0	944	1970	17			
Arrive On Green	0.12	0.12	0.00	0.00	0.12	0.00	0.79	0.79	0.79			
Sat Flow, veh/h	1149	166	0	0	1670	0	1590	3321	29			
Grp Volume(v), veh/h	64	0	0	0	6	0	280	177	175			
Grp Sat Flow(s),veh/h/ln	1316	0	0	0	1670	0	1590	1689	1661			
Q Serve(g_s), s	6.4	0.0	0.0	0.0	0.5	0.0	7.3	3.9	3.9			
Cycle Q Clear(g_c), s	6.8	0.0	0.0	0.0	0.5	0.0	7.3	3.9	3.9			
Prop In Lane	0.89		0.00	0.00		0.00	1.00		0.02			
Lane Grp Cap(c), veh/h	205	0	0	0	203	0	944	1002	985			
V/C Ratio(X)	0.31	0.00	0.00	0.00	0.03	0.00	0.30	0.18	0.18			
Avail Cap(c_a), veh/h	477	0	0	0	546	0	944	1002	985			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	61.0	0.0	0.0	0.0	58.1	0.0	7.2	6.8	6.8			
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	0.0	0.8	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			
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	0.0	0.2	0.0	2.5	1.5	1.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.6	0.0	0.0	0.0	58.2	0.0	8.0	7.2	7.2			
LnGrp LOS	E				E		A	A	A			
Approach Vol, veh/h		64			6			632				
Approach Delay, s/veh		61.6			58.2			7.6				
Approach LOS		E			E			A				
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				24.2		95.0		24.2				
Change Period (Y+Rc), s				6.0		6.0		6.0				
Max Green Setting (Gmax), s				49.0		89.0		49.0				
Max Q Clear Time (g_c+I1), s				2.5		9.3		8.8				
Green Ext Time (p_c), s				0.0		1.4		0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			12.9									
HCM 7th LOS			B									

HCM 7th TWSC  
2: Collins Avenue & 37th Street

A.M. Peak Hour  
Future Background Conditions

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	7	0	0	1	8	2	524	1	0	0	0
Future Vol, veh/h	18	7	0	0	1	8	2	524	1	0	0	0
Conflicting Peds, #/hr	6	0	9	9	0	6	76	0	52	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	19	7	0	0	1	9	2	557	1	0	0	0

Major/Minor	Minor2		Minor1		Major1							
Conflicting Flow All	310	691	-	-	690	337	76	0	0			
Stage 1	76	76	-	-	614	-	-	-	-			
Stage 2	234	615	-	-	76	-	-	-	-			
Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-			
Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-			
Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-			
Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-			
Pot Cap-1 Maneuver	761	574	0	0	574	696	1061	-	-			
Stage 1	-	-	0	0	499	-	-	-	-			
Stage 2	689	498	0	0	-	-	-	-	-			
Platoon blocked, %								-	-			
Mov Cap-1 Maneuver	693	505	-	-	505	662	985	-	-			
Mov Cap-2 Maneuver	693	505	-	-	505	-	-	-	-			
Stage 1	-	-	-	-	473	-	-	-	-			
Stage 2	677	472	-	-	-	-	-	-	-			

Approach	EB	WB	NB
HCM Control Delay, s/v10.99		10.71	0.05
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	
Capacity (veh/h)	20	-	-	628	640
HCM Lane V/C Ratio	0.002	-	-	0.042	0.015
HCM Control Delay (s/veh)	8.7	0	-	11	10.7
HCM Lane LOS	A	A	-	B	B
HCM 95th %tile Q(veh)	0	-	-	0.1	0

HCM 7th TWSC  
3: Collins Avenue & 36th Street

A.M. Peak Hour  
Future Background Conditions

Intersection

Int Delay, s/veh 0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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Lane Configurations

Traffic Vol, veh/h	15	2	0	0	3	5	4	511	4	0	0	0
Future Vol, veh/h	15	2	0	0	3	5	4	511	4	0	0	0
Conflicting Peds, #/hr	9	0	16	16	0	9	70	0	54	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	16	2	0	0	3	5	4	562	4	0	0	0

Major/Minor	Minor2	Minor1	Major1
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Conflicting Flow All	314	699	-	-	697	346	70	0	0
Stage 1	70	70	-	-	627	-	-	-	-
Stage 2	244	629	-	-	70	-	-	-	-
Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-
Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-
Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-
Pot Cap-1 Maneuver	758	570	0	0	571	691	1068	-	-
Stage 1	-	-	0	0	492	-	-	-	-
Stage 2	680	491	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	694	502	-	-	503	656	997	-	-
Mov Cap-2 Maneuver	694	502	-	-	503	-	-	-	-
Stage 1	-	-	-	-	464	-	-	-	-
Stage 2	666	463	-	-	-	-	-	-	-

Approach	EB	WB	NB
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HCM Control Delay, s/v10.58		11.21	0.11
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
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Capacity (veh/h)	41	-	-	664 589
HCM Lane V/C Ratio	0.004	-	-	0.028 0.015
HCM Control Delay (s/veh)	8.6	0	-	10.6 11.2
HCM Lane LOS	A	A	-	B B
HCM 95th %tile Q(veh)	0	-	-	0.1 0

HCM 7th TWSC  
4: 36th Street & Indian Creek Drive

A.M. Peak Hour  
Future Background Conditions

Intersection

Int Delay, s/veh 0.3

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations  

Traffic Vol, veh/h 6 0 0 0 13 821

Future Vol, veh/h 6 0 0 0 13 821

Conflicting Peds, #/hr 0 0 0 0 36 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 99 99 99 99 99 99

Heavy Vehicles, % 3 3 3 3 3 3

Mvmt Flow 6 0 0 0 13 829

Major/Minor Minor1 Major2

Conflicting Flow All 477 - 36 0

Stage 1 36 - - -

Stage 2 441 - - -

Critical Hdwy 4.4 - 4.16 -

Critical Hdwy Stg 1 - - - -

Critical Hdwy Stg 2 5.86 - - -

Follow-up Hdwy 3.8 - 2.23 -

Pot Cap-1 Maneuver 673 0 1566 -

Stage 1 - 0 - -

Stage 2 578 0 - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 643 - 1512 -

Mov Cap-2 Maneuver 643 - - -

Stage 1 - - - -

Stage 2 572 - - -

Approach WB SB

HCM Control Delay, s/v10.65 0.2

HCM LOS B

Minor Lane/Major Mvmt WBLn1 SBL SBT

Capacity (veh/h) 643 56 -

HCM Lane V/C Ratio 0.009 0.009 -

HCM Control Delay (s/veh) 10.7 7.4 0.1

HCM Lane LOS B A A

HCM 95th %tile Q(veh) 0 0 -










Future Total A.M.

# Timings

## 1: Collins Avenue & 41st Street

A.M. Peak Hour

Future Total Conditions

				
Lane Group	EBL	EBT	WBT	NBT
Lane Configurations				
Traffic Volume (vph)	54	7	6	345
Future Volume (vph)	54	7	6	345
Turn Type	Perm	NA	NA	NA
Protected Phases		8	4	6
Permitted Phases	8			
Detector Phase	8	8	4	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	7.0
Minimum Split (s)	27.0	27.0	27.0	22.5
Total Split (s)	55.0	55.0	55.0	95.0
Total Split (%)	36.7%	36.7%	36.7%	63.3%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	C-Max

### Intersection Summary

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 47 (31%), Referenced to phase 6:NBTL, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

















### Splits and Phases: 1: Collins Avenue & 41st Street



# HCM 7th Signalized Intersection Summary

## 1: Collins Avenue & 41st Street

A.M. Peak Hour  
Future Total Conditions

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Traffic Volume (veh/h)	54	7	0	0	6	4	263	345	4	0	0	0
Future Volume (veh/h)	54	7	0	0	6	4	263	345	4	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	0.92		1.00	1.00		1.00	1.00		0.89			
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	1.00	0.90	1.00	0.90			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1856	1856	0	0	1856	1856	1856	1856	1856			
Adj Flow Rate, veh/h	57	7	0	0	6	0	280	367	3			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	3	3	0	0	3	3	3	3	3			
Cap, veh/h	185	20	0	0	203	0	944	1971	16			
Arrive On Green	0.12	0.12	0.00	0.00	0.12	0.00	0.79	0.79	0.79			
Sat Flow, veh/h	1149	166	0	0	1670	0	1590	3323	27			
Grp Volume(v), veh/h	64	0	0	0	6	0	280	186	184			
Grp Sat Flow(s),veh/h/ln	1316	0	0	0	1670	0	1590	1689	1661			
Q Serve(g_s), s	6.4	0.0	0.0	0.0	0.5	0.0	7.3	4.1	4.1			
Cycle Q Clear(g_c), s	6.8	0.0	0.0	0.0	0.5	0.0	7.3	4.1	4.1			
Prop In Lane	0.89		0.00	0.00		0.00	1.00		0.02			
Lane Grp Cap(c), veh/h	205	0	0	0	203	0	944	1002	986			
V/C Ratio(X)	0.31	0.00	0.00	0.00	0.03	0.00	0.30	0.19	0.19			
Avail Cap(c_a), veh/h	477	0	0	0	546	0	944	1002	986			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	61.0	0.0	0.0	0.0	58.1	0.0	7.2	6.9	6.9			
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	0.0	0.8	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			
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	0.0	0.2	0.0	2.5	1.6	1.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.6	0.0	0.0	0.0	58.2	0.0	8.0	7.3	7.3			
LnGrp LOS	E				E		A	A	A			
Approach Vol, veh/h		64			6			650				
Approach Delay, s/veh		61.6			58.2			7.6				
Approach LOS		E			E			A				
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				24.2		95.0		24.2				
Change Period (Y+Rc), s				6.0		6.0		6.0				
Max Green Setting (Gmax), s				49.0		89.0		49.0				
Max Q Clear Time (g_c+I1), s				2.5		9.3		8.8				
Green Ext Time (p_c), s				0.0		1.4		0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			12.8									
HCM 7th LOS			B									

