

Operations Plan



**1701 Washington Avenue
Miami Beach, Florida**

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CONCEPT

Muss Montessori aims to provide both a quality Montessori education and a positive experience to young children. A Montessori education enables students to develop the concentration, order, independence, coordination, and work habits needed in their future academics. Additionally, the curriculum strives to stimulate the students' minds and curiosity by incorporating activities such as science class, ballet, cooking class, Spanish class, and soccer.

The project is strategically located in a multi-family residential neighborhood that is surrounded by commercial uses and a public park. A school within walking distance of this urban residential area encourages pedestrian activity and increases a sense of community. The school fosters a safe environment for growth and development of the child.

Additionally, the layout of the existing school efficiently utilizes every outdoor area of the Property. The central playground between the two classroom buildings is used both for play and for learning outside the classroom.

STUDENT CAPACITY

Muss Montessori began with a limited enrollment of twenty five (25) students between the ages of two (2) and six (6). The day care now wishes to modify that limited enrollment because of an increased demand for the school's services and a desire to better utilize the Property to better serve the community. An additional fifty (50) children for a total maximum enrollment of seventy five children (75) can easily be accommodated within the existing Property.

DROP-OFF/ PICK-UP

The hours of operation will be between 8:00 AM and 5:00 PM Monday to Friday. Drop-off and pick-up occurs on the designated one-way, driveway area consisting approximately 88 feet of stacking along the east side of the Property. The drop-off/pick-up area accommodates a queue of four (4) vehicles.

Drop-off will occur in seven (7) staggered, fifteen (15) minute increments for approximately five (5) to ten (10) students at a time. Drop-off will begin at 7:45 AM and end at approximately 9:30 AM.

Approximately fifteen (15) students enrolled in a half-day program will be picked-up between 12:15 PM and 12:45 PM. Then, regular pick-up will occur in four (4) staggered, fifteen (15) minute increments between 2:00 PM and 2:45 PM.

During Open House parents will have the option to choose their preferred time slot for drop-off and pick-up. Once the time slot is full, parents will have to choose an alternate time slot. The security guards will know the families permitted to drop-off and pick-up during each time slot and ensure that the system is followed.

The use of the designated driveway area, staggered drop-off and pick-up times, and the on-street, public parking available on James Avenue will avoid any potential spillover of queuing vehicles onto James Avenue.

The Property also provides two (2) bike racks that hold nine (9) bicycles each for staff and parents. Moreover, due to the Property's location between residences and offices a number of parents and guardians walk to drop-off and pick-up their children.

STAFFING

With the proposed increase in students the school staff will be composed as follows:

- Five (5) full-time teachers
- One (1) full-time teachers' assistant
- Three (3) full-time school administrators
- Two (2) full-time security guard

Staff live within walking distance or take public transportation. Those that drive are provided subsidized off-site parking.

ACCESS & SECURITY

All external access points will be locked during the school hours. Drop-off and pick-up will be strictly conducted at the designated driveway area. Parents and guardians can access the property through the single entrance on James Avenue. The school portion of the Property is separated by a gate from the Temple and the parking area. A security guard is on-site during hours of operation.

TRASH COLLECTION

Trash collection will occur on the east side of the property via James Avenue entrance. Collection will be take place during the City's regularly scheduled times for this property.



July 29, 2019

Firat Akcay
City of Miami Beach
1700 Convention Center Drive
Miami Beach, Florida 33139

**Re: Muss Montessori Day Care Center at Temple Emanu-El Expansion
Traffic Assessment**

Dear Mr. Akcay:

Kimley-Horn and Associates, Inc. has performed a circulation study for the proposed expansion of the Muss Montessori Day Care at Temple Emanu-El located at 1701 Washington Avenue in Miami Beach, Florida. Currently, the existing day care enrolls 25 students. The proposed expansion includes the addition of 50 students for a total enrollment of 75 students. Parking for teachers and staff is provided on-site. Please note that staggered student arrival periods are proposed from 7:45 A.M. to 9:30 A.M. in 15-minute intervals and staggered student dismissal periods are proposed from 12:15 P.M. to 12:45 P.M., 2:00 P.M. to 2:45 P.M., and 3:00 P.M. to 5:00 P.M. Further note that the day care will assign time slots for each student for arrival and dismissal with a maximum of ten (10) students assigned to each 15-minute time slot. As time slots are filled, students will only be assigned to an available time slot. Time slots will be assigned during open house and will be enforced by staff on-site. A site plan, location map, and detailed arrival and dismissal times are provided in Attachment A-1. The traffic assessment is consistent with the requirements outlined by the City of Miami Beach. Methodology correspondence detailing the traffic assessment requirements are included in Attachment B-1. The following sections summarize the trip generation, on-site vehicle queuing analysis, and transportation demand management strategies.

TRIP GENERATION

Trip generation calculations for the proposed expansion were performed using the Institute of Transportation Engineers' (ITE's) *Trip Generation Manual*, 10th Edition. The trip generation for the proposed expansion was determined using ITE LUC 565 (Day Care Center). Project trips were estimated for the weekday A.M. and P.M. peak hours.

