

JEWISH PRIMARY DAY SCHOOL

6045 16th Street, NW
Washington, DC

TRAFFIC IMPACT STUDY

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INTRODUCTION

The following Transportation Impact Study (TIS) examines transportation impacts associated with the Jewish Primary Day School's proposal to expand its Main campus and increase its student and faculty/staff populations at both of its campus locations. The main JPDS campus is located at 6045 16th Street in Northwest Washington, D.C. JPDS recently purchased a secondary campus for its Pre-Kindergarten, Kindergarten and First Grade academic programs located at 4715 16th Street, NW. The following is being planned:

- **Main Campus** – JPDS purchased the neighboring property at 6107 16th Street, NW to serve as its administrative offices. The school is also seeking to increase enrollment from 275 students (current student cap) to 300 students and will seek an increase in the maximum cap of faculty/staff from 56 to 72.
- **Proposed Early Childhood Campus** - The JPDS has purchased the former British School of Washington (currently leased by the Washington Latin Public Charter School for ninth and tenth graders) located at 4715 16th Street. JPDS is planning to relocate its Pre-Kindergarten, Kindergarten and First grade academic programs to this location and will request an increase in the existing student cap of 125 students, by approximately 5 students, to 130 students. The JPDS will also request an increase in faculty from 15 to 26.

The location of the above referenced properties is illustrated in Figure 1.

Scope of TIS

This study includes report sections outlining existing and future conditions for both the Main Campus and for the proposed Early Childhood Campus. Some report sections such as transportation management have been assessed for the entire campus. The scope of study and TIS methodology was presented to the District Department of Transportation (DDOT) at a scoping meeting on March 30, 2012. The DDOT Scoping Form is included in the appendix.

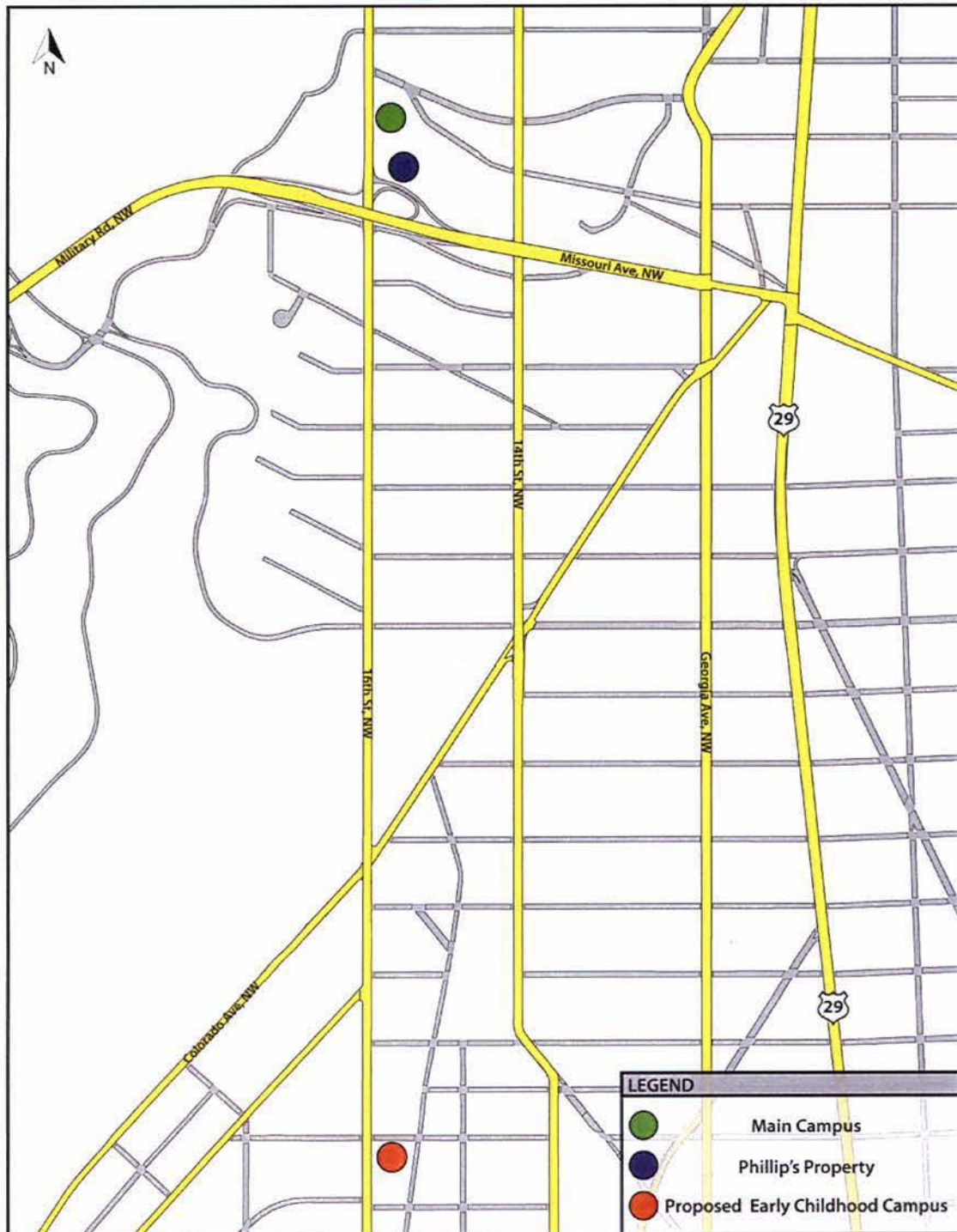


Figure 1: JPDS Main Campus, Phillip's Property and Proposed Early Childhood Campus

BACKGROUND

Previous Studies

In 2007, Symmetra prepared a Traffic Impact Study (TIS) for JPDS to assess impacts of increasing student population from 225 to 275 and faculty/staff from 42 to 56. The TIS included information such as JPDS's transportation characteristics and Transportation Demand Management (TDM) measures. Comparing 2007 and 2012 site trips, the JPDS has reduced vehicle trip generation (even with increases in student population) with a successful bus program.

With continued usage of the bus program, the proposed increases in student enrollment and faculty/staff would not result in noteworthy changes in traffic levels and/or Levels of Service within the vicinity of the current school location. It is also expected that there would be negligible traffic impacts on the roadway surrounding the proposed Early Childhood campus as existing trips (associated with the Washington Latin Public Charter School) are comparable to projected JPDS related site trips.

JPDS Program and Population

The JPDS Main Campus is located at 6045 16th Street NW Washington, DC. The school provides academic programs for Pre-Kindergarten, Kindergarten and Grades one through six. There are 273 students and 56 full-time equivalent staff. Residential zip code data indicates 53.5 percent of JPDS students live in Maryland, 46.2 percent reside in the District of Columbia and the remaining 0.3 percent of students resides in Virginia. Table 1 provides a summary of residential distribution of students.

Table 1: Residential distribution of Students by Jurisdiction

	Students	Percentage
Maryland	146	53.5%
District of Columbia	126	46.2%
Virginia	1	0.3%
Total	273	100%

A summary of faculty/staff residential location is shown in Table 2.

Table 2: Residential distribution of Faculty by Jurisdiction

	Students	Percentage
Maryland	38	68%
District of Columbia	16	29%
Virginia	2	3%
Total	56	100%

As shown in Table 2, 68 percent of JPDS faculty/staff live in Maryland, 29 percent reside in the District of Columbia and the remaining 3 percent of faculty/staff resides in Virginia.

School hours are from 8:30 AM to 3:30 PM on Mondays, Wednesdays and Thursdays. On Tuesdays the school day is extended to 4:30 PM and on Fridays the school day is shorter with dismissal at 2:15 PM. The JPDS offers an on-site after-school program from 3:30 PM to 6:30 PM, Monday through Thursday and from 2:15 PM to 6:00 PM on Fridays.