HCM 7th TWSC  
2: Collins Avenue & 37th Street

A.M. Peak Hour  
Future Total Conditions

Intersection

Int Delay, s/veh 0.9

Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

Lane Configurations

Traffic Vol, veh/h	18	7	0	0	1	8	11	541	1	0	0	0
Future Vol, veh/h	18	7	0	0	1	8	11	541	1	0	0	0
Conflicting Peds, #/hr	6	0	9	9	0	6	76	0	52	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	19	7	0	0	1	9	12	576	1	0	0	0

Major/Minor Minor2 Minor1 Major1

Conflicting Flow All	336	728	-	-	727	346	76	0	0
Stage 1	76	76	-	-	651	-	-	-	-
Stage 2	260	652	-	-	76	-	-	-	-
Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-
Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-
Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-
Pot Cap-1 Maneuver	746	558	0	0	558	691	1061	-	-
Stage 1	-	-	0	0	479	-	-	-	-
Stage 2	665	479	0	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	673	485	-	-	485	657	985	-	-
Mov Cap-2 Maneuver	673	485	-	-	485	-	-	-	-
Stage 1	-	-	-	-	449	-	-	-	-
Stage 2	646	449	-	-	-	-	-	-	-

Approach EB WB NB

HCM Control Delay, s/v	11.2	10.78	0.28
HCM LOS	B	B	

Minor Lane/Major Mvmt NBL NBT NBR EBLn1WBLn1

Capacity (veh/h)	107	-	-	607	632
HCM Lane V/C Ratio	0.012	-	-	0.044	0.015
HCM Control Delay (s/veh)	8.7	0.1	-	11.2	10.8
HCM Lane LOS	A	A	-	B	B
HCM 95th %tile Q(veh)	0	-	-	0.1	0

HCM 7th TWSC  
3: Collins Avenue & 36th Street

A.M. Peak Hour  
Future Total Conditions

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4+4				
Traffic Vol, veh/h	26	5	0	0	11	11	4	521	7	0	0	0
Future Vol, veh/h	26	5	0	0	11	11	4	521	7	0	0	0
Conflicting Peds, #/hr	9	0	16	16	0	9	70	0	54	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	29	5	0	0	12	12	4	573	8	0	0	0

Major/Minor	Minor2		Minor1		Major1				
Conflicting Flow All	323	713	-	-	709	353	70	0	0
Stage 1	70	70	-	-	639	-	-	-	-
Stage 2	253	643	-	-	70	-	-	-	-
Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-
Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-
Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-
Pot Cap-1 Maneuver	753	564	0	0	566	687	1068	-	-
Stage 1	-	-	0	0	485	-	-	-	-
Stage 2	671	483	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	670	497	-	-	498	652	997	-	-
Mov Cap-2 Maneuver	670	497	-	-	498	-	-	-	-
Stage 1	-	-	-	-	458	-	-	-	-
Stage 2	638	456	-	-	-	-	-	-	-



Approach	EB	WB	NB
HCM Control Delay, s/v	11	11.66	0.11
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	39	-	-	634	565
HCM Lane V/C Ratio	0.004	-	-	0.054	0.043
HCM Control Delay (s/veh)	8.6	0	-	11	11.7
HCM Lane LOS	A	A	-	B	B
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1

HCM 7th TWSC  
4: 36th Street & Indian Creek Drive

A.M. Peak Hour  
Future Total Conditions

Intersection

Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	0	0	0	27	830
Future Vol, veh/h	14	0	0	0	27	830
Conflicting Peds, #/hr	0	0	0	0	36	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	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	14	0	0	0	27	838

Major/Minor	Minor1	Major2			
Conflicting Flow All	510	-		36	0
Stage 1	36	-		-	-
Stage 2	474	-		-	-
Critical Hdwy	4.4	-		4.16	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	5.86	-		-	-
Follow-up Hdwy	3.8	-		2.23	-
Pot Cap-1 Maneuver	657	0		1566	-
Stage 1	-	0		-	-
Stage 2	557	0		-	-
Platoon blocked, %					-
Mov Cap-1 Maneuver	620	-		1512	-
Mov Cap-2 Maneuver	620	-		-	-
Stage 1	-	-		-	-
Stage 2	544	-		-	-

Approach	WB	SB
HCM Control Delay, s/v10.95		0.39
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	620	113	-
HCM Lane V/C Ratio	0.023	0.018	-
HCM Control Delay (s/veh)	10.9	7.4	0.2
HCM Lane LOS	B	A	A
HCM 95th %tile Q(veh)	0.1	0.1	-

HCM 7th TWSC  
5: 36th Street & Project Driveway

A.M. Peak Hour  
Future Total Conditions

Intersection						
Int Delay, s/veh	8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	↑			↑
Traffic Vol, veh/h	5	0	0	0	0	13
Future Vol, veh/h	5	0	0	0	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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, %	3	3	3	3	3	3
Mvmt Flow	5	0	0	0	0	14
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1	0	-	0	-	1
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.13	-	-	-	-	4.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.227	-	-	-	-	3.9
Pot Cap-1 Maneuver	1615	-	-	0	0	922
Stage 1	-	-	-	0	0	-
Stage 2	-	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1615	-	-	-	-	922
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	7.24	0		8.96		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1		
Capacity (veh/h)	1615	-	-	922		
HCM Lane V/C Ratio	0.003	-	-	0.015		
HCM Control Delay (s/veh)	7.2	0	-	9		
HCM Lane LOS	A	A	-	A		
HCM 95th %tile Q(veh)	0	-	-	0		

HCM 7th TWSC  
6: 36th Street & Residential Porte Cochere

A.M. Peak Hour  
Future Total Conditions

Intersection

Int Delay, s/veh 4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	↑			↑
Traffic Vol, veh/h	6	6	8	13	5	14
Future Vol, veh/h	6	6	8	13	5	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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, %	3	3	3	3	3	3
Mvmt Flow	7	7	9	14	5	15

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	23	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.227	-	-
Pot Cap-1 Maneuver	1586	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1586	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	3.64	0	9.02
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	900	-	-	-	911
HCM Lane V/C Ratio	0.004	-	-	-	0.017
HCM Control Delay (s/veh)	7.3	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



HCM 7th TWSC  
7: Collins Avenue & Non-Residential Porte Cochere

A.M. Peak Hour  
Future Total Conditions

Intersection

Int Delay, s/veh 0.4

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations 7 ↑↑↑

Traffic Vol, veh/h 0 21 537 22 0 0

Future Vol, veh/h 0 21 537 22 0 0

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Stop Stop

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, % 3 3 3 3 3 3

Mvmt Flow 0 23 584 24 0 0

Major/Minor Minor1 Major1

Conflicting Flow All - 304 0 0

Stage 1 - - - -

Stage 2 - - - -

Critical Hdwy - 4.9 - -

Critical Hdwy Stg 1 - - - -

Critical Hdwy Stg 2 - - - -

Follow-up Hdwy - 3.9 - -

Pot Cap-1 Maneuver 0 716 - -

Stage 1 0 - - -

Stage 2 0 - - -

Platoon blocked, % - - - -

Mov Cap-1 Maneuver - 716 - -

Mov Cap-2 Maneuver - - - -

Stage 1 - - - -

Stage 2 - - - -

Approach WB NB

HCM Control Delay, s/v10.19 0

HCM LOS B

Minor Lane/Major Mvmt NBT NBRWBLn1

Capacity (veh/h) - - 716

HCM Lane V/C Ratio - - 0.032

HCM Control Delay (s/veh) - - 10.2

HCM Lane LOS - - B

HCM 95th %tile Q(veh) - - 0.1








Existing P.M.