The proposed expansion is expected to generate 26 net new vehicle trips during the A.M. peak hour and 28 net new vehicle trips during the P.M. peak hour of adjacent street traffic, Table 1 provides a summary of the trip generation for the proposed expansion. Detailed trip generation calculations and are included in Attachment C-1.

Table 1: Trip Generation Summary						
Scenario	A.M. Peak Hour			P.M. Peak Hour		
	In	Out	Total	In	Out	Total
Existing 25-student enrollment	10	10	20	8	10	18
Proposed 75-student enrollment	25	21	46	22	24	46
Net New Trips	15	11	26	14	14	28

ON-SITE VEHICLE QUEUING ANALYSIS

The proposed expansion will be served by one (1) dedicated student drop-off/pick-up area located along the east side of the property. The student drop-off/pick-up area provides one (1) drop-off/pick-up lane and one (1) by-pass lane. Please note that approximately 88 feet of stacking, approximately four (4) vehicle lengths, is provided from the designated student drop-off/pick-up space to the public right-of-way.

Trip generation estimates based on ITE's *Trip Generation Manual*, 10th Edition for the weekday A.M. and P.M. peak hours were analyzed to determine the highest demand scenario. The project is expected to generate 25 drop-off vehicle trips during the A.M. peak hour and 22 pick-up vehicle trips during the P.M. peak hour. Please note that the inbound trips for the weekday A.M. peak hour were utilized for arrival operations and inbound trips for the weekday P.M. peak hour were utilized for departure operations as these trips coincide with the times of drop-off and pick-up. Detailed trip generation calculations and are included in Attachment C-1.

An on-site vehicle queuing analysis was prepared for the student drop-off/pick-up area, which includes one (1) drop-off/pick-up lane and one (1) by-pass lane, to determine if queues are expected to spill back to James Avenue. The vehicle queuing analysis was conducted consistent with procedures described in ITE's *Transportation and Land Development*, 1988. The queuing analysis used the multiple-channel waiting line model with Poisson arrivals and exponential service times. The queuing analysis is based on the coefficient of utilization, ρ , which is the ratio of the average vehicle arrival rate over the average service rate multiplied by the number of channels.

Drop-off/Pick-up Assumptions

Temple Emanu-El staff will be stationed on-site at the student drop-off/pick-up area located at the east side of the property to assist with the arrival and departure of students. The service time for vehicle arrival operations was determined based on field observation at the facility on June 19th, 2019 (Wednesday), from 8:30 AM to 9:30 AM with 23 students. The service time was recorded and includes the time it took for the unloading of students from the vehicle to the drop-off/pick-up area and the exchange between the students and Temple Emanu-El staff. The average service rate associated with vehicle arrival operations was calculated to be 1.33 minutes. The service time for vehicle departure operations was also determined based on field observation at the facility on June 19th, 2019 (Wednesday), from 2:15 PM to 3:15 PM. The service time was recorded and includes the time it took for the exchange between the students and Temple Emanu-El staff and the loading of students from the drop-off/pick-up area into the vehicle. The average service rate associated with vehicle departure operations was calculated to be 1.88 minutes. Processing times are provided in Attachment D-1.

If the coefficient of utilization (average vehicle arrival rate over the average service rate multiplied by the number of channels) is greater than one (> 1), the calculation methodology does not yield a finite queue length. This result indicates overcapacity conditions for the student drop-off/pick-up area.

The analysis determined the required queue storage, M , which is exceeded P percent of the time. This analysis seeks to ensure that the queue length does not exceed the storage provided at a level of confidence of 95 percent (95%).

Drop-off/Pick-up Analysis

An iterative approach was used to determine if the 95th percentile vehicle queue will extend to James Avenue. Detailed vehicle queuing analysis worksheets are provided in Attachment D-1. The highest

demand condition vehicle queueing analysis demonstrates that the proposed development is expected to result in a vehicle queue of less than one (1) vehicle within the proposed drop-off/pick-up area during arrival and departure operations. As the proposed student drop-off/pick-up area provides one (1) drop-off/pick-up lane with storage for approximately four (4) vehicle lengths and provides one (1) by-pass lane, it is expected that the proposed student drop-off/pick-up area is able to accommodate the vehicle queue.

TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

Transportation Demand Management (TDM) strategies are proposed to reduce the impacts of the project traffic on the surrounding roadway network. Typical measures promote bicycling and walking, encourage car/vanpooling and offer alternatives to the typical workday hours. Carpooling is expected to and from the proposed expansion as many of the students are siblings. Additionally, the applicant will commit to providing the following incentives including:

- Providing a bicycle rack with 16 short-term bicycle parking spaces on-site
- Subsidized transit passes for employees
- Subsidized bicycle purchases for employees
- Subsidized scooter fuel and designated scooter parking spaces

The applicant intends to make the site bicycle/pedestrian- and transit-friendly.

CONCLUSION

The proposed expansion plan includes the addition of 50 students for a total enrollment of 75 students. The proposed expansion is expected to generate 26 net new vehicle trips during the A.M. peak hour of adjacent street traffic, 28 net new vehicle trips during the P.M. peak hour of adjacent street traffic.