Washington Latin Public Charter School (WLPCS) Program and Population

The JPDS has purchased the former British School of Washington (currently leased by the Washington Latin Public Charter School) located at 4715 16th Street. The school's population is made up of 135 students (in Grades 9 and 10) and approximately 20 staff. Typical school hours are from 8:10 AM to 3:30 PM, Monday through Friday. The school also operates an unstructured after school program and students are free to leave anytime between 3:30 PM and 7:30 PM.

All WLPCS students are Washington D.C. residents, and majority of staff are also primarily D.C. residents with a few residing in Maryland.

MAIN CAMPUS – EXISTING CONDITIONS

The JPDS is located at 6045 16th Street in Northwest Washington, D.C. The roadways surrounding the JPDS School site are described below:

Roadway Network

The roadways included as part of the JPDS Project study area are described below:

- 16th Street is a four-lane, median-divided, principal arterial that extends from K Street in the south to Eastern Avenue in the north. Parking is permitted on the northbound curb-lane between Fort Stevens Drive and the Military Road ramp intersection from 9:30 AM to 4:00 PM. The posted speed limit on 16th Street is 30 miles per hour (mph).
- 14th Street is a two-way minor arterial that extends from U Street in the south to Aspen Street in the north. 14th Street is a four-lane roadway south of Military Road and a two-lane roadway north of Military Road. Curb parking is permitted on 14th Street north of Military Road on both sides of the street (except between 7:00 AM and 9:30 AM Monday through Friday). The posted speed limit on 14th Street is 25 mph.
- Military Road is a four-lane, median-divided freeway¹ that extends from Georgia Avenue in the east to Western Avenue in the west. The posted speed limit on Military Road is 30 mph.
- Fort Stevens Drive is a two-lane local road that extends from 13th Street in the east to 16th Street in the west. Both lanes on Fort Stevens are wide enough to accommodate curb parking (as well as vehicle travel). Curb parking is prohibited on Fort Stevens Drive for street cleaning on Tuesdays (eastbound lane) and Wednesdays (westbound lane) between 9:30AM and 11:30AM.
- Rock Creek Ford Road is a two-lane local road that extends from 14th Street in the east to Fort Stevens Drive in the west. Both lanes on Rock Creek Ford Road are wide enough to accommodate two-hour curb parking (as well as vehicle travel) from 7:00 AM to 8:30 PM (Monday to Friday).

Site location and roadways surrounding the main campus are shown in Figure 2.

¹ Military Road is an arterial east of 14th Street and west of Oregon Avenue.

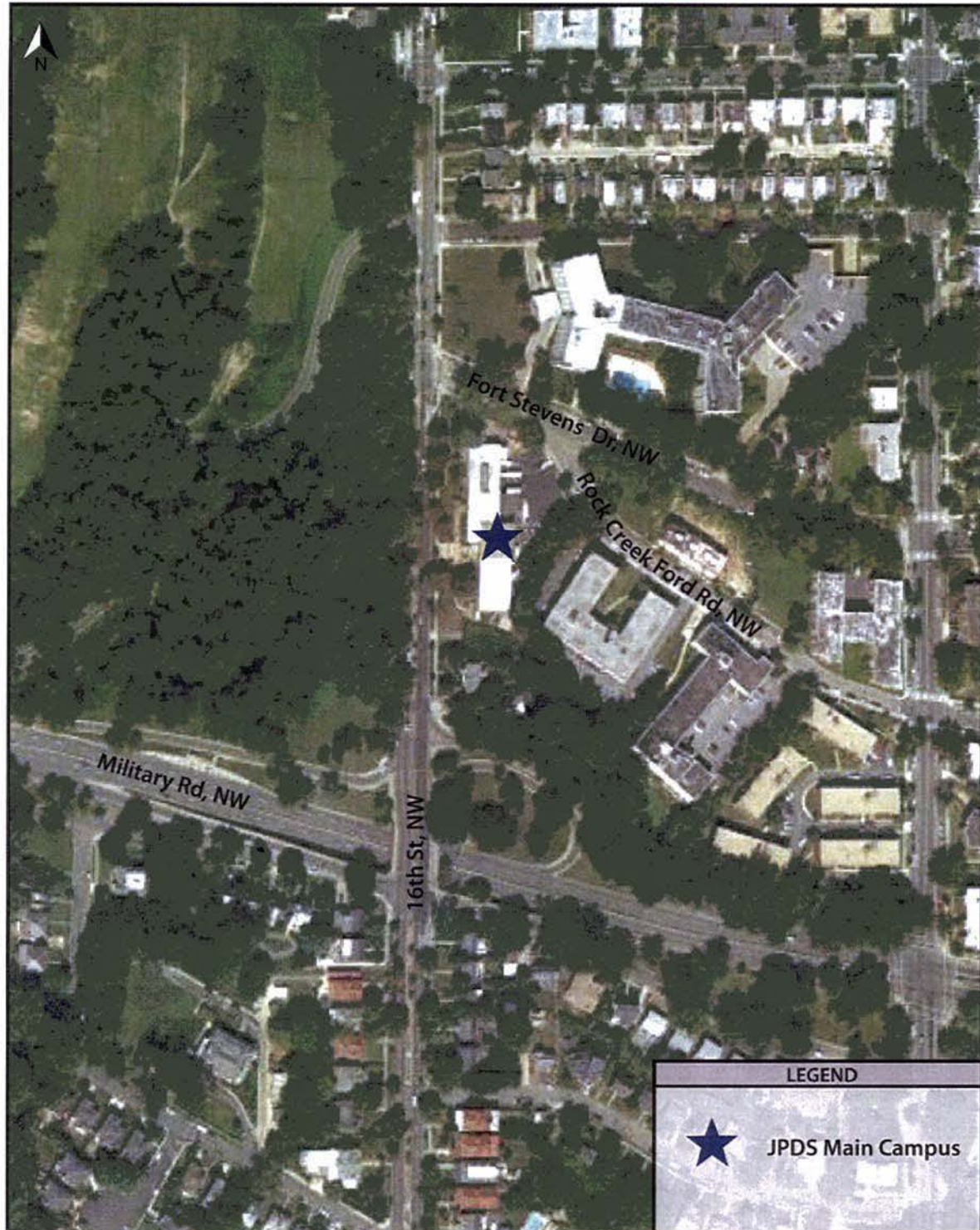


Figure 2: Site Location Map

Site Access and Circulation

Primary north-south access to the school is provided via 16th Street or 14th Street. Military Road provides primary east-west access to the school. The JPDS driveway is accessed from Rock Creek Ford Road.

Drop-off and Pick-up Operations

Vehicles

JPDS manages a two-way inbound/outbound driveway system. The typical morning drop-off is from 8:10 AM to 8:30 AM. Preparation for drop-off operations begins at 7:45 AM when security/traffic personnel place cones within the parking lot to guide inbound and outbound circulation. As vehicles pull into the parking lot, designated staff members are on-hand to assist the children exiting vehicles. At 8:30 AM all the cones are removed and the security gate is closed. Children arriving after 8:30 AM must enter through the pedestrian gate. Both the vehicular and pedestrian gates to the parking lot are automated and require key card access. Figure 3 illustrates a schematic of site access and driveway operations and designated loading area.

The typical afternoon pick-up is from 3:30 PM to 3:45 PM on Mondays, Wednesdays and Thursdays, from 4:10 PM to 4:45 PM on Tuesdays and from 2:15 PM to 2:30 PM on Fridays. Parents begin arriving to the school 15 minutes prior to dismissal time and are directed into the parking lot by security/traffic personnel. Vehicles stack within the parking lot, in four rows with four vehicles per row, and wait for dismissal. The parking lot has stacking capacity for approximately 16 vehicles at any one time. Upon dismissal, designated staff members are on-hand to assist children with boarding. After children board the vehicles, the vehicles proceed to the exit. After a group of vehicles exit then additional vehicles are permitted onto the parking lot.