# Timings

## 1: Collins Avenue & 41st Street

P.M. Peak Hour

Existing Conditions

				
Lane Group	EBL	EBT	WBT	NBT
Lane Configurations				
Traffic Volume (vph)	69	21	15	868
Future Volume (vph)	69	21	15	868
Turn Type	Perm	NA	NA	NA
Protected Phases		8	4	6
Permitted Phases	8			
Detector Phase	8	8	4	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	7.0
Minimum Split (s)	27.0	27.0	27.0	22.5
Total Split (s)	76.0	76.0	76.0	104.0
Total Split (%)	42.2%	42.2%	42.2%	57.8%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	C-Max

### Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 19 (11%), Referenced to phase 6:NBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

### Splits and Phases: 1: Collins Avenue & 41st Street




















# HCM 7th Signalized Intersection Summary

## 1: Collins Avenue & 41st Street

P.M. Peak Hour

Existing Conditions

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Traffic Volume (veh/h)	69	21	0	0	15	13	135	868	20	0	0	0
Future Volume (veh/h)	69	21	0	0	15	13	135	868	20	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	0.81		1.00	1.00		1.00	1.00		0.89			
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	1.00	0.90	1.00	0.90			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1856	1856	0	0	1856	1856	1856	1856	1856			
Adj Flow Rate, veh/h	74	23	0	0	16	0	145	933	19			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	3	3	0	0	3	3	3	3	3			
Cap, veh/h	137	38	0	0	194	0	357	2300	47			
Arrive On Green	0.12	0.12	0.00	0.00	0.12	0.00	0.72	0.72	0.72			
Sat Flow, veh/h	876	327	0	0	1670	0	656	4225	86			
Grp Volume(v), veh/h	97	0	0	0	16	0	362	373	363			
Grp Sat Flow(s),veh/h/ln	1203	0	0	0	1670	0	1637	1689	1642			
Q Serve(g_s), s	12.6	0.0	0.0	0.0	1.5	0.0	15.5	15.5	15.5			
Cycle Q Clear(g_c), s	14.2	0.0	0.0	0.0	1.5	0.0	15.5	15.5	15.5			
Prop In Lane	0.76		0.00	0.00		0.00	0.40		0.05			
Lane Grp Cap(c), veh/h	175	0	0	0	194	0	891	919	894			
V/C Ratio(X)	0.55	0.00	0.00	0.00	0.08	0.00	0.41	0.41	0.41			
Avail Cap(c_a), veh/h	513	0	0	0	649	0	891	919	894			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	76.8	0.0	0.0	0.0	71.0	0.0	13.5	13.5	13.5			
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.0	0.1	0.0	1.4	1.3	1.4			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.5	0.0	0.0	0.0	0.7	0.0	5.4	5.6	5.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.8	0.0	0.0	0.0	71.1	0.0	14.8	14.8	14.8			
LnGrp LOS	E				E		B	B	B			
Approach Vol, veh/h		97			16			1097				
Approach Delay, s/veh		78.8			71.1			14.8				
Approach LOS		E			E			B				
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				26.9		104.0		26.9				
Change Period (Y+Rc), s				6.0		6.0		6.0				
Max Green Setting (Gmax), s				70.0		98.0		70.0				
Max Q Clear Time (g_c+I1), s				3.5		17.5		16.2				
Green Ext Time (p_c), s				0.1		2.5		0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh			20.7									
HCM 7th LOS			C									

HCM 7th TWSC  
2: Collins Avenue & 37th Street

P.M. Peak Hour  
Existing Conditions

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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Lane Configurations

Traffic Vol, veh/h	17	1	0	0	5	5	16	877	3	0	0	0
Future Vol, veh/h	17	1	0	0	5	5	16	877	3	0	0	0
Conflicting Peds, #/hr	13	0	19	19	0	13	83	0	88	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	18	1	0	0	5	5	17	914	3	0	0	0

Major/Minor	Minor2	Minor1	Major1
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Conflicting Flow All	497	1121	-	-	1119	559	83	0	0
Stage 1	83	83	-	-	1036	-	-	-	-
Stage 2	414	1038	-	-	83	-	-	-	-
Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-
Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-
Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-
Pot Cap-1 Maneuver	663	411	0	0	411	575	1054	-	-
Stage 1	-	-	0	0	314	-	-	-	-
Stage 2	537	314	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	583	339	-	-	340	527	970	-	-
Mov Cap-2 Maneuver	583	339	-	-	340	-	-	-	-
Stage 1	-	-	-	-	282	-	-	-	-
Stage 2	511	282	-	-	-	-	-	-	-

Approach	EB	WB	NB
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HCM Control Delay, s/v	11.64	13.94	0.32
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
-----------------------	-----	-----	-----	------------

Capacity (veh/h)	96	-	-	561
HCM Lane V/C Ratio	0.017	-	-	0.033
HCM Control Delay (s/veh)	8.8	0.2	-	11.6
HCM Lane LOS	A	A	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0.1

HCM 7th TWSC  
3: Collins Avenue & 36th Street

P.M. Peak Hour  
Existing Conditions

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
----------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h	10	0	0	0	6	32	9	854	7	0	0	0
Future Vol, veh/h	10	0	0	0	6	32	9	854	7	0	0	0
Conflicting Peds, #/hr	8	0	4	4	0	8	81	0	87	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	10	0	0	0	6	33	9	871	7	0	0	0

Major/Minor	Minor2	Minor1	Major1
-------------	--------	--------	--------

Conflicting Flow All	459	1065	-	-	1061	534	81	0	0
Stage 1	81	81	-	-	980	-	-	-	-
Stage 2	378	984	-	-	81	-	-	-	-
Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-
Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-
Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-
Pot Cap-1 Maneuver	682	429	0	0	430	588	1056	-	-
Stage 1	-	-	0	0	335	-	-	-	-
Stage 2	565	333	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	575	359	-	-	360	539	974	-	-
Mov Cap-2 Maneuver	575	359	-	-	360	-	-	-	-
Stage 1	-	-	-	-	303	-	-	-	-
Stage 2	514	302	-	-	-	-	-	-	-

Approach	EB	WB	NB
----------	----	----	----

HCM Control Delay, s/v	11.38	12.81	0.18
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
-----------------------	-----	-----	-----	-------	-------

Capacity (veh/h)	55	-	-	575	500
HCM Lane V/C Ratio	0.009	-	-	0.018	0.078
HCM Control Delay (s/veh)	8.7	0.1	-	11.4	12.8
HCM Lane LOS	A	A	-	B	B
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3

HCM 7th TWSC  
4: 36th Street & Indian Creek Drive

P.M. Peak Hour  
Existing Conditions

Intersection

Int Delay, s/veh 0.6

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations  

Traffic Vol, veh/h 28 0 0 0 13 828

Future Vol, veh/h 28 0 0 0 13 828

Conflicting Peds, #/hr 0 0 0 0 34 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, % 3 3 3 3 3 3

Mvmt Flow 30 0 0 0 14 900

Major/Minor Minor1 Major2

Conflicting Flow All 512 - 34 0

Stage 1 34 - - -

Stage 2 478 - - -

Critical Hdwy 4.4 - 4.16 -

Critical Hdwy Stg 1 - - - -

Critical Hdwy Stg 2 5.86 - - -

Follow-up Hdwy 3.8 - 2.23 -

Pot Cap-1 Maneuver 656 0 1569 -

Stage 1 - 0 - -

Stage 2 554 0 - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 627 - 1518 -

Mov Cap-2 Maneuver 627 - - -

Stage 1 - - - -

Stage 2 547 - - -

Approach WB SB

HCM Control Delay, s/v11.04 0.2

HCM LOS B

Minor Lane/Major Mvmt WBLn1 SBL SBT

Capacity (veh/h) 627 56 -

HCM Lane V/C Ratio 0.049 0.009 -

HCM Control Delay (s/veh) 11 7.4 0.1

HCM Lane LOS B A A

HCM 95th %tile Q(veh) 0.2 0 -

Future Background P.M.










# Timings

## 1: Collins Avenue & 41st Street

P.M. Peak Hour

Future Background Conditions

				
Lane Group	EBL	EBT	WBT	NBT
Lane Configurations				
Traffic Volume (vph)	72	22	16	905
Future Volume (vph)	72	22	16	905
Turn Type	Perm	NA	NA	NA
Protected Phases		8	4	6
Permitted Phases	8			
Detector Phase	8	8	4	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	7.0
Minimum Split (s)	27.0	27.0	27.0	22.5
Total Split (s)	76.0	76.0	76.0	104.0
Total Split (%)	42.2%	42.2%	42.2%	57.8%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	C-Max

### Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 19 (11%), Referenced to phase 6:NBTL, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