Based on the on-site vehicle queueing analysis, the proposed student drop-off/pick-up area is expected to accommodate the vehicle queue during student arrival and dismissal operations.

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

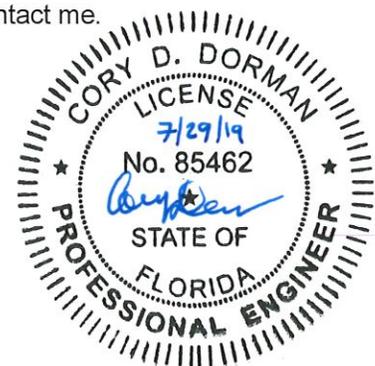
Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Cory D. Dorman, P.E., PTOE

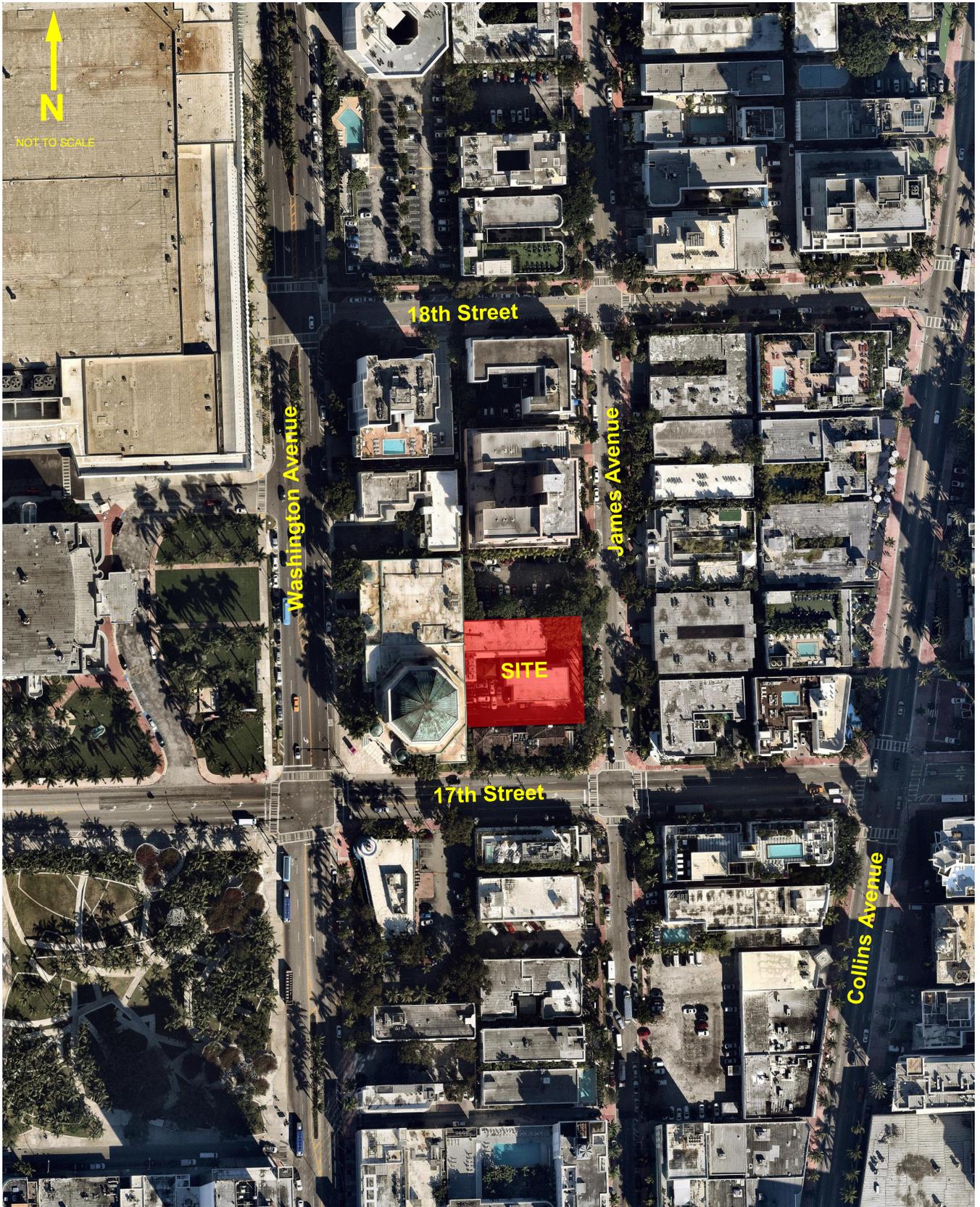
Attachments



Cory D. Dorman, P.E., PTOE
Florida Registration Number 85462
Kimley-Horn and Associates, Inc.
600 North Pine Island Road, Suite 450
Plantation, Florida 33324
CA # 00000696

Attachment A-1

Conceptual Site Plan and Location Map



Traffic: Time and Flow

Classes

1. Preschool A 25 Approx
2. Preschool B 50 Approx

Total of 75 students (approximately)

During School Hours – Drop-off & Pickup

School Arrival: 7:45 – 9:15

	<u>No. children approx.</u>	<u>Time</u>
Students with siblings	10	7:45-8:00 a.m.
Students without siblings	10	8:00-8:15 a.m.
Students without siblings	10	8:15-8:30 a.m.
Students without siblings	10	8:30-8:45 a.m.
Students without siblings	10	8:45-9:00 a.m.
Students without siblings	10	9:00-9:15 a.m.
Students without siblings	5	9:15-9:30 a.m.