It is noted some parents also park along adjacent roadways² and walk over to the school to pick-up their children. Along 16th Street (eastside near approach at Fort Stevens Road), curb parking is permitted from 9:30 AM to 4:00 PM. JPDS school buses and other vehicles waiting to pick-up children utilize this parking. During the afternoon, traffic congestion was observed along northbound 16th Street from 3:15 PM to 4:00 PM. This congestion was alleviated after 4:00 PM when the curb parking lane transitions to an additional northbound travel lane.

² 16th Street northbound curb-lane, Fort Stevens Drive and Rock Creek Ford Road.

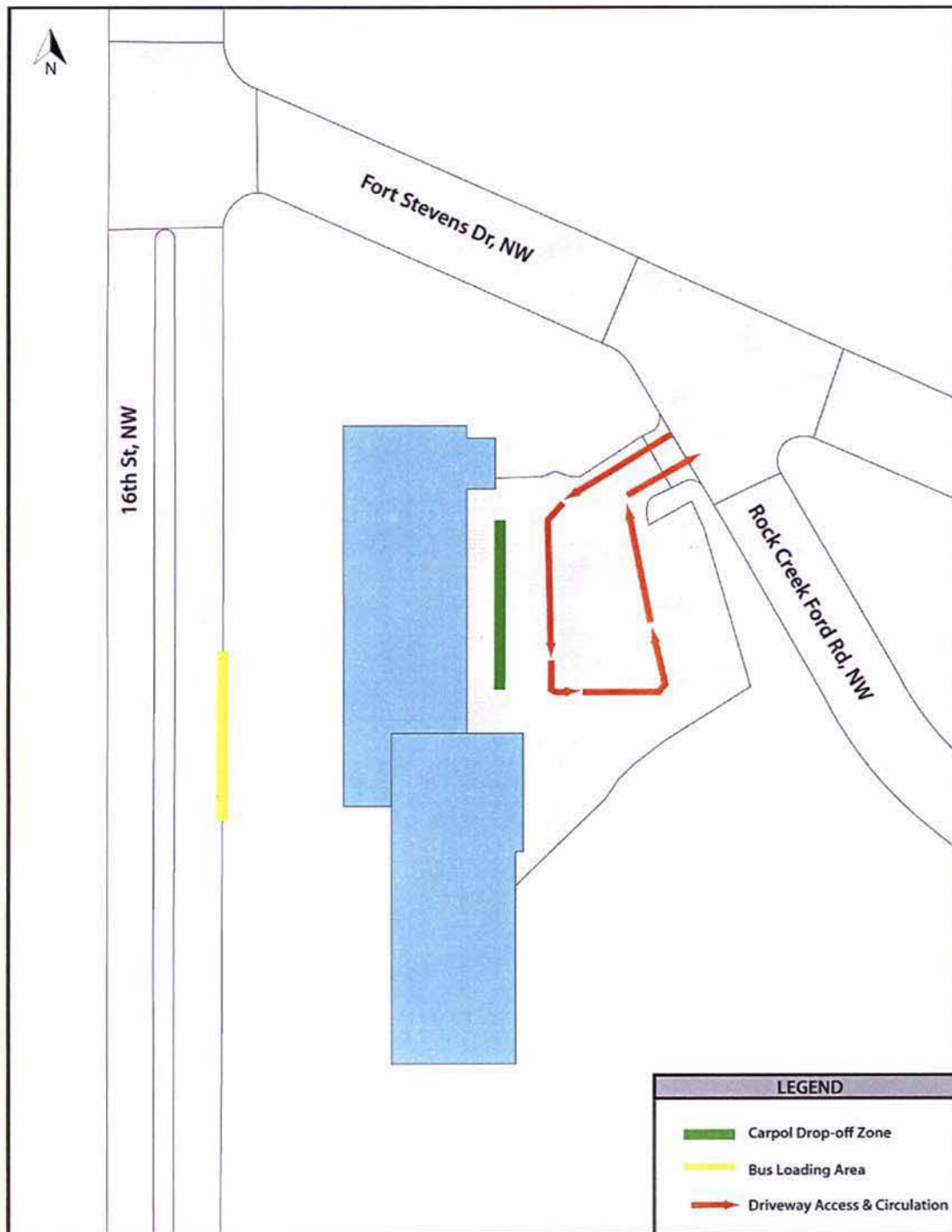


Figure 3: Schematic of Driveway Access and Circulation

School buses

There are three school buses. School bus drop-off takes place along the northbound curb lane on 16th Street.³ Each bus took an average of five minutes to unload. During the morning drop-off, buses were stationed along 16th Street for a total duration of 14 minutes.

During the afternoon, school bus pick-up also takes place on the northbound curb-lane of 16th Street.⁴ Each bus arrives in advance of the afternoon dismissal. Children board the buses and the buses depart traveling northbound along 16th Street. Based on observations, the first bus arrived at 3:10 PM with the second and third buses arriving at 3:30 PM and 3:35 PM, respectively. Buses were stationed along 16th Street for a total duration of 35 minutes.

Queuing

Additional queuing observations were conducted on the April 2, 2012. During observations, the drop-off lasted from 8:08 AM to 8:32 AM. Vehicles waiting to access the school driveway queued along Fort Stevens Road for no more than one minute at any one time. The maximum (on-site and off-site) queue lasted for just seconds at 8:28 AM with a total of 11 vehicles. The average queue⁵ on Fort Stevens Road was one vehicle. Fort Stevens Drive is wide enough to accommodate queuing without impacting the flow of through traffic.

During the afternoon, the pick-up period was from 3:30 pm to 3:45 pm. The maximum (on-site and offsite) queue was 22 vehicles (16 on-site and 6 vehicles on Fort Stevens Road). This lasted for approximately one minute during the 15-minute pick-up period.

³ Curb parking is permitted along 16th Street (northbound) Monday through Friday from 9:30 AM to 4:00 PM.

⁴ Curb parking is permitted along this section of 16th Street Monday through Friday from 9:30 AM to 4:00 PM

⁵ Average queue recorded in minute intervals during 25 minute drop-off period

Pedestrian Conditions and Bicycle Facilities

Sidewalks along 16th Street, Fort Stevens Drive and Rock Creek Ford Road provide pedestrian access to/from the JPDS. Crosswalks are located at all intersections and sidewalks along all roadways within a quarter (1/4) mile radius of the JPDS site.

The District of Columbia Bicycle Map (see Appendix) indicates the following bicycle facilities within a half (1/2) mile radius of the JPDS:

- Bike Lanes along 14th Street from Aspen Street to Columbia Road
- On-street Signed Routes along 13th Street from Georgia Avenue to New York Avenue

Traffic conditions for bicycling, especially along 16th Street and Military Road, are considered poor. There are no bike share locations within a half (1/2) mile from the JPDS site. The closest bike share site is located at the Decatur Street and 14th Street intersection.

Transit Conditions

The following Metrobus routes provide service within the vicinity of the JPDS:

- Military Road–Crosstown Lines (E2, E3, E4)
- 14th Street Lines (52, 53, 54)
- 16 Street Lines (S2, S4)
- 16th Street –Potomac Park Line (S1)

The 52, 54, S2, S4 and E2 buses serve the area seven days a week, the 53 and E4 lines serve the area only on weekdays, the 53 and S1 buses serve the area only during the peak weekday periods and the E2 bus serves the area only on weekends. The Takoma Metrorail station on WMATA's red line is approximately 1.2 miles from the JPDS.

There are two bus stops along either approach of 16th Street at Ford Stevens Drive.

