

COMPREHENSIVE TRANSPORTATION REPORT

**FRIENDSHIP PUBLIC CHARTER SCHOOL
SOUTHEAST ACADEMY
BZA CASE #20082**

WASHINGTON, DC

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EXECUTIVE SUMMARY

The following report is a Comprehensive Transportation Review (CTR) for Friendship Public Charter School's (FPCS) Southeast Academy. This report reviews transportation aspects of the school's modernization and expansion plan as it pertains to the school's Board of Zoning Adjustment (BZA) Case #20082.

The purpose of this study is to evaluate whether the proposed school will have a detrimental impact to the surrounding transportation network. This report concludes that the proposal will not have a detrimental impact to the surrounding transportation network assuming all planned site design elements are implemented.

Proposed Project

FPCS Southeast Academy is located at 645 Milwaukee Place, SE in Washington DC. It is bounded by Milwaukee Place SE to the north, a public alley to the south and Martin Luther King Jr Avenue SE to the east. The site currently contains one building that serves 590 Pre-K to 6th grade students. One hundred thirty (130) 7th-8th grade students are currently located in the adjacent Tech Prep high school building, in addition to 416 9th to 12th grade students. There are 108 surface parking spaces allocated to the Southeast Academy located on east and south side of the building. Site access and site egress is provided via five (5) curb cuts on Martin Luther King Jr Avenue, Milwaukee Place, and a 15' Public Alley. The school is also adjacent to a car wash which shares an access point along Martin Luther King Jr Avenue with the school.

The Applicant is seeking to expand the existing school to accommodate 728 Pre-K to 8th grade students. The expansion will include additional educational space, a gymnasium, improvements to the existing public alley, and additional space for pick-up/drop-off activity. The proposed site will consist of two buildings including the existing building and a proposed building that will replace the eastern parking lot. The existing building will be used for elementary students (Pre-K-5th grade) while the new building will be used for the middle school students (6th-8th grade). This project includes relocating the 7th and 8th grade students from Tech Prep to the new building. The proposed site will contain two parking lots, including the existing southern parking lot and a proposed western parking lot. Although not directly related to the new construction at Southeast Academy, by relocating 7th and 8th grade students to

the new building, Tech Prep will expand their population to 600 students. As such, the overall campus will increase by 192 students, with an increase of 184 students at Tech Prep, but only an increase of 8 total Pre-K to 8th grade students at Southeast Academy.

As part of the proposed plans, two (2) of the existing curb cuts along Martin Luther King Jr Avenue will be eliminated. The curb cut that serves the car wash will be narrowed and relocated further from the existing signalized intersection.

Multi-Modal Impacts and Recommendations

Transit

The school is served by regional and local transit services via Metrobus and Metrorail. The School is currently 0.8 miles from the Congress Heights Station, with Metrobus stops located within walking distance of the site along Martin Luther King Jr Avenue and Mellon Street. With the completion of the Saint Elizabeth's East Campus, the distance to the Congress Heights Station will decrease to 0.5 miles.

Pedestrian

The school is surrounded by a well-connected pedestrian network that provides an adequate walking environment. Most roadways within a quarter-mile radius provide sidewalks, crosswalks and acceptable curb ramps, particularly along the primary walking routes.

The site will improve the overall pedestrian environment by eliminating two (2) curb cuts along Martin Luther King Jr Avenue, removing vehicular-pedestrian conflict.

As part of the proposed development an elevated pedestrian walkway will be added between the existing and proposed building. The proposed walkway will ensure pedestrian safety for students walking from the existing building to the proposed building. Frequent travel between the two buildings will be necessary as only the existing building will have certain facilities such as a cafeteria and specialty classes such as music and arts.

Bicycle

The site has adequate connectivity to existing on- and off-street bicycle facilities. The site is within a quarter mile radius of bicycle lanes along Malcom X Avenue. Additionally, one (1) Capital Bikeshare station is located within a half-mile of the school with 7 available docks.



Per zoning regulations, the proposed site is required to provide five (5) long-term and 18 short-term bicycle parking spaces. The proposed site will include five (5) long-term bicycle parking spaces within the building and 20 short-term bicycle parking spaces along the perimeter of the site.

Vehicular

The school is accessible from several principal and minor arterials such as Martin Luther King Jr Avenue and Malcolm X Avenue, as well as an existing network of collector and local roadways.

In order to determine potential impacts on the transportation network, this report performed analyses of intersection delays and queues. The capacity analysis results were compared to the acceptable levels of delay typically set by DDOT standards, as well as existing queues, to determine areas of concern that will negatively impact the roadways near the school.

The vehicular capacity analysis results in the following conclusions:

- Under existing and future conditions, the majority of intersections in the study area operate under acceptable conditions.
- In the Future (2025) with Development conditions, the eastbound delay at the intersection of Martin Luther King Jr Avenue and Milwaukee Place increases from a LOS D or E to an LOS F in all three scenarios.
- A signal is warranted at the intersection of Martin Luther King Jr Avenue and Milwaukee Place as a result of school-related traffic; however, the signal is only warranted during the AM Peak Hour when there is a short, but significant increase in traffic. Traffic Control Officer reinforcement may mitigate capacity issues at this intersection.
- The school will not have detrimental impact to the surrounding network.

Transportation Demand Management

- Student TDM Elements
 - The school will encourage carpooling by offering a parent listserv which will allow parents to find carpool matches.
 - The school will require all drop-off and pick-up activities to take place within the designated curbside locations.
- The school will coordinate bike safety/education courses for students.
- The school will offer DC One Cards to all students to encourage the use of public transportation.
- Faculty/Staff TDM elements
 - The school will offer a transit benefit program to faculty and staff to encourage the use of public transportation.
 - All faculty and staff who drive to school will be instructed to park on campus.
 - The school will encourage carpooling by offering a staff listserv which will allow staff to find carpool matches.
 - All faculty/staff will complete training on TDM procedures.
- School-Wide TDM Elements
 - The school will assign a staff member to serve as Transportation Management Coordinator (TMC) who will be responsible for oversight of the TDM plan, adherence to driving and parking regulations, and encourage and facilitate carpooling.
 - The school will implement policies for deliveries to the campus to minimize the impact of this traffic on the neighborhood.
 - The school will install outdoor bicycle parking racks to promote additional bicycle activity.
 - The school will participate in the Safe Routes to School Program.



INTRODUCTION

This report is a Comprehensive Transportation Review (CTR) for FPCS Southeast Academy in support of BZA application #20082. This report reviews the existing and future transportation conditions in and around the school. The subject property, shown in Figure 1 and Figure 2, is located at 645 Milwaukee Place in southeast Washington, DC.

PURPOSE OF STUDY

The purpose of this report is to:

1. Review the transportation elements in and around the school area and demonstrate that it conforms to DDOT's general policies of promoting non-automobile modes of travel and sustainability.
2. Provide information to the District Department of Transportation (DDOT) and other agencies on how the development of the site will influence the local transportation network. This report accomplishes this by identifying the potential trips generated by the site on all major modes of travel and where these trips will be distributed on the network.
3. Determine if the development of the school expansion will lead to adverse impacts on the local transportation network.

PROJECT SUMMARY

The Applicant is seeking to expand the existing school to accommodate 728 Pre-K to 8th grade students. The expansion will include additional educational space, a gymnasium, improvements to the existing public alley, and additional space for pick-up/drop-off activity. The proposed site will consist of two buildings including the existing building and a proposed building that will replace the eastern parking lot. The existing building will be used for elementary students (Pre-K to 5th grade) while the new building will be used for the middle school students (6th to 8th grade). The proposed site will contain two parking lots, including the existing southern parking lot and a proposed western parking lot to serve pick-up/drop-off operations.

CONTENTS OF STUDY

This report contains eight (8) sections as follows:

Study Area Overview

This section reviews the area near and adjacent to the school and includes an overview of the school's location.

Project Design

This section reviews the transportation components of the projects, including the site plan and access. This chapter also contains the proposed Transportation Demand Management (TDM) plan for the site.

Trip Generation

This section outlines the travel demand of the proposed projects. It summarizes the proposed trip generation of the project.

Traffic Operations

This section provides a summary of the roadway facilities and an analysis of the existing and future roadway capacity in the study area. This section highlights the vehicular impacts of the proposed school expansion, including presenting strategies for minimizing impacts as needed.

Transit

This section summarizes the existing and future transit service adjacent to the school, outlines impacts, and presents recommendations as needed.

Pedestrian Facilities

This section summarizes existing and future pedestrian access to the school, reviews walking routes to and from the school, and outlines impacts.

Bicycle Facilities

This section summarizes existing and future bicycle access to the school, reviews the quality of cycling routes to and from the school, and outlines impacts.

Summary and Conclusions

This section presents a summary of the recommended mitigation measures by mode and presents overall findings and conclusions.

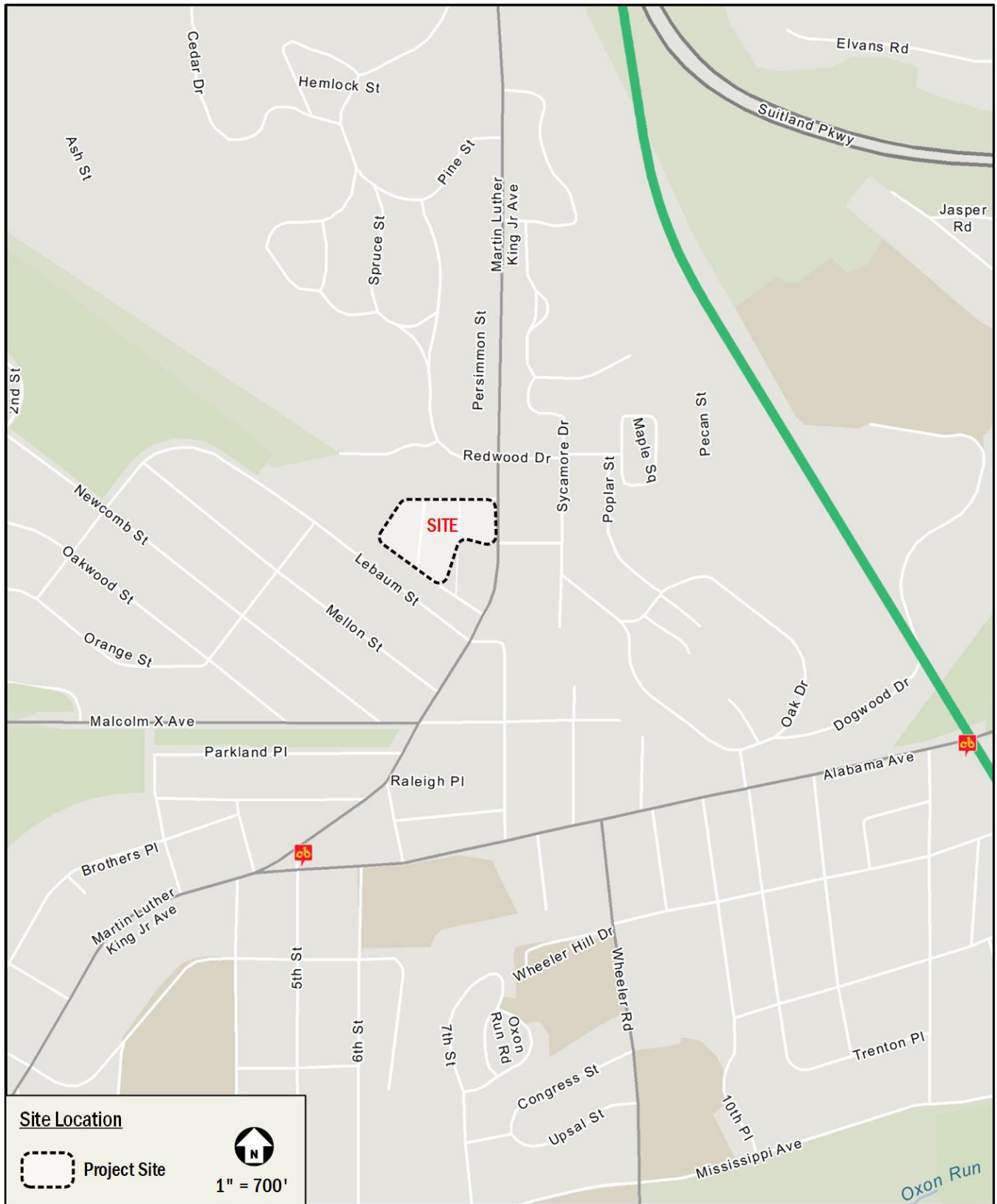


Figure 1: Site Location



Figure 2: Site Aerial



STUDY AREA OVERVIEW

This section reviews the study area and includes an overview of the school's 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 school is surrounded by an extensive regional and local transportation system that connects students and faculty/staff to the rest of the District and surrounding areas.
- The school is served by public transportation with access to Metrobus along Martin Luther King Jr Avenue and Mellon Street.
- There is bicycle infrastructure in the vicinity of the school, including bike lanes along Malcolm X Avenue.
- The existing pedestrian infrastructure surrounding the school provides a sufficient walking environment. There are sidewalks along the majority of primary routes to pedestrian destinations.

MAJOR TRANSPORTATION FEATURES

Overview of Regional Access

As shown in Figure 3, the school has ample access to regional, vehicular, and transit-based transportation options that connect the school to destinations within the District, Virginia, and Maryland.

The school is accessible from several arterials such as Martin Luther King Jr Avenue and Malcom X Avenue. These roadways create connectivity to interstates such as I-295, I-395, and the Capital Beltway (I-495) that surrounds Washington, DC and its inner suburbs, as well as providing connectivity to the District core.