<u>Half Day Students</u>	<u>No. children approx.</u>	<u>Time</u>
	15	12:15 – 12:45 p.m.

*Teachers will receive students at the drop off lane. Children will then be escorted to their respective classroom.

Regular to dismissal for students:

<u>Full-day students</u>	<u>No. children approx.</u>	<u>Time</u>
	10	2:00 p.m.
	10	2:15 p.m.
	10	2:30 p.m.
	15	2:45 p.m.

After School Hours Pickup

After Care Dismissal (picked up at any given time)

<u>No. children approx.</u>	<u>Time</u>
15	3:00-5:00 p.m.

Staff vehicles

8 Staff: 7vehicles, 1 scooter

Attachment B-1

Methodology Correspondence

Dorman, Cory

From: Akcay, Firat <FiratAkca@miamicbeachfl.gov>
Sent: Thursday, June 13, 2019 2:36 PM
To: Dorman, Cory; Ferrer, Josiel
Cc: Emily Balter; Dabkowski, Adrian
Subject: RE: Muss Montessori Day Care Expansion at Temple Emanu-El

Categories: External

Thank you for the update Cory, we have no further comments on the methodology.



Firat Akcay, M.S.C.E. MBA
Transportation Analyst
Transportation Department
1688 Meridian Avenue, Suite 801, Miami Beach, FL 33139
Tel: 305-673-7000, ext 6839

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

 Please do not print this e-mail unless necessary.

From: Dorman, Cory <cory.dorman@kimley-horn.com>
Sent: Thursday, June 13, 2019 2:28 PM
To: Akcay, Firat <FiratAkca@miamicbeachfl.gov>; Ferrer, Josiel <JOSIELFERRER@miamicbeachfl.gov>
Cc: Emily Balter <ebalter@brzoninglaw.com>; Dabkowski, Adrian <Adrian.Dabkowski@Kimley-horn.com>
Subject: RE: Muss Montessori Day Care Expansion at Temple Emanu-El

Good Afternoon Firat,

It was good talking with you yesterday. Please see attached for the updated traffic assessment methodology. The drop-off/pick-up area will be dimensioned and submitted as part of the traffic assessment as the Client is working to address this comment with the Civil Engineer. Please let us know if the City has any further comments.

Thanks,

Kimley»Horn

Cory D. Dorman, P.E., PTOE

Kimley-Horn | 600 North Pine Island Road, Plantation, FL 33324
Direct: (954) 535-5114 | Office: (954) 535-5100

Please note that I will be overseas starting June 16 and will return to the office on July 3.

From: Akcay, Firat <FiratAkca@miamicbeachfl.gov>
Sent: Wednesday, June 12, 2019 2:48 PM
To: Dorman, Cory <cory.dorman@kimley-horn.com>; Ferrer, Josiel <JOSIELFERRER@miamicbeachfl.gov>

Cc: Emily Balter <ebalter@brzoninglaw.com>; Kanaan, Omar <omar.kanaan@kimley-horn.com>
Subject: RE: Muss Montessori Day Care Expansion at Temple Emanu-El

Hello Cory,

Since the site is already in operation I believe it would be beneficial to gather real time information to account for the service time and existing queuing observations. The site plan should be dimensioned to show the stacking capacity. Would you revise the methodology to reflect these revisions?

Thank you



Firat Akcay, M.S.C.E. MBA
Transportation Analyst
Transportation Department
1688 Meridian Avenue, Suite 801, Miami Beach, FL 33139
Tel: 305-673-7000, ext 6839

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



Please do not print this e-mail unless necessary.

From: Dorman, Cory <cory.dorman@kimley-horn.com>
Sent: Wednesday, June 12, 2019 1:35 PM
To: Ferrer, Josiel <JOSIELFERRER@miamibeachfl.gov>; Akcay, Firat <FiratAkcay@miamibeachfl.gov>
Cc: Emily Balter <ebalter@brzoninglaw.com>; Kanaan, Omar <omar.kanaan@kimley-horn.com>
Subject: RE: Muss Montessori Day Care Expansion at Temple Emanu-El

Good Afternoon Josiel/Firat,

Following-up on the attached methodology for the Muss Montessori Day Care at Temple Emanu-El. Please let us know if the City has any comments as we are targeting submittal for June 24 to make the September 24 Planning Board meeting.

