DAVID PLUMMER & ASSOCIATES
TRAFFIC ENGINEERING • CIVIL ENGINEERING • TRANSPORTATION PLANNING

1750 PONCE DE LEON BOULEVARD | CORAL GABLES, FLORIDA 33134
305•447•0090 | DPA@DPLUMMER.COM

February 8, 2019

Ms. Dalila Fernandez, PE
Senior Traffic Engineer
Department of Public Works
Sustainable Public Infrastructure Division
2800 SW 72nd Avenue
Miami, FL 33155
305.460.5128
dfernandez@coralgables.com

RE: Trip Generation Gulliver Academy - #18215

Dear Dalila,

David Plummer & Associates has been retained by Gulliver Schools to perform a trip generation analysis for the proposed increase of students at Gulliver Academy campus. Contact information for the developer is as follows:

Mr. Charlie Rue
Chief Operating Officer
Gulliver Schools
(786) 709-4001

Gulliver Academy is an existing PK3 through 8th Grade school located at 12595 Red Road in Coral Gables, Florida and is currently approved for a maximum of 1,162 student, The school is proposing to expand the Academy's campus and increase the number of students to 1,260. An increase of 98 students. A copy of the proposed site plan is provided in Attachment A.

Trip generation calculations for the existing and proposed development were performed using *Institute of Transportation Engineers' (ITE) Trip Generation Manual,* 10th Edition. ITE Land Use Codes (LUC) 534 (Private K-8) was utilized for the existing and proposed trip generations. A trip generation summary is provided in Table 1. Detailed trip generation calculations are provided in Attachment A.

Table 1: Trip Generation Summary				
Development Plan	Total Weekday	AM Peak Hour	PM Peak Hour	PM Peak of Generator
Existing	4,776	1058	302	721
Proposed	5,178	1147	328	781
△Trips	+402	+89	+26	+60

As shown in Table 1, the results of the trip generation analysis indicate that the proposed increase in students from the maximum allowed represents an increase of 402 daily trips, 89 am peak hour trips, 26 pm peak hour trips and 60 trips during the peak hour of the generator.

We stand ready to provide any support needed for this project. Should you have any questions or comments, please call me at (305) 447-0900.

Sincerely,

Juan Espinosa, PE

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Attachment A

Trip Generation

Gulliver Academy

Trip Generation Comparison (Maximum)

Existing ITE Land Use Designation	Size/Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips			PM Peak of Generator Vehicle Trips		
			In	Out	Total	In	Out	Total	In	Out	Total
Private School (K-8) (Land Use 534)	AM /PM 1,162 Students	4776	582	476	1058	139	163	302	339	382	721
Gross Vehicle Trips		**4776**	**582**	**476**	**1058**	**139**	**163**	**302**	**339**	**382**	**721**

Proposed ITE Land Use Designation	Size/Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips			PM Peak of Generator Vehicle Trips		
			In	Out	Total	In	Out	Total	In	Out	Total
Private School (K-8) (Land Use 534)	AM /PM 1,260 Students	5178	631	516	1147	151	177	328	367	414	781
Gross Vehicle Trips		**5178**	**631**	**516**	**1147**	**151**	**177**	**328**	**367**	**414**	**781**

	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips			PM Peak of Generator Vehicle Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
Existing Land Use (1,162 Max Students)	4776	582	476	1058	139	163	302	339	382	721
Proposed Lane Use (1,260 Students)	5178	631	516	1147	151	177	328	367	414	781
Trips Difference (98 Students)	***402***	***49***	***40***	***89***	***12***	***14***	***26***	***28***	***32***	***60***

Scenario - 2

Scenario Name: Proposed
Dev. phase: 1
Analyst Note:
User Group:
Horizon Year: 2019

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

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
534 - Private School (K-8)	General	Students	1260	Weekday, Peak Hour of	Average	631	516	1147
Data Source: ITE-TGM 10th Edition	Urban/Suburban			Adjacent Street Traffic,	0.91	55%	45%	
534(1) - Private School (K-8)	General	Students	1260	Weekday, Peak Hour of	Average	151	177	328
Data Source: ITE-TGM 10th Edition	Urban/Suburban			Adjacent Street Traffic,	0.26	46%	54%	
534(2) - Private School (K-8)	General	Students	1260	Weekday, PM Peak Hour	Average	367	414	781
Data Source: ITE-TGM 10th Edition	Urban/Suburban			of Generator	0.62	47%	53%	
534(3) - Private School (K-8)	General	Students	1260	Weekday, AM Peak Hour	Average	2589	2589	5178
Data Source: ITE-TGM 10th Edition	Urban/Suburban			of Generator	4.11	50%	50%	

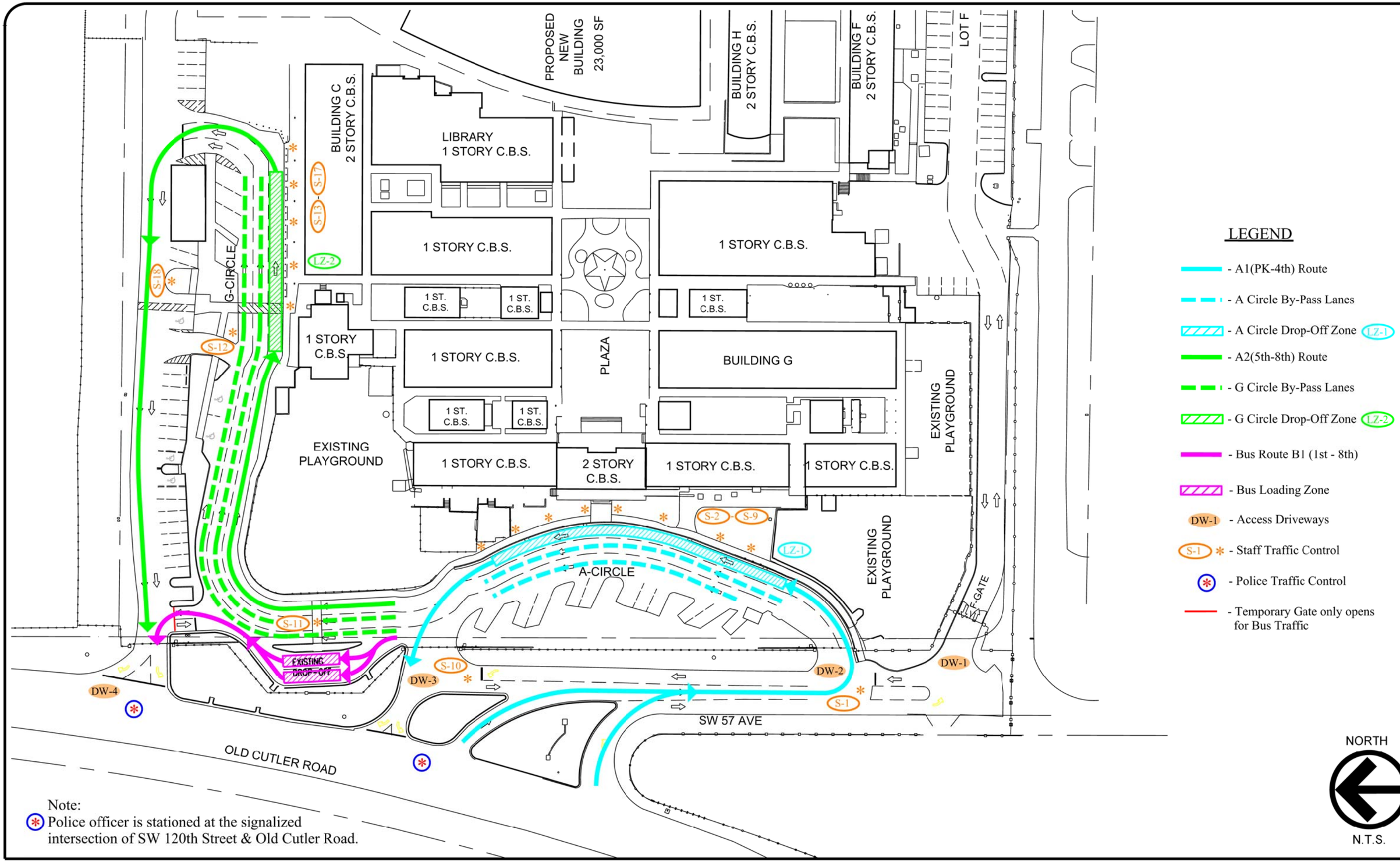
Scenario - 3

Scenario Name: Maximum
Dev. phase: 1
Analyst Note:
User Group:
Horizon Year: 2019

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

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
534 - Private School (K-8)	General	Students	1162	Weekday, Peak Hour of	Average	582	476	1058
Data Source: ITE-TGM 10th Edition	Urban/Suburban			Adjacent Street Traffic,	0.91	55%	45%	
534(1) - Private School (K-8)	General	Students	1162	Weekday, Peak Hour of	Average	139	163	302
Data Source: ITE-TGM 10th Edition	Urban/Suburban			Adjacent Street Traffic,	0.26	46%	54%	
534(2) - Private School (K-8)	General	Students	1162	Weekday, PM Peak Hour	Average	339	382	721
Data Source: ITE-TGM 10th Edition	Urban/Suburban			of Generator	0.62	47%	53%	
534(3) - Private School (K-8)	General	Students	1162	Weekday, AM Peak Hour	Average	2388	2388	4776
Data Source: ITE-TGM 10th Edition	Urban/Suburban			of Generator	4.11	50%	50%	



Note:
* Police officer is stationed at the signalized intersection of SW 120th Street & Old Cutler Road.

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CORAL GABLES FORT MYERS
1750 PONCE DE LEON BLVD. CORAL GABLES FL 33134 TELEPHONE (305) 447-0900
CERTIFICATE OF AUTHORIZATION: 2690

PROJECT: GULLIVER ACADEMY SCHOOL

TITLE: TRAFFIC OPERATIONS PLAN (ARRIVAL)