The school is located 0.8 miles from the Congress Heights Metrorail Station, which is served by the Green Line. The Green Line connects northern and southern Prince George's County, Maryland, while providing access to the District core. Connections from the Green and Yellow Line can be made at L'Enfant Plaza and Gallery Place-Chinatown stations to access the five other Metrorail lines. Green line trains run every four to eight minutes during the weekday morning and afternoon peak hours between 5:00 AM to 9:30 AM and 3:00 PM to 7:00

PM, approximately every 12 minutes during the weekday midday hours from 9:30 AM to 3:00 PM, approximately every 8 to 12 minutes during the weekday evening hours from 7:00 PM to 9:30 PM, and every 12 to 20 minutes during the weekday off-peak periods and on weekends.

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

Overview of Local Access

There are a variety of local transportation options near the school that serve vehicular, transit, walking, and cycling trips, as shown on Figure 4. The school is directly served by a local vehicular network that includes several collector roads such as 4th Street, 7th Street and 8th Street.

The Metrobus system provides local transit service in the vicinity of the school, including connections to several neighborhoods within the District and additional Metrorail stations. As shown in Figure 4, there are eight (8) metrobus routes that run within a quarter-mile radius of the school. A detailed review of transit stops within a quarter mile walk of the school is provided in a later section of this report.

There are several existing bicycle facilities near the school that connect to areas within the District. Bike lanes run along Malcolm X Avenue and a signed bicycle route runs along Alabama Avenue. A detailed review of existing and proposed bicycle facilities and connectivity is provided in a later section of the report.

Anticipated pedestrian routes, such as those to public transportation stops, retail zones, parks, and community amenities, are served by adequate pedestrian facilities. A detailed review of existing and proposed pedestrian access and infrastructure is provided in a later section of this report.

Overall, the school is surrounded by a good local transportation network that allows for efficient transportation options via transit, bicycle, walking, or vehicular modes.

Carsharing

Four (4) carsharing companies provide service in the District: Zipcar, Maven, Free2Move and Car2Go. All four (4) services are private companies that provide registered users access to a variety of automobiles. Of these, Zipcar and Maven have



designated spaces for their vehicles. Currently, there are no Zipcar or Maven locations located within a quarter mile of the site.

Carsharing is also provided by Car2Go and Free2Move, which provide point-to-point carsharing. Car2Go currently has a fleet of vehicles located throughout the District and Arlington, and Free2Move located within select areas of the District. Car2Go and Free2Move vehicles may park in any non-restricted metered curbside parking space or Residential Parking Permit (RPP) location in any zone throughout the defined “Home Area”. Members do not have to pay the meters or pay stations. Car2Go and Free2Move do not have permanent designated spaces for their vehicles; however, availability is tracked through their respective websites and mobile phone applications, which provides an additional option for car-sharing patrons.

Walkscore

Walkscore.com is a website that provides scores and rankings for the walking, biking, and transit conditions within neighborhoods of the District. Based on this website the school is located near the Congress Heights neighborhood. This school location itself has a walk score of 73 (or “Very Walkable”), a transit score of 67 (or “Good Transit”), and a bike score of 62 (or “Bikeable”).

The school is situated in a neighborhood that encompasses “very walkable” walk scores because of the abundance of residential street and neighborhood serving retail locations that are in close proximity, where most errands can be completed by walking. The good transit score was based on the proximity to several metrobus lines that stop near the school. The school is situated in a bikeable area due to its flat terrain and facilities to the south and east.

FUTURE PROJECTS

There are a few District initiatives and planned developments located in the vicinity of the school. These initiatives and developments are summarized below.

Local Initiatives

SustainableDC: Sustainable DC Plan (2011)

SustainableDC is a planning effort initiated by the Department of Energy & Environment and the Office of Planning that provides the District with a framework of leading Washington

DC to become the most sustainable city in the nation. The 2012 report proposes a 20-year timeframe to answer challenges in areas of: (1) Jobs & the economy; (2) Health & Wellness; (3) Equity & Diversity; (4) Climate & Environment; (5) Built Environment; (5) Energy; (6) Food; (7) Nature; (8) Transportation; (9) Waste; and (10) Water. With respect to transportation, the sustainability goals targeted in 20 years include:

- Improving connectivity and accessibility through efficient, integrated, and affordable transit systems
- Expanding provision of safe, secure infrastructure for cyclists and pedestrians
- Reducing traffic congestion to improve mobility
- Improving air quality along major transportation routes

A combination of increasing public transit and decreasing vehicular mode shares has been suggested to meet the transportation targets. The transportation demand management (TDM) measures proposed in this CTR will help curtail vehicular mode share.

MoveDC: Multimodal Long-Range Transportation Plan (2014)

MoveDC is a long-range plan that provides a vision for the future of DC’s transportation system. As the District grows, so must the transportation system, specifically in a way that expands transportation choices while improving the reliability of all transportation modes.

The MoveDC report outlines recommendations by mode with the goal of having them completed by 2040. The plan hopes to achieve a transportation system for the District that includes:

- 70 miles of high-capacity transit (streetcar or bus)
- 200 miles of on-street bicycle facilities or trails
- Sidewalks on at least one side of every street
- New street connections
- Road management/pricing in key corridors and the Central Employment Area
- A new downtown Metrorail loop
- Expanded commuter rail
- Water taxis

In direct relation to Southeast Academy, MoveDC outlines a 4.25-mile South Capitol Street Trail located predominately within the I-295 corridor. The proposed trail will connect with



the existing bicycle lane along Malcolm X Avenue, just south of the site.

Far Southeast Southwest Area Element of the Comprehensive Plan

The Far Southeast Southwest Area Element is a chapter in the DC Comprehensive Plan that outlines planning efforts east of the Anacostia Freeway including neighborhoods such as Historic Anacostia, Congress Heights, Hillside, Woodland, Fort Stanton, Barry Farm, Bellevue, Washington Highland, Douglas/Shipleigh Terrace, Garfield Heights, and Knox Hill/Buena Vista. Policy FSS-1.1.13: School Modernization, strongly supports the modernization of schools in the Far Southeast/Southwest Planning area.

South Capitol Street Corridor Project

The purpose of the South Capitol Street project is to improve safety, mobility, and accessibility, and to support economic development in the vicinity of the project. The project will: (1) correct the design and deteriorating condition of the transportation infrastructure which creates safety concerns for vehicular, pedestrian, and bicycle traffic and transit riders; (2) construct missing critical regional roadway connections of vehicles, pedestrian, and bicycles; (3) correct mobility barriers that limit access to activity centers in the study area; and (4) support economic growth in order to improve the density of employment and residential development.

In the vicinity of the project, the Preferred Alternative from the Final Environmental Impact Statement includes improvements to Martin Luther King Jr Avenue from Howard Road to Summer Road.

Planned Developments

There is one (1) development project in the vicinity of the school that has been approved and is expected to be completed prior to the school expansion or at the same time as the school expansion. The background development included in the analysis is described below.

Saint Elizabeth's East Campus

The Saint Elizabeth's East Campus is a proposed mixed-use development located along Martin Luther King Jr Avenue between Pine Street and Alabama Avenue that will consist of residential, medical, office and retail buildings. The following Parcels are expected to be developed by year 2025:

- Parcel 2: 150 bed Hospital and 230,000 SF of Medical Office
- Parcel 10-14: 100 Townhomes
- Parcel 11: 252 dwelling unit Apartment Building
- Parcel 17: 20,000 SF of Retail and 175,000 SF of Office
- Parcel 15: 100,000 SF of Retail and 1,000 room Hotel Building

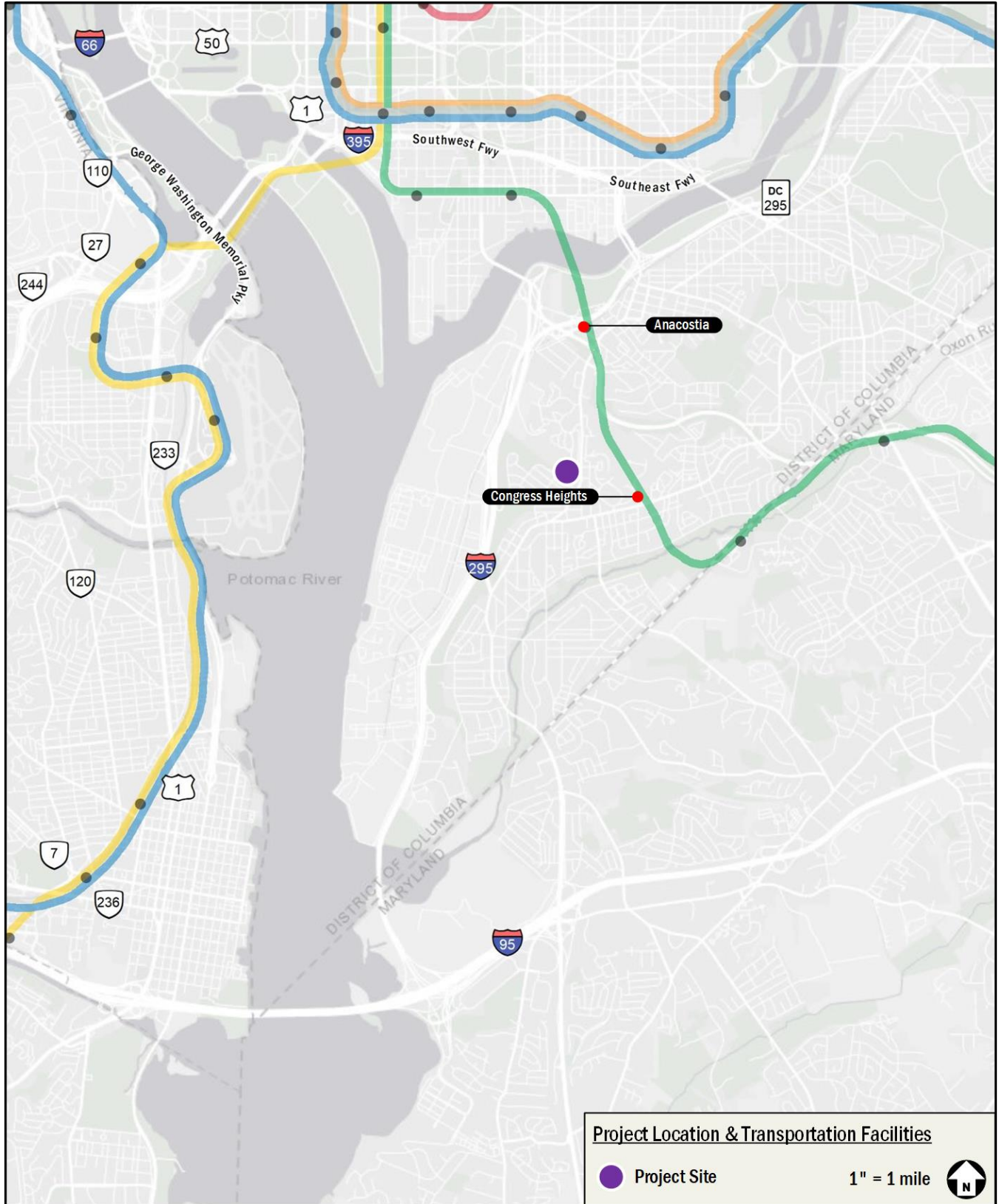


Figure 3: Major Regional Transportation Facilities

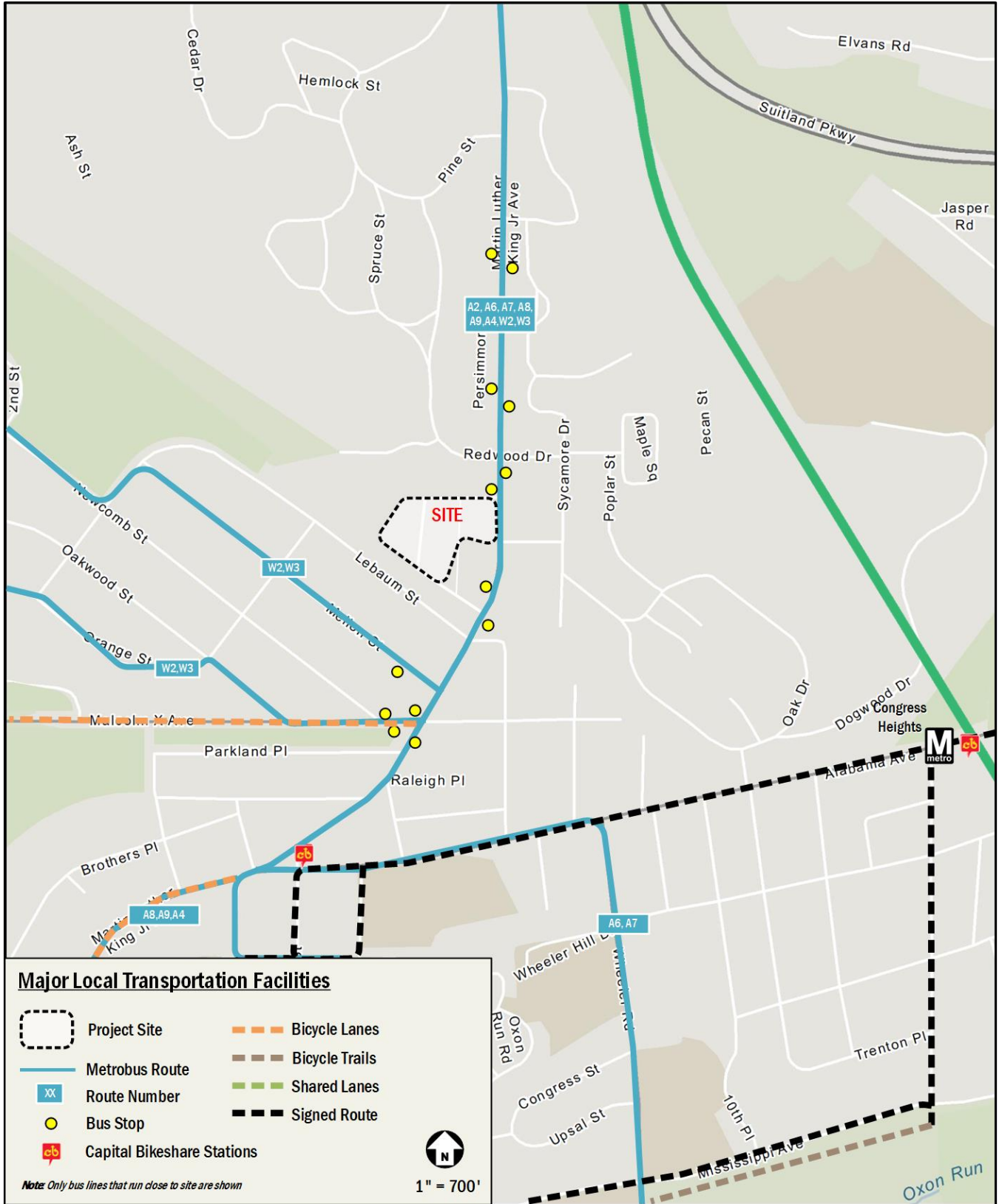


Figure 4: Major Local Transportation Facilities



PROJECT DESIGN

This section reviews the transportation components of the school expansion and modernization project, including the proposed site plan and access points. It includes descriptions of the site's vehicular access, pick-up/drop-off operations, parking, pedestrian and bicycle accommodations, and Transportation Demand Management (TDM) plan.

