



WELLS + ASSOCIATES

MEMORANDUM

ACCOMMODATION OF PROPOSED RELOCATION

Potential Queuing Capacity on Campus

Several options have been discussed to provide adequate queuing space for the Lower School. It is clear that accommodation of the current Lower School pick-up operation is not feasible entirely on the Washington Home site without significant impacts to proposed outdoor programmed space. Therefore, methods to split the queuing locations among multiple locations and/or reduce the pick-up queue must be employed. Potential options for accommodating the pick-up operation are summarized below:

Options for accommodating the pick-up operation among multiple locations–

- On-site options at the future Lower School (Washington Home) site

The on-site pick-up operation can be handled in one of two ways: 1) by providing short term parking and allowing parents to park, leave their vehicle, and walk to the school entrance to pick up their child or 2) by creating queuing storage that allows parents to pick up their students at the front door of the school without having to leave their vehicle. The second option has the advantage of being able to substantially reduce the number of vehicles on campus at one time, thereby creating a more efficient process.

For scenarios where queuing storage is created on site, it is important to configure the design so that the queue is fed from behind. This prevents congestion and additional conflict points near the point of pick-up where children have a significant presence. In order to accommodate a queuing scenario in which the queue is fed from behind, relocation of the existing curb cut on Upton Street further to the east would be ideal. While it is very unlikely that DDOT would approve a second curb cut on Upton Street, relocation of the curb cut is more feasible.

Another option that should be considered is the ability to use the service drive on 37th Street during pick-up and drop-off operation. A conceptual design that illustrates one such design is provided on Figure 13 at the end of this document.

- On-street options

Many schools in the District have parking restrictions along the school's frontage ("No Parking School Days" signs are posted with appropriate time restrictions). It is possible that such a restriction could be implemented on either Upton Street or 37th Street adjacent to the Washington Home site (i.e. on the same side of the street). Approximately 22 vehicles could be accommodated along the Upton Street frontage (between 38th Street and 37th Street). Approximately 15 vehicles could be accommodated along the 37th Street frontage.

Both Upton Street and 37th Street currently are signed for Residential Permit Parking (individuals with Zone 3 RPP stickers can park for an unlimited time; individuals



WELLS + ASSOCIATES

MEMORANDUM

without a Zone 3 RPP sticker can park for two hours from 7:00 AM to 8:30 PM). Given the loss of RPP parking during the day, it is unlikely that DDOT would approve the School Day parking restriction on both Upton and 37th Street.

Ideally, the curbside area posted as “No Parking School Days” would be used as additional stacking space for vehicles waiting to join the queue on campus. However, due to the turning restrictions at the Upton Street/Wisconsin Avenue intersection (which is limited to right-in/right-out maneuvers), traffic coming from the north and east would be heading in the wrong direction to take advantage of the additional curb side queueing space. Therefore, the curbside space most likely would be used for parents parking and walking to the school to pick up their children.

Likely routes to/from the new Lower School Campus are shown on Figure 14 at the end of this document.

■ Shared options

Two shared options have been considered thus far: 1) creation of a new drop-off/pick-up area at the site of the existing tennis courts and 2) Upper School garage.

The new location at the site of the existing tennis courts has the potential to accommodate approximately 13 vehicles, in the configuration shown on current landscape plans. Access to this area could be provided either via the current service road or opposite Rodman Street and through the garage. The advantage of the service drive is that it provides a more direct route to the drop-off area and keeps the traffic flow separate from the high school pick-up/drop-off operation. The disadvantage of the service road option is that entering vehicles would not have the aid of a traffic signal. The advantage to the Rodman Street entrance is that vehicles would be aided by the left turn arrow currently in place at the intersection. The disadvantage is that the Wisconsin Avenue/Rodman Street intersection can handle a limited amount of additional traffic before significant impacts are incurred. Both access options would need further, detailed evaluation to determine the best option from both a safety and efficiency perspective.

The feasibility of using the Upper School garage to accommodate a portion of the Lower School pick-up operation was evaluated. Today, the Lower School pick-up operation largely is complete by 3:30. The Upper School pick-up zone operates at capacity between 3:30 and 3:45. In order to ensure that the queuing lane does not operate over capacity, the Upper School dismissal time would need to be shifted at least 15 minutes later. However, shifting the start time for the Upper School in the morning may have significant implications for intersections on Wisconsin Avenue. The peak 30 minute volumes on Wisconsin Avenue occur from 8:15 – 8:45 AM. Shifting Upper School traffic to a time that coincides with peak commuter traffic on Wisconsin Avenue would create significant impacts at intersections in the area.