DATE 02/06/19 | PROJECT NO. 18171
DRAWN | EXHIBIT NO. 1
CHECKED
APPROVED

DATES
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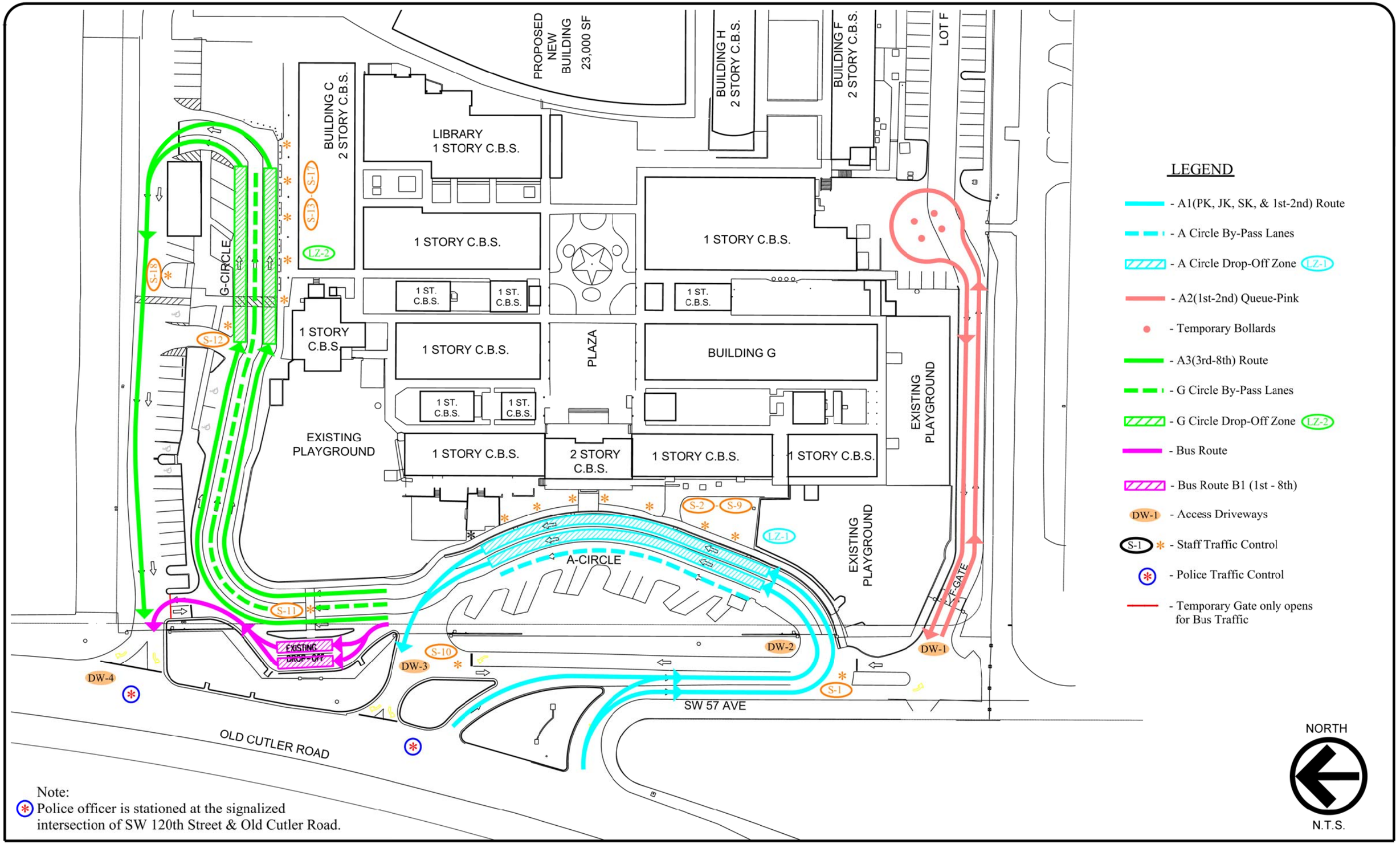

Note:
Police officer is stationed at the signalized intersection of SW 120th Street & Old Cutler Road.

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CERTIFICATE OF AUTHORIZATION: 2690

PROJECT: GULLIVER ACADEMY SCHOOL

TITLE: TRAFFIC OPERATIONS PLAN (DISMISSAL)

DATE 02/06/19 | PROJECT NO. 18171
DRAWN | EXHIBIT NO. 2
CHECKED
APPROVED

DATES
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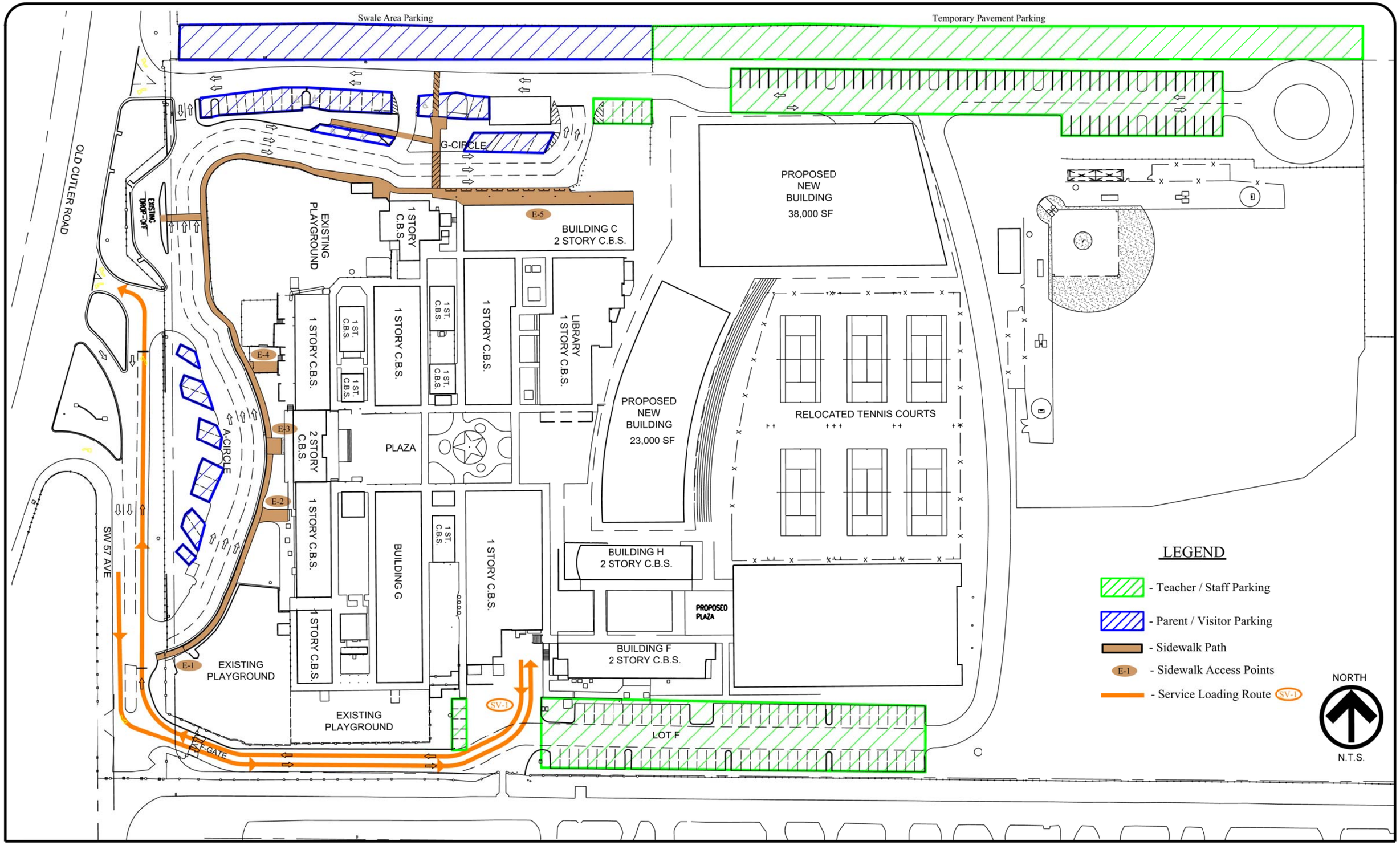

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1750 PONCE DE LEON BLVD. CORAL GABLES FL 33134 TELEPHONE (305) 447-0900
CERTIFICATE OF AUTHORIZATION: 2690

PROJECT:
GULLIVER ACADEMY SCHOOL

TITLE:
TRAFFIC OPERATIONS PLAN

DATE	PROJECT NO.
02/06/19	18215
DRAWN	EXHIBIT NO.
CHECKED	3
APPROVED	

DAVID PLUMMER & ASSOCIATES
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1750 PONCE DE LEON BOULEVARD | CORAL GABLES, FLORIDA 33134
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February 13, 2019

Mr. Charlie Rue
Chief Operating Officer
Gulliver Schools
9350 S Dixie Hwy, 11th Floor
Miami, FL 33156
(786) 709-4001
ruec@Gulliverschools.org

RE: Gulliver Academy Traffic Operations Plan and Accumulation Assessment - *#18215*

Dear Charlie,

Gulliver Academy (Academy) is an existing PK3 through 8th Grade school located at 12595 Red Road in Coral Gables, Florida. The Academy campus school currently has an enrollment of 1,137 students. In addition, the Montgomery Drive campus has an enrollment of 102 students in grades 5th through 8th. These 102 students are currently dropped-off at the Montgomery Drive campus during the morning arrival, bussed over to the Academy during lunch and picked-up at the campus during the afternoon dismissal. The students currently attending the Montgomery campus will be relocated to the Academy campus. The school is proposing to expand the Academy campus and increase the number of students to 1,260, including the 102 students.

Field observations of the arrival and dismissal operations at Gulliver Academy were conducted. Ingress to the site, internal circulation, egress from the site, and the drop-off / pick-up operations were evaluated. Recommendations were provided to improve the existing operations and reduce impacts of school related traffic on the adjacent roadway network. Furthermore, in order to ensure that the Academy's arrival and dismissal will continue to operate within Miami-Dade County Standards, with the proposed increase of students, an accumulation assessment was conducted.

The accumulation assessment was conducted consistent with the Miami-Dade County Department of Transportation and Public Works (DTPW) guidelines to assess the impacts of the proposed increase in students. Data for this assignment was collected during arrival and dismissal at the existing school on Tuesday, December 18, 2018. The accumulation of staged loading / unloading vehicles at the school was recorded every minute from 20 minutes prior and 10 minutes after **arrival (7:40–8:30 AM)** and 15 minutes prior and 30 minutes after **dismissal (2:15–3:45 PM)**. Vehicles were categorized as passenger, student or bus. The data was analyzed to establish adequacy of loading / unloading conditions for the proposed school expansion. A School Traffic Operations Plan (TOP) Form was also prepared in conjunction with the TOP Plan View, to address the school's arrival and dismissal schedule, vehicular pick-up / drop-off queuing route, operations, and pedestrian/bicycle facilities (see Attachment A).

Existing Conditions

The school currently has three morning arrivals and four afternoon dismissal periods. The primary school (PreK, JK, SK) schedule is 8:20 am – 2:30 pm, the lower school (Grades 1st - 4th) schedule is 8:10 am – 2:45 pm, and the middle school (Grades 5th – 8th) schedule is 8:00 am – 3:15 pm. The school operates on this schedule every weekday except Wednesday, where the primary school (PreK, JK, SK) dismissal is at 1:45 pm, the lower school (Grades 1st - 4th) dismissal is at 2:15 pm, and the middle school (Grades 5th – 8th) dismissal is at 2:30 pm.

The school has four gated driveways. The south most driveway (DW-1) accessing SW 57th Avenue is a two-way driveway (F-Gate) and provides access to teachers parking areas. The second driveway (DW-2) also accessing SW 57th Avenue, is an inbound only driveway that provides access to the drop-off / pick-up areas and parent parking areas. The middle driveway (DW-3) accessing SW 57th Avenue is a two-way driveway. The north most driveway (DW-4) accesses Old Cutler Road is outbound only. The school has two separate drop-off / pick-up locations, A- Circle and G-Circle. Exhibit 1 provides a summary of morning arrival and afternoon dismissal.

Faculty parking areas are currently located on the south side, east side, and northeast side of the property and are all accessed through the F-Gate (DW-1) off of SW 57th Avenue. The visitors parking is provide along A-Circle and G-Circle and are accessed through (DW-2 and DW-3) on SW 57th Avenue.

Exhibit 1
Arrival and Dismissal Schedule

Morning Arrival				
Grades / Students			**Schedule (M – F)**	**Drop-off Location**
Middle	Grade 5th - 8th	593	8:00 AM	G - Circle
Lower	Grade 1st - 4th	375	8:10 AM	A - Circle
Primary	PK, JK, SK	169	8:20 AM	A - Circle

Afternoon Dismissal						
Grades / Students			**Color Code**	**Schedule**		**Pick-up Location**
				M, T , Th, F	**Wednesday**	
Primary	PK, JK, SK	169	Yellow	2:30 PM	1:45 PM	A - Circle
Lower	Grade 1st - 2nd	167	Pink	2:45 PM	2:00 PM	A - Circle
	Grade 3rd - 4th	208	Blue	2:50 PM	2:15 PM	G - Circle
Middle	Grade 5th - 8th	593/ 102	White	3:15 PM	2:30 PM	G - Circle

Existing Morning Arrival Operations

The current drop-off operation functions as follows: middle school drop-off vehicles enter the site via the two-way driveway on SW 57th Avenue (DW-3). Entering vehicles make an immediate left turn to loop around the existing playground and arrive at the G-Circle drop-off / pick-up area. They queue on the right most lane, while the middle and left most lanes are designated pass-by lanes. The drop-off area is located on the north side of the existing building (LZ-2). Staff controls traffic flow along the drop-off area by directing vehicles to continuously stack up, minimizing gaps and maximizing queue length and assisting students' off-loading vehicles (S-13 – S-17). Vehicles will then exit the drop-off, loop around the parent's parking lot, and continue straight towards the driveway accessing Old Cutler Road (DW-4). Some parents park within the center parking area and along the swale area north end in G-Circle, and students walk up to school entrance using the pedestrian crosswalks. There are staff (S-12 and S-18) positioned at each of the two crosswalks within G-Circle controlling traffic while students cross.

