**DOCKET ITEM #7****Development Special Use Permit #2019-00004****400 Green Street – The Basilica School of Saint Mary**

Application	General Data	
Project Name: The Basilica School of Saint Mary	PC Hearing:	April 8, 2021
	CC Hearing:	April 17, 2021
	If approved, DSUP Expiration:	April 17, 2024
	Plan Acreage:	3.89 Acres (169,271 square feet)
Location: 400 & 400A Green Street	Zone:	RM/Townhouse
	Existing/Proposed Use:	Private School
	Dwelling Units:	N/A
	Gross Floor Area:	111,109 square feet
Applicant: Catholic Diocese of Arlington, represented by M. Catharine Puskar, attorney	Small Area Plan:	Old Town
	Historic District:	Old & Historic Alexandria District
	Green Building:	LEED B&DC for Schools (Silver)

Purpose of Application

The applicant requests approval of a Development Special Use Permit and Site Plan to expand an existing private school and to construct a connecting addition between two school buildings and make site improvements.

Special Use Permit and Modifications Requested:

1. Development Special Use Permit with site plan for a private school with increased enrollment and to construct an addition;
2. Special Use Permit for parking in excess of the requirement;
3. Modification to minimum landscape island requirement; and,
4. Modification to the street tree placement requirement.

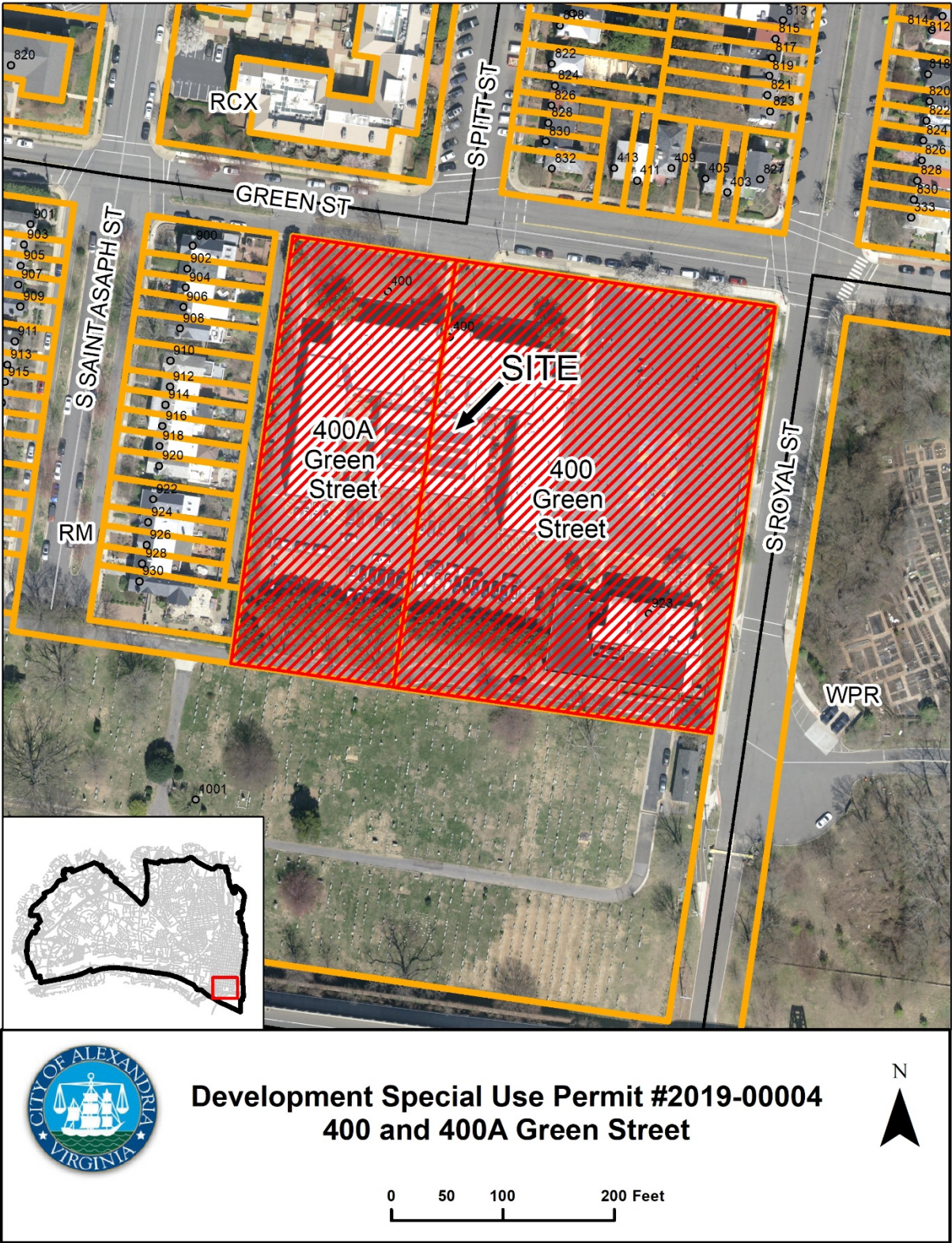
Staff Recommendation: APPROVAL WITH CONDITIONS**Staff Reviewers:**

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I. SUMMARY

A. Recommendation

Staff recommends approval of the Development Special Use Permit with modifications to increase enrollment, make site improvements and construct an addition at the Basilica School of Saint Mary. Staff finds the proposal is consistent with the City's goals and objectives and will provide benefits to the city, including:

- A new addition consistent with the City's 2019 Green Building Policy;
- Improved neighborhood traffic and parking impacts; and,
- Enhanced streetscape and site design.

The following issues were evaluated as part of the staff analysis and are addressed within the report:

- Conformance with the Master Plan and Other City Policies
- Site/Building Design and Board of Architectural Review
- Special Use Permits:
 - Private school addition
 - Parking in excess of the requirement
- Modifications:
 - to the minimum landscape island requirement
 - to the street tree placement requirement
- Open Space and Tree Canopy
- Parking/Loading
- Pedestrian and Streetscape Improvements
- Traffic Circulation
- Community Outreach

B. General Project Description & Summary of Issues

The Basilica School of Saint Mary requests approval of a Development Special Use Permit (with site plan) for a private school to construct a media center and library addition connecting two existing buildings, including a restroom and other small rooms in the shared addition space. Site improvements include:

- replacing tandem staff parking at the rear of the building to a parking lot at the corner of S. Royal and Green streets to limit staff parking in the neighborhood;
- reconfiguring and improving student drop-off and pick-up on the school property at the rear of the site;
- utilization of the queuing area for play space during the school day;
- addition of a brick wall with iron fencing along S. Royal and Green streets to replace an existing chain link fence;

- creation of a new playground for students located on the east side of the building;
- creation of a visitor parking area to the west of the front lawn; and,
- additional landscaping in and around the site.

The applicant also proposes a 45-student enrollment increase, from an existing population of 720 students to up to 765 students.

II. PROJECT BACKGROUND

A. Background

The Basilica School of Saint Mary is a private parochial school located in the RM residential townhouse zone at the south end of Old Town. The site has been operating as a school since the late 1940s.

B. Site Context



Figure 1: Illustrative Birds Eye View

The Basilica School of Saint Mary is a 3.89-acre site occupying a block-and-a-half located at the corner of Green and S. Royal streets in the Old & Historic Alexandria District, with the Basilica of Saint Mary cemetery bordering the school site on the south. Townhouses facing S. Saint Asaph Street back up to a public alley adjacent to the school on the west and townhouses and a condominium building are located across Green Street. The Federal Government's Jones Point Park is located across Royal Street to the east and south. The site is near public bus transportation, a walkable street grid with sidewalks and a bike path.

The topography of the site slopes from a high of 26 feet above sea level at the northwest corner of the site to a low of 11 feet above sea level along the S. Royal Street elevation. A chain link fence encloses a significant portion of the site, including the large asphalt parking lot at the corner of the site.

C. Site History

The Basilica School of Saint Mary (formerly St. Mary's School) site consists of two buildings - the original school building at 400 Green Street that operates as an elementary school with a connected gymnasium, and the smaller Stephens Hall which operates as the middle school. The area in front of the main building is somewhat formal but there are large portions of the site which have impervious asphalt used for traffic circulation and parking as well as outdoor play space for the students.

Both buildings were originally designed in the Colonial Revival style by the Philadelphia architecture firm of Gleeson and Mulrooney. Due to the shortage of building materials after World War II construction of the main building did not occur until 1948. The Old and Historic Alexandria District, established in 1946, has always included this site. The brick and limestone school building has a pedimented main entrance with gable roof and prominent cupola facing Green Street. The two building wings are more utilitarian with two stories and a flat roof above a raised basement. The two-story modern gymnasium was constructed to the south, in the center of the U-shaped school building, around 1980.

Stephens Hall, originally constructed as a convent, is a five-bay, three-story structure with a raised basement and a projecting central pedimented bay that was approved by the Board of Architectural Review on March 20, 1952. In the mid-1990s a wraparound addition was added to the building as part of its conversion to a middle school.

D. Detailed Project Description

The applicant requests approval of a Development Special Use Permit (with site plan) to expand enrollment at an existing private school, construct an addition connecting the two school buildings and make improvements to the site.

Addition



Figure 2: Proposed addition from entrance drive

A new bridge and tower addition will connect the elementary and middle schools at the upper level with an arched opening below the bridge to facilitate access through the site. The space will accommodate a library/media room, maker space and a meeting and work room, a single restroom and additional space in Stephens Hall. The screened mechanical area on the roof over the first floor on Stephens Hall facing the cemetery will be enlarged to accommodate additional mechanical units associated with the addition.

The triangular form of the addition will contain approximately 20,538 gross square feet of floor area (19,298 net), with a flat roof and skylights. The design of the addition is intended to reflect and complement the architecture of the existing buildings, utilizing a compatible cast stone or concrete base and red brick to visually tie the buildings together. Likewise, the portion of the addition over the existing one-story wing of Stephens Hall will be clad with a stone veneer to match the existing building. The windows and detailing are intentionally classical to recall the Colonial Revival style main building, consisting of double-hung, multi-light windows, and a limestone/cast stone cornice and belt courses. The tower feature will have a detailed cornice and hipped metal roof topped by a cross. While the street-facing elevation of the addition will be

visible over the open parking lot, the side elevation facing the cemetery and the rear of the school will be minimally visible.

Site Improvements

There are numerous site improvements associated with this project, including:

- Vehicular circulation through the site with cars entering from S. Royal Street and exiting via the existing one-way drive aisle along the west side of the site onto Green Street;
- A new staff/employee parking lot with some pervious paving and landscape islands at the end of the parking rows;
- A decorative brick and iron perimeter fence along Green and S. Royal streets;
- Formal planting and hardscape areas in front of both the elementary school and the middle school buildings;
- Additional landscaping around the property, such as around the staff parking area, behind the school in the form of bioretention planters, and along the buffer between the school and the public alley to the west;
- A dual use area at the rear of the school that allows for vehicle queuing immediately before and after school and play space/courts for children during the school day; and,
- Creation of a new playground and open lawn area in front and to the east of the main building.

Traffic/Parking

As a large parochial school, many students live outside of the immediate neighborhood, whether in other parts of the City or in surrounding jurisdictions, resulting in a high number of students being driven to school and more limited carpooling, biking and walking. The school provides parents with detailed instructions for drop-off and pick-up, including what streets to use to both get to, and leave, the property.

A total of 74 parking spaces are proposed. A new 65-space teacher/staff parking lot (including two ADA spaces) will be provided on the northeast corner, replacing an existing lot behind the school that accommodates 67 cars (25 tandem). A second small parking area for seven spaces, including two ADA spaces, will be provided off of Green Street for visitors. The smaller lot will be available during school hours when the other parts of the site are inaccessible to vehicles.

III. ZONING

Property Addresses:	400 & 400A Green Street	
Total Site Area:	169,271 square feet	
Existing Zone:	RM/Townhouse	
Current Use:	Private School ¹	
Proposed Use:	Private School	
Enrollment:	720 (existing)/765 (proposed) ²	
	Permitted/Required	Proposed/Provided
FAR:	1.5	.7 Gross SF: 20,538 (addition) Net SF: 19,298 (addition)
Height:	35 ft.	35 ft/48.6 ft.(tower) ³
Open Space:	35% residential use 0% non-residential use	63,300 SF (37.4%)
Crown Coverage:	42,318 SF (25%)	44,591 SF (26.3%)
School Parking:	31 spaces (67 currently provided with 1/3 tandem)	74 spaces ⁴ 20 standard spaces 50 compact spaces 4 ADA compliant spaces
Loading spaces:	N/A	Loading is provided behind the school

¹ Applicant has an existing SUP for the private school.

² SUP for increased enrollment requested.

³ Proposed 48' tower is permitted under section 6-403(C).

⁴ SUP for excess parking requested.

IV. STAFF ANALYSIS

A. Conformance with Master Plan and Other City Policies

Old Town Small Area Plan

The site is located within the Old Town Small Area Plan and the Old & Historic Alexandria District. The Old Town Small Area Plan was adopted in 1992, and advocates for planning policies that retain the balance of residential and commercial uses and contextual development. The plan identified the subject property for institutional uses as the school already occupied the site and recommended for continuation of this use. The proposed school improvement plan furthers the plan area goals by:

- “Preserv[ing] existing open space areas including residential side and rear yards whenever practicable;”
- “Protect[ing] buildings and areas of historic and architectural merit;” and,
- “Encourag[ing] the design of new buildings in the Old Town Plan area on a basis that is compatible with existing development.”

2019 Green Building Policy

The City’s new Green Building Policy was adopted by City Council in 2019 and established that newly constructed non-residential buildings should achieve a *minimum* green building certification level of LEED-Silver (or equivalent). While the policy does not address additions to existing buildings the applicant will pursue LEED Silver certification for the addition using LEED B&DC for Schools.

The applicant has requested flexibility with respect to Indoor Water Use Reduction requirements due to the fact that a single unisex restroom is provided in the addition and meeting the policy with a single lavatory is not feasible unless additional plumbing fixtures are included. In addition, the applicant intends to purchase energy credits rather than provide Renewable Energy Production elements on the addition. Staff supports the requested flexibility given that the addition is small relative to the existing buildings and its systems are intertwined and interdependent.

Landscape Guidelines

The proposed project follows the 2019 Landscape Guidelines, which prioritizes the use of native vegetation and plantings and aligns with the City’s standards of adopting industry best practices. Street trees will be added along the street frontages and a significant number of new plantings are proposed on the site, including additional trees in the landscape buffer between the school and the alley behind the townhouses in the 900 block of S. St. Asaph Street in response to neighbor screening concerns. Similarly, the applicant proposes a masonry wall between the project site and the adjacent alley where the proposed visitor parking is proposed off of Green Street.

Affordable Housing and Public Art Policies

These policies are not applicable to a school.

B. Site and Building Design and Board of Architectural Review

The proposed project reflects the school's existing classical architectural and formal layout. The addition features red brick and cast stone used on the existing buildings to create a seamless addition while allowing for a more cohesive campus layout. The fenestration will also reflect the traditional light patterns on the existing building.

Site work is extensive in order to create a thoughtful campus plan that accommodates student drop-off and pick-up, teacher parking, a visitor parking area as well as improved play space for the students. A handsome brick and iron fence will surround the property on the street facing elevations and a curved brick wall at the corner of Green and S. Royal streets will contain the school's name.

The Board of Architectural Review reviewed the proposed concept plan in Spring 2019 and approved a partial Permit to Demolish at the same meeting to allow for limited demolition in order to construct the new addition (BAR Case #2019-00066 & 67). The BAR endorsed the project's height, scale, mass and general architectural character and recommended that the applicant return to the BAR for a Certificate of Appropriateness following approval of the DSUP by City Council.

C. Special Use Permits

Section 11-500 of the Zoning Ordinance gives authority to the City Council to approve Special Use Permits (SUPs) provided that the development:

1. Will not adversely affect the health or safety of persons residing or working in the neighborhood of the proposed use;
2. Will not be detrimental to the public welfare or injurious to property or improvements in the neighborhood; and,
3. Will substantially conform to the master plan of the city.

A summary of each SUP requested with this application along with a rationale for approval is provided below.

SUP for a Private School

Private schools located in the RM require approval of a Special Use Permit and the school has been operating under one since 1951 (SUP 14 to enlarge the school building constructed in 1948). Subsequent SUPs have been approved as the school evolved, including:

- SUP 162 (1954 for school expansion)
- SUP 94-030 (temporary construction trailer)
- SUP 95-0138 (Stephens Hall addition)

Based on the three criteria City Council considers in its approval of SUPs, staff supports this approval due to the following:

1. The increased student population and the new addition will not adversely affect the health or safety of persons residing or working in the neighborhood of the proposed use. The school has been active on the site since the mid-20th century and has coexisted with the adjacent residential properties.
2. The proposed addition and site improvements will not be detrimental for the public welfare or injurious to property or improvement in the neighborhood. The improved circulation on the site for drop-off and pick-up will equate to a more efficient use of the campus and the cosmetic improvements to the site will be a significant visual improvement. The proposed circulation is intended to lessen the impact of school traffic on the adjacent public streets.
3. The site will retain its institutional/school use as depicted in the 1992 Master Plan.

SUP for Parking in Excess of the Requirement

The parking requirement for private schools is based on the number of classroom seats, which in this case is 31 required spaces for 765 students in 25 separate classrooms. The school currently provides parking for 67 vehicles, with approximately 25 tandem spaces, requiring coordination between school staff. The applicant proposes 74 total parking spaces (none tandem), a slight increase from existing conditions. The applicant requests a SUP for parking in excess of the requirement per Zoning Ordinance Section 3-1103 (J):

Any church or school parking added after October 1, 1996 which exceeds the number of spaces required by this ordinance; provided, however, that no special use permit for such excess parking shall regulate or substantially burden any religious practice or belief.

Based on the three criteria City Council considers in its approval of SUPs, staff supports this approval due to the following:

1. The additional on-site parking and the elimination of tandem parking will not adversely affect the health or safety of persons residing or working in the neighborhood of the proposed use. Quite the contrary, accessible staff parking will result in fewer teachers and staff parking on neighborhood streets.
2. The additional parking will not be detrimental to the public welfare or injurious to property or improvement in the neighborhood because the site will be able to accommodate more on-site parking than it currently does, allowing for more available street parking for residents.
3. The site will retain its institutional/school use as depicted in the 1992 Master Plan.

D. Modifications

As part of this DSUP, the applicant is requesting two modifications to the Zoning Ordinance. Pursuant to Section 11-416, the Planning Commission may approve modifications if they determine that such modifications:

1. Are necessary or desirable to good site development;
2. That specific and identified features of the site design compensate for the impacts otherwise protected by the regulations for which the modification is sought; and,
3. That such modification will not be detrimental to neighboring property or to the public health, safety and welfare.

A summary of each modification requested with this application along with a rationale for approval is provided below.

Modification to Minimum Landscape Island Requirement

Per the City's Landscape Guidelines and Zoning Ordinance section 11-410 (CC)(6), landscape islands must be provided in parking areas at a ratio of one landscape island per 10 parking spaces and approximately every 100 linear feet of parking row. The applicant requests a modification from this requirement, which staff supports due to the site as a whole becoming more pervious than it currently is and because the open space areas are well-designed and generously landscaped. The installation of the decorative masonry wall and iron fencing around the lot and the addition of street trees will also provide some screening of the parking.

Modification of the Required Street Tree Placement

The applicant meets the number of required street trees (27) but a modification is required due to the location of some of the proposed street trees which cannot be located in the prescribed location due to the placement of certain sidewalks, the lay by on Green Street and existing curb cuts and utility poles. Staff has no objection of this modification because it results in the required number of street trees, just located at more varied locations along the block face.

E. Open Space and Tree Canopy

There is no open space requirement in the RM zone for non-residential uses. However, the proposed site improvements result in a net increase of 3,507 square feet of pervious area and an open space of 37.4%. The open space that will be provided as part of the site improvements include more dedicated play space for students in the form of courts, a playground and open lawn area. The project meets, and slightly exceeds, the required crown coverage requirement of 25%.

There are a number of existing trees and shrubs which are being removed to facilitate construction of the addition and site improvements, including: trees close to the buildings and those impacted by the creation of more formal landscaping; trees located where the addition will be constructed; four street trees on S. Royal Street; and shrubs at the SW corner of the site that are in relatively

poor condition. Many of the trees/shrubs proposed for removal are either invasive species or are in poor condition. Fortunately, the areas of the site which will see the largest amount of removed vegetation will be replaced with a more cohesive, non-invasive landscape design. This additional planting will provide shade and soften the existing hard edge of the school where today it is surrounded by black top and chain link fence.

F. Parking/Loading

Parking for staff will be accommodated in the parking lot at the corner of the site and directly behind the school building where there will be two additional spaces. During the school day only the seven-car Green Street lot will be accessible. The table below shows the existing and proposed parking configuration.

	Existing	Proposed
Staff parking	67 (25 of the 65 standard/contact are tandem and 2 are ADA accessible)	67 (20 standard, 50 compact and 2 ADA accessible)
Visitor parking	0	7 (2 ADA accessible)
TOTAL	67	74

While it is unusual for staff to support excess parking, in this case it is appropriate in order to minimize parking impacts on the surrounding neighborhood streets. Further, the additional increase is only slightly more than what is currently provided and is intended to accommodate visitors who would otherwise be parking on the street. Because many of the existing staff parking spots are tandem, if a staff member must leave early for any reason, they have to coordinate with other staff to access their vehicle. Often the solution is for a teacher to park on a nearby street instead of on-site if their schedule requires flexibility. The reconfiguring of spaces will allow for a more efficient use of the space and will reduce neighborhood parking impacts.

Although greater-than-required parking will be provided at the school, the applicant should encourage ride sharing and alternative modes of transportation to minimize single occupancy vehicle trips to the site. Likewise, both staff and students should be encouraged to walk or bike to school. The applicant will install two bike racks on site which may encourage more students and staff to bike to school.

While there is no dedicated loading space nor is there a requirement for one, there is adequate space at the rear of the site for loading/unloading and trash pickup. These activities occur outside of school hours when the site is not encumbered by students and is largely devoid of vehicles.

G. Pedestrian and Streetscape Improvements

Within the site, pedestrian improvements are a key component of the project. The proposed improvements allow for interior circulation between the two school buildings, minimizing the requirement to go outside in poor weather and removing the conflict between cars and pedestrians.

As part of the proposed improvements the applicant will provide for enhanced pedestrian crossings across Green and S. Royal streets by adding thermoplastic ADA crossings. The addition of landscaping and a brick and iron fence will improve the streetscape appearance of the school using the same high-quality materials used on the existing building and the addition.

H. Traffic Circulation

A challenging aspect associated with most schools in residential areas is the traffic impact associated with student drop-off and pick-up. While traffic impacts are limited to a distinct time period in the mornings and afternoons during the school week, the current queuing of vehicles on surrounding neighborhood streets can be significant. The Basilica School of Saint Mary has a well-choreographed routine typically managed by school staff. Additionally, police officers are present in the morning and the afternoon to ensure efficient movement of cars. In the afternoon a bus, chartered by parents, transports some students after school. The school proposes to continue a similar managed routine following the site improvements that will be included as circulation plan in the final site plan.

A Transportation Impact Study was provided by the applicant which describes current and proposed traffic impacts associated with the project using the maximum student enrollment requested, 765 students. In the morning, there will be fewer cars queuing on adjacent city streets because more cars will be accommodated on site rather than at the current curbside drop-off on S. Royal Street. Afternoon pick-up will also accommodate additional cars on-site, especially when the queuing line utilizes the staff parking lanes (shown as Option 2 in the plans). To further minimize impacts on the adjacent streets, a condition is included requiring the applicant to instruct student families on proper drop-off and pick-up protocols, including not to arrive for pick-up or drop-off more than 15 minutes prior to the availability of on-site queuing.

V. COMMUNITY

The development review process for this project was bifurcated by a fundraising campaign for the project, and then by the COVID-19 pandemic and shutdown of indoor public facilities. The community outreach process provided the applicant opportunities to give project updates and solicit feedback from neighborhood residents. The BAR meeting was another opportunity for the community to participate in the project.

DATE	MEETING
Community Meetings	
November 13, 2018	Applicant Meeting with neighbors
January 9, 2019	Old Town Civic Association meeting
December 7, 2020	Applicant-hosted virtual meeting
March 18, 2021	Applicant-hosted virtual meeting
City Meetings	
April 3, 2019	Board of Architectural Review (BAR) Endorsed project concept
April 3, 2019	Board of Architectural Review (BAR) Approved partial demolition for addition

VI. CONCLUSION

Staff recommends **approval** of the development site plan and modifications and all associated special use permits subject to compliance with all applicable codes and the following staff recommendations.

VII. STAFF RECOMMENDATIONS:

1. The Final Site Plan shall be in substantial conformance with the preliminary plan dated February 9, 2021 and comply with the following conditions of approval.

A. SITE PLAN

2. Per Section 11-418 of the Zoning Ordinance, the development special use permit shall expire and become null and void, unless substantial construction of the project is commenced within 36 months after initial approval (plus any extensions per the ordinance adopted by City Council on December 12, 2020 as Temporary Program for Business Relief and to Address Public Need Related to COVID-19) and such construction is thereafter pursued with due diligence. The applicant shall provide a written status report to staff 18 months after initial approval to update the City Council on the project status if substantial construction has not commenced at such time. The period of validity may be extended upon petition by the applicant and after adequate notice and public hearing. (P&Z)
3. Submit the plat of consolidation and all applicable easements prior to the Final Site Plan submission. The plat(s) shall be approved prior to or concurrently with the release of the Final Site Plan. (P&Z) (T&ES) *
4. The plat shall be recorded, and a copy of the recorded plat, dedications and deeds shall be submitted with the first request for a building permit. (P&Z) (T&ES) **
5. Coordinate location of site utilities with other site conditions to the satisfaction of the Directors of P&Z and T&ES. These items include:
 - a. Location of site utilities including above grade service openings and required clearances for items such as transformers, telephone, HVAC units and cable boxes.
 - b. Minimize conflicts with plantings, pedestrian areas, and major view sheds.
 - c. Do not locate above grade utilities in dedicated open space areas and tree wells.
 - d. If applicable, all utilities shall be screened from the public ROW to the satisfaction of the Director of P&Z. (P&Z) (T&ES) (BAR)
6. Provide a lighting plan with the Final Site Plan to verify that lighting meets City standards. The plan shall be to the satisfaction of the Directors of T&ES and/or P&Z in consultation with the Chief of Police and shall include the following:
 - a. Clearly show location of all existing and proposed streetlights and site lights, shading back less relevant information.
 - b. Determine if existing lighting meets minimum standards within the City right-of-way adjacent to the site. If lighting does not meet minimum standards, additional lighting shall be provided to achieve City standards or to the satisfaction of the Director of T&ES.

- c. A lighting schedule that identifies each type and number of all fixtures, mounting height, and strength of fixture in Lumens or Watts.
 - d. All proposed light fixtures in the City right of way shall be basic, approved Dominion LED light fixtures.
 - e. Manufacturer's specifications and details for all proposed fixtures including site, landscape, pedestrian, sign(s) and security lighting.
 - f. A photometric plan with lighting calculations that include all existing and proposed light fixtures, including any existing streetlights located on the opposite side(s) of all adjacent streets. Photometric calculations must extend from proposed building face(s) to property line and from property line to the opposite side(s) of all adjacent streets and/or 20 feet beyond the property line on all adjacent properties and rights-of-way. Show existing and proposed streetlights and site lights.
 - g. Photometric plan must either be separated into two plans or provide a clear distinction between the following: a plan with all streetlights and other pertinent off-site lighting, and a plan without streetlights and off-site lighting; to demonstrate the plan's compliance with lighting regulations re: light spill.
 - h. If site lights are included in the photometric plan to comply with City's lighting standards, then these lights shall be put on photovoltaic switches.
 - i. Provide location of conduit routing between site lighting fixtures to avoid conflicts with street trees.
 - j. Detail information indicating proposed light pole and any footing in relationship to adjacent grade or pavement. All light pole foundations shall be concealed from view or light poles shall be direct bury.
 - k. The lighting for the areas not covered by the City of Alexandria's standards shall be designed to the satisfaction of Directors of T&ES and P&Z.
 - l. Provide numeric summary for various areas (i.e., roadway, walkway/sidewalk, alley, and parking lot, etc.) in the proposed development.
 - m. Light fixtures for open canopies shall be recessed into the ceiling for any areas that can be seen from the public ROW.
 - n. Upon installation of all exterior light fixtures for the site/building, the applicant shall provide photographs of the site demonstrating compliance with this condition.
 - o. Full cut-off lighting shall be used as applicable at the development site to prevent light spill onto adjacent properties.
 - p. Convert all high-pressure sodium vapor light fixtures along the subject parcel's frontage to Green Street and South Royal Street to Dominion Shoebox LED light fixtures. (T&ES)
7. Provide a unit numbering plan for each floor of the school with the first Final Site Plan submission. The unit numbers should comply with a scheme of 100 level numbers on the first floor, 200 level numbers on the second floor, and 300 level numbers for third floor and continue in this scheme for the remaining floors. Indicate unit's use (i.e.: Residential, Retail, Office) if known. (P&Z)

8. The Emergency Vehicle Easement (EVE) shall not be painted. When an EVE is shared with a pedestrian walkway or consists of grasscrete or a similar surface treatment, the EVE shall be defined in a manner that is compatible with the surrounding ground plane. (P&Z)
9. Provide a georeferenced CAD file in AutoCAD 2018.dwg format, which follows the National CAD Standards, of the dimension plan of this project including existing conditions, proposed conditions and grading elements. This information will be used to compile a master CAD reference to ensure all proposed features are correctly located and will connect. (P&Z) (DPI) *

BUILDING:

10. The building design, including the appearance, color and quality of materials, final detailing, and three-dimensional expression shall be generally consistent with the BAR concept review elevations dated March 11, 2019, the Preliminary Plan elevations dated February 9, 2021, and the approved Certificate of Appropriateness (P&Z)
11. Provide detailed drawings (enlarged and coordinated plan-section-elevation studies, typically at ¼"=1'-0" scale, with shadows cast at 45 degrees from both left and above to show true depth of recesses and projections) in realistic color to evaluate the building base, entrance canopy, stoops, window and material details including the final detailing, finish and color of these elements during the Final Site Plan review. Separate design drawings shall be submitted for each building typology, different wall or bay type. When the three-dimensional complexity warrants it, applicant shall also provide isometric vignettes of such special conditions or building areas. (P&Z)
12. Building materials, finishes, and relationships shall be subject to review and approval by the Department of Planning and Zoning for substantial conformance to the Preliminary Plan and as set forth in the associated *Guidelines for Preparations of Mock-Up Panels* Memo to Industry, effective May 16, 2013. The following submissions shall be provided to review the materials, finishes and architectural details, prior to selection of final building materials:
 - a. Provide a materials board that includes all proposed materials and finishes at first Final Site Plan. *
 - b. The materials board shall remain with the Department of Planning and Zoning until the final certificate of occupancy, upon which all samples shall be returned to the applicant. ***
 - c. Provide drawings of a mock-up panel that depict all proposed materials, finishes, and relationships as part of the first Final Site Plan. *
 - d. Construct an on-site, mock-up panel of proposed materials, finishes, and relationships for review and approval prior to final selection of building materials. The mock-up panel requires a building permit and shall be

constructed and approved prior to vertical (above-grade) construction and prior to ordering final building materials. **

- e. The mock-up panel shall be located such that it shall remain on-site in the same location through the duration of construction until the first certificate of occupancy. *** (P&Z) (Code)
13. The project shall comply with the requirements defined by the City of Alexandria 2019 Green Building Policy using the LEED BD&C Schools rating system and will achieve the equivalent of LEED Silver certification for the addition. Diligent pursuance and achievement of certification shall be monitored through the following:
- a. The project shall comply with the requirements defined by the City of Alexandria 2019 Green Building Policy, as amended below.
 - b. The project shall meet the Energy Use Reduction requirements including Optimize Energy Performance, Renewable Energy Production and Advanced Energy Metering (or equivalents) as defined by the City of Alexandria Green Building Policy.
 - c. Flexibility is granted for the project to achieve approximately 23% reduction related to the Water Efficiency requirements for Indoor Water Use Reduction and achieve the Outdoor Water Use Reduction (or equivalents) defined by the City of Alexandria Green Building Policy.
 - d. The project shall comply the Indoor Environmental Quality requirements including Low Emitting Materials, Construction Indoor Air Quality Management Plan, Thermal Comfort, Daylight and Indoor Air Quality Assessment (or equivalents) defined by the City of Alexandria Green Building Policy.
 - e. The application shall provide a draft scorecard identifying the project's path to LEED, Green Globes or Earthcraft certification (or equivalent) with the submission of the Preliminary Review documents.
 - f. Provide evidence of the project's registration with LEED, Green Globes or Earthcraft (or equivalent) with the submission of the first Final Site Plan and provide a draft checklist showing how the project plans to achieve the certification and clearly indicate that requirements for Energy Use Reduction, Water Efficiency and Indoor Environmental Quality are being met as set forth above. *
 - g. Provide an updated copy of the certification scorecard prior to the release of building permits for above-grade construction. **
 - h. Provide updated energy reports prior to the release of building permits for above-grade construction. **
 - i. Provide a draft commissioning plan that includes items "i" through "v" below, prior to the release of building permits for above-grade construction.
**
 - i. A narrative description of the activities that will be accomplished during each phase of commissioning, including the personnel intended to accomplish each of the activities.
 - ii. A listing of the specific equipment, appliances or systems to be tested