WELLS + ASSOCIATES

MEMORANDUM

Additionally, given the distance between the Lower School and the Upper School garage, it is likely not ideal for the Lower School students to walk between the two schools on their own. More likely, parents would park and walk to the Lower School to pick up their students. While there will be sufficient parking in the garage to accommodate a substantial number of Lower School parents, this likely is not the most convenient option and, thus, parents will seek more direct options. The ability to use the garage to accommodate Lower School pick-up operations also is hindered by the available capacity at the Wisconsin Avenue/Rodman Street intersection. Based on our preliminary analysis, approximately 40 percent of the morning drop-off queue and approximately 15 percent of the afternoon pick-up queue could be handled through the Wisconsin Avenue/Rodman Street intersection before negative impacts to the operation of the intersection would be incurred.

Methods for reducing demand:

- More efficient/organized management –

Current pick-up/drop-off operations at the Lower School do not maximize efficiency during the afternoon pick-up time. Parents must arrive early at the school to secure a parking space in the parking lot or on-street near the school. Parents arriving later must park as far away as four or five blocks and walk to and from their cars to pick up their children. This operation requires vehicles to be present for longer periods of time than would be required if queues could be accommodated on site and parents could pick up their children near the door of the school without having to leave their vehicle.

Short term parking for 105 vehicles cannot be easily accommodated on the proposed lower school campus without significant impacts to proposed outdoor program space. Nor can it be accommodated on the streets adjacent to the Washington Home site.

If operations were changed so parents could drive to the front of the school, pick up their children without having to leave their vehicles, and then depart, vehicles could be processed more efficiently. In addition, the establishment of a system to match children with the proper vehicle would help speed the process. For example, each child could be assigned a number, which could be placed in the windshield of each parent's vehicle. A member of staff could radio the numbers back to the school as the vehicles enter campus. Staff at the school would then shepherd the appropriate students to the awaiting vehicles, decreasing the required dwell time in the pick-up queue and processing vehicles more efficiently, thus shortening the queue.

Based on other DC private schools with a similar trip generation profile and more efficient pick-up operations, it is estimated queues could be reduced by approximately 30 percent.



WELLS + ASSOCIATES

MEMORANDUM

■ Transportation Demand Management Strategies –

Improved Carpool Program – If the Lower School were to implement a Carpool Initiative with an AVO goal of 1.6 students per vehicle, the number of vehicles picking up students could be reduced by approximately 30 percent. A Carpool Initiative could include the following:

- An online map for parents to see what other Sidwell families live near them and are interested in carpooling. The interactive map would provide contact information.
- Incentives for carpooling, such as discounted tuition or preferential drop-off locations for carpoolers. For example, depending on the ultimate design of the site, parents who carpool could be accommodated on site (near the front door) while those who do not carpool might be required to use the designated on-street area or short-term parking in the Upper School garage. Alternatively, the on-site circulation design could include a carpool only lane and vehicles in the carpool only lane would be given priority.

Expanded Pick-up Duration

Currently, the Lower School pick-up operation happens almost entirely in a 15 minute window. School dismisses at 3:15 and parents are required to pick-up students by 3:30. Students not picked up by 3:30 are placed in aftercare and parents are charged accordingly. Expanding the pick-up window by 15 minutes or more would help reduce the queuing needs required.

Busing

Creation of a busing program or shuttles to the nearby Metro or off-site drop-off/pick-up locations (determined based on home locations of the student population) could substantially reduce the trip generation for the entire campus and, thus reduce the queuing needs for the not only the Lower School, but also the Upper and Middle Schools.

Transit/Alternate Commute Incentives

By January 1, 2016, employers in the District of Columbia with more than 20 employees will be required to provide one of the following benefits:

- Employee Paid Pre-Tax Benefit – under this option employees have an option to set aside \$130/month in pre-tax funds through their paycheck for transit or vanpool expenses.
- Employer Paid Direct Benefit – Under this option, employers can subsidize employee transit or vanpool costs up to \$130 per month or bicycle commuting costs up to \$20 per month.



WELLS + ASSOCIATES

MEMORANDUM

- Employer Provided Transportation.