### Splits and Phases: 1: Collins Avenue & 41st Street



















# HCM 7th Signalized Intersection Summary

## 1: Collins Avenue & 41st Street





P.M. Peak Hour

Future Background Conditions

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Traffic Volume (veh/h)	72	22	0	0	16	14	141	905	21	0	0	0
Future Volume (veh/h)	72	22	0	0	16	14	141	905	21	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	0.81		1.00	1.00		1.00	1.00		0.89			
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	1.00	0.90	1.00	0.90			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1856	1856	0	0	1856	1856	1856	1856	1856			
Adj Flow Rate, veh/h	77	24	0	0	17	0	152	973	20			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	3	3	0	0	3	3	3	3	3			
Cap, veh/h	137	38	0	0	194	0	359	2298	47			
Arrive On Green	0.12	0.12	0.00	0.00	0.12	0.00	0.72	0.72	0.72			
Sat Flow, veh/h	871	327	0	0	1670	0	659	4221	87			
Grp Volume(v), veh/h	101	0	0	0	17	0	378	389	378			
Grp Sat Flow(s),veh/h/ln	1198	0	0	0	1670	0	1637	1689	1641			
Q Serve(g_s), s	13.2	0.0	0.0	0.0	1.6	0.0	16.5	16.5	16.5			
Cycle Q Clear(g_c), s	14.9	0.0	0.0	0.0	1.6	0.0	16.5	16.5	16.5			
Prop In Lane	0.76		0.00	0.00		0.00	0.40		0.05			
Lane Grp Cap(c), veh/h	175	0	0	0	194	0	891	919	894			
V/C Ratio(X)	0.58	0.00	0.00	0.00	0.09	0.00	0.42	0.42	0.42			
Avail Cap(c_a), veh/h	512	0	0	0	649	0	891	919	894			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	77.1	0.0	0.0	0.0	71.0	0.0	13.6	13.6	13.6			
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.0	0.1	0.0	1.5	1.4	1.5			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.7	0.0	0.0	0.0	0.7	0.0	5.8	5.9	5.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	79.4	0.0	0.0	0.0	71.1	0.0	15.1	15.0	15.1			
LnGrp LOS	E				E		B	B	B			
Approach Vol, veh/h		101			17			1145				
Approach Delay, s/veh		79.4			71.1			15.0				
Approach LOS		E			E			B				
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				26.9		104.0		26.9				
Change Period (Y+Rc), s				6.0		6.0		6.0				
Max Green Setting (Gmax), s				70.0		98.0		70.0				
Max Q Clear Time (g_c+I1), s				3.6		18.5		16.9				
Green Ext Time (p_c), s				0.1		2.7		0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh			20.9									
HCM 7th LOS			C									

HCM 7th TWSC  
2: Collins Avenue & 37th Street

P.M. Peak Hour  
Future Background Conditions

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1	0	0	5	5	17	914	3	0	0	0
Future Vol, veh/h	18	1	0	0	5	5	17	914	3	0	0	0
Conflicting Peds, #/hr	13	0	19	19	0	13	83	0	88	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	19	1	0	0	5	5	18	952	3	0	0	0

Major/Minor	Minor2		Minor1		Major1							
Conflicting Flow All	515	1162	-	-	1160	579	83	0	0			
Stage 1	83	83	-	-	1077	-	-	-	-			
Stage 2	432	1079	-	-	83	-	-	-	-			
Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-			
Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-			
Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-			
Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-			
Pot Cap-1 Maneuver	655	397	0	0	398	565	1054	-	-			
Stage 1	-	-	0	0	300	-	-	-	-			
Stage 2	524	300	0	0	-	-	-	-	-			
Platoon blocked, %								-	-			
Mov Cap-1 Maneuver	574	328	-	-	328	518	970	-	-			
Mov Cap-2 Maneuver	574	328	-	-	328	-	-	-	-			
Stage 1	-	-	-	-	269	-	-	-	-			
Stage 2	498	269	-	-	-	-	-	-	-			

Approach	EB		WB		NB	
HCM Control Delay, s/v	11.76		14.2		0.34	
HCM LOS	B		B			

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	97	-	-	553	402
HCM Lane V/C Ratio	0.018	-	-	0.036	0.026
HCM Control Delay (s/veh)	8.8	0.2	-	11.8	14.2
HCM Lane LOS	A	A	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1

HCM 7th TWSC  
3: Collins Avenue & 36th Street

P.M. Peak Hour  
Future Background Conditions

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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Lane Configurations

Traffic Vol, veh/h	10	0	0	0	6	33	9	890	7	0	0	0
Future Vol, veh/h	10	0	0	0	6	33	9	890	7	0	0	0
Conflicting Peds, #/hr	8	0	4	4	0	8	81	0	87	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	10	0	0	0	6	34	9	908	7	0	0	0

Major/Minor	Minor2	Minor1	Major1
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Conflicting Flow All	474	1102	-	-	1098	553	81	0	0
Stage 1	81	81	-	-	1017	-	-	-	-
Stage 2	393	1021	-	-	81	-	-	-	-
Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-
Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-
Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-
Pot Cap-1 Maneuver	675	417	0	0	418	578	1056	-	-
Stage 1	-	-	0	0	321	-	-	-	-
Stage 2	554	320	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	567	349	-	-	350	530	974	-	-
Mov Cap-2 Maneuver	567	349	-	-	350	-	-	-	-
Stage 1	-	-	-	-	291	-	-	-	-
Stage 2	502	290	-	-	-	-	-	-	-

Approach	EB	WB	NB
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HCM Control Delay, s/v	11.47	12.97	0.18
HCM LOS	B	B	



Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
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Capacity (veh/h)	53	-	-	567 491
HCM Lane V/C Ratio	0.009	-	-	0.018 0.081
HCM Control Delay (s/veh)	8.7	0.1	-	11.5 13
HCM Lane LOS	A	A	-	B B
HCM 95th %tile Q(veh)	0	-	-	0.1 0.3

HCM 7th TWSC  
4: 36th Street & Indian Creek Drive

P.M. Peak Hour  
Future Background Conditions

Intersection

Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	0	0	0	14	863
Future Vol, veh/h	29	0	0	0	14	863
Conflicting Peds, #/hr	0	0	0	0	34	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, %	3	3	3	3	3	3
Mvmt Flow	32	0	0	0	15	938

Major/Minor	Minor1	Major2			
Conflicting Flow All	533	-		34	0
Stage 1	34	-		-	-
Stage 2	499	-		-	-
Critical Hdwy	4.4	-		4.16	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	5.86	-		-	-
Follow-up Hdwy	3.8	-		2.23	-
Pot Cap-1 Maneuver	646	0		1569	-
Stage 1	-	0		-	-
Stage 2	541	0		-	-
Platoon blocked, %					-
Mov Cap-1 Maneuver	616	-		1518	-
Mov Cap-2 Maneuver	616	-		-	-
Stage 1	-	-		-	-
Stage 2	533	-		-	-

Approach	WB	SB
HCM Control Delay, s/v	11.16	0.21
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	616	57	-
HCM Lane V/C Ratio	0.051	0.01	-
HCM Control Delay (s/veh)	11.2	7.4	0.1
HCM Lane LOS	B	A	A
HCM 95th %tile Q(veh)	0.2	0	-








Future Total P.M.

# Timings

## 1: Collins Avenue & 41st Street

P.M. Peak Hour

Future Total Conditions

				
Lane Group	EBL	EBT	WBT	NBT
Lane Configurations				
Traffic Volume (vph)	72	22	16	964
Future Volume (vph)	72	22	16	964
Turn Type	Perm	NA	NA	NA
Protected Phases		8	4	6
Permitted Phases	8			
Detector Phase	8	8	4	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	7.0
Minimum Split (s)	27.0	27.0	27.0	22.5
Total Split (s)	76.0	76.0	76.0	104.0
Total Split (%)	42.2%	42.2%	42.2%	57.8%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	C-Max

### Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 19 (11%), Referenced to phase 6:NBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

















### Splits and Phases: 1: Collins Avenue & 41st Street



# HCM 7th Signalized Intersection Summary

## 1: Collins Avenue & 41st Street

P.M. Peak Hour  
Future Total Conditions

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Traffic Volume (veh/h)	72	22	0	0	16	14	141	964	21	0	0	0
Future Volume (veh/h)	72	22	0	0	16	14	141	964	21	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	0.81		1.00	1.00		1.00	1.00		0.89			
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	1.00	0.90	1.00	0.90			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1856	1856	0	0	1856	1856	1856	1856	1856			
Adj Flow Rate, veh/h	77	24	0	0	17	0	152	1037	21			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	3	3	0	0	3	3	3	3	3			
Cap, veh/h	137	38	0	0	194	0	340	2319	47			
Arrive On Green	0.12	0.12	0.00	0.00	0.12	0.00	0.72	0.72	0.72			
Sat Flow, veh/h	871	327	0	0	1670	0	624	4258	86			
Grp Volume(v), veh/h	101	0	0	0	17	0	399	411	400			
Grp Sat Flow(s),veh/h/ln	1198	0	0	0	1670	0	1639	1689	1641			
Q Serve(g_s), s	13.2	0.0	0.0	0.0	1.6	0.0	17.9	17.9	17.9			
Cycle Q Clear(g_c), s	14.9	0.0	0.0	0.0	1.6	0.0	17.9	17.9	17.9			
Prop In Lane	0.76		0.00	0.00		0.00	0.38		0.05			
Lane Grp Cap(c), veh/h	175	0	0	0	194	0	892	919	894			
V/C Ratio(X)	0.58	0.00	0.00	0.00	0.09	0.00	0.45	0.45	0.45			
Avail Cap(c_a), veh/h	512	0	0	0	649	0	892	919	894			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	77.1	0.0	0.0	0.0	71.0	0.0	13.8	13.8	13.8			
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.0	0.1	0.0	1.6	1.6	1.6			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.7	0.0	0.0	0.0	0.7	0.0	6.3	6.4	6.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	79.4	0.0	0.0	0.0	71.1	0.0	15.4	15.4	15.4			
LnGrp LOS	E				E		B	B	B			
Approach Vol, veh/h		101			17			1210				
Approach Delay, s/veh		79.4			71.1			15.4				
Approach LOS		E			E			B				
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				26.9		104.0		26.9				
Change Period (Y+Rc), s				6.0		6.0		6.0				
Max Green Setting (Gmax), s				70.0		98.0		70.0				
Max Q Clear Time (g_c+I1), s				3.6		19.9		16.9				
Green Ext Time (p_c), s				0.1		2.9		0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh			21.0									
HCM 7th LOS			C									



