TRAFFIC IMPACT STUDY

For

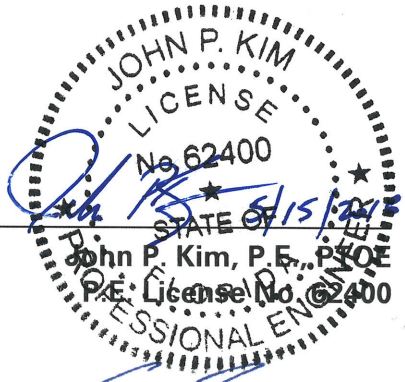
Brickell Preparatory Academy
Miami-Dade County, Florida

Prepared For:

Civica, LLC
8323 NW 12 Street, Suite 106
Doral, FL 33126

Prepared By:

Langan Engineering & Environmental Services, Inc.
15150 NW 79 Court
Miami Lakes, FL 33016
FL Certificate of Authorization No: 6601



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John P. Kim, P.E., PTOE
P.E. License No. 62400

Eric Schwarz, P.E., LEED AP
Principal/Vice President

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Table of Contents

List of Figures

List of Tables

Appendices

EXECUTIVE SUMMARY

Civica LLC retained Langan Engineering and Environmental Services to prepare a traffic-impact analysis for the proposed 3,000-student Brickell Preparatory Academy charter school in the Brickell neighborhood in Miami, Florida. The study shows that the proposed school will have the capacity to accommodate vehicles within its property when students are dropped off and picked up and that two of the five study intersections will operate within their adopted Level of Service (LOS E) during the morning peak hours with the school's impacts for the build out years of 2020 and 2022. Three of the intersections are expected to have LOS that exceed LOS E on certain approaches. The owners of the school will construct left-turn lanes on SW 15th Road at SW 2nd Avenue and a right-turn lane on SW 1st Avenue at SW 15th Road to mitigate the proposed school's impact to these intersections. The property is within the Urban Infill Area which promotes infill development. Land development projects within the UIA are not subject to concurrency requirements.

The proposed charter school will be constructed in two phases with a building for each phase. The north campus (Phase 1) will comprise 9th through 12th grades and is expected to reach its maximum enrollment of 1,500 students by 2020. The south campus (Phase 2) will comprise kindergarten through 8th grades and is expected to reach its maximum enrollment of 1,500 students by 2022. Drop-offs and pick-ups will occur on the ground and basement levels of the north building for Phase 1 of the development, with traffic entering and exiting the school via SW 17th Road. Phase 2 will provide access from SW 2nd Avenue and have a basement level that connects to the Phase 1 north building's basement.

The study includes morning peak-hour intersection analysis and afternoon peak-hour vehicle-accumulation analysis. Trip-generation and vehicle-accumulation data was collected at the Silver Palms Somerset Academy (K-12) charter school, which served as the surrogate school for this analysis. The proposed school is expected to increase traffic during the morning peak hour on the roadway network by 639 trips (351 entering, 288 exiting) and 1,279 (702 entering, 577 exiting) for Phases 1 and 2, respectively. A 30% transit and 15% pedestrian and bicycle reduction were applied to the trip-generation calculations for the following reasons:

- The school site is within an urban area: the Brickell neighborhood of Downtown Miami.
- The school site is within a half-mile of a Metrorail station, within one-third of a mile of a Metromover station, and within 450 feet of a public-transit bus stop.
  The school site is within 350 feet of the M-Path (multi-use trail for nonmotorized vehicles).
- The school will provide shuttle buses to the Vizcaya and Brickell Metrorail Stations.

- The school site is within 350 feet of a public parking lot.
- Pedestrian and bicycle facilities are near the school.

We conducted capacity analyses for the existing, no-build (future without project) and build (future with project) conditions at the following intersections:

- SW 15th Road and SW 2nd Court (two-way stop-sign controlled)
- SW 15th Road and SW 2nd Avenue (all-way stop-sign controlled)
- SW 17th Road and SW 1st Avenue (two-way stop-sign controlled)
- SW 15th Road and SW 1st Avenue (two-way stop-sign controlled)
- SW 15th Road and SW 3rd Avenue (two-way stop-sign controlled)

Although the analysis indicates the need for one instructional shift, the school plans to provide two shifts for Phase 1 and three for Phase 2 to mitigate its impacts to the area.

1.0 INTRODUCTION

Civica LLC retained Langan Engineering and Environmental Services to prepare a traffic-impact analysis for the proposed 3,000-student Brickell Preparatory Academy charter school in the Brickell neighborhood in Miami, Florida. The study shows that the proposed school will have the capacity to accommodate vehicles within its property when students are dropped off and picked up and that two of the five study intersections will operate within their adopted Level of Service (LOS E) during the morning peak hours with the school's impacts for the build out years of 2020 and 2022. Three of the intersections are expected to have LOS that exceed LOS E on certain approaches. The owners of the school will construct left-turn lanes on SW 15th Road at SW 2nd Avenue and a right-turn lane on SW 1st Avenue at SW 15th Road to mitigate the proposed school's impact to these intersections.

The proposed charter school will be constructed in two phases with a building for each phase. The north campus (Phase 1) will comprise 9th through 12th grades and is expected to reach its maximum enrollment of 1,500 students by 2020. The south campus (Phase 2) will comprise kindergarten through 8th grades and is expected to reach its maximum enrollment of 1,500 students by 2022. **Appendix A** contains report figures; **Figure 1** shows the site location. The property is within the Urban Infill Area which promotes infill development. Land development projects within the UIA are not subject to concurrency requirements.

The school site is bound by SW 2nd Avenue to the southeast, Interstate 95 to the west, and SW 17th Road to the northeast. The north campus, to be constructed first, will provide drop-off and pick-up areas on the ground-floor and basement levels. The north campus will have two driveway connections on SW 17th Road. The south campus will provide drop-off and pick-up areas at its basement level and will connect to the basement of the north campus. The south campus will have two side-by-side driveway connections on SW 2nd Avenue, one to access the basement level and one to access an above-ground parking garage. Two areas for on-street bus stacking will be provided on SW 17th Road, and a loop road for buses will be constructed on the school's property. **Appendix B** contains site plans for each phase of development for the ground and basement levels. This study includes the traffic data, traffic-impact analysis and traffic-operation plans for both phases of the proposed school.

1.1 Study Objective

The study's objectives were to analyze the weekday morning peak-hour LOS of the intersections listed in the traffic methodology and to determine the number of instructional shifts that will keep the afternoon vehicle accumulation within the school's property.

1.2 Study Methodology and Study Area

Langan undertook the following steps to prepare this study in accordance with the methodology.

- Collected traffic volumes from 7 to 9 AM at the following unsignalized intersections (study intersections):
    - SW 15th Road and SW 2nd Court
    - SW 15th Road and SW 2nd Avenue
    - SW 17th Road and SW 1st Avenue
    - SW 15th Road and SW 1st Avenue
    - SW 15th Road and SW 3rd Avenue

- Identified the existing weekday morning peak-hour traffic volumes based on the collected data.
- Collected morning peak-hour trip-generation data and afternoon vehicle-accumulation data at the Somerset Academy Silver Palms charter school (surrogate school) at 23255 SW 115th Avenue, Miami, Florida.
- Developed 2017 existing traffic volumes by applying a Florida Department of Transportation (FDOT) peak season conversion factor to the traffic data (if applicable).
- Developed 2022 no-build traffic volumes by applying a 0.87% compounded annual growth rate to the existing traffic volumes.
- Used the data collected at the surrogate school to develop morning trip-generation rates and afternoon vehicle-accumulation estimates for the proposed school.
- Used an equal distribution of traffic to assign project trips to the roadway network.
- Assigned site-generated trips to the driveways based on the cardinal distribution, existing roadway network and likely travel routes motorists will use to and from the site.
- Developed 2020 (Phase 1) and 2022 (Phase 2) build traffic volumes by adding site-generated trips to the no-build traffic volumes.
- Analyzed the intersection capacity for the weekday morning peak-hour using Highway Capacity Manual methodology-based software.
- Prepared a traffic operations plan for each phase of the school's development.

Appendix C contains a copy of the methodology letter accepted by Miami-Dade County. This report presents the database collected by Langan and the traffic analysis for this development.

1.3 School Traffic Operations

The north campus of the school will operate with two staggered instructional shifts with drop-off and pick-up areas on the ground floor and basement level. All traffic will enter from the north driveway on SW 17th Road and exit by either of the two driveways on SW 17th Road. After the south campus is constructed and the basements of both buildings are connected, traffic for drop-off and pick-up will enter the north driveway on SW 17th Road and exit any of the three project driveways.

School staff and service personnel will enter and exit the school via SW 2nd Avenue to access the parking garage in the south campus. School staff will direct traffic through the vehicle-stacking areas on the ground floor and basement levels and will assist with the drop-offs and pick-ups. The school will use traffic-control technicians to direct traffic at the intersection of SW 15th Road and SW 2nd Avenue because it is an all-way stop-sign controlled intersection where drivers are expected to experience significant delays during the morning schools hours. School buses and vans will use the bus loop on the north side of the north campus or either of the two bus-stacking areas on SW 17th Road. SW 17th Road northwest of SW 2nd Court (dead-end road) can also be used for bus stacking. **Appendix D** contains traffic-operation plans for both phases of the proposed school.

2.0 EXISTING CONDITIONS

2.1 Data Collection

Langan collected traffic volume and field data to analyze the current traffic conditions of the study intersections.

2.1.1 Roadway Characteristics

Langan visited the intersections to collect lane-configurations and traffic-control data. **Figure 2** shows the lane configurations for each of the study intersections. A summary of the roadway characteristics is provided below. Roadway classifications and adopted LOS standards are based on the city of Miami's comprehensive master plan. The minimum acceptable LOS for major roadways and intersections is LOS E.

SW 13th Street

SW 13th Street is also designated as State Road 972 and is a four-lane, undivided, east-west minor-arterial roadway maintained by the FDOT and has a 35 MPH posted speed limit.

SW 15th Road

SW 15th Road is a two-lane, divided, northwest-southeast local roadway maintained by the city and has a 30 MPH posted speed limit.

SW 17th Road

SW 17th Road is a two-lane, undivided, northwest- southeast local roadway maintained by the city and has a 30 MPH posted speed limit.

SW 2nd Court

SW 2nd Court is a two-lane, undivided, northeast-southwest local roadway maintained by the city and has a 30 MPH posted speed limit.

SW 2nd Avenue

SW 2nd Avenue is a two-lane, undivided, northeast-southwest local roadway maintained by the city and has a 30 MPH posted speed limit.

SW 1st Avenue

SW 1st Avenue is a two-lane, undivided, northeast-southwest local roadway maintained by the city and has a 30 MPH posted speed limit. The M-Path shared-use path runs along the south side of this roadway.

2.1.2 Traffic Counts

Traffic-volume data was collected on Thursday, April 20, 2017, from 7 to 9 AM at each of the study intersections. The data was collected when schools were in regular session and during the peak season, so an FDOT peak-season adjustment factor was not applied. We compared the data of each intersection and determined that the morning peak hour occurs between 8 and 9 AM. **Figure 3** illustrates the existing weekday morning peak-hour traffic volumes. **Appendix E** contains the traffic data and seasonal adjustment factors.

2.2 Intersection Analysis

We conducted capacity analyses of the study intersections and found that they operate at LOS D or better during the morning peak hour, while Miami's LOS standard is E. Capacity analysis provides an indication of the adequacy of road facilities to serve traffic demand. The evaluation criteria used to analyze the study-area intersections are based methodologies in the 2010 Highway Capacity Manual published by the Transportation Research Board, as applied by the latest version of Synchro software. All of the study intersections are stop-sign controlled (unsignalzied) and the stop-sign controlled approaches typically operate at low levels of service because each approaching vehicle must stop and incur a delay. **Table 1** summarizes the existing-conditions analysis and shows the delay for each intersection approach. **Appendix F** contains the intersection volume tables; **Appendix G** contains the capacity-analyses.

Table 1 - 2017 Existing Intersection Capacity Analysis Summary

Location	Traffic Control	Approach	2017 Existing Conditions	
			LOS	**Delay** (secs)
SW 15 Road and SW 2 Court	Two-Way Stop	NB	B	13.4
		SB	C	15.5
SW 15 Road and SW 2 Avenue	All-Way Stop	EB	D	26.9
		WB	B	11.8
		NB	B	12.6
		SB	B	10.2
SW 17 Road and SW 1 Avenue	Two-Way Stop	SEB	A	9.9
SW 15 Road and SW 1 Avenue	Two-Way Stop	NB	D	34.3
SW 15 Road and SW 3 Avenue	Two-Way Stop	NB	B	13.9
		SEB	D	26.9

3.0 PLANNED AND PROGRAMMED ROADWAY IMPROVEMENTS

There are no planned roadway improvements included in the county's transportation improvement program that impact the study intersections.

4.0 NO-BUILD CONDITIONS

This section of the report covers background traffic growth and future traffic volumes used to evaluate the no-build conditions. The no-build conditions evaluate future traffic volumes without the impacts of the proposed school. We prepared analysis for each phase of the development.

4.1 Background Traffic

Background traffic volumes account for annual increases in traffic from approved and unbuilt land-development projects and historical increases in traffic volumes. We used historical traffic data from four FDOT count stations to calculate a 0.87% area-wide growth rate. We applied the growth rate to the existing traffic volumes and added traffic volumes from the ZOM West Brickell Tower development to develop the 2020 and 2022 no-build traffic volumes shown in **Figure 4**. Appendix E contains the FDOT historical traffic volumes, intersection volume tables, growth-rate calculation and excerpts from the traffic report for the ZOM development.

4.2 Intersection Analysis

Table 2 summarizes the results of the 2020 and 2022 no-build analysis and indicates that the stop-sign controlled approaches of the study intersections are expected to operate at LOS E or better during the morning peak hour. See Appendix G for the capacity-analysis reports.

Table 2 - No-Build Intersection Capacity Analysis Summary for 2020 and 2022

Location	Traffic Control	Approach	2020 No-Build Conditions		2022 No-Build Conditions	
			LOS	**Delay** (secs)	**LOS**	**Delay** (secs)
SW 15 Road and SW 2 Court	Two-Way Stop	NB	B	13.6	B	13.7
		SB	C	15.9	C	16.1
SW 15 Road and SW 2 Avenue	All-Way Stop	EB	D	30.1	D	32.4
		WB	B	12.1	B	12.4
		NB	B	12.9	B	13.7
		SB	B	10.3	C	16.1
SW 17 Road and SW 1 Avenue	Two-Way Stop	SEB	A	9.9	A	9.9
SW 15 Road and SW 1 Avenue	Two-Way Stop	NB	E	38.9	E	41.9
SW 15 Road and SW 3 Avenue	Two-Way Stop	NB	B	14.2	B	14.4
		SEB	D	30.9	D	33.2

5.0 BUILD CONDITIONS

This section of the report covers site-generated trips, trip distribution, and future traffic volumes used to evaluate the build conditions. The analysis of the build conditions evaluates the future traffic volumes for the anticipated build-out year of the school by adding its traffic to the 2020 and 2022 no-build volumes.

5.1 School Traffic

5.1.1 Site Characteristics

The proposed school will be in the Brickell Financial District of the Central Business District (CBD) of Greater Downtown Miami. A report prepared by the Miami Downtown Development Authority (*2016 Greater Downtown Miami Demographics*) indicates the following statistics:

- The population of Downtown Miami has increase more than 30% since 2010.
- The number of households in Downtown Miami has increased 42% since 2010.
- 39% of the Downtown Miami households are family households.
- The number of Brickell households had an annual growth rate of 5.5% between 2010 and 2016.
- Brickell's new residents increased from 26,472 to 34,975 since 2010.
- The highest percentage of Downtown Miami residents (40%) live in Brickell.
- The population through age 14 has increased 14% since 2010.
- The Downtown Miami population through age 19 for 2016 are listed below:
    - Birth to 4 years: 4,616
    - 5-9 years: 3,536
    - 10-14 years: 2,787
    - 15-19 years: 2,966

The increase in households can be attributed to the construction of high-rise condominiums in Brickell. Unfortunately schools have not been constructed within Brickell to serve the demands of its changing demographic. This proposed school will serve the Brickell households and other nearby neighborhoods. **Appendix H** contains excerpts from the DDA report.

Transit

The proposed school is within an urban neighborhood and close to transit stops, so we expect transit use by students and staff to be significantly higher than use by those at a suburban school. The closest transit bus stops are at the intersection SW 13th Street and SW 15th Road. Metrobus routes 24, 48, B and 500 serve the Brickel Metrorail and Metromover stations and travel along SW 13th Street with stops within 450 feet of the school. The school will promote transit use by providing bus service to the two closest Metrorail stations. The Brickell Station is less than a half-mile northeast of school and Vizcaya Station is one mile southwest of school. The Metromover is a free mass transit automated people mover that serves the Downtown Miami neighborhoods and connects directly with the Metrorail at the Government Center and Brickell stations. The Brickell Metromover Station is less than one-third mile from the school site. The school may also provide bus service to students residing in the high-rise condominiums in Brickell. Appendix H contains excerpts from the Miami-Dade County Transit System map showing the bus, Metrorail and Metromover routes.

Nonmotorized Modes of Travel

The M-Path is a paved mutli-use path that follows US-1 from Dadeland Mall at SW 88th Street to SW 1st Avenue in Downtown Miami. It connects six Metrorail stations, including the Brickell and Vizcaya stations, and is within 400 feet of the school's site. A multi-use path serves nonmotorized modes of travel including pedestrians, bicyclists, joggers and skaters. The M-Path and other pedestrian facilities along the surrounding roadways will provide bicycle and pedestrian access to the proposed school. A public city-parking lot at the northwest corner of SW 13th Street and SW 3rd Avenue will serve as an off-site drop-off and pick-up area for students. Pedestrian crosswalks from this parking area provide safe access to a pedestrian walkway on the south side of SW 13th Street that leads to the proposed school site. The transit services and pedestrians facilities near the proposed school are expected to significantly reduce the amount of vehicular traffic generated by the proposed school. The M-Path, Brickell Metrorail Station, Brickell People Mover Station and closest public-parking lot to the proposed school site are shown in Figure 1. An excerpt from a map showing the bicycle facilities near the proposed school is included in Appendix H.

5.1.2 Trip Generation

The county designated the Somerset Academy Silver Palms (K-12) charter school as the surrogate school for this analysis. Staggered class commencement times are at 7:30 AM (grades 6-12), 8:00 AM (grades K-3) and 8:15 AM (grades 4-5). Traffic volumes generated by the surrogate school was collected on Wednesday, November 16, 2016, between 7 and 9 AM, when 1,991 students attended the surrogate school on the day the data was collected. The proposed charter school will have 1,500 students for Phase 1 and 3,000 after the completion of Phase 2. We multiplied the number of trips generated by the surrogate school by 0.75 (Phase 1) and 1.51 (Phase 2) to account for the differences between the schools' enrollment values. The county required surrogate school data, not ITE data, to analyze school-traffic impacts.

We contacted other schools in the area and found that one, the International Studies Preparatory Academy (ISPA), reported a transit-use of 86%. ISPA is within one-third of a mile to the Douglas Road Metrorail Station. We also contacted the National Center for Safe Routes for School (NCSRS) and obtained modal transportation data from similar schools that reported school bus and transit-use of 37% and 15% of non-motorized trips. Based on this information and the characteristics of the site, we applied a trip-reduction of 30% to account for transit usage. We believe usage may be significantly higher but wanted to provide a conservative assessment of the impacts of the proposed school. A 15% trip-reduction was applied to account for anticipated pedestrian and bicycle usage to account for the site's proximity to the M-Path and other pedestrian facilities. Appendix E contains Student Travel Tally reports from NCSRS. **Table 3** summarizes the results of the analysis. **Appendix I** contains the surrogate trip-generation data and trip-generation calculations.

Table 3 - Morning Trip-Generation Estimates

Land Use	Phase 1 (1,500 Students)			Phase 2 (3,000 Students)		
	In	Out	Total	In	Out	Total
K-12 Charter School	638	525	1,163	1,276	1,050	2,326
Transit Reduction (30%)	191	158	349	383	315	698
Pedestrian/Bicycle Reduction (15%)	96	79	175	191	158	349
Net-New Trips	**351**	**288**	**639**	**702**	**577**	**1,279**

5.1.3 Trip Distribution

We met with county staff and agreed that the cardinal distribution for this site's Traffic Analysis Zone did not account for the source of trips for a school and the number of trips that are expected to come from the Brickell area. Trips from the school were assigned to study intersections based on an even distribution of its traffic. The distribution was adjusted to account for the roadway network and site driveway locations. **Figure 5** shows the project-traffic distribution at each of the study intersections. **Figure 6** shows project trip assignments.

5.2 Intersection Analysis

Table 4 summarizes the results of the 2020 and 2022 build analysis and indicates that approaches at two of the intersections (SW 15th Road and SW 3rd Avenue; SW 17th Road and SW 1st Avenue) are expected to operate at LOS E or better during the morning peak hour. One approach of each of the other three intersections (SW 15th Road and SW 2nd Court; SW 15th Road and SW 2nd Avenue; SW 15th Road and SW 1st Avenue) are expected to exceed LOS E. Stop-sign controlled approaches typically operate beyond capacity during peak hours because all approaching vehicles must stop and incur delays and traffic on the uncontrolled approach is high.

To mitigate the school's impact at SW 15th Road and SW 2nd Avenue during the first phase of development, the school will construct two left-turn lanes on SW 15th Road at SW 2nd Avenue.to improve the LOS at the intersection of SW 15th Road and SW 1st Avenue during the second phase of development, the school will construct a right-turn lane on SW 1st Avenue. We developed the 2020 and 2022 build traffic volumes by adding the total site-generated trips to the no-build traffic volumes. **Figure 7** illustrates the 2020 and 2022 build morning peak-hour traffic volumes. The county' Traffic Engineering Division requested an analysis of the intersection of SW 15th Road and SW 2nd Avenue with traffic signalization. We evaluated the intersection with traffic signalization for both phases and with the proposed left-turn lanes on SW 15th Road and found that it could operate at LOS B. Appendix G contains the capacity analysis reports.

Table 4 - Build Conditions Intersection Capacity Analysis Summary

Location	Traffic Control	Condition	Approach	2020 Build Conditions		2022 Build Conditions	
				LOS	Delay (secs)	LOS	Delay (secs)
SW 15 Road and SW 2 Court	Two-Way Stop	Existing Laneage & Control	NB	D	33.6	F	69.3
			SB	D	28.8	E	38.2
SW 15 Road and SW 2 Avenue	All-Way Stop	Construct Left-Turn Lanes on SW 15 Road	EB	F	107.6	F	156.5
			WB	C	22.5	D	30.6
			NB	C	22.9	D	32.4
			SB	C	16.1	C	20.1
SW 17 Road and SW 1 Avenue	Two-Way Stop	Existing Laneage & Control	SEB	B	11.1	B	11.7
SW 15 Road and SW 1 Avenue	Two-Way Stop	Existing Laneage & Control	NB	F	148	-	-
		Construct Right-Turn Lane on SW 1 Avenue	NB	-	-	F	56.9
SW 15 Road and SW 3 Avenue	Two-Way Stop	Existing Laneage & Control	NB	C	16.9	C	18.5
			SEB	E	37.0	E	43.5

5.3 Driveway Volumes

We developed site driveway volumes for the morning peak hour using the project trip-generation and distribution percentages. **Figure 8** shows morning peak-hour volumes for the school's driveways for both phases of development. All of the proposed school's driveways are expected to operate at LOS A for both phases of development.

5.4 Vehicle Accumulation Assessment

Traffic studies for schools must include a vehicle-accumulation assessment to determine the adequacy of the parking and student pick-up and drop-off vehicle-stacking area. Multiple school shifts are required for sites that are expected to cause vehicles to spill back into public roadways.

5.4.1 Methodology

The analysis is consistent with the Miami-Dade County's methodology for schools. Data was collected at the surrogate school to develop accumulation values.

5.4.2 Data Collection

Vehicle-accumulation data was collected at the surrogate school on Wednesday, November 16, 2016, between 1:30 and 3:30 PM because grades K-5 are dismissed at 2 PM on Wednesdays. Grades 6 through 12 are dismissed at 2:30 PM. Data was collected every five minutes and accounted for all of the vehicles generated by the surrogate school. **Appendix J** contains the vehicle-accumulation assessment data.

5.4.4 Assessment Results

The school is expected to accommodate 173 and 125% of its vehicle accumulation within its property with one instructional shift for Phases 1 and 2, respectively. The surrogate school's highest vehicle accumulation was 309. For Phase 1, the proposed school will provide 163 parking spaces and stacking for 57 vehicles for a total of 220 spaces for on-site vehicle accumulation. For Phase 2, the proposed school will provide 254 parking spaces and stacking for 66 vehicles for a total of 320 spaces for on-site vehicle accumulation. Multipliers for Phase 1 (0.75) and Phase 2 (1.51) were applied to the surrogate accumulation data to estimate the vehicle accumulation of the proposed school and determine its expected percentage of vehicle accommodation. Although the analysis indicates the need for one instructional shift for either phase of development, the school operator plans to provide two shifts for Phase 1 and three for Phase 2 to mitigate impacts on the area. Providing more than one instructional shift for each phase of the development will reduce the expected impacts of the proposed school to the surrounding area. **Table 5** shows the summary of the vehicle assessment. Appendix J contains the county's accumulation assessment form.

Table 5 - Vehicle Accumulation Assessment Summary

Vehicle Type	Vehicles Generated by Surrogate	Multiplier	Brickell Preparatory Academy Phase I - Vehicle Accumulation Assessment Summary (1,500 Students)							
			Vehicle Spaces	Transit Reduction (30%)	Bike & Ped Reduction (15%)	Additional Buses for Transit Shuttles	Vehicle Spaces Required	Spaces Provided by School	Percent Accommodation	Requires Second Shift
Cars	309	0.75	232	70	35		127	220	173%	No
Buses	5	0.75	4			2	6	6	100%	No

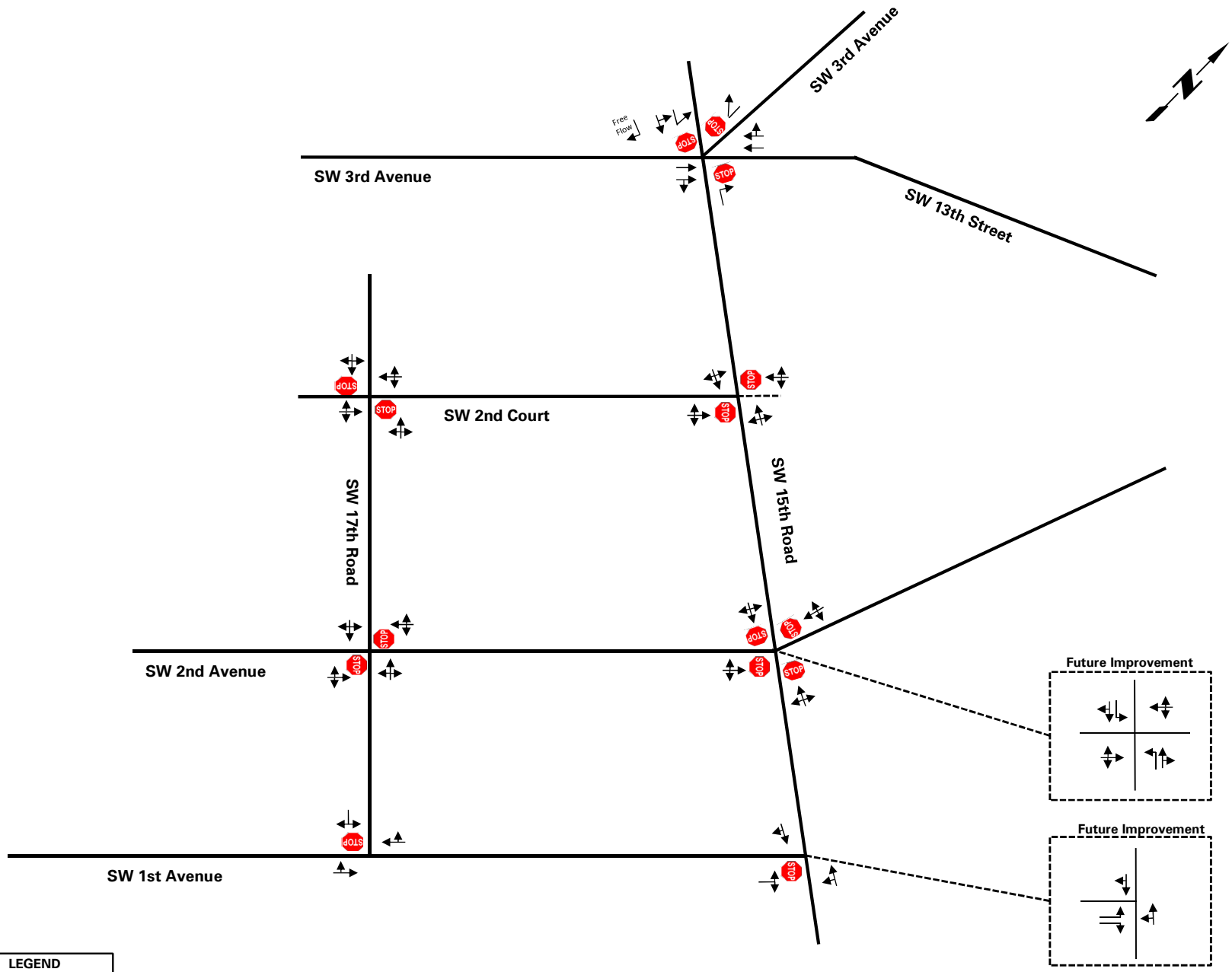
Vehicle Type	Vehicles Generated by Surrogate	Multiplier	Brickell Preparatory Academy Phase II - Vehicle Accumulation Assessment Summary (3,000 Students)							
			Spaces Required for School	Transit Reduction (30%)	Bike & Ped Reduction (15%)	Additional Buses for Transit Shuttles	Vehicle Spaces Required	Spaces Provided by School	Percent Accommodation	Requires Second Shift
Cars	309	1.51	467	140	70		257	320	125%	No
Buses	5	1.51	8			3	11	6	55%	Yes

6.0 CONCLUSIONS

Langan prepared a traffic-impact analysis for the Brickell Preparatory Academy K-12 charter school that will be constructed in two phases. Phase 1 (1,500 students) will comprise 9th through 12th grades and be built by 2020. Phase 2 (additional 1,500 students) is expected to be completed by 2022 and will comprise kindergarten through 8th grades. The study shows that the proposed school will have the capacity to accommodate vehicles within its property when students are dropped off and picked up and that two of the five study intersections will operate within their adopted Level of Service (LOS E) during the morning peak hours with the school's impacts for the build out years of 2020 and 2022. Three of the intersections are expected to have LOS that exceed LOS E on certain approaches. The school will construct exclusive left-turn lanes on SW 15th Road at SW 2nd Avenue for the first phase of development to mitigate its impacts on the intersection. For the second phase of development, the school will construct a right-turn lane on SW 1st Avenue to mitigate its impact to the intersection. Although the vehicle-accumulation analysis indicates that only one instructional shift is needed to accommodate school traffic within the site, the school will operate with two shifts for its first phase of development and three for the second phase to mitigate traffic impacts.

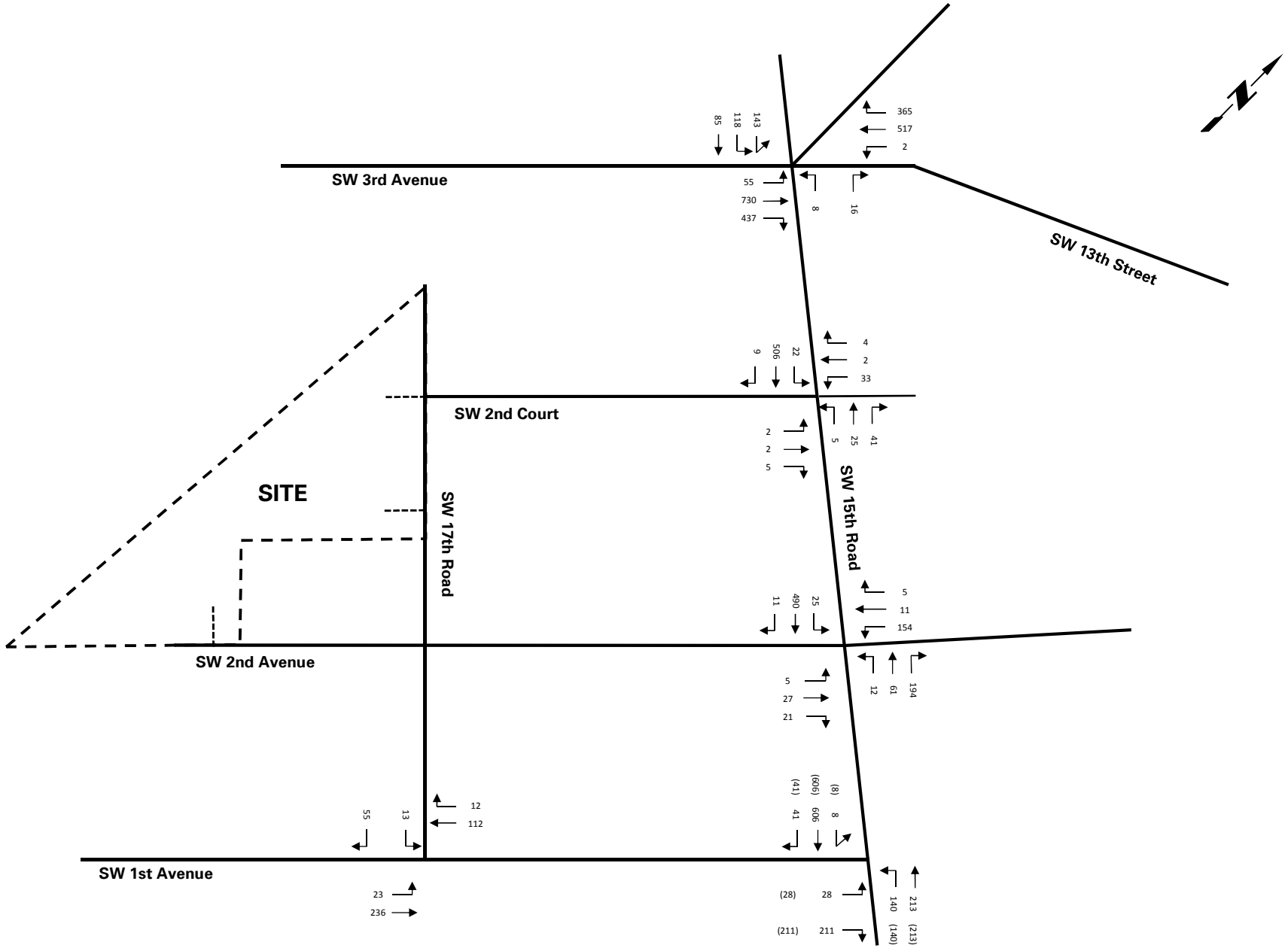
APPENDIX A
FIGURES

LANGAN ENGINEERING & ENVIRONMENTAL SERVICES 15150 NW 79th Court, Suite 200, Miami Lakes, FL 33016 P: 786.264.7221 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project **BRICKELL PREPARATORY ACADEMY** MIAMI MIAMI-DADE COUNTY / FLORIDA	Figure Title **SITE LOCATION MAP**	Project No. 330026301 Date 5/15/2018 Scale NTS	**FIGURE 1**

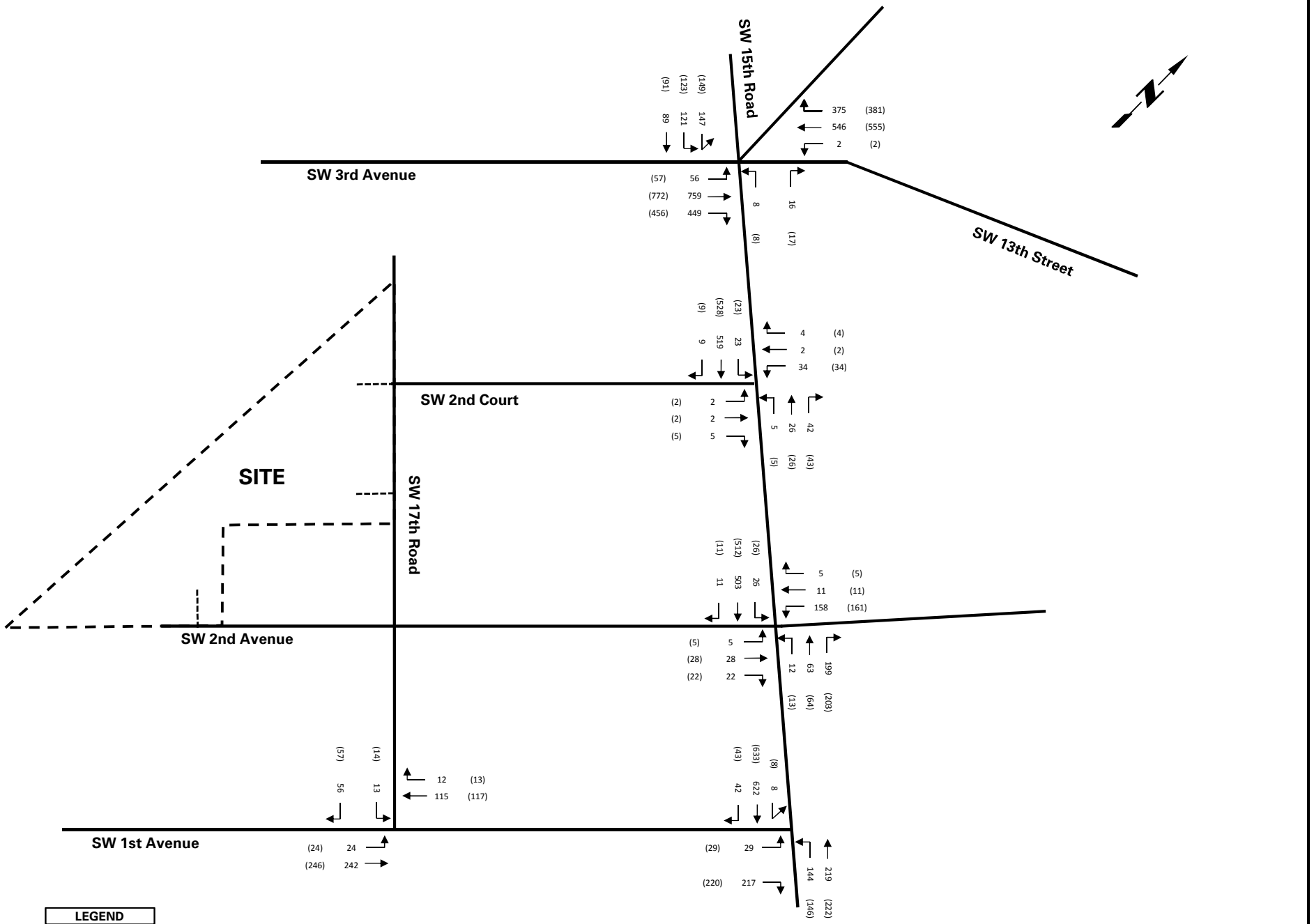


LEGEND
Driveway

LANGAN ENGINEERING & ENVIRONMENTAL SERVICES 15150 NW 79th Court, Suite 200, Miami Lakes, FL 33016 P: 786.264.7221 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project BRICKELL PREPARATORY ACADEMY MIAMI MIAMI-DADE COUNTY / FLORIDA	Figure Title INTERSECTION LANE CONFIGURATIONS	Project No. 330026301 Date 5/15/2018 Scale NTS	FIGURE 2



LANGAN 15150 NW 79th Court, Suite 200, Miami Lakes, FL 33016 P: 786.264.7221 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project **BRICKELL PREPARATORY ACADEMY** MIAMI MIAMI-DADE COUNTY / FLORIDA	Figure Title **2017 EXISTING AM PEAK HOUR TRAFFIC VOLUMES**	Project No. 330026301 Date 5/15/2018 Scale NTS	**FIGURE 3**



LEGEND
2020 (Phase 1)
(##) 2022 (Phase 2)

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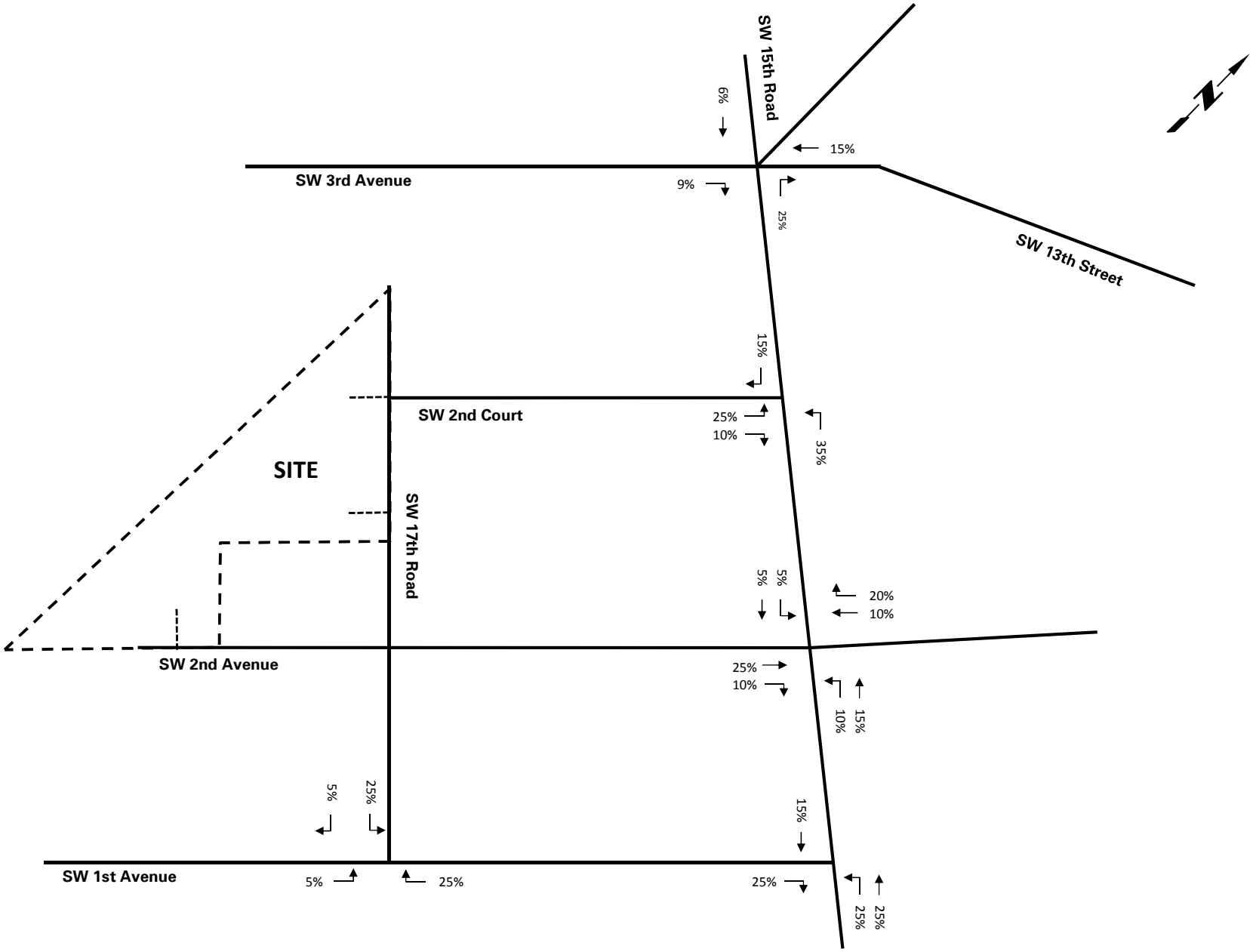
Project	Figure Title	Project No.	
BRICKELL PREPARATORY ACADEMY	NO BUILD AM PEAK HOUR TRAFFIC VOLUMES	330026301	FIGURE 4
MIAMI		Date 5/15/2018	
MIAMI-DADE COUNTY / FLORIDA		Scale NTS	



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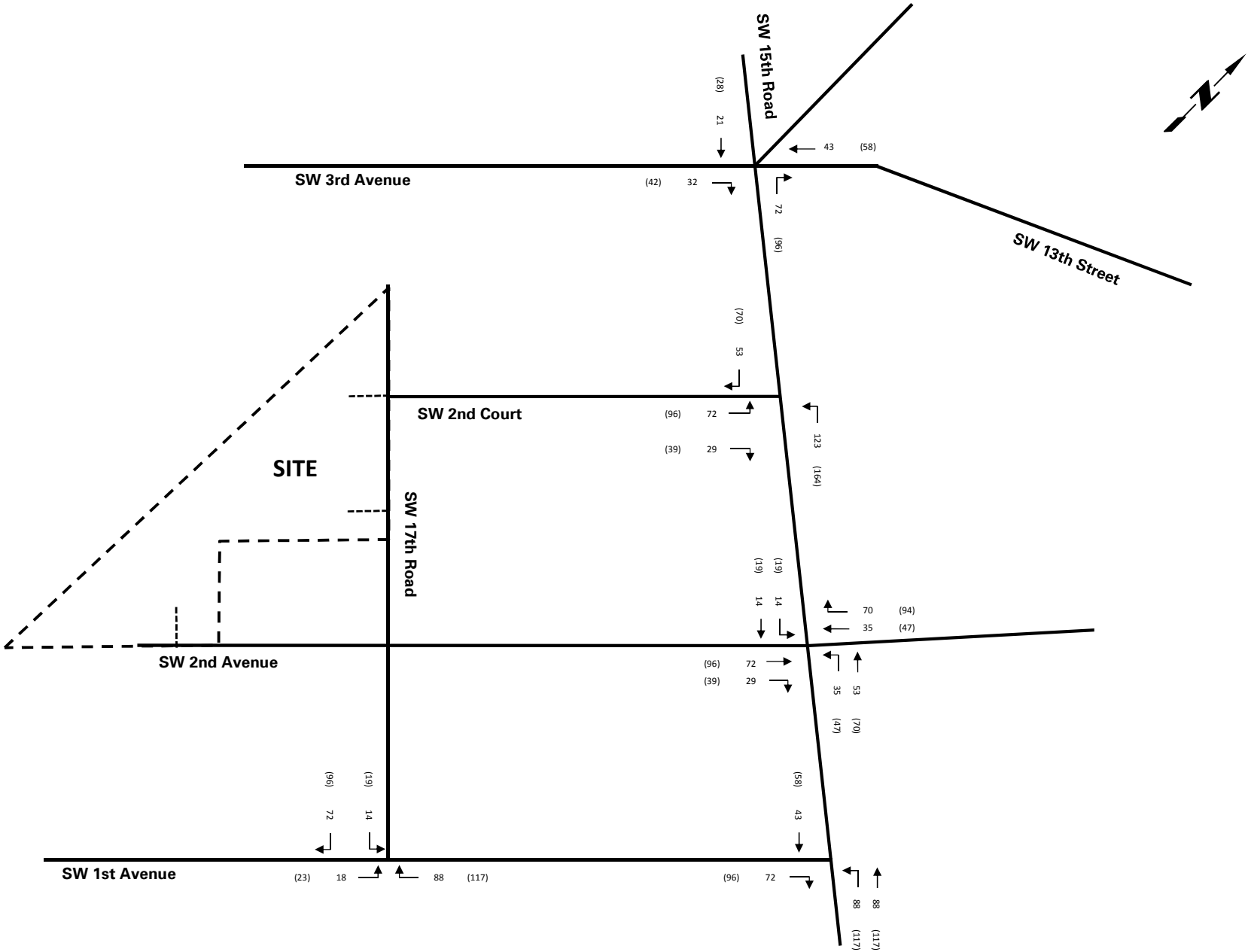