- and a description of the tests to be performed.
 - iii. Functions to be tested including, but not limited to, calibrations and economizer controls.
 - iv. Conditions under which the test will be performed. Testing shall affirm winter and summer design conditions and full outside air conditions.
 - v. Measurable criteria for performance.
 - j. Provide updated water efficiency documentation reflecting any changes from the Final Site Plan prior to the release of building permits for above- grade construction. **
 - k. To the extent that the daylight credit is pursued, provide updated daylight analysis documentation reflecting any changes from the Final Site Plan prior to the release of building permits for above-grade construction. Provide updated daylight analysis documentation reflecting any changes from the Final Site Plan prior to the release of building permits for above-grade construction. **
 - l. Provide evidence that design phase credits have been submitted by the certificate of occupancy. ***
 - m. Provide a commission report including issues log, completed pre-function checklists and any completed functional performance tests by the final certificate of occupancy. ***
 - n. Provide evidence of submission of materials clearly indicating that requirements for Energy Use Reduction, Water Efficiency and Indoor Environmental Quality, as set forth above, are being met as defined by the City of Alexandria Green Building Policy for Design Phase credits to the U.S. Green Building Council (USGBC), Green Globes or Earthcraft (or equivalent) prior to issuance of a certificate of occupancy.***
 - o. Provide documentation of certification at the release of the maintenance bond clearly indicating that requirements for Energy Use Reduction, Water Efficiency and Indoor Environmental Quality, as set forth above, have been achieved. ****
 - p. Failure to achieve the certification level, as required by the City of Alexandria 2019 Green Building Policy, will be evaluated by City staff, and if staff determines that a good faith, reasonable, and documented effort was not made to achieve the certification level, then any City-wide Green Building policies existing at the time of staffs' release of Final Site Plan will apply.
14. Building materials, finishes and architectural details shall be subject to review and approval by the Board of Architectural Review. A materials board shall be submitted as part of the Certificate of Appropriateness approval (BAR)
15. In order to provide a more sustainable use of natural resources, the applicant shall use EPA-labeled WaterSense or equivalent low flow fixtures. In addition, the applicant is encouraged to explore the possibilities of adopting water reduction strategies (i.e., use of gray water system on-site) and other measures that could reduce the consumption of potable water on this site. A list of applicable mechanisms can be found at: www.epa.gov/WaterSense. (T&ES)

OPEN SPACE/LANDSCAPING:

16. Develop, provide, install and maintain an integrated Landscape Plan in accordance with the City of Alexandria's Landscape Guidelines, available online at: www.alexandriava.gov/uploadedFiles/recreation/ParkPlanning/LandscapeGuidelinesFinalv2Final.pdf
18. Provide material, finishes, and architectural details for all retaining walls, seat walls, decorative walls, and screen walls. Indicate methods for grade transitions, handrails — if required by code, directional changes, above and below grade conditions. Coordinate with adjacent conditions. Design and construction of all walls shall be to the satisfaction of the Directors of P&Z and T&ES, and the BAR through the Certificate of Appropriateness process. If the height of any walls exceed six feet in a required yard the BAR can waive the height requirement. (P&Z) (BAR) (T&ES) (Code) *
19. The City of Alexandria Playspace Policy was approved in October 2013 to improve the health and well-being of all youth through design and provision of quality playspaces. Prior to the submission of Final Site Plan #1, the applicant shall work with RP&CA staff representatives of the Playspace Technical Advisory Team (P-TAT) and P&Z staff to develop a playspace design of structured and/or unstructured play.
 - a. The playspace should provide a coordinated array of the play elements, to the satisfaction of the Director of RP&CA.
 - b. Playspace plans shall depict location, scale, massing and character of the playspace, grade conditions, surfacing, site furnishings, vegetation, and other site features.
 - c. Playspaces and site equipment shall comply with the most recent guidelines, specifications and recommendations of the Consumer Product Safety Commission (CPSC) Handbook for Public Playground Safety, ASTM Specification for Playground Equipment for Public Use (ASTM F1487) and ASTM Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment (ASTM F1292). Applicant shall provide certification that the play areas have been designed, reviewed and approved by a certified playground safety inspector (CPSI professional) with current certification. Play area and equipment shall comply with Americans with Disabilities Act 2010ADA Standards for Accessible Design.
 - d. Playspaces shall be regularly inspected and appropriately maintained according to CPSC, ASTM, and manufacturer recommendations. Natural play spaces and/or elements shall be maintained and cared for according to landscape standards provided by landscape architect, planner, and/or to relevant CPSC and ASTM standards. (RP&CA) (P&Z)

TREE PROTECTION AND PRESERVATION:

20. Provide, implement and follow a Tree and Vegetation Protection Plan per the City of Alexandria Landscape Guidelines (P&Z) (RP&CA) *

ARCHAEOLOGY:

21. * The applicant/developer shall call Alexandria Archaeology immediately (703-746-4399) if any buried structural remains (wall foundations, wells, privies, cisterns, etc.) or concentrations of artifacts are discovered during development. Work must cease in the area of the discovery until a City archaeologist comes to the site and records the finds.
22. * The applicant/developer shall not allow any metal detection or artifact collection to be conducted on the property, unless authorized by Alexandria Archaeology.
23. The statements in archaeology conditions above marked with an asterisk “*” shall appear in the General Notes of all site plans and on all site plan sheets that involve demolition or ground disturbance (including Basement/Foundation Plans, Demolition, Erosion and Sediment Control, Grading, Landscaping, Utilities, and Sheeting and Shoring) so that on-site contractors are aware of the requirements.

PEDESTRIAN/STREETSCAPE:

24. Provide the following pedestrian improvements to the satisfaction of the Directors of P&Z and T&ES:
- a. Complete all pedestrian improvements as shown on the preliminary plan prior to the issuance of a certificate of occupancy permit.
 - b. Install ADA accessible pedestrian crossings serving the site.
 - c. Construct all concrete sidewalks to City standards. The minimum unobstructed width of newly constructed sidewalks shall be 5 feet.
 - d. Sidewalks shall be flush across all driveway crossings.
 - e. All newly constructed curb ramps in Alexandria shall be concrete with detectable warning and shall conform to current VDOT standards.
 - f. Provide separate curb ramps for each direction of crossing (i.e., two ramps per corner). Curb ramps shall be perpendicular to the street to minimize crossing distances. Any changes must be approved by the Director of T&ES.
 - g. Provide thermoplastic pedestrian crosswalks at all crossings at the proposed development, which must be designed to the satisfaction of the Director of T&ES.
 - h. All crosswalks across Green Street shall be standard, high-visibility crosswalks [white, thermoplastic ladder crosswalks as shown in the Manual on Uniform Traffic Control Devices (MUTCD)] may be required as

directed by staff at Final Site Plan. All other crosswalk treatments must be approved by the Director of T&ES.

- i. All below grade utilities placed within a City sidewalk shall be designed in such a manner as to integrate the overall design of the structure with the adjacent paving materials to minimize any potential visible impacts. *** (P&Z) (T&ES)

PARKING:

25. Parking for the school use shall be consistent with the requirements of the excess parking SUP. (P&Z) (T&ES)
26. If no other barrier is provided, provide wheel stops for all 90-degree and angled vehicle parking spaces adjacent to a sidewalk if the back of the sidewalk is less than seven (7) feet from the curb. (T&ES).
27. Provide a Parking Management Plan with the Final Site Plan submission. The Parking Management Plan shall be approved by the Departments of P&Z and T&ES prior to the release of the Final Site Plan and comply with the requirements of the Parking Management Plan Template provided in Memo to Industry 01-19. (P&Z) (T&ES)
28. On an annual basis, the applicant shall provide materials to all student households regarding pick-up and drop-off procedures by vehicle that instruct parents and caregivers with the intent of limiting impacts to the right-of-way and the surrounding community. This material shall include, but is not limited to, instructions not to arrive for school pick-up or drop-off more than 15-minutes prior to the availability of on-site queuing, not blocking driveways or intersections when queuing on adjacent streets, allowing access to and from on-street parking spaces along adjacent streets, and not idling vehicles for more than 10 minutes. Provide proposed language as part of the Parking Management Plan with the Final Site Plan submission. (T&ES) (P&Z)*
29. Any parking occupancy data, if available, for the facility shall be made available to the City upon request.
30. Show all existing and proposed on-street parking controls and restrictions on the Final Site Plan. All on-street parking controls and restrictions within the project area shall be approved by the City staff during the Final Site Plan process. Any on-street parking changes desired after the Signature Set approval are required to be approved through the Traffic and Parking Board. (P&Z) (T&ES)
31. Provide bicycle parking for a minimum of four bicycles onsite. Details on location and type of bicycle parking shall be provided on the Final Site Plan. Bicycle parking must be installed and operational prior to first CO. (T&ES) ***

32. The applicant shall encourage its employees who drive to use off-street parking. (T&ES)
33. The applicant shall encourage its employees to use public transportation to travel to and from work. The business shall contact Go Alex at goalex@alexandriava.gov for information on establishing an employee transportation benefits program. (T&ES)
34. The applicant shall provide information about alternative forms of transportation to access the site, including but not limited to printed and electronic school promotional material, posting on the school website, and other similar methods. Contact Go Alex at goalex@alexandriava.gov for more information about available resources. (T&ES)

B. TRANSPORTATION

STREETS/TRAFFIC:

35. A minimum separation of 30 feet shall be maintained on residential streets between the beginning of the street corner radius and any driveway apron radius. (T&ES)
36. If the City's existing public infrastructure is damaged during construction, or patch work required for utility installation then the applicant shall be responsible for construction/ installation or repair of the same as per the City of Alexandria standards and specifications and to the satisfaction of Director, Transportation and Environmental Services. (T&ES)
37. A pre-construction walk/survey of the site shall occur with Transportation and Environmental Services Construction & Inspection staff and Code Administration staff to document existing conditions prior to any land disturbing activities. (T&ES) (Code)
38. The slope along the faculty parking lot shall not exceed 6.5 percent where parking is provided. (T&ES)
39. Any controlled access equipment to parking, such as but not limited to, card reader or security gate, shall be located a minimum of 20 FT from back of the sidewalk to allow for one vehicle to queue without encroaching into the sidewalk space. (T&ES)
40. Asphalt patches larger than 20% of the total asphalt surface, measured along the centerline of the street, will require full curb to curb restoration. (T&ES)
41. A Circulation Plan for student drop-off and pick-up shall be included with the Final Site Plan. This Plan should include the route and designated drop-off/pick up areas, the queuing area, and should facilitate minimizing off-site queues. In addition, the

plan shall include staffing and/or personnel's locations and contact information to provide assistance during these times. (T&ES)*

42. Provide bicycle facilities on the site frontage along South Royal Street and through the site per the City's Transportation Master Plan, Pedestrian and Bicycle Mobility Plan and applicable Small Area Plans and Design Guidelines.
 - a. Install sharrows consistent with AASHTO guidelines along the frontage on South Royal Street in both directions prior to Certificate of Occupancy, unless sharrows have already been installed by others or there is on-going construction activity associated with AlexRenew on South Royal Street. (T&ES)***

BUS STOPS AND BUS SHELTERS:

43. Show all existing bus stops, bus shelters and bus stop benches in the vicinity of the site on the Final Site Plan. (T&ES) *

C. PUBLIC WORKS

WASTEWATER/SANITARY SEWERS:

44. The project lies within the Combined Sewer System (CSS) area district, therefore, stormwater management and compliance with the state stormwater quality and quantity requirements and the City's Alexandria Water Quality Volume Default shall be coordinated with the project's compliance with the CSS Management Policy set forth in Memo to Industry 07-14, effective July 1, 2014. (T&ES)*
 - a) The sanitary flow from the project site is proposed to be discharged to the city's separate sanitary sewer system which outfalls to the Potomac Interceptor owned by AlexRenew. Therefore, the sanitary contribution fee is not required.
 - b) With respect to the stormwater requirement, the applicant proposes to construct a 21-inch storm sewer in lieu of paying a stormwater contribution fee. As illustrated in the Exhibit (Revised Sheet 6) received March 12, 2021, the proposed storm sewer shall run south along Royal St from storm inlet 000805SCIN to manhole 007719SSMH, and the existing connection to the City combined sewer on Royal St. shall be disconnected. The applicant may request a grading plan to advance construction of the storm sewer in advance of the Final Site Plan in order to avoid conflicts with the AlexRenew project. If the proposed storm sewer is not constructed prior to the issuance of the Certificate of Occupancy for the new construction, the development shall be subject to the contribution fee as outlined in Option C of Memo to Industry 07-14.

45. The sewer connection fee must be paid prior to release of the final site plan if the size of the existing water meter requires to be upsized to accommodate the increasing water demand from the development. (T&ES) *

UTILITIES:

46. Locate all private utilities without a franchise agreement outside of the public right-of-way and public utility easements. (T&ES)
47. No transformer and switch gears shall be located in the public right of way. (T&ES)

SOLID WASTE:

48. If the property is a required user, the development must meet all the minimum street standards for the City to provide solid waste collection service. See Alexandria Virginia Code of Ordinances Title 5 Chapter 1 Solid Waste Control. Collection vehicles must be able to pick up solid waste from private streets without backing up. The containers must be stored inside the units or within an enclosure that completely screens them from view. (T&ES)
49. All trash collectors for the project site are required to take their collected trash to the Alexandria/Arlington waste-to-energy facility (T&ES)
50. Provide \$1402 per receptacle to the Director of T&ES for purchase and installation of one (1) Victor Stanley Ironsites Series model SD-42 black receptacle with Dome Lid dedicated to trash collection. The receptacle(s) shall be placed in the public right of way to serve open space and park sites. Receptacles shall be generally located along the property frontage and at strategic locations in the vicinity of the site as approved by the Director of T&ES. Payment required prior to release of Final Site Plan. To the extent that the cans cannot be located where accessible for public collection, the applicant may provide a contribution for receptacles to be located in the vicinity or may agree to private hauling.* (T&ES)
51. Provide \$1626 per receptacle to the Director of T&ES for the purchase and installation of two (2) Victor Stanley Ironsites Series Model SD-42 blue receptacle with Dome Lid, approved dome decals, and approved band dedicated to recycling collection. The receptacle(s) shall be placed in the public right of way to serve open space and park sites. Receptacles shall be generally located along the property frontage and at strategic locations in the vicinity of the site as approved by the Director of T&ES. Payment required prior to release of Final Site Plan. To the extent that the cans cannot be located where accessible for public collection, the applicant may provide a contribution for receptacles to be located in the vicinity or may agree to private hauling. * (T&ES)

D. ENVIRONMENTAL

FLOODPLAIN MANAGEMENT:

52. Demonstrate compliance with flood plain ordinance Section 6-300 to Section 6-311 of Article VI Special and Overlay Zones. No final plan shall be approved until full compliance with flood plain ordinance has been demonstrated. * (T&ES)
53. All required information must appear on the final site plan submission (application) in order to be compliant with the City of Alexandria Floodplain Ordinance and allow for proper review of further compliance. Required items shall include, at a minimum, the following:
 - a. The base flood elevation (BFE);
 - b. The elevation of the lowest floor (including basement);
 - c. For structures to be floodproofed (nonresidential only), the elevation to which the structure will be floodproofed; and,
 - d. Topographic information showing existing and proposed ground elevations.
* (T&ES)
54. Provide detailed computations of the impact of fill in the flood plain on the 100-year Water Surface Elevation (WSE) to the satisfaction of the Director of T&ES. Computations are to include backwater calculations starting at a downstream cross section to an upstream cross section. Computations shall be made by modifying the existing HEC-RAS model, as prepared by the U.S. Army Corps of Engineers, Baltimore District. Proposed fill placement shall not raise the 100-year water surface level at any location along the channel reach more than a maximum of 6 inches as permitted under Floodplain Regulations. * (T&ES)

STORMWATER MANAGEMENT:

55. The City of Alexandria's stormwater management regulations regarding water quality are two-fold: 1) state phosphorus removal requirement and 2) Alexandria Water Quality Volume Default. Compliance with the state phosphorus reduction requirement does not relieve the applicant from the Alexandria Water Quality Default requirement. The Alexandria Water Quality Volume Default, as determined by the site's post-development impervious area shall be treated in a Best Management Practice (BMP) facility. * (T&ES)
56. Provide BMP narrative and complete pre and post development drainage maps that include areas outside that contribute surface runoff from beyond project boundaries to include adequate topographic information, locations of existing and proposed storm drainage systems affected by the development, all proposed BMPs and a completed Virginia Runoff Reduction Method (VRMM) worksheet showing project compliance. The project must use hydrologic soil group "D" in the spreadsheet unless a soils report from a soil scientist or geotechnical engineer delineates onsite soils otherwise. * (T&ES)

57. All stormwater Best Management Practices (BMPs) must be designed to comply with the most recent standards and specifications published in the Virginia Stormwater BMP Clearinghouse. Provide complete design details for all BMPs. This includes site specific plan views, cross sections, planting plans, and complete design calculations for each BMP. (T&ES)
58. Provide a BMP table with a separate listing for each individual BMP that includes the name of the practice, total area treated (acres), pervious area treated (acres), impervious area treated (acres), phosphorous removal efficiency (percentage), phosphorous removal efficiency (percentage), phosphorous removed by the practice (lbs.), and latitude and longitude in decimal degrees (T&ES)
59. Construction inspection checklists and associated photographic documentation must be completed for each stormwater best management practice (BMP) and detention facility during construction. Prior to the release of the performance bond, the applicant must submit all documents required by *The City of Alexandria As-Built Stormwater Requirements* to the City including as built plans, CAD data, BMP certifications and completed construction inspection checklists. (T&ES)
60. The stormwater Best Management Practices (BMPs) required for this project shall be constructed and installed under the direct supervision of the design professional or his designated representative. Prior to release of the performance bond, the design professional shall submit a written certification to the Director of T&ES that the BMPs are:
 - a. Constructed and installed as designed and in accordance with the released Final Site Plan.
 - b. Clean and free of debris, soil, and litter by either having been installed or brought into service after the site was stabilized. (T&ES) ****
61. Surface-installed stormwater Best Management Practice (BMP) measures, i.e. Bio-Retention Filters, Vegetated Swales, etc. that are employed for this site, require installation of descriptive signage to the satisfaction of the Director of T&ES. (T&ES)
62. The applicant/Owner shall be responsible for installing and maintaining stormwater Best Management Practices (BMPs). The Applicant/Owner shall execute a maintenance service contract with a qualified private contractor for a minimum of three (3) years and develop an Owner's Operation and Maintenance Manual for all Best Management Practices (BMPs) on the project. The manual shall include at a minimum: an explanation of the functions and operations of the BMP(s); drawings and diagrams of the BMP(s) and any supporting utilities; catalog cuts on maintenance requirements including mechanical or electrical equipment; manufacturer contact names and phone numbers; a copy of the executed maintenance service contract; and a copy of the maintenance agreement with the City. A copy of the contract shall also be placed in the BMP Operation and

Maintenance Manual. Prior to release of the performance bond, a copy of the maintenance contract shall be submitted to the City. (T&ES) ****

63. Submit a copy of the Operation and Maintenance Manual to the T&ES Stormwater Management Division on digital media prior to release of the performance bond. (T&ES) ****
64. Prior to release of the performance bond, the applicant is required to submit a certification by a qualified professional to the satisfaction of the Director of T&ES that any existing stormwater management facilities adjacent to the project and associated conveyance systems were not adversely affected by construction operations. If maintenance of the facility or systems were required in order to make this certification, provide a description of the maintenance measures performed. (T&ES) ****

WATERSHED, WETLANDS, & RPAs:

65. Provide Environmental Site Assessment Notes that clearly delineate, map, describe and/or explain the following environmental features if located on site: individual components of the RPA as well as the total geographic extent of the RPA, to include the appropriate buffer, intermittent streams and associated buffers; highly erodible and highly permeable soils; steep slopes greater than 15 percent in grade; known areas of contamination; springs, seeps or related features; and a listing of all wetlands permits required by law. (T&ES)

CONTAMINATED LAND:

66. Indicate whether there is any known soil and groundwater contamination present on the plan. The applicant must submit supporting reports for associated environmental investigations or assessments performed to substantiate this determination. (T&ES) *
67. If environmental site assessments or investigations discover the presence of contamination on site, the final [site plan/demo plan/grading plan] shall not be released, and no construction activity shall take place until the following has been submitted and approved by the Director of T&ES:
 - a. Submit a Site Characterization Report/Extent of Contamination Study detailing the location, applicable contaminants, and the estimated quantity of any contaminated soils and/or groundwater at or in the immediate vicinity of the site.
 - b. Submit a Risk Assessment indicating any risks associated with the contamination.
 - c. Submit a Remediation Plan detailing how any contaminated soils and/or groundwater will be dealt with, including plans to remediate utility corridors. Utility corridors in contaminated soil shall be over excavated by 2 feet and backfilled with "clean" soil. Include description of

environmentally sound methods of off-site transport and disposal of contaminated soils and debris (including, but not limited to types of vehicles appropriate for handling specific materials and ensuring vehicle loads are covered).

- d. Submit a Health and Safety Plan indicating measures to be taken during remediation and/or construction activities to minimize the potential risks to workers, the neighborhood, and the environment. Initial Air Monitoring may be required during site activities to demonstrate acceptable levels of volatiles and/or airborne particles. The determination whether air monitoring is needed must be adequately addressed in the Health and Safety Plan submitted for review.
 - e. The applicant shall screen for PCBs as part of the site characterization if any of the past uses are within the identified high risk category sites for potential sources of residual PCBs, which includes the following SICs: 26&27 (Paper and Allied Products), 30 (Rubber and Misc. Plastics), 33 (Primary Metal Industries), 34 (Fabricated Metal Products), 37 (Transportation Equipment), 49 (Electrical, Gas, and Sanitary Services), 5093 (Scrap Metal Recycling), and 1221&1222 (Bituminous Coal).
 - f. Applicant shall submit three (3) electronic and two (2) hard copies of the above. The remediation plan must be included in the Final Site Plan. (T&ES) *
68. Should any unanticipated contamination, underground storage tanks, drums or containers be encountered at the site during construction, the applicant must immediately notify the City of Alexandria Department of Transportation and Environmental Services, Office of Environmental Quality. Should unanticipated conditions warrant, construction within the impacted area shall be stopped until the appropriate environmental reports identified in a. through f. above are submitted and approved at the discretion of the Director of Transportation and Environmental Services. This shall be included as a note on the Final Site Plan.* (T&ES) (Code)
69. If warranted by a Site Characterization report, design and install a vapor barrier and ventilation system for buildings and parking areas in order to prevent the migration or accumulation of methane or other gases, or conduct a study and provide a report signed by a professional engineer showing that such measures are not required to the satisfaction of Directors of T&ES and Code Administration. The installed vapor barrier and ventilation system must include a passive ventilation system that can be converted to an active ventilation system if warranted. (T&ES)

SOILS:

70. Provide a geotechnical report, including recommendations from a geotechnical professional for proposed cut slopes and embankments. (T&ES)

NOISE:

71. All uses within the development shall adhere to the City noise ordinance and no amplified sound shall be audible at the property line after 11 pm. (T&ES)
72. Supply deliveries, loading, and unloading activities shall not occur between the hours of 11:00pm and 7:00am. (T&ES)
73. All roof top HVAC and other mechanical equipment shall be equipped with appropriate noise reducing devices such as (but not limited to) silencers, acoustic plenums or louvers or enclosures, if required, in order to comply with the City noise limit at the property lines. (T&ES)
74. No vehicles associated with this project shall be permitted to idle for more than 10 minutes when parked on site. The applicant shall post a minimum of two (2) no idling for greater than 10 minutes signs along the student drop off path on-site. (T&ES)

AIR POLLUTION:

75. Control odors and any other air pollution sources resulting from operations at the site and prevent them from leaving the property or becoming a nuisance to neighboring properties, as determined by the Director of Transportation and Environmental Services. (T&ES)

E. CONSTRUCTION MANAGEMENT

75. Submit a construction phasing plan to the satisfaction of the Director of T&ES, for review, approval and partial release of Erosion and Sediment Control for the Final Site Plan. All the requirements of Article XIII Environmental Management Ordinance for quality improvement, quantity control, and the development of Storm Water Pollution Prevention Plan (SWPPP) must be complied with prior to the partial release of the Site Plan. (T&ES) *
76. Submit a separate construction management plan to the Directors of P&Z, T&ES and Code Administration prior to Final Site Plan release. The plan shall:
 - a. No streetlights shall be removed without authorization from the City of Alexandria;
 - b. If streetlights are to be removed from the public right of way, then temporary lights shall be provided until the installation and commissioning of new lights; *
 - c. Include an analysis as to whether temporary street or site lighting is needed for safety during the construction on the site and how it is to be installed; *

- d. Provide a detailed sequence of demolition and construction of improvements in the public right of way along with an overall proposed schedule for demolition and construction; *
 - e. Include an overall proposed schedule for construction; *
 - f. Include a plan for temporary pedestrian circulation; *
 - g. Include the location and size of proposed construction trailers, if any; *
 - h. Include a preliminary Maintenance of Traffic Plan (MOT) as part of the construction management plan for informational purposes only, to include proposed controls for traffic movement, lane closures, construction entrances and storage of materials; *
 - i. Copies of the plan shall be posted in the construction trailer and given to each subcontractor before they commence work. (P&Z) (T&ES) ***
77. Provide off-street parking for all construction workers without charge to the construction workers. The applicant shall be responsible for ensuring that all contractors use the off-street parking provided. For the construction workers who use Metro, DASH, or another form of mass transit to the site, the applicant shall subsidize a minimum of 50% of the fees for mass transit. Compliance with this condition shall be a component of the construction management plan, which shall be submitted to the Department of P&Z and T&ES prior to Final Site Plan release. This plan shall:
- a. Establish the location of the parking to be provided at various stages of construction, how many spaces will be provided, how many construction workers will be assigned to the work site, and mechanisms which will be used to encourage the use of mass transit; *
 - b. Provide for the location on the construction site at which information will be posted regarding Metro schedules and routes, bus schedules and routes; *
 - c. If the off-street construction workers parking plan is found to be violated during construction, a correction notice will be issued to the developer. If the violation is not corrected within five (5) days, a "stop work order" will be issued, with construction halted until the violation has been corrected. (P&Z) (T&ES) *
78. Sidewalks adjacent to the site shall remain open during construction. If sidewalks must be closed, pedestrian access shall be maintained adjacent to the site per Memo to Industry #04-18 throughout the construction of the project. The plan for maintenance of pedestrian access shall be included in the Construction Management Plan for approval by T&ES. (T&ES) **
79. Bicycle facilities adjacent to the site shall remain open during construction. If a bicycle facility must be closed, Bicycle access shall be maintained adjacent to the site per Memo to Industry #04-18 throughout the construction of the project. The plan for maintenance of bicycle access shall be included in the Construction Management Plan for approval by T&ES. (T&ES)

80. No major construction staging shall be allowed within the public right-of-way. The applicant shall meet with T&ES to discuss construction staging activities prior to release of any permits for ground disturbing activities. (T&ES) **
81. Any structural elements that extend into the public right of way, including but not limited to footings, foundations, tie-backs etc., must be approved by the Director of T&ES as a part of the Sheeting and Shoring Permit. (T&ES)
82. A “Certified Land Disturber” (CLD) shall be named in a letter to the Division Chief of Infrastructure Right of Way prior to any land disturbing activities. If the CLD changes during the project, that change must be noted in a letter to the Division Chief. A note to this effect shall be placed on the Phase I Erosion and Sediment Control sheets on the site plan. (T&ES)
83. Prior to commencing clearing and grading of the site, the applicant shall hold a meeting with notice to all adjoining property owners and civic associations to review the location of construction worker parking, plan for temporary pedestrian and vehicular circulation, and hours and overall schedule for construction. The Departments of P&Z and T&ES shall be notified a minimum of 14 calendar days prior to the meeting date, and the meeting must be held before any permits are issued. (P&Z) (T&ES)
84. Prior to commencement of landscape installation/planting operations, a pre-installation/construction meeting will be scheduled with the project planner in the Department of P&Z to review the scope of installation procedures and processes. This is in addition to the pre-construction meeting required above. (P&Z)
85. Identify a person who will serve as a liaison to the community throughout the duration of construction. The name and telephone number, including an emergency contact number, of this individual shall be provided in writing to residents, property managers and business owners whose property abuts the site and shall be placed on the project sign, to the satisfaction of the Directors of P&Z, and/or and T&ES. (P&Z) (T&ES)
86. Install a temporary informational sign on the site prior to approval of the Final Site Plan for the project. The sign shall notify the public of the nature of the project and shall include the name and telephone number of the community liaison, including an emergency contact number for public questions regarding the project. The sign shall be displayed until construction is complete.* (P&Z) (T&ES)
87. Implement a waste control program during the construction phase of this development. This program shall control wastes such as discarded building materials, concrete truck washout, chemicals, litter or trash, trash generated by construction workers or mobile food vendor businesses serving them, and all sanitary waste at the construction site and prevent offsite migration that may cause adverse impacts to neighboring properties or to the environment to the satisfaction

of Directors of T&ES and Code Administration. All wastes shall be properly disposed offsite in accordance with all applicable federal, state and local laws. Provide information on the program in construction management plan. If program is implemented in coordination with green building certification, include documentation as appropriate per the City's Green Building Policy and conditions herein. (T&ES)

88. Temporary construction and/or on-site sales trailer(s) shall be permitted and be subject to the approval of the Director of P&Z. The trailer(s) shall be removed prior to the issuance of a final certificate of occupancy permit. (P&Z) (Code) ***
89. Submit a wall check prior to the commencement of construction of the first floor above grade framing for the building(s). The wall check shall include the building footprint, as depicted in the released Final Site Plan, the top-of-slab elevation and the first-floor elevation. The wall check shall be prepared and sealed by a registered engineer or surveyor and submitted to Planning & Zoning. Approval of the wall check by Planning & Zoning is required prior to commencement of framing. (P&Z) **
90. Submit an as-built development site plan survey, pursuant to the requirements outlined in the initial as-built submission for occupancy portion of the as-built development site plan survey checklist to the Department of Transportation and Environmental Services Site Plan Coordinator prior to requesting a certificate of occupancy permit. The as-built development site plan survey shall be prepared and sealed by a registered architect, engineer, or surveyor. Include a note which states that the height was calculated based on all applicable provisions of the Zoning Ordinance. (P&Z) (T&ES) ***
91. Contractors shall not cause or permit vehicles to idle for more than 10 minutes when parked. (T&ES)
92. If there are outstanding performance, completion or other bonds for the benefit of the City in effect for the property at such time as it may be conveyed or sold to a party other than the applicant, a substitute bond and associated documents must be provided by that party or, in the alternative, an assignment or other documentation from the bonding company indicating that the existing bond remains in effect despite the change in ownership may be provided. The bond(s) shall be maintained until such time that all requirements are met, and the bond(s) released by the City. (T&ES)

F. SIGNS

93. A signage/stripping plan shall be included as part of the Final Site. (T&ES)*

94. Any freestanding monument signage must comply with Article IX of the Zoning Ordinance. Adjacent plantings should be coordinated with the proposed sign. (P&Z)

CITY DEPARTMENT CODE COMMENTS

Legend: C - Code Requirement R - Recommendation S - Suggestion F – Finding

Planning and Zoning (P&Z)

- C - 1 As-built documents for all landscape and irrigation installations are required to be submitted with the Site as-built and request for Performance Bond release. Refer to City of Alexandria Landscape Guidelines. (P&Z) (T&ES) *****
- C - 2 Tree conservation and protection plans shall identify all trees to be removed, and all trees to be protected / preserved. Construction methods to reduce disturbance within driplines shall also be identified. An on-site inspection of existing conditions shall be held with the City Arborist and Natural Resources Division Staff prior to the preparation of the Tree Conservation and Protection Plan.
- C - 3 The landscape elements of this development shall be subject to the Performance and Maintenance bonds, based on criteria established by the City and available through T&ES. Release of Performance and Maintenance Bonds are subject to inspections by City staff per City Code requirements. A final inspection for landscaping is also required three (3) years after completion. (P&Z) (T&ES) *****
- C - 4 No permits shall be issued prior to the release of the Certificate of Appropriateness from the Board of Architectural Review. (BAR)

Code Administration (Building Code)

- F - 1. The review by Code Administration is a preliminary review only. Once the applicant has filed for a building permit, code requirements will be based upon the building permit plans. A preconstruction conference is recommended for large projects. If there are any questions, the applicant may contact the Code Administration Office, Plan Review division at 703-746-4200.
- C - 1 New construction or alterations to existing structures must comply with the current edition of the Uniform Statewide Building Code (USBC).
- C - 2 The developer shall provide a building code analysis with the following building code data on the plan: a) use group; b) number of stories; c) type of construction; d) total floor area per floor; e) height of structure f) non-separated or separated mixed use g) fire protection system requirements.