HCM 7th TWSC  
2: Collins Avenue & 37th Street

P.M. Peak Hour  
Future Total Conditions

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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Lane Configurations

Traffic Vol, veh/h	18	1	0	0	5	5	45	973	3	0	0	0
Future Vol, veh/h	18	1	0	0	5	5	45	973	3	0	0	0
Conflicting Peds, #/hr	13	0	19	19	0	13	83	0	88	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	19	1	0	0	5	5	47	1014	3	0	0	0

Major/Minor	Minor2	Minor1	Major1
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Conflicting Flow All	598	1281	-	-	1280	609	83	0	0
Stage 1	83	83	-	-	1197	-	-	-	-
Stage 2	515	1198	-	-	83	-	-	-	-
Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-
Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-
Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-
Pot Cap-1 Maneuver	615	361	0	0	361	550	1054	-	-
Stage 1	-	-	0	0	263	-	-	-	-
Stage 2	467	262	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	518	286	-	-	287	504	970	-	-
Mov Cap-2 Maneuver	518	286	-	-	287	-	-	-	-
Stage 1	-	-	-	-	226	-	-	-	-
Stage 2	425	226	-	-	-	-	-	-	-

Approach	EB	WB	NB
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HCM Control Delay, s/v	12.54	15.13	0.83
HCM LOS	B	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
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Capacity (veh/h)	236	-	-	497	366
HCM Lane V/C Ratio	0.048	-	-	0.04	0.028
HCM Control Delay (s/veh)	8.9	0.5	-	12.5	15.1
HCM Lane LOS	A	A	-	B	C
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.1

HCM 7th TWSC  
3: Collins Avenue & 36th Street

P.M. Peak Hour  
Future Total Conditions

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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Lane Configurations

Traffic Vol, veh/h	73	2	0	0	7	34	9	943	9	0	0	0
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Future Vol, veh/h	73	2	0	0	7	34	9	943	9	0	0	0
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Conflicting Peds, #/hr	8	0	4	4	0	8	81	0	87	0	0	0
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Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
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RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
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Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
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Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
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Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
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Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
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Mvmt Flow	74	2	0	0	7	35	9	962	9	0	0	0
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Major/Minor	Minor2	Minor1	Major1
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Conflicting Flow All	496	1158	-	-	1153	581	81	0	0
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Stage 1	81	81	-	-	1072	-	-	-	-
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Stage 2	415	1077	-	-	81	-	-	-	-
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Critical Hdwy	4.4	4.4	-	-	4.4	4.9	5.36	-	-
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Critical Hdwy Stg 1	-	-	-	-	5.56	-	-	-	-
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Critical Hdwy Stg 2	6.76	5.56	-	-	-	-	-	-	-
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Follow-up Hdwy	3.8	3.8	-	-	3.8	3.9	3.13	-	-
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Pot Cap-1 Maneuver	664	399	0	0	400	564	1056	-	-
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Stage 1	-	-	0	0	302	-	-	-	-
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Stage 2	537	301	0	0	-	-	-	-	-
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Platoon blocked, %	-	-	-	-	-	-	-	-	-
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Mov Cap-1 Maneuver	553	334	-	-	335	517	974	-	-
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Mov Cap-2 Maneuver	553	334	-	-	335	-	-	-	-
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Stage 1	-	-	-	-	274	-	-	-	-
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Stage 2	482	273	-	-	-	-	-	-	-
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Approach	EB	WB	NB
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HCM Control Delay, s/v	12.71	13.34	0.18
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HCM LOS	B	B	
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Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
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Capacity (veh/h)	49	-	-	544	473
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HCM Lane V/C Ratio	0.009	-	-	0.141	0.088
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HCM Control Delay (s/veh)	8.7	0.1	-	12.7	13.3
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HCM Lane LOS	A	A	-	B	B
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HCM 95th %tile Q(veh)	0	-	-	0.5	0.3
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HCM 7th TWSC  
4: 36th Street & Indian Creek Drive

P.M. Peak Hour  
Future Total Conditions

Intersection

Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	0	0	0	79	891
Future Vol, veh/h	30	0	0	0	79	891
Conflicting Peds, #/hr	0	0	0	0	34	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, %	3	3	3	3	3	3
Mvmt Flow	33	0	0	0	86	968

Major/Minor	Minor1	Major2			
Conflicting Flow All	690	-		34	0
Stage 1	34	-		-	-
Stage 2	656	-		-	-
Critical Hdwy	4.4	-		4.16	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	5.86	-		-	-
Follow-up Hdwy	3.8	-		2.23	-
Pot Cap-1 Maneuver	574	0		1569	-
Stage 1	-	0		-	-
Stage 2	451	0		-	-
Platoon blocked, %					-
Mov Cap-1 Maneuver	512	-		1518	-
Mov Cap-2 Maneuver	512	-		-	-
Stage 1	-	-		-	-
Stage 2	416	-		-	-

Approach	WB	SB
HCM Control Delay, s/v	12.5	1.07
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	512	293	-
HCM Lane V/C Ratio	0.064	0.057	-
HCM Control Delay (s/veh)	12.5	7.5	0.5
HCM Lane LOS	B	A	A
HCM 95th %tile Q(veh)	0.2	0.2	-

HCM 7th TWSC  
5: 36th Street & Project Driveway

P.M. Peak Hour  
Future Total Conditions

Intersection						
Int Delay, s/veh	6.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1			1
Traffic Vol, veh/h	3	0	0	0	0	2
Future Vol, veh/h	3	0	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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, %	3	3	3	3	3	3
Mvmt Flow	3	0	0	0	0	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1	0	-	0	-	1
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.13	-	-	-	-	4.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.227	-	-	-	-	3.9
Pot Cap-1 Maneuver	1615	-	-	0	0	922
Stage 1	-	-	-	0	0	-
Stage 2	-	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1615	-	-	-	-	922
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	7.23	0		8.91		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1		
Capacity (veh/h)	1615	-	-	922		
HCM Lane V/C Ratio	0.002	-	-	0.002		
HCM Control Delay (s/veh)	7.2	0	-	8.9		
HCM Lane LOS	A	A	-	A		
HCM 95th %tile Q(veh)	0	-	-	0		




HCM 7th TWSC  
6: 36th Street & Residential Porte Cochere

P.M. Peak Hour  
Future Total Conditions

Intersection

Int Delay, s/veh 1.3

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations						
Traffic Vol, veh/h	4	7	40	2	3	2
Future Vol, veh/h	4	7	40	2	3	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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, %	3	3	3	3	3	3
Mvmt Flow	4	8	43	2	3	2

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	46	0	-	0	61	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.13	-	-	-	4.4	4.9
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.8	3.9
Pot Cap-1 Maneuver	1556	-	-	-	908	890
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	932	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1556	-	-	-	905	890
Mov Cap-2 Maneuver	-	-	-	-	905	-
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	932	-

Approach EB WB SB

HCM Control Delay, s/v	2.66	0	9.03
HCM LOS			A

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	655	-	-	-	899
HCM Lane V/C Ratio	0.003	-	-	-	0.006
HCM Control Delay (s/veh)	7.3	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 7th TWSC  
7: Collins Avenue & Non-Residential Porte Cochere

P.M. Peak Hour  
Future Total Conditions

Intersection

Int Delay, s/veh 1.2

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations

Traffic Vol, veh/h	0	104	918	134	0	0
Future Vol, veh/h	0	104	918	134	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
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, %	3	3	3	3	3	3
Mvmt Flow	0	113	998	146	0	0

Major/Minor Minor1 Major1

Conflicting Flow All	-	572	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	4.9	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.9	-	-
Pot Cap-1 Maneuver	0	569	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	569	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach WB NB

HCM Control Delay, s/v	12.89	0
HCM LOS	B	

Minor Lane/Major Mvmt NBT NBRWBLn1

Capacity (veh/h)	-	-	569
HCM Lane V/C Ratio	-	-	0.199
HCM Control Delay (s/veh)	-	-	12.9
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.7