LEGEND
2020 (Phase 1)
(##) 2022 (Phase 2)

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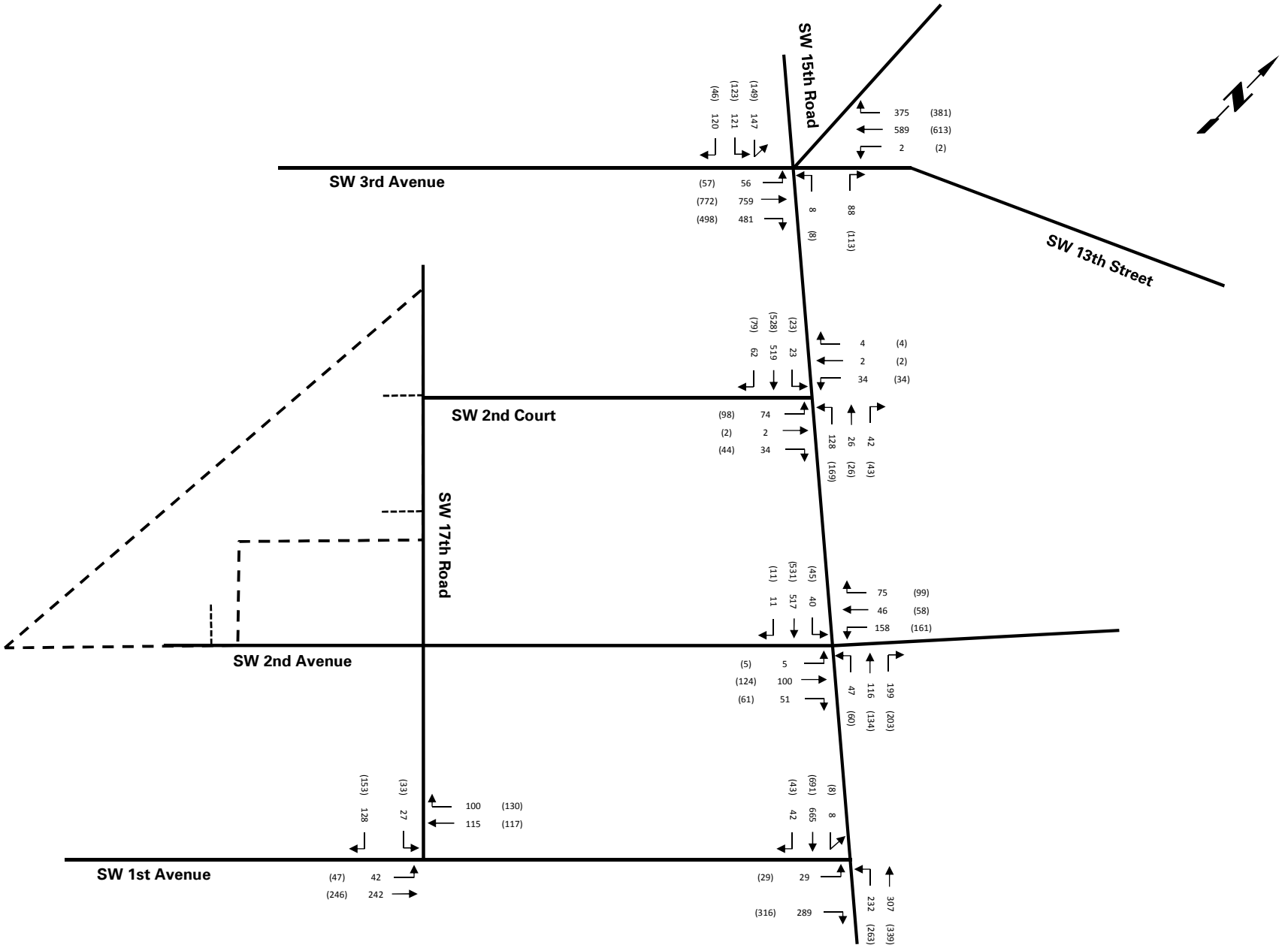
Project	Figure Title	Project No.	
BRICKELL PREPARATORY ACADEMY MIAMI MIAMI-DADE COUNTY FLORIDA	PROJECT TRAFFIC ASSIGNMENT	330026301 Date 5/15/2018 Scale NTS	FIGURE 6



LEGEND
2020 (Phase 1)
(##) 2022 (Phase 2)

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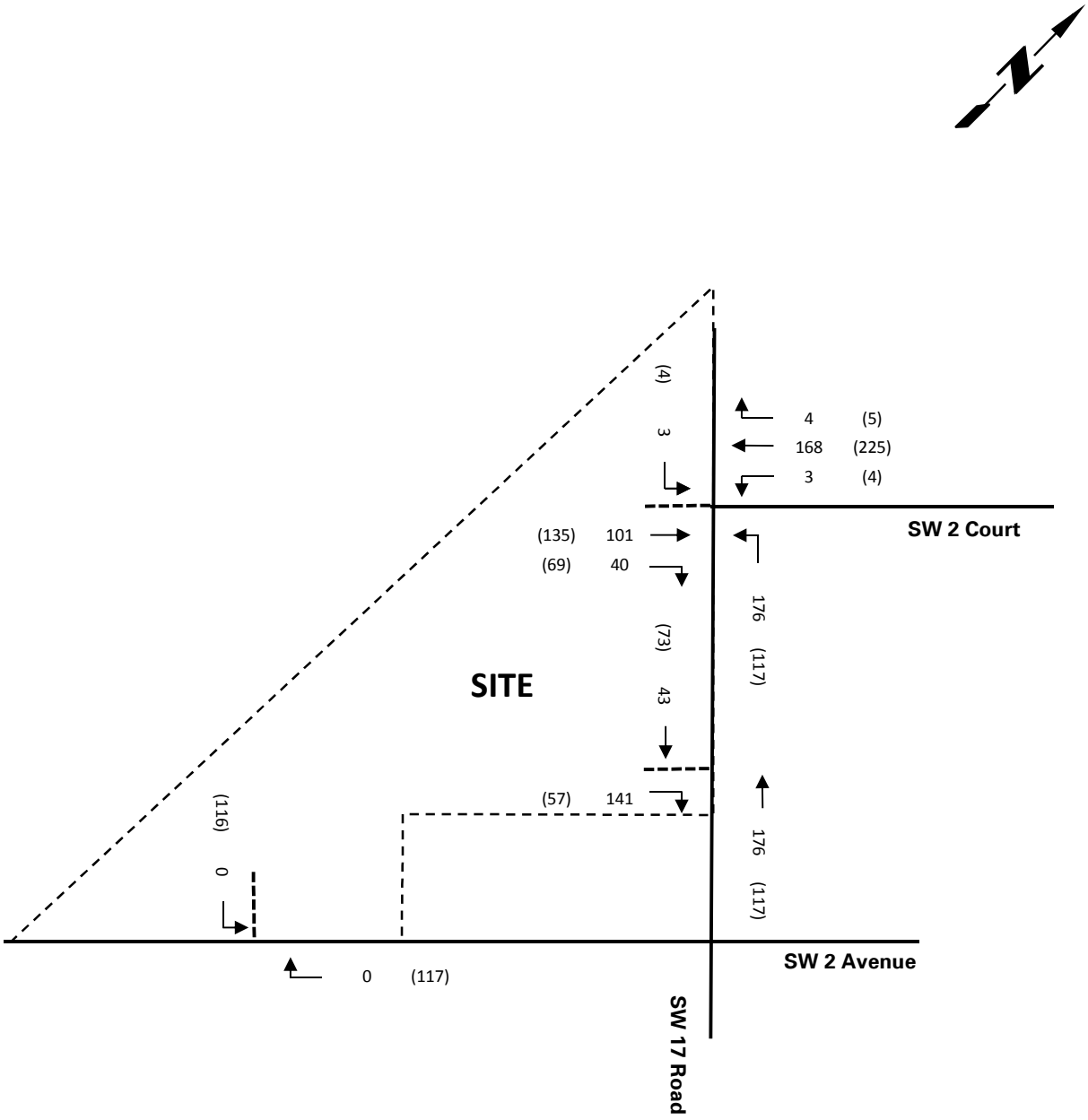
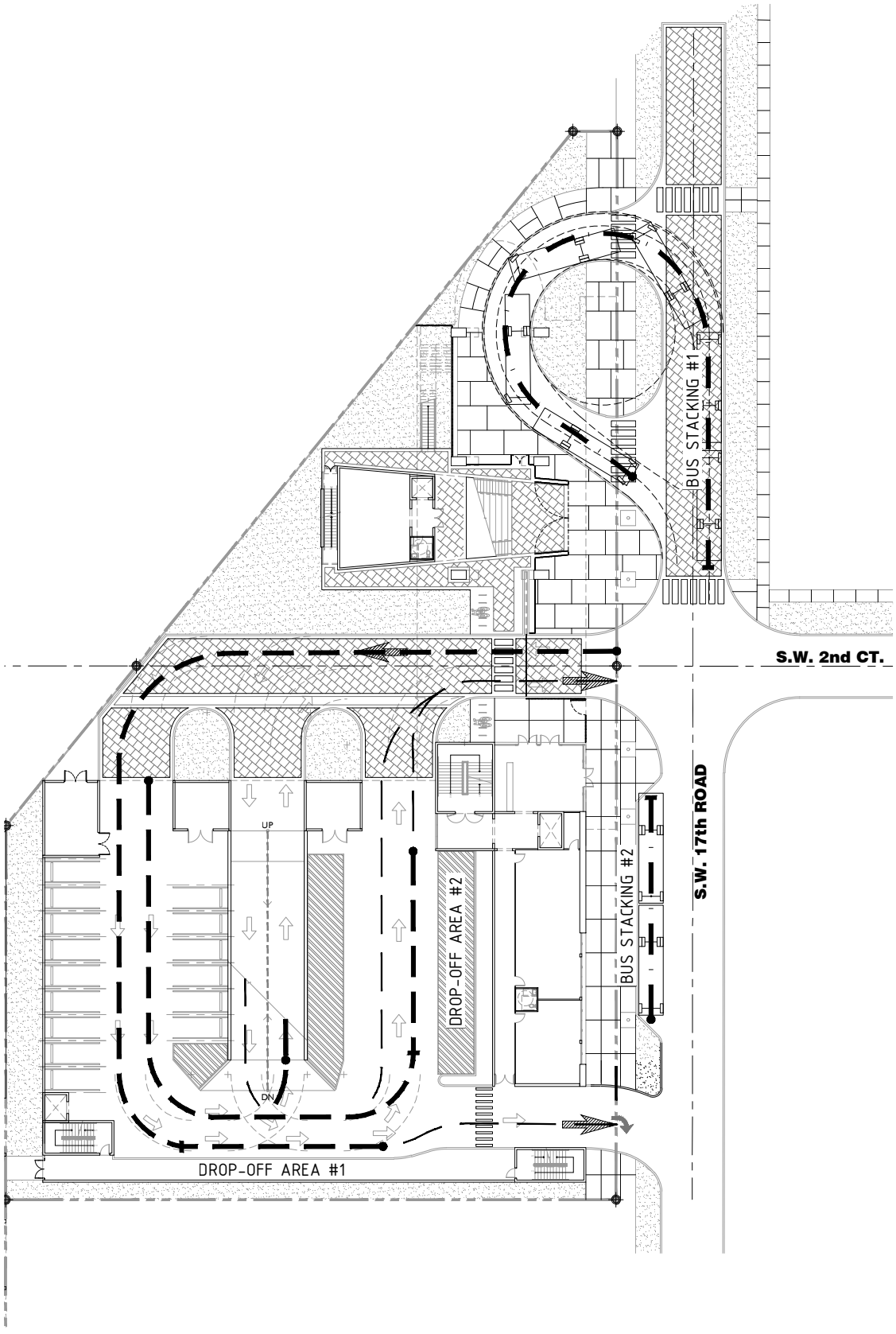
Project	Figure Title	Project No.	
BRICKELL PREPARATORY ACADEMY	BUILD TRAFFIC VOLUMES	330026301	FIGURE 7
MIAMI		Date 5/15/2018	
MIAMI-DADE COUNTY / FLORIDA		Scale NTS	



LEGEND	
##	2020 (Phase 1)
(##)	2022 (Phase 2)
	Driveway

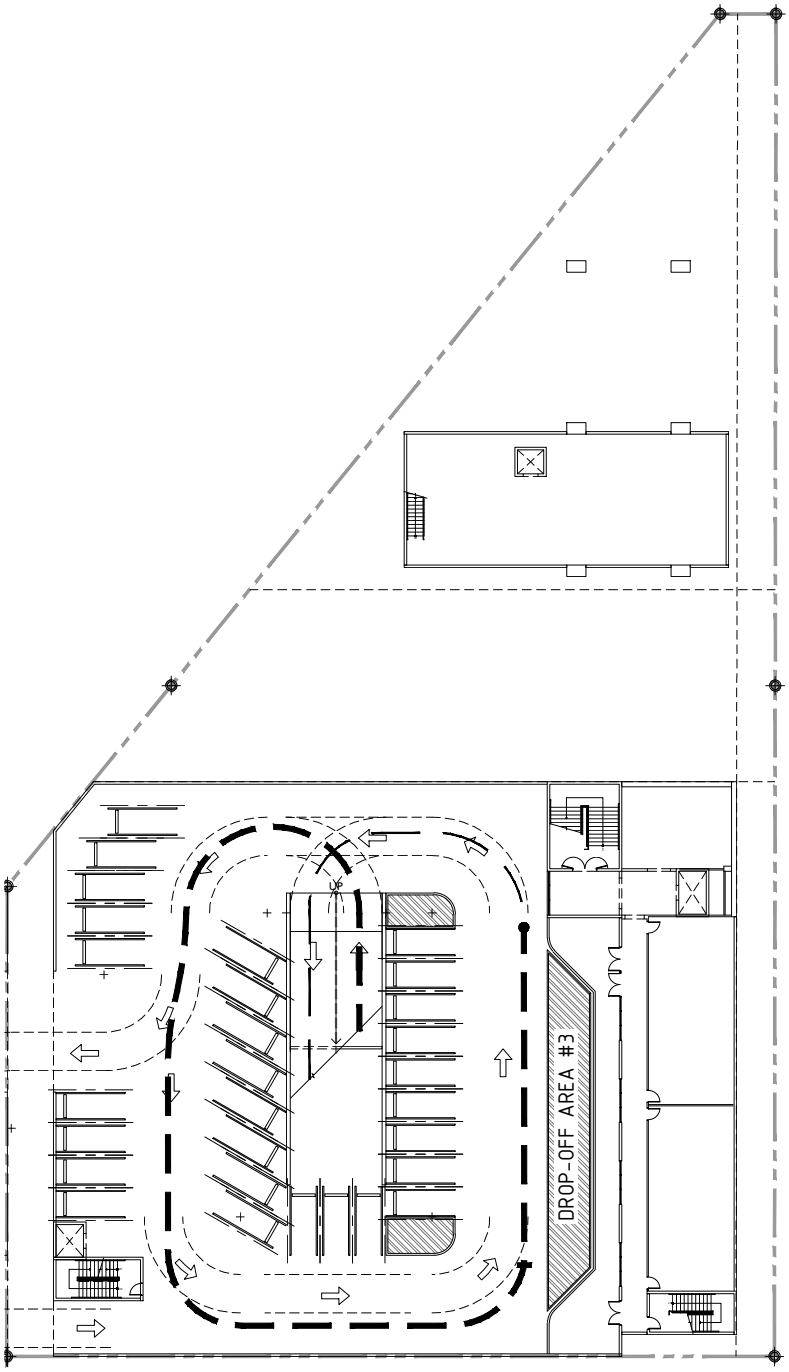
LANGAN ENGINEERING & ENVIRONMENTAL SERVICES 15150 NW 79th Court, Suite 200, Miami Lakes, FL 33016 P: 786.264.7221 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project: BRICKELL PREPARATORY ACADEMY MIAMI MIAMI-DADE COUNTY / FLORIDA	Figure Title: SITE DRIVEWAY VOLUMES	Project No.: 330026301 Date: 5/15/2018 Scale: NTS	FIGURE 8

APPENDIX B
SITE PLANS



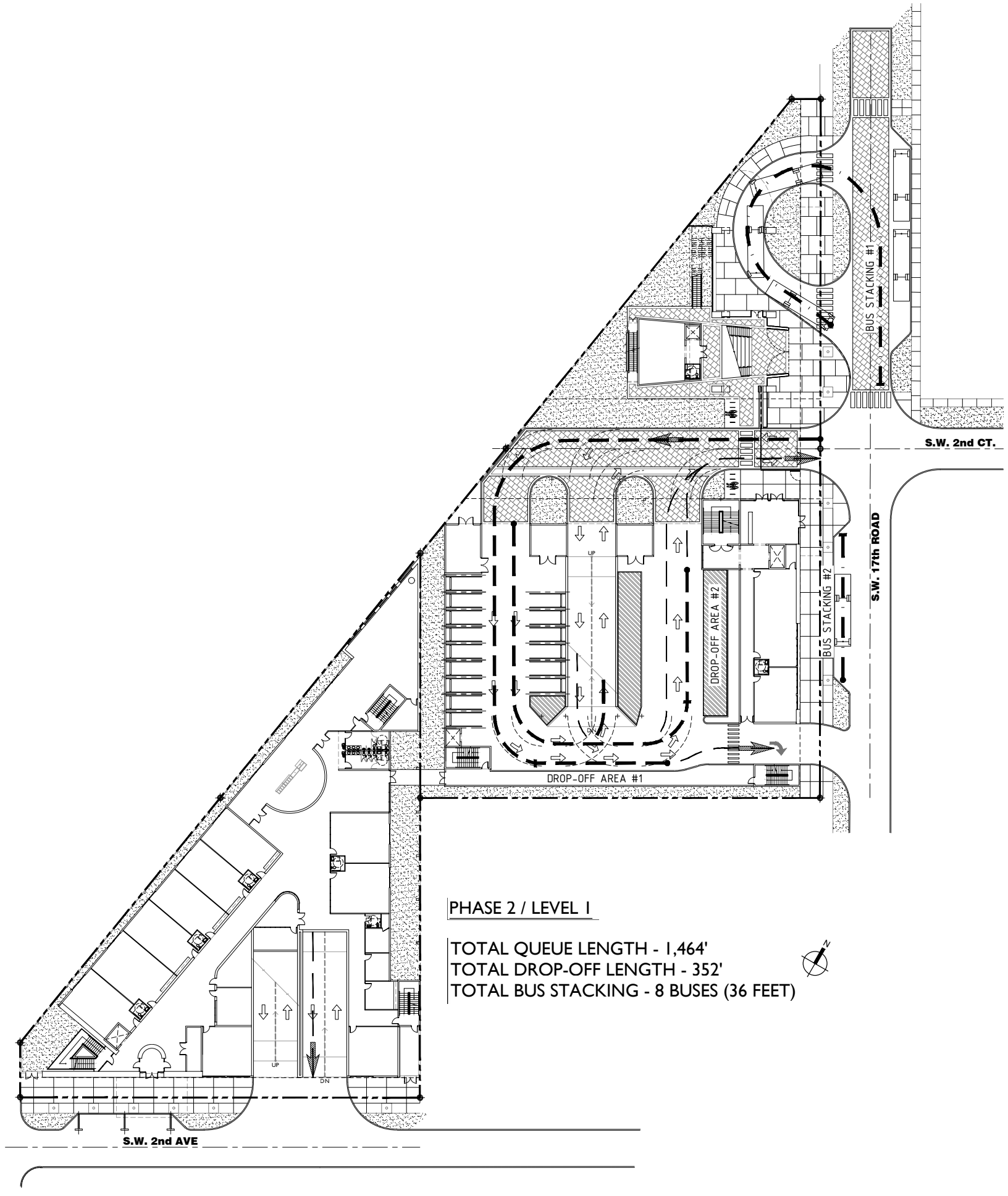
PHASE I / LEVEL I

TOTAL QUEUE LENGTH - 1,049'
TOTAL DROP-OFF LENGTH - 220'
TOTAL BUS STACKING - 8 BUSES (36 FEET)



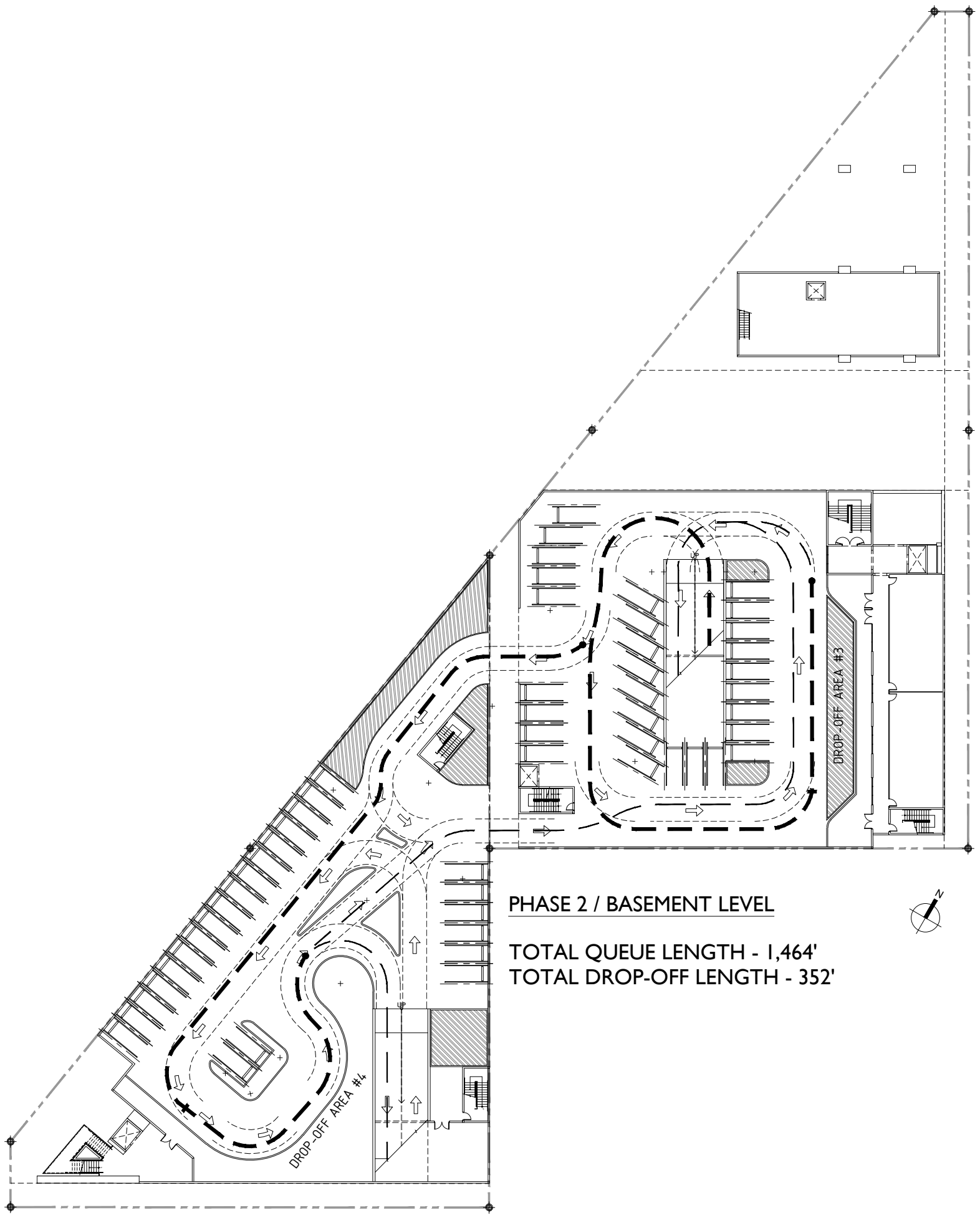
PHASE 1 / BASEMENT LEVEL

TOTAL QUEUE LENGTH - 1,049'
TOTAL DROP-OFF LENGTH - 220'



PHASE 2 / LEVEL 1

TOTAL QUEUE LENGTH - 1,464'
TOTAL DROP-OFF LENGTH - 352'
TOTAL BUS STACKING - 8 BUSES (36 FEET)



PHASE 2 / BASEMENT LEVEL

TOTAL QUEUE LENGTH - 1,464'
TOTAL DROP-OFF LENGTH - 352'

APPENDIX C
METHODOLOGY LETTER

13 April 2017

Gerard Osborne, P.E.
Miami-Dade County Department of Transportation and Public Works
Traffic Engineering Division
111 NW 1st Street, Suite 1510
Miami, FL 33120-6064

Re: Traffic Analysis Methodology
Brickell Preparatory Academy
Miami, Florida
Langan Project No.: 330026301

Dear Mr. Osborne:

Langan Engineering and Environmental Services, Inc. (Langan) has been retained to prepare a traffic impact study for a proposed K-12 charter school. This site is directly east of Interstate 95 and north of SW 2nd Avenue in Miami, Florida. The proposed 3,000-student school will be built in two phases with the first phase comprised of 1,500 students (9th through 12th grades) on the northern portion of the site. The other phase of 1,500 students (K through 8th grades) will be constructed on the southern portion of the site. A basement level will be constructed to facilitate drop-off and pick-up operations. A copy of the preliminary site plan is included as an attachment. **Figure 1** below shows the site location. This letter summarizes the traffic impact analysis methodology for this project based on the discussion at our meeting on April 12, 2017.

Figure 1 – Aerial Photograph of Site

Surrogate School

Field observations and traffic data will be collected at Silver Palms Somerset Academy charter school located at 23255 SW 115th Avenue, Miami, Florida. This K-12 school will serve as the surrogate school for this project.

Data

- We will collect trip generation data at the surrogate school during the morning peak hours (7:00-9:00 AM).
- Vehicle accumulation data will be collected on a Wednesday afternoon at the surrogate school between 1:30 and 3:00 PM. All K-5 classes are dismissed at 2:00 PM on Wednesdays.
- Intersection turning movements will be collected between 7:00 and 9:00 AM at the following intersections:
    - SW 15th Road and SW 2nd Court
    - SW 15th Road and SW 2nd Avenue
    - SW 15th Road and SW 1st Avenue
    - SW 17th Road and SW 1st Avenue
    - SW 13th Street and SW 15th Road and SW 3rd Avenue
- FDOT seasonal factors will be used to convert the traffic data into peak season data.

Analysis

- The analysis will be done for a 3,000 student K-12 charter school that will be built in two phases. Analysis will be prepared for enrollments of 1,500 and 3,000 students.
- Surrogate school data will be used to calculate morning peak-hour trip generation and afternoon vehicle accumulation for the proposed school.
- Project trips will be assigned to the study intersections based on the existing roadway network and an even directional distribution based on data from other schools.
- We will apply transit, bicycle and pedestrian utilization reduction factors to the trip generation and vehicle accumulation analysis to account for the urban location and availability of transit in the area.
- Traffic volumes will be adjusted by an annual growth rate factor to develop build-out years (Phase 1: 2020; Phase 2: 2022) volumes. A 0.5 percent growth rate will be used if historical FDOT volumes indicate a rate of 0.5 percent or less.
- Synchro or Highway Capacity Software will be used to analyze the intersections for existing and future morning peak-hour conditions. Overall levels of service will be summarized for each intersection and will be based on Miami-Dade County adopted LOS standards.
- Afternoon vehicle accumulation analysis will be prepared using the county's vehicle accumulation form and data from the surrogate school.
- The report will include the county's traffic operations form and a traffic operations plan for the two phases of the project.

We hope that you find this methodology acceptable. Please contact me to verify your approval or to discuss any proposed changes.

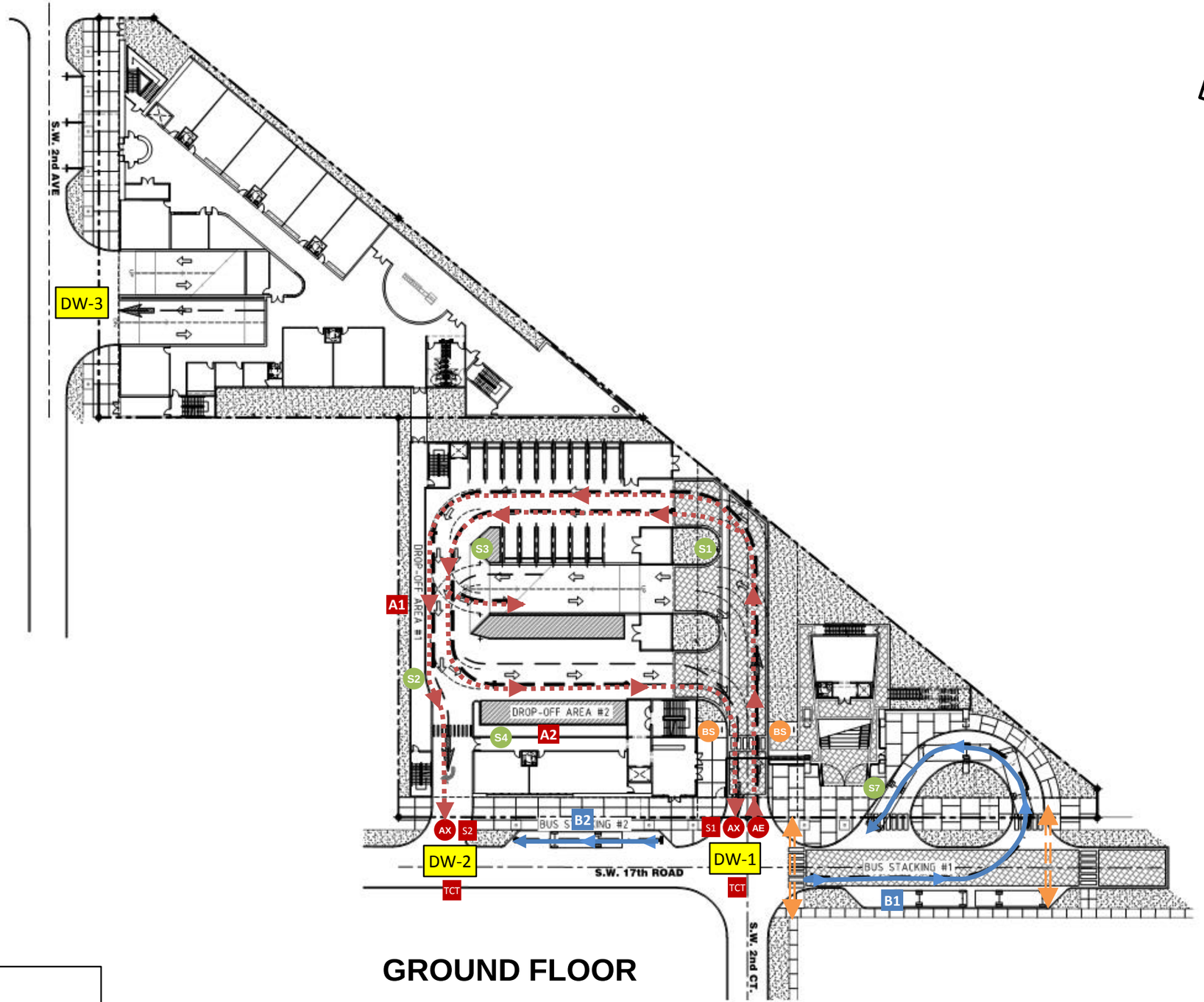
Sincerely,
Langan Engineering and Environmental Services, Inc.

John P. Kim, P.E., PTOE
Senior Project Manager

JPK:jpk
Attachment – Site Plans

Florida Certificate of Authorization No. 6601

APPENDIX D
TRAFFIC OPERATIONS PLAN



GROUND FLOOR

Legend

- **A**-Automobile Loading Route
- **B**-Bus Pick-up/Drop-off
- **S**-Service Delivery Route
- **BP**-Pedestrian/Bicycle Route
- A — Auto Loading Zone
- B — Bus Loading Zone
- AE — Automobile Entrance Point
- AX — Automobile Exit Point
- B1 — Bus Access Point
- S1 — Service Access Point
- BS — Bicycle Storage
- S — School Personnel
- TCT — Traffic Control Technician

Date	Description	No.
REVISIONS		

SIGNATURE DATE SIGNED

JOHN P. KIM
PROFESSIONAL ENGINEER FL Lic. No. 62400

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ENGINEERING & ENVIRONMENTAL SERVICES
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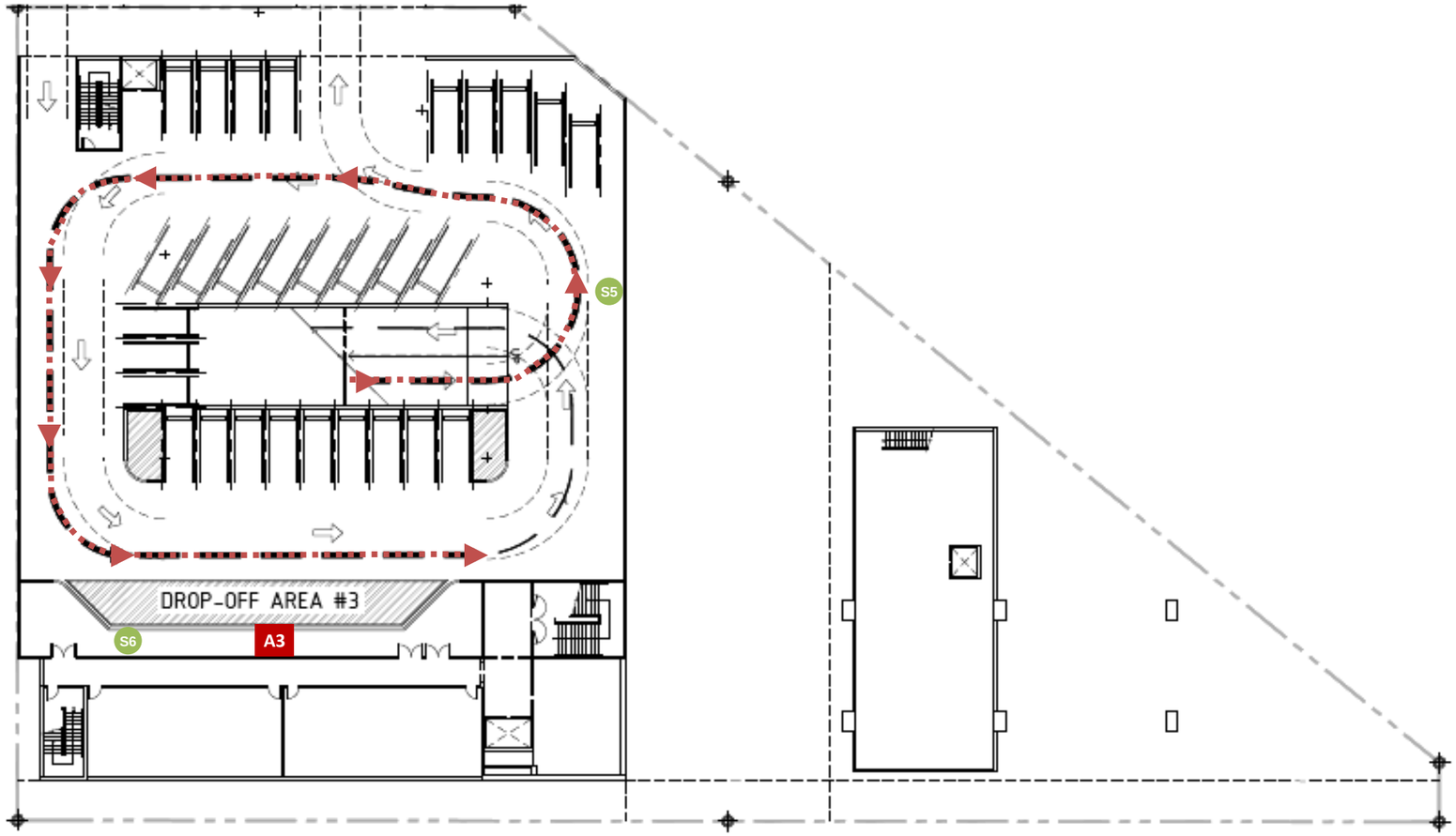
P: 786.264.7221 F: 786.264.7201 www.langan.com
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project
Brickell Preparatory Academy
UNINCORPORATED
MIAMI-DADE COUNTY FLORIDA

Drawing Title
TRAFFIC CONTROL PLAN
Phase I – 1,500 Students

Project No.	330029301
Date	5 July 2017
Scale	Not to Scale
Drawn By	JPK
Checked By	M. CARR
Submittal Date	21 July 2017

Drawing No.
TCP – 1.1



BASEMENT

Legend

- **A**-Automobile Loading Route
- **B**-Bus Pick-up/Drop-off
- **S**-Service Delivery Route
- **BP**-Pedestrian/Bicycle Route
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Date	Description	No.
REVISIONS		

SIGNATURE DATE SIGNED

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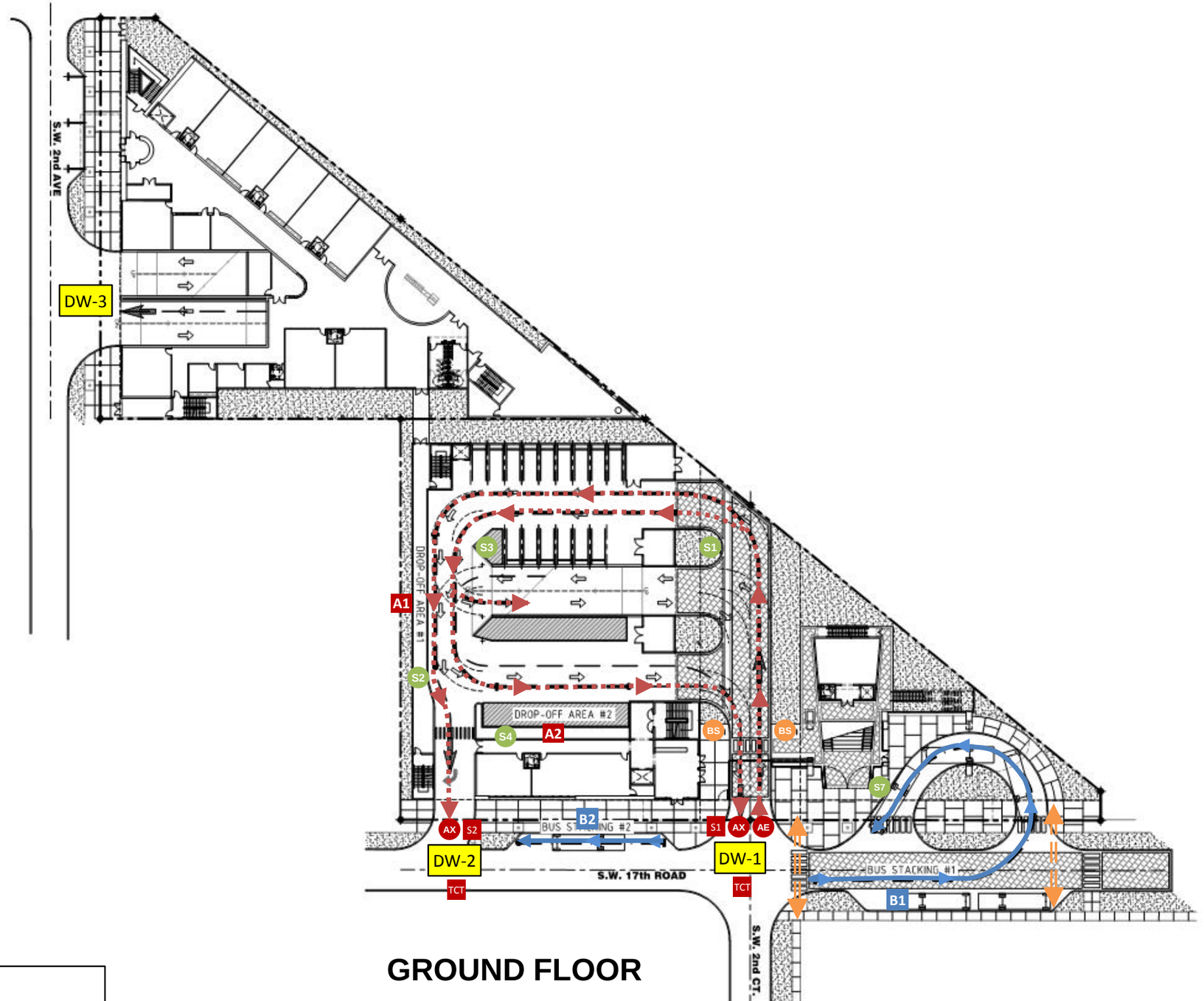
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project
Brickell Preparatory Academy
UNINCORPORATED
MIAMI-DADE COUNTY FLORIDA

Drawing Title
TRAFFIC CONTROL PLAN
Phase I – 1,500 Students

Project No.	330026301
Date	5 July 2017
Scale	Not to Scale
Drawn By	JPK
Checked By	M. CARR
Submittal Date	21 July 2017

Drawing No.
TCP – 1.2



GROUND FLOOR

Legend

- **A**-Automobile Loading Route
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- TCT — Traffic Control Technician

Date	Description	No.
REVISIONS		

SIGNATURE DATE SIGNED

JOHN P. KIM
PROFESSIONAL ENGINEER FL Lic. No. 62400

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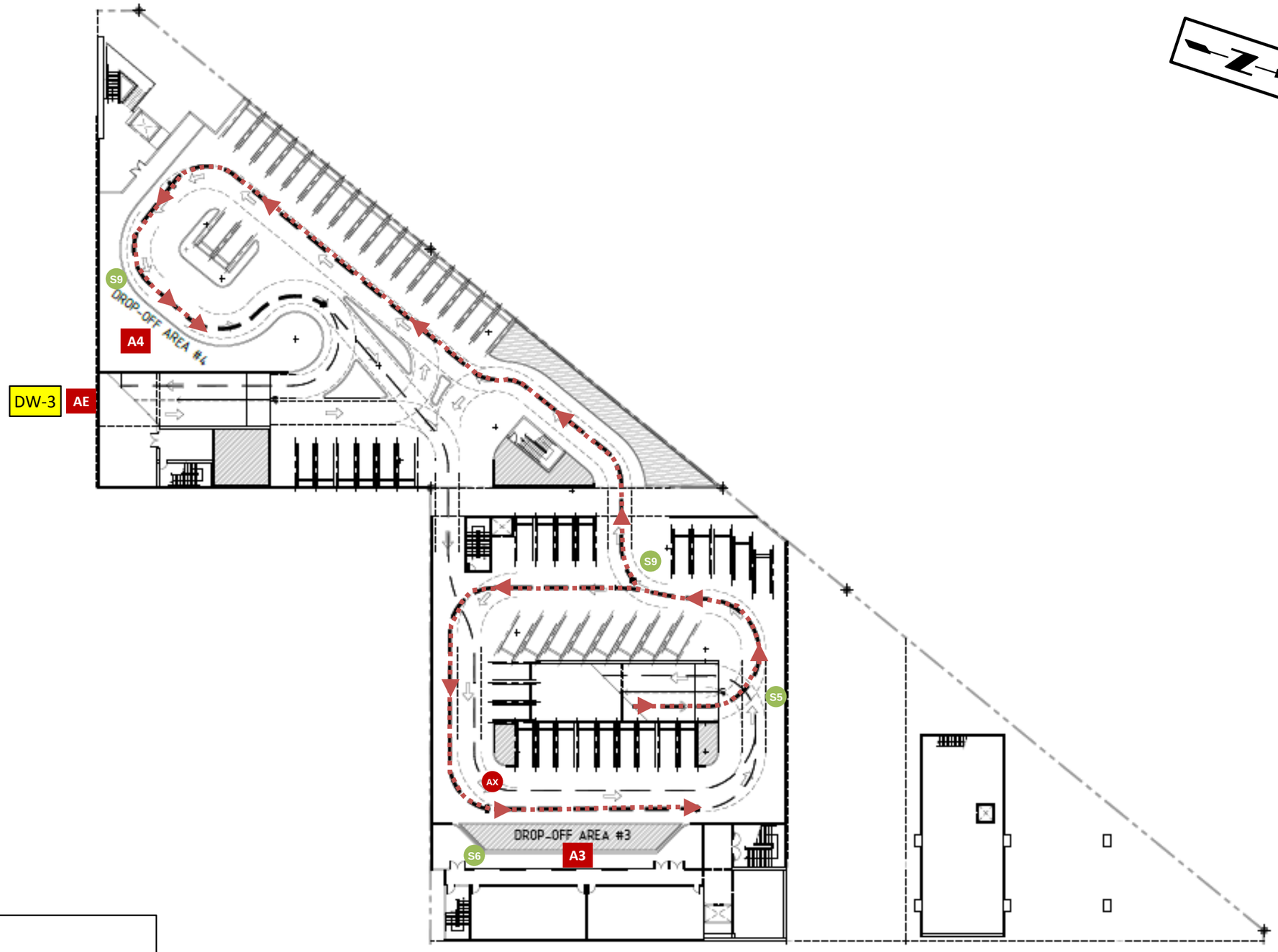
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project
Brickell Preparatory Academy
UNINCORPORATED
MIAMI-DADE COUNTY FLORIDA

Drawing Title
TRAFFIC CONTROL PLAN Phase II – 3,000 Students

Project No.	330029301
Date	5 July 2017
Scale	Not to Scale
Drawn By	JPK
Checked By	M. CARR
Submittal Date	21 July 2017

Drawing No.
TCP – 1.3



BASEMENT

Legend

- **A**-Automobile Loading Route
- **B**-Bus Pick-up/Drop-off
- **S**-Service Delivery Route
- **BP**-Pedestrian/Bicycle Route
- A — Auto Loading Zone
- B — Bus Loading Zone
- AE — Automobile Entrance Point
- AX — Automobile Exit Point
- B1 — Bus Access Point
- S1 — Service Access Point
- BS — Bicycle Storage
- S — School Personnel

Date	Description	No.