Thanks,

Kimley»Horn

Cory D. Dorman, P.E., PTOE

Kimley-Horn | 600 North Pine Island Road, Plantation, FL 33324
Direct: (954) 535-5114 | Office: (954) 535-5100

Proud to be one of FORTUNE magazine's 100 Best Companies to Work

From: Dorman, Cory
Sent: Wednesday, June 5, 2019 1:40 PM
To: JOSIELFERRER@miamibeachfl.gov; firatakay@miamibeachfl.gov
Cc: Emily Balter <ebalter@brzoninglaw.com>
Subject: Muss Montessori Day Care Expansion at Temple Emanu-El

Good Afternoon Josiel and Firat,

Please see attached for the traffic assessment methodology for the proposed enrollment expansion for the Muss Montessori Day Care at Temple Emanu-El. The methodology proposes to update the trip generation calculations, on-site vehicle queuing analysis, and transportation demand management strategies associated with the proposed expansion in enrollment from 25 students to 75 students. Please let us know if the City has any comments.

Thanks,

Kimley»»Horn

Cory D. Dorman, P.E., PTOE

Kimley-Horn | 600 North Pine Island Road, Plantation, FL 33324

Direct: (954) 535-5114 | Office: (954) 535-5100

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Memorandum

To: Josiel Ferrer, P.E.
City of Miami Beach

Cc: Firat Akcay, City of Miami Beach

From: Cory D. Dorman, P.E., PTOE 
Adrian K. Dabkowski, P.E., PTOE 

Date: June 13, 2019

**Subject: Muss Montessori Day Care at Temple Emanu-El Expansion
Traffic Assessment Methodology**

The purpose of this memorandum is to summarize the traffic assessment for the proposed expansion of the Muss Montessori Day Care at Temple Emanu-El located at 1701 Washington Avenue in Miami Beach, Florida. Currently, the existing day care enrolls 25 students. The proposed expansion includes the addition of 50 students for a total enrollment of 75 students. Parking for teachers and staff will be provided on-site. A project location map and site plan are included in Attachment A. The following sections summarize our proposed methodology.

TRIP GENERATION

Trip generation calculations for the proposed expansion were performed using Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition. The trip generation for the proposed expansion was determined using ITE Land Use Code (LUC) 565 (Day Care Center). Project trips were estimated for the weekday A.M. and P.M. peak hours.

A multimodal (public transit, bicycle, and pedestrian) factor based on US Census *Means of Transportation to Work* data was reviewed for the census tracts in the vicinity of the site. The US Census data indicated that there is a 29.0 percent (29.0%) multimodal factor within the vicinity of the site. However, to provide a conservative analysis, a multimodal factor of 20.0 percent (20.0%) was applied to the trip generation calculations to account for the urban environment in which the project site is located. It is expected that a portion of employees, teachers, staff, parents, and students will choose to walk, bike, or use public transit to and from the site.

The project is expected to generate 26 net new vehicle trips during the weekday A.M. peak hour and 28 net new vehicle trips during the weekday P.M. peak hour. Detailed trip generation calculations are included as Attachment B.

ON-SITE VEHICLE QUEUING ANALYSIS

An on-site vehicle queuing analysis will be prepared for the student drop-off/pick-up area to determine if queues are expected to extend onto James Avenue. Trip generation estimates based on ITE's *Trip Generation Manual*, 10th Edition for the weekday A.M. and P.M. peak hours will be utilized to provide for the highest demand scenario. Existing processing times and vehicle queuing will be determined from on-site field observations at the existing student drop-off/pick-up area. The vehicle queuing

analysis will be conducted consistent with procedures described in ITE's *Transportation and Land Development*, 1988.

TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

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

DOCUMENTATION

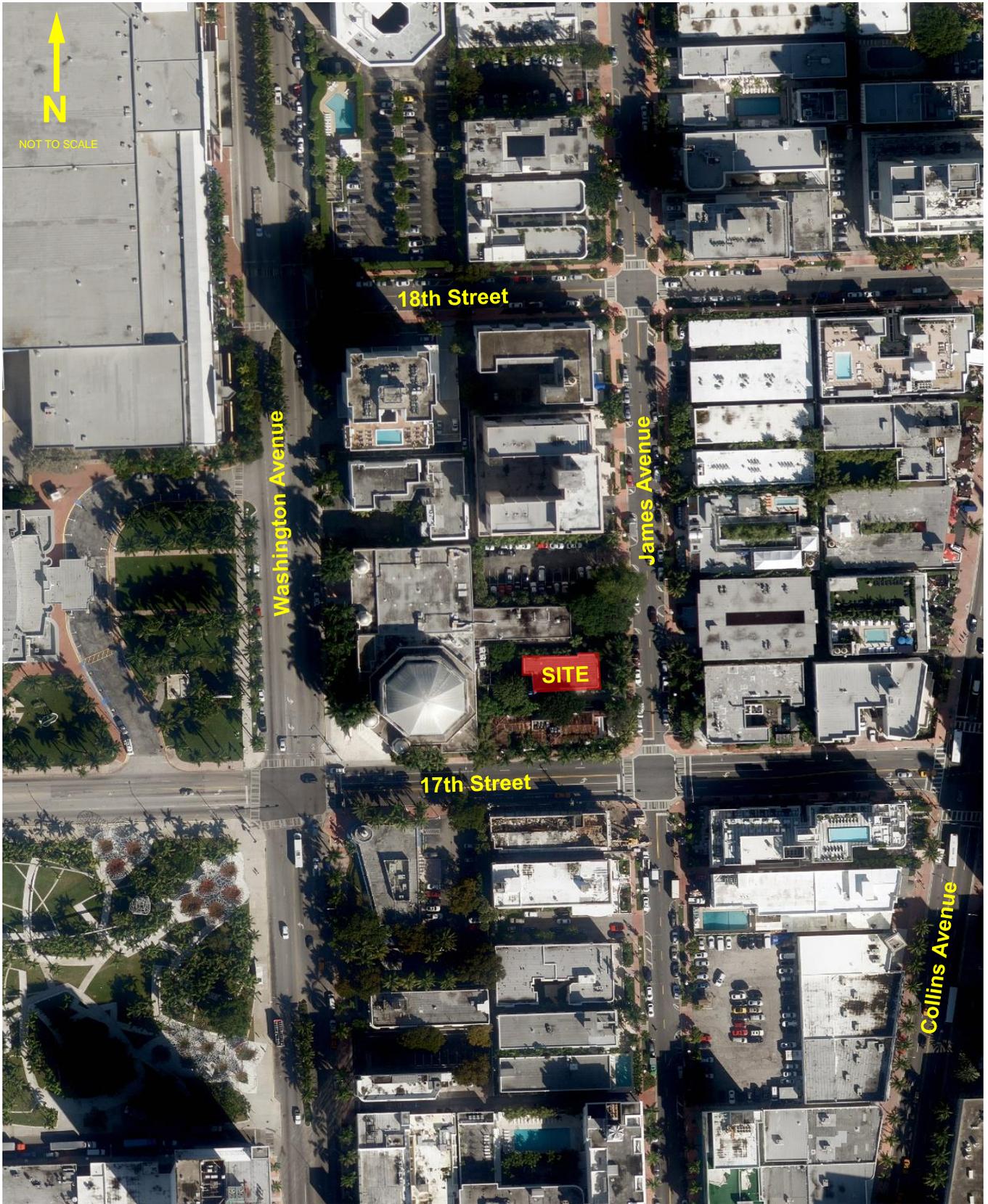
The results of the traffic assessment will be summarized in a technical letter. The technical letter will include supporting documents including trip generation calculations and text and graphics necessary to summarize the assumptions and analysis.

An electronic copy of the technical letter will be provided as part of the submittal package.

K:\FTL_TPTO\043871001-Muss Montessori Expansion\Correspondence\memo\Muss Montessori Traffic Assessment Methodology 06 13 19.docx

Attachment A

Project Location Map and Site Plan



Attachment B

Trip Generation Calculations

AM PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY AM PEAK HOUR TRIP GENERATION

GROUP 1	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS			
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total	
						In	Out																			
1	Day Care Center	10	565	25	stu	53%	47%	13	12	25	20.0%	5	10	10	20	0.0%	0	10	10	20	0.0%	0	10	10	20	
2																										
3																										
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10																										
11																										
12																										
13																										
14																										
15																										
ITE Land Use Code		Rate or Equation		Total:																						
565		Y=0.66*(X)+8.42				13	12	25	20.0%	5	10	10	20	0.0%	0	10	10	20	0.0%	0	10	10	20			

PROPOSED WEEKDAY AM PEAK HOUR TRIP GENERATION

GROUP 2	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS				
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total		
						In	Out																				
1	Day Care Center	10	565	75	stu	53%	47%	31	27	58	20.0%	12	25	21	46	0.0%	0	25	21	46	0.0%	0	25	21	46		
2																											
3																											
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12																											
13																											
14																											
15																											
ITE Land Use Code		Rate or Equation		Total:																							
565		Y=0.66*(X)+8.42				31	27	58	20.7%	12	25	21	46	0.0%	0	25	21	46	0.0%	0	25	21	46				

NET NEW TRIPS	IN	OUT	TOTAL
	15	11	26

PM PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY PM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS					
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total			
						In	Out																					
GROUP 1	1	Day Care Center	10	565	25	stu	47%	53%	10	12	22	20.0%	4	8	10	18	0.0%	0	8	10	18	0.0%	0	8	10	18		
	2																											
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	14																											
	15																											
		ITE Land Use Code	Rate or Equation			Total:			10	12	22	18.2%	4	8	10	18	0.0%	0	8	10	18	0.0%	0	8	10	18		
		565	LN(Y) = 0.87*LN(X)+0.29																									

PROPOSED WEEKDAY PM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS					
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total			
						In	Out																					
GROUP 2	1	Day Care Center	10	565	75	stu	47%	53%	27	30	57	20.0%	11	22	24	46	0.0%	0	22	24	46	0.0%	0	22	24	46		
	2																											
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	11																											
	12																											
	13																											
	14																											
	15																											
		ITE Land Use Code	Rate or Equation			Total:			27	30	57	19.3%	11	22	24	46	0.0%	0	22	24	46	0.0%	0	22	24	46		
		565	LN(Y) = 0.87*LN(X)+0.29																									