Transportation Modal Split

Student arrival and departure (by travel mode) and associated AM and PM peak hour site trips are summarized in Tables 3 and Table 4. The data, including vehicle occupancy counts, was collected on Thursday March 15, 2012.

Table 3: Student Modal Split (AM Peak Period)

	Students	%	Vehicle Trips
Ride Alone	30	11%	30
Carpool	125	45%	50
Metrobus	0	0%	0
School Bus	104	38%	3
Van	0	0%	0
Walk/Bike	0	0%	0
Before School	0	0%	0
Absent	14	6%	0
Total	273	100%	83

As shown in Table 2, 125 students (or 45%) carpooled and 104 students (or 38%) arrived by bus. Approximately 83% of JPDS students currently carpool and/or ride the bus to School.

Table 4: Student Modal Split (PM Peak Period)

	Students	%	Vehicle Trips
Ride Alone	27	10%	27
Carpool	103	37%	44
Metrobus	0	0%	0
School Bus	98	36%	3
Van	12	4%	1
Walk/Bike	2	1%	0
After 6:00 PM	17	6%	0
Absent	14	6%	0
Total	273	100%	75

As shown in Table 4, 103 students (or 37%) carpooled and 104 students (or 36%) departed the School by bus. Approximately 73% of JPDS students currently carpool and/or ride the bus home. It is also noted that some JPDS students participate in After School activities and depart the School after 6:00 PM.

The modal split for JPDS faculty/staff⁶ is shown in Table 5.

Table 5: Faculty/Staff Modal Split

	Staff	%	Vehicle Trips
Drive Alone	47	84%	47
Metrobus	8	15%	0
Walk/Bike	1	1%	0
Total	56	100%	47

Of the 56 total faculty/staff members, 47 drive, 8 arrive by Metrobus and 1 person walks and/or bikes to the school. Faculty/staff typically arrive prior to the morning peak hour (7:45 AM to 8:45 AM) and depart after the school PM peak (3:00 PM to 4:00 PM).

Traffic Counts and Field Observations

Traffic data (turning movement counts) and field observations were conducted at the JPDS Driveway and along adjacent roadways⁷ on Thursday March 15, 2012 from 7:00 AM to 9:00 AM and 3:00 PM to 6:00 PM.

Based on data collected, the morning peak hour was 7:45 AM to 8:45 AM and the school PM peak hour was 3:00 PM to 4:00 PM. Peak hour traffic data is shown in Figure 4.

Field observations indicated traffic congestion along northbound 16th Street during the PM peak hour. This congestion is primarily caused by commuter traffic and is further exacerbated since this section of 16th Street effectively functions as one travel lane until 4:00 PM when curb parking is no longer permitted. Parallel parking maneuvers also slightly impact through traffic from approximately 3:15 PM to 4:00 PM.

⁶ Based on data provided by JPDS

⁷ 16th Street, Fort Stevens Drive and Rock Creek Ford Road where drop-off and pick-up also occurs

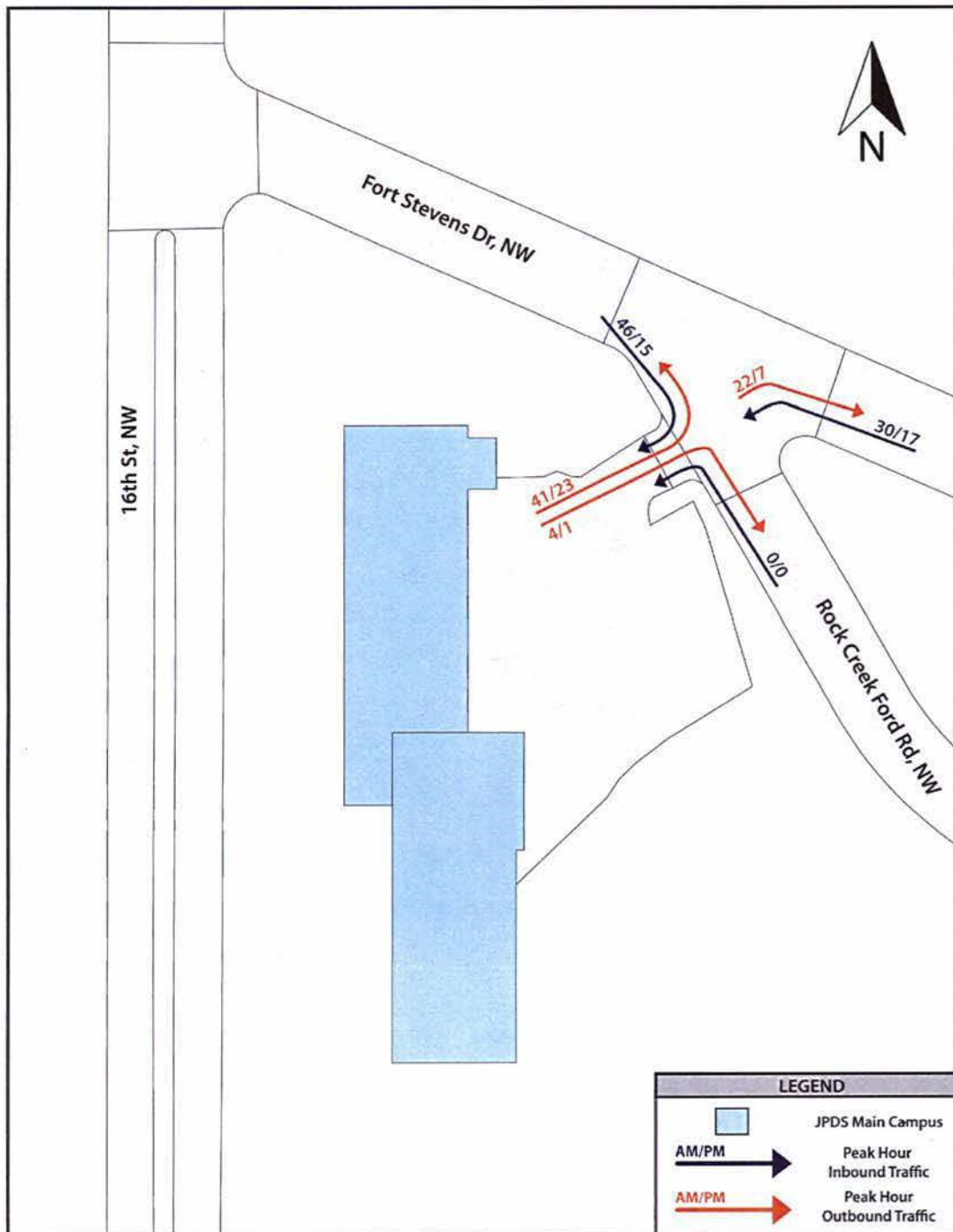


Figure 4: Peak Hour Traffic Data

Vehicle Trip Generation

Traffic counts conducted at the school driveway and along adjacent roadways⁸ were used to determine JPDS vehicular trip generation. Table 6 summarizes vehicle trip generation for the AM peak hour (7:45 AM to 8:45 AM), School PM peak hour (3:00 PM to 4:00 PM) and commuter PM peak hour (5:00 PM to 6:00 PM).

Table 6: Existing Vehicle Trip Generation⁹

AM Peak			School Peak			PM Peak		
IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
82	54	136	57	47	104	8	10	18

As Table 5 indicates, the school currently generates 136 AM peak hour trips, 104 school PM peak hour trips and 18 commuter PM peak hour trips.

Parking

The school provides a total of 41 stacked parking spaces within the on-site parking lot. This supply meets the current zoning requirement.

⁸ 16th Street, Rock Creek Ford Road and Fort Stevens Road

⁹ Numbers include vehicle trips and do not include bus trips. It is noted there are three inbound and three outbound bus trips to the school during the morning and afternoon peak periods.