REVISIONS

SIGNATURE DATE SIGNED

JOHN P. KIM
PROFESSIONAL ENGINEER FL Lic. No. 62400

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FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project
Brickell Preparatory Academy
UNINCORPORATED
MIAMI-DADE COUNTY FLORIDA

Drawing Title
TRAFFIC CONTROL PLAN Phase II – 3,000 Students

Project No. **330026301**
Date **5 July 2017**
Scale **Not to Scale**
Drawn By **JPK** | Checked By **M. CARR**
Submittal Date **21 July 2017**

Drawing No. **TCP – 1.4**

School Traffic Operation Plan (TOP) Form

This form has been created by Miami-Dade County Department of Transportation and Public Works (DTPW) to document a school's traffic operations and commitments. All form worksheets and illustrations have been completed for the operation at Brickell Preparatory Academy (Phase 1 – 1,500 Student 6-12 grade)

Contents

1.0 Definitions

For the purpose of this document, the following definitions for terms used herein shall apply to all sections unless the context clearly indicates otherwise:

(1) *Educational program:* A planned curriculum with specific instructional beginning, progression and ending for the enrolled students.

(2) *Schedule Shift:* A period of time when students are anticipated to be at the school facility to engage in programed activities

(2.1) *Instructional Shift*: A period of time when students enrolled in a particular educational program must be in attendance. The beginning of this shift is often referred to as the "first bell" and the ending of this shift is often referred to as a "last bell."

(2.2) *Early Arrival Shift*: A period of time when students are allowed into the facility prior to the start of an instructional shift. This period may include other types of programs (e.g. breakfast, before care, etc.).

(2.3) *After School Shift*: A period of time when students are allowed to remain at the facility after the end of all instructional shifts. This period may include other types of programs (e.g. after care, extra-curricular, sports, etc.)

(2.4) *Study Hall:* A scheduled period of time, which begins with the school's first instructional shift (arrival time) and ends at the school's last instructional shift (dismissal time), where car-pooling students that arrive prior to their instructional shift and/or are dismissed earlier than their pick-up time (due to co-passenger students) are provided free of charge care.

(2.5) *Arrival Period*: A time or period of time when students come to school to participate in an educational program. The time or period of time is set by the beginning of one or more instructional shifts.

(2.6) *Dismissal Period:* A time or period of time when students leave school due to the end of an educational program. The time or period of time is set by the end of one or more instructional shifts.

(3) *Vehicle Route*: A maneuverable continuous vehicle path that provides access to the stacking and staging spaces.

(4) *Vehicle Stacking Space:* A space in which pickup and delivery of children can take place.

(5) *Vehicle Queuing Space***:** A space where a vehicle can idle while waiting to enter into a stacking space.

(6) *Vehicle Staging Space*: A space where a service vehicle may remain idle while providing their service.

(7) *Parked Stacking Space*: A parking space designated for student drop-off and pick-up use during the arrival and dismissal operations.

(8) *By-Pass Lane**:*** A minimum 10 foot wide vehicle travel lane adjacent to stacking and queuing spaces whose direction of travel is in the same direction as the stacking and queuing vehicles.

(9) *Open Parking Space*: A parking space that has no assigned use during the arrival and dismissal operations.

(10) *Staff Parking Space*: A parking space designated for staff use during the school's hours of operation.

(12) *Student Parking*: A parking space designated for student use during the school's hours of operation.

(13) *Pedestrian Route***:** A continuous exclusive walking path that provides access from the public right-of-way to a school building entrance.

(14) *Bicycle Route:* A continuous biking path that provides access from the public right-of-way to the school's bicycle storage.

(15) *Bicycle Storage*: A designated area where bicycles may be secured and remain in place for the school day.

(16) *School Traffic Personnel:* A school employee who reinforces the onsite traffic operations by guiding vehicles and pedestrians along designated routes within the school property.

(17) *Traffic Control Officer:* An individual who has been authorized by a police department to direct traffic or operate a traffic control device as per section 316.640 of Florida Statute.

(18) *School Special Event:* An organized event at a school facility that generates a peak vehicle trip count or a vehicle accumulation demand greater than the traffic parameters established by the school traffic operation plan.

(19) *School Crossing:* An official school student crossing on an adopted school route plan of a school safety program. Any crossing not so officially designated is termed a "pedestrian crossing."

2.0 School Location

Specify the school's name, site address, folio and hours of operation within the **Table 2.0-1**.

3.0 Educational Program and Enrollment

A school provides instructions to students through its *educational programs* (Elementary, Middle, High, ect*)*. Specify the school's educational programs and maximum enrollment by completing **Table 3.0-1**. Indicate the school's programs by entering the student enrollment associated with each program and/or enter "None" for student enrollment if a particular program does not operate at the school.

School may offer educational programs that vary substantially from programs typically offered in schools. Provide a description of the school's educational programs in **Table 3.0-2.**

4.0 School Schedule

A school schedule is composed of *schedule shifts*. A schedule shift may be classified as either a non-instructional shift (Breakfast Program, After School Care, or Extra Curricular Activity) or an *instructional shift*. The educational programs are scheduled by *instructional shifts*. Therefore, every schedule will include at least one instructional shift. A school's *arrival period*, as well as *dismissal period*, should not exceed 1.5 hours because of its effect on school speed zone hours. The different educational programs may be scheduled independently or concurrently, but an educational program may not be divided by multiple instructional shifts. Instructional shifts must be scheduled a minimum of 20 minutes apart to have their vehicle accumulation events be considered as independent events. The schedule may also include an *early arrival shift* and an *after school shift*. A school that proposes to operate with multiple instructional shifts must enact the multiple shifts from inauguration, regardless of student enrollment. For example, a K-8 school, which has two educational programs (K-5 and 6-8), may operate with one or two instructional shifts, but may not operate with three instructional shifts.

A school's schedule may often be influenced by the site's vehicle accumulation capacity and other off-site traffic operational factors. A site's vehicle accumulation capacity and other factors are typically defined within a traffic study conducted by the school.

Schools that operate with multiple instructional shifts are required to operate a "*study hall*" period. The study hall period begins with the school's first arrival time and ends at the school's last dismissal time. This period must be provided free of charge for car-pooling students that arrive prior to their instructional shift and/or are dismissed earlier than their pick-up time due to co-passenger students.

4.1 School Schedule Commitment

The school schedule will maintain the maximum number of students allowed per instructional shift and operate with the number of instructional shifts stated in **Table 4.1-1,** with a minimum 20 minute separation between any two instructional shifts. Parental vehicular access to onsite passenger loading facilities shall be open a minimum of 30 minutes prior to all arrival and dismissal time(s).

The school will operate a "study hall" period when its schedule has more than one instructional shift.

4.2 School Schedule Example

The school is required to maintain the schedule commitment at all times. This commitment will define the school staggered shift schedule format, but actual start and end times may differ. Provide an example of the school schedule at full capacity in **Table 4.2-1**.

School may offer educational programs that vary substantially from programs typically offered in schools. Provide a description of the school's schedule shifts in **Table 4.22.**

5.0 Vehicle Operations

A school has various vehicle types that access the site regularly. These vehicle types may include automobiles, school buses, and service vehicles such as food delivery trucks and trash collecting trucks. The various vehicles require clear traffic patterns to maintain the site's safety and maneuverability when accessing the site. These patterns are termed *vehicle routes*. Once vehicles are on site, they accumulate as parking, *stacking*, *queuing*, or *staging*. The following section will formally define these vehicle routes and spaces within the TOP.

5.1 Vehicle Routes

Vehicle routes consist of an entry, a pathway, and an exit. All routes must provide the appropriate geometry (e.g. lane width, effective radii) to accommodate the intended vehicles. The route should minimize the number of conflict throughout its pathway. Each portion of the route must be identified using the following formats stated below.

Vehicle Route Naming Format: Each route must be assigned a name that indicates its intended "purpose" and "service". Use the abbreviations contained in **Table 5.1-1** to appropriately name the routes. For example, a curbside automobile passenger loading zone that is to be used by parents dropping-off elementary school students would be named "A(K-5)".

Table 5.1-1 Route Name Key

"Purpose"		"Service"	
A	**Automobile Loading Zone**	**K-12**	**Student Passengers –specify grade range**
B	**Bus Loading Zone**	**Food**	**Food Delivery**
P	**Parking**	**Trash**	**Garbage Pick-up**
S	**Service Vehicle**	**Delivery**	**General Delivery**
PED	**Pedestrian Pathway**		
BIK	**Bicycle Pathway**		

Route Entry and Exit Label Format: Each route's entry and exit location must be assigned a label. Each location label will be composed of an abbreviated location type and a number. Use **Table 5.1-2** to provide the correct abbreviated location type and number. **Route names, entries, and exits must be illustrated in a plan view and attached to this document**.

Table 5.1-2 Route Entry and Exit Location - Labeling Key

Location Type		Number
DW	**Driveway accessing the site**	**Number all the locations sequentially for each "location type" set. Start with the number 1. Begin numbering from the NE corner of the plan and increase the numbers sequentially in a clock-wise direction until all locations are labeled.**
P	**Point located within a plan**	
E	**Pedestrian and Bicycle Entrance and/or Exit**	

Example: The entry and exit locations for a site that has two driveways (DW-1, DW-2) connecting to the public right-of-way, an internal drive aisle (P-1) connecting to the adjacent property, and a sidewalk connecting the main entrance (E-1) to the public right-of-way (E-2); will have three vehicle locations labeled as DW-1, DW-2, and P-1 and two pedestrian locations labeled E1 and E2.

Entry and exit points along the vehicle route may have operational restrictions. The restrictions may be in place permanently or only during the times when the TOP is in effect. Use **Table 5.1-3** to better understand the restriction notes to be used throughout this form.

Table 5.1-3 Route Restrictions Note Key

Restriction Note	Description
Right In Only	**Vehicles may only enter into this location via a right turn movement.**
One Way Only	**All traffic is moving solely in one direction at this location.**
Right Out Only	**Vehicles may only exit out of this location via a right turn movement.**

5.2 Vehicle Stacking and Staging Spaces

All stacking and staging spaces must be accessed through a vehicle route. The stacking, queuing, and staging spaces along a vehicle route may not impede the operations of any other concurrently operating vehicle route or space operation. For example, a stacked or queued vehicle may not be located within the maneuvering "back-out" area of a parking space designated as a *parked stacking space*.

Vehicle stacking spaces within passenger loading zones must have a passenger landing area for entering and exiting the vehicle. A 10 foot minimum *by-pass lane* must be provided for passenger loading zones whose combined stacking and queuing spaces are longer than 3 consecutive vehicle spaces. Parking spaces may be designated as stacking spaces. Access to the vehicle stacking spaces must be opened 30 minutes before the first scheduled time of use.

5.3 Automobile Curbside Passenger Loading Zone Operations

An automobile passenger loading zone is a designated area for stacking automobiles and vans to load and unload passengers to and from a prescribed landing area. The pedestrian landing area for automobile loading zones must be located on the right side of the vehicle and should have a minimum size of 5 feet by 5 feet. Typically these landing areas are considered curbside passenger loading areas because the vehicles stack adjacent to a curbed sidewalk. Automobile passenger loading zones that have a by-pass lane should taper the head of the zone (the front space of the stacking line) towards the by-pass lane to merge the exiting stacked vehicles into the by-pass lane.

Specify if the school operates one or more automobile passenger loading zones by providing information of the vehicle route that provides access to the zone within the **Table 5.3-1**, or indicate no zone by entering "None" for the route name. **The vehicle route must be illustrated in a plan view and attached to this document**.

The use of automobile passenger loading zones are limited to automobiles and vans only. Each vehicle space is measured at 22 feet long and 8 feet wide. If the school operates with an automobile passenger loading zone, indicate its capacity in **Table 5.3-2.** Enter zero (0) for the total capacity if the school does not have an automobile passenger loading zone.

5.4 School Bus Passenger Loading Zone Operations

A school bus passenger loading zone is a designated zone for stacking school buses to load and unload passengers to and from a prescribed landing area. The pedestrian landing area for school bus passenger loading zones must be located on the right side of the vehicle and should have a minimum size of 8 feet by 8 feet.

Specify if the school operates one or more school bus passenger loading zones by providing information of the vehicle route that provides access to the zone within the **Table 5.4-1**, or indicate no zone by entering "None" for the route name. **The vehicle route must be illustrated in a plan view and attached to this document**.

The use of school bus passenger loading zones are limited to only school buses during arrival and dismissal operations. Each bus vehicle space measures 50 feet long and 10 feet wide unless otherwise stated in **Table 5.4a-2**. If the school operates with a school bus passenger loading zone, indicate its capacity in **Table 5.4-2.** Enter zero (0) for the total capacity if the school does not have a school bus passenger loading zone.

The school's bus operations may be voluntary, recommended in a traffic study, and/or mandated by zoning resolution. Complete the section 5.4a to specify the minimum number of school buses required to operate at the school.

5.4a School Bus Commitment

Specify the school's busing commitment by completing **Table 5.4a-1** and **Table 5.4a-2**. Report zero (0) number of buses if the school has no busing commitment. Standard bus types have been provided in **Table 5.4a-2** for convenience.

The school is required to provide a school bus program that maintains the required minimum bus ridership participation reported in **Table 5.4a-1** and **Table 5.4a-2**; and manage the program to ensure that bus accumulations are contained within the designated bus stacking and queuing spaces.

5.5 Parking Stall Operations

All parking spaces used during the school's operation must be identified. The parking spaces must meet all governing parking stall codes.

Parked stacking spaces must have an unobstructed vehicle route to access these spaces during arrival and dismissal shifts. Parking spaces that have no assigned use during arrival and dismissal operations due to vehicle route obstructions will be termed *open parking spaces*. A cross parking agreement is required for all off-site privately managed parking spaces.

Specify the school's parking space usage and quantities by completing **Table 5.5-1**. **The parking spaces must be illustrated in a plan view and attached to this document.**

If the school has parked stacking spaces or *student parking spaces*, specify the route information that provides access to those spaces within the **Table 5.5-2**, or indicate no routes by entering "None" for the route name. **The vehicle route must be illustrated in a plan view and attached to this document.**

5.6 Service Vehicle Operations

Schools often require service vehicles to enter and maneuver within the site to provide facility services. Specify the school's service vehicle routes by providing the vehicle route information within the **Table 5.6-1**, or indicate no routes by entering "None" for the route name. **The vehicle route must be illustrated in a plan view and attached to this document.**

6.0 Pedestrian and Bicycle Facilities

A *pedestrian route* originating from the public right-of-way must be provided to all school building entrances. The route should be a minimum of 5 feet wide and have all the required elements when crossing a motorized vehicle travel lane (crosswalk, pedestrian ramp, etc.). All student entrances to the school site and buildings must be labeled by using **Table 5.1-2**. Only the main entrance is required to be labeled when multiple buildings are interconnected with pedestrian pathways.

Bicycle routes that are combined with pedestrian traffic must have an eight (8) foot minimum width.

For sites that have a bicycle storage area and that only provide standard pedestrian path widths are required to instate the following policy: "*All bicyclists must dismount their bicycles and walk their bicycles to the designated bicycle storage when entering or exiting to the school site.*"

Specify the pedestrian routes by providing the route information within the **Table 6.0-1**. **The pedestrian route must be illustrated in a plan view and attached to this document.**

Specify the bicycle routes by providing the route information within the **Table 6.0-2**, or indicate no routes by entering "None" for the route name. **The bicycle route must be illustrated in a plan view and attached to this document.**

Identify the *bicycle storage* locations throughout the site by labeling each location according to the following instructions: Each location must be label with the letters BS followed by a number (e.g. BS1). Begin with number 1. Do not repeat any location labels. List the storage locations and its capacity in **Table 6.0-3**. Enter "none" for the location to indicate no bicycle storage. **The bicycle storage location must be illustrated in a plan view and attached to this document.**

7.0 Onsite Traffic Personnel & Devices

A functioning school TOP requires adherence to the prescribed routes and operations. Often *school traffic personnel* is required to guide pedestrians within passenger loading zones, assist with traffic flow at route conflict points, and encourage adherence to prescribed routes in areas not defined by the infrastructure's geometry. The school shall supply staff to direct any vehicles which may stage or stack in through travel lanes or non-designated parking areas within the public rights-of-way onto the school site.

School traffic personnel should be stationed and assigned the following duties at the corresponding locations: assist students entering and exiting vehicles at loading zones (loading); guide traffic at points where active route pathways intersect (conflict); and encourage adherence at pathway decision points along the route (diverting). School traffic personnel school be on duty at least 30 minutes prior to scheduled shifts.

Identify the school traffic personnel stations throughout the site by labeling each station according to the following instructions: Each station must be label with the letter S followed by a number (e.g. S1). Begin with number 1. Do not repeat any station labels. List the station locations and personnel duties in **Table 7.0-1**. Enter "none" for the location to indicate no school traffic personnel stations. **The school traffic personnel stations must be illustrated in a plan view and attached to this document.**

Temporary traffic control devices (e.g. parking cones) may be useful at points within the routes that are not defined by the infrastructure's geometry and where school traffic personnel are not stationed. These temporary traffic devices may not be used in the public right-of-way unless managed by a traffic control officer.

Identify the temporary traffic control devices located throughout the site by labeling each location according to the following instructions: Each location must be label with the letter C followed by a number (e.g. C1). Begin with number 1. Do not repeat any station labels. List the device location and description in **Table 7.0-2.** Enter "none" for the location to indicate that no devices will be used. **The device locations must be illustrated in a plan view and attached to this document.**

7.1 School Personnel Commitment

The school is required to provide the school traffic personnel and temporary traffic control devices stated in **Table 7.0-1** and **Table 7.0-2**. School traffic personnel must direct the school's traffic into onsite by-pass lanes or any available vehicle staging spaces during peak traffic generation periods to create additional onsite accumulation capacity when school related vehicle are queuing within non-designated areas of the right-of-way and/or through travel lanes.

8.0 School Zone and Crossings

School zones may be provided for schools to alert drivers that they will be traveling near a school. A school zone is composed of signs and pavement markings. The school zone may also include a speed zone component that requires driver to reduce their travel speed. The speed zone is often enacted to provide control at designated *school crossings* serving elementary and middle schools. The school speed zone component may be composed of signs, pavement markings, and flashing beacons (as per the governing standard). The speed zone is required to be installed for school crossings when applicable.

Indicate the existing and/or proposed school crossing(s) serving the school site within **Table 8.0-1**. Enter "none" for the road name to indicate that no school crossing exists or is proposed for this school. **The school crossing locations must be illustrated in a plan view and attached to this document.**

Indicate the existing and/or proposed school zones associated with the school site within **Table 8.0-2**. Enter "none" for the road name to indicate that no school zone exists or is proposed for this school. Indicate if a speed zone is a component of the school zone by marking the appropriate check box.

A school speed zone should not have a continuous duration longer than two hours. If this school is served by a school speed zone, then specify the zone's posted hours in **Table 8.0-3**. Enter "none" for the period to indicate no posted hours. Use DTPW School Speed Zone Policy to determine appropriate time periods. Note that if the school is located in close proximity to an existing school speed zone (less than 300 feet), the zone and time period may be modified to cover both schools. Indicate below if the times are paired. If paired, provide areal illustrating adjacent school(s).

9.0 Offsite Traffic Control Officers

Enforcement of the TOP routes and operations within the public right-of-way may only be performed by *traffic control officers* as per section 316.640 of the Florida Statute. Traffic control officers should be present during the start of each semester (first two weeks) to reinforce the traffic patterns established by the TOP. Specify the number, location, and duration of traffic control officers required to adequately enforce the TOP within **Table 9.0-1**.

The school's endorsement of the traffic control officer enforcement plan must be stated within **Table 9.0-2**.

A traffic control officer may be stationed at an intersection to improve vehicle delays and operations during a peak traffic demand period. Schools may be required to provide the officer, or may do so voluntarily. Specify the commitment, location, and duration of the traffic control officer stations required for LOS management within **Table 9.0-3**. Enter "none" for the intersection to indicate that no officer management is voluntarily offered or required.

9.1 State Crossing Guards

A school may implement a crossing guard program to assist young (K-8) students traversing school crossings when walking to and from school. A crossing guard is not traffic control officer, unless the guard is trained as a traffic control officer and employed subject to the conditions described in section 316.640, F.S. Specify the crossing guard stations and duration within **Table 9.1-1**. Enter "none" for the station to indicate that no crossing guards are stationed to serve the school.

10.0 School Special Events

Planned school events, such as sporting events, school assemblies, and ceremonies may often generate larger peak traffic volumes and vehicle accumulations than a typical school day. The school will be required to manage the traffic impacts produced by a *school special event* within its neighborhood. Specify the special event types and provisions selected to mitigate its traffic impacts within **Table 10.0-1.** Enter "none" for event type to indicate that no school special events will planned at the school site.

11.0 Parent Traffic Handbook

The Parent Traffic Handbook specifies a parent's child safety responsibilities and commitment to achieve an efficient traffic flow during the arrival and dismissal times. Parents of new students should be issued a Parent Traffic Handbook containing this TOP and are required to sign a contract with the school, which includes adherence to pick-up and drop-off procedures. Additionally, parents should be reissued the Parent Traffic Handbook and contract each new school year. The handbook and contract should be reviewed and signed during Parent Orientation prior to the start of school. **A sample of the Parent Traffic Handbook and contact must be attached to this document.**

12.0 Table Worksheets

Complete this worksheet as per the instructions provided in sections 1.0 through 11.0 of this document.

Educational Program Worksheet

Table 2.0-1 School Location

Name	Brickell Preparatory Academy (Phase 1 – 1,500 Student 6-12 grade)
Address	
Folio Number(s)	01-4139-101-0010, 01-4139-101-0020, 01-4138-104-0020, 01-4138-104-0010, 01-4138-001-5550, 01-4138-001-3890, 01-4138-001-3900
Hours of Operations	7:00 am – 6:00 pm

Table 3.0-1 Educational Program and Enrollment

Educational Program	Grades	Average Maximum Enrollment per Grade	Maximum Enrollment
Middle	6th – 8th	+/-210	640
High	9th –12th	+/- 215	860
Total Facility Enrollment			1500

Table 3.0-2 Educational Program Descriptions

Educational Program	Description
N/A	STANDARD HIGH-PERFORMANCE PROGRAM

School Schedule Worksheet

Table 4.1-1 School Schedule Commitment

Period	Maximum Number of Students Allowed within a Schedule Shift	Minimum Number of Instructional Shifts at Full Enrollment
Arrival	860	2
Dismissal	860	2

Table 4.2-1 School Schedule Example at Full Capacity

Schedule Shift	Grades	Days [M, Tu, W, Th, F]	Begin Time	End Time	No. of Students
1st Shift – (Arrival)	9th –12th	M-F	7:00 AM	7:30 AM	860
2nd Shift – (Arrival)	6th – 8th	M-F	7:30 AM	8:00 AM	640
1st Shift – (Dismissal)	9th –12th	M-F	2:30 PM	3:00 PM	860
2nd Shift – (Dismissal)	6th – 8th	M-F	3:00 PM	3:30 PM	640

Automobile Passenger Curbside Loading Zone Worksheet

Table 5.3-1 Automobile Loading Zone Route Description

Route Name	Entrance Point	[X]	Restriction	Exit Point	[X]	Restriction	Description
A-1 (6th -12th)	DW-1	☐	Right In Only	DW-2	☑	Right Out Only	
		☐	One Way Only		☑	One Way Only	
A-2 (6th -12th)	DW-1	☐	Right In Only	DW-1	☐	Right Out Only	
		☐	One Way Only		☐	One Way Only	
A-3 (6th -12th)	DW-1	☐	Right In Only	DW-1	☐	Right Out Only	
		☐	One Way Only		☐	One Way Only	
		☐	Right In Only		☐	Right Out Only	
		☐	One Way Only		☐	One Way Only	

Table 5.3-2 Automobile Loading Zone Vehicle Capacity Summary (Automobiles and Vans)

Route Name	Stacking Space Capacity	Queuing Spaces Capacity	Total Capacity
A-1	17	9 (Adjacent Open Parking)	26
A-2	12	6 (Adjacent Open Parking)	18
A-3	15	29 (Adjacent Open Parking)	47

Bus Passenger Loading Zone Worksheet

Table 5.4-1 School Bus Passenger Loading Zone Route Description

Route Name	Entrance Point	[X]	Restriction	Exit Point	[X]	Restriction
B-1 (6th – 12th)	Bus Drop-Off #1	☐	Right In Only	Bus Drop-Off #1	☐	Right Out Only
		☐	One Way In		☐	One Way Out
B-2 (6th – 12th)	Bus Drop-Off #2	☐	Right In Only	Bus Drop-Off #2	☐	Right Out Only
		☐	One Way In		☐	One Way Out
		☐	Right In Only		☐	Right Out Only
		☐	One Way In		☐	One Way Out

Table 5.4-2 Bus Loading Zone Vehicle Accumulation Capacity Summary

Route Name	Stacking Spaces Capacity	Queuing Spaces Capacity	Bus Capacity
B-1	6	N/A	6
B-2	2	N/A	2

Table 5.4a-1 Bussing Commitment

Minimum Number of Inbound Buses Required During the Arrival Period	Minimum Number of Outbound Buses Required During the Dismissal Period
3	3

Table 5.4a-2 Bus Type and Capacity

Quantity	Bus Type	Length	Width	Capacity	Student Total by Type
	S-BUS-11 [S-BUS-36]	45	10	65	195
	S-BUS-12 [S-BUS-40]	50	10	84	#
				Students Grand Total	195

Parking Summary Worksheet

Table 5.5-1 Proposed Parking Use Summary

Parking Space Use	Onsite			Offsite
	Req. by Code	Req. by Study	Provided	Provided
Staff	90		100	N/A
Student	15		43	N/A
Parked Stacking	N/A		N/A	N/A
Open	43		20	N/A
Total	148		163	N/A

Table 5.5-2 Parked Loading Zone Route Description

Route Name	Entrance Point	[X]	Restriction	Exit Point	[X]	Restriction
P-1 (11th – 12th)	DW-1	☐	Right In Only	DW-1	☐	Right Out Only
		☐	One Way In		☐	One Way Out
		☐	Right In Only		☐	Right Out Only
		☐	One Way In		☐	One Way Out
		☐	Right In Only		☐	Right Out Only
		☐	One Way In		☐	One Way Out

Service Vehicle, Pedestrian and Bicycle Routes Worksheet

Table 5.6-1 Service Vehicle Route Description

Route Name	Entrance Point	[X]	Restriction	Exit Point	[X]	Restriction	Operation Period (times)
S-1	DW-1	☐	Right In Only	DW-1/DW-2	☐	Right Out Only	10am-1pm / 4pm-6pm
		☐	One Way In		☐	One Way Out	
S-2	DW-1	☐	Right In Only	DW-1/DW-2	☐	Right Out Only	10am-1pm / 4pm-6pm
		☐	One Way In		☐	One Way Out	
		☐	Right In Only		☐	Right Out Only	
		☐	One Way In		☐	One Way Out	

Table 6.0-1 Pedestrian Route Description

Route Name	Off-Site Entrance Point	Building Entrance Point	Operation Period (0:00-0:00)
PED-1	N/A	E-1	7:00 – 8:00 AM / 2:30 – 3:30 PM
PED-2	N/A	E-2	7:00 – 8:00 AM / 2:30 – 3:30 PM

Table 6.0-2 Bicycle Route Description

Route Name	Entrance Point	Exit Point	Operation Period (0:00 – 0:00)
BIK-1	E-1	E-1	7:00 – 8:00 AM / 2:30 – 3:30 PM
BIK-2	E-2	E-2	7:00 – 8:00 AM / 2:30 – 3:30 PM

Table 6.0-3 Bicycle Storage Description

Bicycle Storage Location	Bicycle Capacity
BS-1	10
BS-2	10

Traffic Personnel, Equipment, Enforcement Worksheet

Table 7.0-1 Onsite School Traffic Personnel

Station Label	Personnel Duties (Loading, Conflict, Diverting)	Arrival Duty Period		Dismissal Duty Period	
		From	To	From	To
S1	Guide Traffic / Diverting	6:45	8:15	2:15	3:45
S2	Unloading / Loading Vehicles	6:45	8:15	2:15	3:45
S3	Guide Traffic / Diverting	6:45	8:15	2:15	3:45
S4	Unloading / Loading Vehicles	6:45	8:15	2:15	3:45
S5	Guide Traffic / Diverting	6:45	8:15	2:15	3:45
S6	Unloading / Loading Vehicles	6:45	8:15	2:15	3:45
S7	Unloading / Loading Buses	6:45	8:15	2:15	3:45
TCT	Traffic Control Techncians	6:45	8:15	2:15	3:45

Table 7.0-2 Onsite Temporary Traffic Control Devices

Location Label	Device Description (Number of Cones, Barricades, or Gates)	Arrival Duty Period		Dismissal Duty Period	
		From	To	From	To

Table 8.0-1 School Crossing Description

Location	East-West	North-South	Mid-Block	Uncontrolled
SW 17th Road north of SW 2nd Court	☐	☐	☑	☑
SW 17th Road and SW 2nd Court	☑	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

Table 8.0-2 School Zone Description

Location	Existing [x]	Proposed [x]	Signs & Markings [x]	Speed Zone [x]	Flashing Beacons [x]
SW 17th Road	☐	☑	☑	☑	☑
SW 2nd Court	☐	☑	☑	☑	☑
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐

Table 8.0-3 School Speed Zone Posted Times **Is this a paired Zone? No** ☑ **Yes** ☐

Days of the Week	Arrival Period AM		Dismissal Period PM	
	From	To	From	To
Monday	6:45	8:15	2:15	3:45
Tuesday	6:45	8:15	2:15	3:45
Wednesday	6:45	8:15	2:15	3:45
Thursday	6:45	8:15	2:15	3:45
Friday	6:45	8:15	2:15	3:45

Table 9.0-1 Traffic Control Officer Enforcement Plan

No. of Officers	Intersection or Segment with Boundaries	Arrival	Dismissal	Semester Start	All Year
	SW 17th Road at SW 2nd Court	☑	☑	☑	☐
	SW 17th Rd. at school's south Driveway	☑	☑	☑	☐
		☐	☐	☐	☐
		☐	☐	☐	☐

Table 9.0-2 Traffic Control Officer Reinforcement Commitment

Check Box [x]	Reinforcement Commitment
☑	By marking this check box, the school agrees to provide all necessary resources to ensure traffic control officers will be present to enforce the TOP, as stated in **Table 9.0-1.**

Table 9.0-3 Traffic Control Officer Stations for LOS Management Plan

Intersection	Required (R) Voluntarily (V)	Arrival Time Period		Dismissal Time Period	
		From	To	From	To
SW 15th Road and SW 2nd Avenue	V	7:00	8:00	2:30	3:30

Table 9.1-1 Crossing Guard Stations

No. of Guards	School Crossing Station (Intersection)	Arrival AM Time Period		Dismissal PM Time Period	
		From	To	From	To
2	SW 17th Road and SW 2nd Court	7:00	8:00	2:30	3:30

Table 10.0-1 School Special Event Provisions

Event Type	Provision Descriptions
REQUIRED ON-SITE EVENTS	Events requiring School attendance shall not coincide with peak traffic and shall be divided into sessions so as no to exceed parking available.

13.0 Attachments

The following documents are required to be attached to the TOP.

1. A plan sheet showing all required illustrations stated within this TOP form. (It is suggested that TOP operations that vary by instructional shifts be shown in independent plan sheets.)
2. A Parent Traffic Handbook and contract sample.
3. A Cross-parking agreement (if utilized).

14.0 Endorsement

By signing below, the school owner agrees to operate the school as prescribed within this document and will uphold all commitments specified herein.

Signature

Date

Print Owner Name

School Traffic Operation Plan (TOP) Form

This form has been created by Miami-Dade County Department of Transportation and Public Works (DTPW) to document a school's traffic operations and commitments. All form worksheets and illustrations have been completed for the operation at Brickell Preparatory Academy (Phase 2 – 3,000 Student K-12 grade)

Contents

1.0 Definitions

For the purpose of this document, the following definitions for terms used herein shall apply to all sections unless the context clearly indicates otherwise:

(1) *Educational program:* A planned curriculum with specific instructional beginning, progression and ending for the enrolled students.

(2) *Schedule Shift:* A period of time when students are anticipated to be at the school facility to engage in programed activities

(2.1) *Instructional Shift*: A period of time when students enrolled in a particular educational program must be in attendance. The beginning of this shift is often referred to as the "first bell" and the ending of this shift is often referred to as a "last bell."

(2.2) *Early Arrival Shift*: A period of time when students are allowed into the facility prior to the start of an instructional shift. This period may include other types of programs (e.g. breakfast, before care, etc.).

(2.3) *After School Shift*: A period of time when students are allowed to remain at the facility after the end of all instructional shifts. This period may include other types of programs (e.g. after care, extra-curricular, sports, etc.)

(2.4) *Study Hall:* A scheduled period of time, which begins with the school's first instructional shift (arrival time) and ends at the school's last instructional shift (dismissal time), where car-pooling students that arrive prior to their instructional shift and/or are dismissed earlier than their pick-up time (due to co-passenger students) are provided free of charge care.

(2.5) *Arrival Period*: A time or period of time when students come to school to participate in an educational program. The time or period of time is set by the beginning of one or more instructional shifts.

(2.6) *Dismissal Period:* A time or period of time when students leave school due to the end of an educational program. The time or period of time is set by the end of one or more instructional shifts.

(3) *Vehicle Route*: A maneuverable continuous vehicle path that provides access to the stacking and staging spaces.

(4) *Vehicle Stacking Space:* A space in which pickup and delivery of children can take place.

(5) *Vehicle Queuing Space***:** A space where a vehicle can idle while waiting to enter into a stacking space.

(6) *Vehicle Staging Space*: A space where a service vehicle may remain idle while providing their service.

(7) *Parked Stacking Space*: A parking space designated for student drop-off and pick-up use during the arrival and dismissal operations.

(8) *By-Pass Lane**:*** A minimum 10 foot wide vehicle travel lane adjacent to stacking and queuing spaces whose direction of travel is in the same direction as the stacking and queuing vehicles.

(9) *Open Parking Space*: A parking space that has no assigned use during the arrival and dismissal operations.

(10) *Staff Parking Space*: A parking space designated for staff use during the school's hours of operation.

(12) *Student Parking*: A parking space designated for student use during the school's hours of operation.

(13) *Pedestrian Route***:** A continuous exclusive walking path that provides access from the public right-of-way to a school building entrance.

(14) *Bicycle Route:* A continuous biking path that provides access from the public right-of-way to the school's bicycle storage.

(15) *Bicycle Storage*: A designated area where bicycles may be secured and remain in place for the school day.

(16) *School Traffic Personnel:* A school employee who reinforces the onsite traffic operations by guiding vehicles and pedestrians along designated routes within the school property.

(17) *Traffic Control Officer:* An individual who has been authorized by a police department to direct traffic or operate a traffic control device as per section 316.640 of Florida Statute.

(18) *School Special Event:* An organized event at a school facility that generates a peak vehicle trip count or a vehicle accumulation demand greater than the traffic parameters established by the school traffic operation plan.

(19) *School Crossing:* An official school student crossing on an adopted school route plan of a school safety program. Any crossing not so officially designated is termed a "pedestrian crossing."

2.0 School Location

Specify the school's name, site address, folio and hours of operation within the **Table 2.0-1**.

3.0 Educational Program and Enrollment

A school provides instructions to students through its *educational programs* (Elementary, Middle, High, ect*)*. Specify the school's educational programs and maximum enrollment by completing **Table 3.0-1**. Indicate the school's programs by entering the student enrollment associated with each program and/or enter "None" for student enrollment if a particular program does not operate at the school.

School may offer educational programs that vary substantially from programs typically offered in schools. Provide a description of the school's educational programs in **Table 3.0-2.**

4.0 School Schedule

A school schedule is composed of *schedule shifts*. A schedule shift may be classified as either a non-instructional shift (Breakfast Program, After School Care, or Extra Curricular Activity) or an *instructional shift*. The educational programs are scheduled by *instructional shifts*. Therefore, every schedule will include at least one instructional shift. A school's *arrival period*, as well as *dismissal period*, should not exceed 1.5 hours because of its effect on school speed zone hours. The different educational programs may be scheduled independently or concurrently, but an educational program may not be divided by multiple instructional shifts. Instructional shifts must be scheduled a minimum of 20 minutes apart to have their vehicle accumulation events be considered as independent events. The schedule may also include an *early arrival shift* and an *after school shift*. A school that proposes to operate with multiple instructional shifts must enact the multiple shifts from inauguration, regardless of student enrollment. For example, a K-8 school, which has two educational programs (K-5 and 6-8), may operate with one or two instructional shifts, but may not operate with three instructional shifts.

A school's schedule may often be influenced by the site's vehicle accumulation capacity and other off-site traffic operational factors. A site's vehicle accumulation capacity and other factors are typically defined within a traffic study conducted by the school.

Schools that operate with multiple instructional shifts are required to operate a "*study hall*" period. The study hall period begins with the school's first arrival time and ends at the school's last dismissal time. This period must be provided free of charge for car-pooling students that arrive prior to their instructional shift and/or are dismissed earlier than their pick-up time due to co-passenger students.

4.1 School Schedule Commitment

The school schedule will maintain the maximum number of students allowed per instructional shift and operate with the number of instructional shifts stated in **Table 4.1-1,** with a minimum 20 minute separation between any two instructional shifts. Parental vehicular access to onsite passenger loading facilities shall be open a minimum of 30 minutes prior to all arrival and dismissal time(s).

The school will operate a "study hall" period when its schedule has more than one instructional shift.

4.2 School Schedule Example

The school is required to maintain the schedule commitment at all times. This commitment will define the school staggered shift schedule format, but actual start and end times may differ. Provide an example of the school schedule at full capacity in **Table 4.2-1**.

School may offer educational programs that vary substantially from programs typically offered in schools. Provide a description of the school's schedule shifts in **Table 4.22.**

5.0 Vehicle Operations

A school has various vehicle types that access the site regularly. These vehicle types may include automobiles, school buses, and service vehicles such as food delivery trucks and trash collecting trucks. The various vehicles require clear traffic patterns to maintain the site's safety and maneuverability when accessing the site. These patterns are termed *vehicle routes*. Once vehicles are on site, they accumulate as parking, *stacking*, *queuing*, or *staging*. The following section will formally define these vehicle routes and spaces within the TOP.

5.1 Vehicle Routes

Vehicle routes consist of an entry, a pathway, and an exit. All routes must provide the appropriate geometry (e.g. lane width, effective radii) to accommodate the intended vehicles. The route should minimize the number of conflict throughout its pathway. Each portion of the route must be identified using the following formats stated below.

Vehicle Route Naming Format: Each route must be assigned a name that indicates its intended "purpose" and "service". Use the abbreviations contained in **Table 5.1-1** to appropriately name the routes. For example, a curbside automobile passenger loading zone that is to be used by parents dropping-off elementary school students would be named "A(K-5)".

Table 5.1-1 Route Name Key

"Purpose"		"Service"	
A	**Automobile Loading Zone**	**K-12**	**Student Passengers –specify grade range**
B	**Bus Loading Zone**	**Food**	**Food Delivery**
P	**Parking**	**Trash**	**Garbage Pick-up**
S	**Service Vehicle**	**Delivery**	**General Delivery**
PED	**Pedestrian Pathway**		
BIK	**Bicycle Pathway**		

Route Entry and Exit Label Format: Each route's entry and exit location must be assigned a label. Each location label will be composed of an abbreviated location type and a number. Use **Table 5.1-2** to provide the correct abbreviated location type and number. **Route names, entries, and exits must be illustrated in a plan view and attached to this document**.

Table 5.1-2 Route Entry and Exit Location - Labeling Key

Location Type		Number
DW	**Driveway accessing the site**	**Number all the locations sequentially for each "location type" set. Start with the number 1. Begin numbering from the NE corner of the plan and increase the numbers sequentially in a clock-wise direction until all locations are labeled.**
P	**Point located within a plan**	
E	**Pedestrian and Bicycle Entrance and/or Exit**	

Example: The entry and exit locations for a site that has two driveways (DW-1, DW-2) connecting to the public right-of-way, an internal drive aisle (P-1) connecting to the adjacent property, and a sidewalk connecting the main entrance (E-1) to the public right-of-way (E-2); will have three vehicle locations labeled as DW-1, DW-2, and P-1 and two pedestrian locations labeled E1 and E2.

Entry and exit points along the vehicle route may have operational restrictions. The restrictions may be in place permanently or only during the times when the TOP is in effect. Use **Table 5.1-3** to better understand the restriction notes to be used throughout this form.

Table 5.1-3 Route Restrictions Note Key

Restriction Note	Description
Right In Only	**Vehicles may only enter into this location via a right turn movement.**
One Way Only	**All traffic is moving solely in one direction at this location.**
Right Out Only	**Vehicles may only exit out of this location via a right turn movement.**

5.2 Vehicle Stacking and Staging Spaces

All stacking and staging spaces must be accessed through a vehicle route. The stacking, queuing, and staging spaces along a vehicle route may not impede the operations of any other concurrently operating vehicle route or space operation. For example, a stacked or queued vehicle may not be located within the maneuvering "back-out" area of a parking space designated as a *parked stacking space*.

Vehicle stacking spaces within passenger loading zones must have a passenger landing area for entering and exiting the vehicle. A 10 foot minimum *by-pass lane* must be provided for passenger loading zones whose combined stacking and queuing spaces are longer than 3 consecutive vehicle spaces. Parking spaces may be designated as stacking spaces. Access to the vehicle stacking spaces must be opened 30 minutes before the first scheduled time of use.

5.3 Automobile Curbside Passenger Loading Zone Operations

An automobile passenger loading zone is a designated area for stacking automobiles and vans to load and unload passengers to and from a prescribed landing area. The pedestrian landing area for automobile loading zones must be located on the right side of the vehicle and should have a minimum size of 5 feet by 5 feet. Typically these landing areas are considered curbside passenger loading areas because the vehicles stack adjacent to a curbed sidewalk. Automobile passenger loading zones that have a by-pass lane should taper the head of the zone (the front space of the stacking line) towards the by-pass lane to merge the exiting stacked vehicles into the by-pass lane.

Specify if the school operates one or more automobile passenger loading zones by providing information of the vehicle route that provides access to the zone within the **Table 5.3-1**, or indicate no zone by entering "None" for the route name. **The vehicle route must be illustrated in a plan view and attached to this document**.

The use of automobile passenger loading zones are limited to automobiles and vans only. Each vehicle space is measured at 22 feet long and 8 feet wide. If the school operates with an automobile passenger loading zone, indicate its capacity in **Table 5.3-2.** Enter zero (0) for the total capacity if the school does not have an automobile passenger loading zone.

5.4 School Bus Passenger Loading Zone Operations

A school bus passenger loading zone is a designated zone for stacking school buses to load and unload passengers to and from a prescribed landing area. The pedestrian landing area for school bus passenger loading zones must be located on the right side of the vehicle and should have a minimum size of 8 feet by 8 feet.

Specify if the school operates one or more school bus passenger loading zones by providing information of the vehicle route that provides access to the zone within the **Table 5.4-1**, or indicate no zone by entering "None" for the route name. **The vehicle route must be illustrated in a plan view and attached to this document**.

The use of school bus passenger loading zones are limited to only school buses during arrival and dismissal operations. Each bus vehicle space measures 50 feet long and 10 feet wide unless otherwise stated in **Table 5.4a-2**. If the school operates with a school bus passenger loading zone, indicate its capacity in **Table 5.4-2.** Enter zero (0) for the total capacity if the school does not have a school bus passenger loading zone.

The school's bus operations may be voluntary, recommended in a traffic study, and/or mandated by zoning resolution. Complete the section 5.4a to specify the minimum number of school buses required to operate at the school.

5.4a School Bus Commitment

Specify the school's busing commitment by completing **Table 5.4a-1** and **Table 5.4a-2**. Report zero (0) number of buses if the school has no busing commitment. Standard bus types have been provided in **Table 5.4a-2** for convenience.

The school is required to provide a school bus program that maintains the required minimum bus ridership participation reported in **Table 5.4a-1** and **Table 5.4a-2**; and manage the program to ensure that bus accumulations are contained within the designated bus stacking and queuing spaces.

5.5 Parking Stall Operations

All parking spaces used during the school's operation must be identified. The parking spaces must meet all governing parking stall codes.

Parked stacking spaces must have an unobstructed vehicle route to access these spaces during arrival and dismissal shifts. Parking spaces that have no assigned use during arrival and dismissal operations due to vehicle route obstructions will be termed *open parking spaces*. A cross parking agreement is required for all off-site privately managed parking spaces.