The lower and primary school drop-off vehicles, enter the site via the second driveway on SW 57th Avenue (DW-2). Staff (S-1) controls traffic at this entrance driveway. Entering vehicles immediately loop around and arrive at the A-Circle drop-off area. The A-Circle drop-off area has three lanes and is located on the west side of the existing building (LZ-1). During drop-off vehicles queue on the right most lane, while the middle and left most lanes are designated pass-by lanes. Staff controls traffic flow along the drop-off area by directing vehicles to continuously stack up, minimizing gaps and maximizing queue length and assisting students' off-loading vehicles. (S-2 – S-9). Vehicles will then exit the drop-off and continue towards the middle driveway accessing SW 57th Avenue (DW-3). Parent parking for drop-off within A-Circle is not allowed. Parking spaces provided are designated for visitors during arrival period.

It should be noted that there is staff (S-10) positioned at the middle driveway (DW-3) controlling the outbound movement from A-Circle and the inbound movement into G-Circle. This staff member coordinates with the police officer position on Old Cutler Road directly west of the middle driveway controlling inbound / outbound traffic.

Existing Afternoon Dismissal Operations

Gulliver Academy has implemented color coded dismissal, in which parents display on the vehicle dashboard their designated color by student grade level. Dismissal color designations allow staff, security and police to direct vehicles to the correct pickup location (see Exhibit 1). The current pick -up operation functions as follows:

The primary school pick-up vehicles (yellow) enter the site via the second driveway on SW 57th Avenue (DW-2). Entering vehicles immediately loop around and arrive at the A-Circle pick-up area. The A-Circle drop-off area has three lanes and is located on the west side of the existing building (LZ-1). During pick-up, vehicles queue on the right most lane and the middle lane, while the left most lane is designated as a pass-by lane. Staff (S-2 – S-9) controls traffic flow along the pick-up area by directing vehicles to continuously stack up, minimizing gaps and maximizing queue length and assisting students' loading onto vehicles. Vehicles will then exit the pick-up area and continue towards the middle driveway accessing SW 57th Avenue (DW-3).

The lower school grades 1st and 2nd pick-up vehicles (Pink) begin to arrive during the primary dismissal. These vehicles, displaying the pink color code, are held outside of A-circle on the two far left lanes, leaving one lane to allow access for vehicles displaying yellow to enter the site via the second driveway on SW 57th Avenue (DW-2). Once all the vehicles at the primary pick-up clear from A-Circle, the pink group is allowed into A-circle by the staff (S-1) positioned at (DW-2). The two lanes of vehicles immediately loop around and arrive at the A-Circle pick-up. As with the primary pick-up, vehicles queue on the right most lane and the middle lane, while the left most lane is designated as a pass-by lane. Staff (S-2 – S-9) controls traffic flow along the pick-up area by directing vehicles to continuously stack up, minimizing gaps and maximizing queue length and assisting students' loading onto vehicles. Vehicles will then exit the pick-up area and continue towards the middle driveway accessing SW 57th Avenue (DW-3). It should be noted that once the primary finish dismissal and lower (grades 1st and 2nd) are allowed into A-Circle, the middle driveway gate is closed and all vehicle are directed to enter the school via the second driveway (DW-2).

The lower school grades 3rd and 4th pick-up vehicles (Blue) and middle school pick-up vehicles (White), enter the site via the two-way driveway on SW 57th Avenue (DW-3) or the second driveway (DW-2). Entering vehicles make an immediate left turn to loop around the existing playground and arrive at the G-Circle pick-up area. The drop-off area has three lanes and is located on the north side of the existing building (LZ-2).During pick-up, vehicles queue on the right most lane and left most lanes, while the middle lane is designated as pass-by. Staff (S-13 – S-17) controls traffic flow along the pick-up area by directing vehicles to continuously stack up, minimizing gaps and maximizing queue length and assisting students' loading into vehicles. Vehicles will then exit the drop-off, loop around the parent's parking lot, and continue straight towards the driveway accessing Old Cutler Road (DW-4). Some parents park within the center parking area and along the swale area at the north end in G-Circle, and students walk from the school to their vehicle using the pedestrian crosswalks. There are staff (S-12 and S-18) positioned at each of the two crosswalks within G-Circle controlling traffic while students cross.

There is staff (S-10) positioned at the middle driveway (DW-3) controlling the outbound movement from A-Circle and the inbound movement into G-Circle. This staff member coordinates

with the police officer position on Old Cutler Road directly west of the middle driveway controlling inbound / outbound traffic.

Police Officer Assistance

Gulliver Academy has done a commendable job minimizing school related traffic impacts on Old Cutler Road. The Academy provides three police officers along Old Cutler Road, which are present during both arrival and dismissal periods. The following are the three police officers' locations and assignments:

- **Old Cutler Road / SW 120th Street**: a police officer takes control of the first signalized intersection north of the Academy by manually adjusting the green time for all approaches during the drop-off and pick-up periods. The adjustments of the green times at the signalized intersection is at the officer's discretion. This officer directs traffic, giving each movement enough time, creating balance between the eastbound, northbound and southbound movements and the school related movements at this intersection.
- **Old Cutler Road / North Driveway**: a police officer controls exiting school traffic at this location. Two lanes of outbound vehicles queue inside the school at the north most driveway (DW-4). Vehicles traveling northbound / southbound on Old Cutler Road are periodically stopped to allow drivers exiting both lanes to making a right-turn onto northbound Old Cutler Road. This officer coordinates with the police officer at the middle driveway in order to minimize disruption to northbound / southbound traffic flow on Old Cutler Road.
- **Old Cutler Road / Middle Driveway**: a police officer directly west of the middle driveway (DW-3) controls inbound / outbound school traffic. This officer gauges the queue of southbound left-turn lane into the school. When needed, the officer signals the opposing northbound vehicles to stop, creating a gap and allowing inbound vehicles into the school. Again the officer gauges when to stop the southbound inbound movement to ensure minimal disruptions to northbound traffic flow on Old Cutler Road.

These police officers have been stationed at Gulliver Academy for numerous years and have acquired a thorough understanding of the Academy's traffic patterns and the needs of the local traffic on Old Cutler Road.

Bus / Van Operations

Gulliver Academy is served by a private transportation company. Private vans enter the site via the second driveway (DW-2) and/or the middle driveway (DW-3); they drop-off along the A-Circle and pick-up at the designated van/bus loading area. This designated van/bus loading area is separated by a raised median that is located west of the existing playground and connected to the sidewalk along the school by a pedestrian crosswalk. There is staff (S-11) positioned at the crosswalk controlling traffic while students cross. Once the private vans have loaded / off-loaded students, they exit the loading area and make an immediate left using the access on the west side of the parking lot. This access is closed by a temporary gate which is only opened for exiting vans. Gulliver Academy also provides a school bus for approximately 60 students transporting them to/from Key Biscayne. This bus drops students off at the G-Circle and picks up at the parking lot behind G-Circle.

Pedestrian and Bicycle Access

Pedestrians will have access to the school's entrance via the second driveway (E-1). The school provides a continuous sidewalk along A-Circle that loops around the existing playground and continues to G-Circle. There are three school pedestrian entrances along A-Circle (E-2 – E-4) and one along G-Circle (E-4). Old Cutler Road provides a dedicated multi-use (bike/walk) pathway on the west side of the road. When pedestrians are crossing from the west side of Old Cutler Road, vehicular traffic on Old Cutler Road is controlled by two police officers.

Field Observations and Recommendations

Field observations of the arrival and dismissal operations at Gulliver Academy were conducted on various occasions. Ingress to site, internal circulation, egress from the site, and the drop-off / pick-up operations were evaluated. General operations during arrival and dismissal were observed and describe in sections above as the existing conditions. Gulliver Academy has created an environment where both staff and parents are well informed of the pick-up / drop-off schedules and designated locations. Safety is clearly a priority for the various staff and security positioned along both A-Circle and G-Circle pick-up / drop-off areas, crosswalks, and access driveways.

As described in the section above, the lower school grades 1st and 2nd pick-up vehicles (Pink) begin to arrive during the primary dismissal (yellow). These vehicles, displaying the pink color code, are held outside of A-circle on the two far left lanes. Once all the vehicles at the primary pick-up clear from A-Circle, the pink group is allowed into A-Circle. The queue created by the pink group was observed reaching the storage capacity of SW 57th Avenue. The two police officers positioned at each entrance/exit control Old Cutler Road traffic and enforce gaps to allow northbound and southbound traffic to continue to flow. In order to mitigate this, it is recommended that the pink group is queued internal to the site. Proposed operations and location details are provided in the future conditions section.

The following are additional recommendations to improve access and circulation.

- Provide two additional staff members assisting with off-loading/ loading of students along both the A-Circle and G-Circle drop-off / pick-up areas.
- Parents were observed getting out of their vehicle to assist their child getting in/ out of the vehicle. At times parents began conversations with staff positioned along the A-Circle. Parents should be instructed to allow staff to assist with loading /off-loading. Staff should be instructed to minimize conversations with parents during pick-up at A-Circle.
- Staff should create a sense of urgency for vehicles to move in and out of the queue. Once the child is safely in/out the vehicle, that vehicle should exit the pick-up /drop-off areas.

- During morning arrival buses were observed dropping-off along the A-Circle. Buses should be using the designated bus loading area instead of A-Circle during the morning arrival.
- Even though there are existing signs posted prohibiting parking, two vehicles were observed during afternoon dismissal parking on the swale areas along Old Cutler Road. Gulliver should continue effort to instruct parents and/or visitor to not parking along Old Cutler Road.

Future Conditions

As previously mentioned, Gulliver is proposing to expand the Academy campus. However, all queuing lanes and pick-up / drop-off areas will remain the same. The east staff parking area will be removed and the parking area to the north and south of campus will be reduced. However, one of the proposed building will include a parking garage level with an additional 75 parking spaces.

Proposed Morning Arrival and Afternoon Dismissal

Morning arrival and afternoon dismissal operations will remain as existing with the exception of the lower school grades (1st and 2nd) / pink group. Instead of queuing on SW 57th Avenue, the pink group will first enter via the south most driveway (DW-1) continue straight for approximately 330 feet to turn around at the service area. This queue will be held internally at the F-gate. Once the A-Circle has been cleared of the primary pick-up vehicles, the pink group will then be allowed into A-circle. At this time the staff position at (DW-2) will stop entering vehicle from SW 57th Avenue and allow all queued vehicles in the pink group to enter the A-Circle. All other operations will then continue as existing.

A School Traffic Operations Plan (TOP) Form was prepared in conjunction with the TOP Plan View, to address the school's arrival and dismissal schedule, vehicular pick-up / drop-off queuing route and operations, and pedestrian/bicycle facilities (see Attachment A).