MAIN CAMPUS – FUTURE CONDITIONS

Future Development and Financial Office

The development and financial offices would be relocated to the Phillip's property. Figure 5 illustrates the location of the Phillip's property in relation to the existing JPDS building.

Parking

Four parking spaces are proposed for faculty/staff at the Phillip's property. A total of 45 spaces will be provided in the future at the Main Campus.

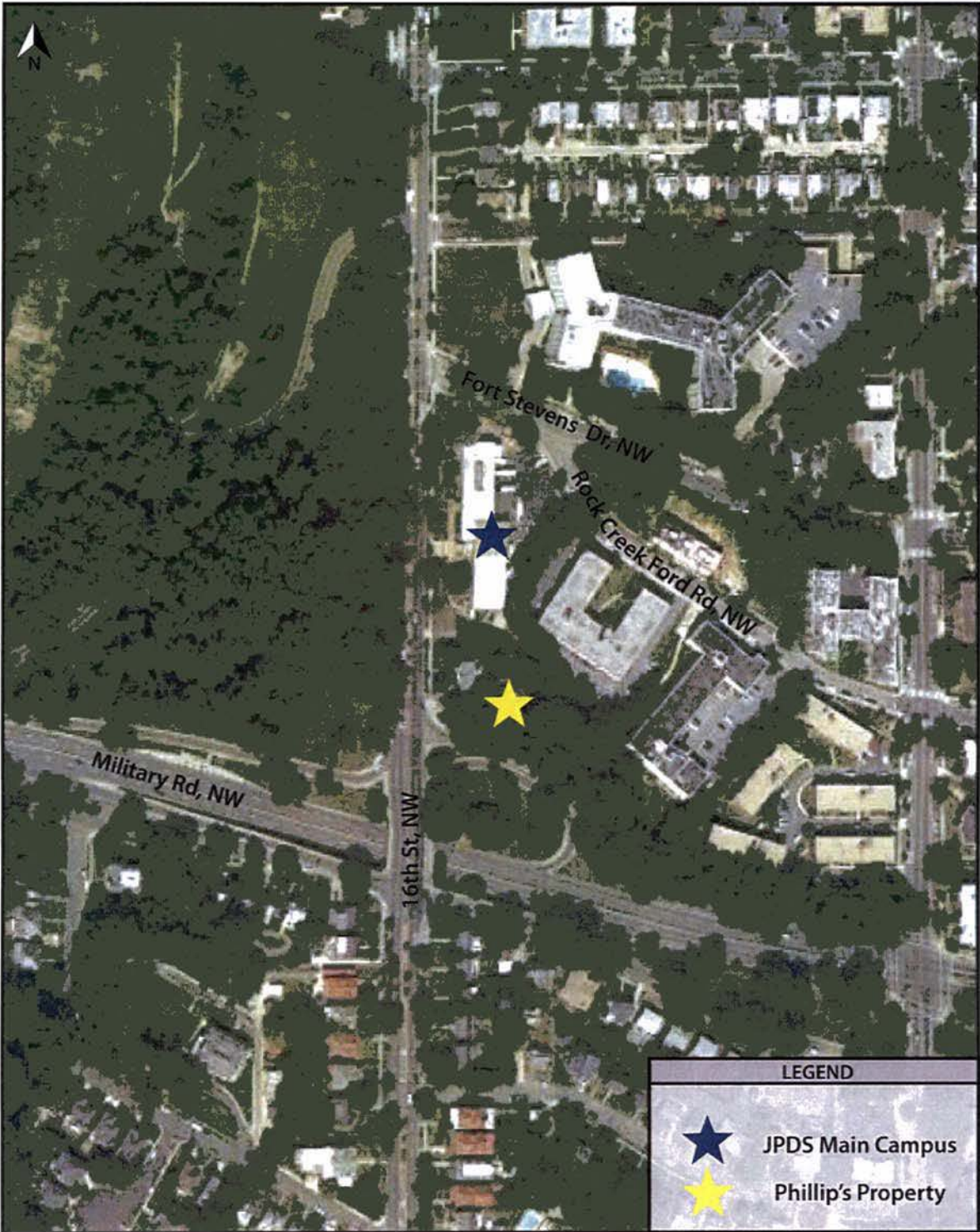


Figure 5: Aerial of Phillip's Property

Transportation Modal Split

JPDS will increase its existing student population by 9% (from 275 to 300). Faculty/Staff population will be increased by 28% (56 to 72). Student and Faculty/Staff transportation characteristics are expected to remain consistent with existing travel patterns.

Future Vehicle Trip Generation

Future trip generation was projected by increasing existing March 2012 trip generation (shown in Table 5) by the rate of increase in student enrollment. The projected increase in vehicle trips to the main campus is shown in Table 7.

Table 7: Future Trip Generation (Additional Main Campus Trips)

AM Peak			School PM Peak			Commuter PM Peak		
IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
7	5	12	5	4	9	1	1	2

With the proposed enrollment increase of 9%, there would be an increase in 10 AM peak, 7 School PM peak and 2 Commuter PM peak hour trips. This increase in trips is negligible.

Table 8 summarizes future trip generation to the main campus. The table also provides a comparison of future trip generation to the previous March 2007 trip generation data.

Table 8: Total Future Trip Generation and Comparison to March 2007

	AM Peak			School Peak			PM Peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
March 2012	82	54	136	57	47	104	8	10	18
9% Increase	7	5	12	5	4	9	1	1	2
JPDS Projected Main Campus Traffic*	89	59	148	62	51	113	9	11	20
March 2007	117	99	216	105	105	210	28	15	43

*Future School Year 2013-2014

As shown in Table 8, the main JPDS campus is projected to generate 146 AM peak hour and 112 School PM peak hour trips. This trip generation is considerably less than the trip generation recorded in March 2007. It is also noted there were 225 students enrolled in March 2007 versus 273 students enrolled during March 2012 traffic counts.

Queuing

In the future, the JPDS driveway will continue to operate as it does today. With the 9% population increase (from 275 to 300), the following can be expected:

- *Morning Drop-off* – The existing maximum (on-site and off-site) queue length of 11 cars can be expected to increase by **one** car. The average vehicle queue on Fort Stevens Road would remain one car.
- *Afternoon Pick-up* – The maximum (on-site and off-site) queue would increase by **two** car lengths from 22 to 24. This would increase the on-street queue from 6 to 8 cars. This maximum queue would last for approximately one minute.

PROPOSED EARLY CHILDHOOD CAMPUS – EXISTING CONDITIONS

The Washington Latin Public Charter School is currently housed in the former British School of Washington located at 4715 16th Street. Figure 6 illustrates the site location.

The roadways immediately surrounding the Washington Latin Public Charter School site are described below:

Roadway Network

The roadways included as part of the JPDS Project study area are described below:

- 16th Street is a four-lane, median divided, principal arterial that extends from K Street in the south to Eastern Avenue in the north. The posted speed limit on 16th Street is 30 miles per hour (mph).
- Decatur Street is a two-lane, two-way local road that extends from New Hampshire Avenue in the east to Blagden Avenue. Curb parking is permitted on both sides of the roadway except during street cleaning on Tuesdays (eastbound lane) and Wednesdays (westbound lane) between 9:30AM and 11:30AM.
- Piney Branch Road is a two-lane, two-way local road that extends from Colorado Avenue in the north to Buchanan Street in the south. Curb parking is permitted on both sides of the roadway except during street cleaning on Mondays (northbound lane) and Tuesdays (southbound lane) between 9:30AM and 11:30AM.