## **Appendix J**

### Valet Operations Analysis Worksheets

**PROPOSED WEEKDAY AM PEAK HOUR NET NEW EXTERNAL VALET TRIP GENERATION**

ITE TRIP GENERATION CHARACTERISTICS					NET NEW EXTERNAL TRIPS			AM NET NEW RIDESHARE TRIPS				AM NET NEW PASS-BY TRIPS			AM NET NEW VALET TRIPS*		
Land Use	ITE Edition	ITE Code	Scale	ITE Units	In	Out	Total	% Rideshare	In	Out	Total	In	Out	Total	In	Out	Total
Hotel	11	310	36	room	8	6	14	64.3%	5	4	9	0	0	0	3	2	5
Multifamily Housing (High-Rise)	11	222	23	du	5	13	18	0.0%	0	0	0	0	0	0	5	13	18
Health/Fitness Club	11	492	13.455	ksf	7	7	14	64.3%	4	5	9	0	0	0	3	2	5
Fine Dining Restaurant	11	931	289	seat	2	2	4	64.3%	2	1	3	0	0	0	0	1	1
Drinking Place	11	975	8.507	ksf	0	0	0	64.3%	0	0	0	0	0	0	0	0	0
<b>Total</b>					<b>22</b>	<b>28</b>	<b>50</b>		<b>11</b>	<b>10</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>18</b>	<b>29</b>

**Notes**      \*Valet trips are the sum of net new external trips and pass-by trips minus rideshare trips. Rideshare trip factors are applied to net new external trips as pass-by trips are not expected to utilize rideshare.

**PROPOSED WEEKDAY PM PEAK HOUR NET NEW EXTERNAL VALET TRIP GENERATION**

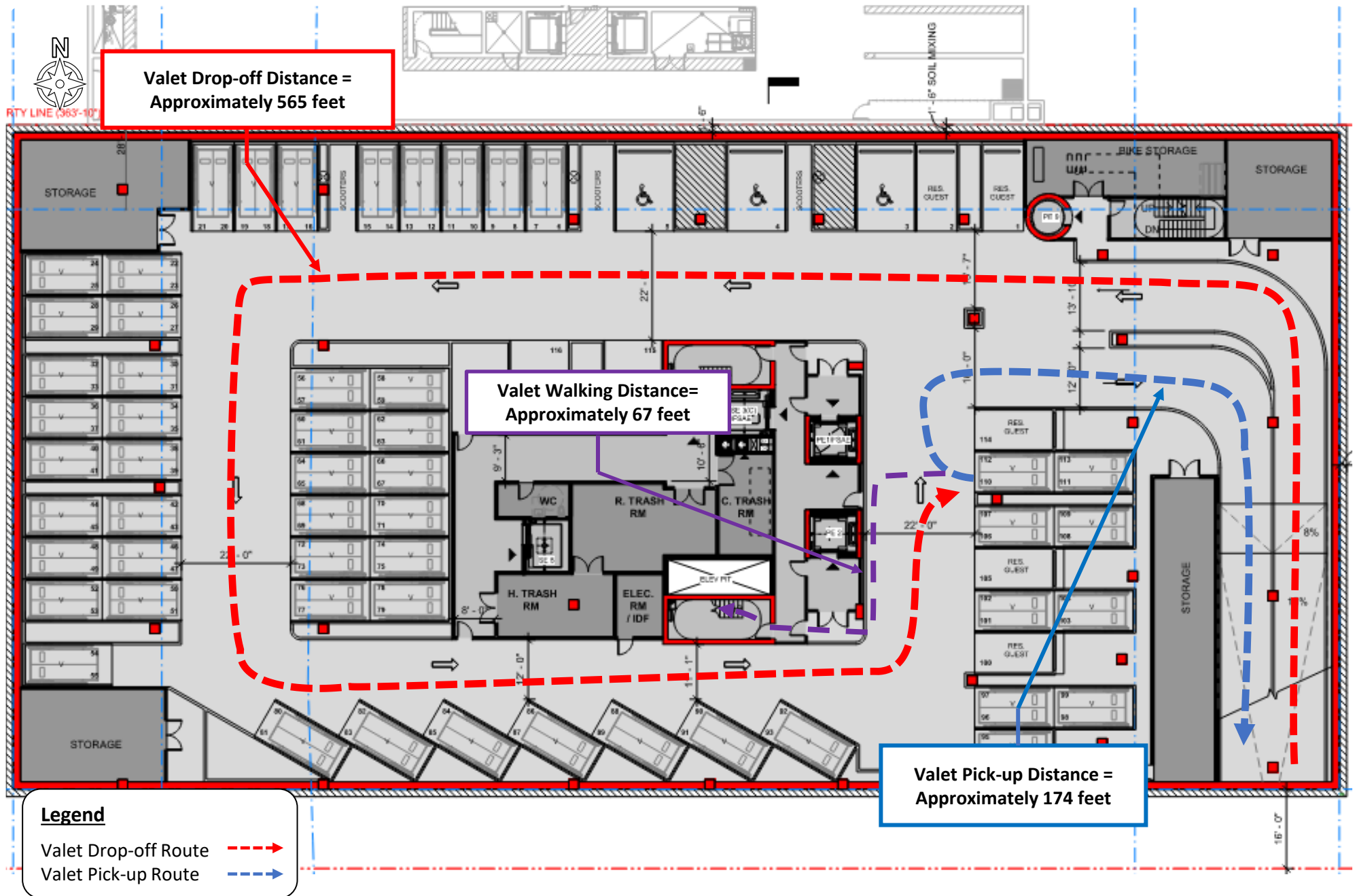
ITE TRIP GENERATION CHARACTERISTICS					NET NEW EXTERNAL TRIPS			PM NET NEW RIDESHARE TRIPS				PM NET NEW PASS-BY TRIPS			PM NET NEW VALET TRIPS*		
Land Use	ITE Edition	ITE Code	Scale	ITE Units	In	Out	Total	% Rideshare	In	Out	Total	In	Out	Total	In	Out	Total
Hotel	11	310	36	room	6	3	9	64.3%	4	2	6	0	0	0	2	1	3
Multifamily Housing (High-Rise)	11	222	23	du	3	2	5	0.0%	0	0	0	0	0	0	3	2	5
Health/Fitness Club	11	492	13.455	ksf	17	13	30	64.3%	11	8	19	0	0	0	6	5	11
Fine Dining Restaurant	11	931	289	seat	22	10	32	64.3%	15	6	21	17	8	25	24	12	36
Drinking Place	11	975	8.507	ksf	46	22	68	64.3%	30	14	44	0	0	0	16	8	24
<b>Total</b>					<b>94</b>	<b>50</b>	<b>144</b>		<b>60</b>	<b>30</b>	<b>90</b>	<b>17</b>	<b>8</b>	<b>25</b>	<b>51</b>	<b>28</b>	<b>79</b>

**Notes**      \*Valet trips are the sum of net new external trips and pass-by trips minus rideshare trips. Rideshare trip factors are applied to net new external trips as pass-by trips are not expected to utilize rideshare.



## Valet Route Maps





Valet Processing Time



### 3611 Collins Avenue Non-Residential Off-Site Valet

Off-Site Parking Calculated Average Travel Time			
VALET DROP-OFF			
<b>VEHICLE TRAVEL TIME</b>		<b>VALET ATTENDANT TRAVEL TIME</b>	
Travel Times (Assume)		Travel Times (Assume)	
<b>To Valet Garage (In vehicle)</b>		<b>Return from Valet Garage (Walk) to Valet Area</b>	
Distance		Distance	Travel Time
	0.25 miles		3 minutes
Controlled Delay	1.0 Minutes		
Gate Delay	0.2 Minutes		
<b>Total Time</b>	<b>5.2 Minutes</b>		

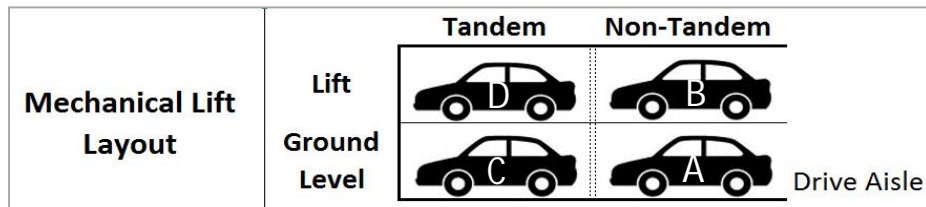
Off-Site Parking Calculated Average Travel Time			
VALET PICK-UP			
<b>VALET ATTENDANT TRAVEL TIME</b>		<b>VEHICLE TRAVEL TIME</b>	
Travel Times (Assume)		Travel Times (Assume)	
<b>To Valet Garage (Walk)</b>		<b>Return from Valet Garage (In Vehicle) to Valet Area</b>	
Distance		Distance	Travel Time
	0.25 miles		1.0 minutes
Controlled Delay	1.0 Minutes		
Gate Delay	0.2 Minutes		
<b>Total Time</b>	<b>5.2 Minutes</b>		