PROJECT SUMMARY

The site currently contains one building that serves 590 Pre-K to 6th grade students. One hundred thirty (130) 7th to 8th grade students are currently located in the adjacent Tech Prep high school building, in addition to 416 9th to 12th grade students. There are 108 surface parking spaces allocated to the Southeast Academy located on east and south side of the building. Site access and site egress is provided via five (5) curb cuts on Martin Luther King Jr Avenue, Milwaukee Place, and a 15' Public Alley. The school is also adjacent to a car wash which shares an access point along Martin Luther King Jr Avenue with the school.

The Applicant is seeking to expand the existing school to accommodate 728 Pre-K to 8th grade students. The expansion will include additional educational space, a gymnasium, improvements to the existing public alley, and additional space for pick-up/drop-off activity. The proposed site will consist of two buildings including the existing building and a proposed building that will replace the eastern parking lot. The existing building will be used for elementary students (Pre-K to 5th grade) while the new building will be used for the middle school students (6th to 8th grade). (This project includes relocating the 7th and 8th grade students from Tech Prep to the new building). The proposed site will contain two parking lots, including the existing southern parking lot and a proposed western parking lot. Although not directly related to the new construction at Southeast Academy, by relocating 7th and 8th grade students to the new building, Tech Prep will expand their population to 600 students. As such, the overall campus will increase by 192 students, with an increase of 184 students at Tech Prep, but only an increase of 8 total Pre-K to 8th grade students at Southeast Academy.

Figure 5 shows an overview of the development program and site plan elements and Figure 6 shows the site circulation.

SITE ACCESS AND CIRCULATION

Vehicle Access

Site access and site egress is provided via five (5) curb cuts on Martin Luther King Jr Avenue, Milwaukee Place, and a 15' Public Alley. As part of the proposed plans, two (2) curb cuts along Martin Luther King Jr Avenue will be eliminated and one (1) will be used primarily for the existing car wash. The other two (2) curb cuts along Milwaukee Place and the 15' Public Alley will remain and be used for site access and egress. The curb cut along the 15' public alley may be widened in order to accommodate the planned traffic flow.

The existing curb cut to the car wash will be relocated to run directly adjacent to the car wash and will be narrowed to 12' wide. This car wash drive aisle is located within the SE Academy property, and the school has agreed to maintain this access. The car wash curb cut also allows for car wash activity to occur outside of pick-up/drop-off circulation.

Pedestrian Access

The existing site consists of four pedestrian entrances located on the north, south, east and west sides of the school. The main pedestrian entrance is located on the east side of the school along the public alley. The public alley off of Martin Luther King Jr Avenue does not have sidewalk, therefore pedestrians coming from the Martin Luther King Jr Avenue must enter the site from Milwaukee Place.

As part of the proposed plans, the western pedestrian entrance will be used for early childhood students and the northern pedestrian entrance will be used for elementary school students. The pedestrian entrance for the middle school students will be located on the west side of the proposed building, along the north/south public alley.

Curbside Management

To better accommodate pick-up/drop-off operations for the school, the following adjustments to curbside management along Milwaukee Place are proposed:

- Parking will be eliminated along the northern and southern block faces of Milwaukee Place between Martin Luther King Jr Avenue and the Public Alley.
- Pick-up/drop-off space will be designated along the southern block face of Milwaukee Place SE from the Public Alley to the end of the block. Additionally, pick-up/drop-off space will be designated along the northern



block face between the public alley and the Tech Prep driveway.

- Along the northern block face of Milwaukee Place between the Tech Prep Driveway and the end of the block, residential permit parking is proposed.

The existing and proposed curbside management are shown on Figure 7 and Figure 8.

LOADING

Given the design and location of this building the Applicant is seeking special exception relief of the loading requirements. The loading requirements for the proposed building include: one (1) 30' loading berth, one (1) 20' service space and one (1) 100 sq. ft loading platform. The Southeast Academy campus currently provides an adequate and accessible designated loading area on the west side of the elementary school building. All loading operations occur outside the pick-up/drop-off time periods. As such, all loading operations will remain the same.

PICK-UP/DROP-OFF OPERATIONS

Under existing conditions, most pick-up drop off activity occurs along the north/south Public Alley that runs in front of the school with some activity occurring in the southern parking lot. Pick-up/drop-off vehicles primarily enter the site via Milwaukee Place, turn left onto the north/south alley, and exit via the Public Alley.

As part of the proposed plans, all pick-up and drop-off vehicles will enter the site from the Public Alley off of Martin Luther King Jr Avenue. Early Childhood vehicles will utilize the western parking lot, allowing parents to park and walk their child into the classroom. Elementary School Students will be picked-up/dropped-off along Milwaukee Place while Middle School Students will be picked-up/dropped-off along the north/south public alley fronting the school. All vehicles will exit the site via Milwaukee Place.

Pickup/drop-off circulation is shown on Figure 6.

PARKING

The existing site includes two parking lots that serve the school: a southern parking lot and an eastern parking lot. The eastern parking lot is a gated lot located in front of the school. Access to the eastern parking lot can be made from a curb cut along Martin Luther King Jr Avenue. The southern parking lot is

located on the south side of the school and can be accessed by a curb cut off the north/south Public Alley.

As part of the proposed plans the existing eastern parking lot will be eliminated and replaced with an additional education building serving middle school students. The southern parking lot will remain as is and an additional lot will be added to the west side of the school. The proposed lot will be accessed by the school driveway that runs along on the west side of the school.

The parking proposed is expected to accommodate all parking needs on-site. The southern parking lot will contain 30 parking spaces and serve staff parking. The western parking lot will contain 34 parking spaces and serve pick-up/drop-off needs. This results in a total of 64 parking spaces on site.

BICYCLE AND PEDESTRIAN FACILITIES

Bicycle Facilities

Per zoning regulations, the proposed site is required to provide five (5) long-term and 18 short-term bicycle parking spaces. The proposed site will include five (5) long-term bicycle parking spaces within the building and 20 short-term bicycle parking spaces along the perimeter of the site.

Pedestrian Facilities

The site will improve the overall pedestrian environment by eliminating two (2) curb cuts along Martin Luther King Jr Avenue, removing vehicular-pedestrian conflict.

As part of the proposed development an elevated pedestrian walkway will be added between the existing and proposed building. The proposed walkway will ensure pedestrian safety for students walking from the existing building to the proposed building. Frequent travel between the two buildings will be necessary as only the existing building will have certain facilities such as a cafeteria and specialty classes such as music and arts.

TRANSPORTATION DEMAND MANAGEMENT

TDM is the application of policies and strategies used to reduce travel demand or to redistribute demand to other times or spaces. TDM typically focuses on reducing demand of single-occupancy, private vehicles during peak period travel times or on shifting single-occupancy vehicular demand to off-peak periods.



The following TDM measures are proposed as part of the school expansion and modernization project:

- Student TDM Elements
 - The school will encourage carpooling by offering a parent listserv which will allow parents to find carpool matches.
 - The school will require all drop-off and pick-up activities to take place within the designated curbside locations.
 - The school will coordinate bike safety/education courses for students.
 - The school will offer DC One Cards to all students to encourage the use of public transportation.
- Faculty/Staff TDM elements
 - The school will offer a transit benefit program to faculty and staff to encourage the use of public transportation.
 - All faculty and staff who drive to school will be instructed to park on campus.
 - The school will encourage carpooling by offering a staff listserv which will allow staff to find carpool matches.
 - All faculty/staff will complete training on TDM procedures.
- School-Wide TDM Elements
 - The school will assign a staff member to serve as Transportation Management Coordinator (TMC) who will be responsible for oversight of the TDM plan, adherence to driving and parking regulations, and encourage and facilitate carpooling.
 - The school will implement policies for deliveries to the campus to minimize the impact of this traffic on the neighborhood.
 - The school will install outdoor bicycle parking racks to promote additional bicycle activity.
 - The school will participate in the Safe Routes to School Program.