Specify the school's parking space usage and quantities by completing **Table 5.5-1**. **The parking spaces must be illustrated in a plan view and attached to this document.**

If the school has parked stacking spaces or *student parking spaces*, specify the route information that provides access to those spaces within the **Table 5.5-2**, or indicate no routes by entering "None" for the route name. **The vehicle route must be illustrated in a plan view and attached to this document.**

5.6 Service Vehicle Operations

Schools often require service vehicles to enter and maneuver within the site to provide facility services. Specify the school's service vehicle routes by providing the vehicle route information within the **Table 5.6-1**, or indicate no routes by entering "None" for the route name. **The vehicle route must be illustrated in a plan view and attached to this document.**

6.0 Pedestrian and Bicycle Facilities

A *pedestrian route* originating from the public right-of-way must be provided to all school building entrances. The route should be a minimum of 5 feet wide and have all the required elements when crossing a motorized vehicle travel lane (crosswalk, pedestrian ramp, etc.). All student entrances to the school site and buildings must be labeled by using **Table 5.1-2**. Only the main entrance is required to be labeled when multiple buildings are interconnected with pedestrian pathways.

Bicycle routes that are combined with pedestrian traffic must have an eight (8) foot minimum width.

For sites that have a bicycle storage area and that only provide standard pedestrian path widths are required to instate the following policy: "*All bicyclists must dismount their bicycles and walk their bicycles to the designated bicycle storage when entering or exiting to the school site.*"

Specify the pedestrian routes by providing the route information within the **Table 6.0-1**. **The pedestrian route must be illustrated in a plan view and attached to this document.**

Specify the bicycle routes by providing the route information within the **Table 6.0-2**, or indicate no routes by entering "None" for the route name. **The bicycle route must be illustrated in a plan view and attached to this document.**

Identify the *bicycle storage* locations throughout the site by labeling each location according to the following instructions: Each location must be label with the letters BS followed by a number (e.g. BS1). Begin with number 1. Do not repeat any location labels. List the storage locations and its capacity in **Table 6.0-3**. Enter "none" for the location to indicate no bicycle storage. **The bicycle storage location must be illustrated in a plan view and attached to this document.**

7.0 Onsite Traffic Personnel & Devices

A functioning school TOP requires adherence to the prescribed routes and operations. Often *school traffic personnel* is required to guide pedestrians within passenger loading zones, assist with traffic flow at route conflict points, and encourage adherence to prescribed routes in areas not defined by the infrastructure's geometry. The school shall supply staff to direct any vehicles which may stage or stack in through travel lanes or non-designated parking areas within the public rights-of-way onto the school site.

School traffic personnel should be stationed and assigned the following duties at the corresponding locations: assist students entering and exiting vehicles at loading zones (loading); guide traffic at points where active route pathways intersect (conflict); and encourage adherence at pathway decision points along the route (diverting). School traffic personnel school be on duty at least 30 minutes prior to scheduled shifts.

Identify the school traffic personnel stations throughout the site by labeling each station according to the following instructions: Each station must be label with the letter S followed by a number (e.g. S1). Begin with number 1. Do not repeat any station labels. List the station locations and personnel duties in **Table 7.0-1**. Enter "none" for the location to indicate no school traffic personnel stations. **The school traffic personnel stations must be illustrated in a plan view and attached to this document.**

Temporary traffic control devices (e.g. parking cones) may be useful at points within the routes that are not defined by the infrastructure's geometry and where school traffic personnel are not stationed. These temporary traffic devices may not be used in the public right-of-way unless managed by a traffic control officer.

Identify the temporary traffic control devices located throughout the site by labeling each location according to the following instructions: Each location must be label with the letter C followed by a number (e.g. C1). Begin with number 1. Do not repeat any station labels. List the device location and description in **Table 7.0-2.** Enter "none" for the location to indicate that no devices will be used. **The device locations must be illustrated in a plan view and attached to this document.**

7.1 School Personnel Commitment

The school is required to provide the school traffic personnel and temporary traffic control devices stated in **Table 7.0-1** and **Table 7.0-2**. School traffic personnel must direct the school's traffic into onsite by-pass lanes or any available vehicle staging spaces during peak traffic generation periods to create additional onsite accumulation capacity when school related vehicle are queuing within non-designated areas of the right-of-way and/or through travel lanes.

8.0 School Zone and Crossings

School zones may be provided for schools to alert drivers that they will be traveling near a school. A school zone is composed of signs and pavement markings. The school zone may also include a speed zone component that requires driver to reduce their travel speed. The speed zone is often enacted to provide control at designated *school crossings* serving elementary and middle schools. The school speed zone component may be composed of signs, pavement markings, and flashing beacons (as per the governing standard). The speed zone is required to be installed for school crossings when applicable.

Indicate the existing and/or proposed school crossing(s) serving the school site within **Table 8.0-1**. Enter "none" for the road name to indicate that no school crossing exists or is proposed for this school. **The school crossing locations must be illustrated in a plan view and attached to this document.**

Indicate the existing and/or proposed school zones associated with the school site within **Table 8.0-2**. Enter "none" for the road name to indicate that no school zone exists or is proposed for this school. Indicate if a speed zone is a component of the school zone by marking the appropriate check box.

A school speed zone should not have a continuous duration longer than two hours. If this school is served by a school speed zone, then specify the zone's posted hours in **Table 8.0-3**. Enter "none" for the period to indicate no posted hours. Use DTPW School Speed Zone Policy to determine appropriate time periods. Note that if the school is located in close proximity to an existing school speed zone (less than 300 feet), the zone and time period may be modified to cover both schools. Indicate below if the times are paired. If paired, provide areal illustrating adjacent school(s).

9.0 Offsite Traffic Control Officers

Enforcement of the TOP routes and operations within the public right-of-way may only be performed by *traffic control officers* as per section 316.640 of the Florida Statute. Traffic control officers should be present during the start of each semester (first two weeks) to reinforce the traffic patterns established by the TOP. Specify the number, location, and duration of traffic control officers required to adequately enforce the TOP within **Table 9.0-1**.

The school's endorsement of the traffic control officer enforcement plan must be stated within **Table 9.0-2**.

A traffic control officer may be stationed at an intersection to improve vehicle delays and operations during a peak traffic demand period. Schools may be required to provide the officer, or may do so voluntarily. Specify the commitment, location, and duration of the traffic control officer stations required for LOS management within **Table 9.0-3**. Enter "none" for the intersection to indicate that no officer management is voluntarily offered or required.

9.1 State Crossing Guards

A school may implement a crossing guard program to assist young (K-8) students traversing school crossings when walking to and from school. A crossing guard is not traffic control officer, unless the guard is trained as a traffic control officer and employed subject to the conditions described in section 316.640, F.S. Specify the crossing guard stations and duration within **Table 9.1-1**. Enter "none" for the station to indicate that no crossing guards are stationed to serve the school.

10.0 School Special Events

Planned school events, such as sporting events, school assemblies, and ceremonies may often generate larger peak traffic volumes and vehicle accumulations than a typical school day. The school will be required to manage the traffic impacts produced by a *school special event* within its neighborhood. Specify the special event types and provisions selected to mitigate its traffic impacts within **Table 10.0-1.** Enter "none" for event type to indicate that no school special events will planned at the school site.

11.0 Parent Traffic Handbook

The Parent Traffic Handbook specifies a parent's child safety responsibilities and commitment to achieve an efficient traffic flow during the arrival and dismissal times. Parents of new students should be issued a Parent Traffic Handbook containing this TOP and are required to sign a contract with the school, which includes adherence to pick-up and drop-off procedures. Additionally, parents should be reissued the Parent Traffic Handbook and contract each new school year. The handbook and contract should be reviewed and signed during Parent Orientation prior to the start of school. **A sample of the Parent Traffic Handbook and contact must be attached to this document.**

12.0 Table Worksheets

Complete this worksheet as per the instructions provided in sections 1.0 through 11.0 of this document.

Educational Program Worksheet

Table 2.0-1 School Location

Name	Brickell Preparatory Academy (Phase 2 – 3,000 Student K-12 grade)
Address	
Folio Number(s)	01-4139-101-0010, 01-4139-101-0020, 01-4138-104-0020, 01-4138-104-0010, 01-4138-001-5550, 01-4138-001-3890, 01-4138-001-3900
Hours of Operations	7:00 am – 6:00 pm

Table 3.0-1 Educational Program and Enrollment

Educational Program	Grades	Average Maximum Enrollment per Grade	Maximum Enrollment
Elementary	K - 5th	+/-210	1,250
Middle	6th – 8th	+/-250	750
High	9th–12th	+/-250	1,000
Total Facility Enrollment			3,000

Table 3.0-2 Educational Program Descriptions

Educational Program	Description
N/A	STANDARD HIGH-PERFORMANCE PROGRAM

School Schedule Worksheet

Table 4.1-1 School Schedule Commitment

Period	Maximum Number of Students Allowed within a Schedule Shift	Minimum Number of Instructional Shifts at Full Enrollment
Arrival	1,250	3
Dismissal	1,250	3

Table 4.2-1 School Schedule Example at Full Capacity

Schedule Shift	Grades	Days [M, Tu, W, Th, F]	Begin Time	End Time	No. of Students
1st Shift – (Arrival)	9th –12th	M-F	7:00	7:30	1,00
2nd Shift – (Arrival)	6th – 8th	M-F	7:30	8:00	750
3rd Shift – (Arrival)	1st – 5th	M-F	8:00	8:30	1,250
1st Shift – (Dismissal)	9th -12th	M-F	2:30	3:00	1,000
1nd Shift – (Dismissal)	6th – 8th	M-F	3:00	3:30	750

Automobile Passenger Curbside Loading Zone Worksheet

Table 5.3-1 Automobile Loading Zone Route Description

Route Name	Entrance Point	[X]	Restriction	Exit Point	[X]	Restriction	Description
A-1 (6TH -12TH)	DW-1	☐	Right In Only	DW-2	☑	Right Out Only	
		☐	One Way Only		☑	One Way Only	
A-2 (6TH -12TH)	DW-1	☐	Right In Only	DW-1	☐	Right Out Only	
		☐	One Way Only		☐	One Way Only	
A-3 (6TH -12TH)	DW-1	☐	Right In Only	DW-1	☐	Right Out Only	
		☐	One Way Only		☐	One Way Only	
		☐	Right In Only		☐	Right Out Only	
		☐	One Way Only		☐	One Way Only	

Table 5.3-2 Automobile Loading Zone Vehicle Capacity Summary (Automobiles and Vans)

Route Name	Stacking Space Capacity	Queuing Spaces Capacity	Total Capacity
A-1	17	9 (Adjacent Open Parking)	26
A-2	12	6 (Adjacent Open Parking)	18
A-3	14	29 (Adjacent Open Parking)	43

Bus Passenger Loading Zone Worksheet

Table 5.4-1 School Bus Passenger Loading Zone Route Description

Route Name	Entrance Point	[X]	Restriction	Exit Point	[X]	Restriction
B-1 (6TH – 12TH)	Bus Dropp-Off #1	☐	Right In Only	Bus Dropp-Off #1	☐	Right Out Only
		☐	One Way In		☐	One Way Out
B-2 (6TH – 12TH)	Bus Dropp-Off #2	☐	Right In Only	Bus Dropp-Off #2	☐	Right Out Only
		☐	One Way In		☐	One Way Out
		☐	Right In Only		☐	Right Out Only
		☐	One Way In		☐	One Way Out

Table 5.4-2 Bus Loading Zone Vehicle Accumulation Capacity Summary

Route Name	Stacking Spaces Capacity	Queuing Spaces Capacity	Bus Capacity
B-1	6	N/A	6
B-2	2	N/A	2

Table 5.4a-1 Bussing Commitment

Minimum Number of Inbound Buses Required During the Arrival Period	Minimum Number of Outbound Buses Required During the Dismissal Period
4	4

Table 5.4a-2 Bus Type and Capacity

Quantity	Bus Type	Length	Width	Capacity	Student Total by Type
4	S-BUS-11 [S-BUS-36]	45	10	65	260
	S-BUS-12 [S-BUS-40]	50	10	84	
				Students Grand Total	260

Parking Summary Worksheet

Table 5.5-1 Proposed Parking Use Summary

Parking Space Use	Onsite			Offsite
	Req. by Code	Req. by Study	Provided	Provided
Staff	180		174	
Student	35		50	
Parked Stacking	N/A		N/A	
Open	30		30	
Total	245		254	

Table 5.5-2 Parked Loading Zone Route Description

Route Name	Entrance Point	[X]	Restriction	Exit Point	[X]	Restriction
P-1 (11th – 12th)	DW-1	☐	Right In Only	DW-1	☐	Right Out Only
		☐	One Way In		☐	One Way Out
		☐	Right In Only		☐	Right Out Only
		☐	One Way In		☐	One Way Out
		☐	Right In Only		☐	Right Out Only
		☐	One Way In		☐	One Way Out

Service Vehicle, Pedestrian and Bicycle Routes Worksheet

Table 5.6-1 Service Vehicle Route Description

Route Name	Entrance Point	[X]	Restriction	Exit Point	[X]	Restriction	Operation Period (times)
S-1	DW-1	☐	Right In Only	DW-1/DW-2	☐	Right Out Only	10am-1pm / 4pm-6pm
		☐	One Way In		☐	One Way Out	
S-2	DW-1	☐	Right In Only	DW-1/DW-2	☐	Right Out Only	10am-1pm / 4pm-6pm
		☐	One Way In		☐	One Way Out	
		☐	Right In Only		☐	Right Out Only	
		☐	One Way In		☐	One Way Out	

Table 6.0-1 Pedestrian Route Description

Route Name	Off-Site Entrance Point	Building Entrance Point	Operation Period (0:00-0:00)
PED-1	N/A	E-1	7:00 – 8:00 AM / 2:30 – 3:30 PM
PED-2	N/A	E-2	7:00 – 8:00 AM / 2:30 – 3:30 PM
PED-3	N/A	E-3	7:00 – 8:00 AM / 2:30 – 3:30 PM

Table 6.0-2 Bicycle Route Description

Route Name	Entrance Point	Exit Point	Operation Period (0:00 – 0:00)
BIK-1	E-1	E-2	7:00 – 8:00 AM / 2:30 – 3:30 PM
BIK-2	E-2	E-2	7:00 – 8:00 AM / 2:30 – 3:30 PM

Table 6.0-3 Bicycle Storage Description

Bicycle Storage Location	Bicycle Capacity
BS-1	10
BS-2	10

Traffic Personnel, Equipment, Enforcement Worksheet

Table 7.0-1 Onsite School Traffic Personnel

Station Label	Personnel Duties (Loading, Conflict, Diverting)	Arrival Duty Period		Dismissal Duty Period	
		From	To	From	To
S1	Guide Traffic / Diverting	6:45	8:45	2:15	4:15
S2	Unloading / Loading Vehicles	6:45	8:45	2:15	4:15
S3	Guide Traffic / Diverting	6:45	8:45	2:15	4:15
S4	Unloading / Loading Vehicles	6:45	8:45	2:15	4:15
S5	Guide Traffic / Diverting	6:45	8:45	2:15	4:15
S6	Unloading / Loading Vehicles	6:45	8:45	2:15	4:15
S7	Unloading / Loading Buses	6:45	8:45	2:15	4:15
TCT	Traffic Control Technician	6:45	8:45	2:15	4:15

Table 7.0-2 Onsite Temporary Traffic Control Devices

Location Label	Device Description (Number of Cones, Barricades, or Gates)	Arrival Duty Period		Dismissal Duty Period	
		From	To	From	To

Table 8.0-1 School Crossing Description

Location	East-West	North-South	Mid-Block	Uncontrolled
SW 17th Road and north of SW 2nd Court	☐	☐	☑	☑
SW 17th Road and SW 2nd Court	☑	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

Table 8.0-2 School Zone Description

Location	Existing [x]	Proposed [x]	Signs & Markings [x]	Speed Zone [x]	Flashing Beacons [x]
SW 17th Road	☐	☑	☑	☑	☑
SW 2nd Court	☐	☑	☑	☑	☑
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐

Table 8.0-3 School Speed Zone Posted Times **Is this a paired Zone? No** ☑ **Yes** ☐

Days of the Week	Arrival Period AM		Dismissal Period PM	
	From	To	From	To
Monday	6:45	8:45	2:15	4:15
Tuesday	6:45	8:45	2:15	4:15
Wednesday	6:45	8:45	2:15	4:15
Thursday	6:45	8:45	2:15	4:15
Friday	6:45	8:45	2:15	4:15

Table 9.0-1 Traffic Control Officer Enforcement Plan

No. of Officers	Intersection or Segment with Boundaries	Arrival	Dismissal	Semester Start	All Year
1	SW 17th Road and SW 2nd Court	☑	☑	☑	☐
1	SW 17th Road at school's south driveway	☑	☑	☑	☐
		☐	☐	☐	☐
		☐	☐	☐	☐

Table 9.0-2 Traffic Control Officer Reinforcement Commitment

Check Box [x]	Reinforcement Commitment
☑	By marking this check box, the school agrees to provide all necessary resources to ensure traffic control officers will be present to enforce the TOP, as stated in **Table 9.0-1.**

Table 9.0-3 Traffic Control Officer Stations for LOS Management Plan

Intersection	Required (R) Voluntarily (V)	Arrival Time Period		Dismissal Time Period	
		From	To	From	To
SW 15th Road and SW 2nd Avenue	V	6:45	8:30	2:15	4:15

Table 9.1-1 Crossing Guard Stations

No. of Guards	School Crossing Station (Intersection)	Arrival AM Time Period		Dismissal PM Time Period	
		From	To	From	To
2	SW 17th Road and SW 2nd Court	6:45	8:45	2:15	4:15

Table 10.0-1 School Special Event Provisions

Event Type	Provision Descriptions
Required On-site Events	Events requiring school attendance shall not coincide with peak traffic and shall be divided into sessions so as not to exceed available parking

13.0 Attachments

The following documents are required to be attached to the TOP.

1. A plan sheet showing all required illustrations stated within this TOP form. (It is suggested that TOP operations that vary by instructional shifts be shown in independent plan sheets.)
2. A Parent Traffic Handbook and contract sample.
3. A Cross-parking agreement (if utilized).

14.0 Endorsement

By signing below, the school owner agrees to operate the school as prescribed within this document and will uphold all commitments specified herein.

Signature

Date

Print Owner Name

APPENDIX E
TRAFFIC, TAZ & SIGNAL TIMING DATA

Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109
Delray Beach, Florida 33483
(561)272-3255

SW 13TH STREET& SW 15TH ROAD & SW 3RD AV
MIAMI, FLORIDA
COUNTED BY: J. SHEA & S. SALVO
NOT SIGNALIZED

Study Name: 13ST3AVE
Site Code : 00170081
Start Date: 04/20/17
Page : 1

ALL VEHICLES

	SW 3RD AVENUE From North				SW 13TH STREET From East				SW 3RD AVE From South		SW 13TH STREET From West				SW 15TH ROAD From Northwest				
Start Time	Left	Thru	Right	HARD RIGHT	Left	Thru	SOFT RIGHT	RIGHT	Left	Right	HARD LEFT	LEFT	THRU	RIGHT	HARD LEFT	SOFT LEFT	THRU	HARD RIGHT	Intvl Total
04/20/17																			
07:00	0	0	0	3	1	54	59	2	0	3	2	0	69	17	9	12	16	4	251
07:15	0	0	0	10	0	67	49	1	0	1	2	0	88	27	12	20	18	7	302
07:30	0	0	0	10	0	79	67	4	1	0	2	0	122	41	8	33	27	7	401
07:45	0	0	0	10	1	91	71	4	4	3	6	2	161	66	19	27	32	8	505
Hour	0	0	0	33	2	291	246	11	5	7	12	2	440	151	48	92	93	26	1459
08:00	0	0	0	16	0	117	67	8	4	2	6	2	171	96	25	36	17	7	574
08:15	0	0	0	36	1	130	89	10	1	6	12	1	179	107	37	19	27	7	662
08:30	0	0	0	25	1	136	87	10	3	5	14	1	189	128	41	25	23	11	699
08:45	0	0	0	37	0	134	84	10	0	3	16	3	191	106	40	38	18	19	699
Hour	0	0	0	114	2	517	327	38	8	16	48	7	730	437	143	118	85	44	2634
Total	0	0	0	147	4	808	573	49	13	23	60	9	1170	588	191	210	178	70	4093
% Apr.	-	-	-	100.0	0.2	56.3	39.9	3.4	36.1	63.8	3.2	0.4	64.0	32.1	29.4	32.3	27.4	10.7	-
% Int.	-	-	-	3.5	-	19.7	14.0	1.1	0.3	0.5	1.4	0.2	28.5	14.3	4.6	5.1	4.3	1.7	-

Traffic Survey Specialists, Inc.

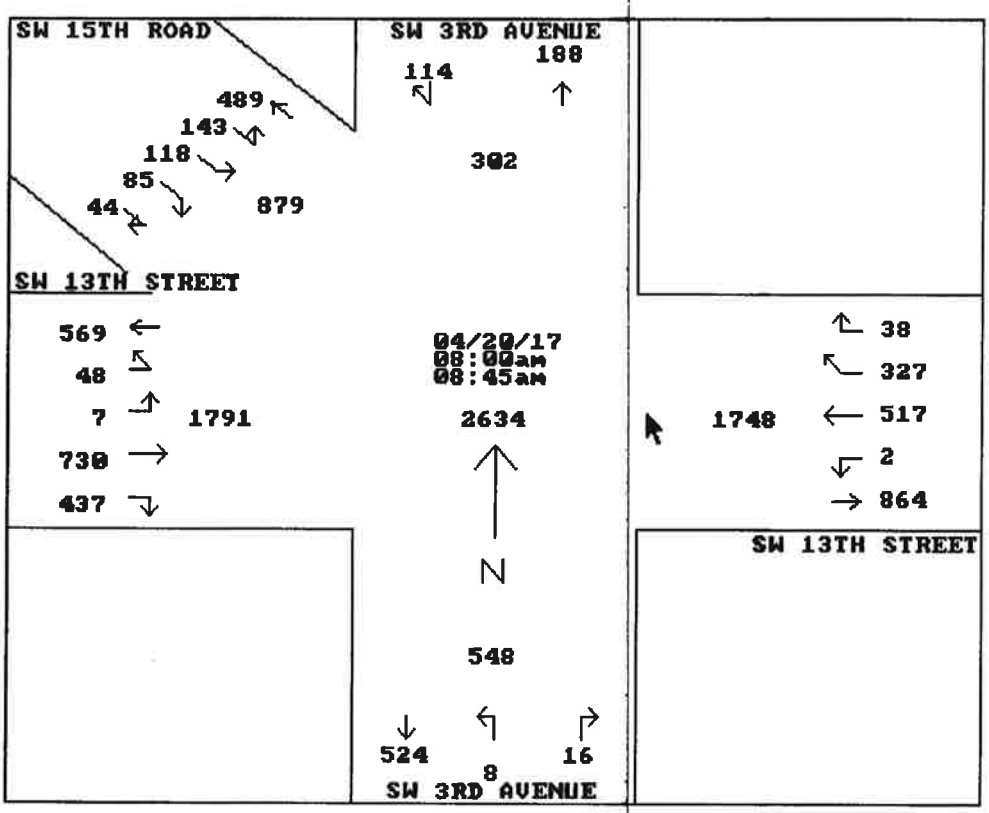
SW 13TH STREET& SW 15TH ROAD & SW 3RD AV
MIAMI, FLORIDA
COUNTED BY: J. SHEA & S. SALVO
NOT SIGNALIZED

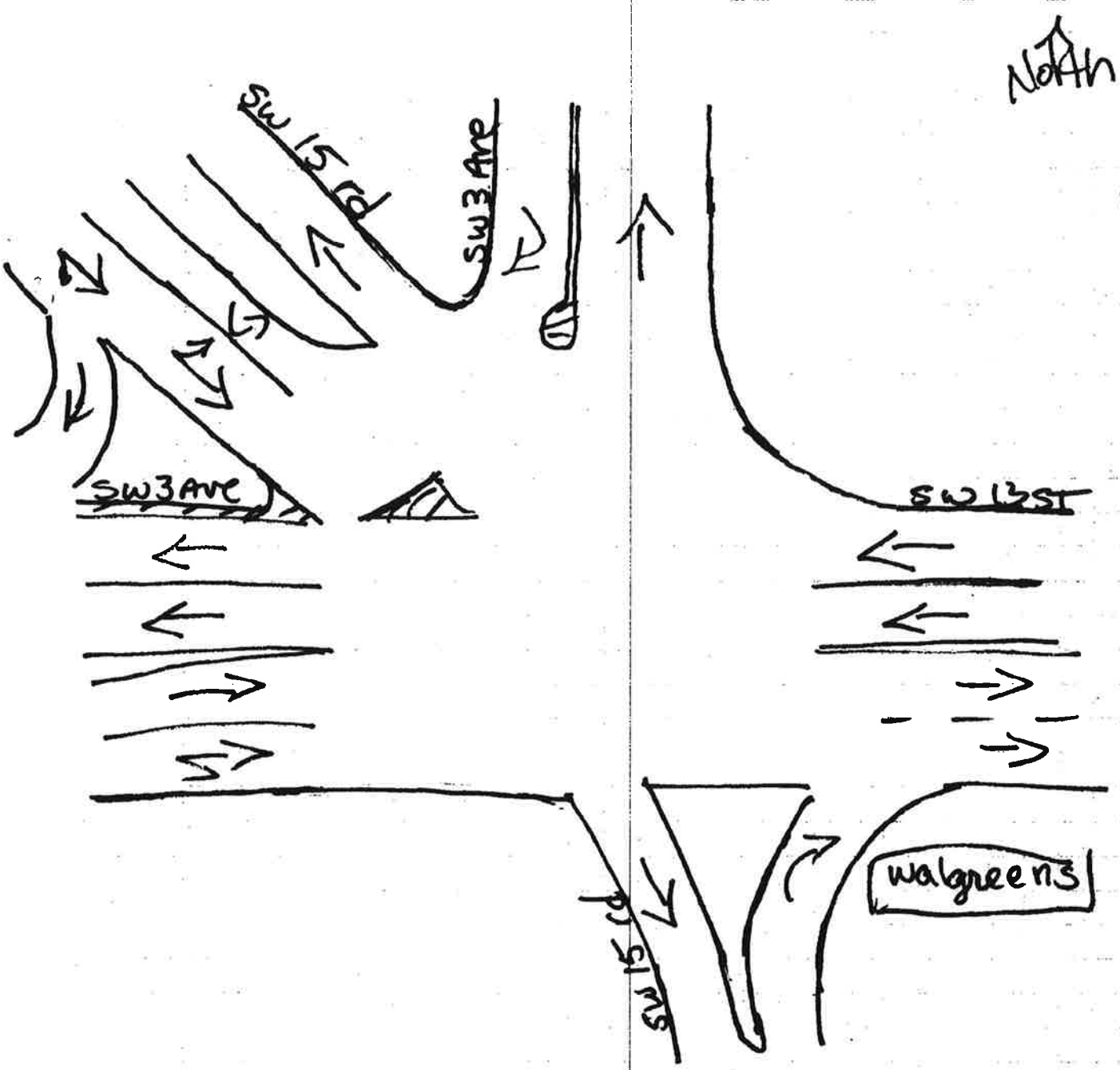
85 SE 4th Avenue, Unit 109
Delray Beach, Florida 33483
(561)272-3255

Study Name: 13ST3AVE
Site Code : 00170081
Start Date: 04/20/17
Page : 2

ALL VEHICLES

	SW 3RD AVENUE				SW 13TH STREET				SW 3RD AVE		SW 13TH STREET				SW 15TH ROAD				
	From North				From East				From South		From West				From Northwest				
Start				HARD				SOFT			HARD				HARD	SOFT		HARD	Intvl
Time	Left	Thru	Right	RIGHT	Left	Thru	RIGHT	RIGHT	Left	Right	LEFT	LEFT	THRU	RIGHT	LEFT	LEFT	THRU	RIGHT	Total
Peak Hour Analysis By Entire Intersection for the Period: 07:00 on 04/20/17 to 08:45 on 04/20/17																			
Time	08:00				08:00				08:00		08:00				08:00				
Vol.	0	0	0	114	2	517	327	38	8	16	48	7	730	437	143	118	85	44	
Pct.	0.0	0.0	0.0	100.0	0.2	58.4	36.9	4.2	33.3	66.6	3.9	0.5	59.7	35.7	36.6	30.2	21.7	11.2	
Total	114				884				24		1222				390				
High	08:45				08:30				08:30		08:30				08:45				
Vol.	0	0	0	37	1	136	87	10	3	5	14	1	189	128	40	38	18	19	
Total	37				234				8		332				115				





Miami, FLorida
November 17, 2016
drawn by: Luis Palomino
Signalized ✓

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

SW 2ND COURT & SW 15TH ROAD
MIAMI, FLORIDA
COUNTED BY: JOE SHEA
NOT SIGNALIZED

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 2CT_15RD
Page : 1

ALL VEHICLES

	SW 15TH ROAD From North				DRIVEWAY From East				SW 15TH ROAD From South				SW 2ND COURT From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/20/17																	
07:00	0	5	31	1	0	2	0	0	0	0	4	1	0	0	1	1	46
07:15	1	0	45	1	0	2	0	0	0	1	1	4	0	1	0	3	59
07:30	0	2	64	1	0	2	0	0	0	0	1	2	0	0	1	0	73
07:45	3	0	98	2	0	6	0	1	0	0	3	6	0	1	0	2	122
Hr Total	4	7	238	5	0	12	0	1	0	1	9	13	0	2	2	6	300
08:00	0	4	114	1	0	5	1	0	0	1	6	7	0	0	0	0	139
08:15	1	4	127	2	0	11	0	1	0	0	6	7	0	1	0	0	160
08:30	4	5	137	5	0	8	0	1	2	2	9	13	0	0	1	2	189
08:45	0	4	128	1	0	9	1	2	0	0	4	14	0	1	1	3	168
Hr Total	5	17	506	9	0	33	2	4	2	3	25	41	0	2	2	5	656
TOTAL	9	24	744	14	0	45	2	5	2	4	34	54	0	4	4	11	956

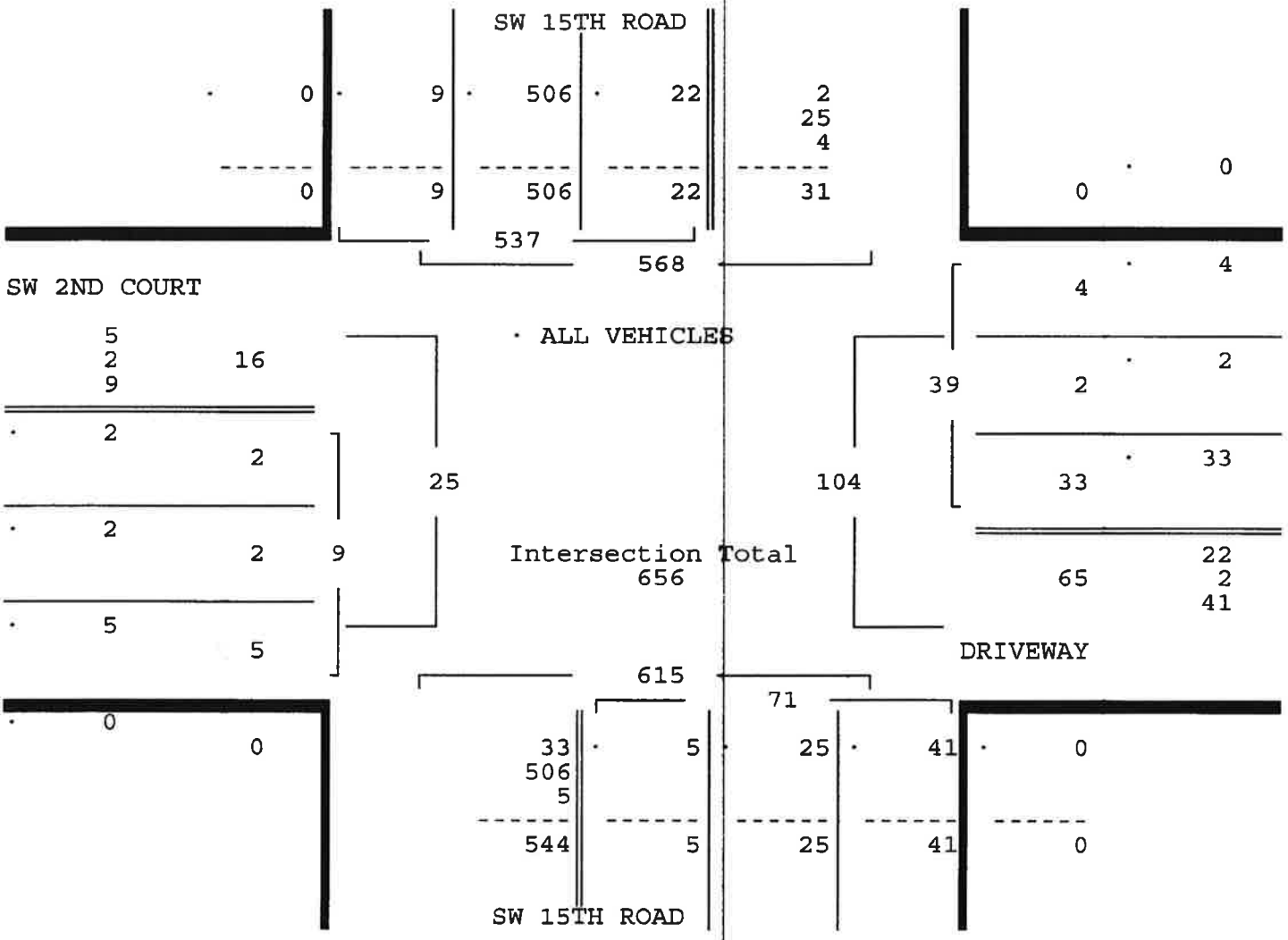
SW 2ND COURT & SW 15TH ROAD
MIAMI, FLORIDA
COUNTED BY: JOE SHEA
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 2CT_15RD
Page : 2

ALL VEHICLES

	SW 15TH ROAD From North				DRIVEWAY From East				SW 15TH ROAD From South				SW 2ND COURT From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/20/17																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 04/20/17																	
Peak start 08:00					08:00				08:00				08:00				
Volume	5	17	506	9	0	33	2	4	2	3	25	41	0	2	2	5	
Percent	1%	3%	94%	2%	0%	85%	5%	10%	3%	4%	35%	58%	0%	22%	22%	56%	
Pk total	537				39				71				9				
Highest	08:30				08:15				08:30				08:45				
Volume	4	5	137	5	0	11	0	1	2	2	9	13	0	1	1	3	
Hi total	151				12				26				5				



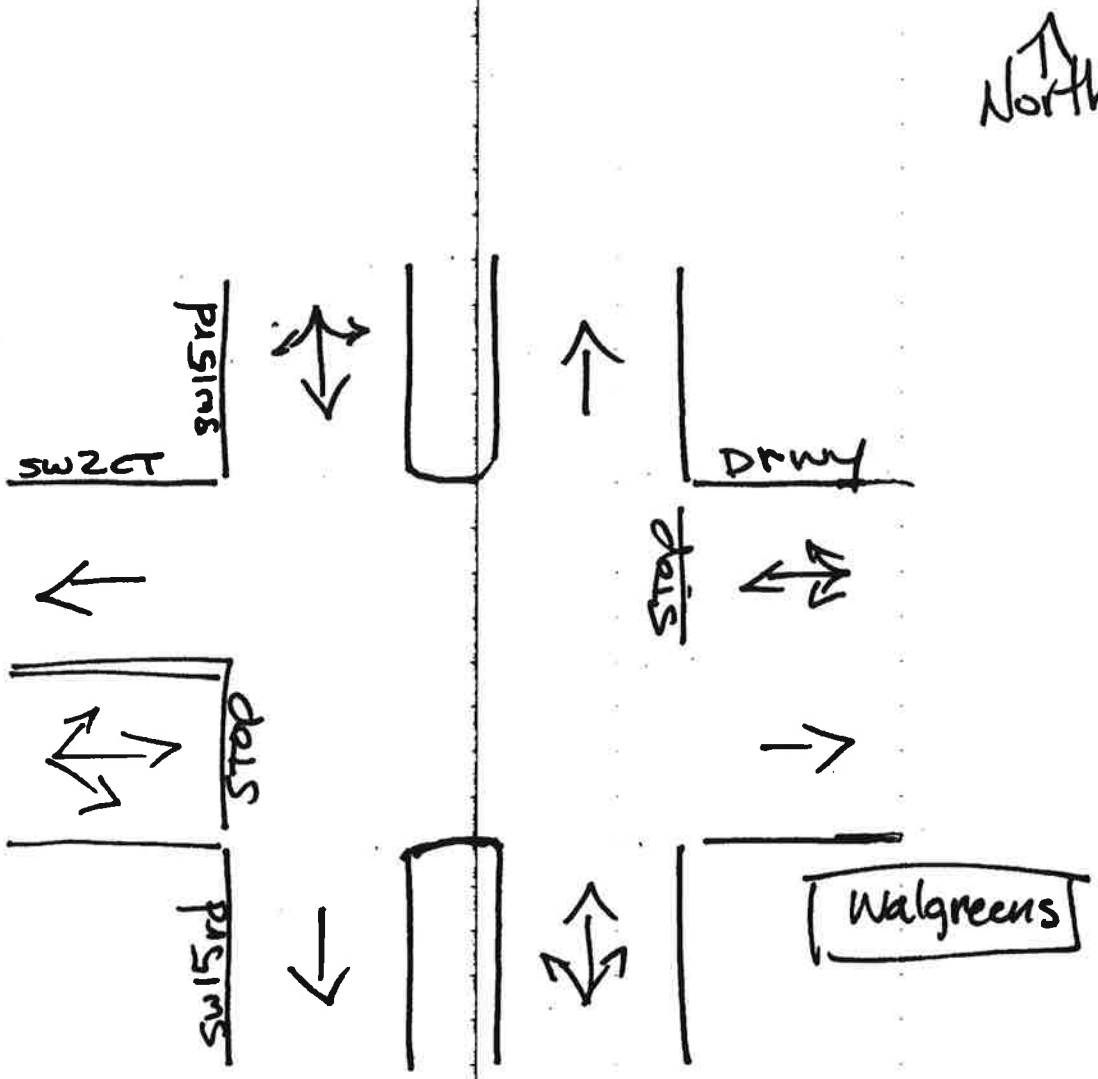
SW 2ND COURT & SW 15TH ROAD
MIAMI, FLORIDA
COUNTED BY: JOE SHEA
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 2CT_15RD
Page : 1

PEDESTRIANS & BIKES

	SW 15TH ROAD From North				DRIVEWAY From East				SW 15TH ROAD From South				SW 2ND COURT From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 04/20/17																	
07:00	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	3	5
07:15	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	4	7
07:30	0	0	0	1	0	1	0	2	0	0	0	2	0	0	0	0	6
07:45	0	0	0	3	0	0	0	1	0	0	0	2	0	0	0	2	8
Hr Total	0	0	0	6	0	2	0	3	0	0	0	6	0	0	0	9	26
08:00	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	4
08:15	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	2	7
08:30	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3
08:45	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	3
Hr Total	0	0	0	4	0	0	0	2	0	0	0	5	0	1	0	5	17
TOTAL	0	0	0	10	0	2	0	5	0	0	0	11	0	1	0	14	43



Miami, Florida
April 20, 2017
drawn by: Luis Palomino
NOT signalized

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

SW 2ND AVENUE & SW 15TH ROAD
MIAMI, FLORIDA
COUNTED BY: MAURICE GOMEZ
NOT SIGNALIZED

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 2AV_15RD
Page : 1

ALL VEHICLES

	SW 15TH ROAD From North				SW 2ND AVENUE From East				SW 15TH ROAD From South				SW 2ND AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/20/17																	
07:00	1	0	32	1	0	24	2	0	2	1	3	33	0	1	1	1	102
07:15	0	3	46	2	0	21	1	0	1	0	6	20	0	0	5	1	106
07:30	0	3	62	2	0	23	4	0	1	1	3	26	0	0	4	2	131
07:45	0	10	96	1	0	37	2	0	3	0	9	27	0	0	2	3	190
Hr Total	1	16	236	6	0	105	9	0	7	2	21	106	0	1	12	7	529
08:00	0	5	108	0	0	29	1	0	2	1	13	38	0	1	6	6	210
08:15	0	10	120	2	0	43	3	1	0	2	13	52	0	0	6	9	261
08:30	1	5	137	8	0	36	7	3	3	1	18	51	0	3	5	1	279
08:45	1	3	125	1	0	46	0	1	1	2	17	53	0	1	10	5	266
Hr Total	2	23	490	11	0	154	11	5	6	6	61	194	0	5	27	21	1016
TOTAL	3	39	726	17	0	259	20	5	13	8	82	300	0	6	39	28	1545

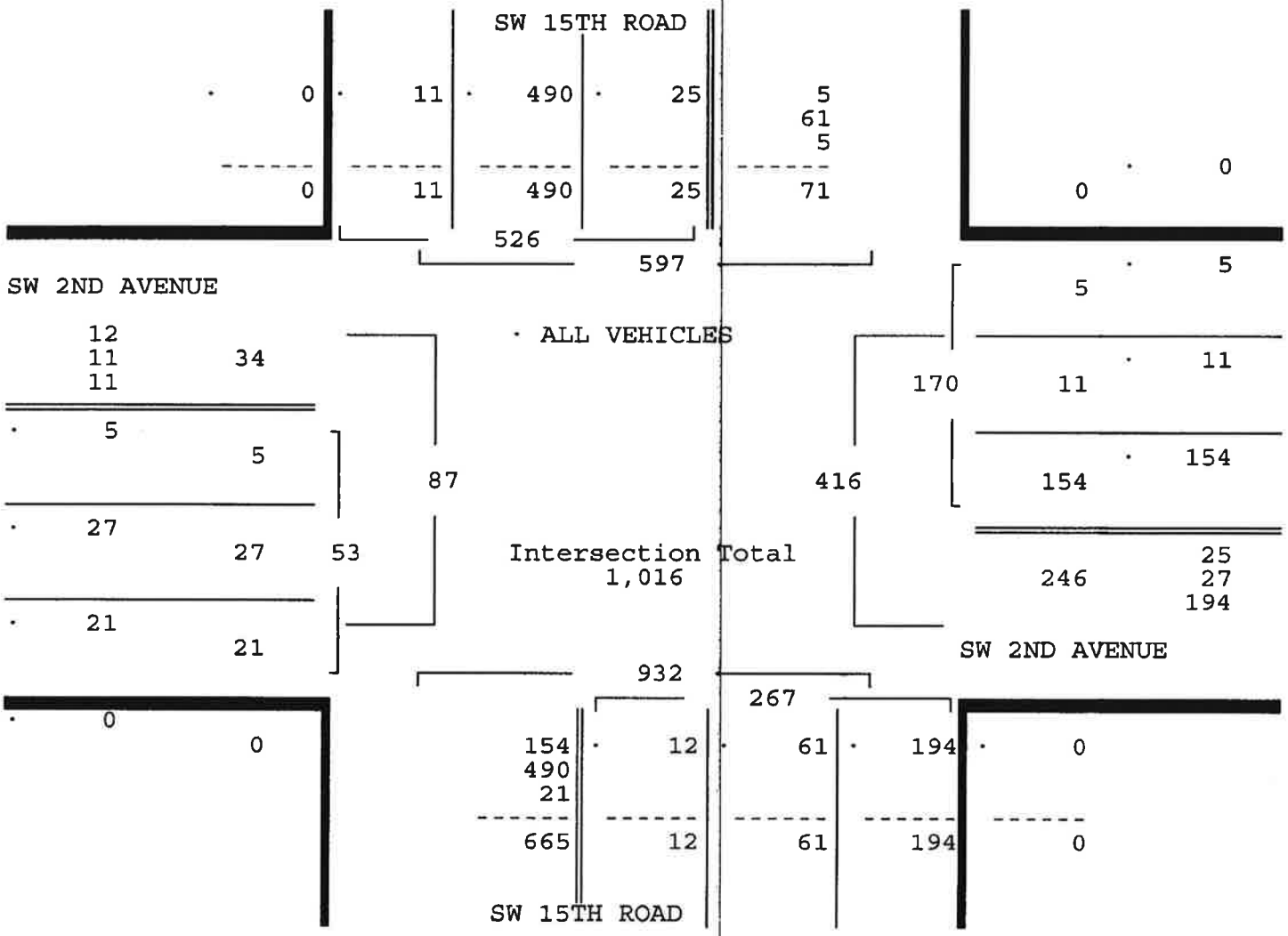
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

SW 2ND AVENUE & SW 15TH ROAD
MIAMI, FLORIDA
COUNTED BY: MAURICE GOMEZ
NOT SIGNALIZED

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 2AV_15RD
Page : 2

ALL VEHICLES

	SW 15TH ROAD From North				SW 2ND AVENUE From East				SW 15TH ROAD From South				SW 2ND AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/20/17																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 04/20/17																	
Peak start 08:00					08:00				08:00				08:00				
Volume	2	23	490	11	0	154	11	5	6	6	61	194	0	5	27	21	
Percent	0%	4%	93%	2%	0%	91%	6%	3%	2%	2%	23%	73%	0%	9%	51%	40%	
Pk total	526				170				267				53				
Highest	08:30				08:15				08:30				08:45				
Volume	1	5	137	8	0	43	3	1	3	1	18	51	0	1	10	5	
Hi total	151				47				73				16				



TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

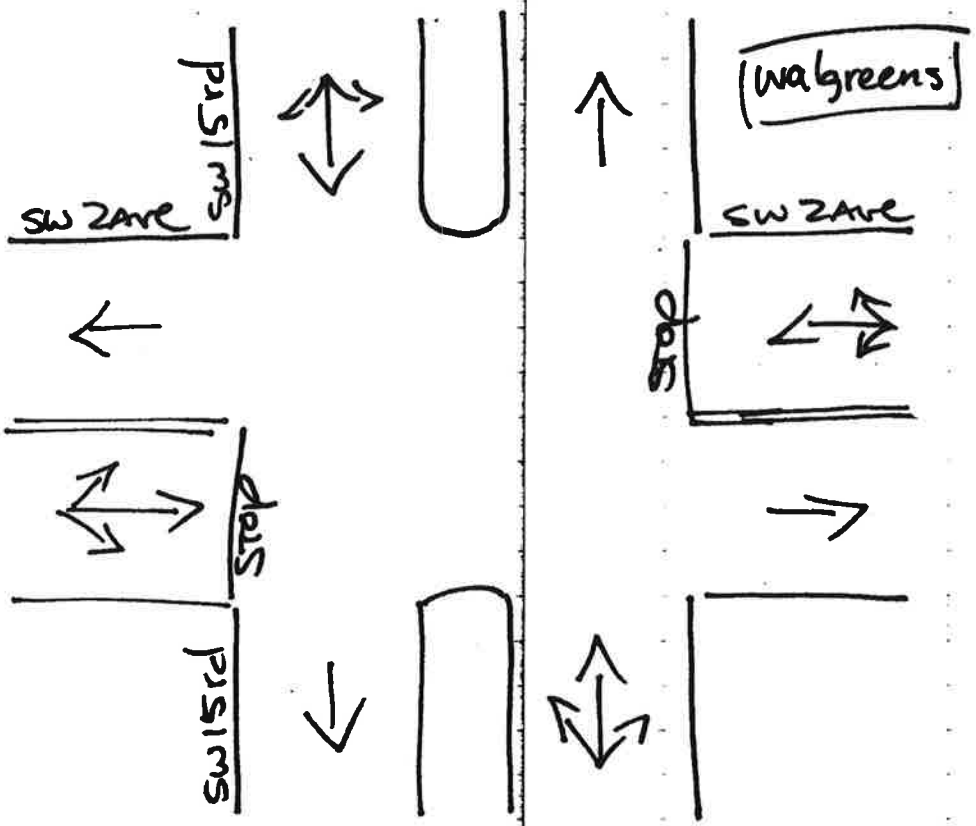
SW 2ND AVENUE & SW 15TH ROAD
MIAMI, FLORIDA
COUNTED BY: MAURICE GOMEZ
NOT SIGNALIZED

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 2AV_15RD
Page : 1

PEDESTRIANS & BIKES

	SW 15TH ROAD From North				SW 2ND AVENUE From East				SW 15TH ROAD From South				SW 2ND AVENUE From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 04/20/17																	
07:00	0	1	0	0	0	4	0	0	0	0	0	1	0	2	0	4	12
07:15	0	0	0	2	0	1	0	2	0	0	0	1	0	0	0	1	7
07:30	0	2	0	0	0	1	0	2	0	0	0	2	0	1	0	0	8
07:45	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Hr Total	0	3	0	2	0	6	0	6	0	0	0	4	0	3	0	5	29
08:00	0	0	0	3	0	1	0	2	0	0	0	2	0	1	0	1	10
08:15	0	1	0	2	0	0	0	0	0	1	0	1	0	0	0	1	6
08:30	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0	1	5
08:45	0	0	0	1	0	1	0	0	0	0	0	1	0	3	0	0	6
Hr Total	0	1	0	7	0	2	0	3	0	1	0	5	0	5	0	3	27
TOTAL	0	4	0	9	0	8	0	9	0	1	0	9	0	8	0	8	56

North



Miami, Florida
April 20, 2017
drawn by. Luis Palomino
NOT signalized

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

SW 1ST AVENUE & SW 15TH ROAD
MIAMI, FLORIDA
COUNTED BY: LUIS PALOMINO
NOT SIGNALIZED

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 1AV_15RD
Page : 1

ALL VEHICLES

	SW 15TH ROAD From North				From East				SW 15TH ROAD From South				SW 1ST AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/20/17																	
07:00	0	0	51	5	0	0	0	0	2	7	34	0	0	7	0	5	111
07:15	1	0	56	13	0	0	0	0	4	2	16	0	0	1	0	13	106
07:30	2	0	77	6	0	0	0	0	8	8	25	0	0	4	0	18	148
07:45	0	0	134	7	0	0	0	0	9	15	31	0	0	3	0	34	233
Hr Total	3	0	318	31	0	0	0	0	23	32	106	0	0	15	0	70	598
08:00	1	0	133	11	0	0	0	0	11	15	44	0	0	3	0	47	265
08:15	1	0	156	12	0	0	0	0	12	32	57	0	0	9	0	46	325
08:30	4	0	157	11	0	0	0	0	12	21	50	0	0	5	0	53	313
08:45	2	0	160	7	0	0	0	0	13	24	62	0	0	11	0	65	344
Hr Total	8	0	606	41	0	0	0	0	48	92	213	0	0	28	0	211	1247
TOTAL	11	0	924	72	0	0	0	0	71	124	319	0	0	43	0	281	1845

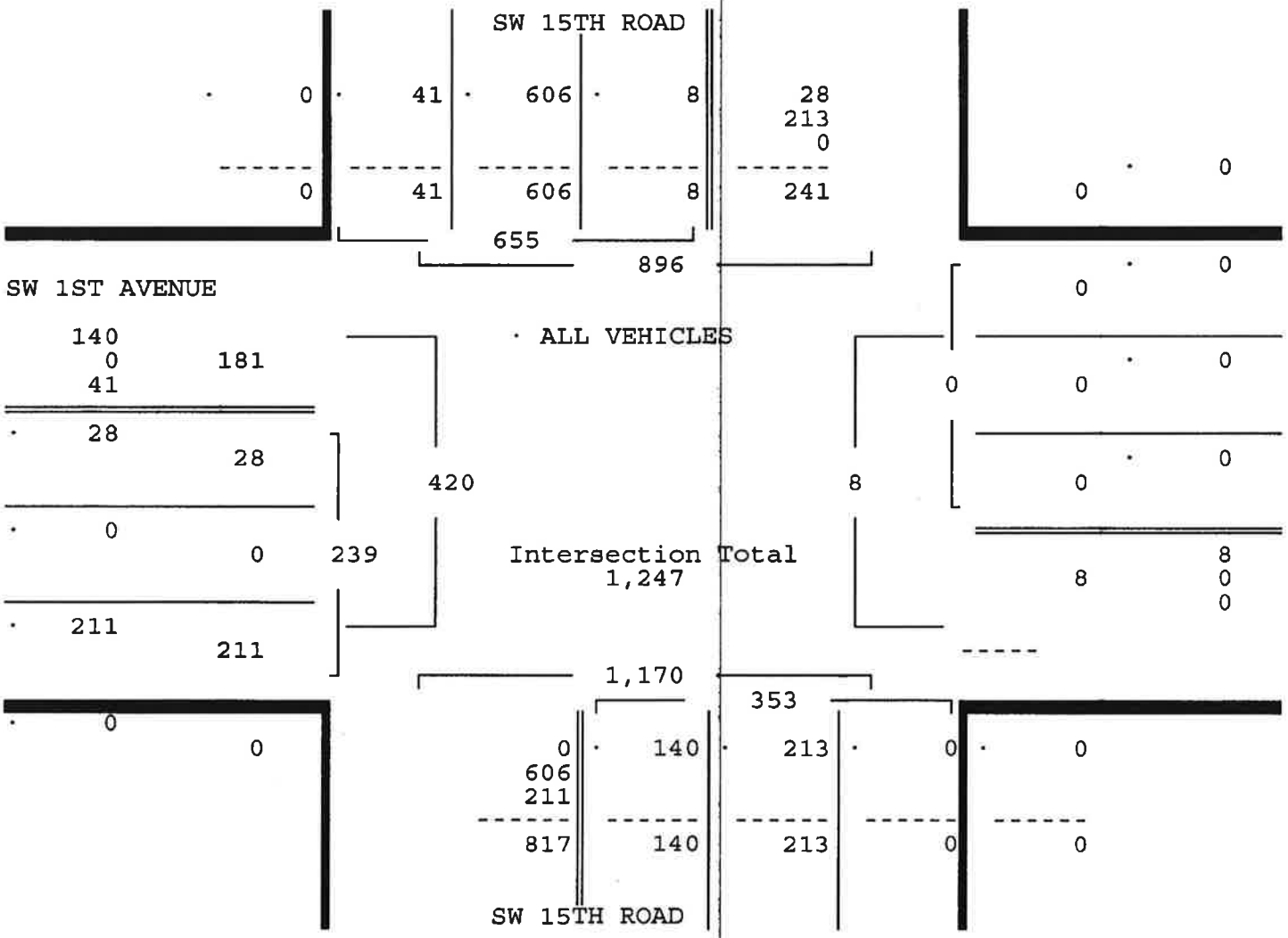
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

SW 1ST AVENUE & SW 15TH ROAD
MIAMI, FLORIDA
COUNTED BY: LUIS PALOMINO
NOT SIGNALIZED

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 1AV_15RD
Page : 2

ALL VEHICLES

	SW 15TH ROAD From North				From East				SW 15TH ROAD From South				SW 1ST AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/20/17																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 04/20/17																	
Peak start 08:00					08:00				08:00				08:00				
Volume	8	0	606	41	0	0	0	0	48	92	213	0	0	28	0	211	
Percent	1%	0%	93%	6%	0%	0%	0%	0%	14%	26%	60%	0%	0%	12%	0%	88%	
Pk total	655				0				353				239				
Highest	08:30				07:00				08:15				08:45				
Volume	4	0	157	11	0	0	0	0	12	32	57	0	0	11	0	65	
Hi total	172				0				101				76				



TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

SW 1ST AVENUE & SW 15TH ROAD
MIAMI, FLORIDA
COUNTED BY: LUIS PALOMINO
NOT SIGNALIZED

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 1AV_15RD
Page : 1

PEDESTRIANS & BIKES

	SW 15TH ROAD From North				From East				SW 15TH ROAD From South				SW 1ST AVENUE From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 04/20/17																	
07:00	0	0	0	6	0	0	0	0	0	0	0	0	0	1	0	4	11
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
07:30	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	6
07:45	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	1	5
Hr Total	0	0	0	10	0	0	0	0	0	0	0	3	0	1	0	10	24
08:00	0	0	0	2	0	0	0	0	0	0	0	3	0	3	0	5	13
08:15	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	5	9
08:30	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	5	9
08:45	0	0	0	4	0	0	0	0	0	0	0	0	0	3	0	4	11
Hr Total	0	0	0	11	0	0	0	0	0	0	0	4	0	8	0	19	42
TOTAL	0	0	0	21	0	0	0	0	0	0	0	7	0	9	0	29	66

North

Miami, Florida
April 20, 2017
drawn by: Luis Palomino
NOT signalized

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

SW 1ST AVENUE & SW 17TH ROAD
MIAMI, FLORIDA
COUNTED BY: KAYLA BARNETT
NOT SIGNALIZED

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 1AV_17RD
Page : 1

ALL VEHICLES

	SW 17TH ROAD From North				SW 1ST AVENUE From East				----- From South				SW 1ST AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/20/17																	
07:00	0	1	0	7	0	0	9	2	0	0	0	0	0	1	12	0	32
07:15	0	1	0	6	0	0	12	1	0	0	0	0	0	2	15	0	37
07:30	0	2	0	7	0	0	10	2	0	0	0	0	0	1	22	0	44
07:45	0	1	0	11	0	0	15	1	0	0	0	0	0	3	35	0	66
Hr Total	0	5	0	31	0	0	46	6	0	0	0	0	0	7	84	0	179
08:00	0	3	0	9	0	0	19	2	0	0	0	0	0	6	51	0	90
08:15	0	3	0	12	0	0	36	4	0	0	0	0	0	4	48	0	107
08:30	0	4	0	15	0	0	30	1	0	0	0	0	0	5	65	0	120
08:45	0	3	0	19	0	0	27	5	0	0	0	0	0	8	72	0	134
Hr Total	0	13	0	55	0	0	112	12	0	0	0	0	0	23	236	0	451
TOTAL	0	18	0	86	0	0	158	18	0	0	0	0	0	30	320	0	630

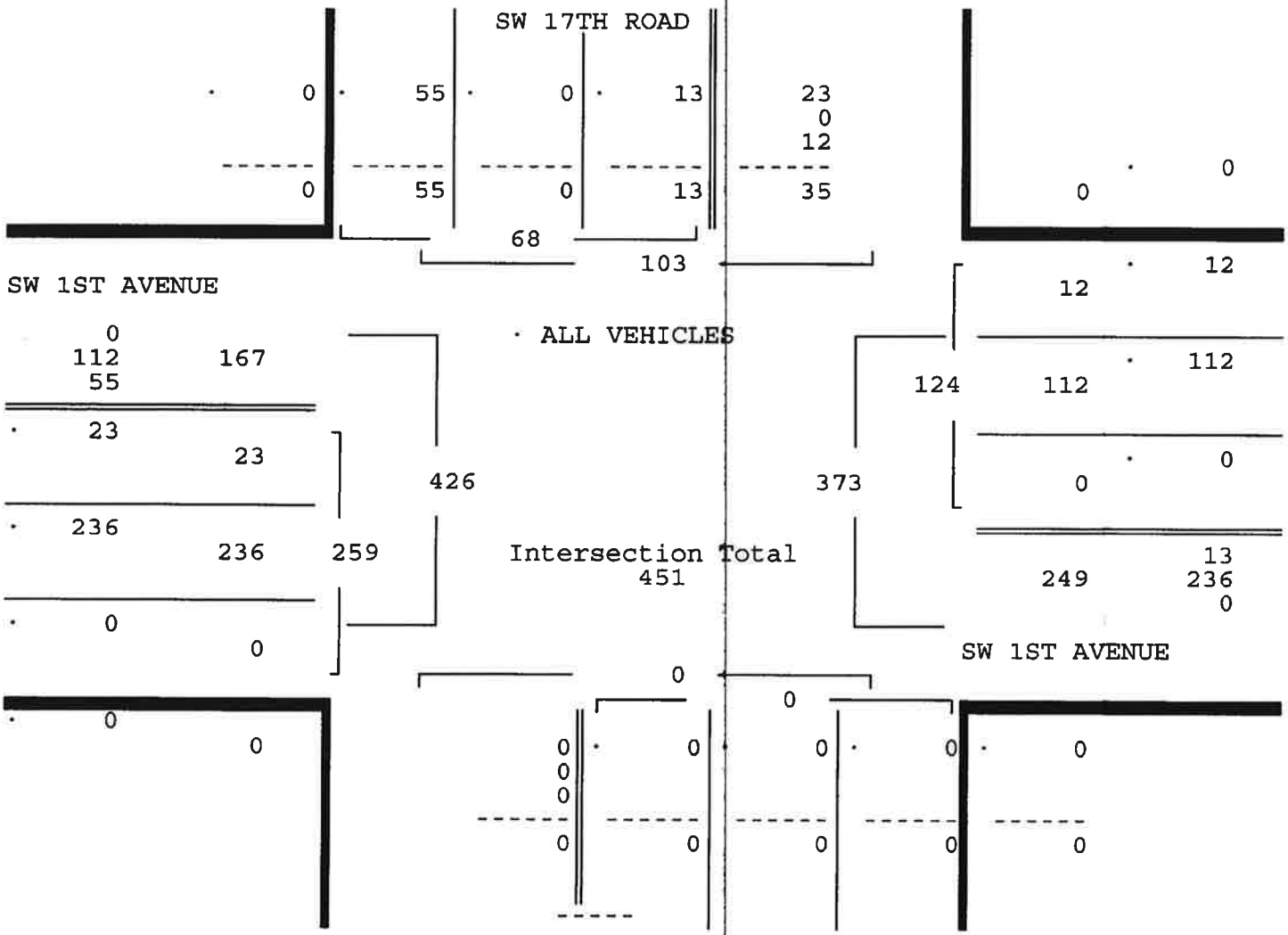
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

SW 1ST AVENUE & SW 17TH ROAD
MIAMI, FLORIDA
COUNTED BY: KAYLA BARNETT
NOT SIGNALIZED

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 1AV_17RD
Page : 2

ALL VEHICLES

	SW 17TH ROAD From North				SW 1ST AVENUE From East				----- From South				SW 1ST AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/20/17																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 04/20/17																	
Peak start 08:00					08:00				08:00				08:00				
Volume	0	13	0	55	0	0	112	12	0	0	0	0	0	23	236	0	
Percent	0%	19%	0%	81%	0%	0%	90%	10%	0%	0%	0%	0%	0%	9%	91%	0%	
Pk total	68				124				0				259				
Highest	08:45				08:15				07:00				08:45				
Volume	0	3	0	19	0	0	36	4	0	0	0	0	0	8	72	0	
Hi total	22				40				0				80				



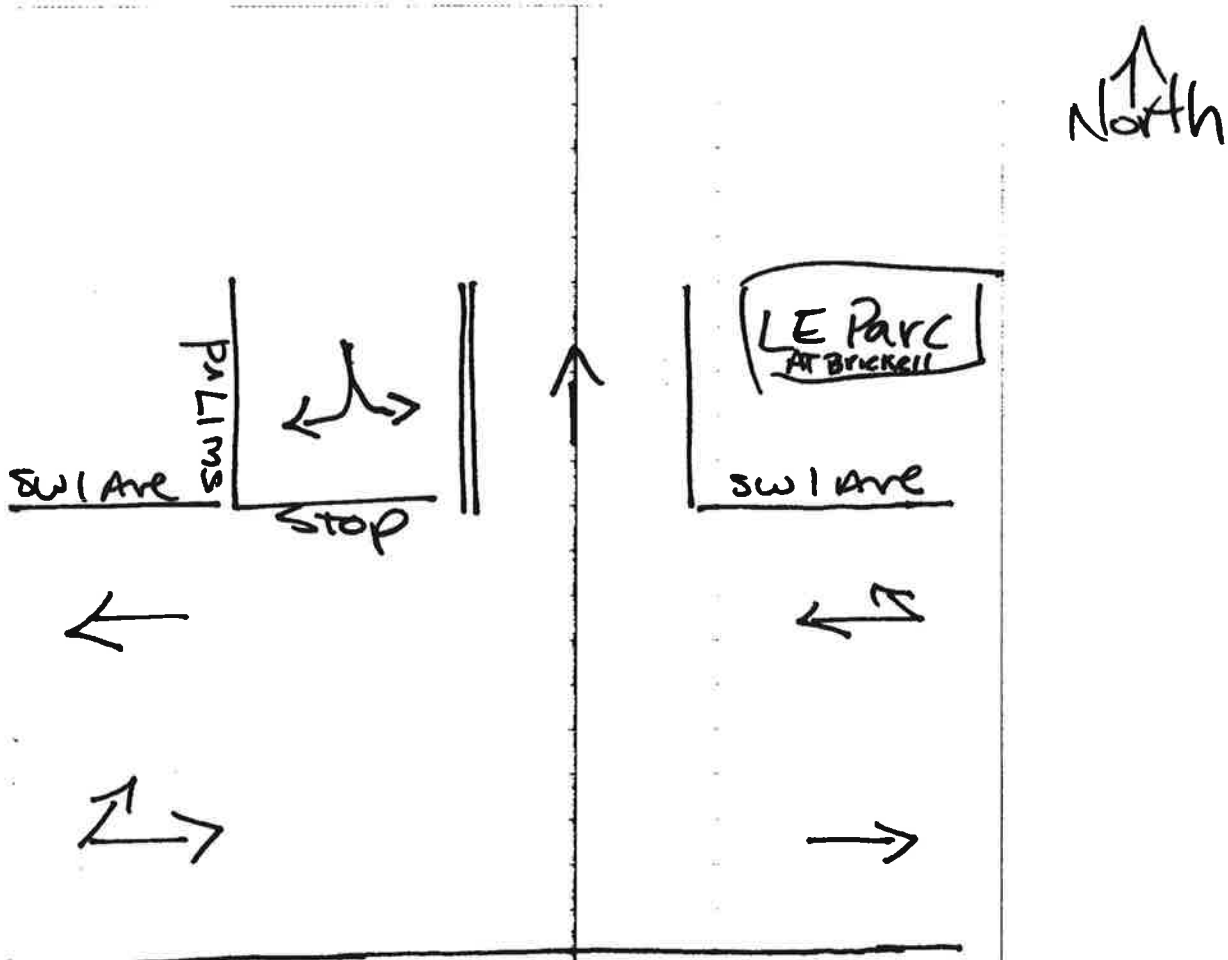
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

SW 1ST AVENUE & SW 17TH ROAD
MIAMI, FLORIDA
COUNTED BY: KAYLA BARNETT
NOT SIGNALIZED

Site Code : 00170081
Start Date: 04/20/17
File I.D. : 1AV_17RD
Page : 1

PEDESTRIANS & BIKES

	SW 17TH ROAD From North				SW 1ST AVENUE From East				----- From South				SW 1ST AVENUE From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 04/20/17																	
07:00	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
07:15	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	3
07:30	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	2	6
07:45	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	1	4
Hr Total	0	0	0	10	0	0	0	1	0	0	0	0	0	2	0	4	17
08:00	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	6
08:15	0	1	0	7	0	0	0	0	0	0	0	0	0	0	0	2	10
08:30	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	3	8
08:45	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	6
Hr Total	0	2	0	20	0	0	0	0	0	0	0	0	0	0	0	8	30
TOTAL	0	2	0	30	0	0	0	1	0	0	0	0	0	2	0	12	47



Miami, Florida
April 20, 2017
drawn by: Luis Palomino
NOT signalized

GROWTH RATE CALCULATION
BRICKELL PREPARATORY ACADEMY

Roadway	FDOT Site	2013	2016
SW 15 Rd. w/o SW 2 Ave.	8234	4,700	4,600
SW 15 Rd. n/o SW 1 Ct.	8523	10,300	13,100
S. Miami Ave. s/o SW 15 Rd	8318	9,800	9,600
SE 13 St. w/o US-1	0086	16,800	15,400
Total		41,600	42,700
Annual Growth Rate		**0.87%**	

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8234 - SW 15TH ROAD, 100' WEST OF SW 2ND AVENUE

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2016	4600 T	N 1100	S 3500	9.00	56.10	4.30
2015	4700 S	N 1100	S 3600	9.00	57.40	7.30
2014	4700 F	N 1100	S 3600	9.00	59.30	19.10
2013	4700 C	N 1100	S 3600	9.00	58.90	16.20
2012	4200 F	N 1000	S 3200	9.00	59.70	16.00
2011	4200 C	N 1000	S 3200	9.00	58.20	14.70

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8523 - SW 15TH RD, 200' NORTH OF SW 1 CT (2011 OFF SYSTEM CYCLE)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2016	13100 F	S 5700	N 7400	9.00	56.10	4.30
2015	13300 C	S 5800	N 7500	9.00	57.40	7.30
2014	10300 S	S 6000	N 4300	9.00	59.30	19.10
2013	10300 F	S 6000	N 4300	9.00	58.90	16.20
2012	10300 C	S 6000	N 4300	9.00	59.70	16.00

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8318 - SOUTH MIAMI AVENUE, 200' SOUTH OF SW 15TH RD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2016	9600 C	N 4200	S 5400	9.00	56.10	13.50
2015	9700 T	N 4300	S 5400	9.00	57.40	13.70
2014	9800 S	N 4300	S 5500	9.00	59.30	17.40
2013	9800 F	N 4300	S 5500	9.00	58.90	16.20
2012	9800 C	N 4300	S 5500	9.00	59.70	16.00

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 0086 - SR 972/SE 13 ST, 200' W SR 5/US-1

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2016	15400 C	E 7800	W 7600	9.00	56.10	3.50
2015	15600 F	E 6600	W 9000	9.00	57.40	5.90
2014	15800 C	E 6700	W 9100	9.00	59.30	10.00
2013	16800 C	E 7800	W 9000	9.00	58.90	2.20
2012	15700 C	E 6900	W 8800	9.00	59.70	2.00
2011	19900 C	E 9900	W 10000	9.00	58.20	3.30
2010	20100 C	E 9600	W 10500	7.87	58.27	4.10
2009	20500 C	E 10000	W 10500	7.98	59.96	2.90
2008	21000 C	E 10500	W 10500	8.07	66.31	2.40
2007	21000 C	E 10500	W 10500	7.90	63.12	1.40
2006	18500 C	E 9000	W 9500	7.39	58.66	2.00
2005	20500 C	E 11000	W 9500	7.70	65.70	2.40
2004	19700 C	E 10500	W 9200	8.20	67.10	6.40
2003	15200 C	E 7300	W 7900	8.10	72.30	4.30
2002	16100 C	E 7300	W 8800	9.20	68.00	5.30
2001	17600 C	E 9000	W 8600	8.20	53.50	3.90

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

Student Travel Tally Report: Combining Schools in One Data Collection Season

School Group: BikeSafe

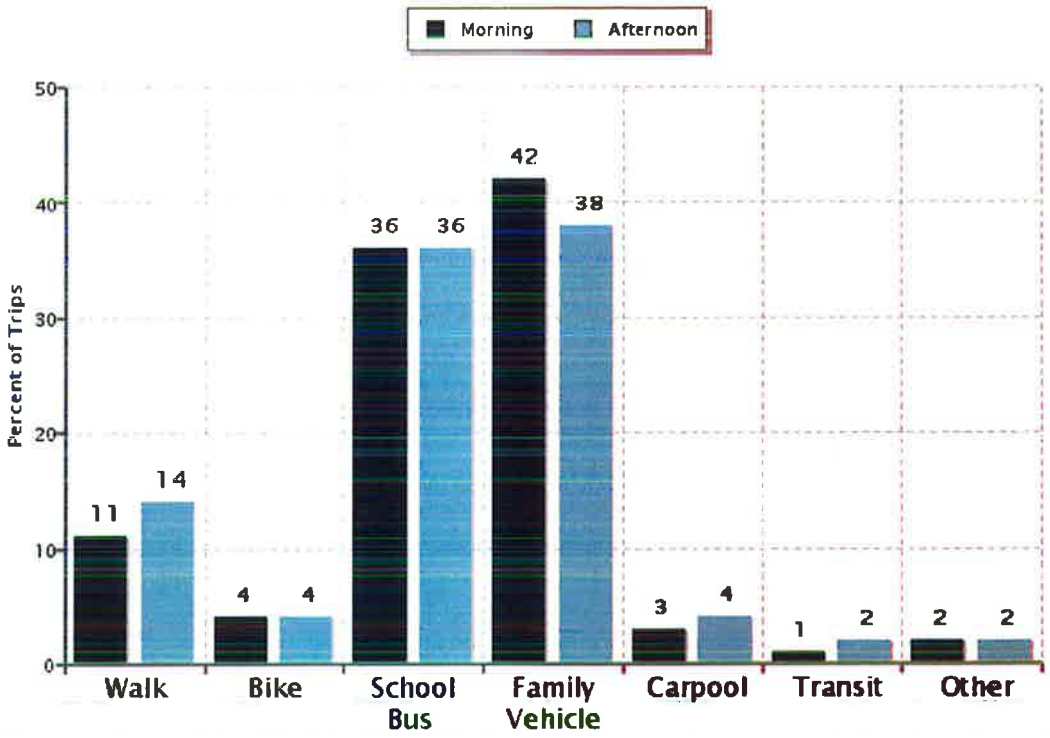
Date Range: Spring 2017

Date Report Generated: 12/06/2017

School Name:	Month & Year Collected & (Set ID)	School Enrollment:	% Range of School's Students Involved in SRTS:	Number of Classroom in School Targeted by School Group:	Number of Classrooms Included in Report:
Hialeah Gardens Middle School	May 2017 (23524)				32
Key Biscayne K-8 Center	February 2017 (22762)		76-100%		13
Nautilus Middle	February 2017 (22846)				29
North Dade Middle School	May 2017 (23596)		Don't Know		15
North Dade Middle School	March 2017 (22878)				16
Ponce de Leon Middle School	March 2017 (23188)				36
Ruth K. Broad Bay Harbor	May 2017 (23720)				6
Ruth K. Broad Bay Harbor	March 2017 (23527)				10
South Miami K-8 Center	May 2017 (23517)		Don't Know		7
South Miami K-8 Center	March 2017 (22813)				10
			Total:	0	174

This report contains information from schools' classrooms about students' trip to and from school. The data used in this report were collected using the in-class Student Travel Tally questionnaire from the National Center for Safe Routes to School.

Morning and Afternoon Travel Mode Comparison

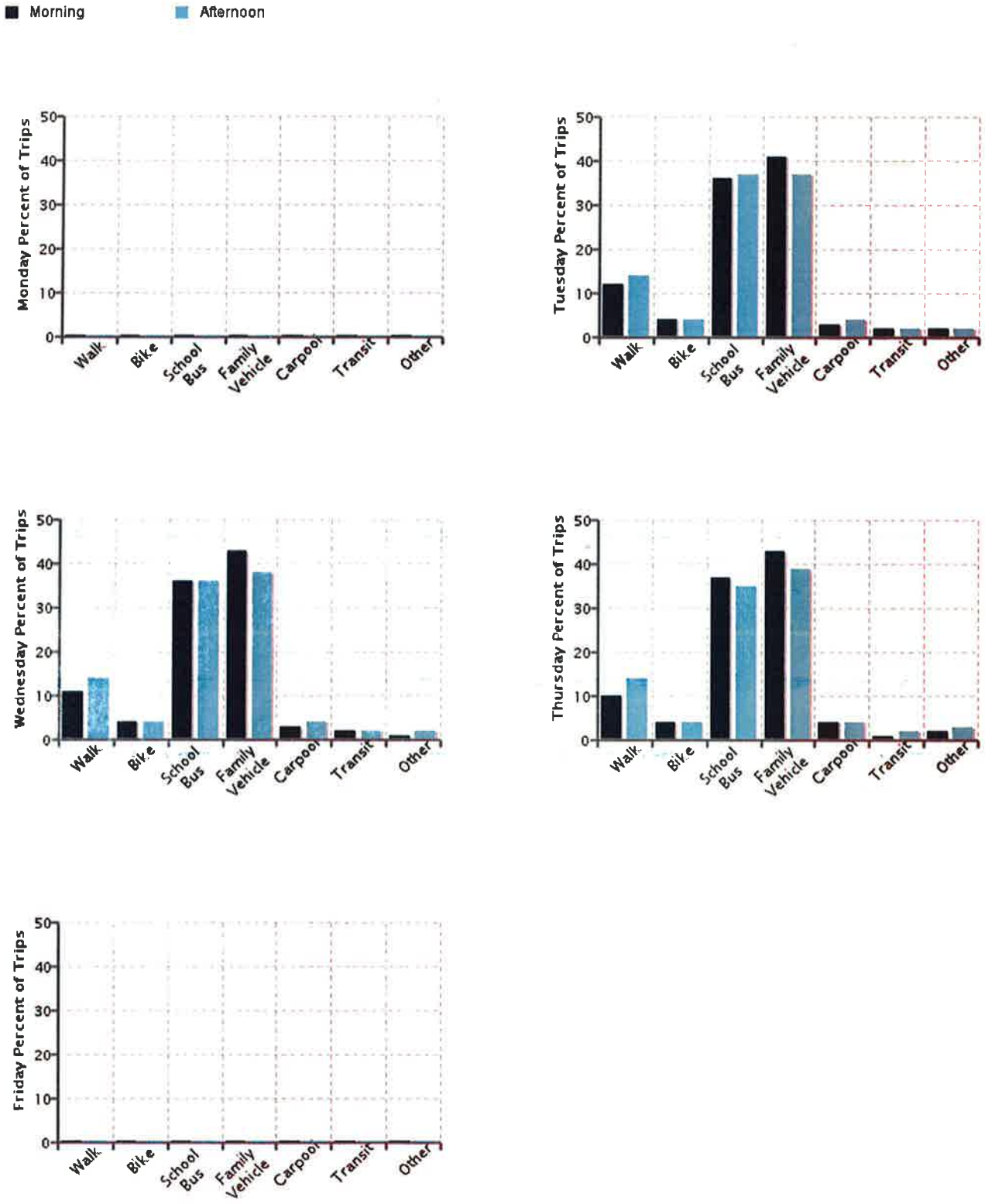


Morning and Afternoon Travel Mode Comparison

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	10614	11%	4%	36%	42%	3%	1%	2%
Afternoon	9001	14%	4%	36%	38%	4%	2%	2%

Percentages may not total 100% due to rounding.

Morning and Afternoon Travel Mode Comparison by Day

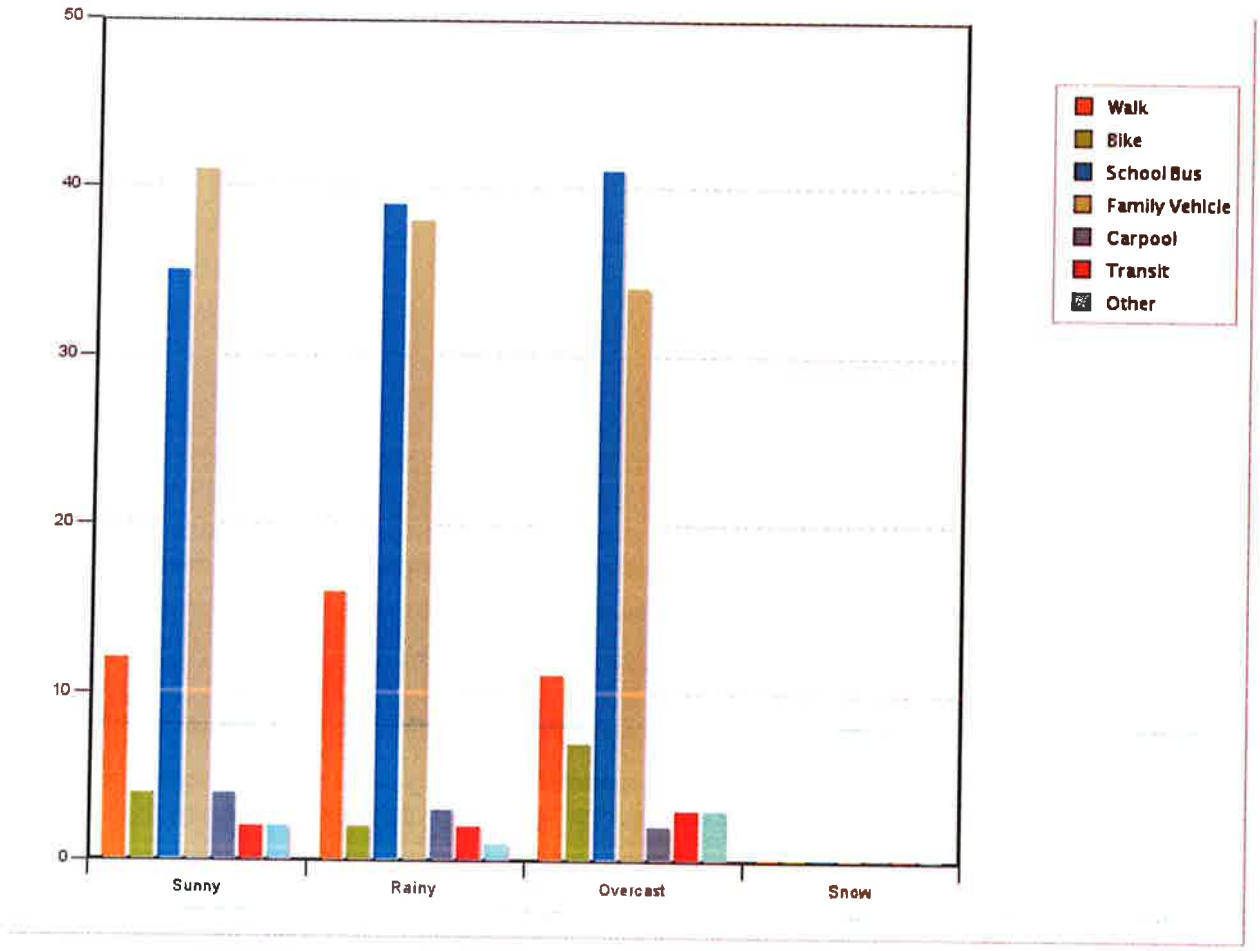


Morning and Afternoon Travel Mode Comparison by Day

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Monday AM		0%	0%	0%	0%	0%	0%	0%
Monday PM		0%	0%	0%	0%	0%	0%	0%
Tuesday AM	3724	12%	4%	36%	41%	3%	2%	2%
Tuesday PM	3258	14%	4%	37%	37%	4%	2%	2%
Wednesday AM	3352	11%	4%	36%	43%	3%	2%	1%
Wednesday PM	2882	14%	4%	36%	38%	4%	2%	2%
Thursday AM	3538	10%	4%	37%	43%	1%	1%	2%
Thursday PM	2861	14%	4%	35%	39%	4%	2%	3%
Friday AM		0%	0%	0%	0%	0%	0%	0%
Friday PM		0%	0%	0%	0%	0%	0%	0%

Percentages may not total 100% due to rounding.

Travel Mode by Weather Conditions



Travel Mode by Weather Condition

Weather Condition	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Sunny	16793	12%	4%	35%	41%	4%	2%	2%
Rainy	885	16%	2%	39%	38%	3%	2%	0.7%
Overcast	1852	11%	7%	41%	34%	2%	3%	3%
Snow	0	0%	0%	0%	0%	0%	0%	0%

Percentages may not total 100% due to rounding.

Student Travel Tally Report: Combining Schools in One Data Collection Season

School Group: BikeSafe

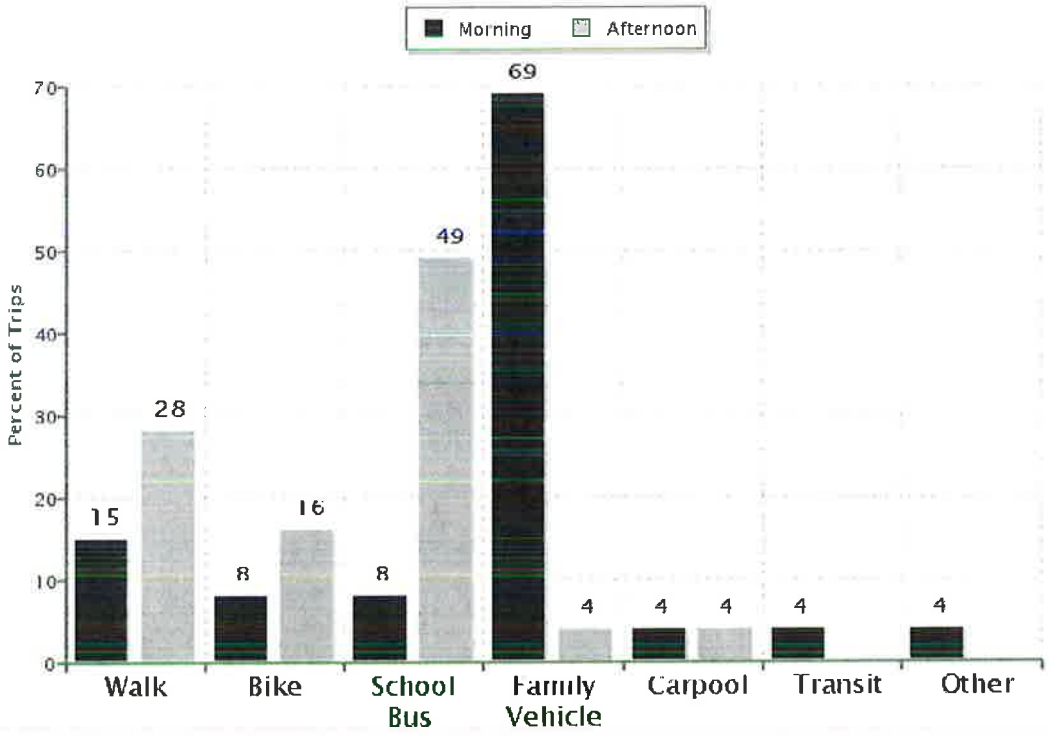
Date Range: Fall 2017

Date Report Generated: 12/06/2017

School Name:	Month & Year Collected & (Set ID)	School Enrollment:	% Range of School's Students Involved in SRTS:	Number of Classroom in School Targeted by School Group:	Number of Classrooms Included in Report:
Key Biscayne K-8 Center	October 2017 (24669)		76-100%		6
			Total:	0	6

This report contains information from schools' classrooms about students' trip to and from school. The data used in this report were collected using the in-class Student Travel Tally questionnaire from the National Center for Safe Routes to School.

Morning and Afternoon Travel Mode Comparison

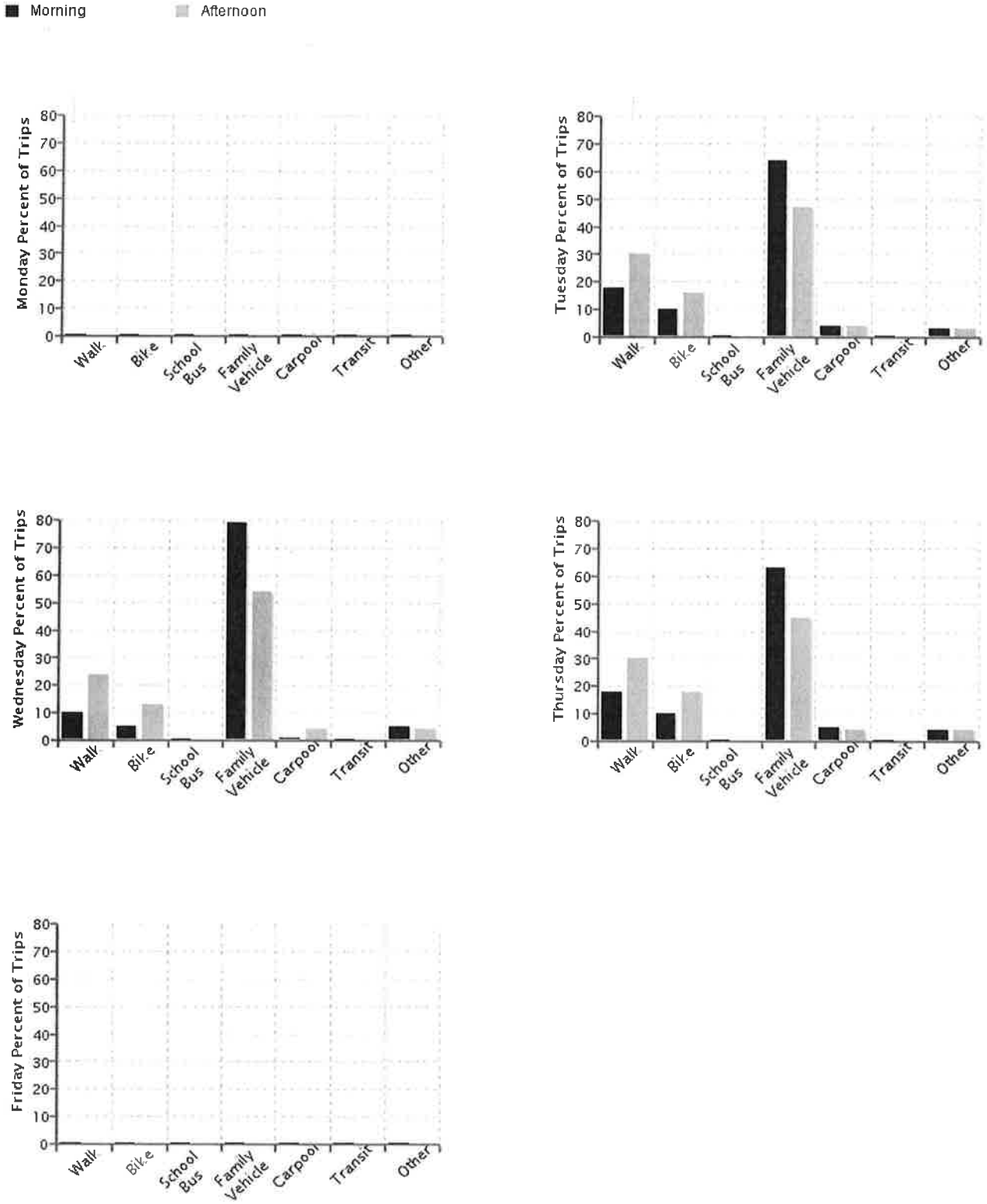


Morning and Afternoon Travel Mode Comparison

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	456	15%	8%	0%	69%	4%	0%	4%
Afternoon	504	28%	16%	0%	49%	4%	0%	4%

Percentages may not total 100% due to rounding.

Morning and Afternoon Travel Mode Comparison by Day

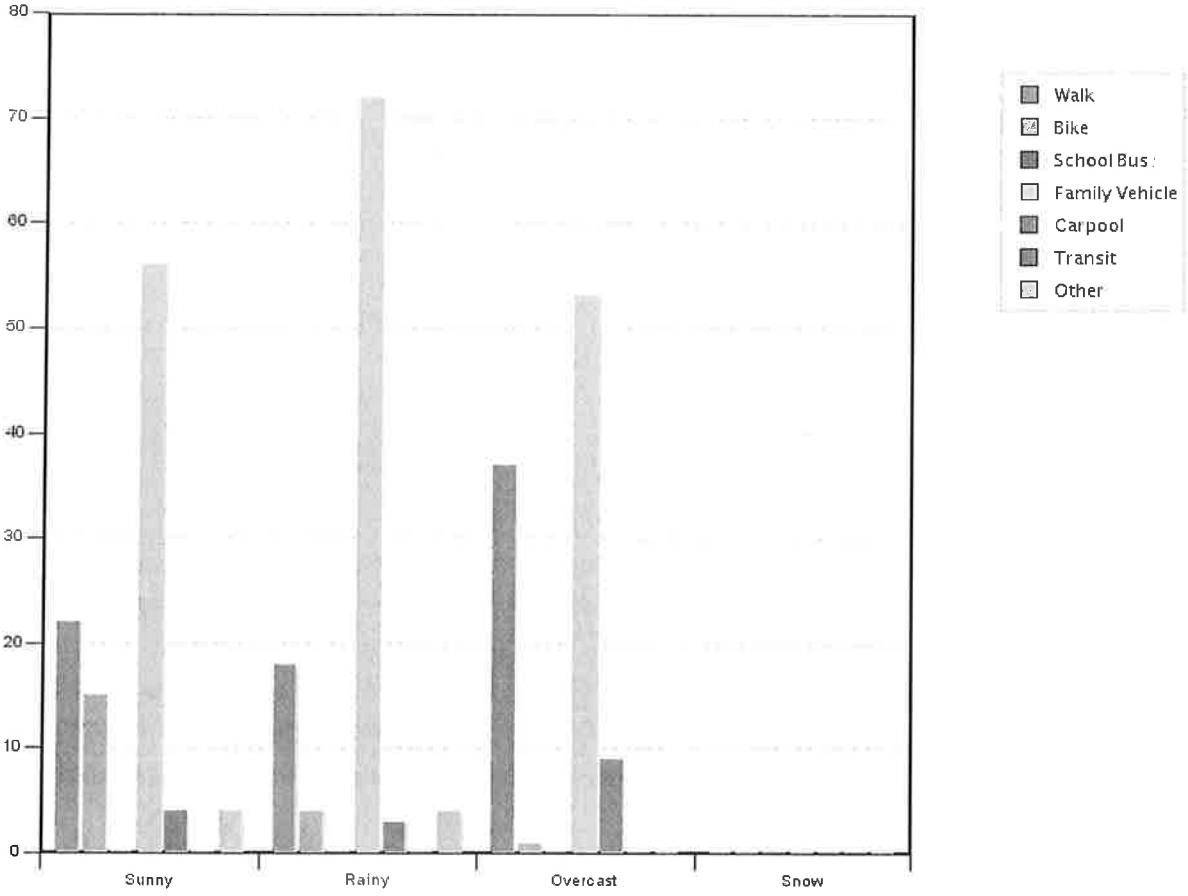


Morning and Afternoon Travel Mode Comparison by Day

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Monday AM		0%	0%	0%	0%	0%	0%	0%
Monday PM		0%	0%	0%	0%	0%	0%	0%
Tuesday AM	149	18%	10%	0%	64%	4%	0%	3%
Tuesday PM	162	30%	16%	0%	47%	4%	0%	3%
Wednesday AM	151	10%	5%	0%	79%	1%	0%	5%
Wednesday PM	167	24%	13%	0%	54%	4%	0%	4%
Thursday AM	156	18%	10%	0%	63%	5%	0%	4%
Thursday PM	175	30%	18%	0%	45%	4%	0%	4%
Friday AM		0%	0%	0%	0%	0%	0%	0%
Friday PM		0%	0%	0%	0%	0%	0%	0%

Percentages may not total 100% due to rounding.