Additional measures could include:

- Enroll in Guaranteed Ride Home, which provides employees who regularly take transit, vanpool, carpool, walk, or bike to work with a reliable ride home when an unexpected emergency arises.
- Encourage older students and/or parents to use Metrorail and Metrobus services by offering a Metro stipend to financial aid students.
- Encourage District of Columbia students to take advantage of the School Transit Subsidy Program, which allows students at private schools to receive discounted transit passes for rail and bus.
- Hold a "Transportation to School" event during or after school once or twice a year, stressing the importance of public transportation, carpooling, biking, etc.

DDOT CONSIDERATIONS

Based on our experience with other private schools in the District, we anticipate DDOT likely will require a transportation management plan (TMP) in conjunction with the relocation of the Lower School. Required elements of the TMP may include the following:

- Establishment of a carpool initiative with a goal of obtaining a pre-established average number of students per vehicle. At least one other school has a goal established by DDOT of 1.6 students per vehicle. While there is no penalty for not achieving the goal, the school is required to conduct counts three times per year to document the average number of students per vehicle. By comparison, Sidwell's Lower School currently has an average vehicle occupancy of 1.19 students per vehicle during the AM peak hour and 1.17 students per vehicle during the PM peak hour.
- Establishment of a peak hour trip generation threshold with a requirement to conduct annual or biannual monitoring studies to measure actual trip generation versus pre-established goals. It is anticipated that those goals would be set to reflect a substantial existing reduction from existing conditions (on the order of 10 to 30 percent).
- Participation in Commuter Connections School Pool Program (or similar program), which assists parents in finding other parents in their neighborhood for carpools, walking groups, or biking groups.
- Provision for ample bicycle parking on-site.



WELLS + ASSOCIATES

MEMORANDUM

CONCLUSIONS

Based on our preliminary evaluation, the most significant challenge related to the relocation of the Lower School to the Upper/Middle School campus is the accommodation of the afternoon pick-up operation. A multi-faceted approach is recommended for accommodating the pick-up operation:

- 1) Reduce the number of vehicles coming to/from campus (thereby reducing the demand during pick-up operations), which may include the following:
 - a. Implementation of a Transportation Demand Management Plan,
 - b. Implementation of a Carpool Initiative to increase the school's AVO.
- 2) Change pick-up/drop-off operations at the Lower School so parents can drive to the front of the school, pick up their children without leaving their vehicles, and then depart. This will help reduce the peak demand during pick-up operations and may include the following:
 - a. Implementation of a system at the Lower School to match children with the proper vehicle during the afternoon pick-up.
- 3) Create a design that will allow for a more efficient pick-up operation, as described above. Design should include queuing lanes to accommodate drop-off/pick-up operation and driveway located so that queue can be fed from behind (which may require use of the 37th Street driveway or shifting the Upton Street driveway further to the east).
- 3) Accommodate the pick-up operation in multiple locations (e.g. on the Washington Home site, on Upton Street or 37th Street, and at a potential new drop-off pick-up circle in the area of the existing tennis courts). "No Parking School Days" signs along the school's frontage on either Upton Street or 37th Street can be pursued through DDOT to maximize use of that space by the school. If multiple locations are used, it is important to have a clear procedure in place for identifying which parents (differentiated by grades) are assigned to each particular location to avoid confusion, over-utilization of one particular area (which could lead to spillback on the adjacent street), and additional time recirculating through the neighborhood if a parent is turned away from a particular pick-up area because it is at capacity.