- C - 3 Exits, parking, and facilities shall be accessible for persons with disabilities. Provide an analysis that describes accessible routes and site characteristics.
- C - 4 Prior to the issuance of a demolition permit or land disturbance permit, a rodent abatement plan shall be submitted to the Department of Code Administration that will outline the steps that will be taken to prevent the spread of rodents from the construction site to the surrounding community and sewers.

Archaeology

- F-1 Based on an examination of historic maps and records, the property at what is now 400 Green St. remained largely vacant until the school was built in the mid-twentieth century. A strip of the south side of the lot contains a small portion of St. Mary's Cemetery that will continue to be protected during the proposed undertaking at the school. Given the close proximity of the cemetery, a measure of caution should be observed during the construction phase of the project, and therefore we recommend the following preservation measures.
- C-1 All required archaeological preservation measures shall be completed in compliance with Section 11-411 of the Zoning Ordinance.

Transportation and Environmental Services (T&ES)

- F - 1. Since the record drawings, maps, and other documents of the City of Alexandria, State, and Federal agencies show the true north pointing upwards, therefore, the Site Plan shall show the true north arrow pointing upward as is customary; however, for the sake of putting the plan together and/or ease of understanding, the project north arrow pointing upward, preferably east, or west may be shown provided it is consistently shown in the same direction on all the sheets with no exception at all. The north arrow shall show the source of meridian. The project north arrow pointing downward will not be acceptable even if, it is shown consistently on all the sheets. (T&ES)
- F - 2. The Final Site Plan must be prepared per the requirements of Memorandum to Industry 02-09 dated December 3, 2009, Design Guidelines for Site Plan Preparation, which is available at the City's website:
<http://alexandriava.gov/uploadedFiles/tes/info/Memo%20to%20Industry%20No.%2002-09%20December%203,%202009.pdf>
- F - 3. The plan shall show sanitary and storm sewer, and water line in plan and profile in the first final submission and cross reference the sheets on which the plan and profile is shown, if plan and profile is not shown on the same sheet. Clearly label the sanitary and storm sewer, or water line plans and profiles. Provide existing and proposed grade elevations along with the rim and invert elevations of all the existing and proposed sanitary and storm sewer at manholes, and water line piping at gate wells on the respective profiles. Use distinctive stationing for various sanitary and storm sewers (if applicable or required by the plan), and water line in plan and use the corresponding stationing in respective profiles. (T&ES)

- F - 4. The Plan shall include a dimension plan with all proposed features fully dimensioned and the property line clearly shown. (T&ES)
- F - 5. Include all symbols, abbreviations, and line types in the legend. (T&ES)
- F - 6. All storm sewers shall be constructed to the City of Alexandria standards and specifications. Minimum diameter for storm sewers shall be 18" in the public Right of Way (ROW) and the minimum size storm sewer catch basin lead is 15". The acceptable pipe materials will be Reinforced Concrete Pipe (RCP) ASTM C-76 Class IV. Alternatively, AWWA C-151 (ANSI A21.51) Class 52 may be used if approved by the Director of T&ES. For roof drainage system, Polyvinyl Chloride (PVC) ASTM D-3034-77 SDR 26 and ASTM 1785-76 Schedule 40 pipes will be acceptable. The acceptable minimum and maximum velocities will be 2.0 fps and 15 fps, respectively. The storm sewers immediately upstream of the first manhole in the public Right of Way shall be owned and maintained privately (i.e., all storm drains not shown within an easement or in a public Right of Way shall be owned and maintained privately). (T&ES)
- F - 7. All sanitary sewers shall be constructed to the City of Alexandria standards and specifications. Minimum diameter of sanitary sewers shall be 10 inches in the public Right of Way and sanitary lateral 6 inches for all commercial and institutional developments; however, a 4-inch sanitary lateral will be acceptable for single family residences. The acceptable pipe materials will be Polyvinyl Chloride (PVC) ASTM D-3034-77 SDR 26, ASTM 1785-76 Schedule 40, Ductile Iron Pipe (DIP) AWWA C-151 (ANSI A21.51) Class 52, or reinforced concrete pipe ASTM C-76 Class IV (For 12 inch or larger diameters); Class III may be acceptable on private properties. The acceptable minimum and maximum velocities will be 2.5 fps and 10 fps, respectively. Laterals shall be connected to the sanitary sewer through a manufactured "Y" or "T" or approved sewer saddle. Where the laterals are being connected to existing Terracotta pipes, replace the section of main and provide manufactured "Y" or "T", or else install a manhole. (T&ES)
- F - 8. Lateral Separation of Sewers and Water Mains: A horizontal separation of 10 feet (edge to edge) shall be provided between a storm or sanitary sewer and a water line; however, if this horizontal separation cannot be achieved then the sewer and water main shall be installed in separate trenches and the bottom of the water main shall be at least 18 inches above of the top of the sewer. If both the horizontal and vertical separations cannot be achieved, then the sewer pipe material shall be Ductile Iron Pipe (DIP) AWWA C-151 (ANSI A21.51) Class 52 and pressure tested in place without leakage prior to installation. (T&ES)
- F - 9. Crossing Water Main Over and Under a Sanitary or Storm Sewer: When a water main over crosses or under crosses a sanitary / storm sewer then the vertical separation between the bottom of one (i.e., sanitary / storm sewer or water main) to the top of the other (water main or sanitary / storm sewer) shall be at least 18 inches for sanitary sewer and 12 inches for storm sewer; however, if this cannot be achieved then both the water main and the sanitary / storm sewer shall be constructed of Ductile Iron Pipe (DIP) AWWA C-151 (ANSI A21.51) Class 52 with joints that are equivalent to water main standards for a

distance of 10 feet on each side of the point of crossing. A section of water main pipe shall be centered at the point of crossing and the pipes shall be pressure tested in place without leakage prior to installation. Sewers crossing over the water main shall have adequate structural support (concrete pier support and/or concrete encasement) to prevent damage to the water main. Sanitary sewers under creeks and storm sewer pipe crossings with less than 6-inch clearance shall be encased in concrete. (T&ES)

- F - 10. No water main pipe shall pass through or come in contact with any part of sanitary / storm sewer manhole. Manholes shall be placed at least 10 feet horizontally from the water main whenever possible. When local conditions prohibit this horizontal separation, the manhole shall be of watertight construction and tested in place. (T&ES)
- F - 11. Crossing Existing or Proposed Utilities: Underground telephone, cable T.V., gas, and electrical duct banks shall be crossed maintaining a minimum of 12 inches of separation or clearance with water main, sanitary, or storm sewers. If this separation cannot be achieved, then the sewer pipe material shall be Ductile Iron Pipe (DIP) AWWA C-151 (ANSI A21.51) Class 52 for a distance of 10 feet on each side of the point of crossing and pressure tested in place without leakage prior to installation. Sanitary / storm sewers and water main crossing over the utilities shall have adequate structural support (pier support and/or concrete encasement) to prevent damage to the utilities. (T&ES)
- F - 12. Dimensions of parking spaces, aisle widths, etc. within the parking garage shall be provided on the plan. Note that dimensions shall not include column widths. (T&ES)
- F - 13. Show the drainage divide areas on the grading plan or on a sheet showing reasonable information on topography along with the structures where each sub-area drains. (T&ES)
- F - 14. Provide proposed elevations (contours and spot shots) in sufficient details on grading plan to clearly show the drainage patterns. (T&ES)
- F - 15. All the existing and proposed public and private utilities and easements shall be shown on the plan and a descriptive narration of various utilities shall be provided. (T&ES)
- F - 16. A Maintenance of Traffic Plan shall be provided within the Construction Management Plan and shall replicate the existing vehicular and pedestrian routes as nearly as practical. Pedestrian and bike access shall be maintained adjacent to the site per Memo to Industry #04-18. These sheets are to be provided as "Information Only." (T&ES)
- F - 17. The following notes shall be included on all Maintenance of Traffic Plan Sheets: (T&ES)
 - a. The prepared drawings shall include a statement "FOR INFORMATION ONLY" on all MOT Sheets.
 - b. Sidewalk closures will not be permitted for the duration of the project. Temporary sidewalk closures are subject to separate approval from Transportation and Environmental Services (T&ES) at the time of permit application.
 - c. Contractor shall apply for all necessary permits for uses of the City Right of Way and shall submit MOT Plans with the T&ES Application for final approval at that time. *

- F - 18. Add complete streets tabulation to the cover sheet with the Final 1 submission. (T&ES)
- C - 1 Per the requirements of the City of Alexandria Zoning Ordinance Article XI, the applicant shall complete a drainage study and adequate outfall analysis for the total drainage area to the receiving sewer that serves the site. If the existing storm system is determined to be inadequate, then the applicant shall design and build on-site or off-site improvements to discharge to an adequate outfall; even if the post development stormwater flow from the site is reduced from the pre-development flow. The Plan shall demonstrate to the satisfaction of the Director of T&ES that a non-erosive stormwater outfall is present. (T&ES)
- C - 2 Per the requirements of the City of Alexandria Zoning Ordinance (AZO) Article XIII, Environmental Management Ordinance, the applicant shall comply with the stormwater quality and quantity requirements and provide channel protection and flood protection in accordance with these requirements. If combined uncontrolled and controlled stormwater outfall is proposed, the peak flow requirements of the Zoning Ordinance shall be met. If the project site lies within the Braddock-West watershed or known flooding area, then the applicant shall provide an additional 10 percent storage of the pre-development flows in this watershed to meet detention requirements. (T&ES)
- C - 3 Per the requirements of Article 13-114 (f) of the AZO, all stormwater designs that require analysis of pressure hydraulic systems, including but not limited to the design of flow control structures and stormwater flow conveyance systems shall be signed and sealed by a professional engineer, registered in the Commonwealth of Virginia. The design of storm sewer shall include the adequate outfall, inlet, and hydraulic grade line (HGL) analyses that shall be completed to the satisfaction of the Director of T&ES. Provide appropriate reference and/or source used to complete these analyses. (T&ES)
- C - 4 The proposed development shall conform to all requirements and restrictions set forth in Section 6-300 (Flood plain District) of Article VI (Special and Overlay Zones) of the City of Alexandria Zoning Ordinance. (T&ES)
- C - 5 If it is determined that the site is not in compliance with Section 13-1-3 of the City Code, then the applicant shall make additional improvements to adjust lighting levels to the satisfaction of the Director of T&ES to comply with the Code. (T&ES)
- C - 6 Location of customer utility services and installation of transmission, distribution and main lines in the public rights of way by any public service company shall be governed by franchise agreement with the City in accordance with Title 5, Chapter 3, Section 5-3-2 and Section 5-3-3, respectively. The transformers, switch gears, and boxes shall be located outside of the public right of way. (T&ES)
- C - 7 (a) Per the requirements of Section 5-3-2, Article A, Chapter 3 of the City of Alexandria Code, all new customer utility services, extensions of existing customer utility services and existing overhead customer utility services supplied by any existing overhead facilities which are relocated underground shall, after October 15, 1971 be installed below the

surface of the ground except otherwise exempted by the City Code and to the satisfaction of the Director, Department of Transportation and Environmental Services. (b) Per the requirements of Section 5-3-3, Article A, Chapter 3 of the City of Alexandria Code, all new installation or relocation of poles, towers, wires, lines, cables, conduits, pipes, mains, and appurtenances used or intended to be used to transmit or distribute any service such as electric current, telephone, telegraph, cable television, traffic control, fire alarm, police communication, gas, water, steam or petroleum, whether or not on the streets, alleys, or other public places of the City shall, after October 15, 1971, be installed below the surface of the ground or below the surface in the case of bridges and elevated highways except otherwise exempted by the City Code and to the satisfaction of Director, Department of Transportation and Environmental Services. (T&ES)

- C - 8 Flow from downspouts, foundation drains, and sump pumps shall be discharged to the storm sewer per the requirements of Memorandum to Industry 05-14 that is available on the City of Alexandria's web site. The downspouts and sump pump discharges shall be piped to the storm sewer outfall, where applicable after treating for water quality as per the requirements of Article XIII of Alexandria Zoning Ordinance (AZO). (T&ES)
- C - 9 In compliance with Title 5: Transportation and Environmental Services, Section 5-1-2(12b) of the City Charter and Code, the City of Alexandria shall provide solid waste collection services to the condominium townhomes portion of the development. All refuse / recycling receptacles shall be placed at the City Right-of-Way. (T&ES)
- C - 10 Per the requirements of Title 4, Chapter 2, Article B, Section 4-2-21, Appendix A, Section A 106(6), Figure A 106.1 Minimum Standards for Emergency Vehicle Access: provide a total turning radius of 25 feet to the satisfaction of Directors of T&ES and Office of Building and Fire Code Administration and show turning movements of standard vehicles in the parking lot as per the latest AASHTO vehicular guidelines. (T&ES)
- C - 11 The applicant shall provide required storage space for both trash and recycling materials containers as outlined in the City's "Solid Waste and Recyclable Materials Storage Space Guidelines", or to the satisfaction of the Director of Transportation & Environmental Services. The plan shall show the turning movements of the collection trucks and for safety reasons, the trucks shall minimize the need to reverse in order to perform trash or recycling collection. The City's storage space guidelines are available online at: <https://www.alexandriava.gov/ResourceRecovery> or by contacting the City's Resource Recovery Division at 703.746.4410, or via email at commercialrecycling@alexandriava.gov. (T&ES)
- C - 12 The applicant shall be responsible to deliver all solid waste, as defined by the City Charter and Code of the City of Alexandria, to the Covanta Energy Waste Facility located at 5301 Eisenhower Avenue. A note to that effect shall be included on the plan. The developer further agrees to stipulate in any future lease or property sales agreement that all tenants and/or property owners shall also comply with this requirement. (T&ES)

- C - 13 The applicants shall submit a Recycling Implementation Plan (RIP) form to the Solid Waste Division, as outlined in Article H of Title 5 (Ordinance Number 4438), which requires all commercial properties to recycle. Instructions for how to obtain a RIP form can be found at: <https://www.alexandriava.gov/ResourceRecovery> or by calling the Resource Recovery Division at 703.746.4410 or by e-mailing CommercialRecycling@alexandriava.gov. (T&ES)
- C - 14 All private streets and alleys shall comply with the City's Minimum Standards for Private Streets and Alleys. (T&ES)
- C - 15 Bond for the public improvements must be posted prior to release of the site plan. (T&ES)*
- C - 16 Plans and profiles of utilities and roads in public easements and/or public Right of Way must be approved prior to release of the plan. (T&ES) *
- C - 17 Provide a phased erosion and sediment control plan consistent with grading and construction plan. (T&ES)
- C - 18 Per the Memorandum to Industry, dated July 20, 2005, the applicant is advised regarding a requirement that applicants provide as-built sewer data as part of the final as-built process. Upon consultation with engineering firms, it has been determined that initial site survey work and plans will need to be prepared using Virginia State Plane (North Zone) coordinates based on NAD 83 and NAVD 88. Control points/Benchmarks which were used to establish these coordinates should be referenced on the plans. To ensure that this requirement is achieved, the applicant is requested to prepare plans in this format including initial site survey work if necessary. (T&ES)
- C - 19 The thickness of sub-base, base, and wearing course shall be designed using "California Method" as set forth on page 3-76 of the second edition of a book entitled, "Data Book for Civil Engineers, Volume One, Design" written by Elwyn E. Seelye. Values of California Bearing Ratios used in the design shall be determined by field and/or laboratory tests. An alternate pavement section for Emergency Vehicle Easements (EVE) to support H-20 loading designed using California Bearing Ratio (CBR) determined through geotechnical investigation and using Virginia Department of Transportation (VDOT) method (Vaswani Method) and standard material specifications designed to the satisfaction of the Director of Transportation and Environmental Services (T&ES) will be acceptable. (T&ES)
- C - 20 All pedestrian, traffic, and way finding signage shall be provided in accordance with the Manual of Uniform Traffic Control Devices (MUTCD), latest edition to the satisfaction of the Director of T&ES. (T&ES)
- C - 21 No overhangs (decks, bays, columns, post or other obstructions) shall protrude into public Right of Ways, public easements, and pedestrian or vehicular travel ways unless otherwise permitted by the City Code. (T&ES)

- C - 22 All driveway entrances, curbing, etc. in the public ROW or abutting public ROW shall meet City design standards. (T&ES)
- C - 23 All sanitary laterals and/or sewers not shown in the easements shall be owned and maintained privately. (T&ES)
- C - 24 The applicant shall comply with the City of Alexandria's Noise Control Code, Title 11, Chapter 5, which sets the maximum permissible noise level as measured at the property line. (T&ES)
- C - 25 All construction activities must comply with the Alexandria Noise Control Code Title 11, Chapter 5, Section 11-5-4(b)(15), which permits construction activities to occur between the following hours:
- a. Monday Through Friday from 7 AM To 6 PM and
 - b. Saturdays from 9 AM to 6 PM.
 - c. No construction activities are permitted on Sundays and holidays.
Section 11-5-4(b)(19) further restricts the Pile Driving to the following hours:
 - d. Monday Through Friday from 9 AM To 6 PM and
 - e. Saturdays from 10 AM To 4 PM
 - f. No pile driving is permitted on Sundays and holidays.
Section 11-5-109 restricts work in the right of way for excavation to the following:
 - g. Monday through Saturday 7 AM to 5 pm
 - h. No excavation in the right of way is permitted on Sundays. (T&ES)
- C - 26 The applicant shall comply with the Article XIII of the City of Alexandria Zoning Ordinance, which includes requirements for stormwater pollutant load reduction, treatment of the Alexandria Water Quality Volume Default and stormwater quantity management. (T&ES)
- C - 27 The applicant shall comply with the City of Alexandria, Erosion and Sediment Control Code, Section 5, Chapter 4. (T&ES)
- C - 28 All required permits from Virginia Department of Environmental Quality, Environmental Protection Agency, Army Corps of Engineers, and/or Virginia Marine Resources shall be in place for all project construction and mitigation work prior to release of the Final Site Plan. This includes the state requirement for a state General VPDES Permit for Discharges of Stormwater from Construction Activities (general permit) and associated Stormwater Pollution Prevention Plan (SWPPP)_for land disturbing activities equal to or greater than one acre. See memo to industry 08-14 which can be found on-line here: <http://alexandriava.gov/tes/info/default.aspx?id=3522>. (T&ES) *
- C - 29 The applicant must provide a Stormwater Pollution Prevention Plan (SWPPP) Book with the Final 1 submission. The project's stormwater management (SWM) plan and the erosion and sediment control (E&SC) plan must be approved prior to the SWPPP being deemed approved and processed to receive coverage under the VPDES Construction General Permit. Upon approval, an electronic copy of the approved SWPPP Book must be provided

with the Mylar submission and the coverage letter must be copied onto the plan sheet containing the stormwater management calculations. An electronic copy and a hardcopy of the SWPPP Binder Book must be included in the released site plans, and the approved hardcopy SWPPP Binder Book must accompany the construction drawings onsite. Separate parcel owners will be required to seek separate VPDES Construction General Permit Coverage unless a blanket entity incorporated in Virginia has control of the entire project. (T&ES-Storm)

AlexRenew Comments

AlexRenew has no comments.

VAWC Comments

No comments received.

Fire Department

Findings

1. The following comments are for verification of completeness review only. Additional comments may be forthcoming or current comments deleted once the applicant provides supplemental information for review. Please direct any questions to Maurice Jones at 703-746-4256 or maurice.jones@alexandriava.gov.

Acknowledged by applicant.

Code

2. The applicant shall provide a separate Fire Service Plan which illustrates where applicable:
a) emergency ingress/egress routes to the site; b) emergency vehicle easements (EVE) around the building with a minimum width of twenty-two (22) feet.

a) Applicant has provided this information.

b) Applicant has provided this information.

3. The fire service plan shall show placement of emergency vehicle easement signs. See sign detail and placement requirements are as follows:

Emergency vehicle easements shall be a minimum of 22 feet across the travel lane. The emergency vehicle easement shall provide access to strategic areas of the building and fire protection systems. Curbing and street components shall conform to the standards established by Transportation and Environmental Services and this document for emergency vehicle easements.

Emergency vehicle easement signs shall be metal construction, 12-inches wide and 18 inches in height. Provide red letters on reflective white background with a 3/8-inch red trim strip around the entire outer edge of the sign. The lettering shall say "NO PARKING,"

"FIRE LANE," "EM. VEH. EAS.," and "City of Alex.," Lettering size shall be as follows: "NO PARKING" - 2 inches, "FIRE LANE" - 2½ inches. EM. VEH. EAS. - 1 inch, CITY OF ALEX. - ½ inch. Directional Arrows - 1 inch by 6 inches solid shaft with solid head - 1½ inches wide and 2 inches deep (For examples, see Figures D102.1, D102.2, and D102.3). Signs shall be mounted with the bottom of the sign 7 feet above the roadway and shall be properly attached to a signpost or other approved structure such as designated by the fire official. Posts for signs, when required, shall be metal and securely mounted. Signs shall be parallel to the direction of vehicle travel and posted so the directional arrows clearly show the boundaries and limits of the Emergency Vehicle Easement. In areas where emergency vehicle easements involve two-way traffic, double mounted signs shall be provided. The maximum distance between signs shall be 100 feet. Other special signs or modifications to emergency vehicle easement signs shall be approved by the fire official.

Where curbing is a component of the emergency vehicle easement, the curbing construction shall conform to weight and grade requirements for vehicular traffic. In no circumstances shall a raised curb be in the path of travel in an emergency vehicle easement. Where a mountable curb is provided as part of an emergency vehicle easement, emergency vehicle easement signs shall be posted at the point nearest the edge of the emergency vehicle easement, but in no case within the clear width of the emergency vehicle easement. Except for flush curbs, any fire department access points that require fire apparatus to mount a curb shall conform to the modified 3-inch curb design standard MOD CG-3 or MOD CG-7 design as shown.



Preliminary information provided that shows proposed EVE through back of property.

4. Show fire apparatus vehicle turning radius based on the following specifications:

Tower 203 Turning Specifications

- a. Turning Radius – Wall to Wall = 54.98 feet + / - 2 feet
- b. Curb to Curb = 51.33 feet + / - 2 feet

- c. Inside turning radius = 37.73 feet + / - 2 feet
- d. Overall Length – 47' – 4 ½"
- e. Overall Width – 98"
- f. Wheelbases from front axle to both rear axles – 240"
- g. Tandem axle spacing – 56" CL of axle to CL of axle
- h. Gross Weight – As built with no equipment or water gross weight = 66,000#
- i. Angle of Approach – 13 Degrees
- j. Angle of Departure – 11 degrees
- k. Ramp Break Over – Break over angle is 9°

Please verify turning movement / gate opening width / curb-island location as it appears that apparatus will hit curb at South Royal Street entrance. It might be more advantageous to enter from the exit side of gate. Please map that turning movement and explore that option.

- 5. The proposed security gates shall be equipped with an override system that opens the gates in the event of a power failure, activation of a yelp siren, and with a Knox Box key. These features shall be designed and installed to the satisfaction of the Alexandria Fire Department Operations and Fire Prevention and Life Safety Sections.

Acknowledged by applicant. Applicant states: A note pertaining to the accessibility of the site by the Fire Department has been provided, see the Fire Department Accessibility Note on Sheet 6. A Siren Operated Sensor and Knox Box will be provided for emergency access. Gate details to be provided with the Final Site Plan. Note is on plans as stated.

- 6. Bridge between buildings shall be a minimum of 15 feet above finished roadway.

No action required; even though fire department access is not required in this area, the possibility exists that apparatus will deploy in that area. Applicant indicates that the minimum 15 ft clearance is provided between the building and the finished roadway below.

- 7. Proposed bollards could obstruct fire department access. If installation of bollards moves forward, submit information concerning type along with manufacturer's data sheets and any information related to installation and location.

Acknowledged by applicant. A note stating “All proposed onsite bollards shall be approved by the City of Alexandria Fire Department and Fire Marshal’s office,” has been added to Sheet 6. Note is on plans as stated.

Police Department

- R - 1. The controlled electronic access should not interfere with the emergency push-bar release located on the inside of the stairwell door that allows for emergency exit of the building.

Asterisks denote the following:

- * Condition must be fulfilled prior to release of the Final Site Plan
- ** Condition must be fulfilled prior to release of the building permit
- *** Condition must be fulfilled prior to release of the certificate of occupancy
- **** Condition must be fulfilled prior to release of the bond

VIII. GRAPHICS



Figure 1: Illustrative birds eye view with labels



Figure 2: Illustrative landscape plan



Figure 1: Addition view from driveway



Figure 2: Addition view from interior of site/queuing area



Figure 3: Addition view from cemetery

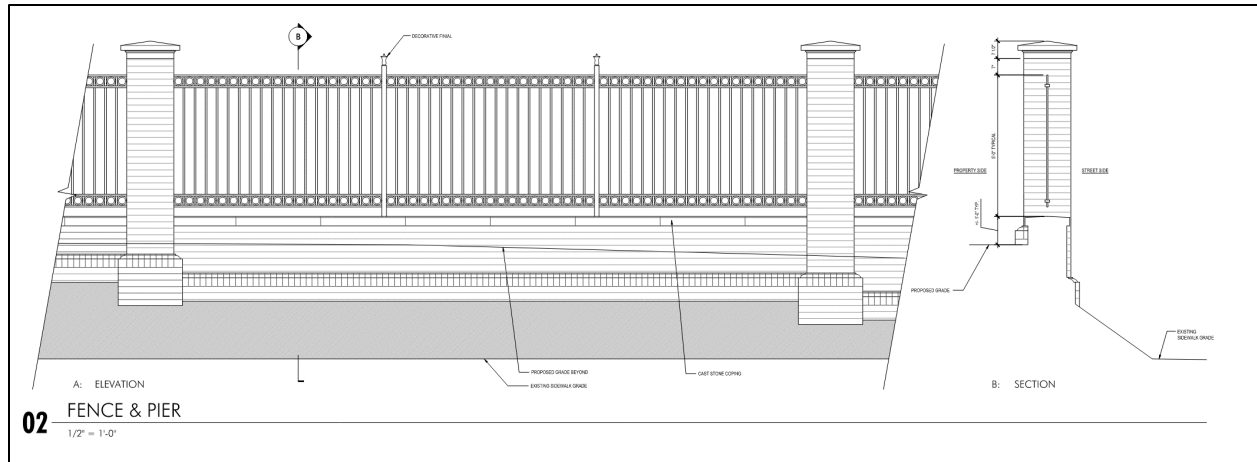


Figure 4: Detail of brick wall/iron perimeter fence

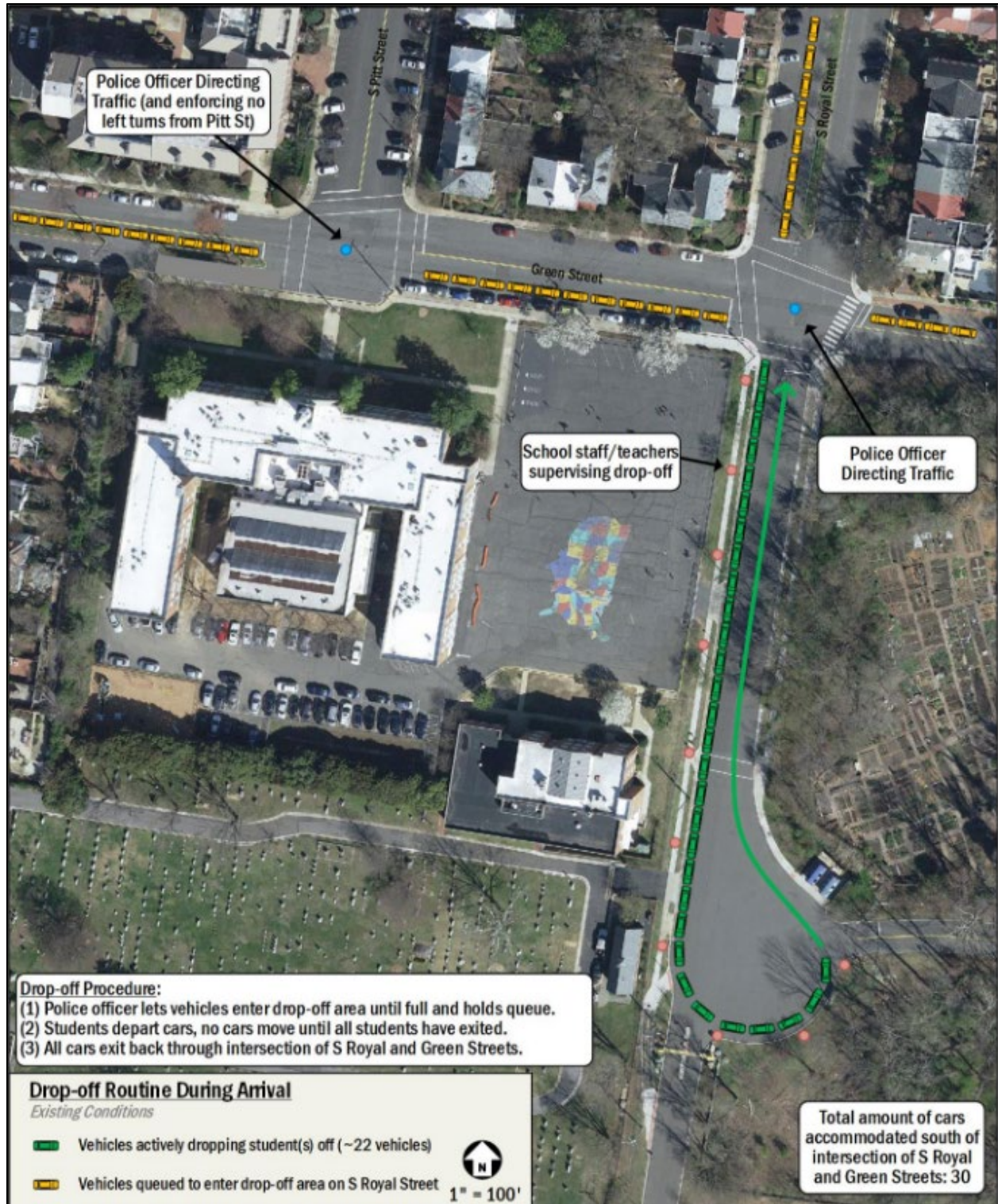


Figure 5: Existing drop-off

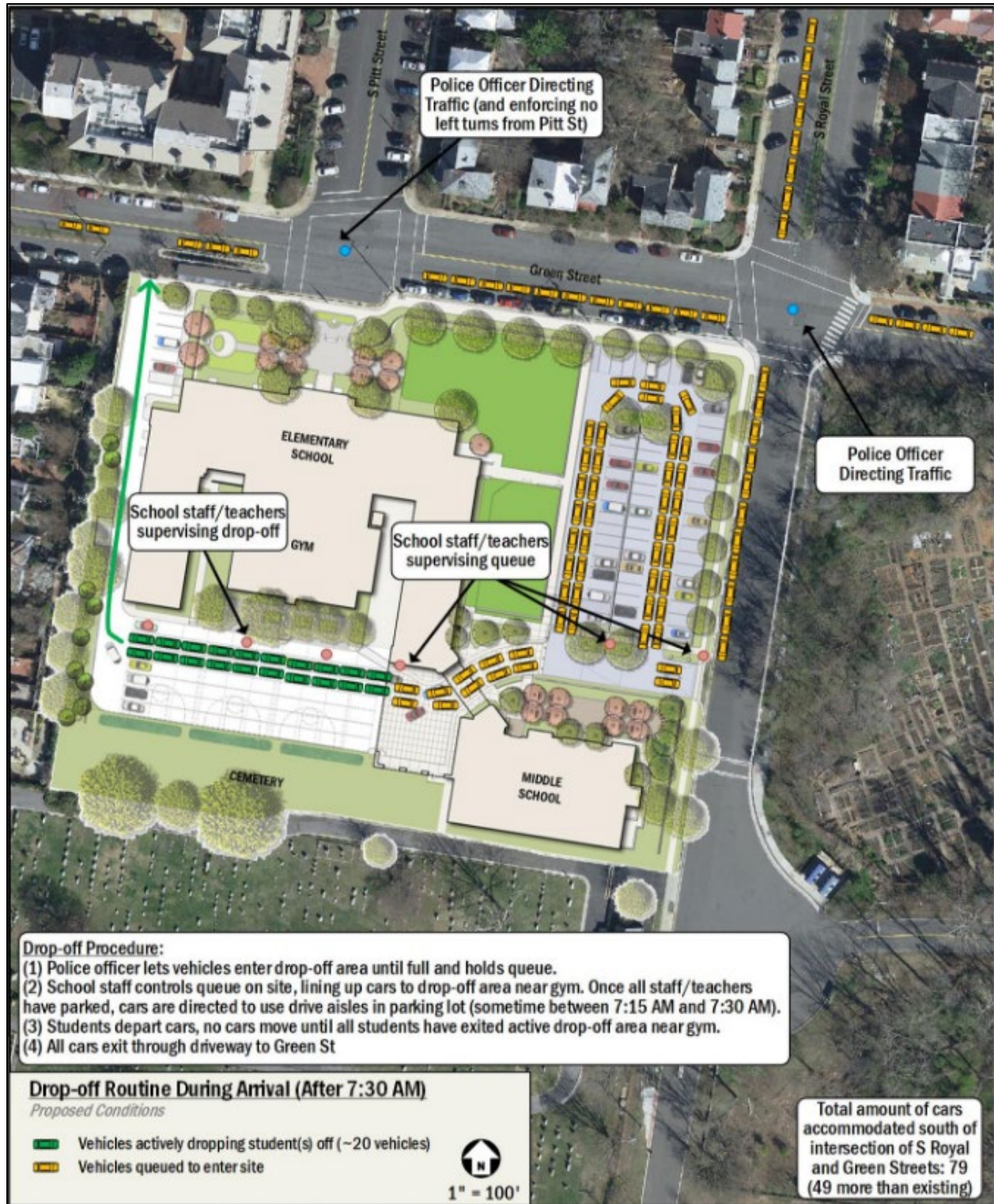


Figure 6: Proposed drop off up utilizing staff parking aisle to que



Figure 7: Existing pick-up



Figure 8: Proposed pick up utilizing staff parking aisle to que

IX. ATTACHMENTS

1. Transportation Impact Study

TRANSPORTATION IMPACT STUDY

THE BASILICA SCHOOL OF SAINT MARY

CITY OF ALEXANDRIA, VIRGINIA

October 27, 2020 (Revised January 15, 2021)



GOROVE / SLADE

Transportation Planners and Engineers

Prepared by:



GOROVE / SLADE
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EXECUTIVE SUMMARY

The following report is a Transportation Impact Study (TIS) for the proposed improvements to The Basilica School of Saint Mary, located in Alexandria, Virginia. The project consists of renovations and potential additions to the building, a revised site access plan including upgrades to parking and student drop-off/pick-up facilities, and an increase in the school's enrollment cap from 720 to 765 students. The report is based on full build of the conceptual plans for the site, and the analyses are based on a total population of 765 students.