Travel Mode by Weather Conditions



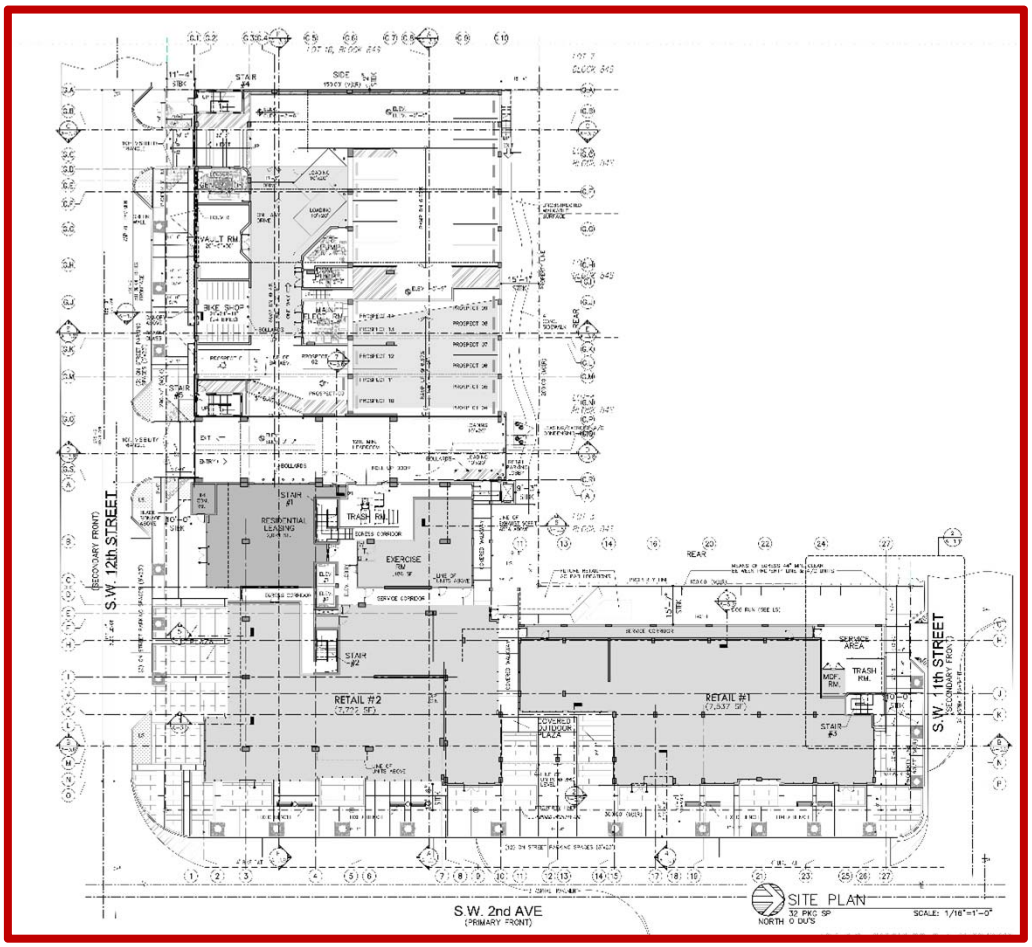
Travel Mode by Weather Condition

Weather Condition	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Sunny	739	22%	15%	0%	56%	4%	0%	4%
Rainy	153	18%	4%	0%	72%	3%	0%	4%
Overcast	68	37%	1%	0%	53%	9%	0%	0%
Snow	0	0%	0%	0%	0%	0%	0%	0%

Percentages may not total 100% due to rounding.

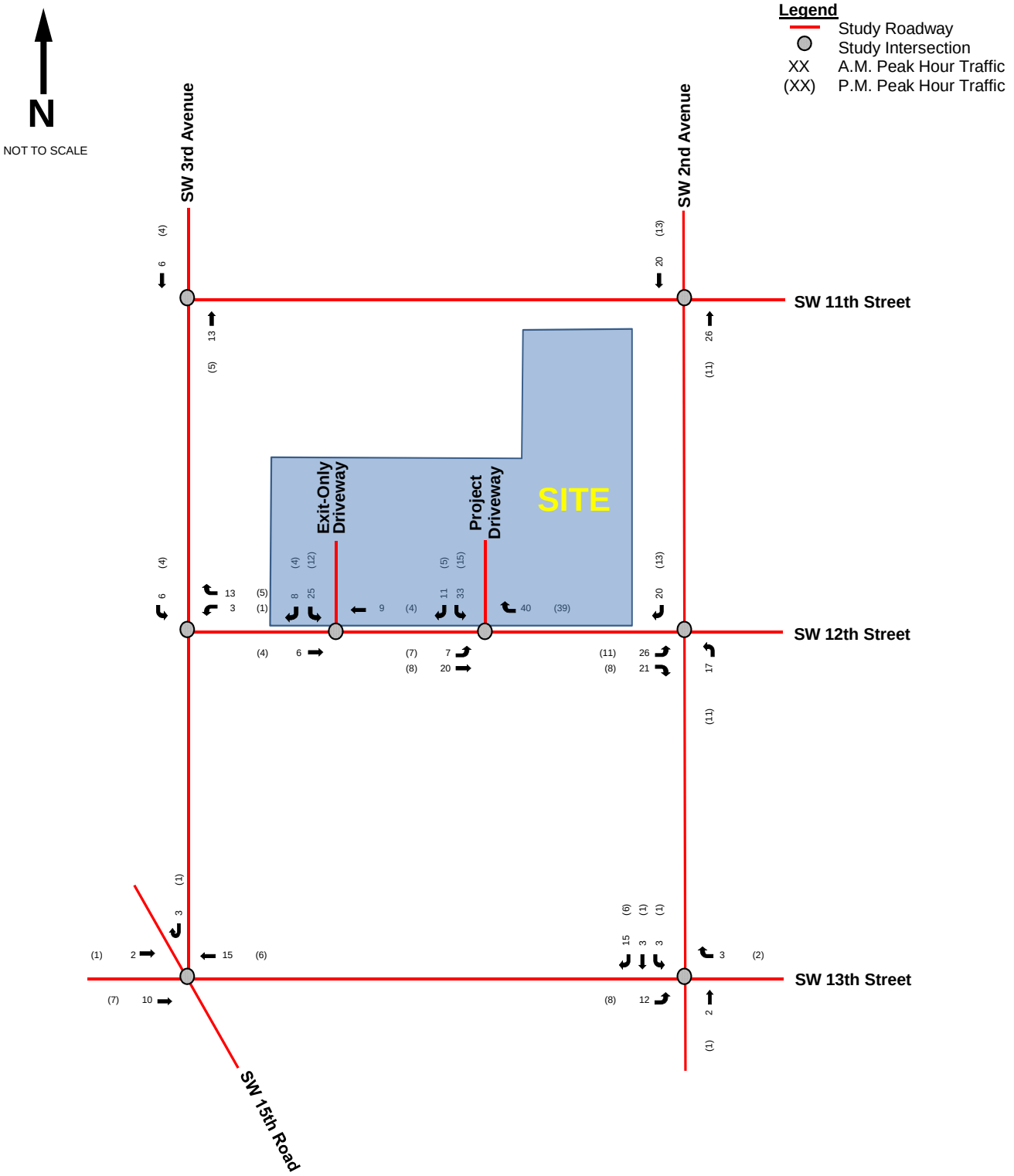
Traffic Impact Analysis
for Submittal to
City of Miami

ZOM – West Brickell Tower
Miami, Florida



Kimley»Horn

Revised March 2018
January 2017
043614002



* The traffic volumes at the project driveways are total project volumes, while traffic volumes at external intersections are net new trips accounting for the existing development

Figure 5
Peak Hour Net New Assignment
ZOM - West Brickell Tower
Miami, Florida

Kimley»Horn

APPENDIX F
INTERSECTION VOLUME TABLES

AM PEAK HOUR TRAFFIC VOLUME CALCULATIONS - PHASE 1 (1,500 Students)

BRICKELL PREPARATORY ACADEMY

Intersection	Scenario	Traffic Volumes											
		EBLT	EBT	EBRT	WBLT	WBT	WBRT	NBLT	NBT	NBRT	SBLT	SBT	SBRT
SW 15 Road and SW 2 Court	Traffic Count	2	2	5	33	2	4	5	25	41	22	506	9
	Peak Season Conversion Factor	1	1	1	1	1	1	1	1	1	1	1	1
	2017 Peak Season Traffic	**2**	**2**	**5**	**33**	**2**	**4**	**5**	**25**	**41**	**22**	**506**	**9**
	Compound Growth Rate	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%
	Existing plus Background Growth	2	2	5	34	2	4	5	26	42	23	519	9
	2020 Background Traffic	**2**	**2**	**5**	**34**	**2**	**4**	**5**	**26**	**42**	**23**	**519**	**9**
	In/Out	Out		Out				In					In
	Project Assignment	25%		10%				35%					15%
	Net New Project Trips	72	0	29	0	0	0	123	0	0	0	0	53
	2020 Total Traffic	**74**	**2**	**34**	**34**	**2**	**4**	**128**	**26**	**42**	**23**	**519**	**62**
SW 15 Road and SW 2 Avenue	Traffic Count	5	27	21	154	11	5	12	61	194	25	490	11
	Peak Season Conversion Factor	1	1	1	1	1	1	1	1	1	1	1	1
	2017 Peak Season Traffic	**5**	**27**	**21**	**154**	**11**	**5**	**12**	**61**	**194**	**25**	**490**	**11**
	Compound Growth Rate	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%
	Existing plus Background Growth	5	28	22	158	11	5	12	63	199	26	503	11
	2020 Background Traffic	**5**	**28**	**22**	**158**	**11**	**5**	**12**	**63**	**199**	**26**	**503**	**11**
	In/Out		Out	Out		In	In	In	In		Out	Out	
	Project Assignment		25%	10%		10%	20%	10%	15%		5%	5%	
	Net New Project Trips	0	72	29	0	35	70	35	53	0	14	14	0
	2020 Total Traffic	**5**	**100**	**51**	**158**	**46**	**75**	**47**	**116**	**199**	**40**	**517**	**11**
SW 17 Road and SW 1 Avenue	Traffic Count	23	236			112	12				13		55
	Peak Season Conversion Factor	1	1			1	1				1		1
	2017 Peak Season Traffic	**23**	**236**			**112**	**12**				**13**		**55**
	Compound Growth Rate	0.87%	0.87%			0.87%	0.87%				0.87%		0.87%
	Existing plus Background Growth	24	242			115	12				13		56
	2020 Background Traffic	**24**	**242**			**115**	**12**				**13**		**56**
	In/Out	In					In				Out		Out
	Project Assignment	5%					25%				5%		25%
	Net New Project Trips	18	0			0	88				14		72
	2020 Total Traffic	**42**	**242**			**115**	**100**				**27**		**128**
SW 15 Road and SW 1 Avenue	Traffic Count	28		211				140	213		8	606	41
	Peak Season Conversion Factor	1		1				1	1		1	1	1
	2017 Peak Season Traffic	**28**		**211**				**140**	**213**		**8**	**606**	**41**
	Compound Growth Rate	0.87%		0.87%				0.87%	0.87%		0.87%	0.87%	0.87%
	Existing plus Background Growth	29		217				144	219		8	622	42
	2020 Background Traffic	**29**		**217**				**144**	**219**		**8**	**622**	**42**
	In/Out			Out				In	In			Out	
	Project Assignment			25%				25%	25%			15%	
	Net New Project Trips	0		72				88	88		0	43	0
	2020 Total Traffic	**29**		**289**				**232**	**307**		**8**	**665**	**42**
		EBLT	**EBT**	**EBRT**	**WBLT**	**WBT**	**WBRT**	**NBLT**	**NBRT**	**SBRT**	**SEBLT**	**SEBT**	**SEBRT**
SW 15 Road and SW 3 Avenue	Traffic Count	55	730	437	2	517	365	8	16	114	261	85	44
	Peak Season Conversion Factor	1	1	1	1	1	1	1	1	1	1	1	1
	2017 Peak Season Traffic	**55**	**730**	**437**	**2**	**517**	**365**	**8**	**16**	**114**	**261**	**85**	**44**
	Compound Growth Rate	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%
	Existing plus Background Growth	56	749	449	2	531	375	8	16	117	268	87	45
	Committed Development Trips		10			15				3		2	
	2020 Background Traffic	**56**	**759**	**449**	**2**	**546**	**375**	**8**	**16**	**120**	**268**	**89**	**45**
	In/Out			In		Out			Out			In	
	Project Assignment			9%		15%			25%			6%	
	Net New Project Trips	0	0	32	0	43	0	0	72	0	0	21	0
	2020 Total Traffic	**56**	**759**	**481**	**2**	**589**	**375**	**8**	**88**	**120**	**268**	**110**	**45**

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

AM PEAK HOUR TRAFFIC VOLUME CALCULATIONS - PHASE II (3 Shifts)
BRICKELL PREPARATORY ACADEMY

Intersection	Scenario	Traffic Volumes											
		EBLT	EBT	EBRT	WBLT	WBT	WBRT	NBLT	NBT	NBRT	SBLT	SBT	SBRT
SW 15 Road and SW 2 Court	Traffic Count	2	2	5	33	2	4	5	25	41	22	506	9
	Peak Season Conversion Factor	1	1	1	1	1	1	1	1	1	1	1	1
	2017 Peak Season Traffic	**2**	**2**	**5**	**33**	**2**	**4**	**5**	**25**	**41**	**22**	**506**	**9**
	Compound Growth Rate	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%
	Existing plus Background Growth	2	2	5	34	2	4	5	26	43	23	528	9
	Committed Development Trips												
	2022 Background Traffic	**2**	**2**	**5**	**34**	**2**	**4**	**5**	**26**	**43**	**23**	**528**	**9**
	In/Out	Out		Out				In					In
	Project Assignment	25%		10%				35%					15%
	Net New Project Trips	96	0	39	0	0	0	164	0	0	0	0	70
	2022 Total Traffic	**98**	**2**	**44**	**34**	**2**	**4**	**169**	**26**	**43**	**23**	**528**	**79**
SW 15 Road and SW 2 Avenue	Traffic Count	5	27	21	154	11	5	12	61	194	25	490	11
	Peak Season Conversion Factor	1	1	1	1	1	1	1	1	1	1	1	1
	2017 Peak Season Traffic	**5**	**27**	**21**	**154**	**11**	**5**	**12**	**61**	**194**	**25**	**490**	**11**
	Compound Growth Rate	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%
	Existing plus Background Growth	5	28	22	161	11	5	13	64	203	26	512	11
	Committed Development Trips												
	2022 Background Traffic	**5**	**28**	**22**	**161**	**11**	**5**	**13**	**64**	**203**	**26**	**512**	**11**
	In/Out		Out	Out		In	In	In	In		Out	Out	
	Project Assignment		25%	10%		10%	20%	10%	15%		5%	5%	
	Net New Project Trips	0	96	39	0	47	94	47	70	0	19	19	0
	2022 Total Traffic	**5**	**124**	**61**	**161**	**58**	**99**	**60**	**134**	**203**	**45**	**531**	**11**
SW 17 Road and SW 1 Avenue	Traffic Count	23	236			112	12				13		55
	Peak Season Conversion Factor	1	1			1	1				1		1
	2017 Peak Season Traffic	**23**	**236**			**112**	**12**				**13**		**55**
	Compound Growth Rate	0.87%	0.87%			0.87%	0.87%				0.87%		0.87%
	Existing plus Background Growth	24	246			117	13				14		57
	Committed Development Trips												
	2022 Background Traffic	**24**	**246**			**117**	**13**				**14**		**57**
	In/Out	In					In				Out		Out
	Project Assignment	5%					25%				5%		25%
	Net New Project Trips	23	0			0	117				19		96
	2022 Total Traffic	**47**	**246**			**117**	**130**				**33**		**153**
SW 15 Road and SW 1 Avenue	Traffic Count	28	0	211	0	0	0	140	213	0	8	606	41
	Peak Season Conversion Factor	1	1	1	1	1	1	1	1	1	1	1	1
	2017 Peak Season Traffic	**28**	**0**	**211**	**0**	**0**	**0**	**140**	**213**	**0**	**8**	**606**	**41**
	Compound Growth Rate	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%
	Existing plus Background Growth	29	0	220	0	0	0	146	222	0	8	633	43
	Committed Development Trips												
	2022 Background Traffic	**29**	**0**	**220**	**0**	**0**	**0**	**146**	**222**	**0**	**8**	**633**	**43**
	In/Out			Out				In	In			Out	
	Project Assignment			25%				25%	25%			15%	
	Net New Project Trips	0	0	96	0	0	0	117	117	0	0	58	0
	2022 Total Traffic	**29**	**0**	**316**	**0**	**0**	**0**	**263**	**339**	**0**	**8**	**691**	**43**
		EBLT	**EBT**	**EBRT**	**WBLT**	**WBT**	**WBRT**	**NBLT**	**NBRT**	**SBRT**	**SEBLT**	**SEBT**	**SEBRT**
SW 15 Road and SW 3 Avenue	Traffic Count	55	730	437	2	517	365	8	16	114	261	85	44
	Peak Season Conversion Factor	1	1	1	1	1	1	1	1	1	1	1	1
	2017 Peak Season Traffic	**55**	**730**	**437**	**2**	**517**	**365**	**8**	**16**	**114**	**261**	**85**	**44**
	Compound Growth Rate	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%
	Existing plus Background Growth	57	762	456	2	540	381	8	17	119	273	89	46
	Committed Development Trips		10			15				3		2	
	2022 Background Traffic	**57**	**772**	**456**	**2**	**555**	**381**	**8**	**17**	**122**	**273**	**91**	**46**
	In/Out			In		Out			Out			In	
	Project Assignment			9%		15%			25%			6%	
	Net New Project Trips	0	0	42	0	58	0	0	96	0	0	28	0
	2022 Total Traffic	**57**	**772**	**498**	**2**	**613**	**381**	**8**	**113**	**122**	**273**	**119**	**46**

APPENDIX G
CAPACITY ANALYSIS REPORTS

EXISTING CONDITIONS

Table 1.1 - 2017 Existing Intersection Capacity Analysis Summary

Location	Traffic Control	Approach	2017 Existing Conditions	
			LOS	**Delay** (secs)
SW 15 Road and SW 2 Court	Two-Way Stop	NB	B	13.4
		SB	C	15.5
SW 15 Road and SW 2 Avenue	All-Way Stop	EB	D	26.9
		WB	B	11.8
		NB	B	12.6
		SB	B	10.2
SW 17 Road and SW 1 Avenue	Two-Way Stop	SEB	A	9.9
SW 15 Road and SW 1 Avenue	Two-Way Stop	NB	D	34.3
SW 15 Road and SW 3 Avenue	Two-Way Stop	NB	B	13.9
		SEB	D	26.9

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	506	9	5	25	41	2	2	5	33	2	4
Future Vol, veh/h	22	506	9	5	25	41	2	2	5	33	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	550	10	5	27	45	2	2	5	36	2	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	72	0	0	560	0	0	667	686	555	667	668	49
Stage 1	-	-	-	-	-	-	603	603	-	60	60	-
Stage 2	-	-	-	-	-	-	64	83	-	607	608	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1528	-	-	1011	-	-	372	370	531	372	379	1020
Stage 1	-	-	-	-	-	-	486	488	-	951	845	-
Stage 2	-	-	-	-	-	-	947	826	-	483	486	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1528	-	-	1011	-	-	361	360	531	359	368	1020
Mov Cap-2 Maneuver	-	-	-	-	-	-	361	360	-	359	368	-
Stage 1	-	-	-	-	-	-	475	477	-	929	841	-
Stage 2	-	-	-	-	-	-	936	822	-	465	475	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	0.3	0.6	13.4	15.5
HCM LOS			B	C

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SWLn1
Capacity (veh/h)	439	1528	-	-	1011	-	-	385
HCM Lane V/C Ratio	0.022	0.016	-	-	0.005	-	-	0.11
HCM Control Delay (s)	13.4	7.4	0	-	8.6	0	-	15.5
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4

Intersection	
Intersection Delay, s/veh	19.7
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEU	NEL	NET	NER
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	25	490	11	0	12	61	194	0	154	11	5
Future Vol, veh/h	0	25	490	11	0	12	61	194	0	154	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	27	533	12	0	13	66	211	0	167	12	5
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NE
Opposing Approach	WB	EB	SW
Opposing Lanes	1	1	1
Conflicting Approach Left	SW	NE	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NE	SW	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	26.9	11.8	12.6
HCM LOS	D	B	B

Lane	NELn1	EBLn1	WBLn1	SWLn1
Vol Left, %	91%	5%	4%	9%
Vol Thru, %	6%	93%	23%	51%
Vol Right, %	3%	2%	73%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	526	267	53
LT Vol	154	25	12	5
Through Vol	11	490	61	27
RT Vol	5	11	194	21
Lane Flow Rate	185	572	290	58
Geometry Grp	1	1	1	1
Degree of Util (X)	0.328	0.816	0.413	0.102
Departure Headway (Hd)	6.384	5.14	5.121	6.355
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	562	703	699	560
Service Time	4.451	3.186	3.179	4.442
HCM Lane V/C Ratio	0.329	0.814	0.415	0.104
HCM Control Delay	12.6	26.9	11.8	10.2
HCM Lane LOS	B	D	B	B
HCM 95th-tile Q	1.4	8.6	2	0.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SWU	SWL	SWT	SWR
Lane Configurations			↕	
Traffic Vol, veh/h	0	5	27	21
Future Vol, veh/h	0	5	27	21
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	5	29	23
Number of Lanes	0	0	1	0

Approach	SW
Opposing Approach	NE
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.2
HCM LOS	B

Intersection	
Int Delay, s/veh	1.9

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	13	55	23	236	112	12
Future Vol, veh/h	13	55	23	236	112	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	60	25	257	122	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	435	128	135	0	-	0
Stage 1	128	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	7.12	6.22	4.12	-	-	-
Critical Hdwy Stg 1	6.12	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	531	922	1449	-	-	-
Stage 1	876	-	-	-	-	-
Stage 2	703	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	523	922	1449	-	-	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	858	-	-	-	-	-
Stage 2	689	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9.9	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1449	-	805	-	-
HCM Lane V/C Ratio	0.017	-	0.092	-	-
HCM Control Delay (s)	7.5	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	7.7

Movement	EBU	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations							
Traffic Vol, veh/h	8	606	41	140	213	28	211
Future Vol, veh/h	8	606	41	140	213	28	211
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	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	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	9	659	45	152	232	30	229

Major/Minor	Major1			Major2		Minor1	
Conflicting Flow All	-	0	0	703	0	1217	681
Stage 1	-	-	-	-	-	681	-
Stage 2	-	-	-	-	-	536	-
Critical Hdwy	-	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	-	895	-	200	450
Stage 1	-	-	-	-	-	503	-
Stage 2	-	-	-	-	-	587	-
Platoon blocked, %		-	-		-		
Mov Cap-1 Maneuver	-	-	-	895	-	161	450
Mov Cap-2 Maneuver	-	-	-	-	-	161	-
Stage 1	-	-	-	-	-	503	-
Stage 2	-	-	-	-	-	473	-

Approach	EB	WB	NE
HCM Control Delay, s		3.9	34.3
HCM LOS			D

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	372	-	-	895	-
HCM Lane V/C Ratio	0.698	-	-	0.17	-
HCM Control Delay (s)	34.3	-	-	9.8	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	5.1	-	-	0.6	-

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↳			↑↑↳				↱					
Traffic Vol, veh/h	7	730	437	2	517	327	0	0	118	85	0	0	0	0
Future Vol, veh/h	7	730	437	2	517	327	0	0	118	85	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	-	-	-	-	None	-	-	-
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	793	475	2	562	355	0	0	128	92	0	0	0	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	917	0	0	801	0	0	744	1649	459
Stage 1	-	-	-	-	-	-	744	744	-
Stage 2	-	-	-	-	-	-	0	905	-
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	740	-	-	818	-	-	350	~ 98	549
Stage 1	-	-	-	-	-	-	431	420	-
Stage 2	-	-	-	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	740	-	-	818	-	-	296	0	549
Mov Cap-2 Maneuver	-	-	-	-	-	-	296	0	-
Stage 1	-	-	-	-	-	-	364	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	SE
HCM Control Delay, s	10.1	0	26.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL2	EBL	EBT	WBL	WBT	WBR	SELn1	SELn2
Capacity (veh/h)	740	-	-	818	-	-	296	420
HCM Lane V/C Ratio	0.071	-	-	0.003	-	-	0.35	0.649
HCM Control Delay (s)	10.2	-	10.2	9.4	-	-	23.6	28.1
HCM Lane LOS	B	-	B	A	-	-	C	D
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	1.5	4.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	730	437	2	882	8	16
Future Vol, veh/h	730	437	2	882	8	16
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, %	2	2	2	2	2	2
Mvmt Flow	793	475	2	959	9	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1268	0	1515	634
Stage 1	-	-	-	-	1031	-
Stage 2	-	-	-	-	484	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	544	-	110	422
Stage 1	-	-	-	-	305	-
Stage 2	-	-	-	-	585	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	544	-	109	422
Mov Cap-2 Maneuver	-	-	-	-	109	-
Stage 1	-	-	-	-	303	-
Stage 2	-	-	-	-	585	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	422	-	-	544	-
HCM Lane V/C Ratio	0.041	-	-	0.004	-
HCM Control Delay (s)	13.9	-	-	11.6	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

2020 No Build Conditions

Table 2.1 - No-Build Intersection Capacity Analysis Summary for 2020

Location	Traffic Control	Approach	2020 No-Build Conditions	
			LOS	**Delay** (secs)
SW 15 Road and SW 2 Court	Two-Way Stop	NB	B	13.6
		SB	C	15.9
SW 15 Road and SW 2 Avenue	All-Way Stop	EB	D	30.1
		WB	B	12.1
		NB	B	12.9
		SB	B	10.3
SW 17 Road and SW 1 Avenue	Two-Way Stop	SEB	A	9.9
SW 15 Road and SW 1 Avenue	Two-Way Stop	NB	E	38.9
SW 15 Road and SW 3 Avenue	Two-Way Stop	NB	B	14.2
		SEB	D	30.9

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	519	9	5	26	42	2	2	5	34	2	4
Future Vol, veh/h	23	519	9	5	26	42	2	2	5	34	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	564	10	5	28	46	2	2	5	37	2	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	74	0	0	574	0	0	684	704	569	685	686	51
Stage 1	-	-	-	-	-	-	619	619	-	62	62	-
Stage 2	-	-	-	-	-	-	65	85	-	623	624	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1526	-	-	999	-	-	363	361	522	362	370	1017
Stage 1	-	-	-	-	-	-	476	480	-	949	843	-
Stage 2	-	-	-	-	-	-	946	824	-	474	478	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1526	-	-	999	-	-	352	351	522	349	359	1017
Mov Cap-2 Maneuver	-	-	-	-	-	-	352	351	-	349	359	-
Stage 1	-	-	-	-	-	-	465	468	-	926	839	-
Stage 2	-	-	-	-	-	-	935	820	-	456	467	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	0.3	0.6	13.6	15.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SWLn1
Capacity (veh/h)	429	1526	-	-	999	-	-	374
HCM Lane V/C Ratio	0.023	0.016	-	-	0.005	-	-	0.116
HCM Control Delay (s)	13.6	7.4	0	-	8.6	0	-	15.9
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Intersection	
Intersection Delay, s/veh	21.5
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEU	NEL	NET	NER
Lane Configurations												
Traffic Vol, veh/h	0	26	503	11	0	12	63	199	0	158	11	5
Future Vol, veh/h	0	26	503	11	0	12	63	199	0	158	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	28	547	12	0	13	68	216	0	172	12	5
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NE
Opposing Approach	WB	EB	SW
Opposing Lanes	1	1	1
Conflicting Approach Left	SW	NE	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NE	SW	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	30.1	12.1	12.9
HCM LOS	D	B	B

Lane	NELn1	EBLn1	WBLn1	SWLn1
Vol Left, %	91%	5%	4%	9%
Vol Thru, %	6%	93%	23%	51%
Vol Right, %	3%	2%	73%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	174	540	274	55
LT Vol	158	26	12	5
Through Vol	11	503	63	28
RT Vol	5	11	199	22
Lane Flow Rate	189	587	298	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.34	0.846	0.429	0.107
Departure Headway (Hd)	6.465	5.189	5.188	6.452
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	554	698	691	551
Service Time	4.537	3.239	3.25	4.546
HCM Lane V/C Ratio	0.341	0.841	0.431	0.109
HCM Control Delay	12.9	30.1	12.1	10.3
HCM Lane LOS	B	D	B	B
HCM 95th-tile Q	1.5	9.6	2.2	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SWU	SWL	SWT	SWR
Lane Configurations			↕	
Traffic Vol, veh/h	0	5	28	22
Future Vol, veh/h	0	5	28	22
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	5	30	24
Number of Lanes	0	0	1	0

Approach	SW
Opposing Approach	NE
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.3
HCM LOS	B

Intersection	
Int Delay, s/veh	1.9

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	13	56	24	242	115	12
Future Vol, veh/h	13	56	24	242	115	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	61	26	263	125	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	447	132	138	0	-	0
Stage 1	132	-	-	-	-	-
Stage 2	315	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	569	917	1446	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	740	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	557	917	1446	-	-	-
Mov Cap-2 Maneuver	557	-	-	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	724	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9.9	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1446	-	817	-	-
HCM Lane V/C Ratio	0.018	-	0.092	-	-
HCM Control Delay (s)	7.5	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	8.6

Movement	EBU	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations							
Traffic Vol, veh/h	8	622	42	144	219	29	217
Future Vol, veh/h	8	622	42	144	219	29	217
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	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	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	9	676	46	157	238	32	236

Major/Minor	Major1			Major2		Minor1	
Conflicting Flow All	-	0	0	722	0	1250	699
Stage 1	-	-	-	-	-	699	-
Stage 2	-	-	-	-	-	551	-
Critical Hdwy	-	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	-	880	-	191	440
Stage 1	-	-	-	-	-	493	-
Stage 2	-	-	-	-	-	577	-
Platoon blocked, %		-	-		-		
Mov Cap-1 Maneuver	-	-	-	880	-	152	440
Mov Cap-2 Maneuver	-	-	-	-	-	152	-
Stage 1	-	-	-	-	-	493	-
Stage 2	-	-	-	-	-	458	-

Approach	EB	WB	NE
HCM Control Delay, s		4	38.9
HCM LOS			E

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	360	-	-	880	-
HCM Lane V/C Ratio	0.743	-	-	0.178	-
HCM Control Delay (s)	38.9	-	-	10	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	5.8	-	-	0.6	-

Intersection	
Int Delay, s/veh	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↳			↑↑↳				↱					
Traffic Vol, veh/h	7	759	449	2	546	336	0	0	121	89	0	0	0	0
Future Vol, veh/h	7	759	449	2	546	336	0	0	121	89	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	-	-	-	-	None	-	-	-
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	825	488	2	593	365	0	0	132	97	0	0	0	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	958	0	0	833	0	0	780	1719	479
Stage 1	-	-	-	-	-	-	780	780	-
Stage 2	-	-	-	-	-	-	0	939	-
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	714	-	-	796	-	-	332	~ 89	533
Stage 1	-	-	-	-	-	-	412	404	-
Stage 2	-	-	-	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	714	-	-	796	-	-	275	0	533
Mov Cap-2 Maneuver	-	-	-	-	-	-	275	0	-
Stage 1	-	-	-	-	-	-	341	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	SE
HCM Control Delay, s	10.4	0	30.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL2	EBL	EBT	WBL	WBT	WBR	SELn1	SELn2
Capacity (veh/h)	714	-	-	796	-	-	275	400
HCM Lane V/C Ratio	0.075	-	-	0.003	-	-	0.387	0.704
HCM Control Delay (s)	10.4	-	10.4	9.5	-	-	26.1	32.7
HCM Lane LOS	B	-	B	A	-	-	D	D
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	1.8	5.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	759	449	2	921	8	16
Future Vol, veh/h	759	449	2	921	8	16
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, %	2	2	2	2	2	2
Mvmt Flow	825	488	2	1001	9	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1313	0	1574	657
Stage 1	-	-	-	-	1069	-
Stage 2	-	-	-	-	505	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	523	-	101	407
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	571	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	523	-	100	407
Mov Cap-2 Maneuver	-	-	-	-	100	-
Stage 1	-	-	-	-	288	-
Stage 2	-	-	-	-	571	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	407	-	-	523	-
HCM Lane V/C Ratio	0.043	-	-	0.004	-
HCM Control Delay (s)	14.2	-	-	11.9	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

PHASE 1 2020 BUILD CONDITIONS

Table 4.1 - 2020 Build Conditions Intersection Capacity Analysis Summary

Location	Traffic Control	Approach	2020 Build Conditions	
			LOS	**Delay** (secs)
SW 15 Road and SW 2 Court	Two-Way Stop	NB	D	33.6
		SB	D	28.8
SW 15 Road and SW 2 Avenue	All-Way Stop	EB	F	115.2
		WB	D	27.7
		NB	C	23.4
		SB	C	16.3
SW 15 Road and SW 2 Avenue*	All-Way Stop	EB	F	107.6
		WB	C	22.5
		NB	C	22.9
		SB	C	16.1
SW 17 Road and SW 1 Avenue	Two-Way Stop	SEB	B	11.1
SW 15 Road and SW 1 Avenue	Two-Way Stop	NB	F	148
SW 15 Road and SW 3 Avenue	Two-Way Stop	NB	C	16.9
		SEB	E	37.0

**With turn lanes improvements*

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	519	62	128	26	42	74	2	34	34	2	4
Future Vol, veh/h	23	519	62	128	26	42	74	2	34	34	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	564	67	139	28	46	80	2	37	37	2	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	74	0	0	632	0	0	981	1000	598	996	1011	51
Stage 1	-	-	-	-	-	-	648	648	-	329	329	-
Stage 2	-	-	-	-	-	-	333	352	-	667	682	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1526	-	-	951	-	-	229	243	502	223	240	1017
Stage 1	-	-	-	-	-	-	459	466	-	684	646	-
Stage 2	-	-	-	-	-	-	681	632	-	448	450	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1526	-	-	951	-	-	196	200	502	177	198	1017
Mov Cap-2 Maneuver	-	-	-	-	-	-	196	200	-	177	198	-
Stage 1	-	-	-	-	-	-	447	454	-	666	547	-
Stage 2	-	-	-	-	-	-	572	535	-	402	438	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	0.3	6.2	33.6	28.8
HCM LOS			D	D

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SWLn1
Capacity (veh/h)	242	1526	-	-	951	-	-	194
HCM Lane V/C Ratio	0.494	0.016	-	-	0.146	-	-	0.224
HCM Control Delay (s)	33.6	7.4	0	-	9.4	0	-	28.8
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	2.5	0.1	-	-	0.5	-	-	0.8

Intersection	
Intersection Delay, s/veh	61.9
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEU	NEL	NET	NER
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	40	517	11	0	47	116	199	0	158	46	75
Future Vol, veh/h	0	40	517	11	0	47	116	199	0	158	46	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	43	562	12	0	51	126	216	0	172	50	82
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NE
Opposing Approach	WB	EB	SW
Opposing Lanes	1	1	1
Conflicting Approach Left	SW	NE	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NE	SW	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	115.2	27.7	23.4
HCM LOS	F	D	C

Lane	NELn1	EBLn1	WBLn1	SWLn1
Vol Left, %	57%	7%	13%	3%
Vol Thru, %	16%	91%	32%	64%
Vol Right, %	27%	2%	55%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	568	362	156
LT Vol	158	40	47	5
Through Vol	46	517	116	100
RT Vol	75	11	199	51
Lane Flow Rate	303	617	393	170
Geometry Grp	1	1	1	1
Degree of Util (X)	0.628	1.159	0.738	0.371
Departure Headway (Hd)	7.933	6.76	7.148	8.422
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	458	537	508	431
Service Time	5.933	4.836	5.148	6.422
HCM Lane V/C Ratio	0.662	1.149	0.774	0.394
HCM Control Delay	23.4	115.2	27.7	16.3
HCM Lane LOS	C	F	D	C
HCM 95th-tile Q	4.2	21.2	6.2	1.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SWU	SWL	SWT	SWR
Lane Configurations			↕	
Traffic Vol, veh/h	0	5	100	51
Future Vol, veh/h	0	5	100	51
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	5	109	55
Number of Lanes	0	0	1	0

Approach	SW
Opposing Approach	NE
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	16.3
HCM LOS	C

Intersection	
Intersection Delay, s/veh	57.3
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEU	NEL	NET	NER
Lane Configurations												
Traffic Vol, veh/h	0	40	517	11	0	47	116	199	0	158	46	75
Future Vol, veh/h	0	40	517	11	0	47	116	199	0	158	46	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	43	562	12	0	51	126	216	0	172	50	82
Number of Lanes	0	1	1	0	0	1	1	0	0	0	1	0

Approach	EB	WB	NE
Opposing Approach	WB	EB	SW
Opposing Lanes	2	2	1
Conflicting Approach Left	SW	NE	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NE	SW	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	107.6	22.5	22.9
HCM LOS	F	C	C

Lane	NELn1	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1
Vol Left, %	57%	100%	0%	100%	0%	3%
Vol Thru, %	16%	0%	98%	0%	37%	64%
Vol Right, %	27%	0%	2%	0%	63%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	40	528	47	315	156
LT Vol	158	40	0	47	0	5
Through Vol	46	0	517	0	116	100
RT Vol	75	0	11	0	199	51
Lane Flow Rate	303	43	574	51	342	170
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.623	0.094	1.153	0.114	0.672	0.368
Departure Headway (Hd)	7.825	7.762	7.232	8.395	7.419	8.301
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	464	461	505	430	490	436
Service Time	5.825	5.516	4.986	6.095	5.119	6.301
HCM Lane V/C Ratio	0.653	0.093	1.137	0.119	0.698	0.39
HCM Control Delay	22.9	11.3	114.9	12.2	24	16.1
HCM Lane LOS	C	B	F	B	C	C
HCM 95th-tile Q	4.2	0.3	20.1	0.4	4.9	1.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SWU	SWL	SWT	SWR
Lane Configurations			↕	
Traffic Vol, veh/h	0	5	100	51
Future Vol, veh/h	0	5	100	51
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	5	109	55
Number of Lanes	0	0	1	0

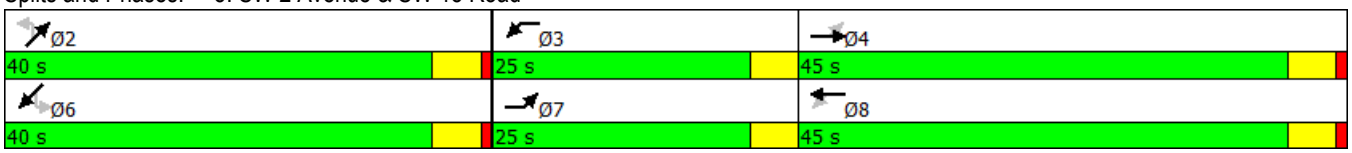
Approach	SW
Opposing Approach	NE
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	16.1
HCM LOS	C

Lane Group	EBL	EBT	WBL	WBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	40	517	47	116	158	46	5	100
Future Volume (vph)	40	517	47	116	158	46	5	100
Lane Group Flow (vph)	43	574	51	342	0	304	0	169
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	25.0	45.0	25.0	45.0	40.0	40.0	40.0	40.0
Total Split (%)	22.7%	40.9%	22.7%	40.9%	36.4%	36.4%	36.4%	36.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0		5.0		5.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio	0.08	0.73	0.15	0.45		0.65		0.27
Control Delay	9.8	26.1	10.4	14.5		29.2		19.0
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	9.8	26.1	10.4	14.5		29.2		19.0
Queue Length 50th (ft)	9	233	10	83		119		52
Queue Length 95th (ft)	27	430	m30	182		238		112
Internal Link Dist (ft)		269		178		402		295
Turn Bay Length (ft)	150		150					
Base Capacity (vph)	766	1141	674	1071		735		979
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.06	0.50	0.08	0.32		0.41		0.17

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 72.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: SW 2 Avenue & SW 15 Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	40	517	11	47	116	199	158	46	75	5	100	51
Future Volume (veh/h)	40	517	11	47	116	199	158	46	75	5	100	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	43	562	12	51	126	216	172	50	82	5	109	55
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	487	720	15	346	248	426	321	85	106	81	306	149
Arrive On Green	0.05	0.40	0.40	0.05	0.40	0.40	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	1817	39	1774	617	1058	777	324	407	16	1168	571
Grp Volume(v), veh/h	43	0	574	51	0	342	304	0	0	169	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1856	1774	0	1676	1508	0	0	1754	0	0
Q Serve(g_s), s	0.7	0.0	13.0	0.8	0.0	7.4	4.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	13.0	0.8	0.0	7.4	8.6	0.0	0.0	3.8	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.63	0.57		0.27	0.03		0.33
Lane Grp Cap(c), veh/h	487	0	735	346	0	674	512	0	0	536	0	0
V/C Ratio(X)	0.09	0.00	0.78	0.15	0.00	0.51	0.59	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	1181	0	1542	1028	0	1392	1155	0	0	1345	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.2	0.0	12.7	9.4	0.0	10.8	16.0	0.0	0.0	14.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.2	0.0	0.6	1.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	6.9	0.4	0.0	3.4	3.8	0.0	0.0	1.9	0.0	0.0
LnGrp Delay(d),s/veh	8.3	0.0	14.6	9.6	0.0	11.4	17.1	0.0	0.0	14.8	0.0	0.0
LnGrp LOS	A		B	A		B	B			B		
Approach Vol, veh/h		617			393			304			169	
Approach Delay, s/veh		14.1			11.2			17.1			14.8	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		17.6	6.5	24.1		17.6	6.2	24.4
Change Period (Y+Rc), s		5.0	4.0	5.0		5.0	4.0	5.0
Max Green Setting (Gmax), s		35.0	21.0	40.0		35.0	21.0	40.0
Max Q Clear Time (g_c+I1), s		10.6	2.8	15.0		5.8	2.7	9.4
Green Ext Time (p_c), s		2.1	0.1	4.1		1.0	0.1	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.2

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	27	128	42	242	115	100
Future Vol, veh/h	27	128	42	242	115	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	139	46	263	125	109

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	533	179	234	0	-	0
Stage 1	179	-	-	-	-	-
Stage 2	354	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	507	864	1333	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	487	864	1333	-	-	-
Mov Cap-2 Maneuver	487	-	-	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	682	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	11.1	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1333	-	761	-	-
HCM Lane V/C Ratio	0.034	-	0.221	-	-
HCM Control Delay (s)	7.8	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	31.6

Movement	EBU	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations							
Traffic Vol, veh/h	8	665	42	232	307	29	289
Future Vol, veh/h	8	665	42	232	307	29	289
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	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	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	9	723	46	252	334	32	314

Major/Minor	Major1			Major2		Minor1	
Conflicting Flow All	-	0	0	768	0	1584	746
Stage 1	-	-	-	-	-	746	-
Stage 2	-	-	-	-	-	838	-
Critical Hdwy	-	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	-	846	-	119	413
Stage 1	-	-	-	-	-	469	-
Stage 2	-	-	-	-	-	424	-
Platoon blocked, %		-	-		-		
Mov Cap-1 Maneuver	-	-	-	846	-	75	413
Mov Cap-2 Maneuver	-	-	-	-	-	75	-
Stage 1	-	-	-	-	-	469	-
Stage 2	-	-	-	-	-	269	-

Approach	EB	WB	NE
HCM Control Delay, s		4.8	148
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	293	-	-	846	-
HCM Lane V/C Ratio	1.18	-	-	0.298	-
HCM Control Delay (s)	148	-	-	11.1	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	15.1	-	-	1.3	-

Intersection	
Int Delay, s/veh	10.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↳			↑↑↳				↱					
Traffic Vol, veh/h	7	759	481	2	589	336	0	0	121	110	0	0	0	0
Future Vol, veh/h	7	759	481	2	589	336	0	0	121	110	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	-	-	-	-	None	-	-	-
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	825	523	2	640	365	0	0	132	120	0	0	0	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	1005	0	0	833	0	0	827	1766	503
Stage 1	-	-	-	-	-	-	827	827	-
Stage 2	-	-	-	-	-	-	0	939	-
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	685	-	-	796	-	-	310	~ 83	514
Stage 1	-	-	-	-	-	-	390	384	-
Stage 2	-	-	-	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	685	-	-	796	-	-	255	0	514
Mov Cap-2 Maneuver	-	-	-	-	-	-	255	0	-
Stage 1	-	-	-	-	-	-	320	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	SE
HCM Control Delay, s	10.6	0	37
HCM LOS			E