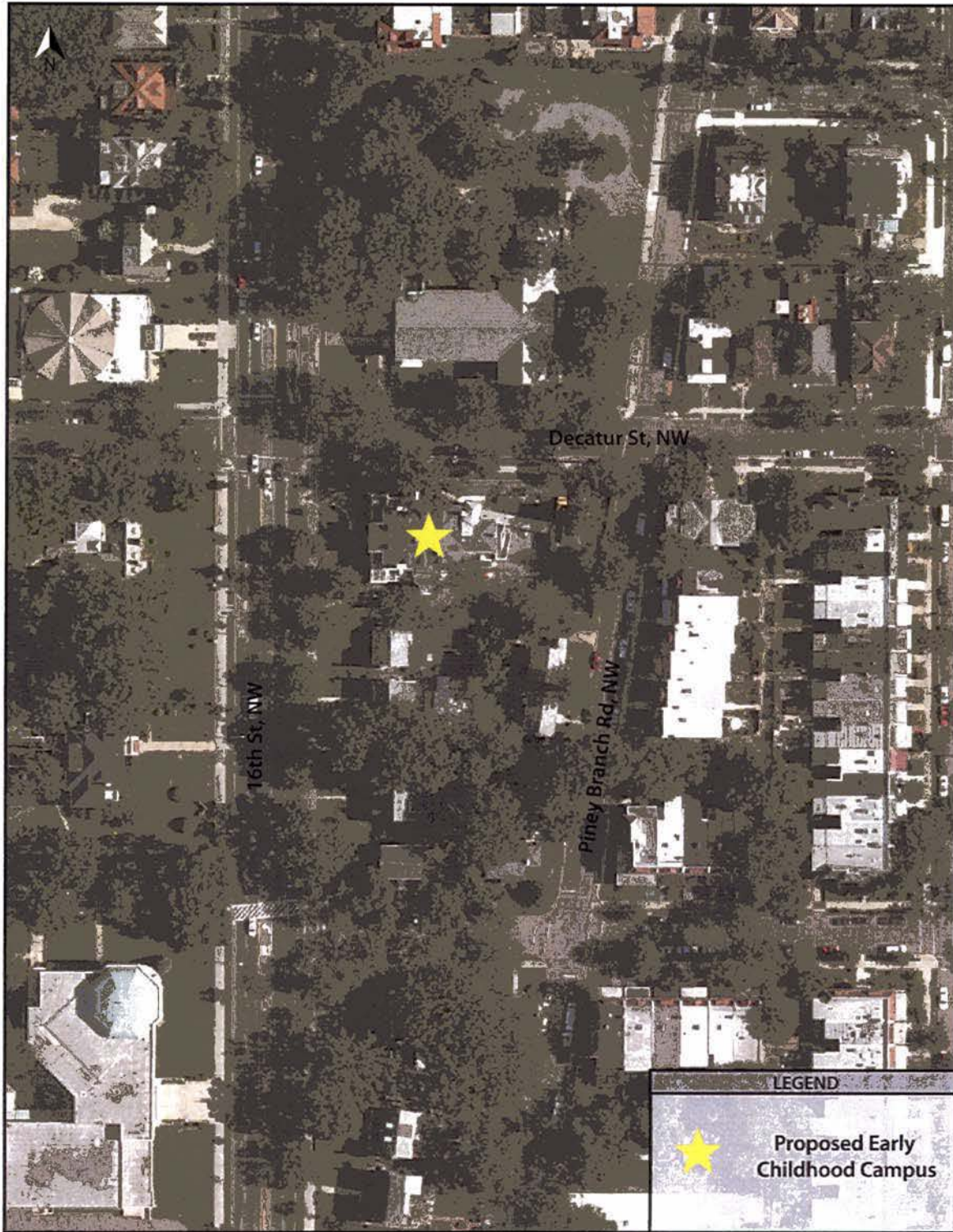


Figure 6: Proposed Early Childhood Campus Site Location

Site Access and Circulation

Primary vehicle access is provided via the School's driveway along Decatur Street. The driveway operates as a one-way inbound one-way outbound system with vehicles entering at the westernmost access (closer to 16th Street) and exiting at the easternmost access (near Piney Branch Avenue). Along 16th Street, there are two curb cuts that provide access to a circular driveway. The southernmost curb cut also provides access to an asphalt paved area in the rear of the school. Figure 7 provides a schematic of existing vehicular circulation.

Drop-off and Pick-up Operations

Vehicles

Drop-off and pick-up operations take place at the Decatur Street driveway. Some parents also stopped along Decatur Street and/or along 16th Street to drop-off students. Drop-off occurs during the morning from 7:00 AM to 8:10 AM and pick-up occurs during the evening anytime from 3:15 PM to 7:15 PM. Existing AM and School PM peak hour site trips (associated with the Washington Latin Public Charter School) is shown in Figure 8.