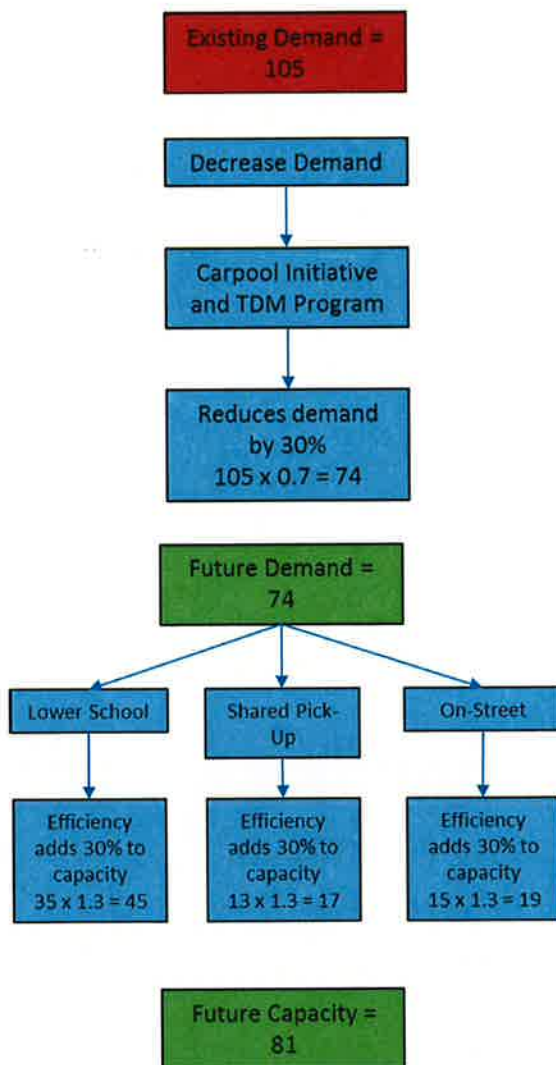
Figure 15 illustrates how this multi-faceted approach could be used to accommodate the pick-up operation at the Lower School. As shown below, improving operations at the pick-up areas could increase capacity at those locations by 30 percent.



WELLS + ASSOCIATES

MEMORANDUM

Figure 15
Sample Multi-Faceted Approach



Should you require any additional information, please do not hesitate to contact us at 703-917-6620, jlmlanovich@mjwells.com, or armartin@mjwells.com.

O:\Projects\6500-7000\6510 Sidwell Friends School\Documents\Preliminary Evaluation.docx