Accumulation Assessment Results

The accumulation data for the morning arrival was recorded from 7:40 AM to 8:30 AM. Collected accumulation data has been included as Attachment B. Although the school currently has three

arrival periods, because they are closely spaced (8:00, 8:10, and 8:20 am) the overall peak accumulation was used. Based on the data collected the peak accumulation for the school's morning arrival occurs at 7:49 AM, with a total of 334 vehicles counted. The projected accumulation for the AM based on the proposed increase in students arriving in the morning was calculated to be 370 vehicles. This was determined by multiplying the existing peak accumulation by a 1.11 growth factor. This factor was calculated by dividing 1,260 (proposed students during arrival) by 1,137 (existing students during arrival).

The accumulation data for the afternoon dismissal was recorded from 2:15 PM to 3:45 PM. Based on the data collected the peak accumulation for the school's afternoon dismissal occurs at 3:19 PM, with a total of 427 vehicles counted. The projected accumulation for the afternoon dismissal based on the proposed increase in students in the afternoon was calculated to be 434 vehicles. This was determined by multiplying the existing peak accumulation by a 1.02 growth factor. The growth factor was calculated by dividing 1,260 (proposed students at dismissal) by 1,239 (existing student at dismissal). The accumulation assessment analysis worksheets are also included in Attachment B.

The results of the accumulation assessment show that with the existing drop-off and pick-up schedules, proposed TOP and increase in student enrollment, the projected vehicle accumulation will not exceed the proposed school storage capacity of 532 vehicles. The recommendations provided should be implemented at Gulliver Academy in order to improve access and circulation.

We stand ready to provide any support needed for this project. Should you have any questions or comments, please call me at (305) 447-0900.

Sincerely,

Sarah Fiol

Sarah Fiol, PE
Senior Transportation Engineer

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ATTACHMENT A

School Traffic Operations
Plan (TOP) Form

Since 1978

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 Gulliver Academy

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	Gulliver Academy
Address	12595 Red Road, Coral Gable, FL 33156
Folio Number(s)	03-5118-001-0020
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
Primary School	Pre-K, JK, SK	169	178
Lower School	1st - 4th	375	387
Middle School	5th - 8th	593	695
		Total 1137	
Total Facility Enrollment			1260

Table 3.0-2 Educational Program Descriptions

Educational Program	Description
Primary	Pre-K, JK, SK Instructional Typical
Lower	Grades 1st - 4th Instructional Typical
Middle	Grades 5th - 8th Instructional Typical

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	695	3
Dismissal	695	4

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
Primary School	Pre-K, JK, SK	M,Tu,Th,F	8:20 am	2:30 pm	178
Lower School	1st - 2nd	M,Tu,Th,F	8:10 am	2:45 pm	173
Lower School	3rd - 4th	M,Tu,Th,F	8:10 am	2:50 pm	214
Middle School	5th - 8th	M,Tu,Th,F	8:00 am	3:15 pm	695
Primary School	Pre-K, JK, SK	W	8:20 am	1:45 pm	178
Lower School	1st - 2nd	W	8:10 am	2:00 pm	174
Lower School	3rd - 4th	W	8:10 am	2:15 pm	214
Middle School	5th - 8th	W	8:00 am	2:30 pm	695

* (695) Includes 102 Montgomery campus students

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
A1(PK - 4th)	DW-2	☐	Right In Only	DW-3	☐	Right Out Only	Arrival
		☑	One Way Only		☐	One Way Only	
A2(5th - 8th)	DW-3	☐	Right In Only	DW-4	☐	Right Out Only	Arrival
		☐	One Way Only		☑	One Way Only	
A1(PK -2nd)	DW-2	☐	Right In Only	DW- 4	☐	Right Out Only	Dismissal
		☑	One Way Only		☑	One Way Only	
A3(3rd -8th)	DW-3	☐	Right In Only	DW-4	☐	Right Out Only	Dismissal
		☐	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
A1(PK - 4th)	10	4	14
A2(5th - 8th)	6	7	13
A1(PK -2nd)	20	7	27
A2(1st- 2nd)	0	30	30
A3(3rd -8th)	12	13	25

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
B1 (1st -8th)	DW-3	☐	Right In Only	DW-4	☑	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

Table 5.4-2 Bus Loading Zone Vehicle Accumulation Capacity Summary

Route Name	Stacking Spaces Capacity	Queuing Spaces Capacity	Bus Capacity
B1(1st - 8th)	4	0	4

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 vans / 1 bus	4 vans / 1 bus

Table 5.4a-2 Bus Type and Capacity

Quantity	Bus Type	Length	Width	Capacity	Student Total by Type
1	S-BUS-11 [S-BUS-36]	45	10	65	65
0	S-BUS-12 [S-BUS-40]	50	10	84	0
4	Van	22	7	15	60
				Students Grand Total	125

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	-	231	270	
Student	-	0	0	
Parked Stacking	-			
Open	-	85	87	
Total	242	316	357	0

Table 5.5-2 Parked Loading Zone Route Description

Route Name	Entrance Point	[X]	Restriction	Exit Point	[X]	Restriction
N/A		☐	Right In Only		☐	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)
SV-1	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	

Table 6.0-1 Pedestrian Route Description

Route Name	Off-Site Entrance Point	Building Entrance Point	Operation Period (0:00-0:00)
PED	E-1	E-2	7:00 am - 6:00 pm
PED	E-1	E-3	7:00 am - 6:00 pm
PED	E-1	E-4	7:00 am - 6:00 pm
PED	E-1	E-5	7:00 am - 6:00 pm

Table 6.0-2 Bicycle Route Description

Route Name	Entrance Point	Exit Point	Operation Period (0:00 – 0:00)
N/A			

Table 6.0-3 Bicycle Storage Description

Bicycle Storage Location	Bicycle Capacity
N/A	

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
S-1	Diverting (DW-2)	7:15 am	8:30 am	2:05 pm	3:30 pm
S-2 - S-9	Loading (A-Circle)	7:15 am	8:30 am	2:05 pm	3:30 pm
S-10	Diverting (DW-3)	7:15 am	8:30 am	2:05 pm	3:30 pm
S-11	Conflict (Crosswalk)	7:15 am	8:30 am	2:05 pm	3:30 pm
S-12	Conflict (G-Circle Crosswalk)	7:15 am	8:30 am	2:05 pm	3:30 pm
S-13 - S-17	Loading (G-Circle)	7:15 am	8:30 am	2:05 pm	3:30 pm
S-18	Conflict (Crosswalk)	7:15 am	8:30 am	2:05 pm	3:30 pm

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
G-Cirlce	Bollards delineating lane line	7:15 am	8:30 am	2:05 pm	3:30 pm
Parking	Temporary gate for bus access	7:15 am	8:30 am	2:05 pm	3:30 pm

Table 8.0-1 School Crossing Description

Location	East-West	North-South	Mid-Block	Uncontrolled
N/A	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

Table 8.0-2 School Zone Description

Location	Existing [x]	Proposed [x]	Signs & Markings [x]	Speed Zone [x]	Flashing Beacons [x]
Old Cutler Road	☑	☐	☑	☑	☑
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐

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	7:45 AM	8:45 AM	2:30 PM	3:30 PM
Tuesday	7:45 AM	8:45 AM	2:30 PM	3:30 PM
Wednesday	7:45 AM	8:45 AM	2:30 PM	3:30 PM
Thursday	7:45 AM	8:45 AM	2:30 PM	3:30 PM
Friday	7:45 AM	8:45 AM	2:30 PM	3:30 PM

Table 9.0-1 Traffic Control Officer Enforcement Plan

No. of Officers	Intersection or Segment with Boundaries	Arrival	Dismissal	Semester Start	All Year
3	Old Cutler Road	☑	☑	☐	☑
		☐	☐	☐	☐
		☐	☐	☐	☐
		☐	☐	☐	☐

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
Old Cutler Road / SW 120th Street	R	7:45 AM	8:45 AM	2:30 PM	3:30 PM

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
None					

Table 10.0-1 School Special Event Provisions

Event Type	Provision Descriptions
None	

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).

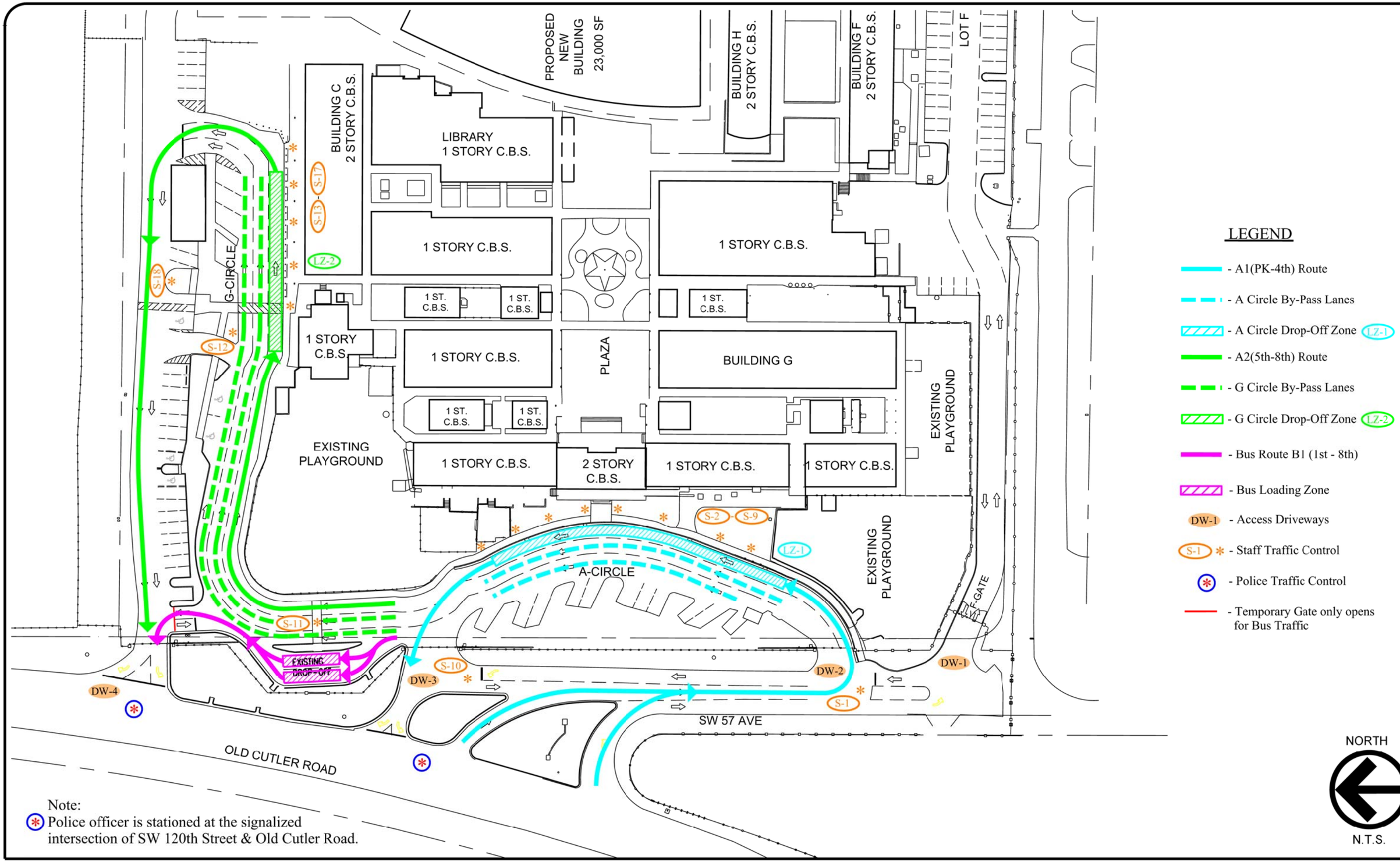
14.0 Endorsement

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



Note:
* Police officer is stationed at the signalized intersection of SW 120th Street & Old Cutler Road.