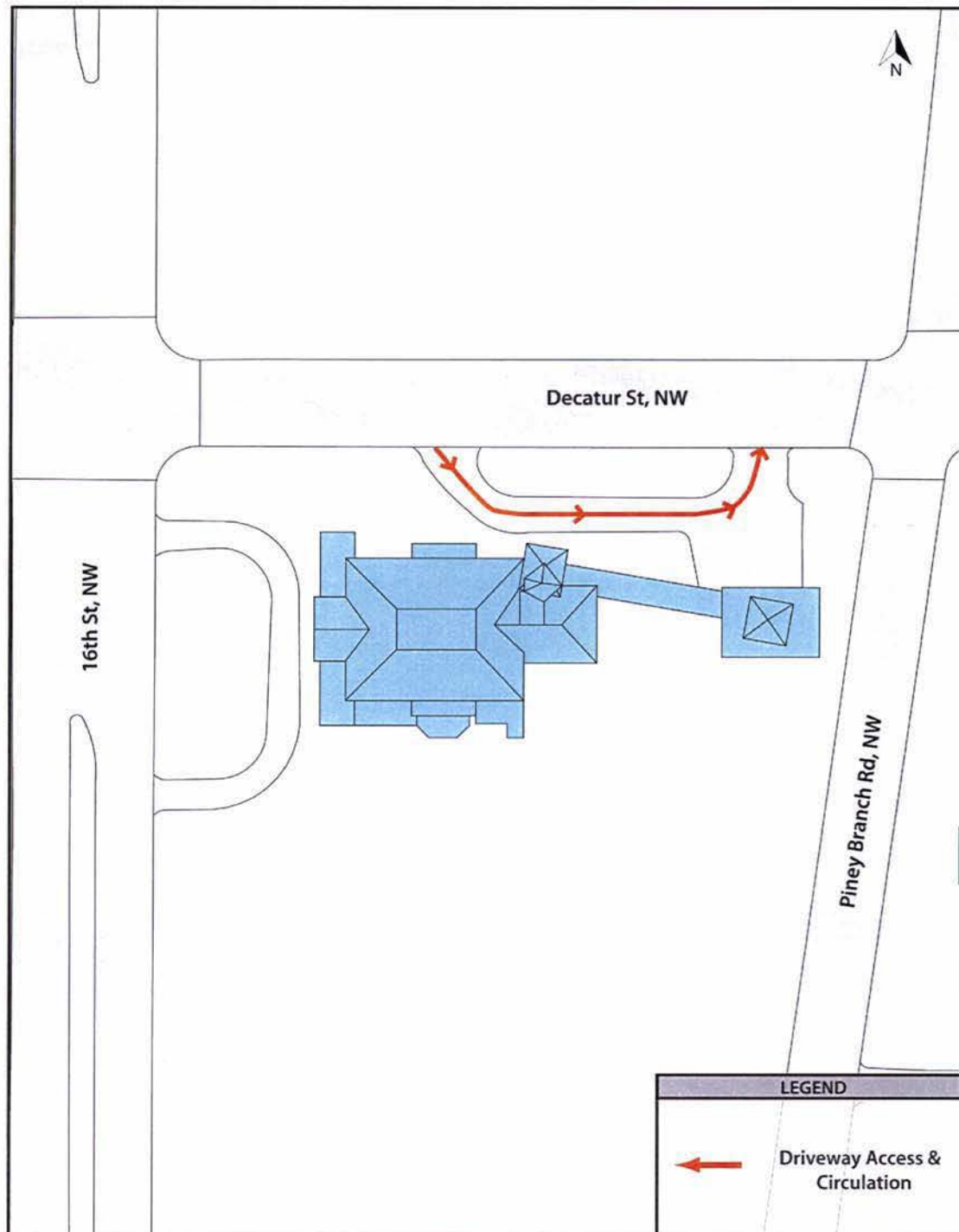


Figure 7: Schematic of Access and Driveway Operations

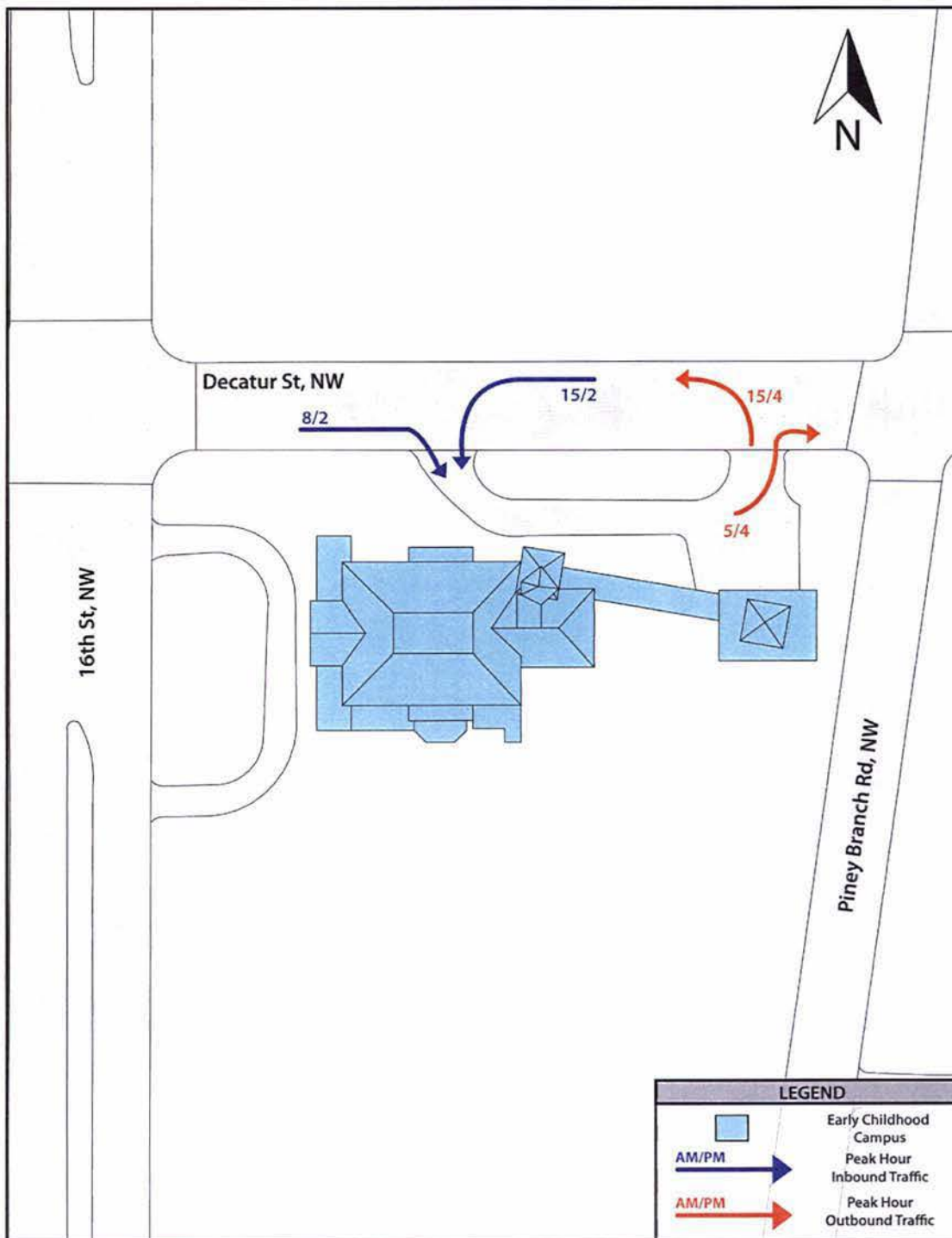


Figure 8: Washington Latin Public Charter School Existing Peak Hour site Trips

Pedestrian Access and Bicycle Facilities

Sidewalks along 16th Street and Decatur Street provide pedestrian access to and from the School.

According to the District of Columbia Bicycle Map (2011 edition), there are two types of bicycle facilities within half (1/2) mile radius from the Latin School site along 14th Street and Piney Branch Road. The bike facilities are located on the following roadway segments:

- Bike Lanes - along 14th Street from Aspen Street in the north to Columbia Road in the south.
- On-street Signed Routes - along 13th Street from Georgia Avenue in the north to New York Avenue in the south.

Traffic conditions for bicycling especially along 16th Street are considered fair to poor.

Transportation Modal Split

The majority of the students use public transportation to travel to/from school, either by Metrobus or a combination of Metrorail and Metrobus via the Columbia Heights Station. Some students walk and/or bike or ride with their parents.

Approximately fifty percent (50%) of staff ride-alone, twenty-five percent (25%) take metro bus and twenty-five percent (25%) walk/bike to/from the School.

Traffic Counts and Field Observations

Traffic data (turning movement counts) and field observations were conducted on Wednesday March 14, 2012 from 6:45 AM to 9:00 AM and from 4:00 PM to 6:15 PM.

Queuing

There was no school-related vehicle queuing on adjacent roadways.

Vehicle Trip Generation

Existing trip generation (associated with the Washington Latin Public Charter School) is shown in Table 9.

Table 9: Washington Latin Public Charter School Existing Trip Generation

	AM Peak			School PM Peak			Commuter PM Peak		
Month/Year	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
March 2012	32	27	59	12	18	30	16	21	37

The Washington Latin Public Charter School currently generates 59 AM, 30 school PM and 37 Commuter PM Peak hour trips.

Parking

The school has 10 vehicle spaces on-site, four spaces in the parking lot accessed via the Decatur Street driveway and six spaces¹⁰ positioned along the 16th Street driveway.

¹⁰ Located within public spaces and are not zoning compliant

PROPOSED EARLY CHILDHOOD CAMPUS- FUTURE CONDITIONS

The JPDS is planning to relocate its Pre-Kindergarten, Kindergarten, and Grade 1 students from its main campus to the current site of the Washington Latin Public Charter School. There are currently 92 students in the Pre-Kindergarten, Kindergarten and Grade One program and that number is expected to grow to 130 (proposed cap) students in the future. There will be 26 faculty/staff members on-site. School hours will be the consistent with hours of operation at the main campus.

All students and faculty/staff members associated with the Washington Latin Public Charter School will be re-located prior to JPDS' occupancy of the property.

Proposed Campus Connection

JPDS will provide a shuttle bus to connect the main campus with the new early childhood campus. Children and/or siblings that currently ride the bus will continue to ride the bus in the future and will be dropped off at the appropriate campuses.

Families who drive to school with siblings in both campuses will have a single drop off point at one campus and the sibling(s) that attends the other campus will be shuttled via the designated shuttle bus.

Transportation Modal Split

Students

The Proposed Early Childhood Campus would operate the same hours of operation as the Main Campus and students are expected to continue to arrive/depart the school similar to the way they do today (see Tables 2 and 3). It should be noted that the early childhood students currently have carpool and bus ridership percentages comparable to or greater than the carpool and bus ridership rates for the older students.