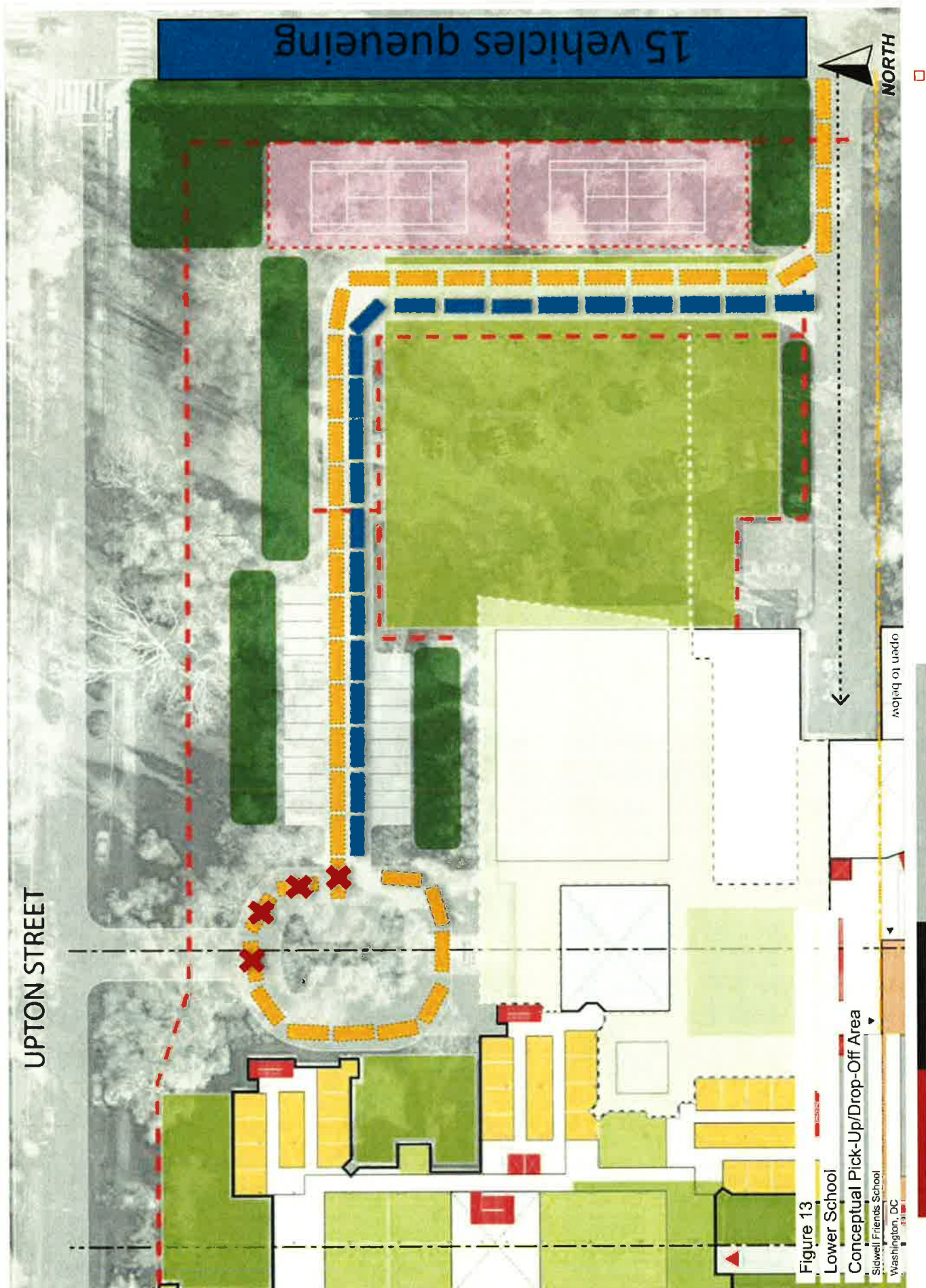


Figure 13
Lower School
Conceptual Pick-Up/Drop-Off Area

Sidwell Friends School

Washington, DC

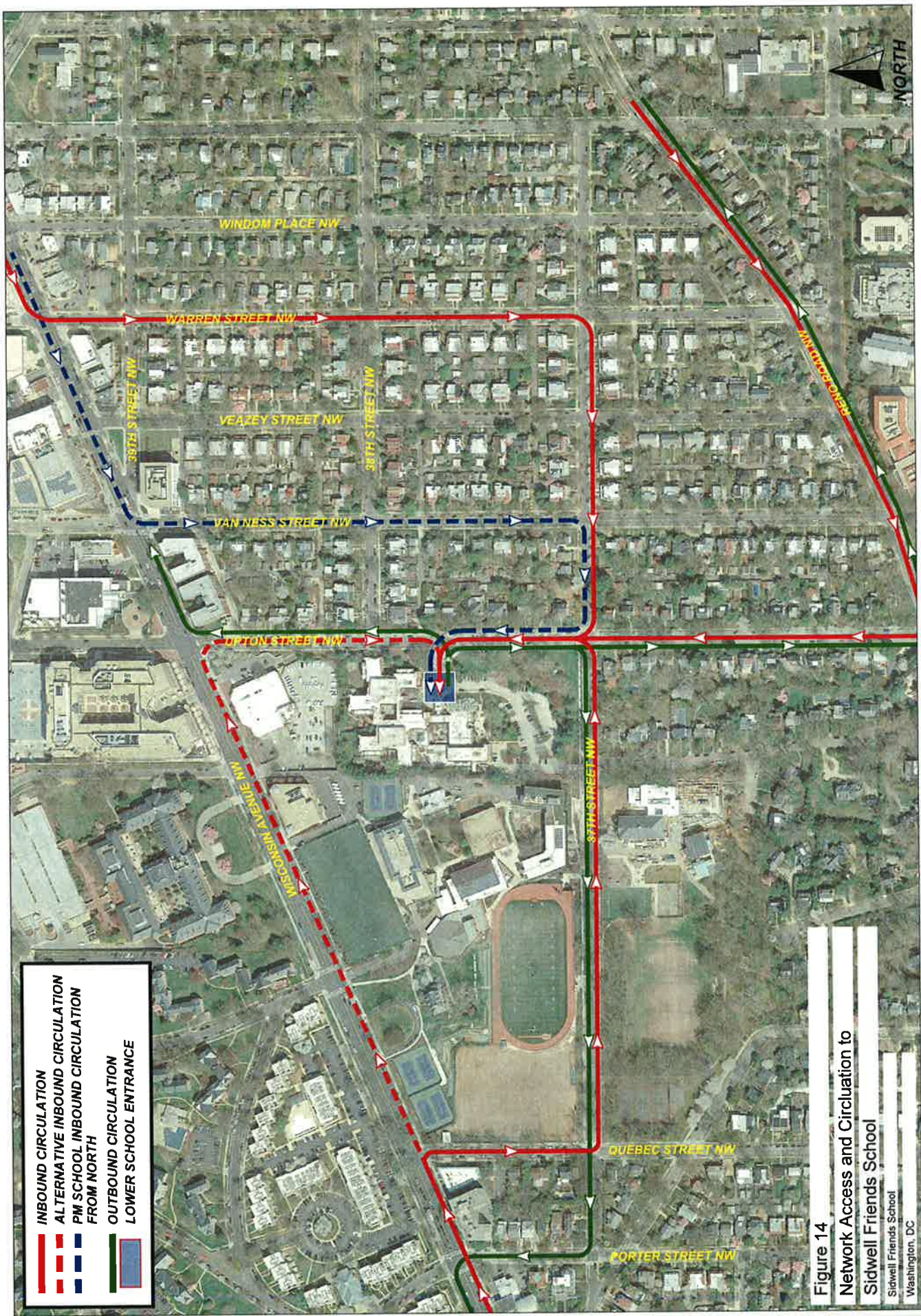


Figure 14
Network Access and Circulation to
Sidwell Friends School

Sidwell Friends School
Washington, DC



Transportation Management Plan for Sidwell Friends School

Transportation Demand Management Measures

1) Provide Carpool Matching Assistance

- Create an online map for parents to see what other Sidwell families live near them and are interested in carpooling. The interactive map would provide contact information.
- Register with Commuter Connections School Pool Program – The program assists parents in finding other parents in their neighborhood to form carpools, walking groups, or biking groups.

2) Implement Shuttle Busing

- Provide shuttle(s) to the nearby Tenleytown Metro Station for faculty, staff, and students. The stop location will be subject to DDOT approval and require a Public Space Permit.

3) Provide Transit/Alternate Commute Incentives

- Employee Paid Pre-Tax Benefit – under this option employees have an option to set aside \$130/month in pre-tax funds through their paycheck for transit or vanpool expenses.
- Enroll in Guaranteed Ride Home, which provides employees who regularly take transit, vanpool, carpool, walk, or bike to work with a reliable ride home when an unexpected emergency arises.
- Encourage District of Columbia students to take advantage of the School Transit Subsidy Program, which allows students at private schools to receive discounted transit passes for rail and bus.

4) Capital Bikeshare

- Explore the possibility of a Capital Bikeshare station within closer proximity to Sidwell Friends School to maximize the opportunity to provide easy access for students, faculty, and staff.



5) Provide Outreach and Education

- Hold a “Transportation to School” event during or after school once or twice a year, stressing the importance of public transportation, carpooling, biking, etc.
- Participate in Safe Routes to School Program – The program encourages students and their parents to walk and bicycle to school by examining conditions around schools and conducting projects and activities to improve safety and accessibility. The program also provides pedestrian and bicycle safety training in the classroom.