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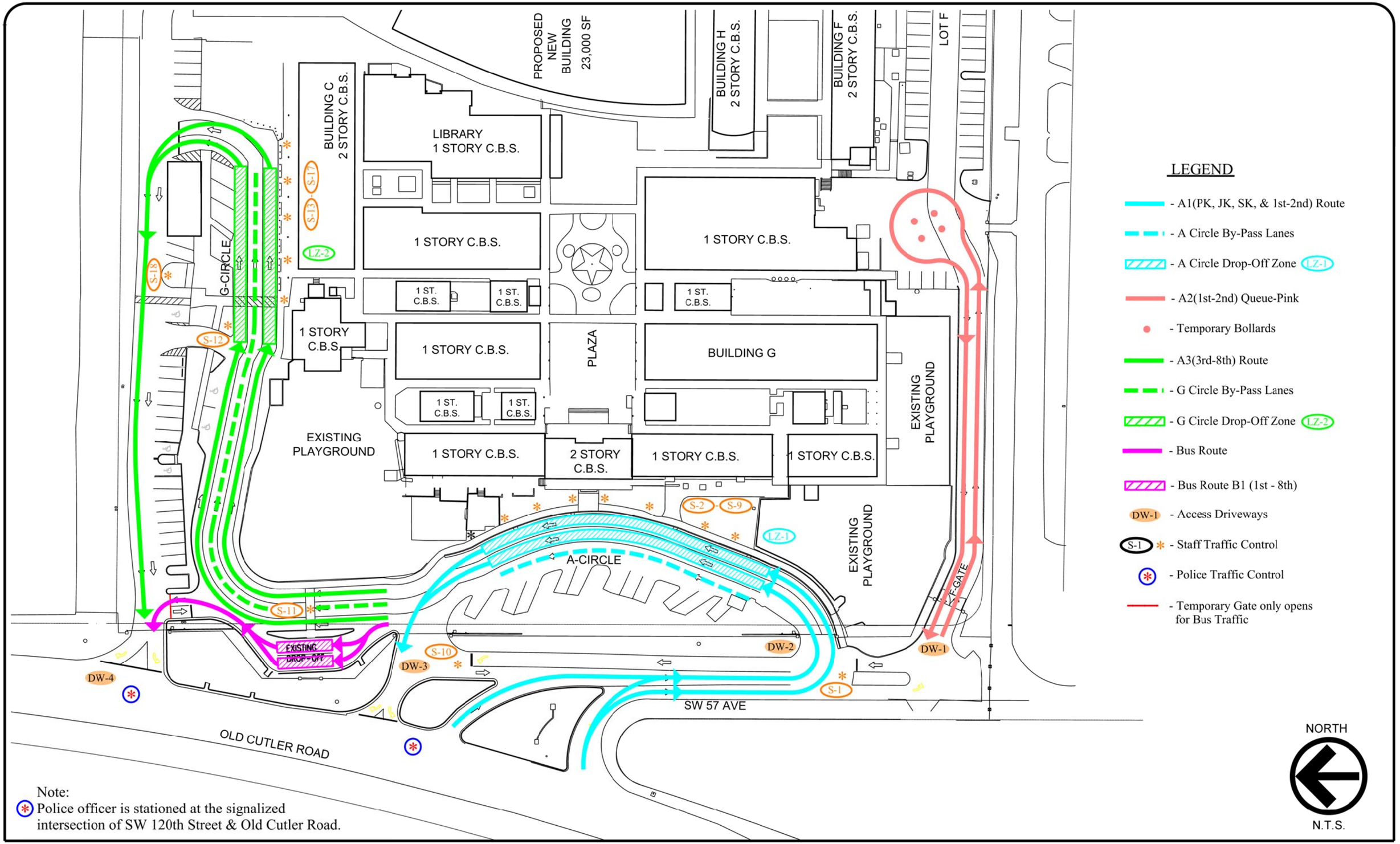
TRAFFIC ENGINEERING • CIVIL ENGINEERING • TRANSPORTATION PLANNING
CORAL GABLES FORT MYERS
1750 PONCE DE LEON BLVD. CORAL GABLES FL 33134 TELEPHONE (305) 447-0900
CERTIFICATE OF AUTHORIZATION: 2690

PROJECT: GULLIVER ACADEMY SCHOOL

TITLE: TRAFFIC OPERATIONS PLAN (ARRIVAL)

DATE 02/06/19 | PROJECT NO. 18171
DRAWN | EXHIBIT NO. 1
CHECKED
APPROVED

DATES
$TIMES $FILE$



Note:
Police officer is stationed at the signalized intersection of SW 120th Street & Old Cutler Road.

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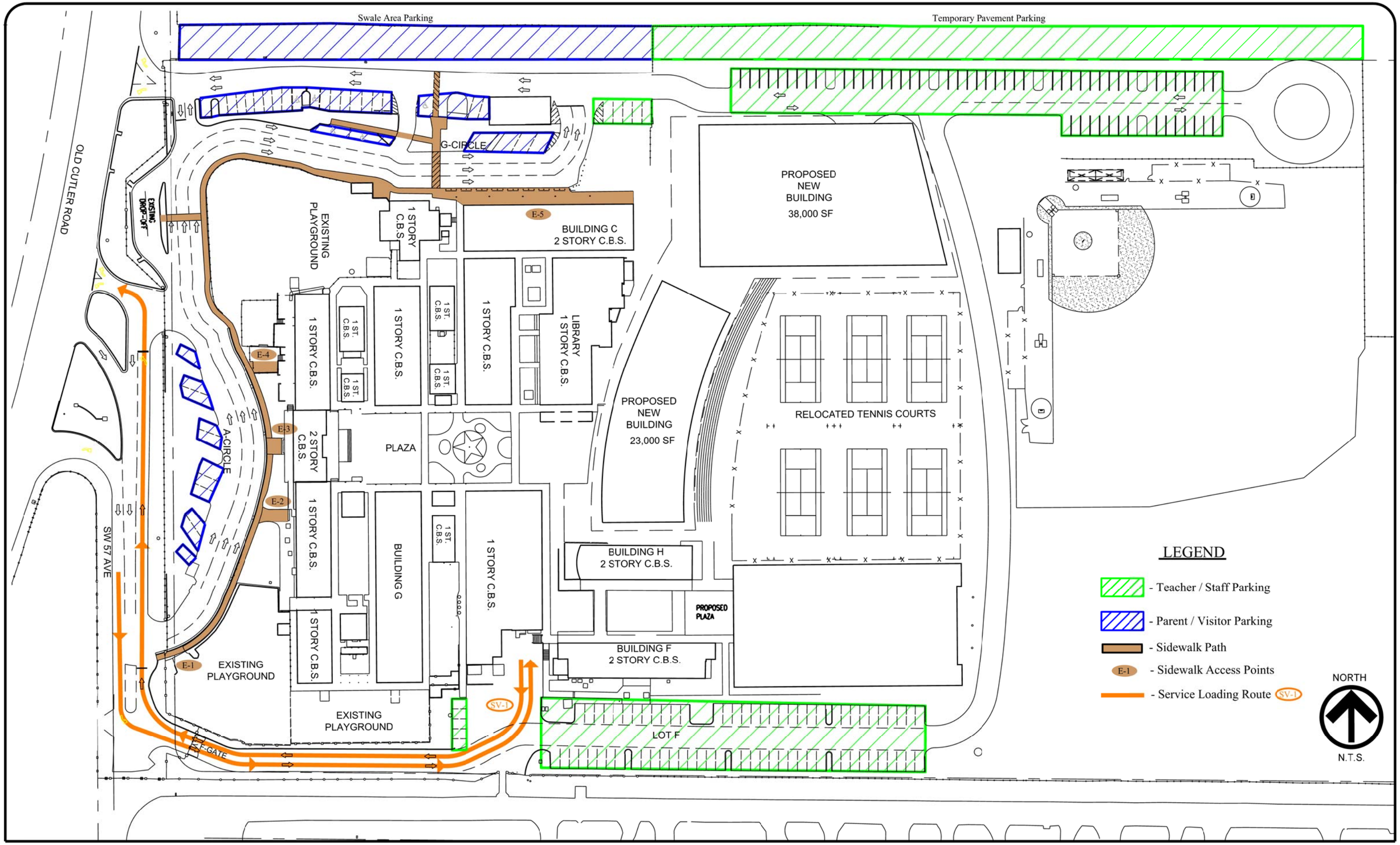
CORAL GABLES FORT MYERS
1750 PONCE DE LEON BLVD. CORAL GABLES FL 33134 TELEPHONE (305) 447-0900
CERTIFICATE OF AUTHORIZATION: 2690

PROJECT: GULLIVER ACADEMY SCHOOL

TITLE: TRAFFIC OPERATIONS PLAN (DISMISSAL)

DATE 02/06/19 | PROJECT NO. 18171
DRAWN | EXHIBIT NO. 2
CHECKED
APPROVED

DATES
$FILE$



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CORAL GABLES FORT MYERS
1750 PONCE DE LEON BLVD. CORAL GABLES FL 33134 TELEPHONE (305) 447-0900
CERTIFICATE OF AUTHORIZATION: 2690

PROJECT:
GULLIVER ACADEMY SCHOOL

TITLE:
TRAFFIC OPERATIONS PLAN

DATE	PROJECT NO.
02/06/19	18215
DRAWN	EXHIBIT NO.
CHECKED	3
APPROVED	

ATTACHMENT B
Accumulation Analysis Worksheets

Since 1978

ACCUMULATION ASSESSMENT

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

New School Name	**Gulliver Academy**	
Surrogate School Name[1]	**Gulliver Academy**	
Date / Day / Time of Data Collection	**12/18/2018 - Tuesday** **Drop Off (7:40 AM - 8:30 AM)**	(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	**1137**	students, E (verified by school staff on same date as data collection)
Capacity of New School	**1260**	student stations,C: (max # students for each separate dismissal period @ 30 minute intervals, imposed p/u 'window' and 30% to aftercare.)
Multiplier[2]	**1.11**	[C / E]
Surrogate Accumulations[3]	**334**	passenger vehicles (including commercial vans)
	3	large school buses
	0	student vehicles (for high schools only)
Projected Accumulations	**370**	passenger vehicles
	3	large school buses
		student vehicles
Provided Spaces[4]	**532**	passenger vehicles (legal staging areas on and contiguous to site)
	0	large school buses
	0	student vehicles (legal parking on and contiguous to site)
Percent Accommodated[5]	**144%**	passenger vehicles
	0%	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.

and telephone number: _____

_____

_____

_____

_____

_____
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	**Gulliver Academy**	
Surrogate School Name[1]	**Gulliver Academy**	
Date / Day / Time of Data Collection	**12/18/2018 - Tuesday** **Pick-up (2:15 PM - 3:45 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	**1239**	students, E (verified by school staff on same date as data collection)
Capacity of New School	**1260**	student stations,C: (max # students for each separate dismissal period @ 30 minute intervals, imposed p/u 'window' and 30% to aftercare.)
Multiplier[2]	**1.02**	[C / E]
Surrogate Accumulations[3]	**427**	passenger vehicles (including commercial vans)
	0	large school buses
	0	student vehicles (for high schools only)
Projected Accumulations	**434**	passenger vehicles
	0	large school buses
	0	student vehicles
Provided Spaces[4]	**532**	passenger vehicles (legal staging areas on and contiguous to site)
	0	large school buses
	0	student vehicles (legal parking on and contiguous to site)
Percent Accommodated[5]	**123%**	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.