NET NEW TRIPS	IN	OUT	TOTAL
	14	14	28



B08301

MEANS OF TRANSPORTATION TO WORK

Universe: Workers 16 years and over

2013-2017 American Community Survey 5-Year Estimates

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

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

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

$$(51+6+140)/680 = 29.0\%$$

	Census Tract 42.06, Miami-Dade County, Florida	
	Estimate	Margin of Error
Total:	680	+/-203
Car, truck, or van:	376	+/-141
Drove alone	285	+/-131
Carpooled:	91	+/-58
In 2-person carpool	79	+/-50
In 3-person carpool	0	+/-13
In 4-person carpool	0	+/-13
In 5- or 6-person carpool	0	+/-13
In 7-or-more-person carpool	12	+/-18
Public transportation (excluding taxicab):	51	+/-50
Bus or trolley bus	51	+/-50
Streetcar or trolley car (carro publico in Puerto Rico)	0	+/-13
Subway or elevated	0	+/-13
Railroad	0	+/-13
Ferryboat	0	+/-13
Taxicab	7	+/-11
Motorcycle	7	+/-12
Bicycle	6	+/-9
Walked	140	+/-93
Other means	33	+/-32
Worked at home	60	+/-63

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

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

While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic

Attachment C-1

Trip Generation

AM PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY AM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS					
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total			
						In	Out																					
GROUP 1	1	Day Care Center	10	565	25	stu	53%	47%	13	12	25	20.0%	5	10	10	20	0.0%	0	10	10	20	0.0%	0	10	10	20		
	2																											
	3																											
	4																											
	5																											
	6																											
	7																											
	8																											
	9																											
	10																											
	11																											
	12																											
	13																											
	14																											
	15																											
		ITE Land Use Code	Rate or Equation			Total:		13	12	25	20.0%	5	10	10	20	0.0%	0	10	10	20	0.0%	0	10	10	20			
		565	Y=0.66*(X)+8.42																									

PROPOSED WEEKDAY AM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS						
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total				
						In	Out																						
GROUP 2	1	Day Care Center	10	565	75	stu	53%	47%	31	27	58	20.0%	12	25	21	46	0.0%	0	25	21	46	0.0%	0	25	21	46			
	2																												
	3																												
	4																												
	5																												
	6																												
	7																												
	8																												
	9																												
	10																												
	11																												
	12																												
	13																												
	14																												
	15																												
		ITE Land Use Code	Rate or Equation			Total:		31	27	58	20.7%	12	25	21	46	0.0%	0	25	21	46	0.0%	0	25	21	46				
		565	Y=0.66*(X)+8.42																										

NET NEW TRIPS	IN	OUT	TOTAL
	15	11	26

PM PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY PM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS					
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total			
						In	Out																					
GROUP 1	1	Day Care Center	10	565	25	stu	47%	53%	10	12	22	20.0%	4	8	10	18	0.0%	0	8	10	18	0.0%	0	8	10	18		
	2																											
	3																											
	4																											
	5																											
	6																											
	7																											
	8																											
	9																											
	10																											
	11																											
	12																											
	13																											
	14																											
	15																											
		ITE Land Use Code	Rate or Equation			Total:			10	12	22	18.2%	4	8	10	18	0.0%	0	8	10	18	0.0%	0	8	10	18		
		565	LN(Y) = 0.87*LN(X)+0.29																									

PROPOSED WEEKDAY PM PEAK HOUR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		NET NEW EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS						
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total				
						In	Out																						
GROUP 2	1	Day Care Center	10	565	75	stu	47%	53%	27	30	57	20.0%	11	22	24	46	0.0%	0	22	24	46	0.0%	0	22	24	46			
	2																												
	3																												
	4																												
	5																												
	6																												
	7																												
	8																												
	9																												
	10																												
	11																												
	12																												
	13																												
	14																												
	15																												
		ITE Land Use Code	Rate or Equation			Total:			27	30	57	19.3%	11	22	24	46	0.0%	0	22	24	46	0.0%	0	22	24	46			
		565	LN(Y) = 0.87*LN(X)+0.29																										

NET NEW TRIPS	IN	OUT	TOTAL
	14	14	28



B08301

MEANS OF TRANSPORTATION TO WORK
 Universe: Workers 16 years and over
 2013-2017 American Community Survey 5-Year Estimates

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

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

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

$$(51+6+140)/680 = 29.0\%$$

	Census Tract 42.06, Miami-Dade County, Florida	
	Estimate	Margin of Error
Total:	680	+/-203
Car, truck, or van:	376	+/-141
Drove alone	285	+/-131
Carpooled:	91	+/-58
In 2-person carpool	79	+/-50
In 3-person carpool	0	+/-13
In 4-person carpool	0	+/-13
In 5- or 6-person carpool	0	+/-13
In 7-or-more-person carpool	12	+/-18
Public transportation (excluding taxicab):	51	+/-50
Bus or trolley bus	51	+/-50
Streetcar or trolley car (carro publico in Puerto Rico)	0	+/-13
Subway or elevated	0	+/-13
Railroad	0	+/-13
Ferryboat	0	+/-13
Taxicab	7	+/-11
Motorcycle	7	+/-12
Bicycle	6	+/-9
Walked	140	+/-93
Other means	33	+/-32
Worked at home	60	+/-63