The purpose of this report is to review existing and future transportation facilities in the area surrounding the project site, project transportation demand needs of the project, determine if the new transportation demand generated by the project would have negative impacts on the surrounding transportation network, and present recommendations to minimize the negative impact from the proposed project.

This report concludes that The Basilica School of Saint Mary site improvements will not have a negative impact on the surrounding transportation and roadway network given the recommendations from this report are implemented.

This report reached the following major findings and recommendations:

PROJECT SUMMARY

The project consists of renovations and potential additions to the building, a revised site access plan including upgrades to parking and student drop-off/pick-up facilities, and an increase in the school's enrollment cap from 720 to 765 students.

The project includes two (2) site access points: one (1) on Green Street and one (1) on Royal Street. These provide access to the two (2) on-site surface parking lots. A small visitor and ADA parking lot will be provided on the west side of the school building, accessed from Green Street. This parking lot provides the shortest walking route to the main entrance for ADA parking, without the grade challenges that exist in other parking locations. A 62-space parking lot will be constructed on the east side of the school building, serving teachers and staff. This larger parking lot will be accessed from the Royal Street driveway. The Royal Street driveway also serves as the entry for parent pick-up/drop-off during arrival and dismissal, and during

those times queues will extend to the driveway and temporarily block access to the parking lot.

Under existing and future conditions, parent pick-up/drop-off queues extend off-site into the neighborhood during arrival and dismissal. The project includes changes to the site plan that will allow for more of the queues to stack on-site, reducing the off-site queues in the future. This report concludes that in the amount of queuing will be significantly reduced despite the increase in student capacity. During the morning arrival, which coincides with the commuter peak period, this change is substantial as it significantly reduces the amount of impact the school has on the surrounding neighborhood.

The school does not generate significant amounts of traffic during the day, except during morning arrival and afternoon dismissal. During these times, the school generates enough traffic that it creates pockets of congestion nearby for an acute period of time. The proposed changes in site circulation during the morning arrival alter the way traffic exits the school and can lead to increased congestion on Green Street. This can be mitigated through operational and management solutions that disperse traffic on the City grid, spread out demand and limit overall impacts. The school can accomplish this by changing the way the police officers direct traffic to accommodate for the future change in circulation.

The changes to site access, circulation, and arrival/dismissal operations are outlined in the following section.

SITE ACCESS AND CIRCULATION

Teacher/Staff Parking

The staff parking lot is accessed via the Royal Street driveway. During student arrival, teachers and staff must wait in the student drop-off queue to enter the parking lot, unless they arrive prior to the start student drop-off queuing. Teachers and staff can exit the site from any of the site driveways following student dismissal.

Visitor and ADA Parking

During the school day, access to the small ADA and visitor lot will be to/from Green Street, as vehicles will not be able to circulate around the school and access the lot via Royal Street. This changes during arrival and dismissal, as access to these visitor and ADA spaces will be from the south only. Vehicles will enter the site from the arrival/dismissal entrance on S Royal Street and circulate around the building. Vehicles exiting the small lot will exit the site from the outbound-only driveway on



Green Street. It is anticipated that there will be very few vehicles parking in this lot during arrival and dismissal periods.

Student Arrival and Dismissal

Student arrival and dismissal operations will be moved to a new pick-up/drop-off area on the new playground surface south of the elementary school building. The existing police officers that direct traffic will change how they direct in order to accommodate the proposed operations. The changes to the existing arrival and dismissal operations are as follows:

Proposed Drop-off Operations

The proposed drop-off operations vary by time period. Before 7:30 AM, vehicles enter the site using the S Royal Street driveway and the queuing area is limited to the driveway between S Royal Street and the drop-off area. After 7:30 AM, once most teachers and staff have parked, the queuing area is expanded to include the drive aisles within the teacher/staff parking lot.

The proposed drop-off operations will decrease the number of vehicles queued on local streets, because it increases the number of vehicles than can be accommodated south of the intersection of S Royal Street and Green Street at any given time. Under existing conditions, 30 vehicles can be accommodated. Under proposed conditions, 54 vehicles (24 more than existing) can be accommodated before 7:30 AM, and 79 vehicles (49 more than existing) after 7:30 AM. This change will significantly reduce the impacts cars waiting in the queue have off-site on nearby roads.

Proposed Pick-Up Operations

There are two options for proposed pick-up operations: (1) No Drive Aisle Use and (2) Using Drive Aisles. With both options, vehicles will enter the pick-up area from the S Royal Street driveway and exit from the Green Street driveway on the west side of the building. The options differ by the way queuing is accommodated. In Option 1, queuing is limited to the driveway between S Royal Street and the pick-up area. In Option 2, the queuing area will be expanded to include the drive aisles within the teacher/staff parking lot.

In addition to parent/guardian pick-up, a parent-chartered school bus will queue in front of the main entrance on Green

Street. The school bus will depart once the students are onboard.

The proposed pick-up operations affect the number of vehicles than can be accommodated south of the intersection of S Royal Street and Green Street at any given time. Under existing conditions, about 116 vehicles can be accommodated. Under proposed conditions with no drive aisle use (Option 1), 88 vehicles (28 fewer than existing) can be accommodated, and 118 vehicles (two more than existing) with drive aisle use (Option 2).

TRAFFIC OPERATIONS

A detailed traffic capacity analysis performed for this report led to the following findings:

- Under existing conditions, the study area intersections all operate at acceptable levels of service and delay, with a few exceptions.
- Under future conditions, levels of service and delay get worse at some study intersections and better at others.
- One (1) intersection movement meets the criteria for mitigation measures, but these measures are not recommended because there would be negative impacts to other modes (mainly walking), and the benefit would not impact enough drivers to offset negative impacts to other modes. The increase in delay and queues at this intersection is primarily due to re-routed existing trips with the new circulation pattern. If there are found to be impacts, the police officers directing traffic can help to better distribute vehicles throughout the grid.

TRANSPORTATION MANAGEMENT PLAN (TMP)

A Transportation Management Plan (TMP) has many components that are tailored to accommodate a given facility with the goal of reducing of automobile trips by encouraging alternative forms of transportation.

While a TMP is **not** required by the City of Alexandria for this project, this report highlights certain measures The Basilica School of Saint Mary is already undertaking to advance the goals typically seen in a TMP, including reducing automobile trips and lessening the impact of site-generated automobile trips on the transportation network.



INTRODUCTION

This report is a Transportation Impact Study (TIS) for the proposed improvements to The Basilica School of Saint Mary, located in Alexandria, Virginia. The project consists of renovations and potential additions to the building, a revised site access plan including upgrades to parking and student drop-off/pick-up facilities, and an increase in the school's enrollment cap from 720 to 765 students. This TIS/TMP is based on the Ultimate Condition conceptual plans for the site. Figure 2 shows the location of The Basilica School of Saint Mary site.

PURPOSE OF STUDY

The purpose of this report is to:

1. Review existing and future transportation facilities in the area surrounding the project site.
2. Project the transportation demand needs of the proposed project.
3. Determine if the new transportation demand generated by the project would have negative impacts on the surrounding transportation network.
4. Present recommendations to minimize the negative impact from the proposed project, including providing recommendations for the design team to incorporate into the schematic design.

STUDY TASKS

The following tasks were completed as part of this study:

- A scoping form based on the meeting with City staff was submitted to the City and subsequently approved.
- Field observations were performed at The Basilica School of Saint Mary campus regarding study area review lane configurations and traffic controls, and current arrival and dismissal patterns at the school.
- Traffic counts were conducted at seven (7) locations on Tuesday, November 27, 2018.
- Mode split assumptions were determined based on results from a transportation survey.
- Capacity analyses for the existing conditions were performed.
- Future capacity analyses were performed based on the approved scope.

- Multimodal analyses were performed reviewing pedestrian and bicycle travel to and from the project.
- The analysis findings and recommendations were documented in this report.

CONTENTS OF STUDY

This report contains nine (9) chapters as follows:

- *Study Area Overview*
This chapter reviews the area near and adjacent to the proposed project and includes an overview of the site location, and local initiatives within the study area.
- *Project Design*
This chapter reviews the transportation components of the project, including the site plan and access. Included is a review of vehicle parking and student pick-up/drop-off operations.
- *Travel Demand Assumptions*
This chapter outlines the travel demand of the proposed project. It contains projections on the mode splits of site users and summarizes the proposed trip generation of the project.
- *Traffic Operations*
This chapter provides a summary of the existing roadway facilities and an analysis of the existing and future roadway capacity in the study area. This section highlights the vehicular impacts of the project, including presenting mitigation measures for minimizing impacts as needed.
- *Pedestrian Facilities*
This chapter summarizes existing and future pedestrian access to the site, reviews walking routes to and from the project site, outlines impacts, and presents recommendations as needed.
- *Bicycle Facilities*
This chapter summarizes existing and future bicycle access to the site, reviews the quality of cycling routes to and from the project site, outlines impacts, and presents recommendations as needed.
- *Transportation Management Plan*
This chapter outlines various efforts The Basilica School of Saint Mary is undertaking to reduce automobile trips and lessen the impact of automobile trips on the transportation network.
- *Summary and Recommendations*
This chapter presents a summary of the recommended mitigation measures by mode and presents overall report findings and conclusions.

STUDY AREA OVERVIEW

This chapter reviews the study area and includes an overview of the site location, including a summary of the major transportation characteristics of the area and of future regional projects.

The following conclusions are reached within this chapter:

- The site is surrounded by an extensive regional and local transportation system that will connect students, staff, and visitors of the project to the rest of the City of Alexandria and surrounding areas.
- The site is served by public transportation with access to two (2) local and regional bus routes.
- The site is served by existing bicycle infrastructure including the Woodrow Wilson Bridge Trail and the Mount Vernon Trail and several shared lanes and signed routes in the vicinity of the site.
- Pedestrian conditions are generally adequate, particularly along anticipated major walking routes.
- Several citywide initiatives will positively impact the study area, including the City's Comprehensive Transportation Master Plan, Transit Vision Study, and Complete Streets and Vision Zero initiatives.

SITE LOCATION

The site is located within the Old Town neighborhood in the City of Alexandria. It is bounded by Green Street to the north, S Royal Street to the south, houses along S Saint Asaph Street to the west, and Saint Mary's Cemetery to the south. The site location is shown on Figure 2.

PARCEL INFORMATION

The existing property at 400 Green Street is currently occupied by The Basilica School of Saint Mary, seen on tax map 80.04. A tax map showing the location of the property is shown on Figure 3.

ZONING INFORMATION

The site is currently zoned RM: Townhouse. The zoning map showing the location of the property is shown on Figure 4.

MAJOR TRANSPORTATION FEATURES

Overview of Regional Access

The Basilica School of Saint Mary site has ample access to regional vehicular, transit, and bicycle transportation options, as shown in Figure 5, that connect the site to destinations within Virginia, the District, and Maryland.

The site is accessible from Interstate 495/95, US Highway 1 (Richmond Highway), and state routes such as VA-236 (Duke Street) and VA-7 (King Street). These roadways bring vehicular traffic within one (1) mile of the site, at which point local roads can be used to access the site directly.

The site is located 1.4 miles from the King Street Metrorail station, which is served by the Blue and Yellow Lines and provides connection to areas in Virginia, the District, and Maryland. The site is also serviced by three (3) Metrobus routes and two (2) DASH bus routes.

The site is located 0.2 miles from the Mount Vernon Trail, a major off-street bicycle trail network connecting Mount Vernon and Rosslyn, Virginia, as well as the Woodrow Wilson Bridge Trail, which connects Alexandria, Virginia with National Harbor, Maryland. A detailed review of existing and bicycle access and infrastructure is provided in a later chapter of this report.

Overall, the site has access to several regional roadways, transit, and bicycle options, making it convenient to travel between the site and destinations in the Virginia, the District, and Maryland.

Overview of Local Access

There are several local transportation options near the site that serve vehicular, transit, walking, and cycling trips, as shown on Figure 6.

In addition to arterials, the site is served by a local vehicular network of low volume neighborhood streets that provide connections from regional roads to the site.

DASH is a local bus system provided by the Alexandria Transit Company, operating within the City of Alexandria. DASH connects with Metrobus, Metrorail, Virginia Railway Express (VRE), and other local bus systems. As shown in Figure 6, there are multiple bus routes that run near the site along S Washington Street, Jefferson Street, S Saint Asaph Street, and Franklin Street.

There are existing bicycle facilities that connect the site to neighborhoods within the City of Alexandria, most notably the Woodrow Wilson Bridge Trail and the Mount Vernon Trail, the shared lanes on S Royal Street, Columbus Street, and Wilkes Street, and the signed bicycle route and off-street path on Wilkes Street.

As shown in Figure 1, the site is situated in a neighborhood featuring high Walk Scores and Bike Scores. A detailed review of existing and proposed pedestrian access and infrastructure is provided in a later section of this report.

Car-sharing

Zipcar is the only car-sharing company currently operating in the City of Alexandria. Zipcar is a private company that provides registered users access to a variety of automobiles. Zipcar has designated spaces for their vehicles. The nearest Zipcar location to the school site is 0.9 miles away near the intersection of King Street and S Patrick Street.

Walk Score and Bike Score

Walkscore.com is a website that provides scores and rankings for the walking, biking, and transit conditions within the City of Alexandria. Based on this website the planned development is in the Old Town neighborhood. The neighborhood has a walk score of 86 (or “Very Walkable”), a transit score of 56 (or “Good Transit”), and a bike score of 75 (or “Very Bikeable”).

Figure 1 shows the neighborhood borders in relation to the site location and displays a heat map for walkability and bikeability.

The site is situated in an area with very good walk scores because of the abundance of neighborhood serving retail locations nearby, where most errands can be completed by walking.

The site is situated in an area with good transit scores. The transit score was based on the proximity to multiple bus lines,

and distance to the nearest Metrorail stop which is located 1.4 miles from the site.

The site is situated in an area with very good bike scores due to its proximity to low volume residential roadways, number of bike lanes and trails, and flat topography.

Overall, the Old Town neighborhood has high walk, transit, and bike scores. Additionally, planned roadway improvements will help increase the walk, bike, and transit scores in the Old Town neighborhood.

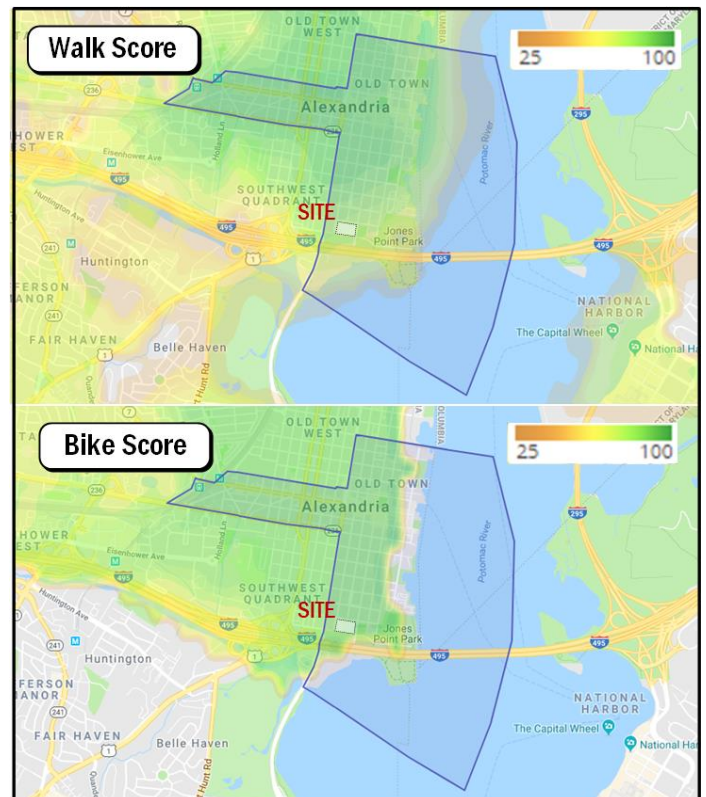


Figure 1: Walk Score & Bike Score



Figure 2: Site Location



Figure 3: Tax Map

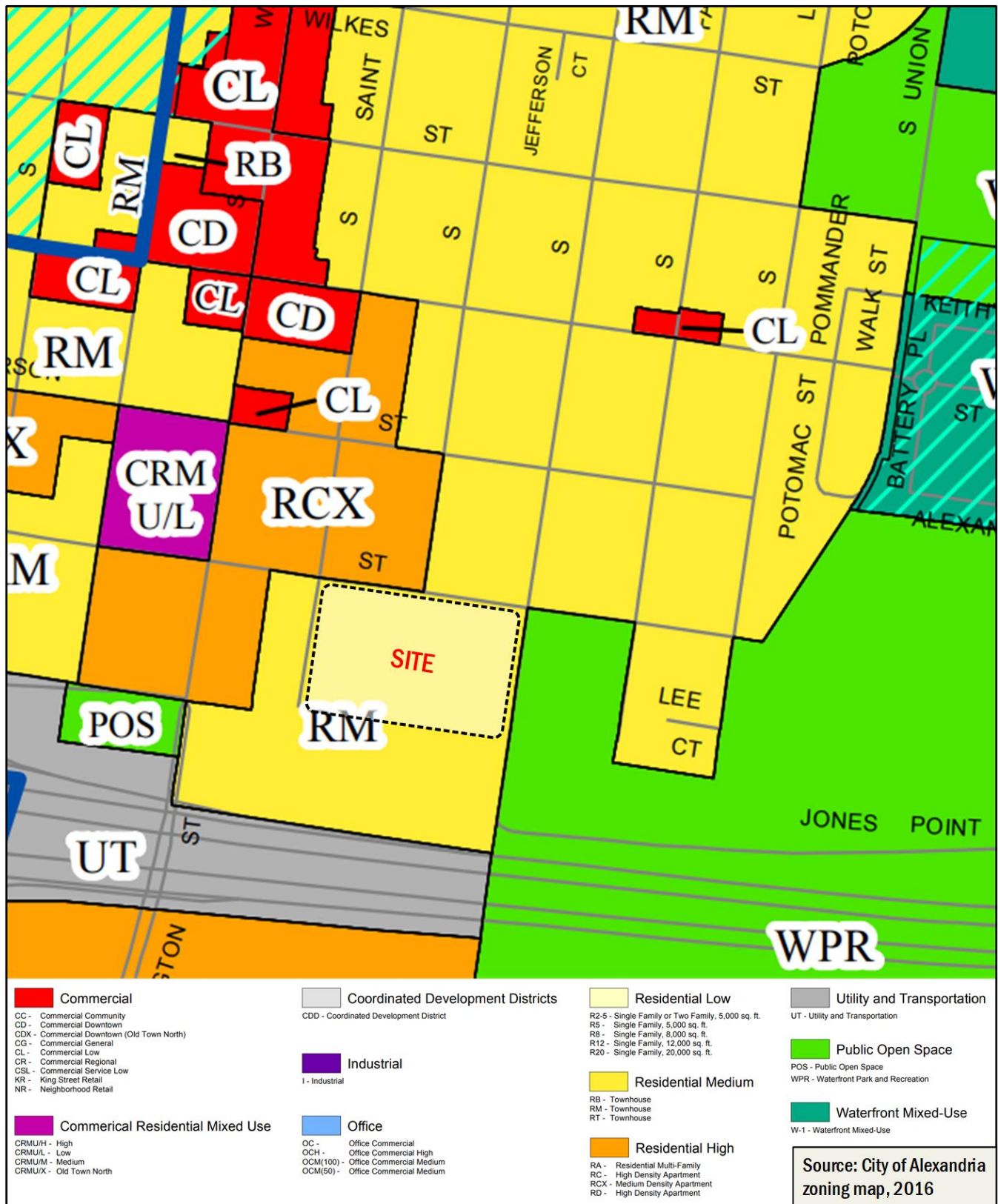


Figure 4: Zoning Map

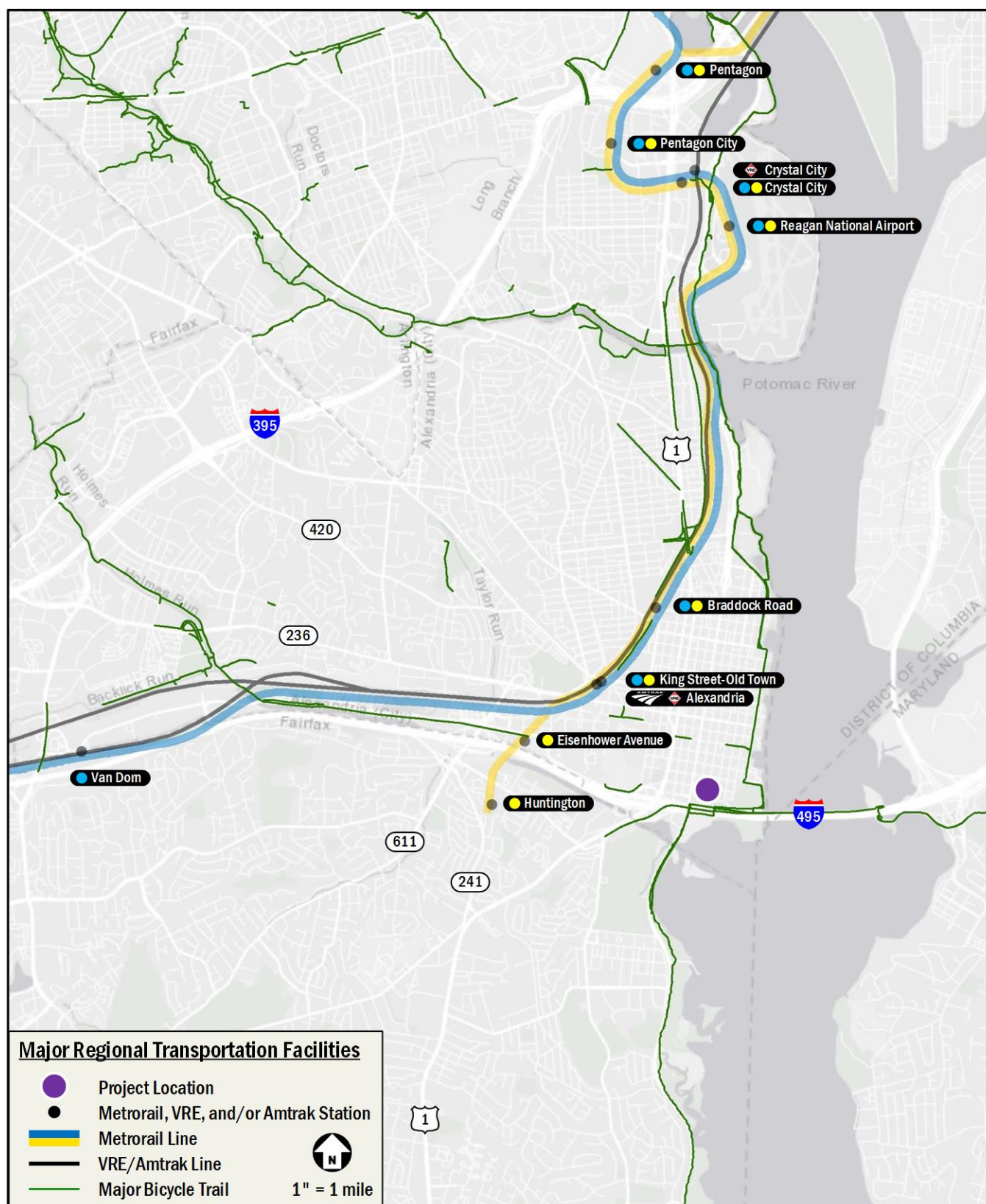


Figure 5: Major Regional Transportation Facilities

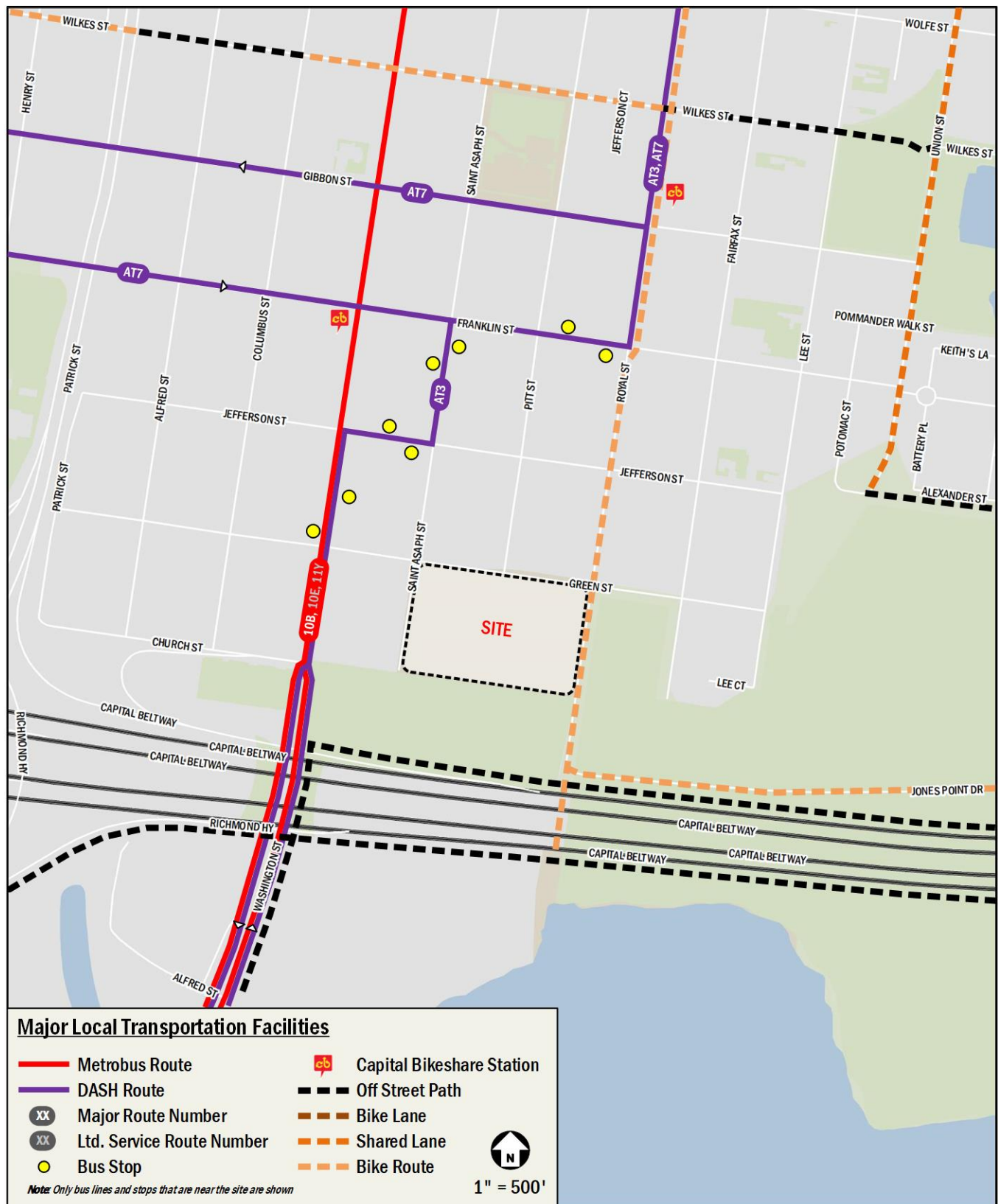


Figure 6: Major Local Transportation Facilities



FUTURE PROJECTS

There are several local initiatives and approved developments in the vicinity of the site. These planned and proposed projects are summarized below.

City-wide Initiatives

Comprehensive Transportation Master Plan (2008)

Adopted in April 2008, updated in 2016, and currently undergoing an update that will culminate in 2020, the City of Alexandria's Comprehensive Transportation Master Plan was developed to ensure wise, effective, and sustainable planning of the City's transportation future.

The Comprehensive Transportation Master Plan is driven by seven (7) guiding principles to inform transportation related decision making within the City. These guiding principles are (1) developing innovative local and regional transit options; (2) providing quality pedestrian and bicycle accommodations; (3) providing accessibility and mobility to all citizens, regardless of age or ability; (4) increasing the use of communications technology in transportation system; (5) promoting transportation policies that enhance quality of life and support livable, urban land use, and encourage neighborhood preservation; (6) leading the region in promoting environmentally friendly transportation policies; and (7) ensuring accessible, reliable, and safe transportation for older and disabled citizens.

The Comprehensive Transportation Master Plan's recommended approach to transportation in the City is outlined as follows:

- **Transit** – The City will create a network of three (3) transit corridors within secure rights-of-way dedicated exclusively for transit use. The Comprehensive Transportation Master Plan has identified the corridors of Route 1, Van Dorn/Shirlington, and Duke Street for these projects. In doing so the City will: (1) conduct public outreach regarding the concept and process; (2) coordinate with adjacent jurisdictions to ensure integration with existing transit and explore opportunities for future connections; (3) prioritize transit corridors for investments; (4) plan for dedicated transit lanes and ensure new developments do not preclude dedicated transit lanes; (5) identify locations for smart stations that serve both new and existing transportation modes; (6) ensure development does not preclude efforts to expand public transit; (7) identify transit technologies and techniques that suit the identified corridors; (8) integrate existing DASH service with new transit system elements; (9) incorporate traffic signal priority, traffic circulation changes, and other on-street enhancements into the new system; (10) create Transportation Management Plans, Transit Overlay Zoning Districts, Parking Management Zones, etc. to coordinate efforts to support the system; (11) investigate potential funding from existing and new revenue sources; (12) develop an outreach and marketing campaign to engage citizens about the City's transportation future; and (13) coordinate with pertinent Boards and Commissions to ensure special transportation needs of all citizens are considered.
- **Pedestrian** – The City will promote and encourage walking by creating a safe, well-maintained, comfortable, and enjoyable pedestrian environment that encourages walking and is accessible for people of all ages and abilities. The City will provide a continuous, connected, and accessible pedestrian network that enables people of all ages and abilities to move safely and comfortably between places and destinations. The City will promote walking as a means of improving transportation circulation, transit access, public health, environmental quality, and recreation, with the goal of increasing walking trips as a percent of all travel in Alexandria. Finally, the City will educate users of all transportation modes about pedestrian safety, rights, and responsibilities.
- **Bicycle** – The City will promote and encourage the use of bicycles by creating a safe, well-maintained bicycling environment that encourages bicycling as an enjoyable and convenient mode of travel and recreation for riders of all ages and abilities. The City will develop a connected bicycle network that includes both on-street and off-street facilities, as well as support facilities such as bicycle parking, that provide safe, enjoyable, and comfortable accommodations for riders of all ages and abilities. The City will promote bicycling as a means of improving transportation circulation, transit access, public health, environmental quality, and recreation, with the goal of increasing bicycling trips as a percent of all travel in Alexandria. Finally, the City will educate users of all transportation modes about bicycle safety, rights, and responsibilities.
- **Streets** – The City will comprehensively address the City's street system and enhance the transportation network by:



(1) ensuring that streets can accommodate all users; (2) formally adopt a Complete Streets policy; (3) develop new and enhance existing programs regarding Transportation Demand Management (TDM); (4) improve mobility on the City's arterials through the incorporation of technology into transportation infrastructure; (5) improve safety at intersections; (6) focusing on improvements that improve the natural and human environment, preservation of historic resources, and creation of more enjoyable public street spaces; (7) developing a comprehensive design manual for City street space; and (8) exploring opportunities to enhance the use of high-occupancy vehicle (HOV) lanes as a traffic management strategy for periods of peak travel demand.