Future Vehicle Trip Generation

Peak hour trip generation to the Early Childhood campus was projected by multiplying the existing trip rate¹¹ to the potential Early Childhood program population (130 students). Table 10 illustrates the net difference in site trips expected to the early childhood campus compared to existing WLPCS vehicle trips.

¹¹ Trips per students

Table 10: Net Future Trip Generation

	AM Peak			School PM Peak			PM Peak		
Scenario	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Future Early Childhood Campus	37	25	65	26	21	47	4	4	8
Existing WLPCS	32	27	59	12	18	30	16	21	37
Net Site Trips	8	-2	6	14	3	17	-12	-17	-29

The proposed JPDS early childhood development relocation is projected to result in a net increase of 6 AM and 17 School PM trips. This increase in site trips is negligible. In addition, during the Commuter PM peak hour there would be a net decrease of approximately 29 trips to the school.

Drop-Off and Pick-up Operations

Vehicles

Vehicle drop-off and pick-up operations will take place along the Decatur Street driveway. JPDS will enforce a system requiring vehicles approach the driveway from the east (traveling westbound along Decatur Street). Vehicles will then turn left onto the school driveway. This circulation is intended to mitigate potential impacts of cars queued back to 16th Street.

School buses

JPDS will use the southern 16th Street driveway for inbound/outbound bus access to the school. The driveway would be managed by school personnel during drop-off and pick-up operations.

Queuing

In order to project potential queuing, it is assumed the Early Childhood Campus would have the same transportation characteristics as the Main Campus. This assumption is viable since the early childhood students (Pre-Kindergarten, Kindergarten and First Grade) currently have carpool and bus ridership percentages comparable to or greater than the carpool and bus ridership rates for the older students¹². At the Main Campus, the 273 student body currently generates a maximum (on-site and off-site) vehicle queue of 11 cars during the morning and 22 cars during the afternoon. It can be expected a student population of 130 students at the Early Childhood Campus would generate a maximum vehicle queue of 5 cars during the morning and 10 cars

¹² Existing ridership data indicates 51% of Early Childhood population (pre-kindergarten, kindergarten and first grade) ride the bus to school and 69% ride the bus home from School. Of the students in grades two through six, 42% ride the bus to school in the morning and 58% ride the bus home from school in the afternoon.

during afternoon. This queue is calculated by creating a ratio between the existing student body (273) and the existing vehicle queue (11 AM and 22 School PM) to the proposed Early Childhood Student population (130). While there were no observed differences in loading/un-loading associated with smaller children, JPDS acknowledges smaller kids theoretically take longer to get into and out of vehicles. In sight of this, the projected maximum queue of 10 cars has been increased by two vehicles to 12 cars. The existing driveway (along Decatur Street) has a capacity of 8 car spaces; thus four cars may potentially queue on the street. On-street queuing is expected to last for a short period. In addition, the proposed circulation system will require vehicles approach the driveway from the east (traveling westbound along Decatur Street) and make a left onto the school driveway. This circulation is intended to mitigate potential impacts of cars queuing back to 16th Street.

Parking

Zoning requires the JPDS provide two parking spaces for every three faculty/staff members. A total of 26 faculty/staff members will be on-site at the Early Childhood Campus thus 17 parking spaces are required. There are ten spaces on-site today. Additional parking will be provided at an off-site location. Designated staff members will be responsible for picking up/ dropping-off JPDS Staff at this location.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

The JPDS has an active TDM program which includes the following measures:

- **Bus Program** – JPDS has a successful bus program offering three school buses with 140 students (51% of current population) enrolled in the bus program. Each bus can accommodate a maximum of 66 students. In the future, the bus program will be expanded to include a fourth bus. The addition of the fourth bus will help streamline existing bus routes and provide additional service to students. The JPDS has also instated financial incentives such as subsidizing ridership cost. This has greatly increased ridership.
- **Carpool** – The JPDS provides a zip code list that helps connect families with other JPDS families interested in carpooling to/from school. Approximately 45% of students currently carpool to the JPDS.
- **Off-site parking for faculty** – Approximately six faculty/staff members currently park off-site. In the future, the JPDS will utilize an off-site location, in Maryland, for faculty/staff. A leasing agreement between the JPDS and the owner of the proposed location is underway. Designated staff members will be responsible for picking up/ dropping-off JPDS Staff at this location. Faculty/Staff members will then carpool into the District to the main JPDS campus.
- **Shower Facilities** – JPDS will provide shower facilities in the Early Childhood building as an incentive for faculty/staff members to bike to the school. Shower facilities are also available within the Phillip's property for faculty/staff at the Main Campus.
- **Intercampus connectivity** – JPDS will provide a bus to shuttle children to/from the main campus and the early childhood campus. Families who drive to school with siblings in both campuses will have a single drop off point at one campus and the sibling(s) that attends the other campus will be shuttled via the designated shuttle bus.

More than 83% of the JPDS student population currently participates in the bus program and/or carpools to the school. The JPDS will continue to implement TDM measures (listed above) and work to increase participation with the proposed increases in student population.

CONCLUSIONS

- The Jewish Primary Day School's proposes to expand its Main campus and increase its student population from 275 to 300 students and increase minimum faculty/staff cap from 56 to 72. The JPDS will purchase the neighboring property to serve as administrative offices.
- The Main campus currently generates 136 AM peak hour trips, 104 school PM peak hour trips and 18 commuter PM peak hour trips. With the proposed 9% enrollment increase there would be an increase in 10 AM peak, 7 School PM peak and 2 Commuter PM peak hour trips. This increase in trips is negligible and is considerably less than the trip generation recorded in March 2007.
- With the 9% population increase (from 275 to 300), the maximum (on-site and off-site) vehicle queue is expected to increase by one car during the morning and by two cars during the afternoon. The vehicle queue would last for no more than one minute at any one time.
- The Jewish Primary Day School has purchased the former British School of Washington (currently leased by the Washington Latin Public Charter School for ninth and tenth graders) located at 4715 16th Street. JPDS will relocate its Pre-Kindergarten, Kindergarten and First grade academic programs to this location and will request an increase in the existing student cap from 125 students to 130 students.
- The Washington Latin Public Charter School (existing tenant of the Proposed Early Childhood Campus) currently generates 59 AM, 30 school PM and 37 Commuter PM Peak hour trips. With the relocation JPDS's Pre-Kindergarten, Kindergarten and First Grade programs, a net increase of 6 AM and 17 School PM trips will be generated. This increase in site trips is negligible. During the Commuter PM peak hour there would be a net decrease of approximately 29 trips.
- With the proposed 130 student population at the Early Childhood Campus, off-site vehicle queuing is expected to be a maximum of 12 cars (considering smaller kids may take longer to load/unload). The existing site driveway has a stacking capacity of 8 car spaces thus four cars may potentially queue on Decatur Street during the afternoon. No vehicle queuing is projected during the morning drop-off.
- Student Transportation Demand Management measures including the expanded school bus program and intercampus shuttle bus will reduce impact on the local intersections and reduce the school's carbon footprint on the environment. More than 83% of the JPDS

student population currently participates in the bus program and/or carpool program. The JPDS will continue to implement TDM measures and work to increase participation with the proposed increases in student population.

- Faculty/Staff Transportation Demand Management measures including providing an off-site location for faculty/staff to park and carpool into the District. The JPDS will also provide shower facilities within the Early Childhood Campus as an incentive for faculty/staff member to bike to the school. Shower facilities are also available within the Phillip's property for faculty/staff at the Main Campus.

There are 41 stacked spaces at the Main Campus, 10 vehicle spaces at the Early Childhood Campus and 4 parking spaces at the Phillip's property. Additional off-site parking will be provided for Faculty/Staff. Faculty/Staff members will carpool to JPDS from the off-site parking location.