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

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Attachment D-1

On-site Vehicle Queuing Analysis

Temple Emanu-El Student Drop-off

Student Drop-off (A.M. Peak Hour)

Arrival Rate

DROP-OFF
25

 veh/hr

Service Rate

DROP-OFF
1.33

 mins/veh

Control Delay = min
Service Time = mins/veh

Level of Confidence = 0.95
Storage Provided On-Site = 4 vehicles
Total Entering and Exiting Vehicles(q) = 25 veh/hr
Service Capacity per N (60 mins/Service Rate) (Q) = 45.11 veh/hr/pos
Average Service Rate (t) = 1.33 mins/veh
rho (t/Q) = 0.277

Expected (avg.) number of vehicles in the system	E(m)=	0.05	
Expected (avg.) number of vehicles waiting in queue	E(n)=	0.60	
Mean time in the queue	E(w)=	0.11	mins
Mean time in system	E(t)=	1.44	mins

Proportion of customers who wait (P) (E(w) > 0)=		12.02%	
Probability of a queue exceeding a length (M) P(x > M)=		5.00%	

Queue length which is exceeded 5.00% of the times is equal to -0.5 vehicles

Temple Emanu-El Student Pick-up

Student Pick-up (P.M. peak hour)

Departure Rate

PICK-UP
22

 veh/hr

Service Rate

PICK-UP
1.88

 mins/veh

Control Delay = min
Service Time = mins/veh

Level of Confidence = 0.95
Storage Provided On-Site = 4 vehicles

Total Entering and Exiting Vehicles(q) = 22 veh/hr
Service Capacity per N (60 mins/Service Rate) (Q) = 31.91 veh/hr/pos
Average Service Rate (t) = 1.88 mins/veh
 ρ (t/Q) = 0.345

Expected (avg.) number of vehicles in the system	E(m)=	0.09	
Expected (avg.) number of vehicles waiting in queue	E(n)=	0.78	
Mean time in the queue	E(w)=	0.25	mins
Mean time in system	E(t)=	2.13	mins

Proportion of customers who wait (P) (E(w) > 0)=		17.67%	
Probability of a queue exceeding a length (M) P(x > M)=		5.00%	

Queue length which is exceeded 5.00% of the times is equal to 0.0 vehicles

Muss Montessorri AM Processing Times				
Time	Dwell Time			Queue
	# Kids	# Kids	# Kids	
8:30				0
8:31				0
8:32				0
8:33				0
8:34				0
8:35				0
8:36				0
8:37				0
8:38				0
8:39				0
8:40				0
8:41				0
8:42				0
8:43				0
8:44				0
8:45				0
8:46				0
8:47				0
8:48				0
8:49				0
8:50				0
8:51				0
8:52				0
8:53				0
8:54				0
8:55				0
8:56	1:15 1	1:30 2		2
8:57			1:00 1	3
8:58				1
8:59	0:45 1			1
9:00	0:55 2			1
9:01				0
9:02	0:55 1	1:00 2	1:30 1	3
9:03				2
9:04				0
9:05				0
9:06	1:45 1			1
9:07				1
9:08				0
9:09				0
9:10	3:15 1			1
9:11				1
9:12				1
9:13	1:00 1			1
9:14				0
9:15				0
9:16				0
9:17				0
9:18				0
9:19				0
9:20				0
9:21	1:15 1			1
9:22				1
9:23				0
9:24				0
9:25				0
9:26				0
9:27				0
9:28				0
9:29				0
9:30				0

Data Collected 6/19/2019
Average AM Dwell Time 1:20
Average AM Dwell Time (Decimal) 1.33

Muss Montessorri PM Processing Times					
Time	Dwell Time			Queue	
	# Kids	# Kids	# Kids		
2:15				0	
2:16				0	
2:17				0	
2:18				0	
2:19				0	
2:20				0	
2:21				0	
2:22				0	
2:23				0	
2:24				0	
2:25				0	
2:26				0	
2:27				0	
2:28				0	
2:29				0	
2:30				0	
2:31				0	
2:32				0	
2:33				0	
2:34				0	
2:35				0	
2:36				0	
2:37				0	
2:38				0	
2:39				0	
2:40				0	
2:41	1:30 1			1	
2:42				1	
2:43				0	
2:44				0	
2:45				0	
2:46				0	
2:47				0	
2:48				0	
2:49	1:15 1			1	
2:50				1	
2:51	2:00 2	1:30 1		2	
2:52				2	
2:53				0	
2:54				0	
2:55	2:30 1			1	
2:56		2:00 1		2	
2:57			2:40 1	3	
2:58				2	
2:59	1:45 2			2	
3:00		1:30 1	1:30 1	3:30 1	4
3:01					3
3:02					1
3:03					1
3:04	1:15 1	2:15 1			2
3:05					2
3:06					0
3:07					0
3:08					0
3:09					0
3:10					0
3:11					0
3:12					0
3:13					0
3:14					0
3:15	1:15 1				1

Data Collected 6/19/2019
Average PM Dwell Time 1:53
Average PM Dwell Time (Decimal) 1.88