- Parking – The City will comprehensively address the City's parking network by: (1) completing comprehensive studies on the City's parking supply, parking demand, and policies; (2) developing and implementing guidelines and requirements for Transit-Oriented Development (TOD); (3) ensuring parking availability with the City's commercial, residential, and tourist districts through the development of a curbside management program; (4) implementing policies to discourage the development of surface parking lots; (5) increasing the use of information technology to provide real-time parking location and availability information; (6) unbundling parking from building leases; and (7) minimizing, if not eliminating, tour bus traffic in residential areas of Old Town Alexandria.

In direct relation to The Basilica School of Saint Mary, the Comprehensive Transportation Master Plan includes the following:

- Transit
 - A Smart Station featuring real-time transit information, bicycle parking, and other amenities is proposed near the corner of S Patrick Street and Franklin Street.
 - A Smart Shelter featuring real-time transit information, bicycle parking, and other amenities is proposed near the corner of S Washington Street and Jefferson Street.
- Pedestrian
 - New sidewalks are proposed on the blocks of Green Street and Franklin Street which currently lack them.

- Bicycling
 - Improvements to the Mount Vernon Trail near Jones Point Park and at the trail's intersection with S Royal Street are proposed, including widening the trail and adding signage near sharp turns.
 - An extension of the Old Cameron Run Trail is proposed, running east from Eisenhower Avenue and Mill Road to South Payne Street.
 - Shared Roadway bicycle facilities are proposed along S Payne Street, S Fayette Street, S Columbus Street, S Royal Street, and Jones Point Drive.
 - A Capital Bikeshare station is proposed near the intersection of S Saint Asaph Street and Church Street.

Alexandria Transit Choices Report (2018)

The Transit Choices Report is the first step in the Alexandria Transit Vision Study. Through the Transit Vision Study, the City of Alexandria is conducting a comprehensive review of how the bus network in the City can best serve existing needs, as well as new residents, business, and visitors who come to Alexandria over the next 10-20 years. The Transit Choices Report presents an overview of Alexandria's existing transit network, as well as the City's current and planned development patterns as they relate to transit performance. After several rounds of public engagement, the City plans to present a redesigned bus network in fall 2019, and a Final Transit Vision Plan and Near-Term Implementation Plan in winter 2020.

Because specific transit route recommendations are still forthcoming, plans directly relating to The Basilica School of Saint Mary are not provided in this report.

Complete Streets Design Guidelines (2016)

The Complete Streets Design Guidelines integrates existing City policy and design guidance related to roadway, sidewalk and trails, and incorporates new information to reflect best practices for developing a transportation system that serves the needs of people who walk, bike, ride transit or drive vehicles. The Complete Streets Design Guide identifies new street types for Alexandria and provides direction on the design of sidewalks, roadways, intersections, and curbsides.

The Complete Streets Design Guidelines are used by City staff, design professionals, developers, and consultants in the planning and design of all types of street improvements. The Guidelines ensure that new roadways, intersections, sidewalks,



and trails are achieving the City's objectives for a safe and effective multimodal transportation system.

Vision Zero

Vision Zero is a multi-national initiative that aims to eliminate road deaths and serious injuries for all users, regardless of transportation mode. The City of Alexandria is one of over 20 municipalities across the United States that has adopted its own Vision Zero program.

The City of Alexandria included the development of a Vision Zero program in a 2016 amendment to its Transportation Master Plan. In January 2017, the City adopted a Vision Zero resolution instructing the City Manager to develop an action plan. The resulting action plan was adopted by the City Council in December 2017.

The City's Vision Zero Action Plan includes the following strategies:

- Improve data collection and evaluation.
- Enhance city processes and collaboration.
- Build safe streets for everyone.
- Promote a culture of safety.

While the Vision Zero Action Plan's recommendations are more related to overall strategy than individual projects, the Action Plan references several funded City programs projects that are aligned with Vision Zero principles.

As part of Alexandria's Vision Zero Action Plan, new "no turn on red" restrictions are being implemented at various intersections throughout the City. These restrictions are designed to improve pedestrian safety by reducing turning-movement vehicle crashes.

New "no turn on red" restrictions are being implemented at the following intersection movements near the project site:

- Gibbon Street onto S Patrick Street (Route 1)
- Gibbon Street onto S Washington Street

Another Vision Zero strategy includes Leading Pedestrian Interval (LPI) signal treatments, which will be implemented at various intersections throughout the City. LPIs are designed to improve pedestrian safety by increasing pedestrian visibility in intersections and reinforcing pedestrian priority over turning vehicles during shared signal phases.

New Leading Pedestrian Intervals are being implemented at the following intersections near the project site:

- S Patrick Street (Route 1) and Gibbon Street
- S Patrick Street (Route 1) and Wilkes Street
- Wilkes Street and S Washington Street
- Gibbon Street and S Washington Street

Other projects aligned with Vision Zero that relate to The Basilica School of Saint Mary include:

- City Transportation Management Technologies that improve road safety and traffic management while preparing for emerging transportation technologies, as identified in the City's Smart Mobility program.
- Complete Streets Guidelines which integrate existing City policy and design guidance related to roadway, sidewalk and trails, and incorporate new information to reflect best practices for developing a transportation system that serves the needs of people who walk, bike, ride transit or drive vehicles.
- The City's network of shared use paths which cover 20 miles within the City. Shared use paths within or near the EESAP include the Eisenhower Avenue and Mount Vernon Trails, as well as the planned Old Cameron Run Trail.
- Sidewalk maintenance, which is performed through the City's Public Works Services and replaces and repairs more than 12,000 square feet of sidewalk per year.
- The Pedestrian and Bicycle Chapter of the City's Comprehensive Transportation Master Plan, which articulates a vision of safe walking and bicycling networks for users of all ages and abilities.

Local Initiatives

King Street-Old Town Metro Access Improvements

This project is a coordinated effort between the City of Alexandria and WMATA to improve pedestrian and bicyclist safety and comfort around the King Street-Old Town Metrorail Station while maintaining efficient bus and other transit access at the site. The project will also include three (3) new bus bays, designate specific areas for bikes, shuttles, Kiss & Ride, taxis, and carshare.

Since the King Street-Old Town Metrorail Station is a major walking and bicycling destination from The Basilica School of Saint Mary, improved access to this station will enhance the



bicycling and pedestrian experience and encourage more walking and biking trips overall, including to and from the school site.

Major construction began in 2018 and is expected to be completed by mid-2020.

Royal Street Neighborhood Bikeway

The Union Street Corridor Study (2013) recommended that S Royal Street be considered as an alternate, parallel route for bicyclists on Union Street. As part of the City of Alexandria's Pedestrian & Bicycle Master Plan Update, S Royal Street was identified as a neighborhood bikeway, between Jones Point Drive and Bashford Lane. Neighborhood Bikeways are streets designed to encourage slow vehicular traffic and to be

comfortable for people bicycling and walking. Design elements may include shared lane markings or bike route signage.

Goals of the project include:

- Providing more visible pedestrian crossing across S Royal Street at major intersections;
- Creating a more direct and comfortable route for bicyclists traveling to/from and through Old Town;
- Reducing pedestrian-vehicle-bicycle conflicts on Union Street and in Old Town; and
- Creating a calmer and safer street for all users.



PROJECT DESIGN

This chapter reviews the transportation components of The Basilica School of Saint Mary project. This includes an overview of how the site will be accessed by various users and how each mode is accommodated.

PROJECT OVERVIEW

This project consists of improving the school grounds to upgrade parking, student drop-off and pick-up facilities, site access, play area space, and potential other improvements. This report is based on the Ultimate Condition conceptual design plans for the site.

SITE ACCESS AND PARKING

This section reviews site access and parking concerns related to the project.

Teacher/Staff Parking

Under existing conditions, a teacher/staff parking lot containing approximately 52 spaces is provided south of the elementary school building, accessible from the Green Street driveway.

Under the proposed site plan, the existing teacher/staff parking lot will be replaced with a student drop-off/pick-up area and relocated to the east side of the school building. The teacher/staff parking lot will contain 62 spaces.

During student arrival, vehicles will queue along S Royal Street before 7:30 AM. Teachers and staff will wait in the drop-off queue to access the parking lot via the Royal Street driveway. After 7:30 AM, vehicles will enter the site from the S Royal Street entrance and use the parking lot drive aisles to queue for drop-off; therefore, teachers and staff must wait in the drop-off queue to park. Teachers and staff will exit the site from any of the site driveways following student dismissal.

Visitor and ADA Parking

Under the proposed site plan, visitor and ADA spaces are provided in a small lot along the access drive on the west side of the building. This small lot is closest to the main entrance of the building and is the ideal location for ADA parking, without the grade challenges that exist in other parking locations. The access drive is two-way until it narrows (south of the visitor and ADA lot), at which point it becomes one-way northbound. During the school day, access to this small lot will be to/from Green Street. Vehicles will not be permitted to circulate on-site during the school day.

During arrival and dismissal, the entire access drive will be one-way northbound to help egress. Access to these visitor and ADA spaces at these times will be from the south only. Vehicles will enter the site from the arrival/dismissal entrance on S Royal Street and circulate around the building. Vehicles exiting the small lot will exit the site from the outbound-only driveway on Green Street. It is anticipated that there will be very few vehicles parking in this lot during arrival and dismissal periods.

Visitor parking is also available on-street, along Green Street directly adjacent to the site.

Parking locations and access points are shown on Figure 7 and Figure 8.

STUDENT ARRIVAL

Existing Drop-off Operations

Under existing conditions, the student drop-off area is located on the western curb of S Royal Street south of Green Street, and along the cul-de-sac at the intersection of S Royal Street and Jones Bridge Road. Drop-off vehicles queue along eastbound and westbound Green Street and southbound S Royal Street north of Green Street. Police officers then direct vehicles into the drop-off area and students exit the vehicles under the supervision of school staff. Once all students have exited their vehicles, the vehicles depart the drop-off area northbound through the intersection of S Royal Street and Green Street.

Existing drop-off operations are shown on Figure 9, with the resulting queuing shown on Figure 10.

Proposed Drop-off Operations

Under proposed conditions, the student drop-off area is located on the new playground surface south of the elementary school building. The existing police officers that direct traffic will change how they direct in order to accommodate the proposed operations. The drop-off operations vary by time period:

- **Before 7:30 AM**

Until approximately 7:30 AM, the police officer directing traffic will let vehicles enter the drop-off area until its full, at which point they will hold the queues until vehicles finish with drop-off. Drop-off vehicles, teachers, and staff enter the site using the S Royal Street driveway. Vehicles queue to enter the drop-off area without using the drive aisles in the new teacher/staff parking lot. Once in the drop-off area, students will exit the vehicles and no



vehicles will move until all students have exited the active drop-off area. The vehicles depart the drop-off area through the driveway on the west side of the site to Green Street.

▪ After 7:30 AM

After 7:30 AM, once most teachers and staff have parked, the drop-off queuing area is expanded to include the parking lot drive aisles. Any teachers or staff needing to park at this time will wait in the drop-off queue to park.

Police officers will continue to direct queuing vehicles and other traffic along Green Street while teachers/staff supervise queuing and drop-off operations on-site.

The proposed drop-off operations increase the number of vehicles than can be accommodated south of the intersection of S Royal Street and Green Street at any given time. Under existing conditions, 30 vehicles can be accommodated. Under proposed conditions, 54 vehicles (24 more than existing) can be accommodated before 7:30 AM, and 79 vehicles (49 more than existing) after 7:30 AM. A summary of the queue lengths is shown in Table 1.

Proposed drop-off operations are shown on Figure 11 and Figure 12, with resulting queuing shown on Figure 13.

STUDENT DISMISSAL

Existing Pick-up Operations

Under existing conditions, the student pick-up area is located on the playground and parking area east of the school building. Vehicles queue to pick-up students along eastbound and westbound Green Street and southbound S Royal Street both north and south of Green Street. Once the gate on S Royal Street opens, vehicles enter from S Royal Street and fill the pick-up area. Students are then matched with their vehicles, which stay in place until every student is inside a vehicle. Finally, vehicles exit the drop-off area, proceeding behind the school to the driveway on the west side of the site which leads to Green Street. As vehicles begin to exit, the gate re-opens to allow vehicles to enter. This process repeats as necessary, usually twice per afternoon.

In addition to parent/guardian pick-up, there is a school bus chartered by parents. During dismissal, this school bus queues in front of the main entrance on Green Street and departs once students are onboard.

Existing pick-up operations are shown on Figure 14, with resulting queuing shown on Figure 15.

Proposed Pick-up Operations

There are two options for proposed pick-up operations:

▪ Option 1: No Drive Aisle Use

In Option 1, the student pick-up area is located on the new playground surface south of the elementary school building. Pick-up vehicles queue in the new driveway connecting S Royal Street with the playground surface, as well as along eastbound and westbound Green Street and southbound S Royal Street north and south of Green Street. A police officer lets vehicles enter the pick-up area until it is full and holds the queue. Students are then matched with their vehicles, which stay in place until every student is inside a vehicle. Finally, vehicles exit the drop-off area through the driveway on the west side of the site which leads to Green Street. This process repeats as necessary, probably three to four times each afternoon.

▪ Option 2: Using Drive Aisles

Option 2 is the same as Option 1 except vehicles will queue in the parking lot drive aisles in addition to the driveway connecting S Royal Street with the playground surface at the rear of the school building. This expanded queuing area allows for fewer repeats of the pick-up process than Option 1.

The proposed pick-up operations affect the number of vehicles than can be accommodated south of the intersection of S Royal Street and Green Street at any given time. Under existing conditions, about 116 vehicles can be accommodated. Under proposed conditions, 88 vehicles (28 fewer than existing) can be accommodated with Option 1, and 118 vehicles (two more than existing) with Option 2. A summary of the queue lengths is shown in Table 1.

In addition to parent/guardian pick-up, the parent-chartered school bus will continue to operate. During dismissal, this school bus will queue in front of the main entrance on Green Street. The school bus will depart once students are onboard.

Option 1 and Option 2 proposed pick-up operations are shown on Figure 16 and Figure 17, respectively, with the resulting queuing shown on Figure 18.



LOADING AND TRASH REMOVAL

Freight loading and trash removal locations will remain unchanged as a result of the project. Delivery vehicles and

trash trucks will continue using the loading facilities at the rear side of the elementary school building. Access to the school site is provided from the S Royal Street driveway. Access from the school site will occur at the Green Street driveway.

Table 1: Queuing Summary

	Queued Vehicles	
	Arrival	Dismissal
Existing Operations (Observed)	70	23
Proposed Operations (No Growth)	21	21
<i>% Change over Existing</i>	<i>-70%</i>	<i>-9%</i>
Proposed Operations (With Growth)	28	30
<i>% Change over Existing</i>	<i>-60%</i>	<i>+30%</i>

Note: Queue lengths are based on the number of vehicles queued north of the site, along both Green Street and S Royal Street.



Figure 7: Site Circulation – During School Day



Figure 8: Site Circulation – During Arrival/Dismissal

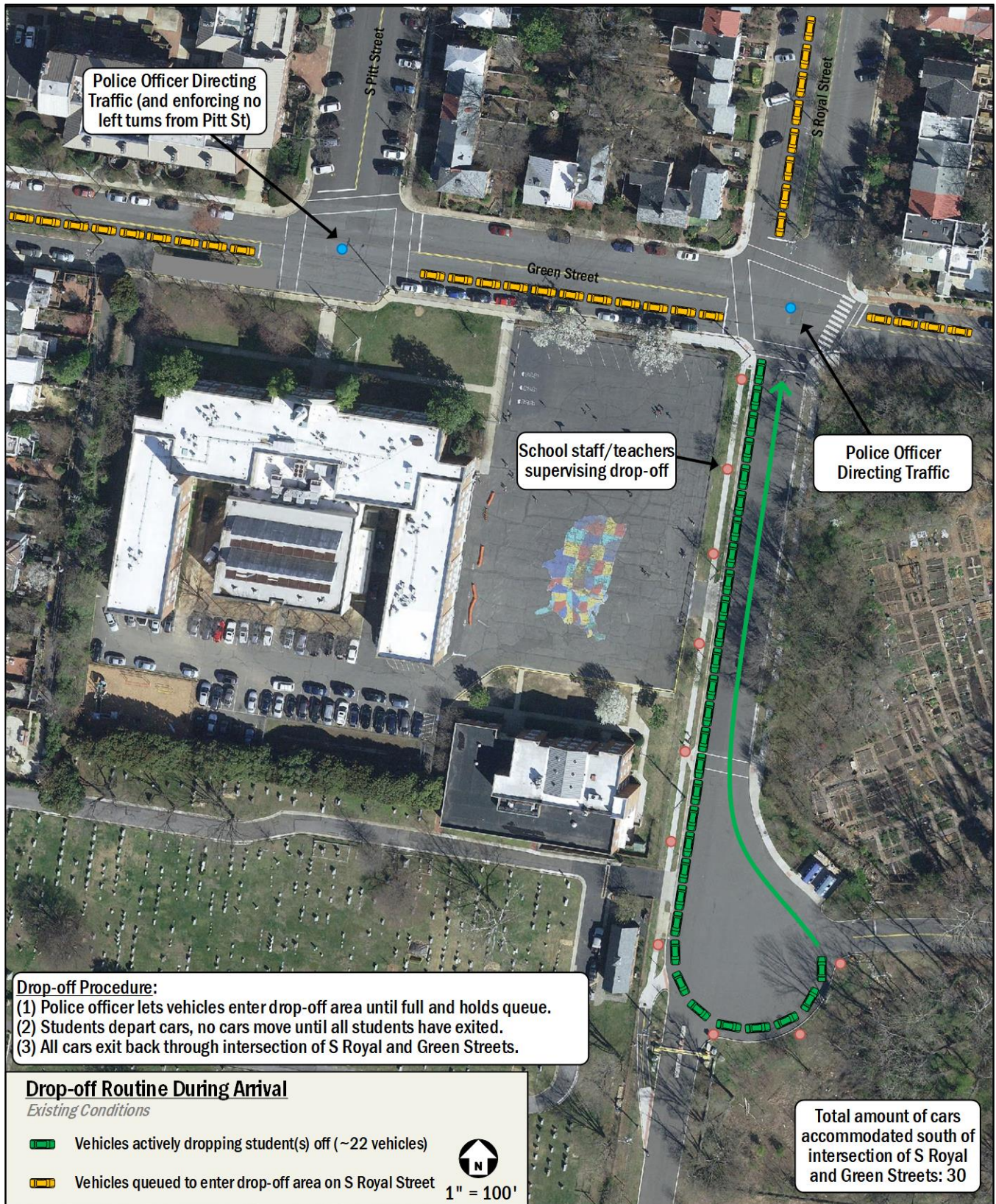


Figure 9: Drop-off Routine During Arrival – Existing Conditions



Figure 10: Queuing During Drop-off – Existing Conditions

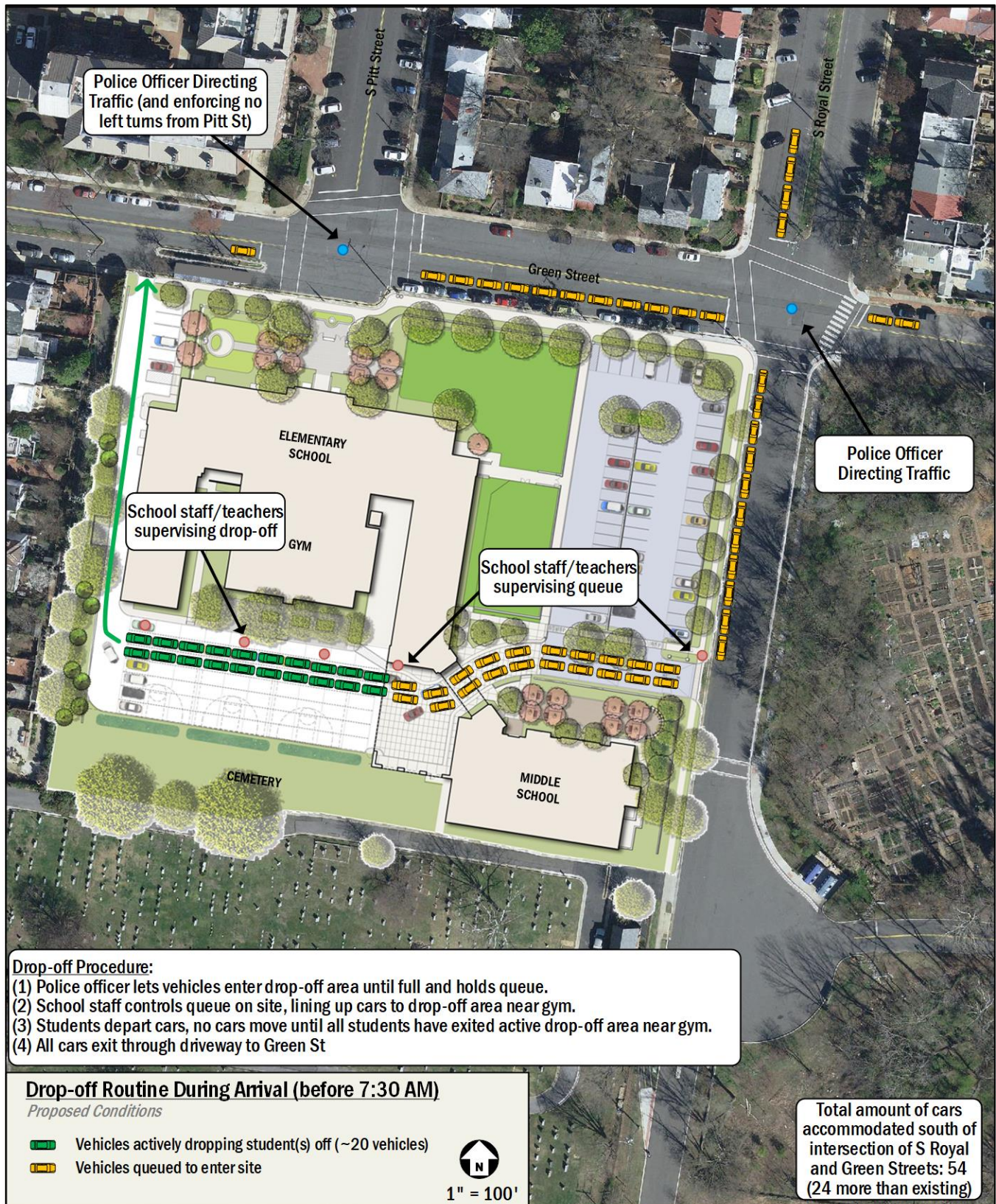


Figure 11: Drop-off Routine During Arrival (before 7:30 AM) – Proposed Conditions

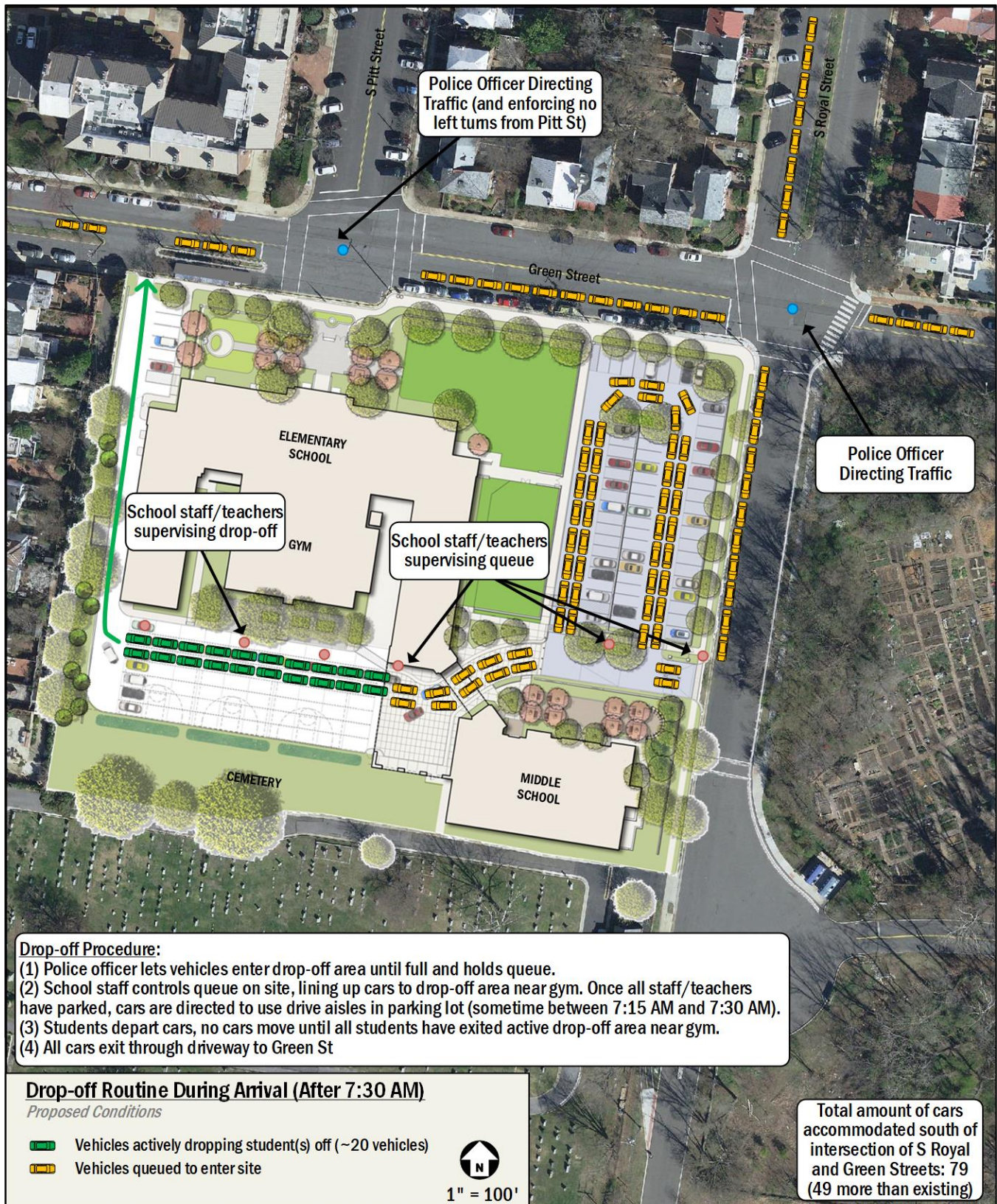


Figure 12: Drop-off Routine During Arrival (after 7:30 AM) – Proposed Conditions



Figure 13: Queuing During Drop-off – Proposed Conditions



Figure 14: Pick-up Routine During Dismissal – Existing Conditions

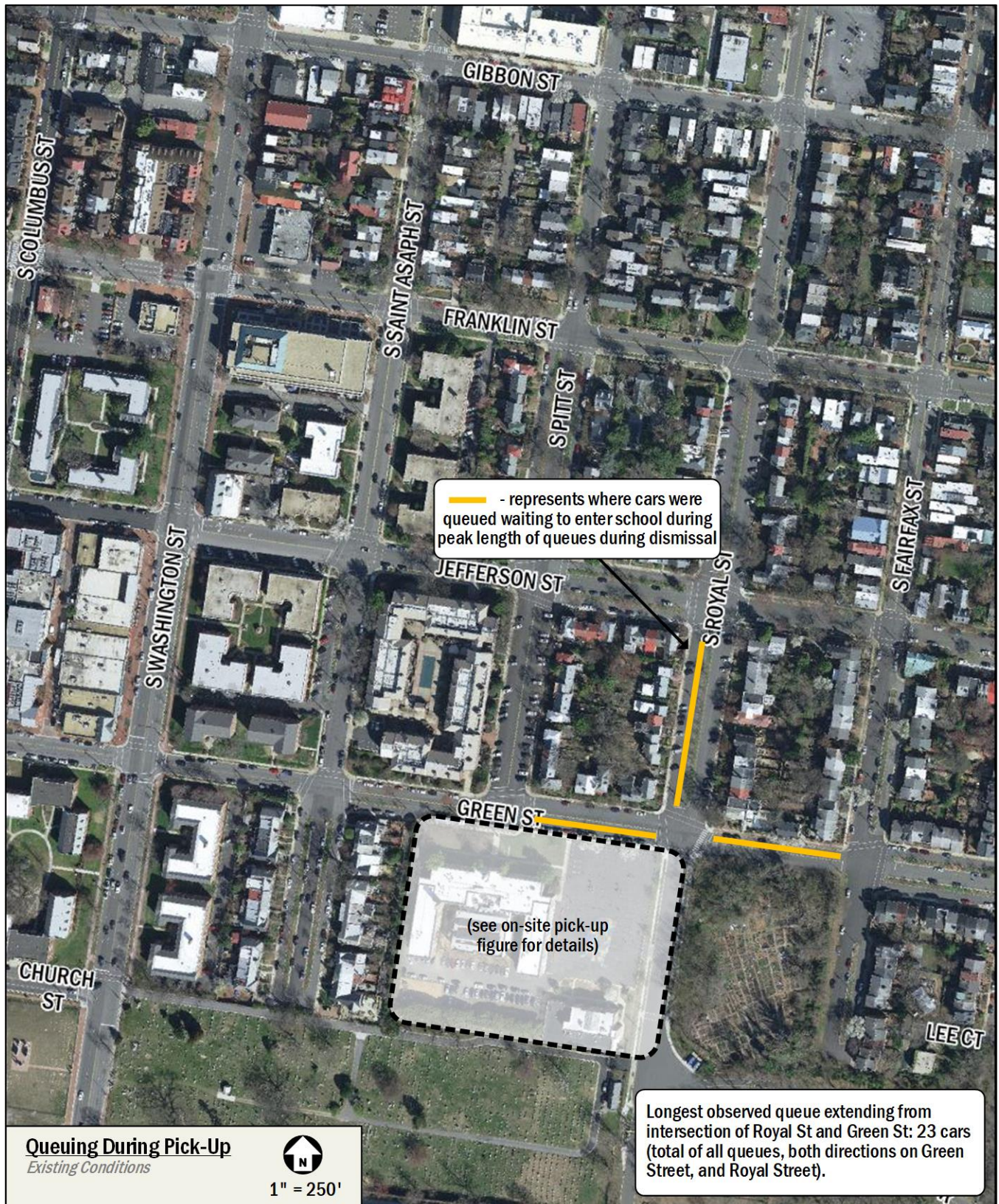


Figure 15: Queuing During Pick-up – Existing Conditions

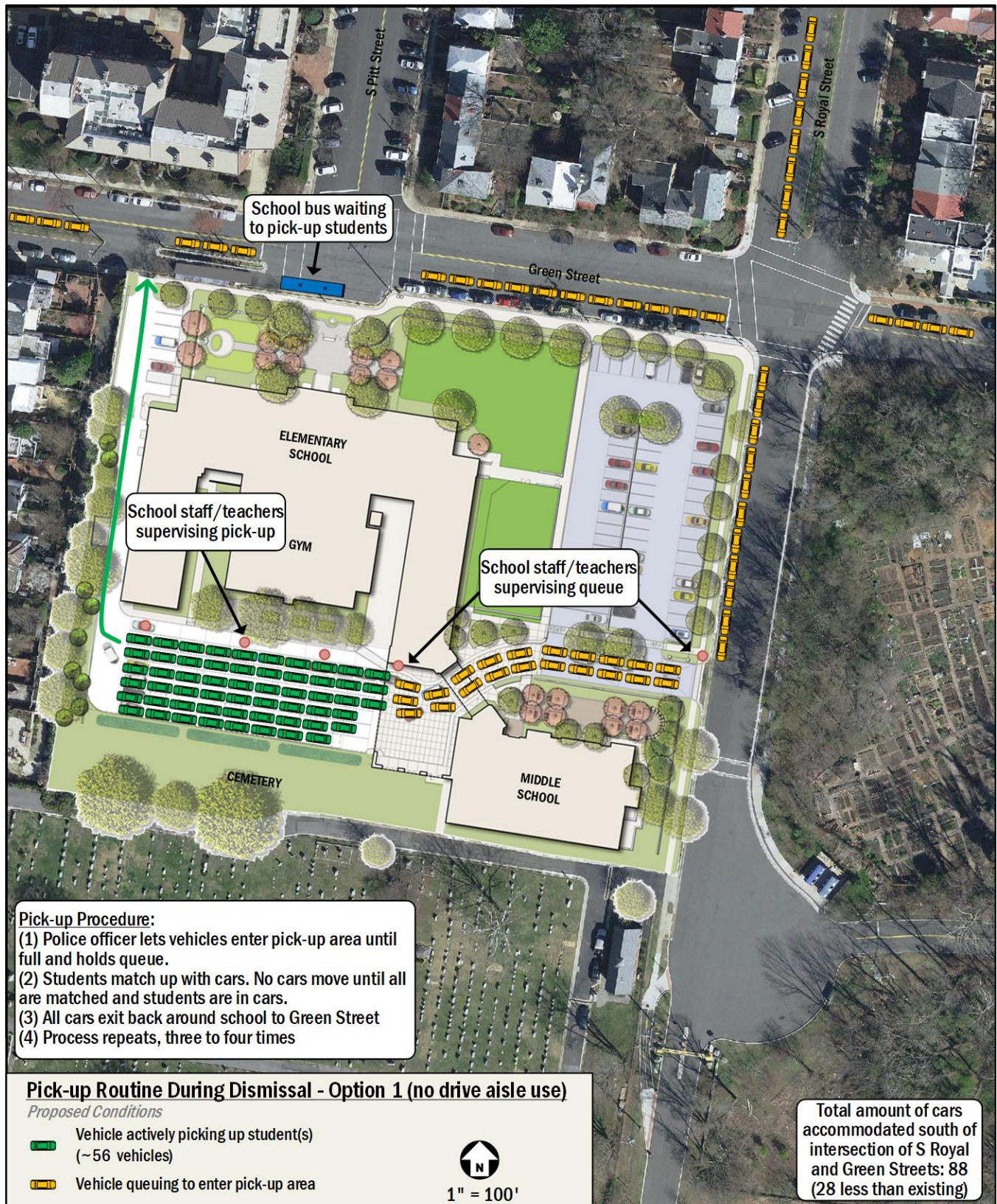


Figure 16: Proposed Pick-up Routine During Dismissal – Option 1 (no drive aisle use)