and telephone number: _____

_____

_____

_____

_____

_____

Signature of Data Collector

ACCUMULATION DATA REPORT

#18215

NAME: _____

Area # _____

AM

Facility Name	Gulliver Academy
Facility Address	12595 Red Road Coral Gables, FL 33156
Date/Day/Hour	12/18/2018 - Tuesday - AM Drop-off (7:40 AM - 8:30 AM) 8:00 AM (5th - 8th) 8:10 AM (1st - 4th) 8:20 AM (PK, JK, SK) 12/18/2018 - Tuesday - AM Drop-off (7:40 AM - 8:30 AM) 8:00 AM (5th - 8th) 8:10 AM (1st - 4th) 8:20 AM (PK, JK, SK)

NUMBER OF VEHICLES ACCUMULATED **NUMBER OF VEHICLES ACCUMULATED**

TIME		OFF SITE	ON SITE																								TOTAL				
		AREA 1	**AREA 2**				**AREA 3**			**AREA 4**				**AREA 5**					**AREA 6**			**AREA 7**		**AREA 8**		**Auto**				**Bus**
		Red Road	**A** Drop-off / Pick-up				**A** Turn / Private Bus			**G** Drop-off / Pick-up				**G** Turn / Parent Parking					Staff Parking (North)			Staff Parking (East)		Staff Parking (South)						
			2A		**2B**					**4A**	**4B**			**5A**			**5B**		**6A / 6B**											
Hour	Minute	Drive Lanes	Swale Parking	Lane 1 & Lane 2	Private Bus	Lane 3 Pass-by	Parent Parking	Lane 1 & Lane 3	Lane 2 Pass-by	Private Bus	Lane 1 & Lane 3	Lane 2 Pass-by	Departure Area	Parent Parking	Lane 1	Lane 2	Parent Drop Off	Parent Parking	Swale Parking	Buses	Parking Spaces	Drive Lanes	Parking Space	Drive Lanes	Parking Space	Drive Lanes	Queue	Parent Parking	Staff Parking	**Total Auto**	
7:40 AM	**0:40**	8	0	6	0	0	1	9	2	0	0	0	0	0	2	2	3	13	25	3	67	1	31	0	42	0	33	39	140	212	3
	0:41	13	0	10	1	0	1	7	1	0	0	0	0	0	1	6	1	13	25	3	74	5	31	1	44	0	45	39	149	233	4
	0:42	5	0	8	1	0	1	11	4	0	0	7	4	0	4	8	3	13	26	3	77	3	31	0	47	0	56	40	155	251	4
	0:43	12	3	11	1	0	1	15	2	0	4	3	5	0	5	11	3	13	26	3	79	3	31	0	48	0	74	43	158	275	4
	0:44	13	3	11	1	0	1	17	5	0	6	4	9	0	4	8	4	13	25	3	78	1	31	0	49	0	81	42	158	281	4
7:45 AM	0:45	8	3	18	1	0	1	20	8	0	14	8	9	0	9	9	3	14	27	3	78	5	32	1	50	0	111	45	160	316	4
	0:46	11	2	11	0	0	1	14	2	0	13	10	8	0	7	6	4	14	28	3	81	4	32	0	51	0	89	45	164	298	3
	0:47	12	2	23	0	0	1	17	6	0	16	8	7	0	4	6	4	13	26	3	83	1	33	0	54	0	104	42	170	316	3
	0:48	13	2	20	0	0	1	15	9	0	9	10	5	1	5	6	5	15	28	3	84	0	33	0	53	0	97	47	170	314	3
	0:49	**14**	**2**	**19**	**0**	**0**	**1**	**20**	**3**	**0**	**14**	**10**	**6**	**1**	**12**	**12**	**6**	**13**	**26**	**3**	**86**	**3**	**33**	**0**	**53**	**0**	**119**	**43**	**172**	**334**	**3**
7:50 AM	0:50	8	2	17	0	0	1	7	4	0	16	11	9	1	9	14	4	13	26	3	87	0	33	0	54	0	98	43	174	315	3
	0:51	8	3	19	0	0	1	15	3	0	12	8	12	2	7	10	3	13	24	3	87	0	33	0	54	0	97	43	174	314	3
	0:52	10	2	15	1	0	1	7	8	0	16	8	13	2	8	11	5	13	25	3	87	0	33	0	55	0	101	43	175	319	4
	0:53	12	1	11	2	0	1	14	2	0	14	4	10	4	11	17	6	12	26	3	87	1	33	0	54	0	101	44	174	319	5
	0:54	8	2	11	2	0	2	2	1	0	6	11	13	4	15	11	5	12	27	3	88	1	33	0	54	0	84	47	175	306	5
7:55 AM	0:55	11	2	10	1	0	2	7	4	0	6	9	11	4	6	10	5	12	27	3	88	0	33	0	54	0	79	47	175	301	4
	0:56	6	3	14	2	0	2	7	6	0	10	9	9	4	14	10	3	12	25	3	88	1	34	0	56	0	88	46	178	312	5
	0:57	7	3	12	2	0	2	0	0	0	15	4	8	4	11	11	1	11	25	3	89	0	34	0	56	0	69	45	179	293	5
	0:58	8	3	17	1	0	3	3	1	0	7	4	8	4	16	16	0	12	24	3	89	0	34	0	57	0	80	46	180	306	4
	0:59	8	3	16	0	0	3	6	4	0	10	2	11	4	13	17	0	12	25	3	89	0	34	0	57	0	86	47	180	313	3
8:00 AM	0:00	5	3	13	0	0	3	7	2	0	10	3	8	4	14	13	0	12	25	3	89	0	34	0	58	0	75	47	181	303	3
	0:01	6	3	13	0	0	5	6	4	0	6	1	9	4	16	15	0	11	26	3	89	0	34	0	58	0	76	49	181	306	3
	0:02	1	3	10	0	0	6	0	0	0	1	6	5	3	18	16	0	13	25	3	89	0	34	0	58	0	57	50	181	288	3
	0:03	5	3	10	0	0	6	0	0	0	0	1	4	3	11	14	0	13	24	3	89	2	34	0	57	0	47	49	180	276	3
	0:04	2	3	9	0	0	6	0	0	0	0	1	2	3	11	9	0	13	23	3	90	1	34	0	58	0	35	48	182	265	3
8:05 AM	0:05	0	3	6	0	0	6	0	0	0	0	2	3	2	9	6	0	13	24	3	90	1	34	0	58	0	27	48	182	257	3
	0:06	0	2	3	0	0	6	0	0	0	0	1	3	3	5	3	0	13	24	3	91	0	34	0	58	0	15	48	183	246	3
	0:07	1	2	2	0	0	6	0	0	0	0	1	1	3	0	1	0	13	23	3	91	0	34	0	58	0	6	47	183	236	3
	0:08	1	0	4	0	0	6	0	0	0	0	1	1	3	0	1	0	13	24	3	91	0	34	0	58	0	8	46	183	237	3
	0:09	1	0	3	0	0	5	0	0	0	0	1	1	3	0	1	0	13	24	3	91	0	34	0	58	0	7	45	183	235	3
8:10 AM	0:10	0	0	2	0	0	4	0	0	0	0	1	1	3	0	1	0	11	21	3	91	0	34	0	58	0	5	39	183	227	3
	0:11	0	0	1	0	0	4	0	0	0	0	1	1	3	0	1	0	10	20	3	91	0	34	0	58	0	4	37	183	224	3
	0:12	1	0	1	0	0	4	0	0	0	0	0	0	3	0	1	0	9	18	3	91	0	34	0	58	0	3	34	183	220	3
	0:13	0	0	1	0	0	4	0	0	0	0	0	0	3	0	1	0	8	17	2	90	1	34	0	58	0	3	32	182	217	2
	0:14	4	0	0	0	0	3	0	0	0	0	0	0	3	0	1	0	8	16	2	90	0	34	0	58	0	5	30	182	217	2

ACCUMULATION DATA REPORT

#18215

NAME: _____

Area # _____

AM

Facility Name	Gulliver Academy
Facility Address	12595 Red Road Coral Gables, FL 33156
Date/Day/Hour	12/18/2018 - Tuesday - AM Drop-off (7:40 AM - 8:30 AM) 8:00 AM (5th - 8th) 8:10 AM (1st - 4th) 8:20 AM (PK, JK, SK) 12/18/2018 - Tuesday - AM Drop-off (7:40 AM - 8:30 AM) 8:00 AM (5th - 8th) 8:10 AM (1st - 4th) 8:20 AM (PK, JK, SK)

NUMBER OF VEHICLES ACCUMULATED **NUMBER OF VEHICLES ACCUMULATED**

TIME		OFF SITE	ON SITE																							TOTAL				
		AREA 1	**AREA 2**				**AREA 3**			**AREA 4**				**AREA 5**					**AREA 6**			**AREA 7**		**AREA 8**		**Auto**				**Bus**
		Red Road	**A** Drop-off / Pick-up				**A** Turn / Private Bus			**G** Drop-off / Pick-up				**G** Turn / Parent Parking					Staff Parking (North)			Staff Parking (East)		Staff Parking (South)						
			2A		**2B**					**4A**	**4B**			**5A**			**5B**		**6A / 6B**											
Hour	Minute	Drive Lanes	Swale Parking	Lane 1 & Lane 2	Private Bus	Lane 3 Pass-by	Parent Parking	Lane 1 & Lane 3	Lane 2 Pass-by	Private Bus	Lane 1 & Lane 3	Lane 2 Pass-by	Departure Area	Parent Parking	Lane 1	Lane 2	Parent Drop Off	Parent Parking	Swale Parking	Buses	Parking Spaces	Drive Lanes	Parking Space	Drive Lanes	Parking Space	Drive Lanes	Queue	Parent Parking	Staff Parking	**Total Auto**	
8:15 AM	0:15	3	0	2	0	0	3	0	0	0	0	1	1	2	0	1	0	8	15	2	90	4	34	0	60	0	12	28	184	224	2
	0:16	2	0	2	0	0	2	0	0	0	0	0	0	2	0	2	0	7	15	2	92	0	34	0	60	0	6	26	186	218	2
	0:17	3	0	2	0	0	5	0	0	0	0	0	0	2	0	2	0	7	14	2	92	0	34	0	60	0	7	28	186	221	2
	0:18	6	0	7	0	0	6	0	0	0	0	0	0	2	0	2	0	7	14	2	92	0	34	0	60	0	15	29	186	230	2
	0:19	5	0	8	0	0	6	0	0	0	0	0	0	2	0	0	0	7	13	2	92	0	34	0	58	0	13	28	184	225	2
8:20 AM	0:20	3	0	10	0	0	6	0	0	0	0	0	0	2	0	1	0	7	15	2	92	0	34	0	59	0	14	30	185	229	2
	0:21	2	0	8	0	0	5	0	0	0	0	1	3	2	1	3	0	7	16	2	92	0	34	0	60	0	18	30	186	234	2
	0:22	2	1	5	0	0	5	0	0	0	0	0	0	2	1	3	0	7	16	2	92	0	34	0	61	0	11	31	187	229	2
	0:23	0	1	4	0	0	5	0	0	0	0	0	0	2	0	4	0	7	16	2	92	0	34	0	61	0	8	31	187	226	2
	0:24	1	1	3	0	0	5	0	0	0	0	1	1	2	0	1	0	7	16	2	92	0	34	0	61	0	7	31	187	225	2
8:25 AM	0:25	1	1	3	0	0	5	0	0	0	0	0	1	2	0	1	0	7	15	2	92	0	34	0	61	0	6	30	187	223	2
	0:26	6	1	6	0	0	5	0	0	0	0	0	0	2	0	2	0	7	14	2	92	0	34	0	61	0	14	29	187	230	2
	0:27	3	1	6	0	0	5	0	0	0	0	0	0	2	0	1	0	7	14	2	92	0	34	0	61	0	10	29	187	226	2
	0:28	1	0	7	0	0	3	0	0	0	0	1	1	2	0	4	0	7	14	2	92	0	34	0	61	0	14	26	187	227	2
	0:29	0	0	7	0	0	3	0	0	0	0	0	0	2	0	0	0	7	14	2	92	0	34	0	61	0	7	26	187	220	2
1 Min Peak Acc.																															