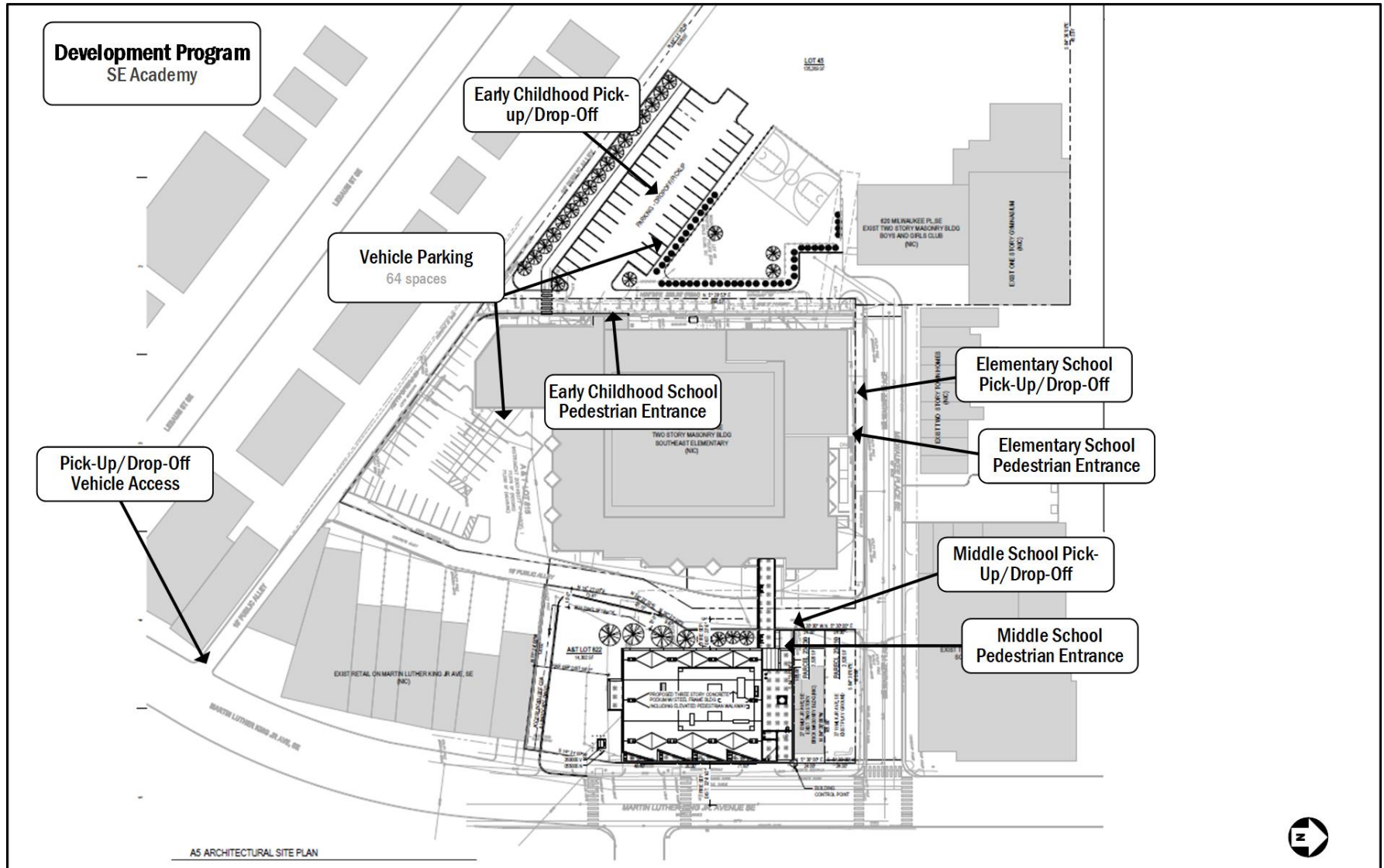


Figure 5: Site Plan

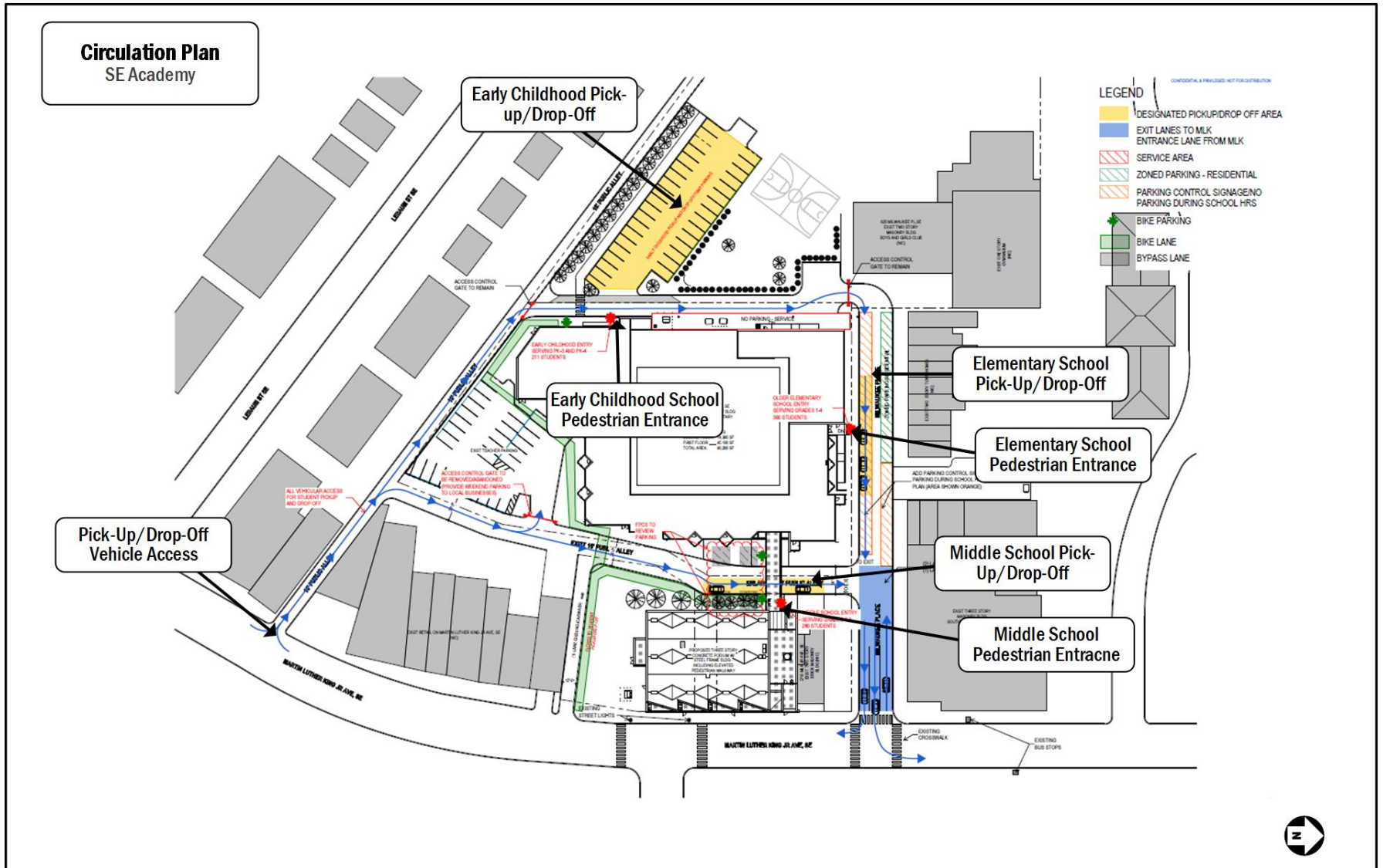


Figure 6: Circulation Plan

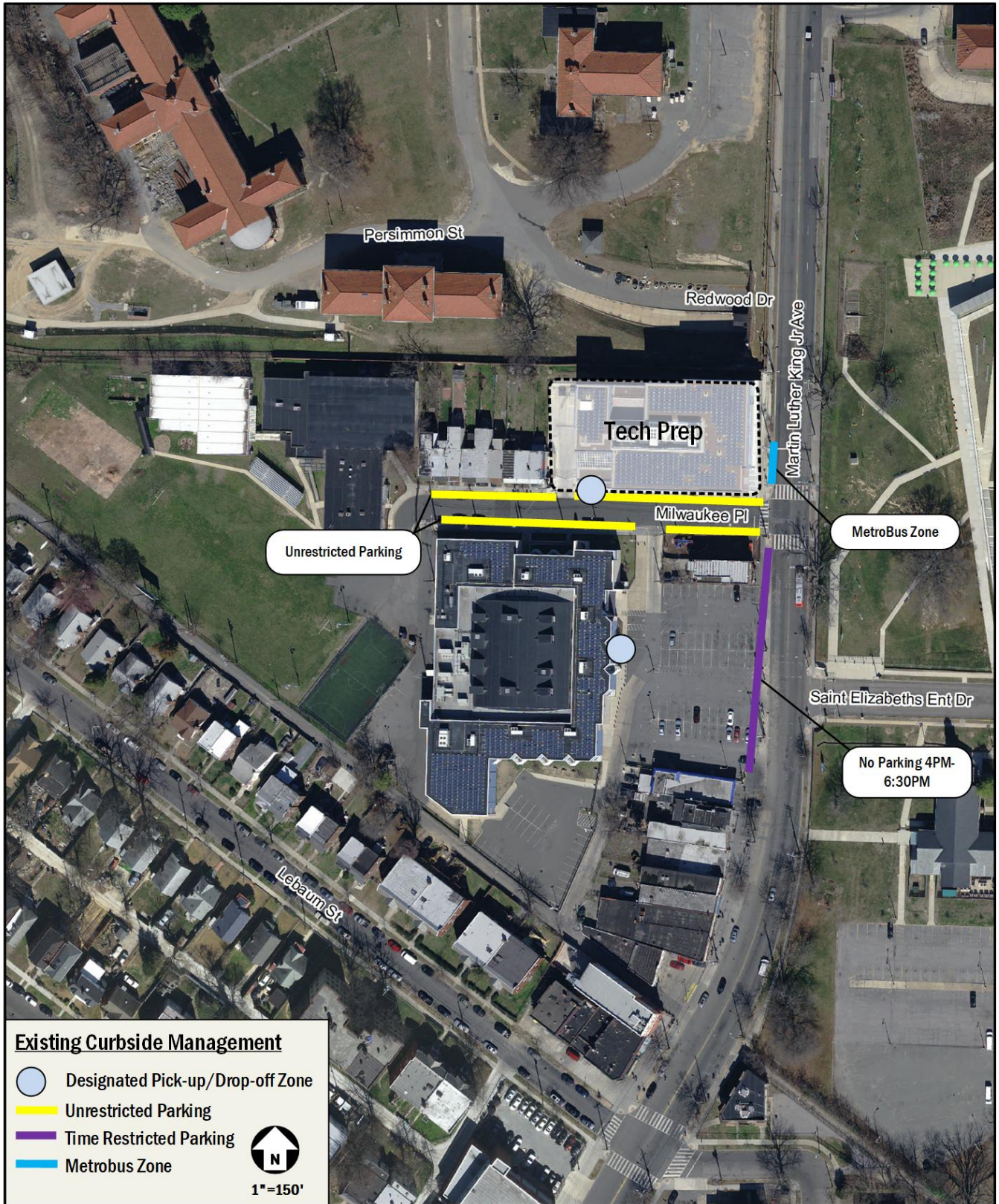


Figure 7: Existing Curbside Management

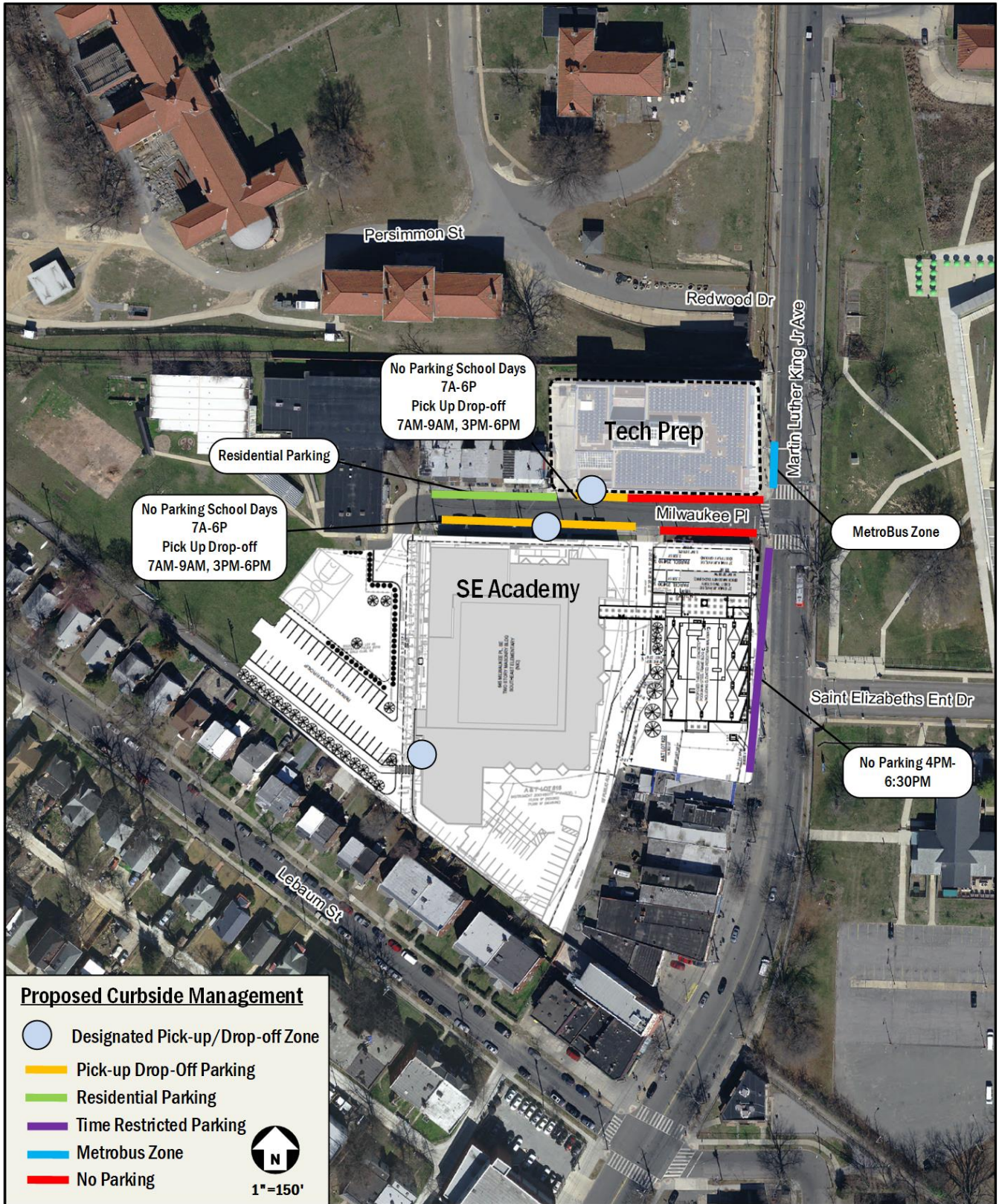


Figure 8: Proposed Curbside Management



TRIP GENERATION

This section outlines the transportation demand of the proposed FPCS Southeast Academy project. It summarizes the projected trip generation of the school by mode, which forms the basis for the chapters that follow. These assumptions were conducted in general accordance with the typical parameters set by DDOT for preparing Transportation Impact Studies.

Trip generation for both the existing and proposed school was determined based on information provided by the school regarding projected student/employee mode split and start/end times, comparable data from other DC area schools, and existing intersection counts. Although the existing trip generation could not be directly determined based on existing intersection counts, the counts were used to verify and adjust trip generation/mode split assumptions.

With 7-8th grade students moving from the Tech Prep Building to the SE academy building, Tech Prep will be able to expand their enrollment by approximately 200 students. The overall enrollment of Pre-K to 8th grade students will stay approximately the same. As such, the trip generation includes the trips of SE academy as well as Tech Prep in order to accommodate all added trips to the campus. As part of the analysis, all school-related trips will be rerouted based on the proposed circulation patterns. In order to reroute the school-related trips, all existing school trips were first subtracted from the network then re-added along the proposed circulation route. The rerouting routing of trips is detailed in the following section.

Based on the information provided by the school and the existing traffic counts, the mode splits assumed were as 45% auto, 30% transit and 25% walk for Elementary, 30% auto, 45% public transit, 2% bike, and 23% walk for Middle School, 10% auto, 60% transit, 2% bike and 28% walk for High School and

75% auto, 20% public transit and 2% bike and 3% walk for staff. The mode split assumptions are summarized in Table 1.

A summary of the multimodal trip generation for the overall school is provided in Table 2 for all three peak hours. The net new site trips were calculated by subtracting the existing trips from the proposed trips.

As such, the school expansion is expected to generate 28 new vehicular trips (20 in, 8 out) during the morning peak hour, 9 vehicular trips (5 in, 4 out) during the afternoon school peak hour and 11 vehicular trips (3 in, 8 out) during the afternoon commuter peak hour. Detailed calculations are included in the Technical Attachments.