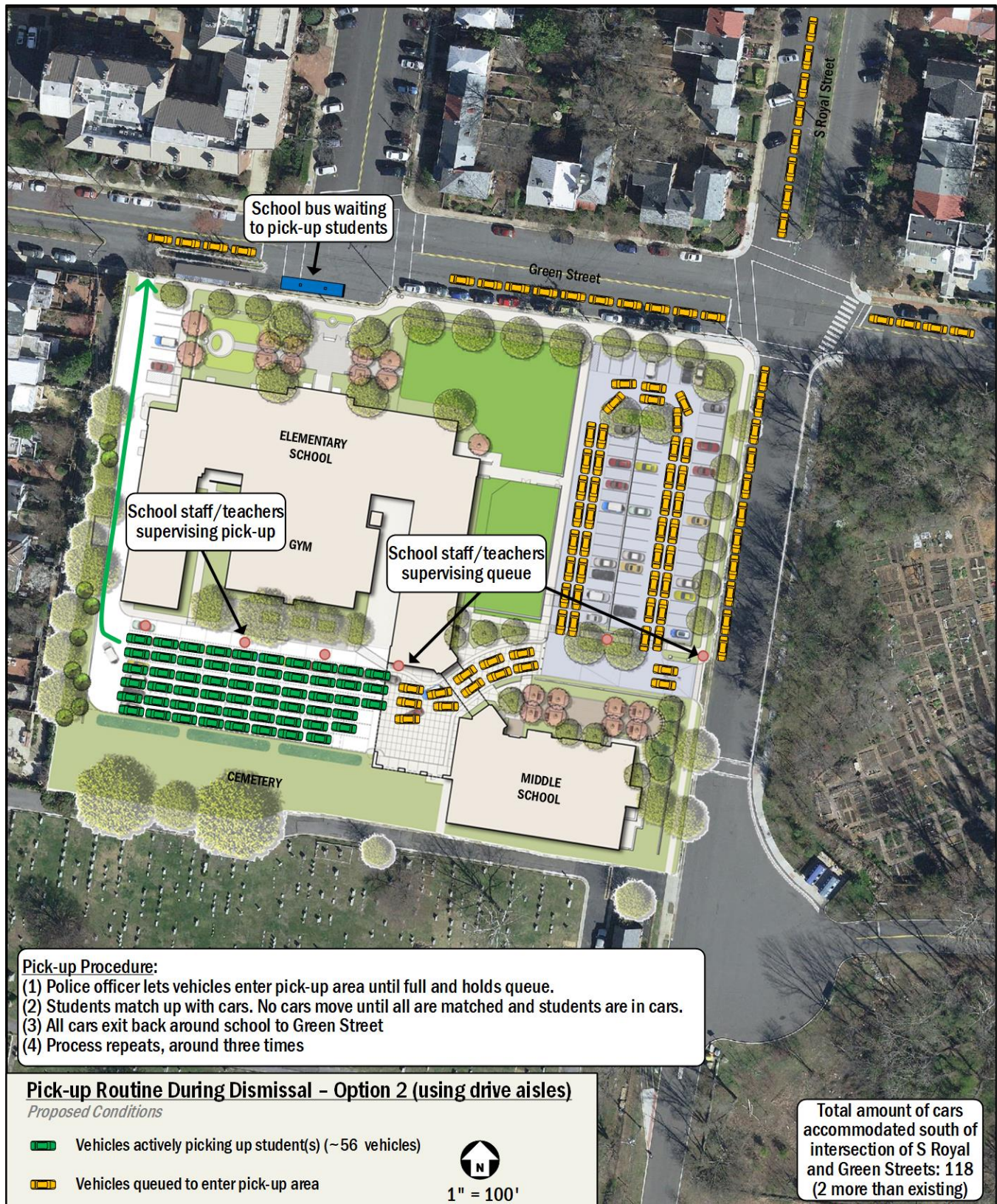


Figure 17: Proposed Pick-up Routine During Dismissal – Option 2 (using drive aisles)



Figure 18: Queuing During Pick-up – Proposed Conditions



TRAVEL DEMAND ASSUMPTIONS

This chapter outlines the transportation demand of The Basilica School of Saint Mary improvements. This includes a review of survey information, expected mode splits for staff and students, vehicular trip generation, and parking demand.

SURVEY INFORMATION

In order to model future conditions accurately, it was necessary to understand how students and staff travel to and from the school on a typical day. To this end, an online transportation survey was emailed to parents and staff on Tuesday, March 19, 2019. In order to ensure quality response data, respondents were asked to provide data for that day – March 19 – as opposed to estimations of a typical day.

Survey questions included, among others:

- Arrival and departure modes of travel for employees and students
- ZIP code origins and destinations of employees, drop-off drivers, and pick-up drivers
- Employee parking locations
- Employee arrival and departure times

49% of employees and 69% of parents responded to the survey.

MODE SPLIT

Mode split information is based on the survey data collected in March 2019. Figure 19 shows arrival and departure mode split data for school employees, while Figure 20 shows arrival and dismissal mode split data for students.

A review of employee versus student mode splits shows a higher drive-alone mode split (including student drop-off/pick-up) among students. This is primarily due to a substantial portion of employees who carpool. Survey results also showed

that walking was slightly more prevalent among students than employees. Finally, while about 4% of employees rode the bus, no students did so, except about 6% who used the parent-organized, dismissal-only bus service to Alexandria's Rosemont and Potomac Greens neighborhoods.

PARKING

Parking information is based on the survey data collected in March 2019. Figure 21 shows employees' parking locations and their arrival and departure times.

Survey results show about 70% of employees parking on the school site, and about 30% using on-street parking. Most employees arrived before 7:30 AM and departed after 3:30 PM.

TRIP GENERATION

Vehicular trip generation for this project considers the addition of 45 students to the school's enrollment, increasing the total number of students from 720 to 765.

Table 2 contains a summary of the project's trip generation. Based on driveway counts under existing conditions, the increase in student enrollment is expected to add 40 new vehicular trips in the AM peak hour, 19 new trips in the PM school dismissal peak hour, and nine (9) new trips in the PM commuter peak hour.

TRIP DISTRIBUTION

Trip distribution for the project is based on the survey data collected in March 2019. Origin and destination ZIP codes of employees, drop-off drivers, and pick-up drivers are shown on Figure 22, Figure 23, and Figure 24, respectively.

This origin and destination data was used to distribute the new site trips attributable to the student enrollment increase. Trip distribution was also based on the reconfigured parking and drop-off/pick-up access points.

Table 2: Trip Generation Summary

Land Use	ITE Code	Size		----- Week day -----								
				AM Peak Hour			PM School Dismissal Peak Hour			PM Commuter Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total
Existing												
Private School (K-8)	N/A	720	students	325	308	633	148	157	305	65	76	141
Existing TOTAL				325	308	633	148	157	305	65	76	141
Proposed												
Private School (K-8)	N/A	765	students	345	327	673	157	167	324	69	81	150
Proposed TOTAL				345	327	673	157	167	324	69	81	150
Net New Trips				20	19	40	9	10	19	4	5	9

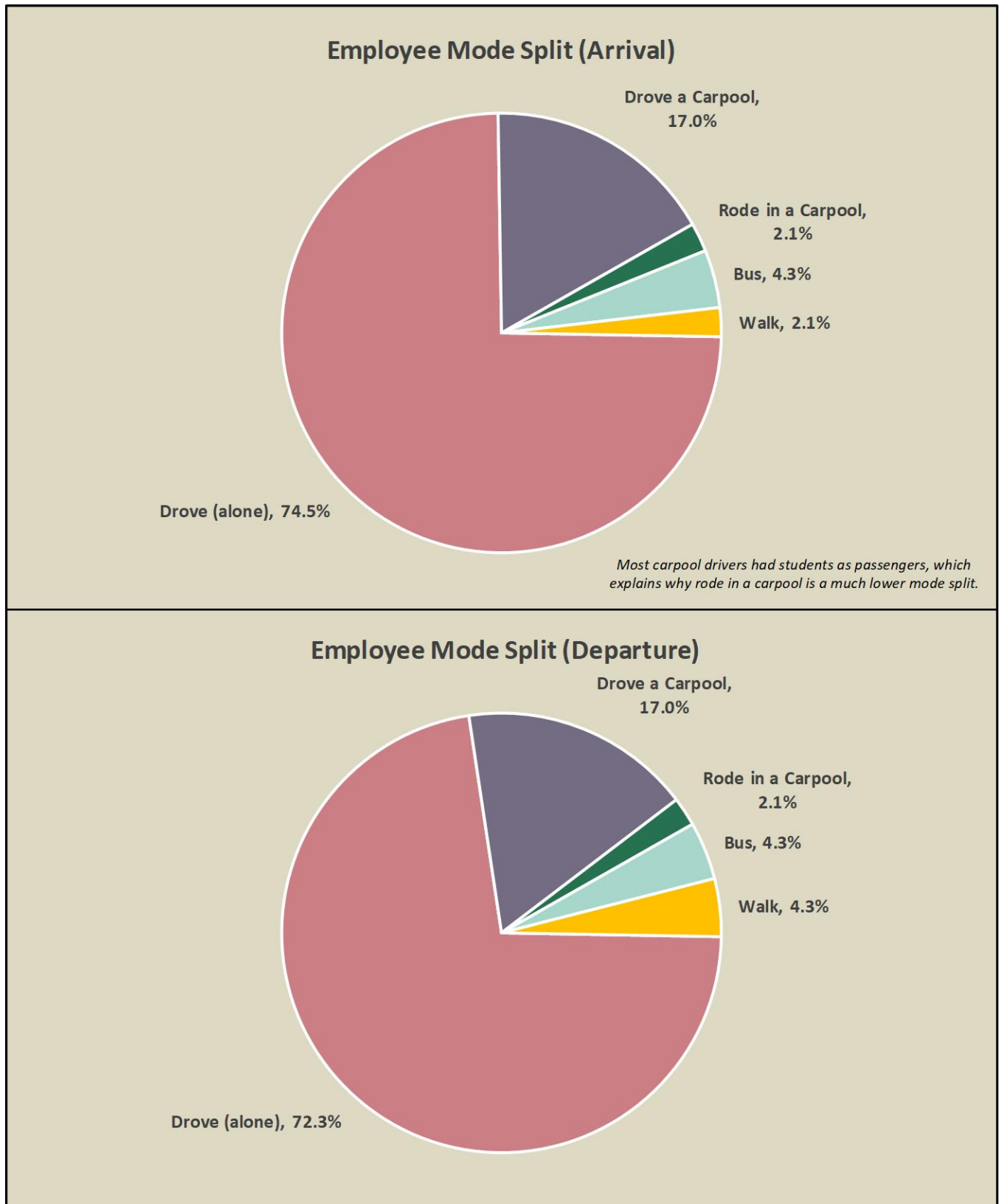


Figure 19: Employee Mode Split

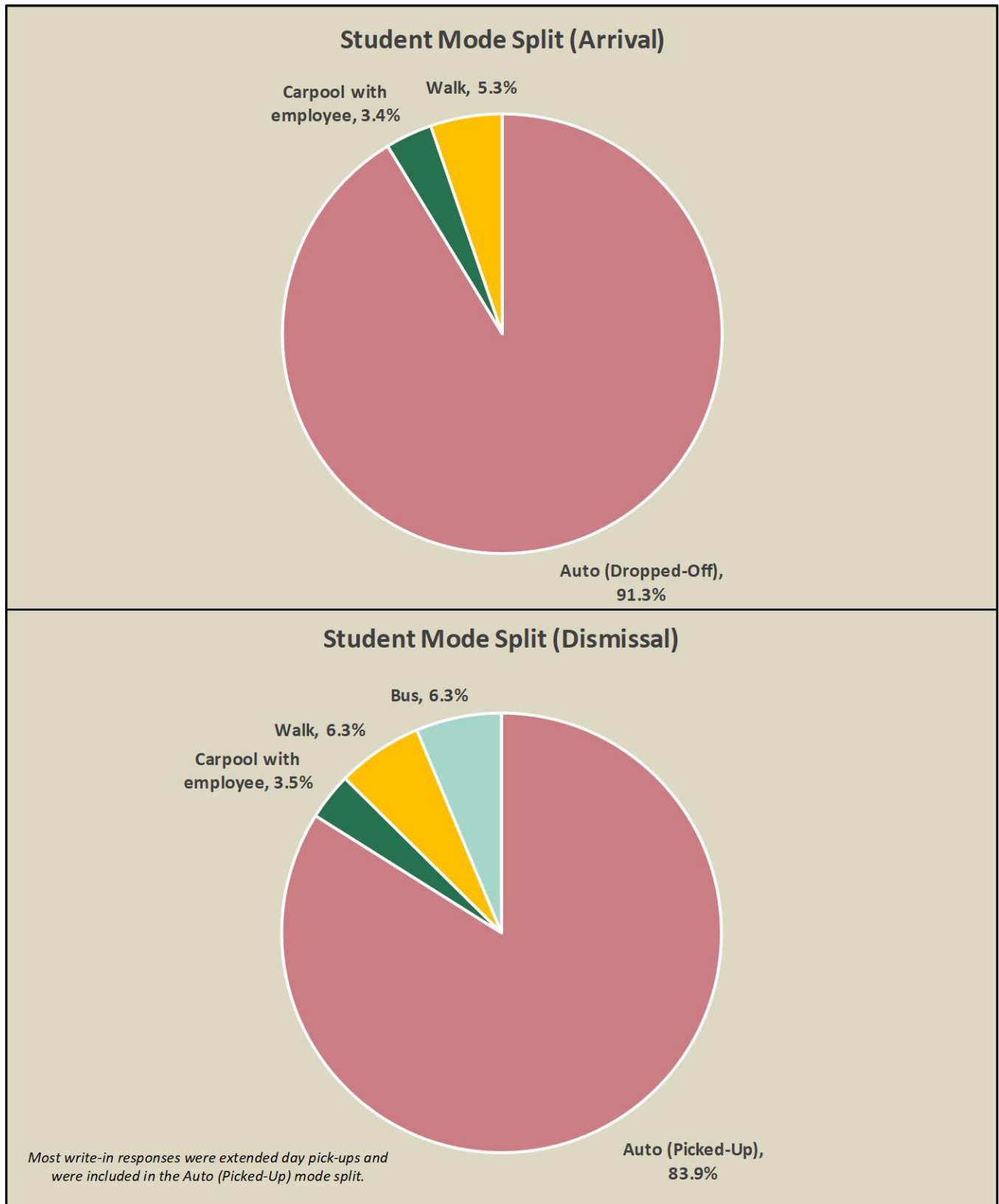


Figure 20: Student Mode Split

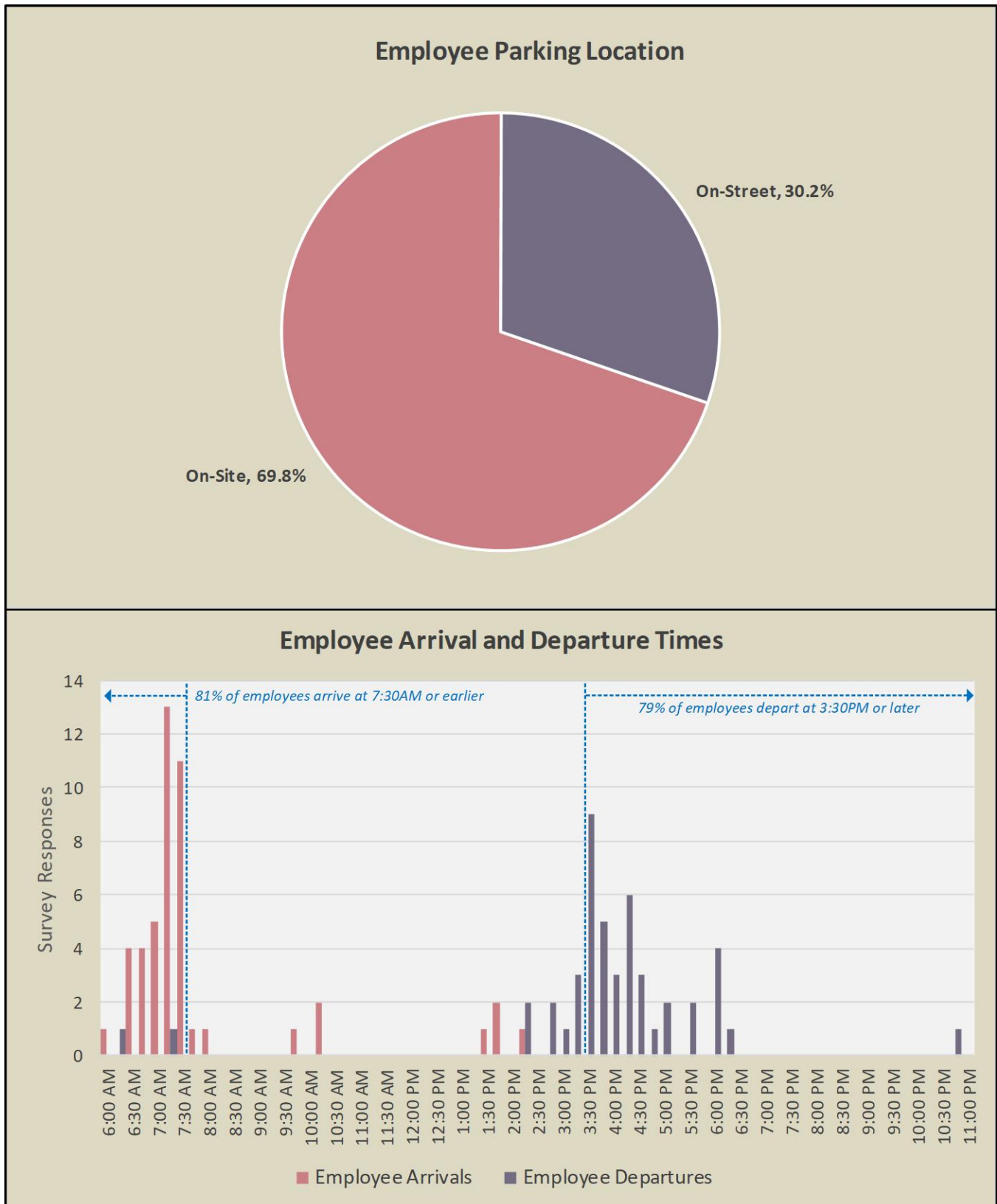


Figure 21: Employee Parking Locations and Arrival/Departure Times

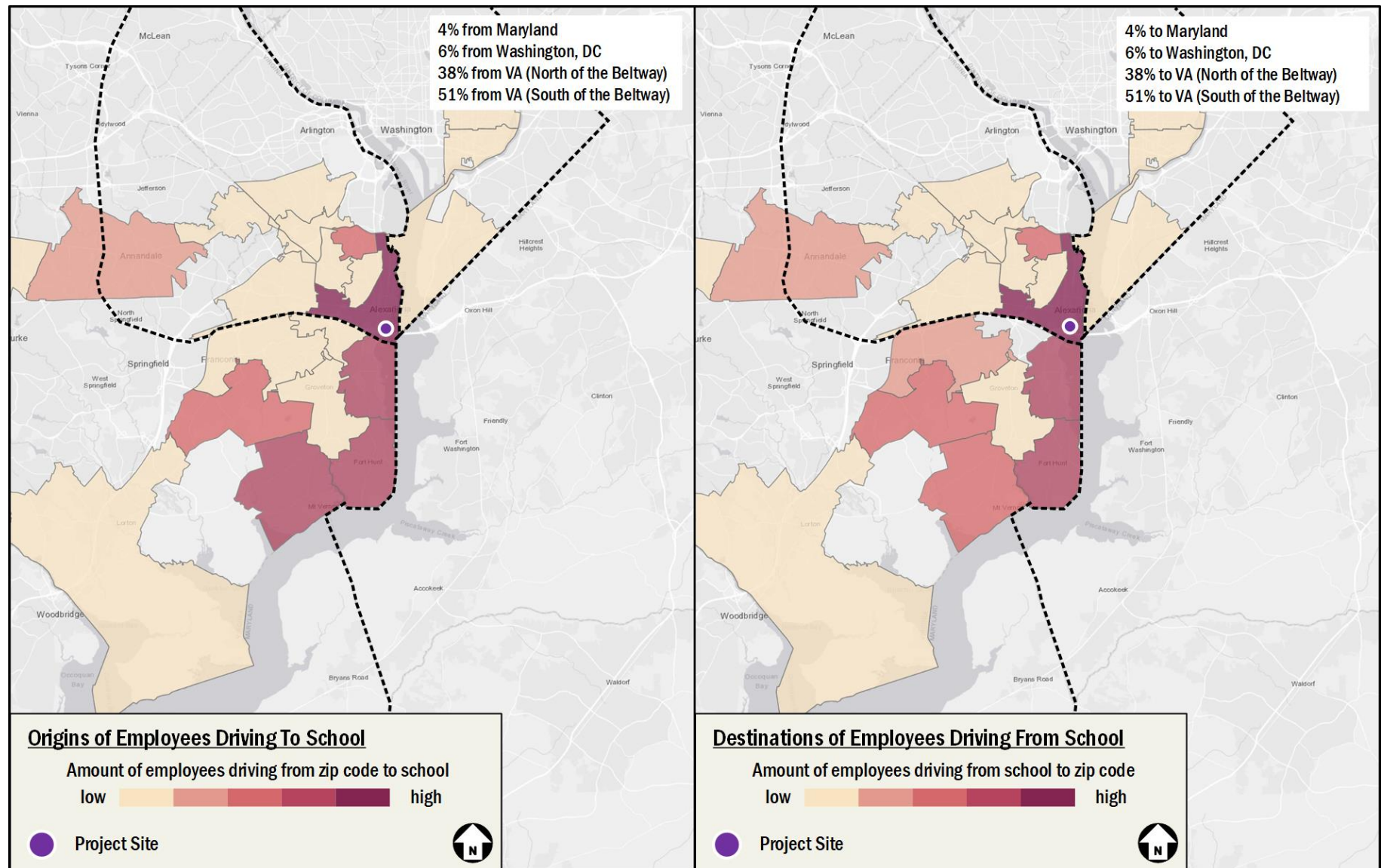


Figure 22: Employee Origins and Destinations

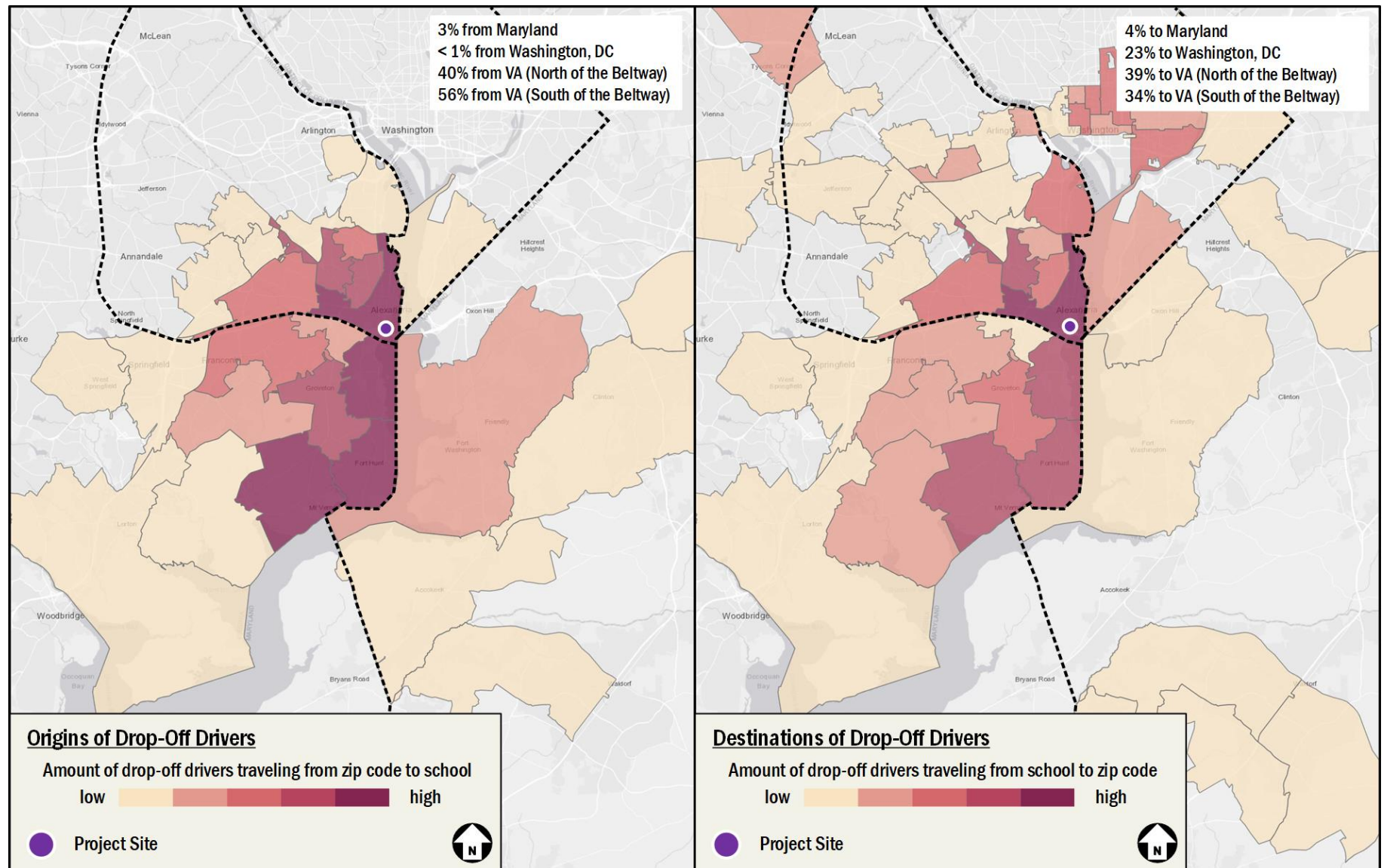


Figure 23: Drop-off Driver Origins and Destinations

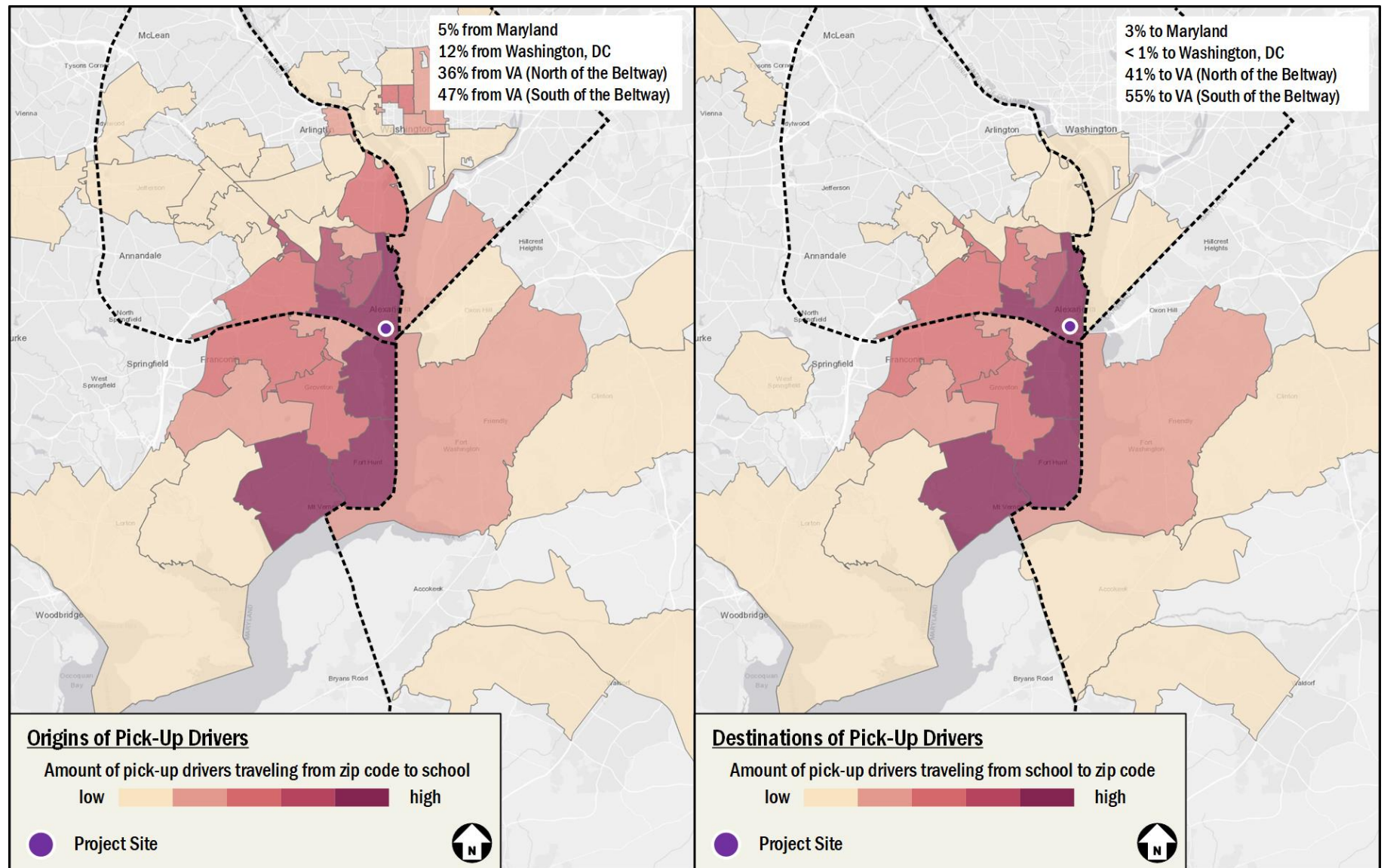


Figure 24: Pick-up Driver Origins and Destinations

TRAFFIC OPERATIONS

This chapter summarizes an analysis of the existing and future roadway capacity in the study area. Included is an analysis of potential vehicular impacts of the project and a discussion of potential improvements.

The purpose of the capacity analysis is to:

- Determine the existing capacity of the study area roadways;
- Determine the overall impact of the proposed project on the study area roadways; and
- Discuss potential improvements and mitigation measures to accommodate the additional vehicular trips.

The following conclusions are reached within this chapter:

- Under existing conditions, the study area intersections all operate at acceptable levels of service and delay, with a few exceptions.
- Under future conditions, levels of service and delay get worse at some study intersections and better at others.
- One (1) intersection movement meets the criteria for mitigation measures, but these measures are not recommended because there would be negative impacts to other modes (mainly walking), and the benefit would not impact enough drivers to offset negative impacts to other modes.

STUDY AREA, SCOPE, & METHODOLOGY

This section outlines the assumptions used to develop the existing and future capacity analyses, including volumes, roadway geometries and traffic operations. The scope of the analysis contained within this report was extensively discussed with and agreed to with City of Alexandria staff. The general methodology of the analysis follows national and City guidelines on the preparation of transportation impact evaluations of site development.

Capacity Analysis Scenarios

The vehicular analyses were performed to determine if the proposed development will lead to adverse impacts on traffic operations. (A review of impacts to each of other modes is provided later in this report.) This was accomplished by comparing the existing scenario with the future scenario with

the proposed project (referred to as the Total Future condition).

Because there are no significant background developments near the site, and because historic data shows negative traffic growth near the site, this report's analysis does not include a future scenario without the proposed project (referred to as the Background condition), as such a scenario would be identical to the future scenario with the proposed project.

As per this report's scoping agreement, the roadway capacity analysis examined the following scenarios:

1. 2018 Existing Conditions
2. 2021 Total Future Conditions with project traffic

Each scenario contains three distinct hours of analysis:

1. The AM peak hour
2. The PM school dismissal peak hour,
3. The PM commuter peak hour

Study Area

The study area is a list of intersections where detailed capacity analyses were performed for the scenarios listed above. They represent the intersections most likely to have potential impacts or require changes to traffic operations to accommodate the proposed project. Although it is possible that impacts will occur outside of the study area, those impacts are not significant enough to be considered a negative impact nor worthy of mitigation measures.

The study area intersections are based on the projected future trip generation and the location of site access points. As agreed to in this report's scoping agreement, the following intersections were included:

1. Site Driveway & S Royal Street
2. Green Street & Washington Street
3. Green Street & Saint Asaph Street
4. Green Street & Site Driveway
5. Green Street & Pitt Street
6. Green Street & S Royal Street
7. Jefferson Street & S Royal Street

Figure 25 shows a map of the study area intersections.