	AREA 1		AREA 2				AREA 3			AREA 4				AREA 5					AREA 6			AREA 7		AREA 8						
	Drive Lanes	Swale Parking	Lane 1 & Lane 2	Private Bus	Lane 3 Pass-by	Parent Parking	Lane 1 & Lane 3	Lane 2 Pass-by	Private Bus	Lane 1 & Lane 3	Lane 2 Pass-by	Departure Area	Parent Parking	Lane 1	Lane 2	Parent Drop Off	Parent Parking	Swale Parking	Buses	Parking Spaces	Drive Lanes	Parking Space	Drive Lanes	Parking Space	Drive Lanes	Queue	Parent Parking	Staff Parking	**Total Auto**	Bus
PEAK MINUTE	**14**	**2**	**19**	**0**	**0**	**1**	**20**	**3**	**0**	**14**	**10**	**6**	**1**	**12**	**12**	**6**	**13**	**26**	**3**	**86**	**3**	**33**	**0**	**53**	**0**	**119**	**43**	**172**	**334**	**3**
MAX	**14**	**3**	**23**	**2**	**0**	**6**	**20**	**9**	**0**	**16**	**11**	**13**	**4**	**18**	**17**	**6**	**15**	**28**	**3**	**92**	**5**	**34**	**1**	**61**	**0**	**119**	**50**	**187**	**334**	**5**
Capacity	430		600		300		400	200		560	280	250		420	420											3860				
Feet / Vehicle	20		27		14	11	18	9		25	13	11	2	19	19		38	45		160		35		92		175	96	287	558	

Projected Accumulation	**16**	**2**	**21**	**0**	**0**	**1**	**22**	**3**	**0**	**16**	**11**	**7**	**1**	**13**	**13**	**7**	**14**	**29**	**3**	**95**	**3**	**37**	**0**	**59**	**0**	**132**	**48**	**191**	**370**	**3**
Existing 1137																														
Proposed 1260	**16**	**3**	**25**	**2**	**0**	**7**	**22**	**10**	**0**	**18**	**12**	**14**	**4**	**20**	**19**	**7**	**17**	**31**	**3**	**102**	**6**	**38**	**1**	**68**	**0**	**132**	**55**	**207**	**370**	**6**
Multiplier 1.11																														
Future Capacity Feet	430		600		300		400	200		560	280	250		420	420											3860				
Future Capacity Vehicle	20		27		14	11	18	9		25	13	11	2	19	19		29	45		180		0		90		175	87	270	532	

ACCUMULATION DATA REPORT

NAME: _____

Area # _____

PM

Facility Name	Gulliver Academy
Facility Address	12595 Red Road Coral Gables, FL 33156
Date/Day/Hour	12/18/2018 - Tuesday - PM Pick-up (2:15 AM - 3:45 PM) 2:30 PM (PK, JK, SK) 2:45 PM (1st - 2nd) 2:50 PM (3rd - 4th) 3:15 PM (5th - 8th)
	12/18/2018 - Tuesday - PM Pick-up (2:15 AM - 3:45 PM) 2:30 PM (PK, JK, SK) 2:45 PM (1st - 2nd) 2:50 PM (3rd - 4th) 3:15 PM (5th - 8th)

NUMBER OF VEHICLES ACCUMULATED																											
NUMBER OF VEHICLES ACCUMULATED																											
TIME		OFF SITE	ON SITE													ON SITE						TOTAL				
		AREA 1	AREA 2			AREA 3			AREA 4				AREA 5				AREA 6		AREA 7		AREA 8		Auto				Bus
		Red Road	A Drop-off / Pick-up			A Turn / Private Bus			G Drop-off / Pick-up				G Turn / Parent Parking				Staff Parking (North)		Staff Parking (East)		Staff Parking (South)						
			2A	2B					4A	4B			5A		5B		6A / 6B										
Hour	Minute	Drive Lanes	Swale Parking	Lane 1 & Lane 2	Lane 3 Pass-by	Parent Parking	Lane 1 & Lane 3	Lane 2 Pass-by	Private Bus	Lane 1 & Lane 3	Lane 2 Pass-by	Departure Area	Parent Parking	Lane 1	Lane 2	Parent Parking	Swale Parking	Parking Space	Drive Lanes	Parking Space	Drive Lanes	Parking Space	Drive Lanes	Queue	Parent Parking	Staff Parking	Total Auto	
2:15 PM	**0:15**	3	2	16	0	7	0	0	0	3	1	0	1	0	0	21	27	121	0	33	0	65	0	23	58	219	300	0
	0:16	4	2	16	0	8	0	0	0	3	0	0	1	0	0	21	27	121	0	32	0	65	0	23	59	218	300	0
	0:17	1	3	18	0	8	0	0	0	3	1	0	1	0	0	21	27	121	0	32	0	65	0	23	60	218	301	0
	0:18	1	3	19	0	8	0	0	0	0	1	0	1	0	0	20	28	121	1	32	0	66	0	22	60	219	301	0
	0:19	2	3	19	0	8	0	0	0	0	2	0	1	0	0	22	27	122	0	32	0	65	0	23	61	219	303	0
2:20 PM	0:20	2	4	26	0	8	0	0	0	3	2	0	1	0	0	25	27	122	0	32	0	65	0	33	65	219	317	0
	0:21	2	4	26	0	7	0	0	0	2	2	0	1	0	0	25	28	122	0	32	0	65	0	32	65	219	316	0
	0:22	3	4	25	0	7	0	0	0	2	1	0	1	0	0	25	28	122	0	32	0	65	0	31	65	219	315	0
	0:23	4	4	26	0	7	0	0	0	2	2	0	1	0	0	29	28	122	0	32	0	65	0	34	69	219	322	0
	0:24	4	4	26	0	7	0	0	0	2	0	0	1	0	0	29	30	122	0	32	0	65	0	32	71	219	322	0
2:25 PM	0:25	6	4	28	0	7	0	0	0	3	0	0	1	0	0	29	31	122	0	32	0	65	0	37	72	219	328	0
	0:26	8	4	30	0	7	0	0	0	5	1	0	1	0	0	29	31	122	0	32	0	65	0	44	72	219	335	0
	0:27	8	4	28	0	7	0	0	1	5	0	1	1	0	0	29	30	122	0	32	0	65	0	42	71	219	332	1
	0:28	8	4	28	0	7	0	0	0	6	2	1	1	0	0	29	30	122	1	32	0	65	0	46	71	219	336	0
	0:29	12	4	28	0	7	0	0	0	7	0	1	1	0	0	29	30	123	0	32	0	65	0	48	71	220	339	0
2:30 PM	0:30	12	5	24	0	7	0	0	0	8	1	0	1	0	0	28	29	123	0	32	0	66	0	45	70	221	336	0
	0:31	12	5	18	0	7	0	0	0	9	1	1	1	0	0	28	29	123	0	32	0	65	0	41	70	220	331	0
	0:32	15	5	15	0	6	0	0	0	10	3	1	1	0	0	28	29	124	0	32	0	65	0	44	69	221	334	0
	0:33	17	5	12	0	6	0	0	0	12	2	1	2	0	0	27	30	125	0	32	0	65	0	44	70	222	336	0
	0:34	17	5	9	2	6	1	0	0	13	0	0	2	0	0	27	33	125	0	32	0	65	0	42	73	222	337	0
2:35 PM	0:35	14	6	5	0	6	2	0	0	14	1	1	2	0	0	26	32	125	0	32	0	65	0	37	72	222	331	0
	0:36	17	6	15	0	6	2	0	2	16	1	1	2	0	0	27	31	124	0	31	0	65	0	52	72	220	344	2
	0:37	17	5	14	2	6	2	0	0	18	1	1	2	0	0	26	32	124	0	31	0	65	0	55	71	220	346	0
	0:38	12	4	14	0	6	3	0	0	18	1	1	2	0	1	26	33	124	0	31	0	65	0	50	71	220	341	0
	0:39	12	5	6	0	5	3	0	0	18	1	1	2	0	1	26	34	123	0	31	0	65	0	42	72	219	333	0
2:40 PM	0:40	16	4	5	0	5	3	0	0	18	1	1	2	0	1	27	36	123	0	31	0	64	0	45	74	218	337	0
	0:41	16	4	2	0	5	4	0	0	18	1	1	2	0	1	28	35	123	0	31	0	64	0	43	74	218	335	0
	0:42	16	5	1	1	5	7	0	0	18	2	2	2	0	1	27	37	122	0	31	0	64	0	48	76	217	341	0
	0:43	12	5	21	1	5	7	0	0	18	0	0	2	0	1	28	37	123	0	31	0	64	0	60	77	218	355	0
	0:44	2	5	28	0	5	12	0	0	18	2	2	2	0	0	27	37	122	0	31	0	64	0	64	76	217	357	0
2:45 PM	0:45	2	5	28	1	6	13	0	0	18	4	4	2	0	0	27	37	121	0	31	0	64	0	70	77	216	363	0
	0:46	2	5	28	0	6	8	0	0	18	5	2	2	0	3	26	39	122	0	31	0	64	0	66	78	217	361	0
	0:47	1	5	27	0	5	11	0	0	18	1	0	2	0	1	27	39	122	0	31	0	64	0	59	78	217	354	0
	0:48	3	5	28	0	5	10	0	0	16	3	0	2	2	2	29	39	122	0	31	0	64	0	64	80	217	361	0
	0:49	2	5	28	0	5	11	0	0	16	4	0	2	0	0	30	36	120	0	31	0	64	0	61	78	215	354	0

ACCUMULATION DATA REPORT

NAME: _____

Area # _____

PM

Facility Name	Gulliver Academy
Facility Address	12595 Red Road Coral Gables, FL 33156
Date/Day/Hour	12/18/2018 - Tuesday - PM Pick-up (2:15 AM - 3:45 PM) 2:30 PM (PK, JK, SK) 2:45 PM (1st - 2nd) 2:50 PM (3rd - 4th) 3:15 PM (5th - 8th)