Table 1: Mode Split

| Land Use | Mode | | | |
|-------------|-------|---------|------|------|
| | Drive | Transit | Walk | Bike |
| Elementary | 45% | 30% | 25% | 0% |
| Middle | 30% | 45% | 23% | 2% |
| High School | 10% | 60% | 28% | 2% |
| Staff | 75% | 20% | 3% | 2% |



Table 2: Trip Generation

| Mode | Land Use | AM Peak Hour School | | | PM Peak Hour School | | | PM Peak Hour Commuter | | |
|-------------------------|-------------------|---------------------|------------|--------------|---------------------|------------|--------------|-----------------------|------------|--------------|
| | | <i>In</i> | <i>Out</i> | <i>Total</i> | <i>In</i> | <i>Out</i> | <i>Total</i> | <i>In</i> | <i>Out</i> | <i>Total</i> |
| Auto (veh/hr) | Existing Students | 172 | 172 | 344 | 96 | 100 | 196 | 64 | 61 | 125 |
| | Existing Staff | 50 | 0 | 50 | 0 | 0 | 0 | 0 | 23 | 23 |
| | Proposed Students | 180 | 180 | 360 | 100 | 105 | 205 | 67 | 64 | 131 |
| | Proposed Staff | 62 | 0 | 62 | 0 | 0 | 0 | 0 | 28 | 28 |
| | Net Total | 20 | 8 | 28 | 5 | 4 | 9 | 3 | 8 | 11 |
| Transit (ppl/hr) | Existing Students | 358 | 0 | 358 | 0 | 210 | 210 | 0 | 133 | 133 |
| | Existing Staff | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 7 | 7 |
| | Proposed Students | 442 | 0 | 442 | 0 | 259 | 259 | 0 | 164 | 164 |
| | Proposed Staff | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 9 | 9 |
| | Total | 85 | 0 | 85 | 0 | 49 | 49 | 0 | 33 | 33 |
| Bike (ppl/hr) | Existing Students | 13 | 0 | 13 | 0 | 6 | 6 | 0 | 4 | 4 |
| | Existing Staff | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Proposed Students | 13 | 0 | 13 | 0 | 8 | 8 | 0 | 5 | 5 |
| | Proposed Staff | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Total | 1 | 0 | 1 | 0 | 2 | 2 | 0 | 1 | 1 |
| Walk (ppl/hr) | Existing Students | 210 | 0 | 210 | 0 | 119 | 119 | 0 | 75 | 75 |
| | Existing Staff | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Proposed Students | 240 | 0 | 240 | 0 | 141 | 141 | 0 | 89 | 89 |
| | Proposed Staff | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Total | 30 | 0 | 30 | 0 | 22 | 22 | 0 | 14 | 14 |

TRAFFIC OPERATIONS

This section provides a summary of an analysis of the existing and future roadway capacity surrounding the school. Included is an analysis of potential vehicular impacts that may impact the school in future years.

The purpose of the capacity analysis is to:

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

This analysis was accomplished by determining the traffic volumes and roadway capacity for the 2019 existing conditions, the 2025 future conditions without the school expansion, and the 2025 future conditions with the school expansion.

The capacity analysis focuses on the weekday morning peak hour, afternoon school peak hour and afternoon commuter peak hour as determined by the existing traffic volumes in the study area and the school's hours of operation.

This chapter concludes that:

- Under existing and future conditions, the majority of intersections in the study are operate under acceptable conditions.
- In the Future (2025) with Development conditions, the eastbound delay at the intersection of Martin Luther King Jr Avenue and Milwaukee Place increases from a LOS D or E to an LOS F in all three scenarios.
- A signal is warranted at the intersection of Martin Luther King Jr Avenue and Milwaukee Place as a result of school-related traffic; however, the signal is only warranted during the AM Peak Hour when there is a short, but significant increase in traffic. Traffic Control Officer reinforcement may mitigate capacity issues at this intersection.
- The school will not have detrimental impact to the surrounding network.

STUDY AREA, SCOPE, & METHODOLOGY

This section outlines the vehicular trips generated in the study area along the vehicular access routes and defines the analysis assumptions.

The scope of the analysis contained within this report followed parameters typically agreed upon with DDOT. The general methodology of the analysis follows national and DDOT guidelines on the preparation of transportation impact evaluations of the school expansion.

Capacity Analysis Scenarios

The vehicular capacity analyses are performed to determine whether the school expansion will lead to adverse impacts on traffic operations. (A review of impacts to each of the other modes is outlined later in this report.) This is accomplished by comparing future scenarios: (1) without the proposed school expansion (referred to as the Background condition) and (2) with the school expansion approved and constructed (referred to as the Future condition).

Specifically, the roadway capacity analysis examined the following scenario:

1. 2019 Existing Conditions (Existing Conditions);
2. 2025 Background Conditions without the school expansion (2025 Background)
3. 2025 Future Conditions with the school expansion (2025 Total Future)

Study Area

The study area of the analysis is a set of intersections where detailed capacity analyses were performed for the scenarios listed above. The set of intersections decided upon are those intersections most likely to have potential impacts or require changes to traffic operations to accommodate the school expansion. Although it is possible that impacts will occur outside of the study area, those impacts are not significant enough to be considered a detrimental impact nor worthy of mitigation measures.

Based on the existing school enrollment and the location of the school access points, the following intersections were chosen for analysis:

1. Martin Luther King Jr Avenue & Milwaukee Place
2. Martin Luther King Jr Avenue & Site Driveway
3. Martin Luther King Jr Avenue & Car Wash Driveway



4. Martin Luther King Jr Avenue & Public Alley
5. Milwaukee Place & Site Entrance
6. Public Alley & Site Entrance

Figure 9 shows a map of the study area intersections.

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 Assumptions

The geometry and operations assumed in the Existing Conditions scenario are those present when the main data collection occurred. Gorove/Slade made observations and confirmed the existing lane configurations and traffic controls at the intersections within the study area. Existing signal timings and offsets were obtained from DDOT and confirmed during field reconnaissance.

Flashing pedestrian crossing signs are present along Martin Luther King Jr Avenue at the intersection of Milwaukee Place. The signs are activated by pedestrian push buttons and will flash in order to alert drivers to stop and allow pedestrians to cross the crosswalk. Due to the limitations of Synchro, the flashing pedestrian crossing system was not incorporated into the analysis.

The lane configurations and traffic controls for the Existing Conditions are shown on Figure 10.

Background Geometry and Operations Assumptions

Following national and DDOT methodologies, a background improvement must meet the following criteria to be incorporated into the analysis:

- Be funded; and
- Have a construction date prior or close to the proposed development.

Based on these criteria, there are no improvements planned on the study area roadways; the lane configurations and traffic controls present under existing conditions will remain for the 2025 Background Conditions.

Total Future Geometry and Operations Assumptions

The lane configurations and traffic controls for the 2025 Total Future Conditions are based on those for the 2025 Background

Conditions and any additional Site-related operational changes. As part of the proposed plans, the site driveway along Martin Luther King Jr Avenue will be eliminated making the intersection of Martin Luther King Jr Avenue and Saint Elizabeth Driveway a three-way intersection.

The Future Lane configurations are presented in Figure 11.

Traffic Volume Assumptions

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

Existing Traffic Volumes

The existing traffic volumes are comprised of turning movement count data, which was collected on Tuesday, May 14, 2019, between the hours of 6:30 and 9:30 AM and 2:30 and 7:00 PM. For all intersections, the system morning and commuter afternoon peak hours were used. The school afternoon peak hour was determined based off the school dismissal time. The existing peak hour traffic volumes are shown on Figure 12. The morning peak hour was from 7:30 to 8:30 AM, the afternoon school peak hour was from 3:00 to 4:00 PM and the afternoon commuter peak hour was from 4:45 to 5:45 PM. Schools and government were in session when the turning movement count data was collected.

2025 Background Traffic Volumes (without the school expansion)

The traffic projections for the 2025 Background Conditions consist of the existing volumes with two additions:

- Traffic generated by developments within the vicinity of the school and expected to be completed prior, or close to 2025 (known as background developments); and
- Inherent growth on the roadway (representing regional traffic growth).

Following national and DDOT methodologies, a background development must meet the following criteria to be incorporated into the analysis:

- Be located in the study area, defined as having an origin or destination point within the cluster of study area intersections;
- Have entitlements; and
- Have a construction completion date prior or close to the proposed school expansion.



Based on these criteria, and as discussed with and agreed to with DDOT, the Saint Elizabeth’s East Campus development was included in the 2025 background Scenario. Trip generation was calculated based on the ITE Trip Generation Manual, 10th Edition while mode splits and trip distribution were discussed with and agreed to with DDOT. The Trip Generation for Saint Elizabeth’s East Campus is shown in Table 3.

While the background developments represent local traffic changes, regional traffic growth is typically accounted for using growth rates. MWCOG regional model and historic AADT data were used to develop an average annual growth rate for the study area roadways. The applied growth rates are shown on Table 4.

The traffic volumes generated by the background development and the inherent growth along the network were added to the existing traffic volumes in order to establish the 2025 Background traffic volumes. The traffic volumes for the 2025 Background conditions are shown on Figure 13.

2025 Total Future Traffic Volumes (with the school expansion)

The 2025 Total Future traffic volumes consist of the 2025 Background volumes with the addition of the traffic volumes generated by the school expansion (school expansion-generated trips). Thus, the 2025 Total Future traffic volumes include traffic generated by: the existing volumes, background developments, the inherent growth on the study area roadways, and the school expansion.

Trip distribution for the school expansion-generated trips was determined based on the locations of pick-up drop off activity, the staff parking lot access points, and the school’s enrollment boundaries.

Under existing conditions, existing pick-up/drop-off vehicles enter the site via Milwaukee Place and exit via the Public alley. Under proposed conditions, the pick-up/drop-off vehicles will enter the site via the Public Alley and exit via Milwaukee Place as previously shown on Figure 6. In order to account for the new pick-up/drop-off operations all existing site trips were redistributed to enter the site via the Public Alley in addition to the net new trips.

Based on this review and the school access locations, the school expansion-generated trips were distributed through the study area intersections. A summary of trip distribution assumptions is provided on Figure 14.

The traffic volumes for the 2025 Total Future conditions were calculated by adding the school expansion-generated traffic volumes to the 2025 Background traffic volumes. Thus, the future condition with the school expansion scenario includes traffic generated by: existing volumes, background developments through the year 2025, inherent growth on the network, and the school expansion. The school expansion-generated traffic volumes are shown on Figure 16 and the 2025 Total Future traffic volumes are shown on Figure 17.

Peak Hour Factors

The *Highway Capacity Manual (HCM)* and the *AASHTO Policy on Geometric Design of Highways and Intersections* recommend evaluating traffic conditions during the worst 15 minutes of either a design hour or a typical weekday rush hour. Peak Hour Factor (PHF) is used to convert the hourly volume into the volume rate representing the busiest 15 minutes of the hour. The existing guidelines provide typical values of PHF and advise using the PHF calculated from vehicle counts at analyzed or similar locations. The HCM recommends a PHF of 0.88 for

Table 3: Summary of Background Trip Generation

| Development | Saint Elizabeth’s Ultimate Trip Generation | | | | | | | | |
|-------------------------------|--|----------|-----------|---------------------|-----------|-----------|-----------------------|-----------|-----------|
| | AM Peak Hour | | | PM School Peak Hour | | | PM Commuter Peak Hour | | |
| | IB | OB | Total | IB | OB | Total | IB | OB | Total |
| Saint Elizabeth’s East Campus | 936 v/hr | 442 v/hr | 1378 v/hr | 692 v/hr | 1057 v/hr | 1749 v/hr | 692 v/hr | 1057 v/hr | 1749v /hr |

Table 4: Applied Annual and Total Growth Rates

| Road and Direction of Travel | Proposed Annual Growth Rate | | Total Growth Rate | |
|------------------------------|-----------------------------|--------------|-------------------|--------------|
| | AM Peak Hour | PM Peak Hour | AM Peak Hour | PM Peak Hour |
| MLK Jr Avenue – Northbound | 0.50% | 0.25% | 3.0% | 1.5% |
| MLK Jr Avenue – Southbound | 0.53% | 0.25% | 3.2% | 1.5% |



rural areas and 0.92 for urban areas and presumes that capacity constraints in congested areas reduce the short-term traffic fluctuation. The HCM postulates 0.95 as the typical PHF for congested roadways.

For the Existing Conditions analysis, PHF were calculated from the turning movement data that was collected in the field, using a minimum PHF of 0.85.

To account for the increase in peak hour traffic generated by regional growth along major corridors, a default PHF minimum of 0.92 was assumed in the Background Conditions and Total Future Conditions analyses.

VEHICULAR ANALYSIS RESULTS

Intersection Capacity Analysis

Intersection capacity analyses were performed for the scenario outlined previously at the intersections contained within the study area during the morning and afternoon peak hours. Synchro version 9.1 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 District; 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 and all-way stop-controlled 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. Detailed LOS descriptions and the analysis worksheets are contained in the Technical Attachments.

Table 5 shows the results of the capacity analyses, including LOS and average delay per vehicle (in seconds) for the study scenarios during the morning peak hour, the afternoon school peak hour, and the afternoon commuter peak hour, respectively.