Traffic Volume Assumptions

The following section reviews the traffic volume assumptions and methodologies used in the roadway capacity analyses.

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2018 Existing Traffic Volumes

The existing traffic volumes are comprised of turning movement count data, which was collected on Tuesday, November 27, 2018. The results of the traffic counts are included in the Technical Appendix.

For the AM and PM commuter peak hours, the system peak of the study area intersections was used. For the PM school dismissal peak hour, a user-defined peak of the study area intersections was used. These were 7:15 AM to 8:15 AM for the AM peak, and 4:45 PM to 5:45 PM for the PM peak. For the PM school dismissal peak hour, the counts from 2:45 PM to 3:45 PM were used based on the school's dismissal time of 3:15 PM. The 2018 Existing peak hour traffic volumes are shown in Figure 26.

2021 Future Volumes (with Project)

The 2021 Future volumes consist of the 2018 Existing volumes with the addition of the traffic volumes generated by the project. These added volumes are determined by growing the 2018 Existing volumes linearly based on the projected increase in the school's enrollment. The site generated volumes are shown in Figure 27, and the 2021 Future volumes are shown in Figure 28.

Geometry and Operations Assumptions

The following section reviews the roadway geometry and operations assumptions made and the methodologies used in the roadway capacity analyses.

Existing Geometry and Operations

Study area intersection geometry, lane configuration and additional infrastructure details were confirmed via field reconnaissance by Gorove/Slade.

Traffic signal timings were provided by City of Alexandria staff and double-checked in the field. Figure 28 shows the 2018 Existing lane configurations.

2021 Total Future Geometry and Operations Assumptions

2021 Future geometry and operations will be the same as in 2018 Existing conditions, except for the conversion of the site driveway onto Green Street (Intersection 4) into one-way operations during arrival and dismissal times. During arrival and dismissal times, the northbound approach of the site driveway on Green Street (Intersection 4) will be de facto left- and right-turn lanes; the vehicles turning left to avoid the median and the vehicles turning right into the access lane. Figure 29 shows the 2021 Future lane configurations.



Figure 25: Study Area Intersections

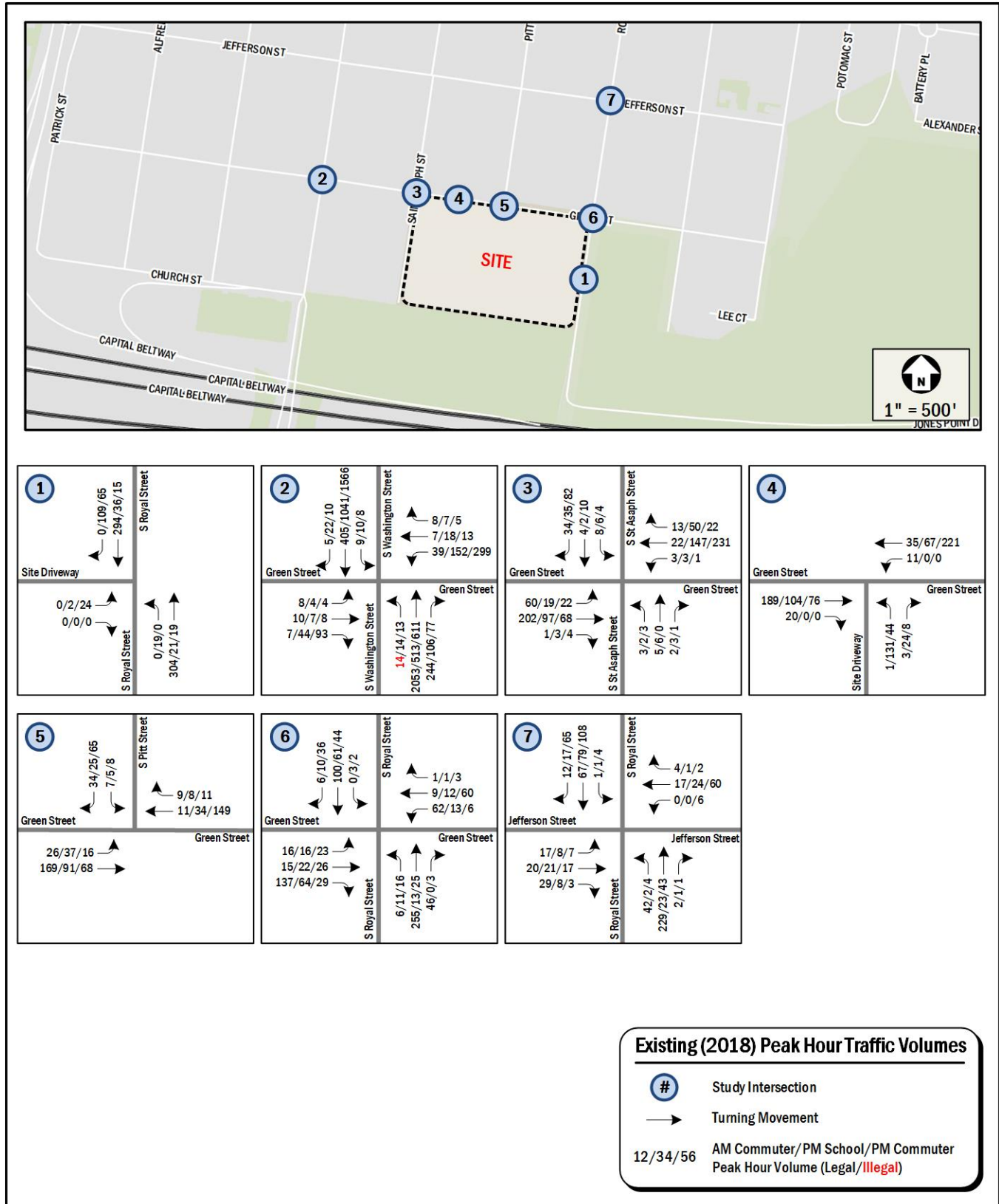


Figure 26: Existing (2018) Peak Hour Volumes

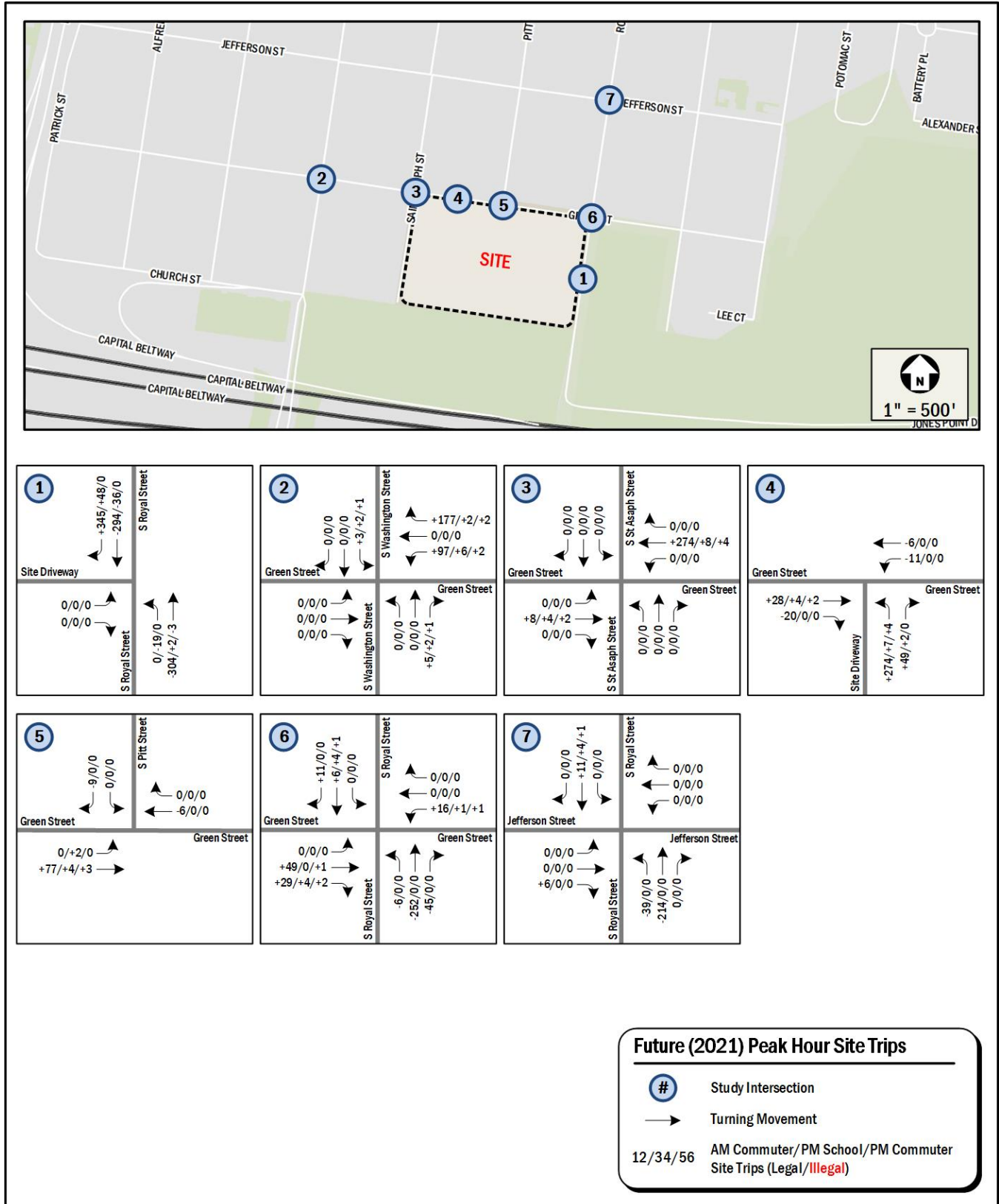


Figure 27: Future (2021) Peak Hour Site Trips

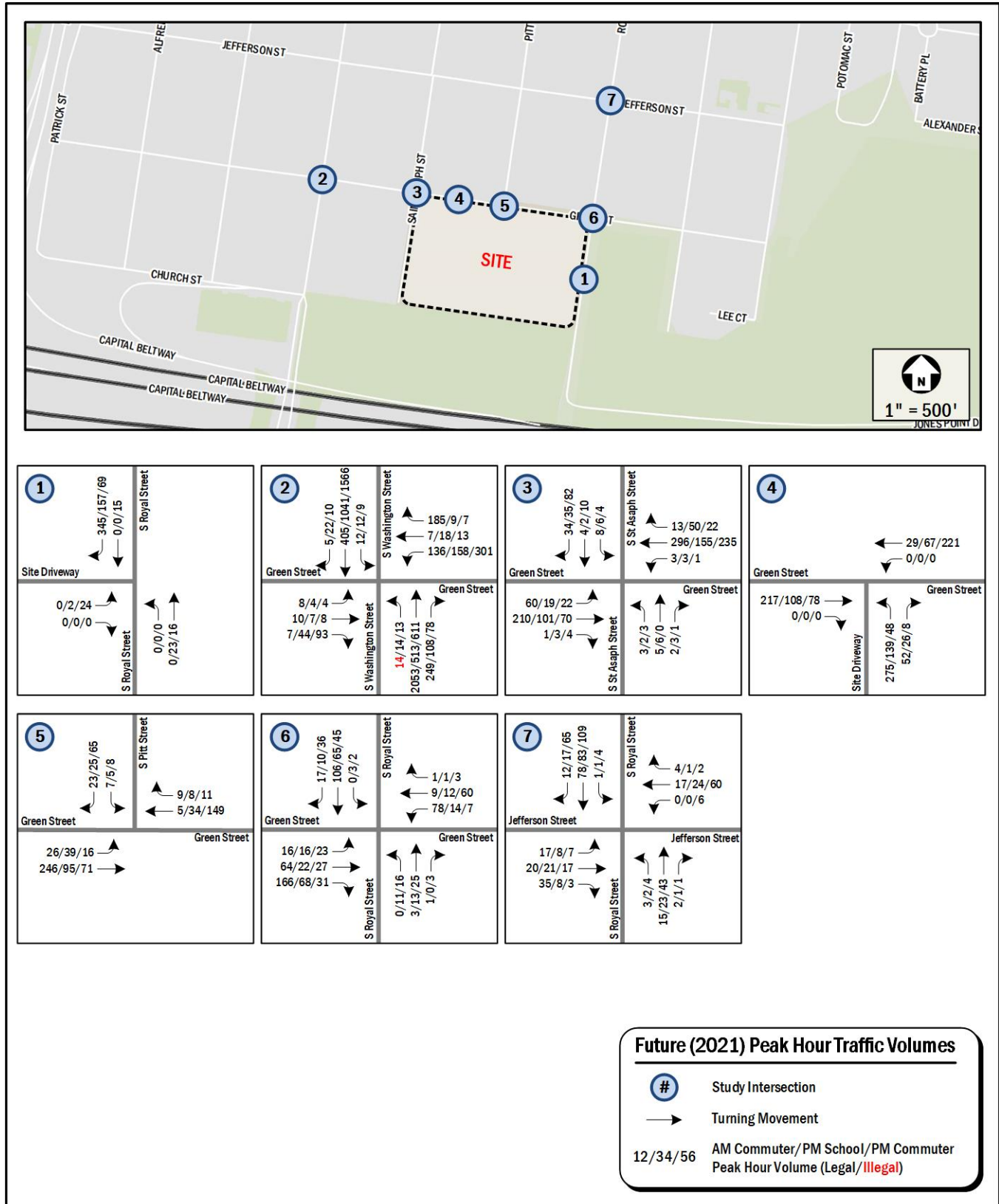


Figure 28: Future (2021) Peak Hour Volumes

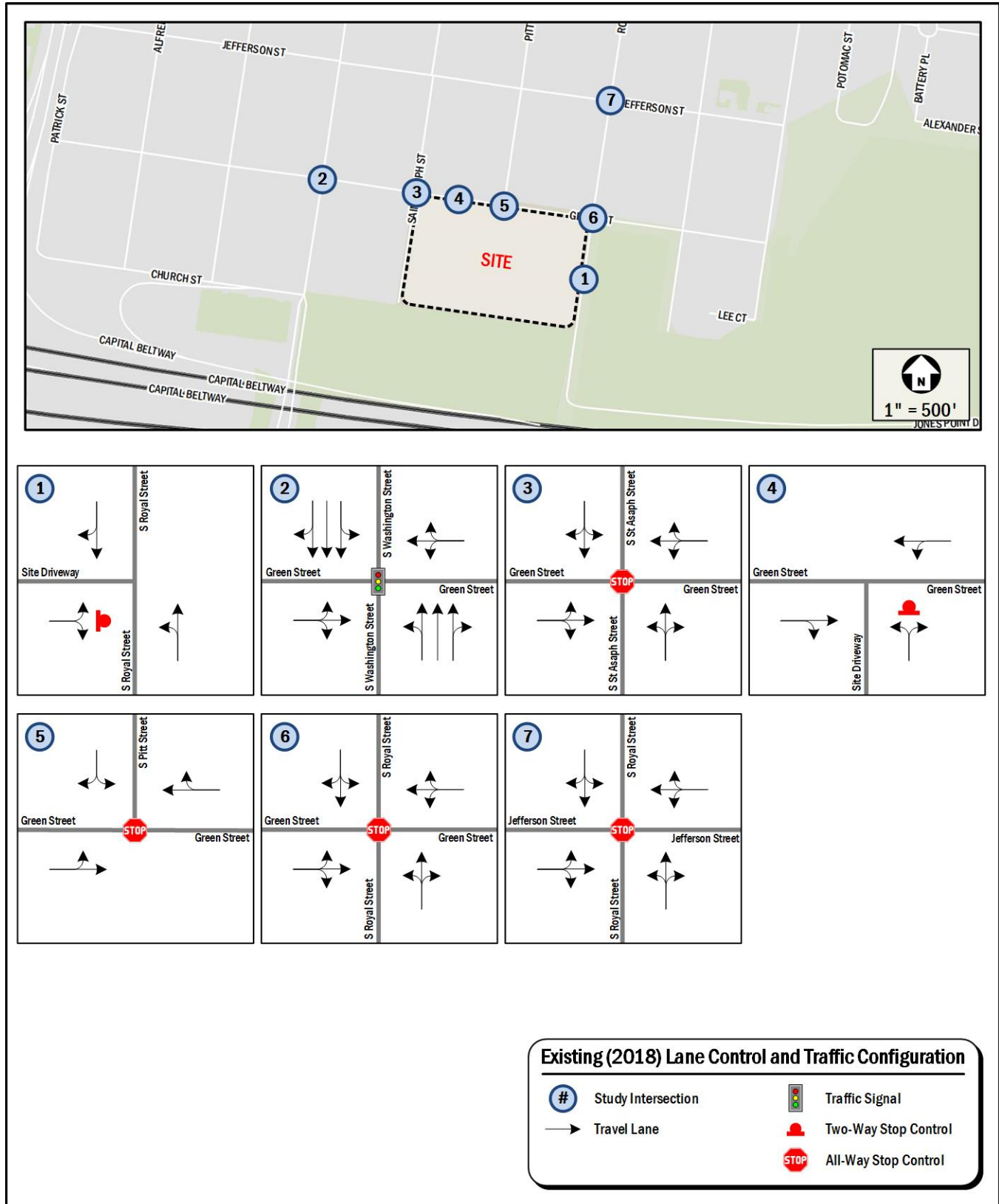


Figure 29: Existing (2018) Lane Configurations

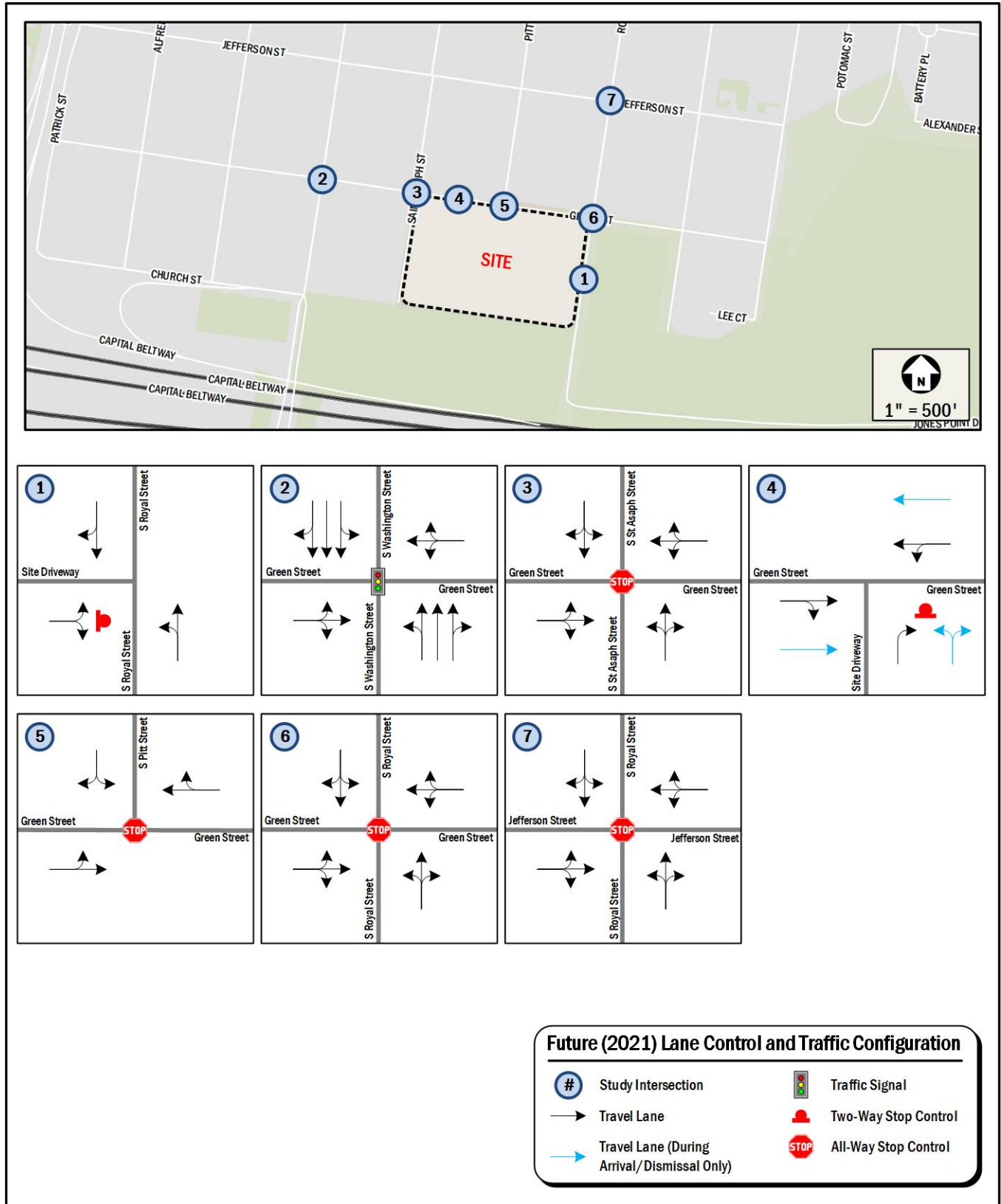


Figure 30: Future (2021) Lane Configurations

VEHICULAR ANALYSIS RESULTS

Intersection Capacity Analysis

Intersection capacity analyses were performed for the two (2) scenarios outlined previously at the intersections within the study area during the AM, PM school dismissal, and PM commuter peak hours. *Synchro* version 10 was used to analyze the study intersections based on the *Highway Capacity Manual* (HCM) 2000 methodology.

The results of the capacity analyses are expressed in level of service (LOS) and delay (seconds per vehicle) for each approach. A LOS grade is a letter grade based on the average delay (in seconds) experienced by motorists traveling through an intersection. LOS results range from “A” being the best to “F” being the worst. LOS D is typically used as the acceptable LOS threshold in the City; although LOS E or F is sometimes accepted in urbanized areas if vehicular improvements would be a detriment to safety or non-auto modes of transportation.

The LOS capacity analyses were based on: (1) the peak hour traffic volumes; (2) the lane use and traffic controls; and (3) the Highway Capacity Manual (HCM) methodologies (using *Synchro* software). The average delay of each approach and LOS is shown for the signalized intersections in addition to the overall average delay and intersection LOS grade. The HCM does not give guidelines for calculating the average delay for a two-way stop-controlled intersection, as the approaches without stop signs would technically have no delay.

Table 3 and Table 4 show the results of the capacity analyses. Detailed LOS descriptions and the analysis worksheets are contained in the Technical Appendix.

The results show that most study area intersections operate at acceptable conditions, with several exceptions which are highlighted in red on Table 3 and Table 4.

Queuing Analysis

In addition to the capacity analyses presented above, a queuing analysis was performed at the study intersections. The queuing

analysis was performed using *Synchro* software. The 50th percentile and 95th percentile queue lengths are shown for each lane group at the study area signalized intersections. The 50th percentile queue is the maximum back of queue on a median cycle. The 95th percentile queue is the maximum back of queue that is exceeded 5% of the time. For unsignalized intersections, only the 95th percentile queue is reported for each lane group (including free-flowing left turns and stop-controlled movements) based on the HCM 2000 calculations. HCM 2000 does not calculate queuing for all-way stops.

Table 3 and Table 4 show the results of the queuing analysis for Existing (2018) and Future (2021) conditions. The queuing analyses show that all study intersections have acceptable queuing results, with all queues shorter than available storage lengths, with exceptions at the Green Street and Washington Street intersection.

Mitigations

Based on City standards, the proposed project is determined to have an impact if any intersection or movement within the study area experiences a degradation to LOS E or F in the future scenario where one does not exist in the background scenario. Only one (1) intersection movement meets these criteria:

- Green Street & Washington Street
 - Westbound approach, AM peak hour

The increase in delay and queues at this intersection is primarily due to re-routed existing trips with the new circulation pattern. This report does not recommend mitigation measures at this intersection because there would be negative impacts to other modes (mainly walking), and the benefit would not impact enough drivers to offset negative impacts to other modes. However, if there are found to be impacts at this intersection, the police officers directing traffic can help to better distribute vehicles throughout the grid, reducing the demand at this intersection.

Table 3: 2018 Existing Conditions Capacity Analysis

Intersection (Movement)		Storage Length (ft)	Existing (2018) Conditions														
			AM Peak				PM School Dismissal Peak			PM Commuter Peak							
			LOS Delay		Queue (ft)		LOS Delay		Queue (ft)		LOS Delay		Queue (ft)				
				50th	95th			50th	95th			50th	95th				
1. Site Driveway & S Royal Street																	
	Eastbound LR	50	A	0.0	--	0	A	9.9	--	0	A	9.1	--	2			
	Northbound LT	260	A	0.0	--	0	A	4.9	--	3	A	0.0	--	0			
	Southbound TR	160	A	0.0	--	0	A	0.0	--	0	A	0.0	--	0			
2. Green Street & Washington Street																	
Overall Intersection (Signalized)			A	6.2			B	12.5			C	25.6					
	Eastbound LTR	250	D	51.0	15	38	D	39.3	8	214	C	31.5	52	95			
	Westbound LTR	245	D	54.7	43	75	E	56.7	152	249	F	99.4	~311	#462			
	Northbound LTR	345	A	5.1	197	411	A	6.4	60	299	B	11.9	101	119			
	Southbound LTR	330	A	2.4	21	49	A	7.3	120	311	B	15.3	268	310			
3. Green Street & Saint Asaph Street																	
	Eastbound LTR	240	A	9.5	--	--	A	8.2	--	--	A	8.3	--	--			
	Westbound LTR	225	A	7.5	--	--	A	8.6	--	--	A	9.4	--	--			
	Northbound LTR	320	A	7.8	--	--	A	7.8	--	--	A	8.0	--	--			
	Southbound LTR	340	A	7.6	--	--	A	7.6	--	--	A	8.0	--	--			
4. Green Street & Site Driveway																	
	Eastbound TR	100	A	0.0	--	0	A	0.0	--	0	A	0.0	--	0			
	Westbound LT	95	A	2.0	--	1	A	0.0	--	0	A	0.0	--	0			
	Northbound LR	500	A	9.9	--	1	B	11.0	--	22	B	10.8	--	7			
5. Green Street & Pitt Street																	
	Eastbound LT	210	A	8.5	--	--	A	8.0	--	--	A	7.9	--	--			
	Westbound TR	220	A	7.2	--	--	A	7.3	--	--	A	8.3	--	--			
	Southbound LR	330	A	7.2	--	--	A	7.1	--	--	A	7.4	--	--			
6. Green Street & S Royal Street																	
	Eastbound LTR	220	A	9.5	--	--	A	7.5	--	--	A	7.7	--	--			
	Westbound LTR	240	A	9.5	--	--	A	7.6	--	--	A	7.8	--	--			
	Northbound LTR	400	B	12.1	--	--	A	7.6	--	--	A	7.8	--	--			
	Southbound LTR	320	A	9.2	--	--	A	7.7	--	--	A	7.6	--	--			
7. Jefferson Street & S Royal Street																	
	Eastbound LTR	215	A	8.3	--	--	A	7.4	--	--	A	7.8	--	--			
	Westbound LTR	225	A	8.0	--	--	A	7.4	--	--	A	8.1	--	--			
	Northbound LTR	320	A	10.0	--	--	A	7.4	--	--	A	7.7	--	--			
	Southbound LTR	350	A	8.0	--	--	A	7.6	--	--	A	8.3	--	--			

m - Volume for 95th percentile queue is metered by upstream signal

- 95th percentile volume exceeds capacity, queue may be longer

~ - Volume exceeds capacity, queue is theoretically infinite

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Table 4: 2021 Future Conditions Capacity Analysis

Intersection (Movement)		Storage Length (ft)	Future with Development (2021) Conditions											
			AM Peak				PM School Dismissal Peak				PM Commuter Peak			
			LOS Delay		Queue (ft)		LOS Delay		Queue (ft)		LOS Delay		Queue (ft)	
			50th	95th		50th	95th		50th	95th		50th	95th	
1. Site Driveway & S Royal Street														
Eastbound LR	50	A	0.0	--	0	A	9.1	--	0	A	9.1	--	2	
Northbound LT	260	A	0.0	--	0	A	0.0	--	0	A	0.0	--	0	
Southbound TR	160	A	0.0	--	0	A	0.0	--	0	A	0.0	--	0	
2. Green Street & Washington Street														
Overall Intersection (Signalized)			C	29.4		B	12.3			C	26.1			
Eastbound LTR	245	D	39.8	13	40	D	39.4	8	41	C	31.5	95	214	
Westbound LTR	245	F	178.3	~328	#520	D	54.9	147	212	F	102.6	#468	249	
Northbound LTR	340	B	11.7	354	407	A	6.2	53	90	B	11.9	119	299	
Southbound LTR	330	A	5.7	37	49	A	7.1	115	178	B	15.4	311	311	
3. Green Street & Saint Asaph Street														
Eastbound LTR	240	B	10.1	--	--	A	8.1	--	--	A	8.3	--	--	
Westbound LTR	215	B	10.4	--	--	A	8.4	--	--	A	9.5	--	--	
Northbound LTR	300	A	8.5	--	--	A	7.8	--	--	A	8.1	--	--	
Southbound LTR	340	A	8.3	--	--	A	7.5	--	--	A	8.0	--	--	
4. Green Street & Site Driveway														
Eastbound TR	115	A	0.0	--	0	A	0.0	--	0	A	0.0	--	0	
Westbound LT	70	A	0.0	--	0	A	0.0	--	0	A	0.0	--	0	
Northbound LR	500	C	15.2	--	72	B	10.8	--	22	B	10.8	--	8	
5. Green Street & Pitt Street														
Eastbound LT	210	A	9.0	--	--	A	7.9	--	--	A	7.9	--	--	
Westbound TR	225	A	7.0	--	--	A	7.2	--	--	A	8.3	--	--	
Southbound LR	325	A	7.4	--	--	A	7.0	--	--	A	7.5	--	--	
6. Green Street & S Royal Street														
Eastbound LTR	225	A	8.6	--	--	A	7.4	--	--	A	7.7	--	--	
Westbound LTR	240	A	8.3	--	--	A	7.5	--	--	A	7.8	--	--	
Northbound LTR	350	A	7.7	--	--	A	7.6	--	--	A	7.8	--	--	
Southbound LTR	320	A	8.6	--	--	A	7.7	--	--	A	7.7	--	--	
7. Jefferson Street & S Royal Street														
Eastbound LTR	215	A	7.4	--	--	A	7.4	--	--	A	7.8	--	--	
Westbound LTR	220	A	7.3	--	--	A	7.4	--	--	A	8.1	--	--	
Northbound LTR	320	A	7.3	--	--	A	7.4	--	--	A	7.8	--	--	
Southbound LTR	350	A	7.6	--	--	A	7.6	--	--	A	8.3	--	--	

m - Volume for 95th percentile queue is metered by upstream signal

- 95th percentile volume exceeds capacity, queue may be longer

~ - Volume exceeds capacity, queue is theoretically infinite



PEDESTRIAN FACILITIES

This chapter presents a review of pedestrian facilities near The Basilica School of Saint Mary. The steps performed in this review include:

- A detailed review of pedestrian facilities within a quarter-mile distance of the site
- An examination of impacts that planned City projects would have on walking route quality

The following conclusions are reached within this chapter:

- Pedestrian facilities near The Basilica School of Saint Mary are well-established and mostly continuous, but many facilities do not meet City of Alexandria or Virginia Department of Transportation requirements.
- There are small gaps in the sidewalk network, but plans exist to fill them.

EXISTING PEDESTRIAN FACILITIES REVIEW

The following is a review of sidewalks and other pedestrian facilities within a quarter-mile distance of The Basilica School of Saint Mary. Sidewalks, crosswalks, and curb ramps within the study area were evaluated based on City of Alexandria and Virginia Department of Transportation requirements, which are summarized in Table 5.

Comparisons of the pedestrian facilities within the study area to City of Alexandria and Virginia Department of Transportation standards are shown on Figure 31.

Table 5: Sidewalk Requirements

Document	Minimum Sidewalk Width	Minimum Buffer Width
City of Alexandria Comprehensive Transportation Master Plan	5 ft	-
VDOT Roadway Design Manual (buffer with tree)	5 ft	6 ft
VDOT Roadway Design Manual (buffer without tree)	5 ft	3 ft
VDOT Roadway Design Manual (no buffer)	8 ft	-

Sidewalks

Most streets near the site have sidewalks on both sides. Many of these sidewalks are at least four (4) feet wide, but do not meet the City's minimum standard width of five (5) feet for new sidewalks. Other sidewalks near the site meet the City's

minimum width, but do not have buffers as required by the Virginia Department of Transportation.

Crosswalks

Most intersections near the site have crosswalks on all legs.

Curb Ramps

ADA standards require that all curb ramps be provided wherever an accessible route crosses a curb, that curb ramps have a detectable warning, and that curb ramps are not shared between two crosswalks. Under existing conditions within the site's quarter-mile walkshed, there are curb ramps present at most intersections. However, many intersections have curb ramps that are shared by multiple crosswalks or that lack a detectable warning.