Minor Lane/Major Mvmt	EBL2	EBL	EBT	WBL	WBT	WBR	SELn1	SELn2
Capacity (veh/h)	685	-	-	796	-	-	255	391
HCM Lane V/C Ratio	0.078	-	-	0.003	-	-	0.418	0.778
HCM Control Delay (s)	10.7	-	10.7	9.5	-	-	28.9	39.9
HCM Lane LOS	B	-	B	A	-	-	D	E
HCM 95th %tile Q(veh)	0.3	-	-	0	-	-	1.9	6.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	759	481	2	966	8	88
Future Vol, veh/h	759	481	2	966	8	88
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, %	2	2	2	2	2	2
Mvmt Flow	825	523	2	1050	9	96

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1348	0	1616	674
Stage 1	-	-	-	-	1087	-
Stage 2	-	-	-	-	529	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	507	-	94	397
Stage 1	-	-	-	-	285	-
Stage 2	-	-	-	-	555	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	507	-	93	397
Mov Cap-2 Maneuver	-	-	-	-	93	-
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	555	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	16.9
HCM LOS			C

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	397	-	-	507	-
HCM Lane V/C Ratio	0.241	-	-	0.004	-
HCM Control Delay (s)	16.9	-	-	12.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.9	-	-	0	-

2022 No Build Conditions

Table 2.2 - No-Build Intersection Capacity Analysis Summary for 2022

Location	Traffic Control	Approach	2022 No-Build Conditions	
			LOS	**Delay** (secs)
SW 15 Road and SW 2 Court	Two-Way Stop	NB	B	13.7
		SB	C	16.1
SW 15 Road and SW 2 Avenue	All-Way Stop	EB	D	32.4
		WB	B	12.4
		NB	B	13.7
		SB	C	16.1
SW 17 Road and SW 1 Avenue	Two-Way Stop	SEB	A	9.9
SW 15 Road and SW 1 Avenue	Two-Way Stop	NB	E	41.9
SW 15 Road and SW 3 Avenue	Two-Way Stop	NB	B	14.4
		SEB	D	33.2

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	528	9	5	26	43	2	2	5	34	2	4
Future Vol, veh/h	23	528	9	5	26	43	2	2	5	34	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	574	10	5	28	47	2	2	5	37	2	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	75	0	0	584	0	0	695	715	579	696	697	52
Stage 1	-	-	-	-	-	-	629	629	-	63	63	-
Stage 2	-	-	-	-	-	-	66	86	-	633	634	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1524	-	-	991	-	-	357	356	515	356	365	1016
Stage 1	-	-	-	-	-	-	470	475	-	948	842	-
Stage 2	-	-	-	-	-	-	945	824	-	468	473	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1524	-	-	991	-	-	346	346	515	343	354	1016
Mov Cap-2 Maneuver	-	-	-	-	-	-	346	346	-	343	354	-
Stage 1	-	-	-	-	-	-	459	464	-	925	838	-
Stage 2	-	-	-	-	-	-	934	820	-	450	462	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	0.3	0.6	13.7	16.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SWLn1
Capacity (veh/h)	423	1524	-	-	991	-	-	368
HCM Lane V/C Ratio	0.023	0.016	-	-	0.005	-	-	0.118
HCM Control Delay (s)	13.7	7.4	0	-	8.7	0	-	16.1
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Intersection	
Intersection Delay, s/veh	22.8
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEU	NEL	NET	NER
Lane Configurations												
Traffic Vol, veh/h	0	26	512	11	0	13	64	203	0	161	11	5
Future Vol, veh/h	0	26	512	11	0	13	64	203	0	161	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	28	557	12	0	14	70	221	0	175	12	5
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NE
Opposing Approach	WB	EB	SW
Opposing Lanes	1	1	1
Conflicting Approach Left	SW	NE	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NE	SW	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	32.4	12.4	13.1
HCM LOS	D	B	B

Lane	NELn1	EBLn1	WBLn1	SWLn1
Vol Left, %	91%	5%	5%	9%
Vol Thru, %	6%	93%	23%	51%
Vol Right, %	3%	2%	72%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	177	549	280	55
LT Vol	161	26	13	5
Through Vol	11	512	64	28
RT Vol	5	11	203	22
Lane Flow Rate	192	597	304	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.348	0.865	0.442	0.108
Departure Headway (Hd)	6.516	5.219	5.226	6.522
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	548	692	685	545
Service Time	4.593	3.272	3.293	4.621
HCM Lane V/C Ratio	0.35	0.863	0.444	0.11
HCM Control Delay	13.1	32.4	12.4	10.4
HCM Lane LOS	B	D	B	B
HCM 95th-tile Q	1.5	10.2	2.3	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SWU	SWL	SWT	SWR
Lane Configurations				
Traffic Vol, veh/h	0	5	28	22
Future Vol, veh/h	0	5	28	22
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	5	30	24
Number of Lanes	0	0	1	0

Approach	SW
Opposing Approach	NE
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.4
HCM LOS	B

Intersection	
Int Delay, s/veh	1.9

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	14	57	24	246	117	13
Future Vol, veh/h	14	57	24	246	117	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	62	26	267	127	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	454	134	141	0	-	0
Stage 1	134	-	-	-	-	-
Stage 2	320	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	564	915	1442	-	-	-
Stage 1	892	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	552	915	1442	-	-	-
Mov Cap-2 Maneuver	552	-	-	-	-	-
Stage 1	892	-	-	-	-	-
Stage 2	721	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9.9	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1442	-	810	-	-
HCM Lane V/C Ratio	0.018	-	0.095	-	-
HCM Control Delay (s)	7.5	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	9.2

Movement	EBU	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations							
Traffic Vol, veh/h	8	633	43	146	222	29	220
Future Vol, veh/h	8	633	43	146	222	29	220
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	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	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	9	688	47	159	241	32	239

Major/Minor	Major1			Major2		Minor1	
Conflicting Flow All	-	0	0	735	0	1270	711
Stage 1	-	-	-	-	-	711	-
Stage 2	-	-	-	-	-	559	-
Critical Hdwy	-	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	-	870	-	186	433
Stage 1	-	-	-	-	-	487	-
Stage 2	-	-	-	-	-	572	-
Platoon blocked, %		-	-		-		
Mov Cap-1 Maneuver	-	-	-	870	-	147	433
Mov Cap-2 Maneuver	-	-	-	-	-	147	-
Stage 1	-	-	-	-	-	487	-
Stage 2	-	-	-	-	-	451	-

Approach	EB	WB	NE
HCM Control Delay, s		4	41.9
HCM LOS			E

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	353	-	-	870	-
HCM Lane V/C Ratio	0.767	-	-	0.182	-
HCM Control Delay (s)	41.9	-	-	10.1	0
HCM Lane LOS	E	-	-	B	A
HCM 95th %tile Q(veh)	6.2	-	-	0.7	-

Intersection	
Int Delay, s/veh	9.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↳			↑↑↳				↳					
Traffic Vol, veh/h	7	772	456	2	555	341	0	0	123	91	0	0	0	0
Future Vol, veh/h	7	772	456	2	555	341	0	0	123	91	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	-	-	-	-	None	-	-	-
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	839	496	2	603	371	0	0	134	99	0	0	0	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	974	0	0	847	0	0	793	1748	487
Stage 1	-	-	-	-	-	-	793	793	-
Stage 2	-	-	-	-	-	-	0	955	-
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	704	-	-	786	-	-	326	~ 85	526
Stage 1	-	-	-	-	-	-	406	398	-
Stage 2	-	-	-	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	704	-	-	786	-	-	267	0	526
Mov Cap-2 Maneuver	-	-	-	-	-	-	267	0	-
Stage 1	-	-	-	-	-	-	333	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	SE
HCM Control Delay, s	10.5	0	33.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL2	EBL	EBT	WBL	WBT	WBR	SELn1	SELn2
Capacity (veh/h)	704	-	-	786	-	-	267	392
HCM Lane V/C Ratio	0.077	-	-	0.003	-	-	0.404	0.731
HCM Control Delay (s)	10.5	-	10.5	9.6	-	-	27.3	35.4
HCM Lane LOS	B	-	B	A	-	-	D	E
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	1.9	5.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	772	456	2	936	8	17
Future Vol, veh/h	772	456	2	936	8	17
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, %	2	2	2	2	2	2
Mvmt Flow	839	496	2	1017	9	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1335	0	1600	668
Stage 1	-	-	-	-	1087	-
Stage 2	-	-	-	-	513	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	513	-	97	401
Stage 1	-	-	-	-	285	-
Stage 2	-	-	-	-	566	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	513	-	96	401
Mov Cap-2 Maneuver	-	-	-	-	96	-
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	566	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	401	-	-	513	-
HCM Lane V/C Ratio	0.046	-	-	0.004	-
HCM Control Delay (s)	14.4	-	-	12	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

PHASE 2 2022 BUILD CONDITIONS
(3 SHIFTS)

Table 4.2 - 2022 Build Conditions Intersection Capacity Analysis Summary

Location	Traffic Control	Condition	Approach	2022 Build Conditions	
				LOS	**Delay** (secs)
SW 15 Road and SW 2 Court	Two-Way Stop	Existing Laneage & Control	NB	F	69.3
			SB	E	38.2
SW 15 Road and SW 2 Avenue	All-Way Stop	Existing Laneage & Control	EB	F	195.7
			WB	E	49.3
			NB	D	32.4
			SB	C	20.1
	All-Way Stop	Construct Left-Turn Lanes on SW 15 Road	EB	F	156.5
			WB	D	30.6
			NB	D	32.4
			SB	C	20.1
	Signalized	Left-Turn Lanes + Signal	EB	B	16.9
			WB	B	13.3
			NB	B	19.6
			SB	B	16.6
SW 17 Road and SW 1 Avenue	Two-Way Stop	Existing Laneage & Control	SEB	B	11.7
SW 15 Road and SW 1 Avenue	Two-Way Stop	Existing Laneage & Control	NB	-	-
	Two-Way Stop	Construct Right-Turn Lane on SW 1 Avenue	NB	F	56.9
SW 15 Road and SW 3 Avenue	Two-Way Stop	Existing Laneage & Control	NB	C	18.5
			SEB	E	43.5

Intersection	
Int Delay, s/veh	12.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	528	79	169	26	43	98	2	44	34	2	4
Future Vol, veh/h	23	528	79	169	26	43	98	2	44	34	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	574	86	184	28	47	107	2	48	37	2	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	75	0	0	660	0	0	1089	1109	617	1111	1129	52
Stage 1	-	-	-	-	-	-	667	667	-	419	419	-
Stage 2	-	-	-	-	-	-	422	442	-	692	710	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1524	-	-	928	-	-	193	210	490	186	204	1016
Stage 1	-	-	-	-	-	-	448	457	-	612	590	-
Stage 2	-	-	-	-	-	-	609	576	-	434	437	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1524	-	-	928	-	-	157	162	490	137	157	1016
Mov Cap-2 Maneuver	-	-	-	-	-	-	157	162	-	137	157	-
Stage 1	-	-	-	-	-	-	436	445	-	596	467	-
Stage 2	-	-	-	-	-	-	478	456	-	380	426	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	0.3	7	69.3	38.2
HCM LOS			F	E

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SWLn1
Capacity (veh/h)	198	1524	-	-	928	-	-	151
HCM Lane V/C Ratio	0.791	0.016	-	-	0.198	-	-	0.288
HCM Control Delay (s)	69.3	7.4	0	-	9.8	0	-	38.2
HCM Lane LOS	F	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	5.5	0.1	-	-	0.7	-	-	1.1

Intersection	
Intersection Delay, s/veh	100.3
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEU	NEL	NET	NER
Lane Configurations												
Traffic Vol, veh/h	0	45	531	11	0	60	134	203	0	161	58	99
Future Vol, veh/h	0	45	531	11	0	60	134	203	0	161	58	99
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	49	577	12	0	65	146	221	0	175	63	108
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NE
Opposing Approach	WB	EB	SW
Opposing Lanes	1	1	1
Conflicting Approach Left	SW	NE	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NE	SW	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	195.7	49.3	34.9
HCM LOS	F	E	D

Lane	NELn1	EBLn1	WBLn1	SWLn1
Vol Left, %	51%	8%	15%	3%
Vol Thru, %	18%	90%	34%	65%
Vol Right, %	31%	2%	51%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	318	587	397	190
LT Vol	161	45	60	5
Through Vol	58	531	134	124
RT Vol	99	11	203	61
Lane Flow Rate	346	638	432	207
Geometry Grp	1	1	1	1
Degree of Util (X)	0.759	1.355	0.893	0.491
Departure Headway (Hd)	8.876	7.646	8.191	9.565
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	411	479	444	380
Service Time	6.876	5.681	6.191	7.565
HCM Lane V/C Ratio	0.842	1.332	0.973	0.545
HCM Control Delay	34.9	195.7	49.3	21.4
HCM Lane LOS	D	F	E	C
HCM 95th-tile Q	6.3	29	9.5	2.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SWU	SWL	SWT	SWR
Lane Configurations			↕	
Traffic Vol, veh/h	0	5	124	61
Future Vol, veh/h	0	5	124	61
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	5	135	66
Number of Lanes	0	0	1	0

Approach	SW
Opposing Approach	NE
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	21.4
HCM LOS	C

Intersection	
Intersection Delay, s/veh	79.2
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEU	NEL	NET	NER
Lane Configurations												
Traffic Vol, veh/h	0	45	531	11	0	60	134	203	0	161	58	99
Future Vol, veh/h	0	45	531	11	0	60	134	203	0	161	58	99
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	49	577	12	0	65	146	221	0	175	63	108
Number of Lanes	0	1	1	0	0	1	1	0	0	0	1	0

Approach	EB	WB	NE
Opposing Approach	WB	EB	SW
Opposing Lanes	2	2	1
Conflicting Approach Left	SW	NE	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NE	SW	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	156.5	30.6	32.4
HCM LOS	F	D	D

Lane	NELn1	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1
Vol Left, %	51%	100%	0%	100%	0%	3%
Vol Thru, %	18%	0%	98%	0%	40%	65%
Vol Right, %	31%	0%	2%	0%	60%	32%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	318	45	542	60	337	190
LT Vol	161	45	0	60	0	5
Through Vol	58	0	531	0	134	124
RT Vol	99	0	11	0	203	61
Lane Flow Rate	346	49	589	65	366	207
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.745	0.114	1.286	0.154	0.773	0.475
Departure Headway (Hd)	8.468	8.393	7.861	9.154	8.192	9.1
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	429	426	460	395	443	399
Service Time	6.468	6.173	5.64	6.854	5.892	7.1
HCM Lane V/C Ratio	0.807	0.115	1.28	0.165	0.826	0.519
HCM Control Delay	32.4	12.3	168.5	13.5	33.7	20.1
HCM Lane LOS	D	B	F	B	D	C
HCM 95th-tile Q	6.1	0.4	25	0.5	6.7	2.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SWU	SWL	SWT	SWR
Lane Configurations				
Traffic Vol, veh/h	0	5	124	61
Future Vol, veh/h	0	5	124	61
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	5	135	66
Number of Lanes	0	0	1	0

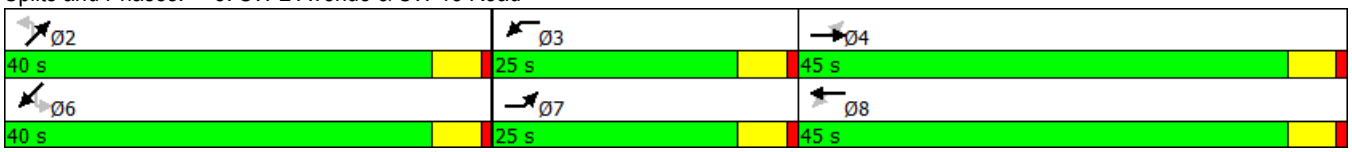
Approach	SW
Opposing Approach	NE
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	20.1
HCM LOS	C

Lane Group	EBL	EBT	WBL	WBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	45	531	60	134	161	58	5	124
Future Volume (vph)	45	531	60	134	161	58	5	124
Lane Group Flow (vph)	49	589	65	367	0	346	0	206
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	25.0	45.0	25.0	45.0	40.0	40.0	40.0	40.0
Total Split (%)	22.7%	40.9%	22.7%	40.9%	36.4%	36.4%	36.4%	36.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0		5.0		5.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio	0.11	0.80	0.23	0.48		0.73		0.31
Control Delay	11.4	33.6	12.9	17.2		34.7		20.7
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	11.4	33.6	12.9	17.2		34.7		20.7
Queue Length 50th (ft)	14	307	18	124		162		75
Queue Length 95th (ft)	31	458	m38	210		#318		141
Internal Link Dist (ft)		269		178		402		295
Turn Bay Length (ft)								
Base Capacity (vph)	670	969	544	934		586		819
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.07	0.61	0.12	0.39		0.59		0.25

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 83.4
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: SW 2 Avenue & SW 15 Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	45	531	11	60	134	203	161	58	99	5	124	61
Future Volume (veh/h)	45	531	11	60	134	203	161	58	99	5	124	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	49	577	12	65	146	221	175	63	108	5	135	66
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	449	711	15	319	268	406	294	96	133	69	336	160
Arrive On Green	0.05	0.39	0.39	0.06	0.40	0.40	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1774	1818	38	1774	670	1014	693	339	468	12	1183	563
Grp Volume(v), veh/h	49	0	589	65	0	367	346	0	0	206	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1856	1774	0	1684	1500	0	0	1758	0	0
Q Serve(g_s), s	0.9	0.0	15.8	1.2	0.0	9.4	6.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	0.0	15.8	1.2	0.0	9.4	11.6	0.0	0.0	5.3	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.60	0.51		0.31	0.02		0.32
Lane Grp Cap(c), veh/h	449	0	726	319	0	674	523	0	0	565	0	0
V/C Ratio(X)	0.11	0.00	0.81	0.20	0.00	0.54	0.66	0.00	0.00	0.36	0.00	0.00
Avail Cap(c_a), veh/h	998	0	1326	852	0	1203	994	0	0	1160	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.8	0.0	15.2	11.3	0.0	12.9	18.2	0.0	0.0	16.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	2.2	0.3	0.0	0.7	1.4	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	8.5	0.6	0.0	4.4	5.1	0.0	0.0	2.6	0.0	0.0
LnGrp Delay(d),s/veh	9.9	0.0	17.4	11.6	0.0	13.6	19.6	0.0	0.0	16.6	0.0	0.0
LnGrp LOS	A		B	B		B	B			B		
Approach Vol, veh/h		638			432			346			206	
Approach Delay, s/veh		16.9			13.3			19.6			16.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.9	8.2	26.9		20.9	7.7	27.4
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		35.0	20.0	40.0		35.0	20.0	40.0
Max Q Clear Time (g_c+I1), s		13.6	3.2	17.8		7.3	2.9	11.4
Green Ext Time (p_c), s		2.3	0.1	4.1		1.2	0.1	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.5

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	33	153	47	246	117	130
Future Vol, veh/h	33	153	47	246	117	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	166	51	267	127	141

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	568	198	268	0	-	0
Stage 1	198	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	484	843	1296	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	462	843	1296	-	-	-
Mov Cap-2 Maneuver	462	-	-	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	667	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	11.7	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1296	-	735	-	-
HCM Lane V/C Ratio	0.039	-	0.275	-	-
HCM Control Delay (s)	7.9	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-

Intersection	
Int Delay, s/veh	52.6

Movement	EBU	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations							
Traffic Vol, veh/h	8	691	43	263	339	29	316
Future Vol, veh/h	8	691	43	263	339	29	316
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	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	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	9	751	47	286	368	32	343

Major/Minor	Major1			Major2		Minor1	
Conflicting Flow All	-	0	0	798	0	1714	774
Stage 1	-	-	-	-	-	774	-
Stage 2	-	-	-	-	-	940	-
Critical Hdwy	-	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	-	824	-	99	398
Stage 1	-	-	-	-	-	455	-
Stage 2	-	-	-	-	-	380	-
Platoon blocked, %		-	-		-		
Mov Cap-1 Maneuver	-	-	-	824	-	56	398
Mov Cap-2 Maneuver	-	-	-	-	-	56	-
Stage 1	-	-	-	-	-	455	-
Stage 2	-	-	-	-	-	214	-

Approach	EB	WB	NE
HCM Control Delay, s		5.1	248.5
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	263	-	-	824	-
HCM Lane V/C Ratio	1.426	-	-	0.347	-
HCM Control Delay (s)	248.5	-	-	11.7	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	20.8	-	-	1.6	-

Intersection	
Int Delay, s/veh	13.4

Movement	EBU	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations							
Traffic Vol, veh/h	8	691	43	263	339	29	316
Future Vol, veh/h	8	691	43	263	339	29	316
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0	350
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	9	751	47	286	368	32	343

Major/Minor	Major1			Major2		Minor1	
Conflicting Flow All	-	0	0	798	0	1714	774
Stage 1	-	-	-	-	-	774	-
Stage 2	-	-	-	-	-	940	-
Critical Hdwy	-	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	-	824	-	99	398
Stage 1	-	-	-	-	-	455	-
Stage 2	-	-	-	-	-	380	-
Platoon blocked, %		-	-		-		
Mov Cap-1 Maneuver	-	-	-	824	-	56	398
Mov Cap-2 Maneuver	-	-	-	-	-	56	-
Stage 1	-	-	-	-	-	455	-
Stage 2	-	-	-	-	-	214	-

Approach	EB	WB	NE
HCM Control Delay, s		5.1	56.9
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	56	398	-	-	824	-
HCM Lane V/C Ratio	0.563	0.863	-	-	0.347	-
HCM Control Delay (s)	132	50	-	-	11.7	0
HCM Lane LOS	F	F	-	-	B	A
HCM 95th %tile Q(veh)	2.2	8.4	-	-	1.6	-

DRIVEWAYS

Intersection	
Int Delay, s/veh	11.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations														
Traffic Vol, veh/h	7	772	498	2	613	341	0	0	123	119	0	0	0	0
Future Vol, veh/h	7	772	498	2	613	341	0	0	123	119	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	-	-	-	-	None	-	-	-
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	839	541	2	666	371	0	0	134	129	0	0	0	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	1037	0	0	847	0	0	856	1811	519
Stage 1	-	-	-	-	-	-	856	856	-
Stage 2	-	-	-	-	-	-	0	955	-
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	666	-	-	786	-	-	297	~ 78	502
Stage 1	-	-	-	-	-	-	377	373	-
Stage 2	-	-	-	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	666	-	-	786	-	-	240	0	502
Mov Cap-2 Maneuver	-	-	-	-	-	-	240	0	-
Stage 1	-	-	-	-	-	-	305	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	SE
HCM Control Delay, s	10.8	0	43.5
HCM LOS			E

Minor Lane/Major Mvmt	EBL2	EBL	EBT	WBL	WBT	WBR	SELn1	SELn2
Capacity (veh/h)	666	-	-	786	-	-	240	380
HCM Lane V/C Ratio	0.082	-	-	0.003	-	-	0.45	0.834
HCM Control Delay (s)	10.9	-	10.9	9.6	-	-	31.7	47.5
HCM Lane LOS	B	-	B	A	-	-	D	E
HCM 95th %tile Q(veh)	0.3	-	-	0	-	-	2.2	7.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	772	498	2	996	8	113
Future Vol, veh/h	772	498	2	996	8	113
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, %	2	2	2	2	2	2
Mvmt Flow	839	541	2	1083	9	123

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1380	0	1656	690
Stage 1	-	-	-	-	1110	-
Stage 2	-	-	-	-	546	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	493	-	89	388
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	544	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	493	-	88	388
Mov Cap-2 Maneuver	-	-	-	-	88	-
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	544	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	388	-	-	493	-
HCM Lane V/C Ratio	0.317	-	-	0.004	-
HCM Control Delay (s)	18.5	-	-	12.3	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.3	-	-	0	-

Intersection	
Int Delay, s/veh	4.8

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	0	176	0	0	0	101	40	3	168	4
Future Vol, veh/h	3	0	0	176	0	0	0	101	40	3	168	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	0	191	0	0	0	110	43	3	183	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	323	344	185	323	325	132	187	0	0	153	0	0
Stage 1	191	191	-	132	132	-	-	-	-	-	-	-
Stage 2	132	153	-	191	193	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	630	579	857	630	593	917	1387	-	-	1428	-	-
Stage 1	811	742	-	871	787	-	-	-	-	-	-	-
Stage 2	871	771	-	811	741	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	629	578	857	629	592	917	1387	-	-	1428	-	-
Mov Cap-2 Maneuver	629	578	-	629	592	-	-	-	-	-	-	-
Stage 1	811	741	-	871	787	-	-	-	-	-	-	-
Stage 2	871	771	-	809	740	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	10.8	13.2	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1387	-	-	629	629	1428	-	-
HCM Lane V/C Ratio	-	-	-	0.304	0.005	0.002	-	-
HCM Control Delay (s)	0	-	-	13.2	10.8	7.5	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.3	0	0	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	42	0	0	176	0	141
Future Vol, veh/h	42	0	0	176	0	141
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, %	2	2	2	2	2	2
Mvmt Flow	46	0	0	191	0	153

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	46	0	237	46
Stage 1	-	-	-	-	46	-
Stage 2	-	-	-	-	191	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1562	-	751	1023
Stage 1	-	-	-	-	976	-
Stage 2	-	-	-	-	841	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1562	-	751	1023
Mov Cap-2 Maneuver	-	-	-	-	751	-
Stage 1	-	-	-	-	976	-
Stage 2	-	-	-	-	841	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	1023	1562	-	-	-
HCM Lane V/C Ratio	0.15	-	-	-	-
HCM Control Delay (s)	9.1	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	0.5	0	-	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	117	0	0	0	135	69	4	225	5
Future Vol, veh/h	4	0	0	117	0	0	0	135	69	4	225	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	127	0	0	0	147	75	4	245	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	440	478	247	440	443	184	250	0	0	222	0	0
Stage 1	256	256	-	184	184	-	-	-	-	-	-	-
Stage 2	184	222	-	256	259	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	527	486	792	527	509	858	1316	-	-	1347	-	-
Stage 1	749	696	-	818	747	-	-	-	-	-	-	-
Stage 2	818	720	-	749	694	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	526	485	792	526	507	858	1316	-	-	1347	-	-
Mov Cap-2 Maneuver	526	485	-	526	507	-	-	-	-	-	-	-
Stage 1	749	694	-	818	747	-	-	-	-	-	-	-
Stage 2	818	720	-	747	692	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	11.9	14	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1316	-	-	526	526	1347	-	-
HCM Lane V/C Ratio	-	-	-	0.242	0.008	0.003	-	-
HCM Control Delay (s)	0	-	-	14	11.9	7.7	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0	0	-	-

Intersection	
Int Delay, s/veh	5.7

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	73	0	117	0	0	57
Future Vol, veh/h	73	0	117	0	0	57
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, %	2	2	2	2	2	2
Mvmt Flow	79	0	127	0	0	62

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	79	0	333	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	254	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1519	-	662	981
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	788	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1519	-	606	981
Mov Cap-2 Maneuver	-	-	-	-	606	-
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	722	-

Approach	SE	NW	NE
HCM Control Delay, s	0	7.6	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	981	1519	-	-	-
HCM Lane V/C Ratio	0.063	0.084	-	-	-
HCM Control Delay (s)	8.9	7.6	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0.3	-	-	-

Intersection	
Int Delay, s/veh	4.7

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	116	0	0	0	0	117
Future Vol, veh/h	116	0	0	0	0	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	0	0	0	0	127

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	64	-	127	0	-	0
Stage 1	64	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	-	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	2.218	-	-	-
Pot Cap-1 Maneuver	942	0	1459	-	-	-
Stage 1	959	0	-	-	-	-
Stage 2	-	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	942	-	1459	-	-	-
Mov Cap-2 Maneuver	942	-	-	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1459	-	942	-	-
HCM Lane V/C Ratio	-	-	0.134	-	-
HCM Control Delay (s)	0	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

APPENDIX H
EXCERPTS FROM DDA & TRANSIT/BICYCLE MAPS

2016

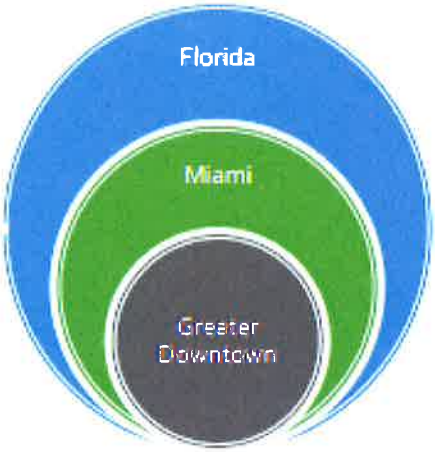
Greater Downtown Miami Demographics

MIAMIDDA
DOWNTOWN DEVELOPMENT AUTHORITY

Applied Research and Analytics

Miami Downtown Development Authority
200 S. Biscayne Blvd. Suite 2929,
Miami, FL 33131
T: 305.579.6675
E: research@miamidda.com

Executive Summary



Florida is now the third most populous state in the United States of America. Miami is Florida's largest metro area with Greater Downtown Miami as its hub. Miami is a uniquely diverse place that warmly embraces new residents from around the globe. New residential developments within Greater Downtown Miami continue to appeal to young professionals who are pursuing a true urban lifestyle in a tropical waterfront city. Downtown Miami is an emerging major world city and the business, social and cultural epicenter of the Americas. This report will showcase the unique dynamics of Greater Downtown Miami's current demographics – including the population and household changes over the past five years and projections for the future. Here is a brief summary of some of our key findings found in this update.

- Population

  Since 2010, the population of Downtown Miami has increased more than 30%.
  - Population Estimate 2016: 88,540
  - % Increase from 2010 Census: 32.6%
  - Density: approximately 23,300 persons per square mile
  - Population Projection 2021: 106,429
  - Daytime Population: 234,976

  Majority of the population within Downtown Miami are highly educated, young working professionals.
  - Population age 25-44 estimate 2016: 39,516
  - Population % Age 25-44: 45%
  - Population % Age 25+ with College Education: 59%

- Households

  Households within Downtown Miami increased 42% since 2010.
  - Household Estimate 2016: 46,130
  - % Increase from 2010 Census: 36%
  - % Family Households: 39%

- Income

  Income in Greater Downtown Miami significantly exceeds that of the City of Miami.
  - 2016 Greater Downtown Per Capita Income Estimate: $50,707
  - 2016 Greater Downtown Median HH Income Estimate: $66,498

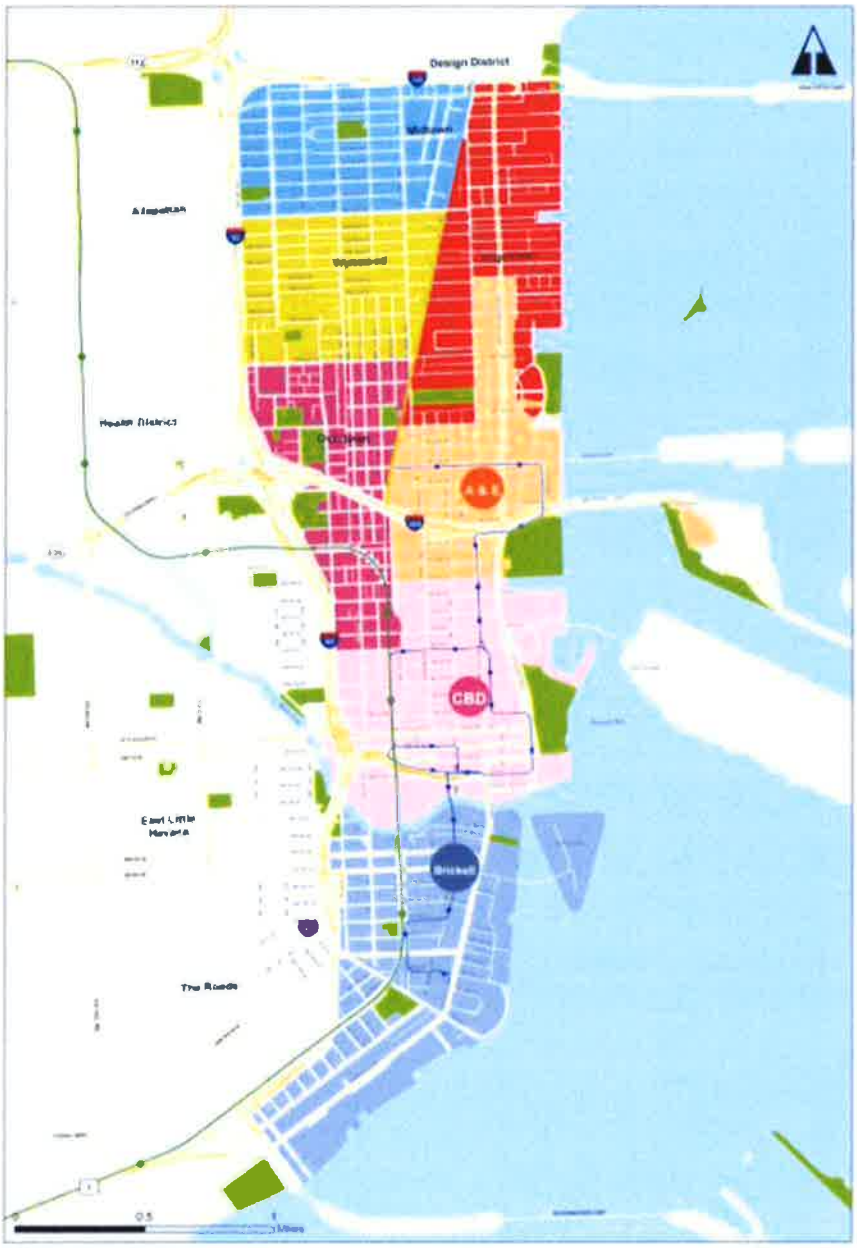
- Migration

  Miami-Dade County attracts people from all over to live, work and play.
  - Annual domestic in-migrants from across the country as of 2014: 71,086
  - Annual foreign immigration into Miami-Dade County as of 2014: 36,763

*Unless noted all estimates are Q1 2016

Greater Downtown Miami

Greater Downtown Miami is a 3.8 square mile area of prime waterfront real estate in tropical Miami. It is situated between Interstate 95 on the west and Biscayne Bay on the east, the Julia Tuttle Causeway on the north, and the Rickenbacker Causeway on the south. Miami Downtown Development Authority (DDA) represents the urban core of Greater Downtown which constitutes three neighborhoods – the Brickell Financial District, the Central Business District (CBD), and the Arts & Entertainment District. Greater Downtown also includes Wynwood, Edgewater, Midtown, and historic Overtown.



MIAMIDDA

Downtown Miami
Residential Neighborhoods

Population

Population continues to increase in Greater Downtown. We estimate the current population at 88,540 and project it will surpass 100,000 in 2021. Per Figure 1, Greater Downtown has added nearly 22,000 people since 2010 – an increase of almost 33%. The urban core neighborhoods – Brickell, the CBD, and Arts & Entertainment – continue to see remarkable growth and now make up 75% of the Greater Downtown population; Brickell added the most new residents increasing from 26,472 to 34,975. New development continues to lure residents into Greater Downtown Miami. Per Figure 2, average annual growth has held at 6.5% for the last 5 years mimicking the tremendous growth achieved between 2000 and 2010.

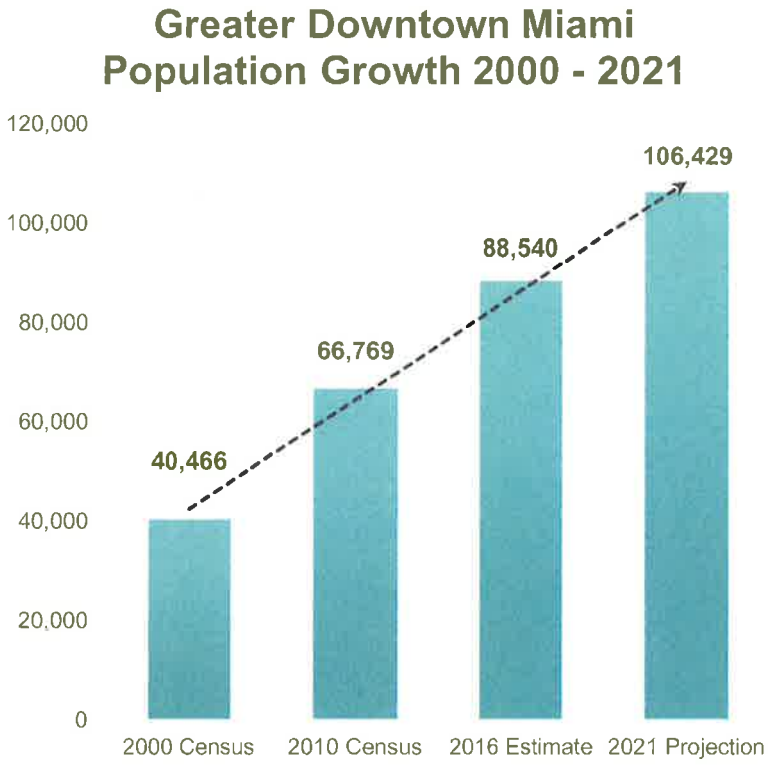


Figure 1. Population Trends in Greater Downtown Miami

Area	2000 Census	2010 Census	2016 Estimate	2021 Projection
Brickell	12,904	26,472	34,975	38,172
CBD	4,901	11,108	17,132	20,584
Arts & Entertainment	4,432	9,079	14,675	18,425
Wynwood/ Edgewater/Midtown	11,229	13,374	17,649	21,018
Overtown	7,000	6,736	4,109	8,231
Greater Downtown	**40,466**	**66,769**	**88,540**	**106,430**

Figure 2. Population Growth Rates for Greater Downtown Miami

Area	2000-2010		2010-2016		2016-2021	
	% Change	Avg. Annual Growth	% Change	Avg. Annual Growth	% Change	Avg. Annual Growth
Brickell	105.1%	10.5%	32.1%	6.4%	9.1%	1.8%
CBD	126.6%	12.7%	54.2%	10.8%	20.1%	4.0%
Arts & Entertainment	104.9%	10.5%	61.6%	12.3%	25.6%	5.1%
Wynwood/ Edgewater/Midtown	19.1%	1.9%	31.9%	6.4%	19.1%	3.8%
Overtown	-3.8%	-0.4%	-39.0%	-7.8%	100.3%	20.0%
Greater Downtown	**65.0%**	**6.5%**	**32.6%**	**6.5%**	**20.2%**	**4.0%**

Source: ESRI BAO; Synergos PopStats; Miami DDA

Households

Household growth remains strong into 2016. We estimate the current household count to be 46,130 and project that number to near 55,000 by 2021. Per Figure 3, almost 12,250 new households now call Greater Downtown Miami home – an increase of 36% since 2010. Like the population trends, the largest growth is in the urban core; Brickell continues to attract households as growth there has increased from 14,945 to 19,053. The household growth rates are interesting to explore. Per Figure 4, average annual growth for households is 7.2%. That outpaces the population growth rate of 6.5%; therefore, household size is shrinking. In 2010 household size was 1.97 people per household; in 2016 it is 1.92 people per household.

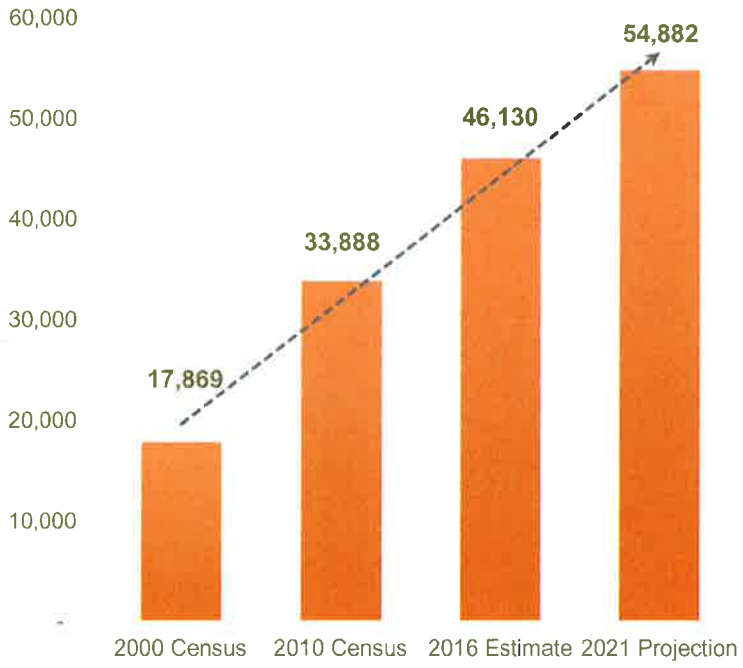


Figure 3. Household Trends in Greater Downtown Miami

Area	2000 Census	2010 Census	2016 Estimate	2021 Projection
Brickell	7,107	14,945	19,053	21,935
CBD	1,712	5,393	8,180	9,746
Arts & Entertainment	2,151	5,248	8,188	9,962
Wynwood/ Edgewater/Midtown	4,425	5,842	7,852	9,394
Overtown	2,474	2,460	2,857	3,845
Greater Downtown	**17,869**	**33,888**	**46,130**	**54,882**

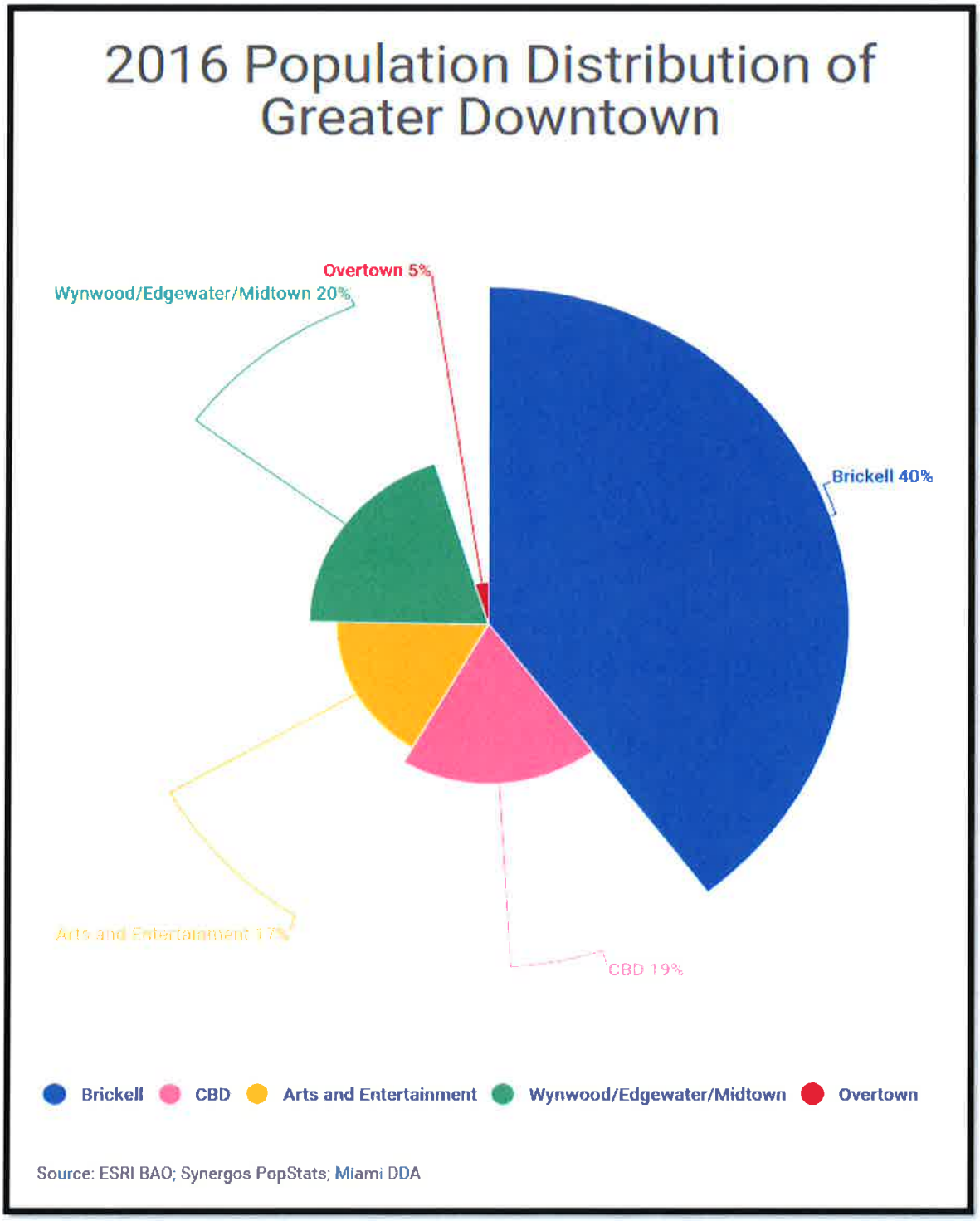
Figure 4. Household Growth Rates for Greater Downtown Miami

Area	2000-2010		2010-2016		2016-2021	
	% Change	Avg. Annual Growth	% Change	Avg. Annual Growth	% Change	Avg. Annual Growth
Brickell	110.3%	11.0%	27.5%	5.5%	15.1%	3.0%
CBD	215.0%	21.5%	51.7%	10.3%	19.1%	3.8%
Arts & Entertainment	144.0%	14.4%	56.0%	11.2%	21.7%	4.3%
Wynwood/ Edgewater/Midtown	32.0%	3.2%	34.4%	6.9%	19.6%	3.9%
Overtown	-0.6%	-0.1%	16.1%	3.2%	34.6%	6.9%
Greater Downtown	**89.6%**	**9.0%**	**36.1%**	**7.2%**	**19.0%**	**3.8%**

Source: ESRI BAO; Synergos PopStats; Miami DDA

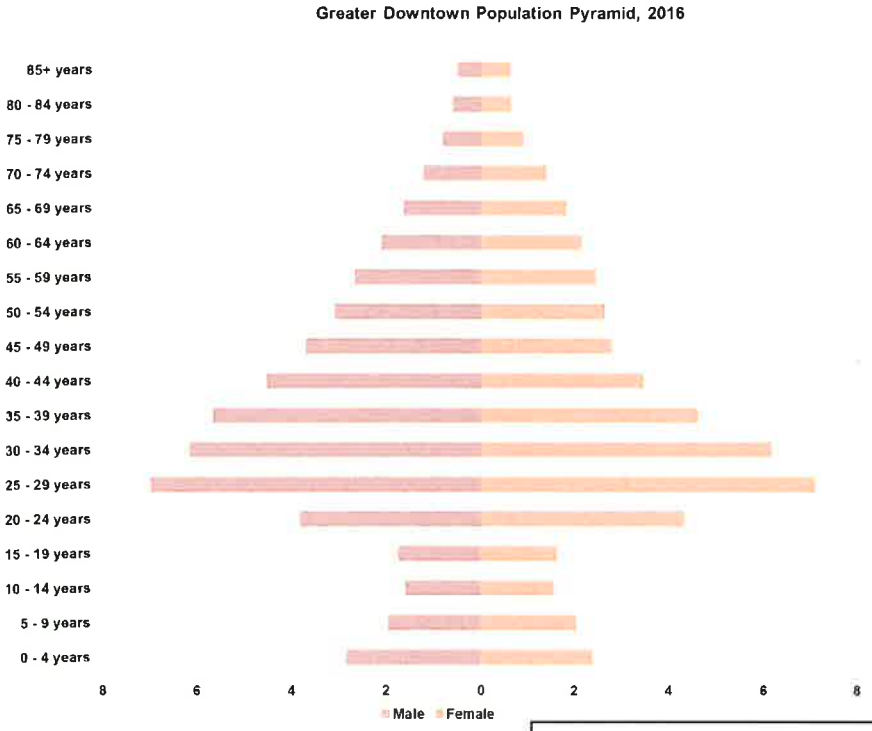
Population Distribution

Brickell is the most populated neighborhood in Greater Downtown Miami; 40% of the overall population lives in Brickell. The CBD follows with 19% of the population, and the Arts & Entertainment District increased to 17% of the overall population. Wynwood/Edgewater/Midtown (combined) now represents 20%, and Overtown makes up a small portion of the population at 5%.