The capacity analysis results indicate that all movements operate at acceptable LOS under the Future (2025) with Development Conditions, with the exception of the following:

- Martin Luther King Jr Avenue and Milwaukee Place
 - Eastbound approach: AM, PM School, PM Commuter
- Martin Luther King Jr Avenue & Car Wash
 - Eastbound approach: PM School

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 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 percent 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 6 shows the queuing results for the study area intersections. None of the study intersections have lane groups that exceed the given storage length during the Future (2025) with Development Conditions.

The addition of school expansion trips has minimal effects on the queue lengths at the study intersections.

RECOMMENDATIONS AND IMPROVEMENTS

Based on DDOT standards, a project is considered to have an impact at an intersection within the study area if any of the following conditions are met:

- The capacity analyses show a LOS E or F at an intersection or along an approach where one does not exist in the Existing Conditions or Background (Future without the school expansion) Conditions;



- There is an increase in delay at any approach or overall intersection operating under LOS E or F of greater than 5 percent when compared to the Background Conditions; or
- There is an increase in the 95th percentile queues by more than 150 feet at an intersection or along an approach in the Total Future (Future with the school expansion) Conditions with the proposed school expansion where one does not exist in the Background Conditions.

Following these guidelines, one (1) intersection meets the requirements for mitigations.

- *Martin Luther King Jr Avenue and Milwaukee Place*
During all three peak hours the eastbound LOS increases from an LOS D or E to an LOS F. A signal warrant was conducted to determine whether the future volumes warrant a signal. The results of the warrant indicate that a signal is warranted in the Total Future Conditions during the AM conditions. By signaling this intersection, the eastbound LOS improves from an LOS F to an LOS D with some potential queuing issues along Martin Luther King Jr Avenue. However, the signal is only warranted during the AM Peak Hour when there is a short, but significant increase in traffic. Traffic Control Officer reinforcement may mitigate capacity issues at this intersection.

Table 5 and Table 6 show the LOS and queueing results with the addition of a traffic signal to the Martin Luther King Jr Avenue and Milwaukee Place intersection.

Additionally, with the proposed circulation plan, conditions for the eastbound movement at the intersection of Martin Luther King Jr Avenue and the Public Alley improve from an LOS E to an LOS A in the AM.