Summary

In general, there are no major gaps in the pedestrian network surrounding the site, though the pedestrian experience could be improved by bringing sidewalks and curb ramps up to City, State, and ADA standards wherever feasible.

PLANNED PEDESTRIAN FACILITIES

This section reviews planned infrastructure improvements near The Basilica School of Saint Mary that would improve pedestrian comfort levels.

Comprehensive Transportation Master Plan – Pedestrian Element

The following pedestrian improvement(s) are proposed in the Pedestrian Element of the City of Alexandria's Comprehensive Transportation Master Plan:

- Install sidewalks on the blocks of Green Street and Franklin Street which currently lack them.

Safe Routes to School (SRTS) Walk Audit Recommendations – Lyles Crouch Traditional Academy

The following pedestrian improvement(s) are recommended in the Safe Routes to School (SRTS) Walk Audit for Lyles Crouch Traditional Academy, an elementary school located 0.3 miles north of The Basilica School of Saint Mary:

- Install sidewalks and ADA compliant curb ramps on the blocks of S Pitt Street and Franklin Street which currently lack them.

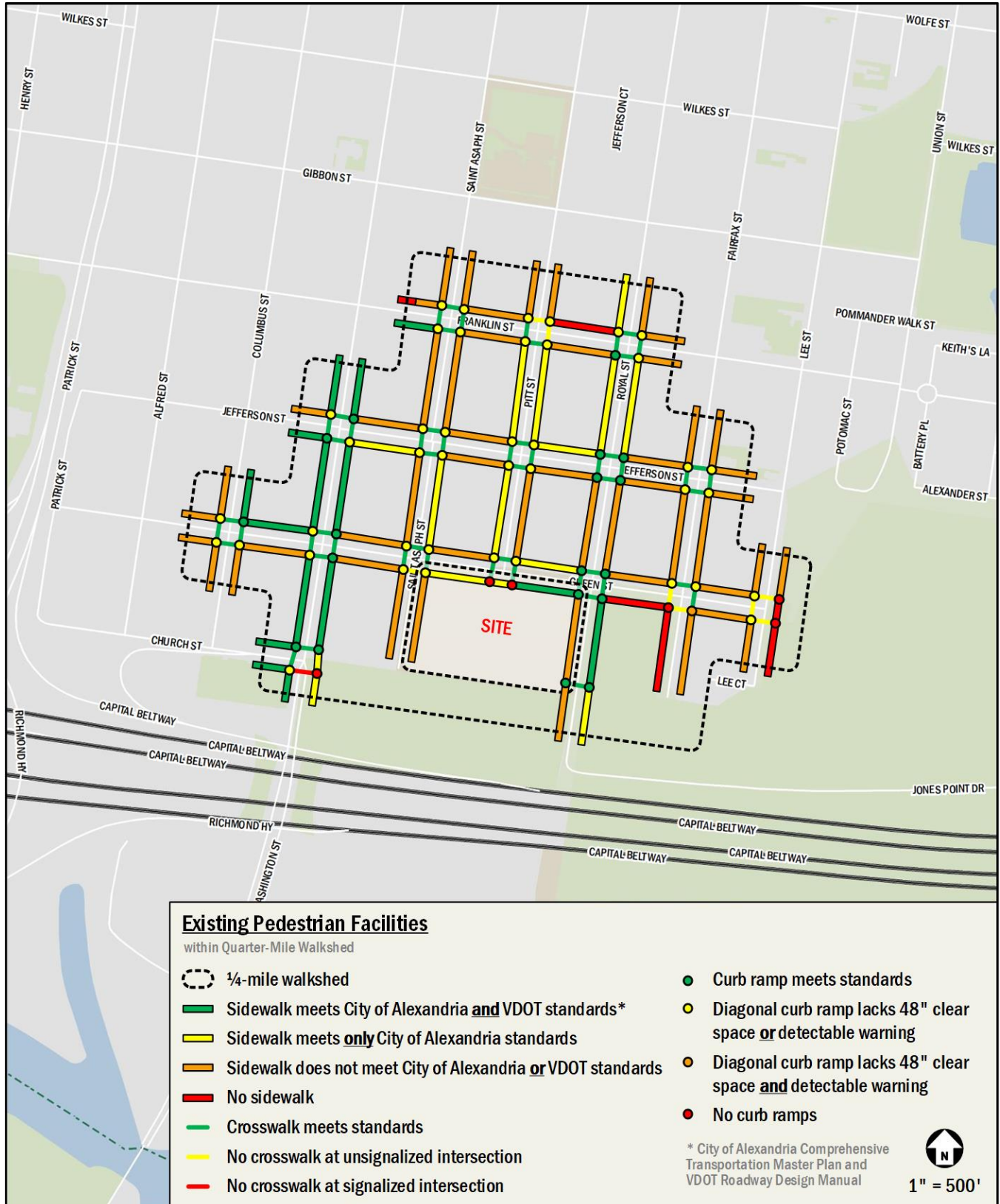


Figure 31: Existing Pedestrian Facilities



BICYCLE FACILITIES

This chapter presents a review of bicycle facilities near The Basilica School of Saint Mary. The steps performed in this review include:

- A detailed review of existing bicycle infrastructure near the site
- An examination of impacts that planned City projects would have on bicycle comfort levels to and from the site

The following conclusions are reached within this chapter:

- The site has good connectivity to existing on- and off-street bicycle facilities. The site is surrounded by local neighborhood streets, shared lanes on S Royal Street, Columbus Street, and Wilkes Street, and the Woodrow Wilson Bridge and Mount Vernon Trails.
- While there are no bicycle lanes on S Royal Street adjacent to the site, planned improvements as part of the Royal Street Neighborhood Bikeway project will add an enhanced bicycle facility on the roadway, improving bicycle comfort levels.
- There are two (2) Capital Bikeshare stations within 0.5 miles of the site.

EXISTING BICYCLE FACILITIES REVIEW

The site has good connectivity to existing on- and off-street bicycle facilities and the site is surrounded by neighborhood streets that are relatively low in vehicular traffic and speed. North-south connectivity is provided via shared lanes on S Royal Street, Columbus Street, and Union Street. East-west connectivity is provided via signed routes, off-street paths, and shared lanes on Wilkes Street as well as Woodrow Wilson Bridge Trail and Mount Vernon Trail.

Existing bicycle facilities near The Basilica School of Saint Mary are shown on Figure 31.

Bicycle Parking

There are currently no bicycle parking spaces located on or near The Basilica School of Saint Mary site.

Capital Bikeshare

The Capital Bikeshare program provides an additional cycling option for staff and visitors. Capital Bikeshare has placed over 500 bikeshare stations across Washington, DC, Arlington County, the City of Alexandria, and Fairfax County in Virginia,

and Montgomery County and Prince George's County in Maryland, with 4,300 bicycles provided. There is a 19-dock Capital Bikeshare station in the southwest corner of the Washington Street and Franklin Street intersection and a 15-dock station in the northeast corner of the S Royal Street and Wilkes Street intersection. Both stations are about 0.3 miles from The Basilica School of Saint Mary site.

PLANNED BICYCLE FACILITIES

This section reviews planned infrastructure improvements near The Basilica School of Saint Mary site that would improve bicycle comfort levels.

Comprehensive Transportation Master Plan – Bicycle Element

The following bicycle improvement(s) are proposed in the Bicycle Element of the City of Alexandria's Comprehensive Transportation Master Plan:

- Improvements to the Mount Vernon Trail near Jones Point Park and at the trail's intersection with S Royal Street are proposed, including widening the trail and adding signage near sharp turns.
- An extension of the Old Cameron Run Trail is proposed, running east from Eisenhower Avenue and Mill Road to South Payne Street.
- Shared Roadway bicycle facilities are proposed along S Payne Street, S Fayette Street, S Columbus Street, S Royal Street, and Jones Point Drive.
- A Capital Bikeshare station is proposed near the intersection of S Saint Asaph Street and Church Street.

Royal Street Neighborhood Bikeway

The Union Street Corridor Study (2013) recommended that S Royal Street be considered as an alternate, parallel route for bicyclists on Union Street. As part of the City of Alexandria's Pedestrian & Bicycle Master Plan Update, S Royal Street was identified as a neighborhood bikeway, between Jones Point Drive and Bashford Lane. Neighborhood Bikeways are streets designed to encourage slow vehicular traffic and to be comfortable for people bicycling and walking. Design elements may include shared lane markings or bike route signage.

Goals of the project include:

- Providing more visible pedestrian crossing across S Royal Street at major intersections;

The Basilica School of Saint Mary TIS



- Creating a more direct and comfortable route for bicyclists traveling to/from and through Old Town;
- Reducing pedestrian-vehicle-bicycle conflicts on Union Street and in Old Town; and
- Creating a calmer and safer street for all users.

Since S Royal Street is a primary route to/from The Basilica School of Saint Mary, the improved connectivity the Neighborhood Bikeway will provide will enhance the bicycling and pedestrian experience and encourage more walking and biking trips overall.



Figure 32: Existing Bicycle Facilities

TRANSPORTATION MANAGEMENT PLAN

A Transportation Management Plan (TMP) has many components that are tailored to accommodate a given facility with the goal of reducing of automobile trips by encouraging alternative forms of transportation.

Based on the City of Alexandria zoning ordinance, no Transportation Management Plan (TMP) is required for the renovations to The Basilica School of Saint Mary. However, the school already has several measures in place that encourage non-automobile trips and ensure the impact of automobile trips on the transportation network is as minimal as possible. These measures include:

- Two (2) parent-organized dismissal-only bus routes from the school to the Rosemont and Potomac Greens neighborhoods.
- A volunteer carpool coordinator.
- Walker passes for students walking to their homes or parent's office after school, provided the home or office is within the boundaries of Washington and King Streets.
- Prohibiting parents from entering the school parking lot except during afternoon dismissal.
- Orderly arrival and dismissal procedures assisted by police officers directing traffic and enforcing turn restrictions.

SUMMARY AND RECOMMENDATIONS

This Transportation Impact Study (TIS) reached the following major findings and recommendations:

PROJECT SUMMARY

The project consists of renovations and potential additions to the building, a revised site access plan including upgrades to parking and student drop-off/pick-up facilities, and an increase in the school's enrollment cap from 720 to 765 students.

The project includes two (2) site access points: one (1) on Green Street and one (1) on Royal Street. These provide access to the two (2) on-site surface parking lots. A small visitor and ADA parking lot will be provided on the west side of the school building, accessed from Green Street. This parking lot provides the shortest walking route to the main entrance for ADA parking, without the grade challenges that exist in other parking locations. A 62-space parking lot will be constructed on the east side of the school building, serving teachers and staff. This larger parking lot will be accessed from the Royal Street driveway. The Royal Street driveway also serves as the entry for parent pick-up/drop-off during arrival and dismissal, and during those times queues will extend to the driveway.

Under existing and future conditions, parent pick-up/drop-off queues extend off-site into the neighborhood during arrival and dismissal. The project includes changes to the site plan that will allow for more of the queues to stack on-site, reducing the off-site queues in the future. This report concludes that in the amount of queuing will be significantly reduced despite the increase in student capacity. During the morning arrival, which coincides with the commuter peak period, this change is substantial as it significantly reduces the amount of impact the school has on the surrounding neighborhood.

The school does not generate significant amounts of traffic during the day, except during morning arrival and afternoon dismissal. During these times, the school generates enough traffic that it creates pockets of congestion nearby for an acute period of time. The proposed changes in site circulation during the morning arrival alter the way traffic exits the school and can lead to increased congestion on Green Street. This can be mitigated through operational and management solutions that disperse traffic on the City grid, spread out demand and limiting overall impacts. The school can accomplish this by

changing the way the police officers direct traffic to accommodate for the future change in circulation.

The changes to site access, circulation, and arrival/dismissal operations are outlined in the following section.

SITE ACCESS AND CIRCULATION

Teacher/Staff Parking

During student arrival, teachers and staff must wait in the student drop-off queue to access the parking lot from the S Royal Street driveway. After 7:30 AM, when the drop-off queue uses the drive aisles of the parking lot, teachers and staff must wait in the drop-off queue to park. Teachers and staff will exit the site from any of the site driveways following student dismissal.

Visitor Parking

During the school day, access to this small lot will be to/from Green Street. Vehicles will not be permitted to circulate on-site during the school day. During arrival and dismissal, access to these visitor and ADA spaces will be from the south only. Vehicles will enter the site from the arrival/dismissal entrance on S Royal Street and circulate around the building. Vehicles exiting the small lot will exit the site from the outbound-only driveway on Green Street. It is anticipated that there will be very few vehicles parking in this lot during arrival and dismissal periods.

Student Arrival and Dismissal

Student arrival and dismissal operations will be moved to a new pick-up/drop-off area on the new playground surface south of the elementary school building. The existing police officers that direct traffic will change how they direct in order to accommodate the proposed operations. The changes to the existing arrival and dismissal operations are as follows:

Proposed Drop-off Operations

The proposed drop-off operations vary by time period. Before 7:30 AM, vehicles enter the site using the S Royal Street driveway and the queuing area is limited to the driveway between S Royal Street and the drop-off area. After 7:30 AM, once most teachers and staff have parked, the queuing area is expanded to include the drive aisles within the teacher/staff parking lot.

The proposed drop-off operations increase the number of vehicles than can be accommodated south of the intersection of S Royal Street and Green Street at any given time. Under



existing conditions, 30 vehicles can be accommodated. Under proposed conditions, 54 vehicles (24 more than existing) can be accommodated before 7:30 AM, and 79 vehicles (49 more than existing) after 7:30 AM.

Proposed Pick-Up Operations

There are two options for proposed pick-up operations: (1) No Drive Aisle Use and (2) Using Drive Aisles. With both options, vehicles will enter the pick-up area from the S Royal Street driveway and exit from the Green Street driveway on the west side of the building. The options differ by the way queuing is accommodated. In Option 1, queuing is limited to the driveway between S Royal Street and the pick-up area. In Option 2, the queuing area will be expanded to include the drive aisles within the teacher/staff parking lot.

In addition to parent/guardian pick-up, a parent-chartered school bus will queue in front of the main entrance on Green Street. The school bus will depart once the students are onboard.

The proposed pick-up operations affect the number of vehicles than can be accommodated south of the intersection of S Royal Street and Green Street at any given time. Under existing conditions, about 116 vehicles can be accommodated. Under proposed conditions with no drive aisle use (Option 1), 88 vehicles (28 fewer than existing) can be accommodated, and 118 vehicles (two more than existing) with drive aisle use (Option 2).

TRAFFIC OPERATIONS

A detailed traffic capacity analysis performed for this report led to the following findings:

- Under existing conditions, the study area intersections all operate at acceptable levels of service and delay, with a few exceptions.
- Under future conditions, levels of service and delay get worse at some study intersections and better at others.
- One (1) intersection movement meets the criteria for mitigation measures, but these measures are not recommended because there would be negative impacts to other modes (mainly walking), and the benefit would not impact enough drivers to offset negative impacts to other modes. The increase in delay and queues at this intersection is primarily due to re-routed existing trips with the new circulation pattern. If there are found to be

impacts, the police officers directing traffic can help to better distribute vehicles throughout the grid.

TRANSPORTATION MANAGEMENT PLAN (TMP)

While a TMP is not required by the City of Alexandria for this project, this report highlights certain measures The Basilica School of Saint Mary is already undertaking to advance the goals typically seen in a TMP, including reducing automobile trips and lessening the impact of site-generated automobile trips on the transportation network.



APPLICATION

DEVELOPMENT SPECIAL USE PERMIT with SITE PLANDSUP # #2019-0004Project Name: Basilica School of St Mary'sPROPERTY LOCATION: 400 and 400A Green StreetTAX MAP REFERENCE: 080.04-07-36 and -37ZONE: RM

APPLICANT:

Name: Catholic Diocese of ArlingtonAddress: 200 North Glebe Road Arlington, VA 22203

PROPERTY OWNER:

Name: Catholic Diocese of ArlingtonAddress: 200 North Glebe Road Arlington, VA 22203

SUMMARY OF PROPOSAL The applicant requests a DSUP with Site Plan to permit an addition connecting the two existing buildings and associated site improvements. These improvements include upgraded parking area, student pick-up and drop-off facilities, and play area.

MODIFICATIONS REQUESTED Modification of the required street tree placement., modification to minimum landscape island requirement

SUP's REQUESTED SUP for parking in excess of requirement.

☒ THE UNDERSIGNED hereby applies for Development Site Plan with Special Use Permit approval in accordance with the provisions of Section 11-400 of the Zoning Ordinance of the City of Alexandria, Virginia.

☒ THE UNDERSIGNED, having obtained permission from the property owner, hereby grants permission to the City of Alexandria to post placard notice on the property for which this application is requested, pursuant to Article XI, Section 11-301 (B) of the 1992 Zoning Ordinance of the City of Alexandria, Virginia.

☒ THE UNDERSIGNED also attests that all of the information herein provided and specifically including all surveys, drawings, etc., required of the applicant are true, correct and accurate to the best of his/her knowledge and belief.

M. Catharine Puskar

Print Name of Applicant or Agent

2200 Clarendon Blvd, Suite 1300

Mailing/Street Address

Arlington, VA 22201

City and State

Zip Code

Signature

703-528-4700

Telephone #

703-525-3197

Fax #

cpuskar@thelandlawyers.com

Email address

10/30/2020 / REVISED 1/21/2021

Date

REVISED 2/8/2020

DO NOT WRITE IN THIS SPACE - OFFICE USE ONLY

Application Received: _____

Received Plans for Completeness: _____

Fee Paid and Date: _____

Received Plans for Preliminary: _____

ACTION - PLANNING COMMISSION: _____

ACTION - CITY COUNCIL: _____

ALL APPLICANTS MUST COMPLETE THIS FORM.

Supplemental forms are required for child care facilities, restaurants, automobile oriented uses and freestanding signs requiring special use permit approval.

1. The applicant is: (check one)
☒ the Owner ☐ Contract Purchaser ☐ Lessee or ☐ Other: _____ of
the subject property.

State the name, address and percent of ownership of any person or entity owning an interest in the applicant, unless the entity is a corporation or partnership in which case identify each owner of more than ten percent.

See attachment.

If property owner or applicant is being represented by an authorized agent, such as an attorney, realtor, or other person for which there is some form of compensation, does this agent or the business in which the agent is employed have a business license to operate in the City of Alexandria, Virginia?

- ☐ ^{N/A} Yes. Provide proof of current City business license.
☐ No. The agent shall obtain a business license prior to filing application, if required by the City Code.



DIOCESE OF ARLINGTON

Office of the Bishop

200 North Glebe Road, Suite 914 • Arlington, Virginia 22203 • Office (703) 841-2511 • Fax (703) 524-5028

October 20, 2020

Karl Moritz
301 King Street
City Hall, Room 2100
Alexandria, Virginia 22314

Re: Consent and Authorization to File a Development Special Use Permit
Amendment and related requests
The Basilica School of Saint Mary; 400 Green Street
Tax Map IDs: #080.04-07-36 and -37 ("The Property")

Dear Mr. Moritz:

Most Reverend Michael F. Burbidge, Bishop of the Catholic Diocese of Arlington, Va., and his successors and assigns, as owner of the above-referenced Property, hereby consents to the filing of an application for a Development Special Use Permit Amendment on the Property and any related requests.

Most Reverend Michael F. Burbidge, Bishop of the Catholic Diocese of Arlington, Va., and his successors and assigns, hereby authorizes Walsh, Colucci, Lubeley & Walsh, P.C. to act as agent on our behalf for the filing and representation of an application for a Development Special Use Permit Amendment on the Property and any related requests.

Very Truly Yours,

Most Reverend Michael F. Burbidge
Bishop of the Catholic Diocese of Arlington, Va.

By: *Michael F. Burbidge, COD*
in fact

Its: _____

Date: *10/20/2020*

OWNERSHIP AND DISCLOSURE STATEMENT

Use additional sheets if necessary

1. Applicant. State the name, address and percent of ownership of any person or entity owning an interest in the applicant, unless the entity is a corporation or partnership, in which case identify each owner of more than three percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. Most Reverend Michael F. Burbidge, Bishop of the Catholic Diocese of Arlington, Va		
2. and his successors and assigns		100%
3.		

2. Property. State the name, address and percent of ownership of any person or entity owning an interest in the property located at 400 and 400A Green Street (address), unless the entity is a corporation or partnership, in which case identify each owner of more than three percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. Most Reverend Michael F. Burbidge, Bishop of the Catholic Diocese of Arlington, Va		
2. and his successors and assigns		100%
3.		

3. Business or Financial Relationships. Each person or entity indicated above in sections 1 and 2, with an ownership interest in the applicant or in the subject property are required to disclose **any** business or financial relationship, as defined by [Section 11-350 of the Zoning Ordinance](#), existing at the time of this application, or within the 12-month period prior to the submission of this application with any member of the Alexandria City Council, Planning Commission, Board of Zoning Appeals or either Boards of Architectural Review. **All fields must be filled out completely. Do not leave blank. (If there are no relationships please indicate each person or entity and "None" in the corresponding fields).**

For a list of current council, commission and board members, as well as the definition of business and financial relationship, [click here](#).

Name of person or entity	Relationship as defined by Section 11-350 of the Zoning Ordinance	Member of the Approving Body (i.e. City Council, Planning Commission, etc.)
1. Most Reverend Michael F. Burbidge, Bishop of the Catholic Diocese of Arlington, Va		
2. and his successors and assigns	None	None
3.		

NOTE: Business or financial relationships of the type described in Sec. 11-350 that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings.

As the applicant or the applicant's authorized agent, I hereby attest to the best of my ability that the information provided above is true and correct.

10/20/2020
10/30/2020
Date

Ward Jones, in fact
Printed Name

Ward A Jones
Signature

- See Attachment.

Narrative Description
The Basilica School of Saint Mary
TM ID #080.04-07-36 and -37

REVISED
February 8, 2021

The Catholic Diocese of Arlington (the “Applicant”) hereby requests approval of a Development Special Use Permit with preliminary site plan and Special Use Permit for parking in excess of requirement, and modifications to the minimum street tree placement and minimum landscape island requirement. The Basilica School of Saint Mary (“St. Mary’s” or the “School”) proposes to construct an addition for a library and media center at 400 Green Street (the “Property”). The proposed addition would connect two school buildings on the Property and allow students to safely travel between the two classroom buildings. Site improvements include reorienting the parking lot and student pick-up and drop-off area, adding one elevator for ADA accessibility, and other landscaping and playground improvements.

Site History

St. Mary’s has operated on the Property since 1948, and has grown and changed along with the needs of the student body and the community. Located on an approximately 169,271 square foot (3.89 acre) site at the corner of Green Street and South Royal Street, adjacent to St. Mary’s Cemetery, the existing buildings have been modified periodically since their construction in the mid-1940s.

By way of background, the School was granted Special Use Permit (SUP) #14 to operate the private school in 1951. The City Council approved SUP #162 for an expansion of the School on October 26, 1954. Subsequently, Stephen’s Hall, located to the southeast of the Main Building, was constructed in 1955. A two-story gym was constructed on the south side of the Main Building in 1979. Most recently, a one-story addition was constructed on Stephen’s Hall in 1997 per SUP #95-0138.

Proposal Details

Overall, the improvements to St. Mary’s will increase the FAR of the site to approximately a 0.7 FAR, which is well below the permitted density of a 1.5 FAR in the RM Zone. The proposed addition connects the southeast corner of the Main Building with the northwest corner of Stephen’s Hall and contains approximately 19,298 square feet of floor area on the library level. Additionally, the new connection will provide a secure path for students and faculty. Currently both buildings contain classroom space, and students must travel outside under the supervision of faculty in order to get from one building to the other. The proposed addition will allow students to travel freely between the previously separated buildings, protect them from the weather, and also eliminate the risk of unauthorized persons entering the building.

The Applicant intends to match the proposed materials with the existing building materials, creating a seamless transition from the Main Building through the new library and

media center addition to Stephen's Hall. While the height of the two existing buildings is approximately the same, due to grade changes on the site, the addition will provide a connection between the second floor of the Main Building and the third floor of Stephen's Hall. The proposed height of the addition's main roof is comparable to the height of the existing buildings. The proposed tower feature provides an anchor to the South Royal Street frontage and complements the historic elements of the School. The proposed tower is architecturally distinct from the existing cupola but borrows several key details from the School's Green Street façade. The scale and massing of the proposed addition fit well with the existing buildings and improve the School's ability to provide services for students and faculty.

Traffic and Parking Improvements

The proposed site improvements will reorient student pick-up and drop-off area, improve the playground areas, and upgrade the faculty and guest parking lots. With these site improvements, the Applicant will reduce the amount of impervious area on the Property.

Currently, the existing pick-up and drop-off pattern involves significant queuing in surrounding streets and neighborhood. In order to internalize the pick-up and drop-off traffic, the Applicant proposes to reorient the pick-up and drop-off area to the rear of the school, behind the gym. Parents will enter the School from South Royal Street, drive under the proposed addition to the rear of the school, where faculty will direct the pick-up and drop-off process. To exit the School grounds, they will drive down a one-way alley along the western side of the Main Building and exit on to Green Street. Appropriate signage will help visitors and parents navigate the site, and staff will be outside during peak travel times to direct traffic and reduce conflicts.

During times where there is little automobile traffic on the proposed street, the pick-up and drop-off area will be temporary closed to allow full access for an additional play area for students while maintaining emergency vehicle access when necessary. The clear width of the area under the bridge is intended to promote easy access and visual connection around the corner from the play areas to the east of the Main Building with the play areas to the south. Additionally, the proposed width in this area will provide a clearer line of sight when the roadway is opened to car traffic.

With regard to parking, the existing parking on the site consists of 20 standard parking spaces, 4 ADA spaces, and 23 tandem spaces located in the rear of the school. The paved playground area to the east of the Main Building doubles as a waiting lot for parents at pick-up and a parking lot for School events. The Applicant proposes to renovate this area and create a dedicated parking area for faculty during the school days and parents during evening and weekend events. The proposed parking will consist of 20 standard spaces, 4 ADA accessible spaces, and 50 compact spaces, for which the Applicant requests a Special Use Permit for parking in excess of the requirement. This parking area will be screened with landscaping and a low brick and decorative metal fence. Additionally, the Applicant proposes to add seven (7) parking spaces on the western side of the Property near the main entrance for guests and school officials.

Board of Architectural Review

The Board of Architectural Review (“BAR”) approved the associated demolition and encapsulation permit on April 3, 2019. The BAR also endorsed the height, scale, mass, and general architectural character of the proposal. Following the DSUP and preliminary site plan review process, the Applicant will return to the BAR for a Certificate of Appropriateness.

3. How many patrons, clients, pupils and other such users do you expect?

Specify time period (i.e., day, hour, or shift).

765 students per day

4. How many employees, staff and other personnel do you expect?

Specify time period (i.e. day, hour, or shift).

79 full time staff per day

5. Describe the proposed hours and days of operation of the proposed use:

Day	Hours	Day	Hours
Monday + Tuesday	7 AM - 3:15 PM*		
Wednesday	7 AM - 2:10 PM*		
Thursday + Friday	7 AM - 3:15 PM*		
Saturday + Sunday	Closed*		

*Proposed school hours, ancillary activities associated with the private school will occur some afternoons and evenings.

6. Describe any potential noise emanating from the proposed use:

- A. Describe the noise levels anticipated from all mechanical equipment and patrons.

N/A

- B. How will the noise from patrons be controlled?

N/A

7. Describe any potential odors emanating from the proposed use and plans to control them:

N/A

8. Provide information regarding trash and litter generated by the use:

A. What type of trash and garbage will be generated by the use?

Typical garbage from everyday school use.

B. How much trash and garbage will be generated by the use?

Typical garbage generation from everyday school use.

C. How often will trash be collected?

Garbage is collected twice per week.

D. How will you prevent littering on the property, streets and nearby properties?

The Applicant's maintenance staff will monitor the property for litter.

9. Will any hazardous materials, as defined by the state or federal government, be handled, stored, or generated on the property?

☐ Yes. ☒ No.

If yes, provide the name, monthly quantity, and specific disposal method below:

10. Will any organic compounds (for example: paint, ink, lacquer thinner, or cleaning or degreasing solvent) be handled, stored, or generated on the property?

☐ Yes. ☒ No.

If yes, provide the name, monthly quantity, and specific disposal method below:

Cleaning materials will be disposed of in accordance with federal, state, and local regulations.

11. What methods are proposed to ensure the safety of residents, employees and patrons?

Appropriate safety measures are in place in accordance with applicable regulations regarding school safety.

ALCOHOL SALES

12. Will the proposed use include the sale of beer, wine or mixed drinks?

☐ Yes. ☒ No.

If yes, describe alcohol sales below, including if the ABC license will include on-premises and/or off-premises sales. Existing uses must describe their existing alcohol sales and/or service and identify any proposed changes in that aspect of the operation.

PARKING AND ACCESS REQUIREMENTS

13. Provide information regarding the availability of off-street parking:

- A. How many parking spaces are required for the proposed use pursuant to section 8-200 (A) of the zoning ordinance?

31 spaces.

- B. How many parking spaces of each type are provided for the proposed use:

20	Standard spaces
50	Compact spaces
4	Handicapped accessible spaces
0	Other

- C. Where is required parking located? (check one) ☒ on-site ☐ off-site

If the required parking will be located off-site, where will it be located?

N/A

Pursuant to section 8-200 (C) of the zoning ordinance, commercial and industrial uses may provide off-site parking within 500 feet of the proposed use, provided that the off-site parking is located on land zoned for commercial or industrial uses. All other uses must provide parking on-site, except that off-street parking may be provided within 300 feet of the use with a special use permit.

- D. If a reduction in the required parking is requested, pursuant to section 8-100 (A) (4) or (5) of the zoning ordinance, complete the Parking Reduction Supplemental Application.

14. Provide information regarding loading and unloading facilities for the use:

- A. How many loading spaces are required for the use, per section 8-200 (B) of the zoning ordinance? **0**

- B. How many loading spaces are available for the use?

- C. Where are off-street loading facilities located?

N/A

- D. During what hours of the day do you expect loading/unloading operations to occur?

N/A

- E. How frequently are loading/unloading operations expected to occur, per day or per week, as appropriate?

N/A

- 15.** Is street access to the subject property adequate or are any street improvements, such as a new turning lane, necessary to minimize impacts on traffic flow?

Street access is adequate.

March 16, 2021

Re: Saint Mary's Basilica School Construction

To: City of Alexandria Planning Department

From: Elise Latawiec, 926 South Saint Asaph Street, Alexandria 571 312 4567

To whom it may concern:

My neighbors and I are seeking assistance in addressing issues related to the school construction plan that will significantly increase the glare from car lights, noise and emissions. The 6 homes on the southern end of the east side of the street (toward the cemetery) are most exposed to the rear school yard as it abuts to our patios. We met with the school and requested a meaningful sound/ light/ emission barrier, but we were only offered "bushes". The current light problem was also not addressed . The school verbally agreed to build a brick wall on the west end of the block behind the houses on South Saint Asaph near the exit on Green where they are building a visitor parking. However, they refused to do build a meaningful barrier on the south end of the block.

We suggest the school reverse the current plan so that the teacher parking is in the rear (as it is now) and the basketball courts/ student play area be moved into the same space as the planned teacher parking along Royal Street. This would solve numerous problems:

- Parents would line up in the basketball court in the morning and for pick up- sort of like they do now and still exit in the alley behind our houses. We would need mitigation for the emissions and car lights, but it would be less of a problem. Again, the traffic flow would remain as presented in the current plan.
- Teachers parking in the rear would provide relative quiet for us. Maybe not scenic to see cars from our upstairs windows but would significantly reduce noise and idling emissions.
- This would still provide a separate older child play area- a point the church made during the last Zoom.
- The school will likely argue the rear yard was always a playground. Our counter is there never should have been a play area so close to our houses as it is an ongoing noise challenge. Plus, times have changed with more people telecommuting. We can't open our rear windows because of the noise. Additionally, moving the basketball courts to that area will significantly increase the problem.
- The basketball courts will be very noisy and likely used on the weekends, school functions and nights. We already have parents coming with cars shining lights onto the kiddy playground in off hours. Has the city done noise studies on basketball courts?
- We are the only real neighbors to the school...the people on Green have a 5- lane road between them and the school. There are NO neighbors on Royal near the school yard.
- This plan would not interfere/ change the flow of traffic for our other neighbors including those at the north end of our street. Moving the idling cars to the Royal side of the property will keep

the vehicles in open air space. The current plan to line up cars in numerous rows behind the school in what will be a relatively closed space once the construction is completed is environmentally concerning. Especially given parents line up 30 minutes to an hour prior to the start and close of the school day.

Additionally, we need to point out that those of us on South Saint Asaph are also the recipients of the River Renew tunneling project. The 3 houses on the south end of Saint Asaph are being asked to sign agreements with River Renew in the event of damage related to the tunneling. We asked River Renew to request the archdiocese agree to move the tunnel further south under the cemetery so our homes would be out of the danger zone. The church refused.

Given the tunnel and school construction will occur in rapid succession, and the potential of damage from the tunnel, we request special consideration from the city. This is a lot of stress on unsuspecting homeowners who bought houses on a dead-end street.

Thank you for your kind consideration.

Elise Latawiec



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