Age Composition

Greater Downtown Miami residents are mostly young professionals age 25 – 44. At nearly 40,000 that group represents 45% of the total Greater Downtown Miami population.



Average Age

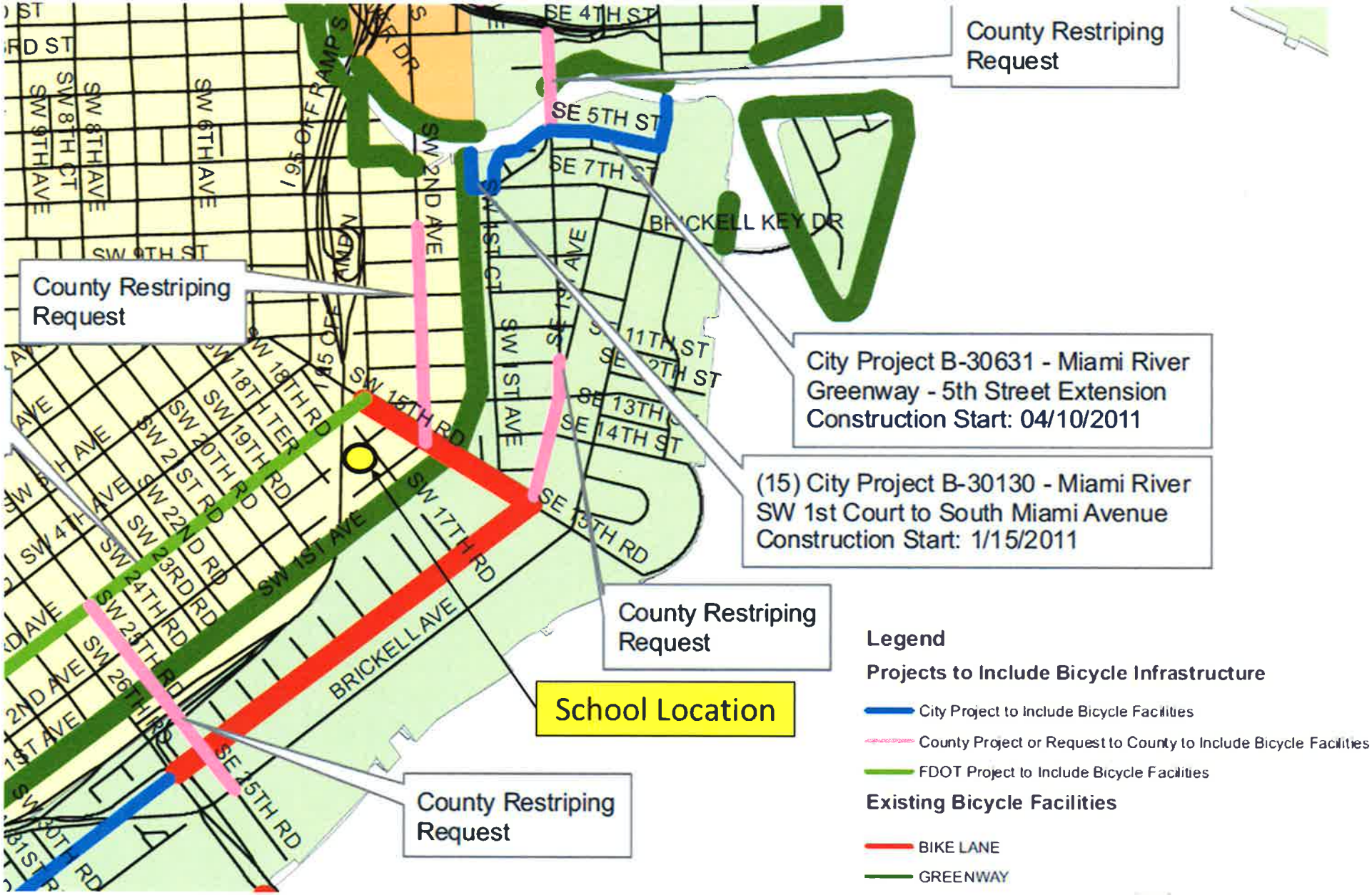
▲The average age of Greater Downtown residents is 35 years old.

Young Professionals

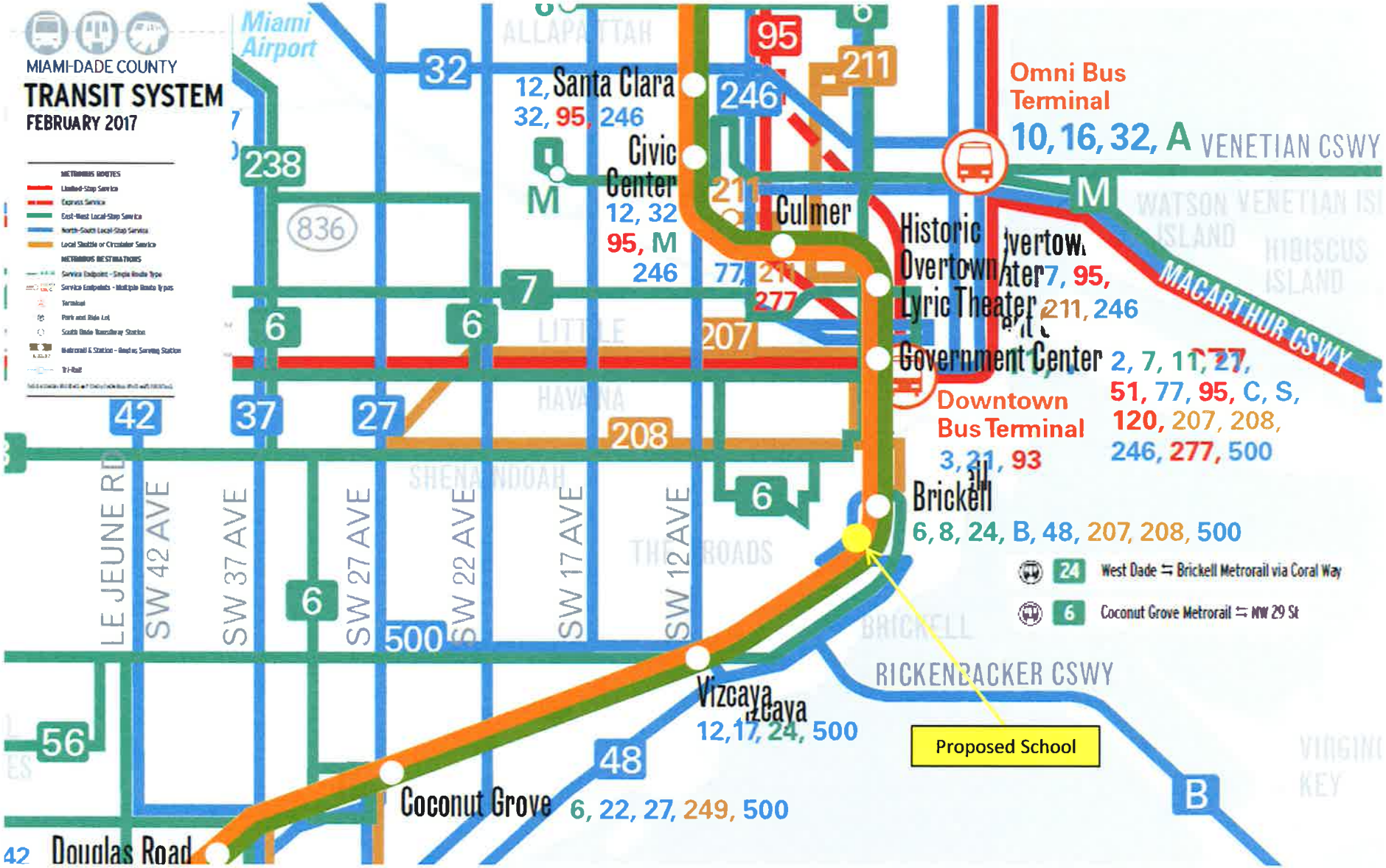
- ▲ The population aged 25-44 has increased by 27% since 2010.
- ▲ The population aged 0-14 has increased by almost 14% since 2010.

Greater Downtown Population Profile 2016					
Age	Male	% Male	Female	% Female	Total
85+ years	456	0.5%	515	0.6%	971
80 - 84 years	546	0.6%	515	0.6%	1,061
75 - 79 years	730	0.8%	773	0.9%	1,503
70 - 74 years	1,094	1.2%	1,202	1.4%	2,296
65 - 69 years	1,459	1.6%	1,589	1.8%	3,048
60 - 64 years	1,869	2.1%	1,889	2.1%	3,758
55 - 59 years	2,358	2.7%	2,147	2.4%	4,505
50 - 54 years	2,734	3.1%	2,319	2.6%	5,053
45 - 49 years	3,281	3.7%	2,448	2.8%	5,729
40 - 44 years	4,011	4.5%	3,049	3.4%	7,060
35 - 39 years	5,014	5.7%	4,079	4.6%	9,093
30 - 34 years	5,455	6.2%	5,454	6.2%	10,909
25 - 29 years	6,184	7.0%	6,270	7.1%	12,454
20 - 24 years	3,373	3.8%	3,822	4.3%	7,195
15 - 19 years	1,549	1.7%	1,417	1.6%	2,966
10 - 14 years	1,413	1.6%	1,374	1.6%	2,787
5 - 9 years	1,732	2.0%	1,804	2.0%	3,536
0 - 4 years	2,517	2.8%	2,099	2.4%	4,616
Total	**45,775**	**51.7%**	**42,765**	**48.3%**	**88,540**

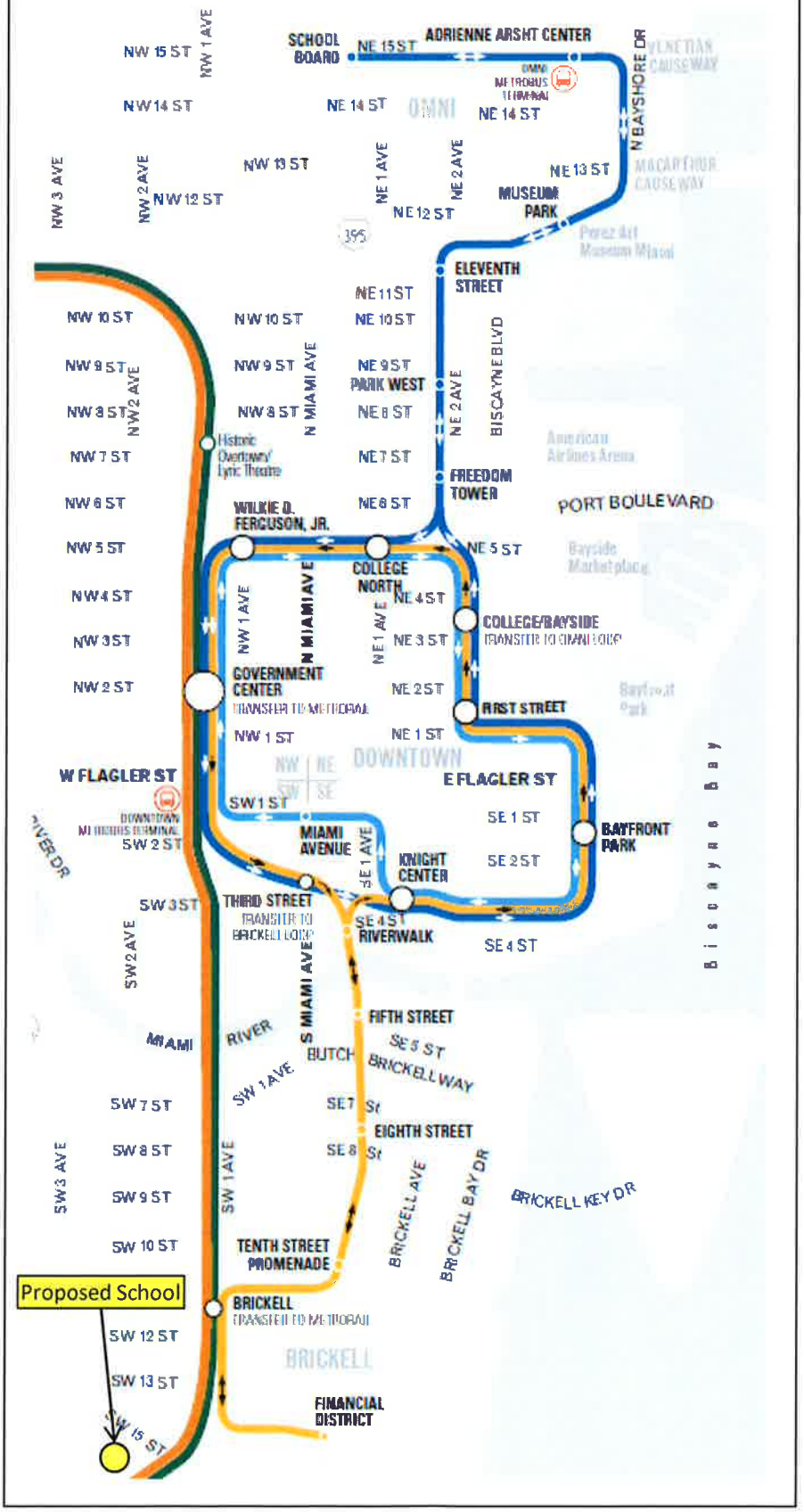
City of Miami Bicycle Facilities



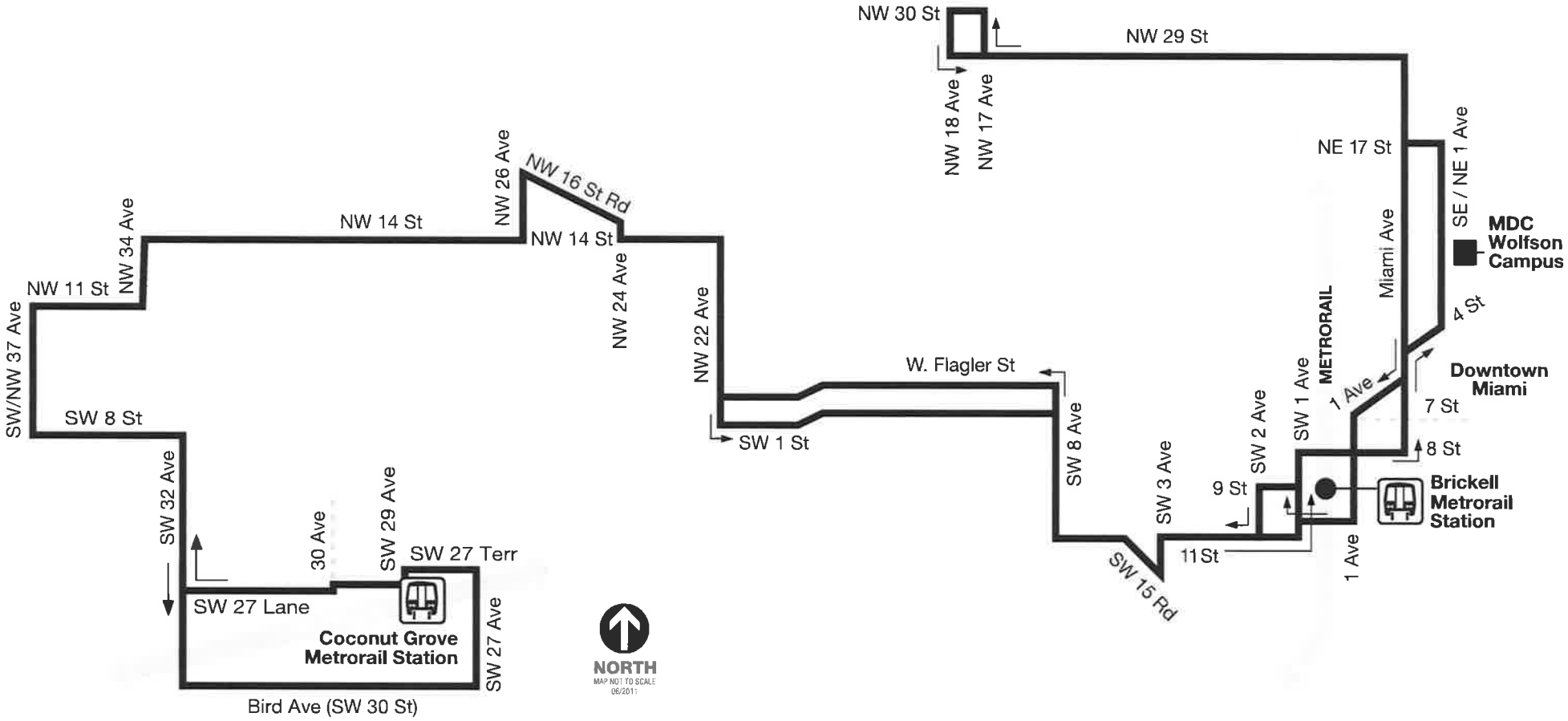
Excerpt from February 2017 Miami-Dade County Transit System Map



METROMOVER

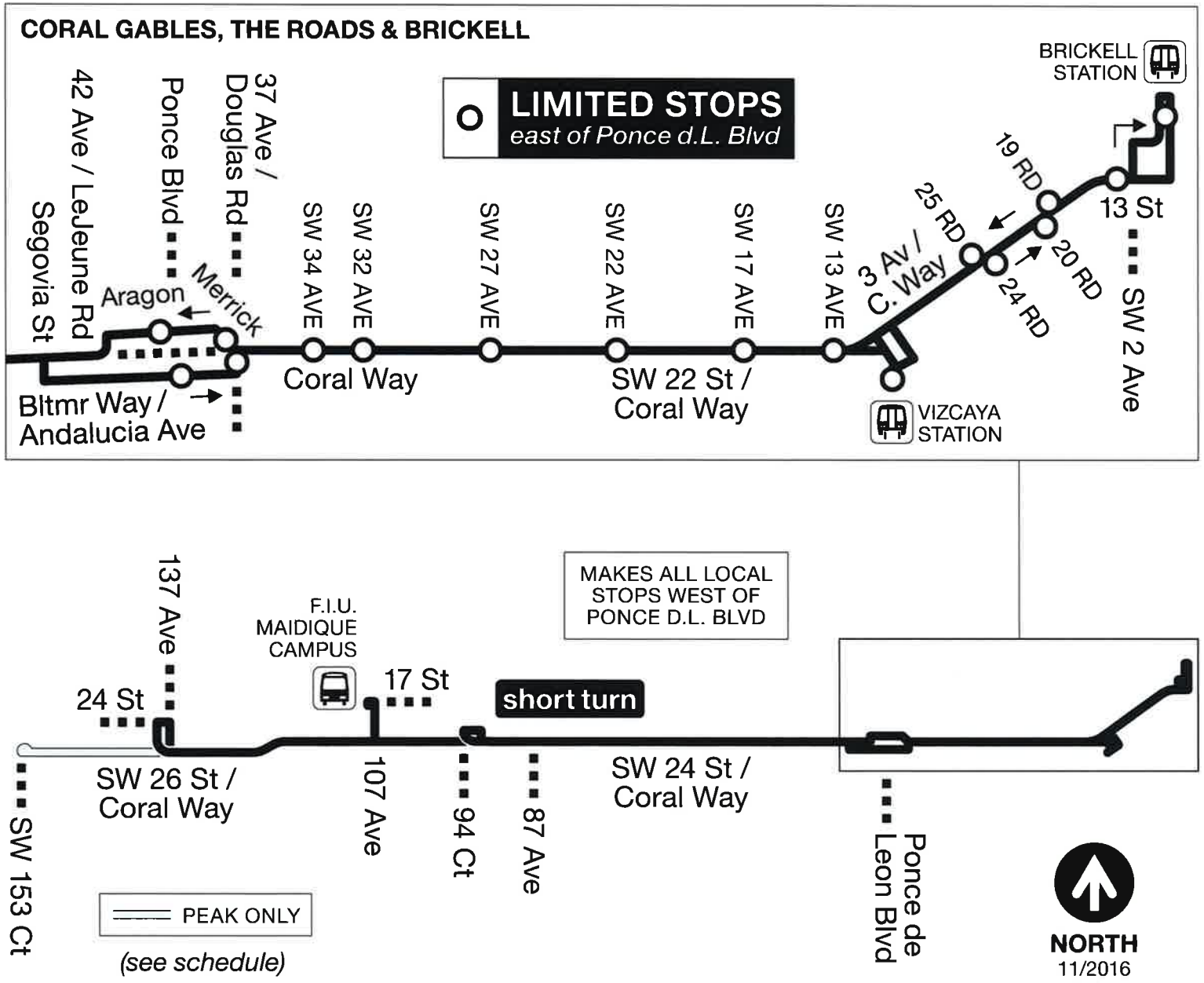

SCHOOL BOARD
ADRIENNE ARSHT CENTER
NE 15 ST
NW 15 ST
NW 1 AVE
OMNI METROBUS TERMINAL
NW 14 ST
NE 14 ST
OMNI
N BAYSHORE DR
VENETIAN CAUSEWAY
NW 13 ST
NW 3 AVE
NW 2 AVE
NW 12 ST
NE 1 AVE
NE 2 AVE
NE 13 ST
MACARTHUR CAUSEWAY
MUSEUM PARK
NE 12 ST
395
Perez Art Museum Miami
ELEVENTH STREET
NE 11 ST
NW 10 ST
NW 10 ST
NE 10 ST
NW 9 ST
NW 2 AVE
NW 9 ST
N MIAMI AVE
NE 9 ST
PARK WEST
NE 2 AVE
BISCAYNE BLVD
NW 8 ST
NW 8 ST
NE 8 ST
Historic Overtown/ Lyric Theatre
NW 7 ST
NE 7 ST
American Airlines Arena
FREEDOM TOWER
NW 6 ST
WILKIE D. FERGUSON, JR.
NE 8 ST
PORT BOULEVARD
NW 5 ST
COLLEGE NORTH
NE 5 ST
Bayside Marketplace
NW 4 ST
NW 1 AVE
N MIAMI AVE
NE 4 ST
NE 1 AVE
COLLEGE/BAYSIDE
TRANSFER TO OMNI LOOP
NW 3 ST
NE 3 ST
NW 2 ST
GOVERNMENT CENTER
TRANSFER TO METRORAIL
NE 2 ST
FIRST STREET
Bayfront Park
NW 1 ST
NE 1 ST
DOWNTOWN
NW
NE
SW
SE
W FLAGLER ST
E FLAGLER ST
DOWNTOWN METROBUS TERMINAL
SW 1 ST
SE 1 ST
SW 2 ST
MIAMI AVENUE
SE 1 AVE
KNIGHT CENTER
SE 2 ST
BAYFRONT PARK
RIVER DR
SW 3 ST
THIRD STREET
TRANSFER TO BRICKELL LOOP
SE 4 ST
RIVERWALK
SE 4 ST
SW 2 AVE
S MIAMI AVE
FIFTH STREET
SE 5 ST
MIAMI
RIVER
BUTCH
BRICKELL WAY
SW 1 AVE
SW 7 ST
SE 7 St
EIGHTH STREET
SW 3 AVE
SW 8 ST
SE 8 St
SW 1 AVE
BRICKELL AVE
BRICKELL BAY DR
BRICKELL KEY DR
SW 9 ST
SW 10 ST
TENTH STREET PROMENADE
Proposed School
BRICKELL
TRANSFER TO METRORAIL
SW 12 ST
SW 13 ST
BRICKELL
FINANCIAL DISTRICT
SW 15 ST
Biscayne Bay

Route 6


NW 30 St
NW 29 St
NW 18 Ave
NW 17 Ave
NE 17 St
SE / NE 1 Ave
MDC
Wolfson
Campus
4 St
Miami Ave
METRORAIL
NW 16 St Rd
NW 26 Ave
NW 14 St
NW 14 St
NW 34 Ave
NW 11 St
SW/NW 37 Ave
NW 24 Ave
NW 22 Ave
W. Flagler St
SW 1 St
SW 8 Ave
SW 3 Ave
SW 2 Ave
SW 1 Ave
1 Ave
Downtown
Miami
7 St
8 St
9 St
Brickell
Metrorail
Station
11 St
SW 15 Rd
1 Ave
SW 8 St
SW 32 Ave
30 Ave
SW 29 Ave
SW 27 Terr
SW 27 Lane
Coconut Grove
Metrorail Station
SW 27 Ave
Bird Ave (SW 30 St)
NORTH
MAP NOT TO SCALE
06/2011

24

CORAL WAY LIMITED



APPENDIX I
TRIP GENERATION CALCULATIONS

SURROGATE SCHOOL TRIP GENERATION ANALYSIS SUMMARY
Brickell Preparatory Academy

Surrogate Trip Generation

Location	Cars		Buses	
	Ingress	Egress	Ingress	Egress
Bailes Road	381	213		
SW 232 Street	238	247	4	4
SW 115 Avenue	82	81	1	1
SW 114 Place	141	151		
Total	**842**	**692**	**5**	**5**

PHASE I - AM PEAK HOUR TRIP GENERATION (1,500 Students)

Surrogate Peak Hour		Surrogate Factor		Project Trip Generation		Reductions		Net New Trips
AM Peak Hour		Proposed Enrollment:	1,500	AM Peak Hour		Transit (30%)	Bike/Ped (15%)	
In:	847	Surrogate Enrollment:	1,991	In:	638	191	96	**351**
Out:	697	Factor:	0.75	Out:	525	158	79	**288**
Total:	1,544			Total:	1,163	349	175	**639**

PHASE II - AM PEAK HOUR TRIP GENERATION (3,000 Students)

Surrogate Peak Hour		Surrogate Factor		Project Trip Generation		Reductions		Net New Trips
AM Peak Hour		Proposed Enrollment:	3,000	AM Peak Hour		Transit (30%)	Bike/Ped (15%)	
In:	847	Surrogate Enrollment:	1,991	In:	1,276	383	191	**702**
Out:	697	Factor:	1.51	Out:	1,050	315	158	**577**
Total:	1,544			Total:	2,326	698	349	**1,279**

SURROGATE SCHOOL TRIP GENERATION ANALYSIS SUMMARY

Location	Cars		Buses	
	Ingress	Egress	Ingress	Egress
Bailes Road	381	213		
SW 232 Street	238	247	4	4
SW 115 Avenue	82	81	1	1
SW 114 Place	141	151		
Total	**842**	**692**	**5**	**5**

AM PEAK HOUR TRIP GENERATION COMPARISON

Surrogate Peak Hour		Surrogate Factor		Project Trip Generation	
AM Peak Hour		Proposed Enrollment:	1,500	AM Peak Hour	
In:	847	Surrogate Enrollment:	1,991	In:	638
Out:	697	Factor:	0.75	Out:	525
Total:	1,544			Total:	1,163

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Delray Beach, Florida 33483
(561)272-3255

STUDENT DROP OFF & SW 114TH PLACE
CUTLER BAY, FLORIDA
COUNTED BY: ALEX RICKETTS
NOT SIGNALIZED

Study Name: 114PDROP
Site Code : 00160245
Start Date: 11/16/16

ALL BUT BUSES

Start	SW 114TH PLACE From North				- --- From East				SW 114TH PLACE From South				STUDENT DROP OFF From West				Intvl.
Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
11/16/16																	
07:00	0	0	0	52	0	0	0	0	0	16	0	0	0	0	0	61	129
07:15	0	0	0	45	0	0	0	0	0	23	0	0	0	0	0	73	141
07:30	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	16	21
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Hour	0	0	0	101	0	0	0	0	0	40	0	0	0	0	0	151	292
08:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	0	0	105	0	0	0	0	0	40	0	0	0	0	0	151	296
% Apr.	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-
% Int.	-	-	-	35.4	-	-	-	-	-	13.5	-	-	-	-	-	51.0	-

4

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STUDENT DROP OFF & SW 114TH PLACE
CUTLER BAY, FLORIDA
COUNTED BY: ALEX RICKETTS
NOT SIGNALIZED

Study Name: 114PDROP
Site Code : 00160245
Start Date: 11/16/16
Page : 1

BUSES

Start Time	SW 114TH PLACE From North				---- From East				SW 114TH PLACE From South				STUDENT DROP OFF From West				Intvl. Total
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
11/16/16																	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Apr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
% Int.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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STUDENT DROP OFF & SW 115TH AVENUE
CUTLER BAY, FLORIDA
COUNTED BY: RICHARD MENDEZ
NOT SIGNALIZED

Study Name: 232S_BUS
Site Code : 00160245
Start Date: 11/16/16
Page : 1

ALL BUT BUSES

Start	SW 115TH AVENUE From North				STUDENT DROP OFF From East				SW 115TH AVENUE From South				----- From West				Intvl
Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
11/16/16																	
07:00	0	0	0	0	0	0	0	31	0	0	0	33	0	0	0	0	64
07:15	0	0	0	0	0	0	0	42	0	0	0	43	0	0	0	0	85
07:30	0	0	0	0	0	0	0	5	0	0	0	6	0	0	0	0	11
07:45	0	0	0	0	0	0	0	4	0	0	0	1	0	0	0	0	5
Hour	0	0	0	0	0	0	0	82	0	0	0	83	0	0	0	0	165
08:00	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2
08:15	0	3	0	0	0	0	0	1	0	0	0	2	0	0	0	0	6
08:30	0	4	0	0	0	0	0	4	0	0	0	2	0	0	0	0	10
08:45	0	1	0	0	0	0	0	3	0	0	0	1	0	0	0	0	5
Hour	0	8	0	0	0	0	0	9	0	0	0	6	0	0	0	0	23
Total	0	8	0	0	0	0	0	91	0	0	0	89	0	0	0	0	188
% Apr.	-	100.0	-	-	-	-	-	100.0	-	-	-	100.0	-	-	-	-	-
% Int.	-	4.2	-	-	-	-	-	48.4	-	-	-	47.3	-	-	-	-	-

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STUDENT DROP OFF & SW 115TH AVENUE
CUTLER BAY, FLORIDA
COUNTED BY: RICHARD MENDEZ
NOT SIGNALIZED

Study Name: 2328_BUS
Site Code : 00160245
Start Date: 11/16/16

BUSES

Start	SW 115TH AVENUE From North				STUDENT DROP OFF From East				SW 115TH AVENUE From South				----- From West				Intvl.
Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
11/16/16																	
07:00	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2
% Apr.	-	-	-	-	-	-	-	100.0	-	-	-	100.0		-	-	-	
% Int.	-	-	-	-	-	-	-	50.0	-	-	-	50.0	-	-	-	-	

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SW 232RD STREET & BUS DROP OFF
CUTLER BAY, FLORIDA
COUNTED BY: AMBER PALOMINO
NOT SIGNALIZED

Study Name: 232SDROP
Site Code : 00160245
Start Date: 11/16/16

ALL VEHICLES

	BUS DROP OFF From North				SW 232ND STREET From East				From South				SW 232ND STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Intvl Total
11/16/16																	
07:00	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	3
07:15	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	8
07:30	0	0	0	7	0	0	0	7	0	0	0	0	0	0	0	0	14
07:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Hour	0	0	0	13	0	0	0	13	0	0	0	0	0	0	0	0	26
08:00	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	4
08:15	0	0	0	2	0	0	0	4	0	0	0	0	0	0	0	0	6
08:30	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2
08:45	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	8
Hour	0	0	0	9	0	0	0	11	0	0	0	0	0	0	0	0	20
Total	0	0	0	22	0	0	0	24	0	0	0	0	0	0	0	0	46
% Apr.	-	-	-	100.0	-	-	-	100.0	-	-	-	-	-	-	-	-	-
% Int.	-	-	-	47.8	-	-	-	52.1	-	-	-	-	-	-	-	-	-

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SW 232ND STREET & STUDENT DROP OFF
CUTLER BAY, FLORIDA
COUNTED BY: MARISA CRUZ
NOT SIGNALIZED

Study Name: BUS_115A
Site Code : 00160245
Start Date: 11/16/16
Page : 1

ALL BUT BUSES

	STUDENT DROP OFF From North				SW 232ND STREET From East				----- From South				SW 232ND STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Intvl Total
11/16/16																	
07:00	0	0	0	27	0	0	0	29	0	0	0	0	0	0	0	0	56
07:15	0	0	0	61	0	0	0	58	0	0	0	0	0	0	0	0	119
07:30	0	0	0	60	0	0	0	61	0	0	0	0	0	1	0	0	122
07:45	0	0	0	99	0	0	0	56	0	0	0	0	0	33	0	0	188
Hour	0	0	0	247	0	0	0	204	0	0	0	0	0	34	0	0	485
08:00	0	0	0	37	0	0	0	34	0	0	0	0	0	6	0	0	77
08:15	0	0	0	2	0	0	0	2	0	0	0	0	0	2	0	0	6
08:30	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
08:45	0	0	0	6	0	0	0	4	0	0	0	0	0	0	0	0	10
Hour	0	0	0	52	0	0	0	40	0	0	0	0	0	8	0	0	100
Total	0	0	0	299	0	0	0	244	0	0	0	0	0	42	0	0	585
% Apr.	-	-	-	100.0	-	-	-	100.0	-	-	-	-	-	100.0	-	-	
% Int.	-	-	-	51.1	-	-	-	41.7	-	-	-	-	-	7.1	-	-	-

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Delray Beach, Florida 33483
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SW 232ND STREET & STUDENT DROP OFF
CUTLER BAY, FLORIDA
COUNTED BY: MARISA CRUZ
NOT SIGNALIZED

Study Name: BUS_115A
Site Code : 00160245
Start Date: 11/16/16

BUSES

Start Time	STUDENT DROP OFF From North				SW 232ND STREET From East				----- From South				SW 232ND STREET From West				Intvl Total
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
11/16/16																	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Apr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
% Int.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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BAILES ROAD & STUDENT DROP OFF
CUTLER BAY, FLORIDA
COUNTED BY: SEBASTIAN SALVO
NOT SIGNALIZED

Study Name: BAILDROP
Site Code : 00160245
Start Date: 11/16/16

ALL BUT BUSES

Start	From North				BAILES ROAD From East				STUDENT DROP OFF From South				BAILES ROAD From West				Intvl
Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
11/16/16																	
07:00	0	0	0	0	0	14	0	0	0	12	0	10	0	0	0	40	76
07:15	0	0	0	0	0	39	0	0	0	24	0	17	0	0	0	80	160
07:30	0	0	0	0	0	36	0	0	0	37	0	30	0	0	0	80	183
07:45	0	0	0	0	0	3	0	0	0	35	0	48	0	0	0	89	175
Hour	0	0	0	0	0	92	0	0	0	108	0	105	0	0	0	289	594
08:00	0	0	0	0	0	10	0	0	0	20	0	23	0	0	0	40	93
08:15	0	0	0	0	0	4	0	0	0	5	0	4	0	0	0	11	24
08:30	0	0	0	0	0	2	0	0	0	17	0	25	0	0	0	4	48
08:45	0	0	0	0	0	6	0	0	0	12	0	14	0	0	0	6	38
Hour	0	0	0	0	0	22	0	0	0	54	0	66	0	0	0	61	203
Total	0	0	0	0	0	114	0	0	0	162	0	171	0	0	0	350	797
% Apr.	-	-	-	-	-	100.0	-	-	-	48.6	-	51.3	-	-	-	100.0	-
% Int.	-	-	-	-	-	14.3	-	-	-	20.3	-	21.4	-	-	-	43.9	-

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Delray Beach, Florida 33483
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BAILES ROAD & STUDENT DROP OFF
CUTLER BAY, FLORIDA
COUNTED BY: SEBASTIAN SALVO
NOT SIGNALIZED

Study Name: BAILDROP
Site Code : 00160245
Start Date: 11/16/16

BUSES

	From North				BAILES ROAD From East				STUDENT DROP OFF From South				BAILES ROAD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Intvl. Total
11/16/16																	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Apr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
% Int.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX J
ACCUMULATION CALCULATIONS

ACCUMULATION ASSESSMENT

(This form is used to assess the impact of the accumulation of loading vehicles staged at dismissal time)

New School Name	**Brickell Academy Preparatory Charter School (9th - 12th Grade)**	
Surrogate School Name[1]	**Silver Palms Somerset Acadmey**	
Date / Day / Time of Data Collection	**11/16/2016 (Wed)** **1:30 to 3:30 PM**	(collect maximum accumulation of staged loading vehicles at or around dismissal time on Tuesday, Wednesday or Thursday for elementary, middle, and/or high schools)
Surrogate Enrollment	**1991**	students, E (verified by school staff on same date as data collection)
Capacity of New School	**1500**	student stations,C: (max # students for each separate dismissal period @ 30 minute intervals, imposed p/u 'window' and 30% to aftercare.)
Multiplier[2]	**0.75**	[C / E]
Surrogate Accumulations[3]	**309**	passenger vehicles (including commercial vans)
	5	large school buses
	0	student vehicles (for high schools only)
Projected Accumulations	**127**	passenger vehicles (Includes reductions for transit, peds. & bikes)
		large school buses
		student vehicles
Provided Spaces[4]	**220**	passenger vehicles (legal staging areas on and contiguous to site)
		large school buses
		student vehicles (legal parking on and contiguous to site)
Percent Accommodated[5]	**173%**	passenger vehicles
		large school buses
		student vehicles

[1] The facility to be used as a surrogate school will be determined by MDPWD staff. The surrogate school data is used to form a basis for the projected accumulations.

[2] This figure is used to determine projected accumulations at the new school by applying it to existing surrogate school accumulations. It is calculated by dividing the new school student station capacity by the surrogate school student enrollment at the time of accumulation data collection.

[3] These are all school related loading vehicles which are, legally or illegally, staged or parked, on or neighboring the school site.

[4] Information must be obtained from a field survey or proposed site plan indicating the total spaces to be provided for each vehicle type at 22 linear feet per passenger vehicle and/or commercial van, and 50 linear feet per large school bus. Credit may be taken for legal parking in paved swale areas along school property frontage. A sketch or site plan (maximum 40 scale) showing the location of these spaces, the type of spaces in each area, and linear footage provided for each area including the width of bus bays is **required**. Onstreet bus loading bays are required to have a minimum 14 foot width, onstreet passenger vehicle loading bays are required to have a minimum 10 foot width, and onstreet passenger vehicle parking areas are required to have a minimum 8 foot width, unless otherwise allowed.

[5] This is calculated as, [(Provided Spaces / Projected Accumulations) x 100], for each vehicle type. MDPWD requires all of the large school bus and student vehicle (if applicable) accumulations to be accommodated. The Department also expects l00 % of the passenger vehicle accumulation to be accommodated depending on adjacent roadway design and classification, and limitations of the school site.

address, and telephone number: _____

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Signature of Data Collector

ACCUMULATION ASSESSMENT

(This form is used to assess the impact of the accumulation of loading vehicles staged at dismissal time)

New School Name	**Brickell Academy Preparatory Charter School (K - 12th Grade)**	
Surrogate School Name[1]	**Silver Palms Somerset Acadmey**	
Date / Day / Time of Data Collection	**11/16/2016 (Wed)** **1:30 to 3:30 PM**	(collect maximum accumulation of staged loading vehicles at or around dismissal time on Tuesday, Wednesday or Thursday for elementary, middle, and/or high schools)
Surrogate Enrollment	**1991**	students, E (verified by school staff on same date as data collection)
Capacity of New School	**3000**	student stations,C: (max # students for each separate dismissal period @ 30 minute intervals, imposed p/u 'window' and 30% to aftercare.)
Multiplier[2]	**1.51**	[C / E]
Surrogate Accumulations[3]	**309**	passenger vehicles (including commercial vans)
	5	large school buses
	0	student vehicles (for high schools only)
Projected Accumulations	**257**	passenger vehicles (Includes reductions for transit, peds. & bikes)
		large school buses
		student vehicles
Provided Spaces[4]	**320**	passenger vehicles (legal staging areas on and contiguous to site)
		large school buses
		student vehicles (legal parking on and contiguous to site)
Percent Accommodated[5]	**125%**	passenger vehicles
		large school buses
		student vehicles

[1] The facility to be used as a surrogate school will be determined by MDPWD staff. The surrogate school data is used to form a basis for the projected accumulations.

[2] This figure is used to determine projected accumulations at the new school by applying it to existing surrogate school accumulations. It is calculated by dividing the new school student station capacity by the surrogate school student enrollment at the time of accumulation data collection.

[3] These are all school related loading vehicles which are, legally or illegally, staged or parked, on or neighboring the school site.

[4] Information must be obtained from a field survey or proposed site plan indicating the total spaces to be provided for each vehicle type at 22 linear feet per passenger vehicle and/or commercial van, and 50 linear feet per large school bus. Credit may be taken for legal parking in paved swale areas along school property frontage. A sketch or site plan (maximum 40 scale) showing the location of these spaces, the type of spaces in each area, and linear footage provided for each area including the width of bus bays is **required**. Onstreet bus loading bays are required to have a minimum 14 foot width, onstreet passenger vehicle loading bays are required to have a minimum 10 foot width, and onstreet passenger vehicle parking areas are required to have a minimum 8 foot width, unless otherwise allowed.

[5] This is calculated as, [(Provided Spaces / Projected Accumulations) x 100], for each vehicle type. MDPWD requires all of the large school bus and student vehicle (if applicable) accumulations to be accommodated. The Department also expects l00 % of the passenger vehicle accumulation to be accommodated depending on adjacent roadway design and classification, and limitations of the school site.

address, and telephone number:

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Signature of Data Collector

Traffic Survey Specialists, Inc. 85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Somerset Academy, 23255 SW 115th Avenue, Miami, Florida 33032
Wednesday, November 16th, 2016
Observed By: A. Palomino, S. Salvo, R. Mendez, M. Cruz, A. Ricketts and L. Palomino

Time	Bus Loop On SW 232nd Street	On Street Near Bus Loop On SW 232nd Street	Bailes Road Student Drop Off	Bailes Road Parking Lot Parking Accumulation	SW 115th Avenue Drop Off Queue	SW 115th Avenue Drop Off Queue On Street	SW 232nd Street Student Drop Off Loop Queue	SW 232nd Street Student Drop Off Street Queue	SW 114th Place Student Drop Off Queue	SW 114th Place Student Drop Off Queue On Street	SW 114th Place Student Drop Off Parking Lot Parking Accumulation	Total
1:30 PM	4	0	23	136	3	0	9	0	0	0	51	226
1:35 PM	4	0	25	136	3	0	11	5	0	0	51	235
1:40 PM	3	0	25	138	4	0	12	6	0	0	51	239
1:45 PM	3	0	28	138	4	0	12	6	2	0	51	244
1:50 PM	5	0	30	148	3	0	14	11	2	0	51	264
1:55 PM	5	0	34	148	8	0	14	8	5	0	51	273
2:00 PM	5	0	25	142	6	0	19	12	9	0	50	268
2:05 PM	0	2	26	142	6	3	13	15	10	0	50	267
2:10 PM	0	7	23	130	11	5	11	13	13	0	50	263
2:15 PM	0	7	25	130	15	15	10	7	16	3	50	278
2:20 PM	0	10	13	132	15	15	14	8	25	0	51	283
2:25 PM	0	12	12	132	17	19	15	9	33	1	51	301
2:30 PM	0	17	17	117	19	23	13	7	35	7	54	**309**
2:35 PM	0	18	13	117	19	21	5	6	20	9	54	282
2:40 PM	0	0	10	118	11	10	6	2	14	0	50	221
2:45 PM	0	0	7	118	4	5	3	0	4	0	50	191
2:50 PM	0	0	8	118	3	2	3	2	3	0	49	188
2:55 PM	0	0	7	118	4	0	5	0	4	0	49	187
3:00 PM	0	0	7	119	5	0	7	0	4	0	47	189
3:05 PM	0	0	6	119	5	0	5	0	0	0	47	182
3:10 PM	2	0	6	123	4	0	6	0	4	0	51	196
3:15 PM	0	0	10	123	4	0	5	0	8	0	51	201
3:20 PM	2	0	11	130	7	0	9	0	3	0	48	210
3:25 PM	0	0	9	130	5	0	10	0	6	0	48	208
3:30 PM	0	0	5	131	5	0	11	0	4	0	45	201

Parking Lots counted every 10 minutes. Includes people that park on grass. Count is repeated in following interval for totals