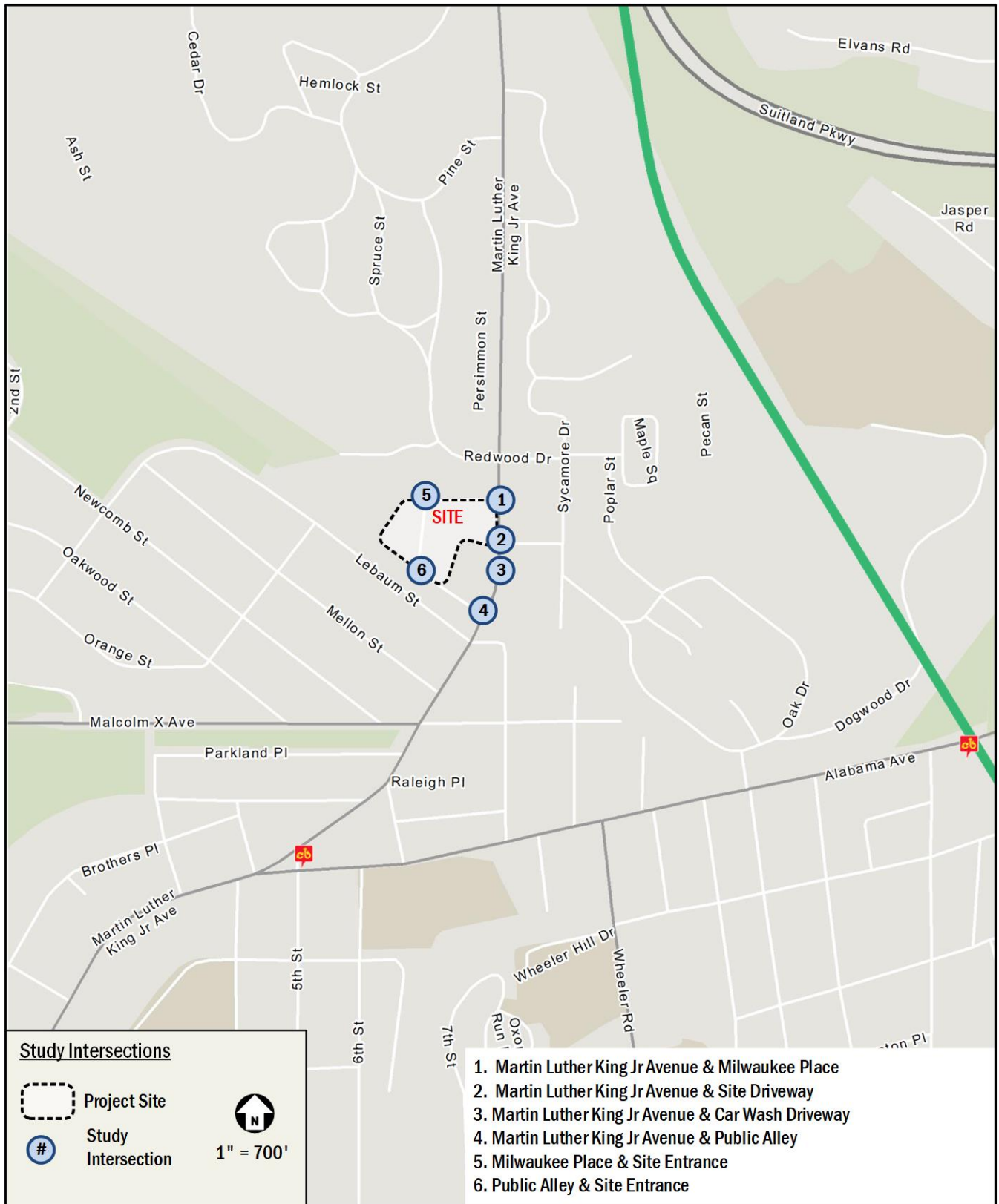


Figure 9: Study Intersections

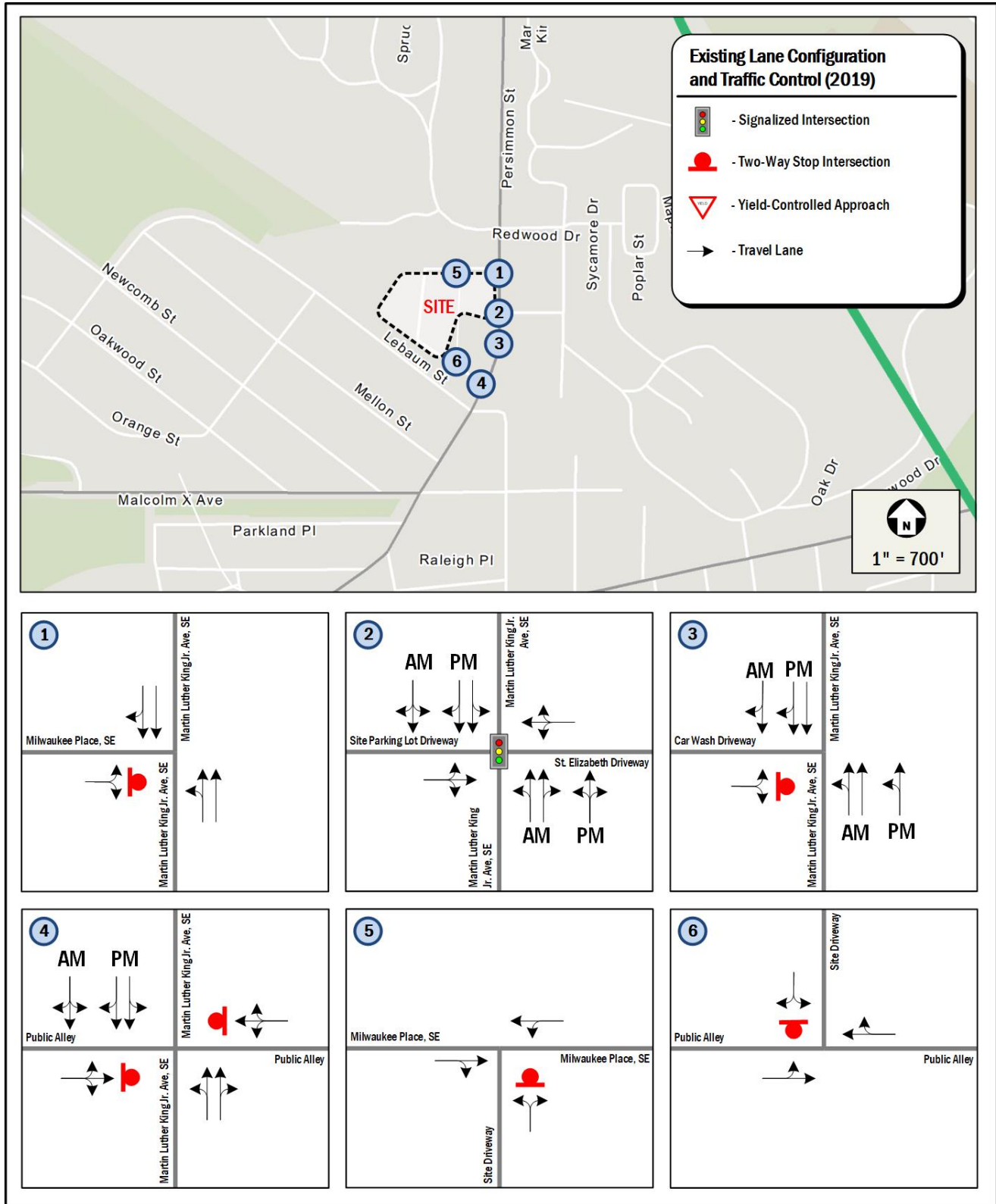


Figure 10: Existing Lane Configuration and Traffic Control

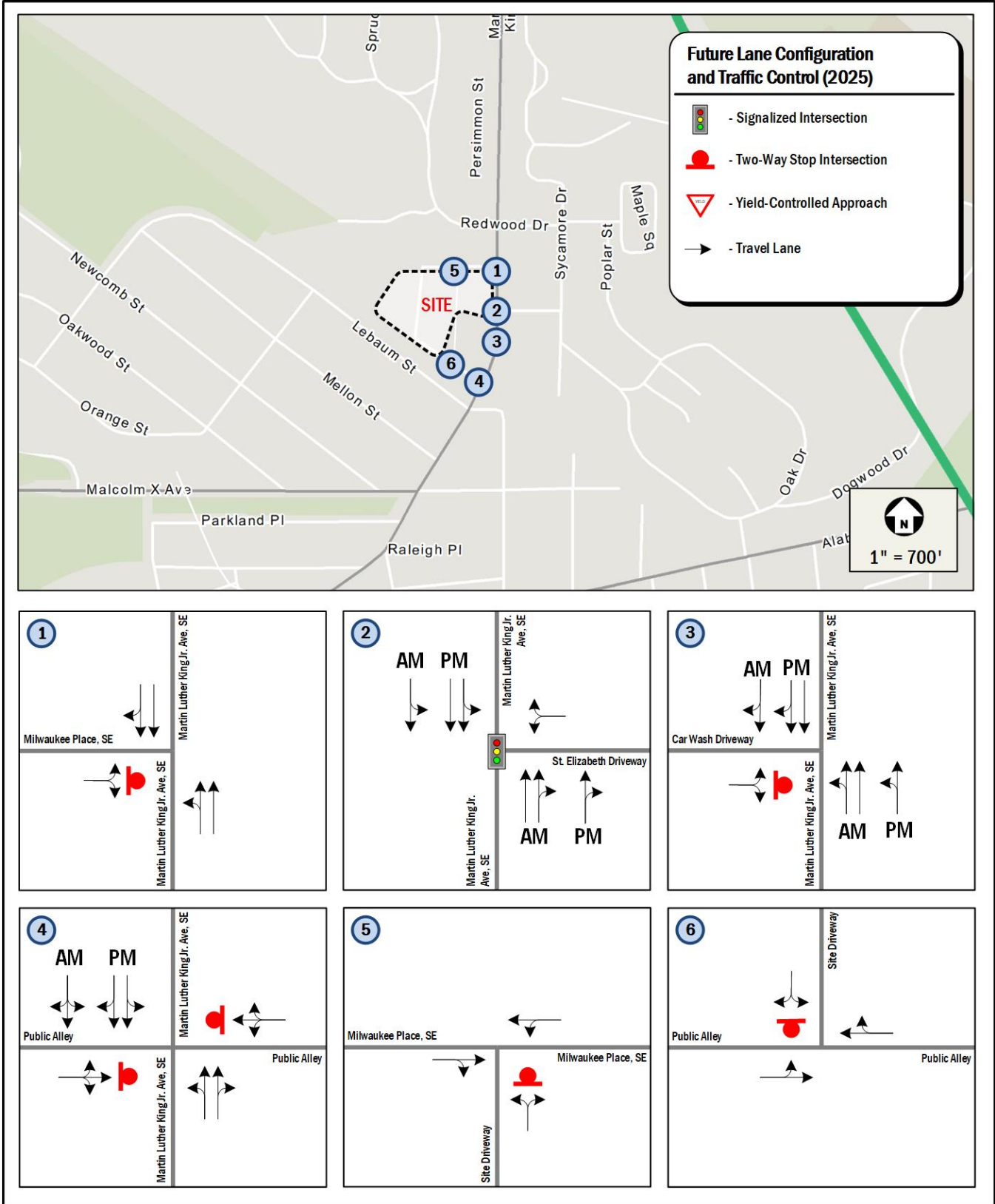


Figure 11: Total Future Lane Configuration

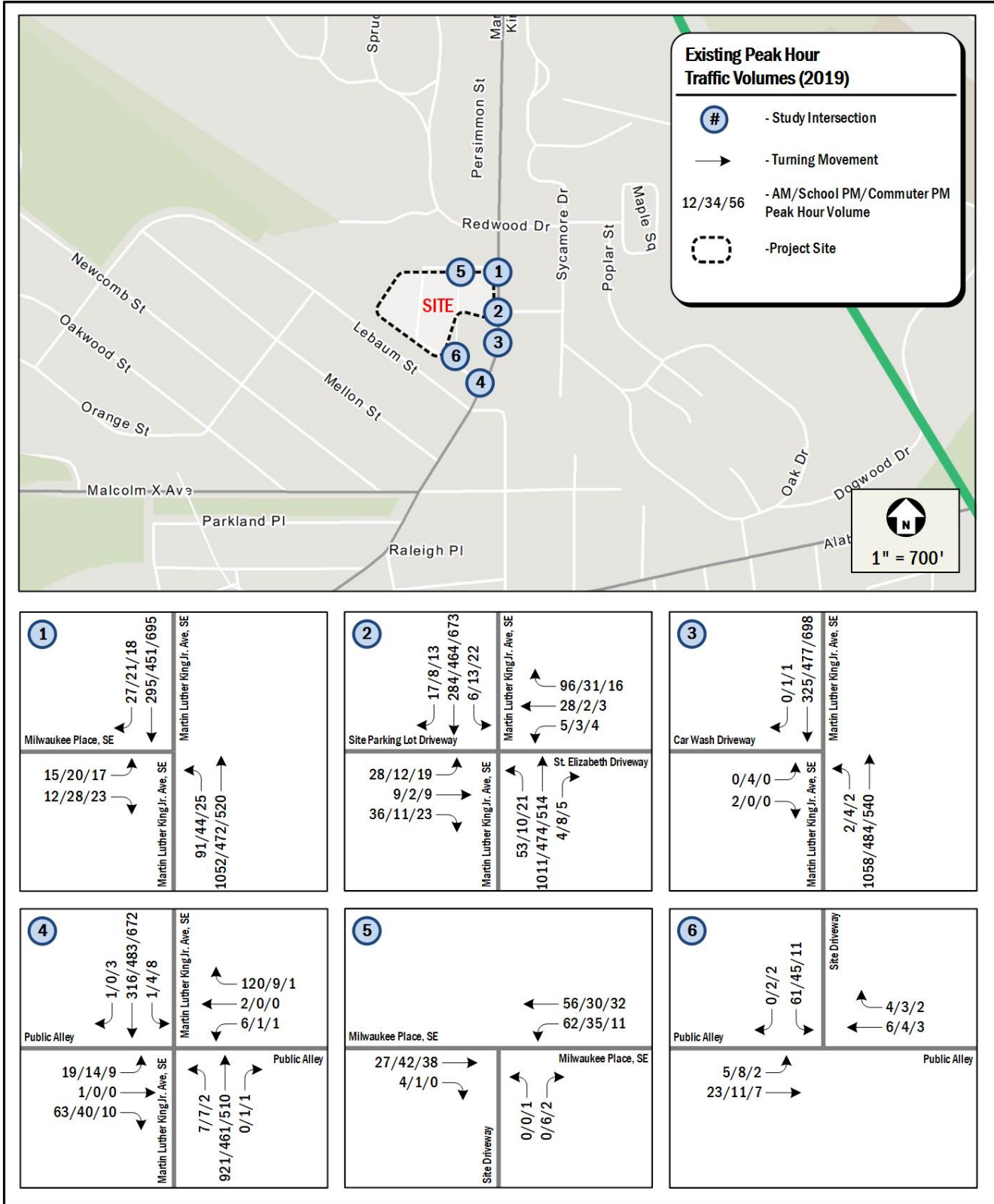


Figure 12: Existing (2019) Peak Hour Traffic Volumes

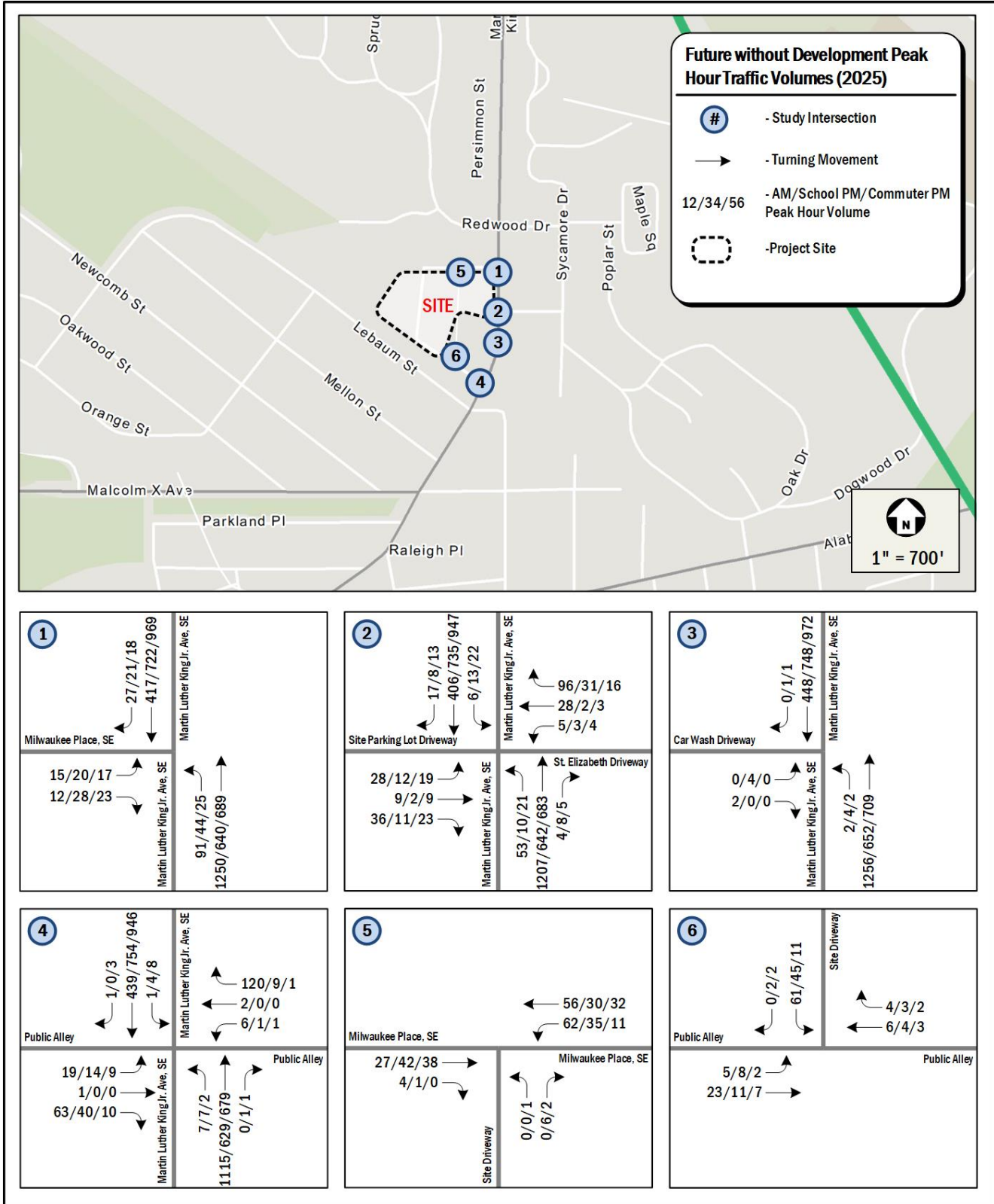


Figure 13: Future (2025) without School Expansion Peak Hour Traffic Volumes