## 3611 Collins Avenue Residential On-Site Valet

On-Site Parking Calculated Average Travel Time			
VALET DROP-OFF			
<b>VEHICLE TRAVEL TIME</b>		<b>VALET ATTENDANT TRAVEL TIME</b>	
Travel Times (Assume)      15 mph speed		Travel Times (Assume)      5 mph speed	
<b>To Valet Garage (In vehicle)</b>		<b>Return from Valet Garage (Walk) to Valet Area</b>	
Distance	Travel Time	Distance	Travel Time
0.15 miles	0.6 minutes	0.02 miles	0.2 minutes
Controlled Delay	0.5 Minutes		
Stacker Delay	2.0 Minutes		
<b>Total Time</b>	<b>3.3 Minutes</b>		

On-Site Parking Calculated Average Travel Time			
VALET PICK-UP			
<b>VALET ATTENDANT TRAVEL TIME</b>		<b>VEHICLE TRAVEL TIME</b>	
Travel Times (Assume)      5 mph speed		Travel Times (Assume)      15 mph speed	
<b>To Valet Garage (Walk)</b>		<b>Return from Valet Garage (In Vehicle) to Valet Area</b>	
Distance	Travel Time	Distance	Travel Time
0.02 miles	0.2 minutes	0.05 miles	0.2 minutes
Controlled Delay	0.5 Minutes		
Stacker Delay	1.7 Minutes		
<b>Total Time</b>	<b>2.6 Minutes</b>		

# Vehicle Processing Scenarios



## Vehicle D (Tandem): Vehicle A and B Vacant - Drop-Off

- |  |    |
|--|----|
| 1. Attendant exits Vehicle D                             | 10 |
| 2. Attendant raise B stacker                             | 30 |
| 3. Attendant re-enters Vehicle D and drives into stacker | 30 |
| 4. Attendant exits Vehicle D                             | 10 |
| 5. Attendant raises lift                                 | 30 |

110 sec

## Vehicle D (Tandem): Vehicle A and B Parked or Vehicle A - Drop-Off

- |  |    |
|--|----|
| 1. Attendant exits Vehicle D                                   | 10 |
| 2. Attendant enters Vehicle A                                  | 10 |
| 3. Attendant moves Vehicle A to drive aisle                    | 20 |
| 4. Attendant exits Vehicle A                                   | 10 |
| 5. Attendant re-enters Vehicle D and drives into lift          | 30 |
| 6. Attendant exits Vehicle D                                   | 10 |
| 7. Attendant raises stacker                                    | 30 |
| 8. Attendant re-enters Vehicle A and drives into parking space | 30 |
| 9. Attendant exits Vehicle A                                   | 10 |

160 sec

## Vehicle C (Tandem): Vehicle A and B Vacant - Drop-Off

- |  |    |
|--|----|
| 1. Attendant exits Vehicle C                           | 10 |
| 2. Attendant raise B stacker                           | 30 |
| 3. Attendant re-enters Vehicle C and drives into space | 30 |
| 4. Attendant exits Vehicle C                           | 10 |

80 sec

## Vehicle C (Tandem): Vehicle A and Vehicle B Parked - Drop-Off

- |  |    |
|--|----|
| 1. Attendant exits Vehicle C                           | 10 |
| 2. Attendant enters Vehicle A                          | 10 |
| 3. Attendant moves Vehicle A to drive aisle            | 20 |
| 4. Attendant exits Vehicle A                           | 10 |
| 5. Attendant re-enters Vehicle C and drives into space | 30 |
| 6. Attendant exits Vehicle C                           | 10 |
| 7. Attendant re-enters Vehicle A and drives into space | 30 |
| 8. Attendant exits Vehicle A                           | 10 |

130

## Vehicle D (Tandem): Vehicle A and B Vacant - Pick-up

- |  |    |
|--|----|
| 1. Attendant lowers tandem lift and raises non-tandem lift | 30 |
| 2. Attendant enters Vehicle D and drives off lift          | 30 |

60 sec

# Vehicle Processing Scenarios

## Vehicle D (Tandem): Vehicle A and B Parked or Vehicle A - Pick-up

- |    |  |    |
|----|--|----|
| 1. | Attendant enters Vehicle A               | 10 |
| 2. | Attendant moves Vehicle A to drive aisle | 20 |
| 3. | Attendant exits Vehicle A                | 10 |
| 4. | Attendant lowers tandem lift             | 30 |



# Vehicle Processing Scenarios

- |    |   |    |
|----|---|----|
| 5. | Attendant enters Vehicle D and drives off lift              | 30 |
| 6. | Attendant exits Vehicle D                                   | 10 |
| 7. | Attendant re-enters Vehicle A and drives into parking space | 30 |
| 8. | Attendant exits Vehicle A                                   | 10 |

---

150 sec

## Vehicle C (Tandem): Vehicle A and B Vacant - Pick-up

- |    |  |    |
|----|--|----|
| 1. | Attendant raises non-tandem stacker      | 30 |
| 2. | Attendant enters Vehicle C               | 10 |
| 3. | Attendant moves Vehicle C to drive aisle | 20 |

---

60 sec

## Vehicle C (Tandem): Vehicle A and Vehicle B Parked - Pick-up

- |    |  |    |
|----|--|----|
| 1. | Attendant enters Vehicle A                           | 10 |
| 2. | Attendant moves Vehicle A to drive aisle             | 20 |
| 3. | Attendant exits Vehicle A                            | 10 |
| 4. | Attendant enters Vehicle C and drives to drive aisle | 30 |
| 5. | Attendant exits Vehicle C                            | 10 |
| 6. | Attendant re-enters Vehicle A and drives into space  | 30 |
| 7. | Attendant exits Vehicle A                            | 10 |
| 8. | Attendant enters Vehicle C                           | 10 |

---

130

Average Drop-off Processing Time	120 sec
Average Pick-up Processing Time	100 sec

## Valet Analysis

### Non-Residential Valet Analysis - A.M. Peak Hour

Arrival Rate	IN	OUT	
	6	5	veh/hr

Number of Valet Attendants (N) = 2  
Level of Confidence = 0.95

Storage Provided On-Site = 4 vehicles

Service Rate	IN	OUT	
	5.20	5.20	mins/veh

Total Entering and Exiting Vehicles(q) = 11 veh/hr  
Service Capacity per N (60 mins/Service Rate) (Q) = 11.54 veh/hr/pos  
Average Service Rate (t) = 5.20 mins/veh  
rho (t/Q) = 0.477

Control Delay = min  
Service Time = 5.20 mins/veh

Expected (avg.) number of vehicles in the system	E(m)=	0.28	
Expected (avg.) number of vehicles waiting in queue	E(n)=	1.23	
Mean time in the queue	E(w)=	1.53	mins
Mean time in system	E(t)=	6.73	mins

Proportion of customers who wait (P) (E(w) > 0)= 30.77%  
Probability of a queue exceeding a length (M) P(x > M)= 5.00%

Queue length which is exceeded 5.00% of the times is equal to 1.5 vehicles

### Non-Residential Valet Analysis - P.M. Peak Hour

Arrival Rate	IN	OUT	
	48	26	veh/hr

Service Rate	IN	OUT	
	5.20	5.20	mins/veh

Control Delay = min  
Service Time = 5.20 mins/veh

Number of Valet Attendants (N) = 9  
Level of Confidence = 0.95  
Storage Provided On-Site = 4 vehicles  
Total Entering and Exiting Vehicles(q) = 74 veh/hr  
Service Capacity per N (60 mins/Service Rate) (Q) = 11.54 veh/hr/pos  
Average Service Rate (t) = 5.20 mins/veh  
rho (t/Q) = 0.713

Expected (avg.) number of vehicles in the system	E(m)=	0.66	
Expected (avg.) number of vehicles waiting in queue	E(n)=	7.07	
Mean time in the queue	E(w)=	0.53	mins
Mean time in system	E(t)=	5.73	mins

Proportion of customers who wait (P) (E(w) > 0)= 26.46%  
Probability of a queue exceeding a length (M) P(x > M)= 5.00%

Queue length which is exceeded 5.00% of the times is equal to 3.9 vehicles

### Residential Valet Analysis - A.M. Peak Hour

Arrival Rate	IN	OUT	
	5	13	veh/hr

Service Rate	IN	OUT	
	3.30	2.60	mins/veh

Control Delay = min  
Service Time = 2.79 mins/veh

Number of Valet Attendants (N) = 2  
Level of Confidence = 0.95  
Storage Provided On-Site = 2 vehicles  
Total Entering and Exiting Vehicles(q) = 18 veh/hr  
Service Capacity per N (60 mins/Service Rate) (Q) = 21.47 veh/hr/pos  
Average Service Rate (t) = 2.79 mins/veh  
rho (t/Q) = 0.419

Expected (avg.) number of vehicles in the system E(m)= 0.18  
Expected (avg.) number of vehicles waiting in queue E(n)= 1.02  
Mean time in the queue E(w)= 0.60 mins  
Mean time in system E(t)= 3.39 mins

Proportion of customers who wait (P) (E(w) > 0)= 24.76%  
Probability of a queue exceeding a length (M) P(x > M)= 5.00%