NUMBER OF VEHICLES ACCUMULATED | **NUMBER OF VEHICLES ACCUMULATED**

TIME		OFF SITE	ON SITE																			TOTAL				
		AREA 1 Red Road	**AREA 2** **A** Drop-off / Pick-up			**AREA 3** **A** Turn / Private Bus			**AREA 4** **G** Drop-off / Pick-up				**AREA 5** **G** Turn / Parent Parking				**AREA 6** Staff Parking (North)		**AREA 7** Staff Parking (East)		**AREA 8** Staff Parking (South)		Auto				Bus
			2A		**2B**				**4A**			**4B**	**5A**		**5B**		**6A / 6B**										
Hour	Minute	Drive Lanes	Swale Parking	Lane 1 & Lane 2	Lane 3 Pass-by	Parent Parking	Lane 1 & Lane 3	Lane 2 Pass-by	Private Bus	Lane 1 & Lane 3	Lane 2 Pass-by	Departure Area	Parent Parking	Lane 1	Lane 2	Parent Parking	Swale Parking	Parking Space	Drive Lanes	Parking Space	Drive Lanes	Parking Space	Drive Lanes	Queue	Parent Parking	Staff Parking	**Total Auto**	
2:50 PM	0:50	5	6	28	0	5	7	0	0	15	2	2	2	0	5	30	37	120	0	31	0	64	0	64	80	215	359	0
	0:51	6	6	26	0	5	0	0	0	12	3	2	2	0	1	30	37	122	0	31	0	60	0	50	80	213	343	0
	0:52	7	6	23	3	5	0	0	0	15	4	2	2	2	0	29	35	123	0	31	0	60	0	56	77	214	347	0
	0:53	5	5	22	0	5	0	0	0	15	0	2	2	0	3	29	37	123	0	30	0	62	0	47	78	215	340	0
	0:54	5	6	22	0	5	0	0	0	17	0	0	2	0	0	28	36	123	0	30	0	62	0	44	77	215	336	0
2:55 PM	0:55	4	5	19	0	6	0	0	0	13	1	2	2	0	4	26	35	123	0	30	0	62	0	43	74	215	332	0
	0:56	4	5	9	0	6	2	0	0	15	0	2	2	0	0	26	34	123	0	30	0	62	0	32	73	215	320	0
	0:57	0	5	9	1	6	8	2	3	15	2	2	2	0	0	25	34	122	0	30	0	62	0	39	72	214	325	3
	0:58	4	4	4	0	7	6	3	0	15	1	2	2	0	0	26	35	122	0	30	0	61	0	35	74	213	322	0
	0:59	4	5	6	0	7	8	0	0	15	3	2	2	0	0	27	37	122	0	30	0	61	0	38	78	213	329	0
3:00 PM	**0:00**	5	7	11	0	7	12	0	2	15	1	2	2	0	2	29	37	122	0	30	0	60	0	48	82	212	342	2
	0:01	4	6	8	0	7	14	2	1	18	4	2	2	0	2	29	37	122	1	30	0	60	0	55	81	212	348	1
	0:02	3	6	7	2	7	16	0	1	14	1	2	2	0	2	29	45	123	1	30	0	60	0	48	89	213	350	1
	0:03	1	10	6	0	7	15	2	0	14	3	2	2	0	4	30	45	124	1	30	0	60	0	48	94	214	356	0
	0:04	1	10	7	1	7	17	3	0	14	0	2	2	0	4	30	44	124	0	30	0	59	0	49	93	213	355	0
3:05 PM	0:05	2	10	8	1	7	18	0	0	14	1	2	2	0	4	30	37	123	0	30	0	59	0	50	86	212	348	0
	0:06	4	11	8	1	7	16	0	0	14	2	2	2	0	9	30	38	122	0	29	0	59	0	56	88	210	354	0
	0:07	3	12	10	2	7	17	0	0	12	1	3	2	0	5	30	38	123	0	29	0	59	0	53	89	211	353	0
	0:08	2	11	6	2	7	17	0	0	18	2	2	2	0	6	30	38	125	0	28	0	58	0	55	88	211	354	0
	0:09	5	13	7	4	7	19	0	0	20	0	2	2	0	7	31	39	126	0	28	0	58	0	64	92	212	368	0
3:10 PM	0:10	2	12	9	5	7	16	0	0	20	2	2	2	0	8	30	39	126	0	27	0	58	0	64	90	211	365	0
	0:11	0	14	9	7	7	15	0	0	20	5	2	2	0	7	31	39	127	1	27	0	58	0	66	93	212	371	0
	0:12	9	14	10	8	6	16	0	0	20	0	2	2	0	11	31	39	128	0	27	0	59	0	76	92	214	382	0
	0:13	3	15	14	7	5	16	0	0	20	2	2	2	0	12	31	39	129	0	27	0	59	0	76	92	215	383	0
	0:14	3	15	11	7	5	15	0	0	20	3	2	2	0	12	31	39	131	0	27	0	59	0	73	92	217	382	0
3:15 PM	0:15	1	13	12	7	5	14	0	0	20	6	2	2	0	16	31	39	133	3	27	0	59	0	81	90	219	390	0
	0:16	2	13	13	7	5	17	0	0	20	5	2	2	0	18	31	39	137	3	27	0	58	0	87	90	222	399	0
	0:17	7	11	11	7	5	17	0	0	20	6	2	2	0	21	31	39	140	4	27	0	58	0	95	88	225	408	0
	0:18	5	11	15	9	6	18	0	0	18	6	6	2	4	18	29	39	142	6	27	0	58	0	105	87	227	419	0
	0:19	**5**	**12**	**12**	**10**	**6**	**17**	**2**	**0**	**20**	**6**	**4**	**2**	**9**	**16**	**36**	**39**	**141**	**4**	**27**	**0**	**59**	**0**	**105**	**95**	**227**	**427**	**0**
3:20 PM	0:20	3	12	12	11	6	17	7	0	20	4	0	1	6	14	25	39	143	5	27	0	59	0	99	83	229	411	0
	0:21	2	12	11	6	6	16	9	0	19	7	7	1	6	12	25	38	142	0	26	0	59	0	95	82	227	404	0
	0:22	4	11	11	3	6	15	7	2	18	4	5	1	8	8	25	36	142	4	24	0	58	0	87	79	224	390	2
	0:23	3	11	11	6	5	16	6	2	17	6	6	1	5	10	21	36	139	2	23	0	58	0	88	74	220	382	2
	0:24	4	11	12	5	6	15	7	2	20	8	10	1	8	11	20	38	139	0	22	0	58	0	100	76	219	395	2

ACCUMULATION DATA REPORT

NAME: _____

Area # _____

PM

Facility Name	Gulliver Academy
Facility Address	12595 Red Road Coral Gables, FL 33156
Date/Day/Hour	12/18/2018 - Tuesday - PM Pick-up (2:15 AM - 3:45 PM) 2:30 PM (PK, JK, SK) 2:45 PM (1st - 2nd) 2:50 PM (3rd - 4th) 3:15 PM (5th - 8th)

NUMBER OF VEHICLES ACCUMULATED | **NUMBER OF VEHICLES ACCUMULATED**

TIME		OFF SITE	ON SITE																		TOTAL				
		AREA 1	AREA 2			AREA 3			AREA 4				AREA 5				AREA 6		AREA 7		AREA 8		Auto				Bus
		Red Road	A Drop-off / Pick-up			A Turn / Private Bus			G Drop-off / Pick-up				G Turn / Parent Parking				Staff Parking (North)		Staff Parking (East)		Staff Parking (South)						
			2A	2B					4A	4B			5A		5B		6A / 6B										
Hour	Minute	Drive Lanes	Swale Parking	Lane 1 & Lane 2	Lane 3 Pass-by	Parent Parking	Lane 1 & Lane 3	Lane 2 Pass-by	Private Bus	Lane 1 & Lane 3	Lane 2 Pass-by	Departure Area	Parent Parking	Lane 1	Lane 2	Parent Parking	Swale Parking	Parking Space	Drive Lanes	Parking Space	Drive Lanes	Parking Space	Drive Lanes	Queue	Parent Parking	Staff Parking	Total Auto	
3:25 PM	0:25	0	11	11	0	7	18	9	2	18	16	7	1	6	9	19	37	139	0	23	0	58	0	94	75	220	389	2
	0:26	0	10	10	0	7	12	4	2	17	16	5	1	6	10	19	36	140	2	23	0	58	0	82	73	221	376	2
	0:27	0	10	12	0	7	17	6	0	15	21	11	1	5	9	18	34	140	2	22	0	58	0	98	70	220	388	0
	0:28	0	10	7	0	6	16	5	0	18	13	6	1	4	7	17	36	140	1	22	0	58	0	77	70	220	367	0
	0:29	0	10	4	0	6	16	5	0	16	14	6	1	3	6	16	35	140	0	22	0	57	0	70	68	219	357	0
3:30 PM	0:30	0	10	0	0	8	12	3	4	16	10	3	1	3	7	17	33	140	3	22	0	56	0	57	69	218	344	4
	0:31	0	9	0	0	8	0	0	0	10	7	5	1	0	11	17	33	141	1	22	0	55	0	34	68	218	320	0
	0:32	0	8	0	0	8	0	0	0	10	6	4	1	1	8	17	31	139	2	22	0	53	0	31	65	214	310	0
	0:33	0	8	0	0	8	0	0	0	10	0	0	1	1	5	16	31	140	2	21	0	53	0	18	64	214	296	0
	0:34	0	7	0	0	8	0	0	0	13	0	0	1	0	6	15	29	138	2	20	0	53	0	21	60	211	292	0
3:35 PM	0:35	0	7	0	0	6	0	0	0	10	1	1	1	0	2	15	31	136	2	19	0	53	0	16	60	208	284	0
	0:36	0	7	0	0	6	0	0	0	11	1	0	1	0	1	14	31	137	1	20	0	53	0	14	59	210	283	0
	0:37	0	8	1	0	6	0	0	5	9	5	3	1	0	5	13	32	137	3	20	0	50	0	26	60	207	293	5
	0:38	0	7	2	0	6	0	0	0	7	2	1	1	0	3	12	32	137	1	20	0	51	0	16	58	208	282	0
	0:39	0	7	2	0	6	0	0	0	10	2	0	1	0	2	12	31	137	1	20	0	51	0	17	57	208	282	0
3:40 PM	0:40	0	7	2	0	6	0	0	0	11	6	0	1	0	2	12	30	140	2	19	0	51	0	23	56	210	289	0
	0:41	0	7	4	0	8	0	0	0	9	6	0	1	0	3	13	28	135	2	19	0	51	0	24	57	205	286	0
	0:42	0	7	6	0	8	0	0	0	7	1	0	1	0	2	13	29	133	0	18	0	51	0	16	58	202	276	0
	0:43	0	7	4	0	8	0	0	0	12	5	0	1	0	1	14	28	133	0	18	0	51	0	22	58	202	282	0
	0:44	0	7	6	0	8	0	0	0	14	2	0	1	0	3	14	25	133	0	18	0	51	0	25	55	202	282	0
1 Min Peak Acc.																												

	AREA 1		AREA 2			AREA 3			AREA 4				AREA 5				AREA 6		AREA 7		AREA 8						
	Drive Lanes	Swale Parking	Lane 1 & Lane 2	Lane 3 Pass-by	Parent Parking	Lane 1 & Lane 3	Lane 2 Pass-by	Private Bus	Lane 1 & Lane 3	Lane 2 Pass-by	Departure Area	Parent Parking	Lane 1	Lane 2	Parent Parking	Swale Parking	Parking Space	Drive Lanes	Parking Space	Drive Lanes	Parking Space	Drive Lanes	Queue	Parent Parking	Staff Parking	Total Auto	Bus
PEAK MINUTE	**5**	**12**	**12**	**10**	**6**	**17**	**2**	**0**	**20**	**6**	**4**	**2**	**9**	**16**	**36**	**39**	**141**	**4**	**27**	**0**	**59**	**0**	**105**	**95**	**227**	**427**	**0**
MAX	**17**	**15**	**30**	**11**	**8**	**19**	**9**	**5**	**20**	**21**	**11**	**2**	**9**	**21**	**36**	**45**	**143**	**6**	**33**	**0**	**66**	**0**	**105**	**95**	**229**	**427**	**5**
Capacity	430		600	300		400	200		560	280	250		420	420									3860				
Feet / Vehicle	20		27	14	11	18	9		25	13	11	2	19	19	38	45	160		35		92		175	96	287	558	0
Projected Accumulation	**5**	**12**	**12**	**10**	**6**	**17**	**2**	**0**	**20**	**6**	**4**	**2**	**9**	**16**	**37**	**40**	**143**	**4**	**27**	**0**	**60**	**0**	**107**	**97**	**231**	**434**	**0**
Existing 1239																											
Proposed 1260	**17**	**15**	**31**	**11**	**8**	**19**	**9**	**5**	**20**	**21**	**11**	**2**	**9**	**21**	**37**	**46**	**145**	**6**	**34**	**0**	**67**	**0**	**107**	**97**	**233**	**434**	**5**
Multiplier 1.02																											
Future Capacity Feet	430		600	300		400	200		560	280	250		420	420									3860				0
Future Capacity Vehicle	20		27	14	11	18	9		25	13	11	2	19	19	29	45	180		0		90		175	87	270	532	0