- Participate in Walk to School/Bike to School Day
- Start weekly “Walking Fridays”
- Promote Walking/Biking in Communications with parents
- Students track Walking/Biking and its benefits

Operations Management Plan (Lower School)

- 1) Expanded Pick-up Duration – Expand the pick-up window at the Lower from 15 minutes to 30 minutes to help reduce queuing.
- 2) Pick-up/Drop-off Protocol –
 - Drop-off/pick-up for the Lower School will occur on the lower school site or in the shared circle adjacent to the new Campus Center.
 - Traffic entering the drop-off/pick-up lane on the Lower School site will enter via 37th Street and exit via Upton Street. The 37th Street driveway will be open to general traffic only during drop-off/pick-up periods. At all other times, the driveway will be open only to service traffic.
 - Traffic entering the drop-off/pick-up circle adjacent to the Campus Center will enter and exit via Wisconsin Avenue.
 - Parents/guardians will be assigned a drop-off/pick-up location and must use the assigned area. Parents/guardians will be given a color-coded tag with a number. The color will correspond to their assigned drop-off/pick-up location and the number will correspond to their student(s). The tag must be placed in the windshield of the vehicle picking up the student(s). A member of staff will note the number as the vehicle enters the pick-up



line and radio the number back to the school as the vehicles enter campus. Staff at the school then will shepherd the appropriate students to the awaiting vehicles once they stop in the circle in front of the school or adjacent to the Campus Center (depending on their assigned location).

- All parents who must leave their vehicle to drop-off/pick up students during regular drop-off/pick-up times, must park in the Upper School garage. Parents using the drop-off/pick-up lane at the Lower School must remain in their vehicles and will drop-off/pick-up their student(s) when they stop in the circle in front of the school.
- Staff members will be stationed at each drop-off/pick-up location to direct traffic and to assist students in getting to the appropriate vehicle.