Queue length which is exceeded 5.00% of the times is equal to 0.8 vehicles

### Residential Valet Analysis - P.M. Peak Hour

Arrival Rate	IN	OUT	
	3	2	veh/hr

Number of Valet Attendants (N) = 1  
Level of Confidence = 0.95

Storage Provided On-Site = 2 vehicles

Service Rate	IN	OUT	
	3.30	2.60	mins/veh

Total Entering and Exiting Vehicles(q) = 5 veh/hr  
Service Capacity per N (60 mins/Service Rate) (Q) = 19.87 veh/hr/pos

Average Service Rate (t) = 3.02 mins/veh

rho (t/Q) = 0.252

Control Delay = min  
Service Time = 3.02 mins/veh

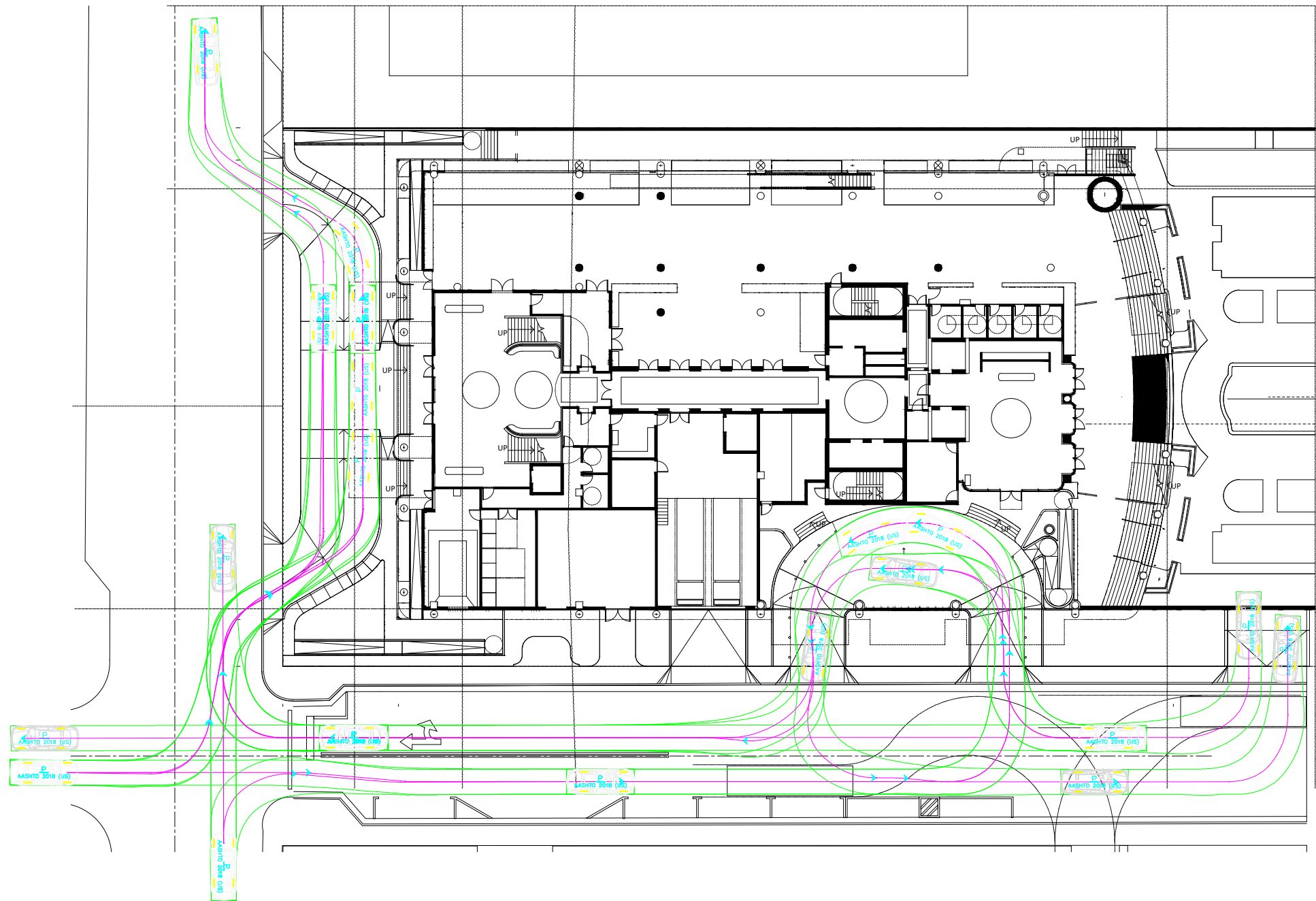
Expected (avg.) number of vehicles in the system	E(m)=	0.08	
Expected (avg.) number of vehicles waiting in queue	E(n)=	0.34	
Mean time in the queue	E(w)=	1.02	mins
Mean time in system	E(t)=	4.04	mins

Proportion of customers who wait (P) (E(w) > 0)=	25.17%
Probability of a queue exceeding a length (M) P(x > M)=	5.00%

Queue length which is exceeded 5.00% of the times is equal to 0.2 vehicles

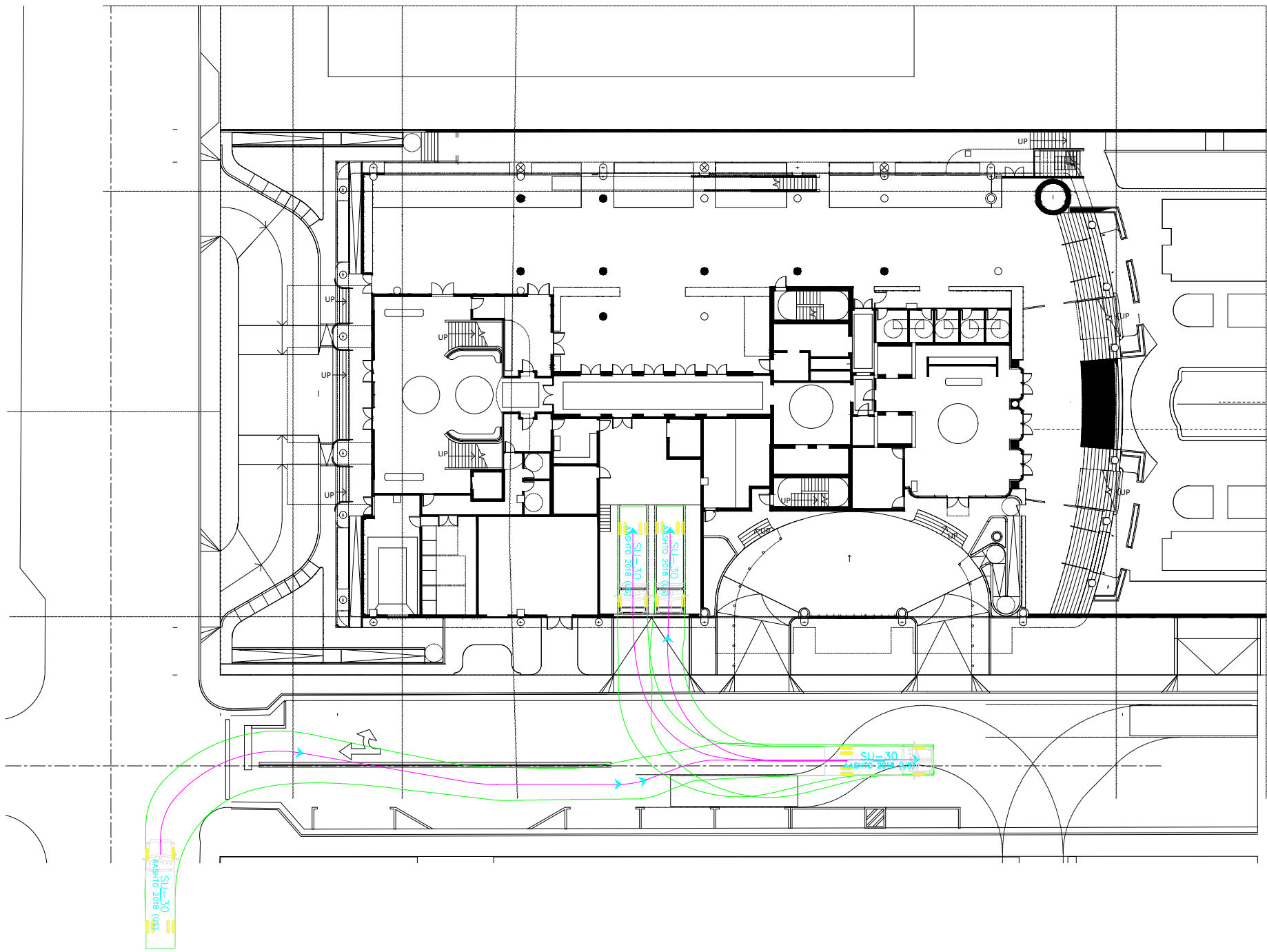
## **Appendix K**

### Maneuverability Analysis





Loading Ingress



Loading Egress