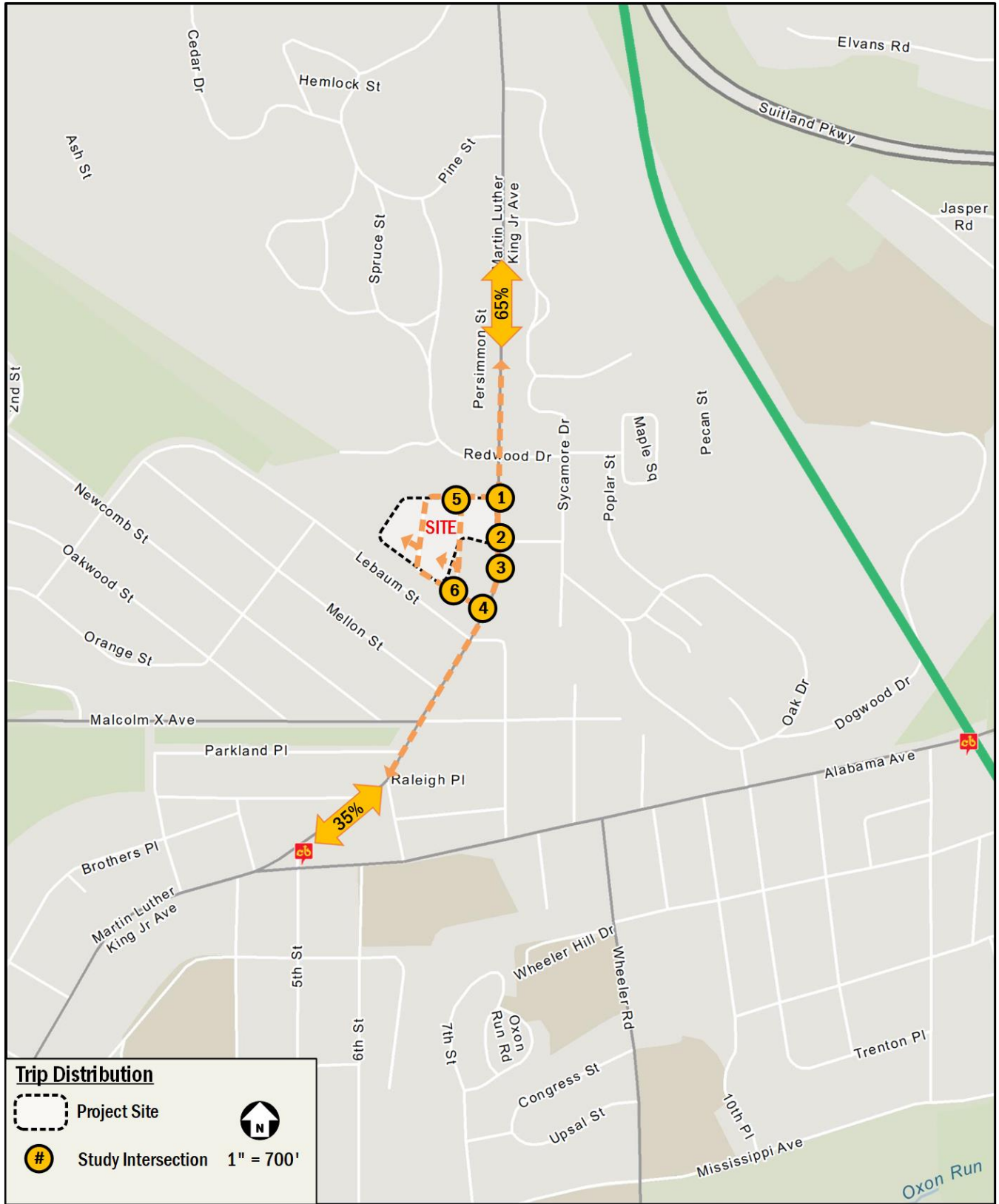


Figure 14: Trip Distribution

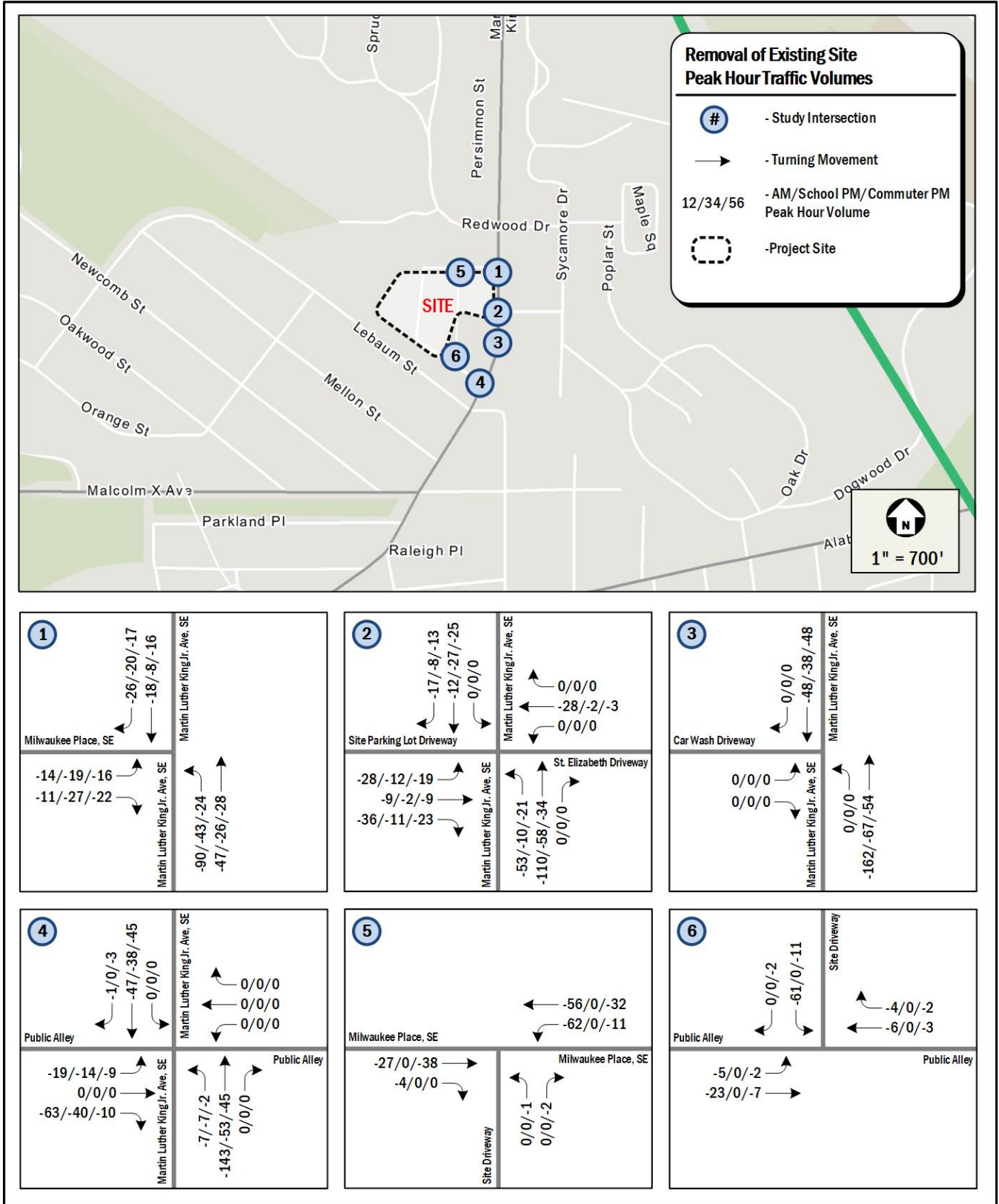


Figure 15: Existing Site Trip Removal

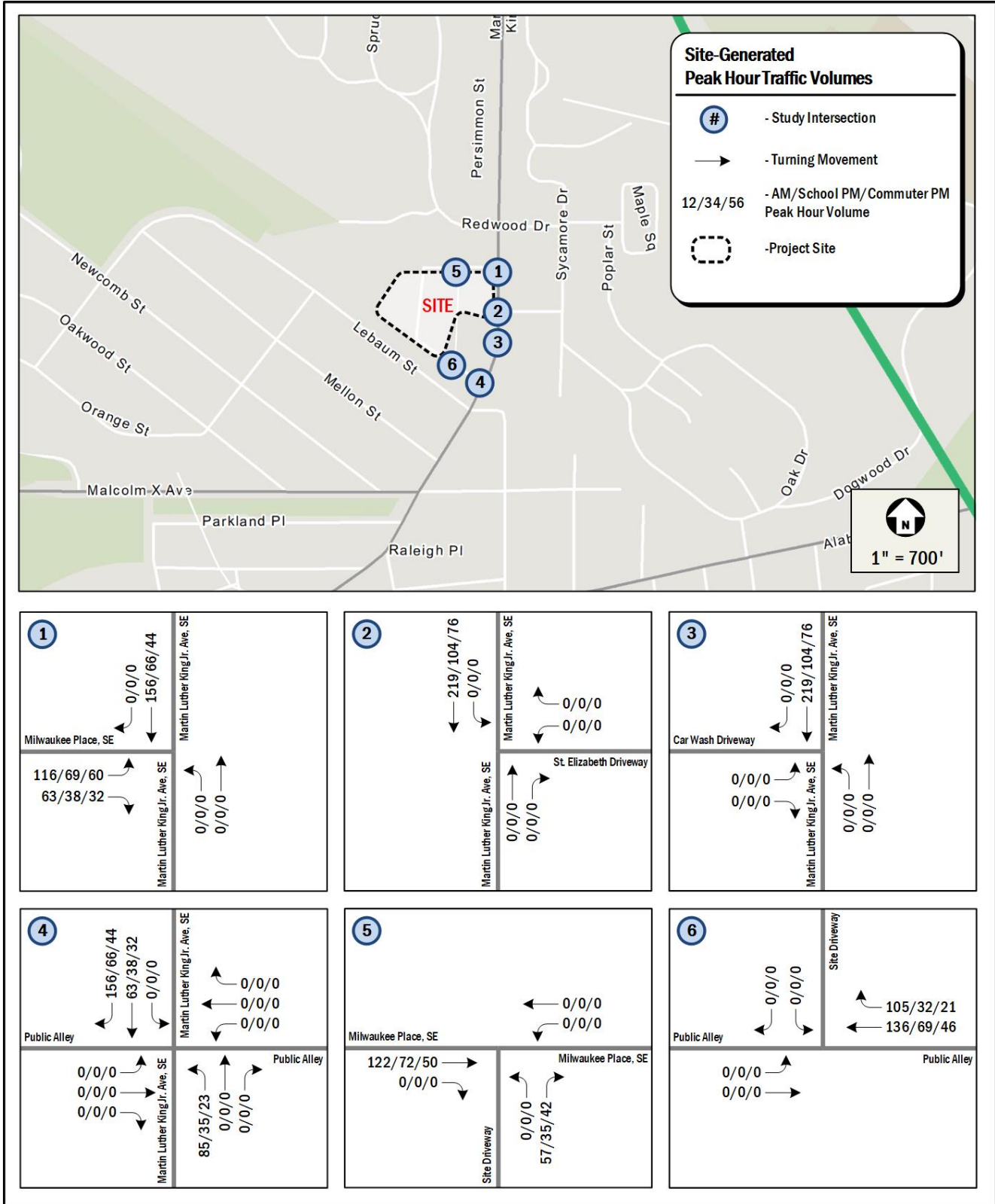


Figure 16: School Expansion-Generated Peak Hour Traffic Volumes

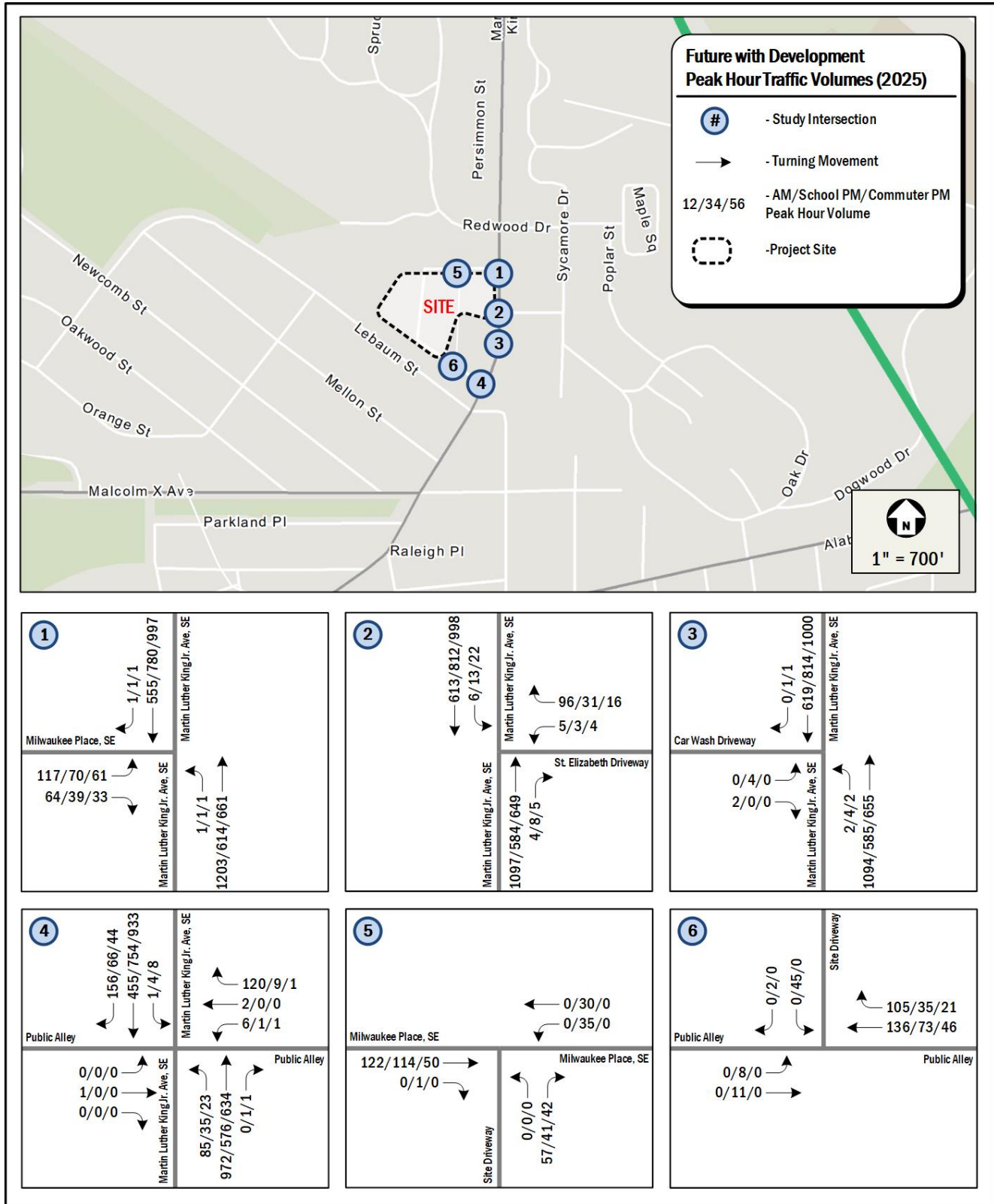


Figure 17: Future (2025) With School Expansion Peak Hour Traffic Volumes

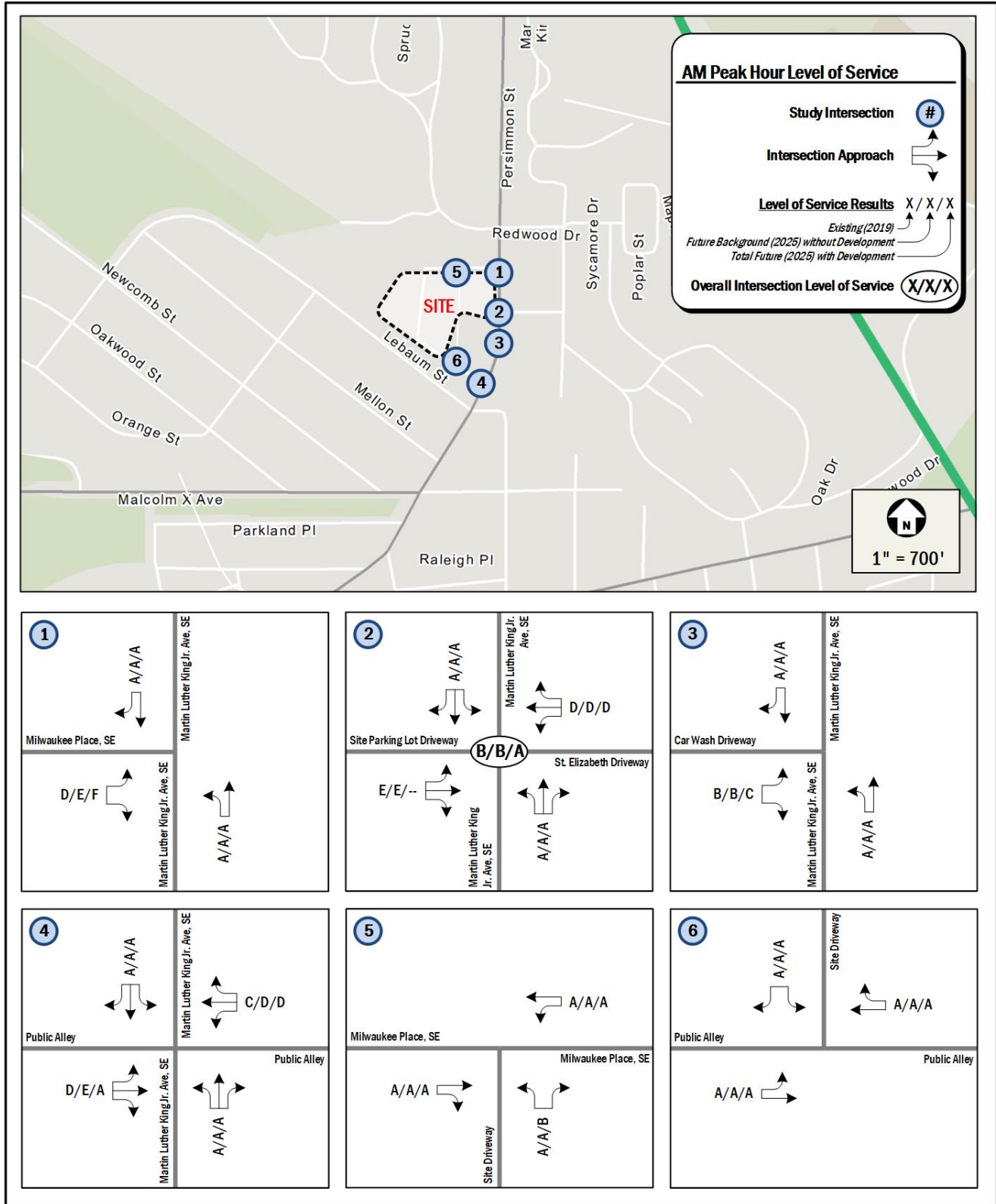


Figure 18: AM Peak Hour Level of Service

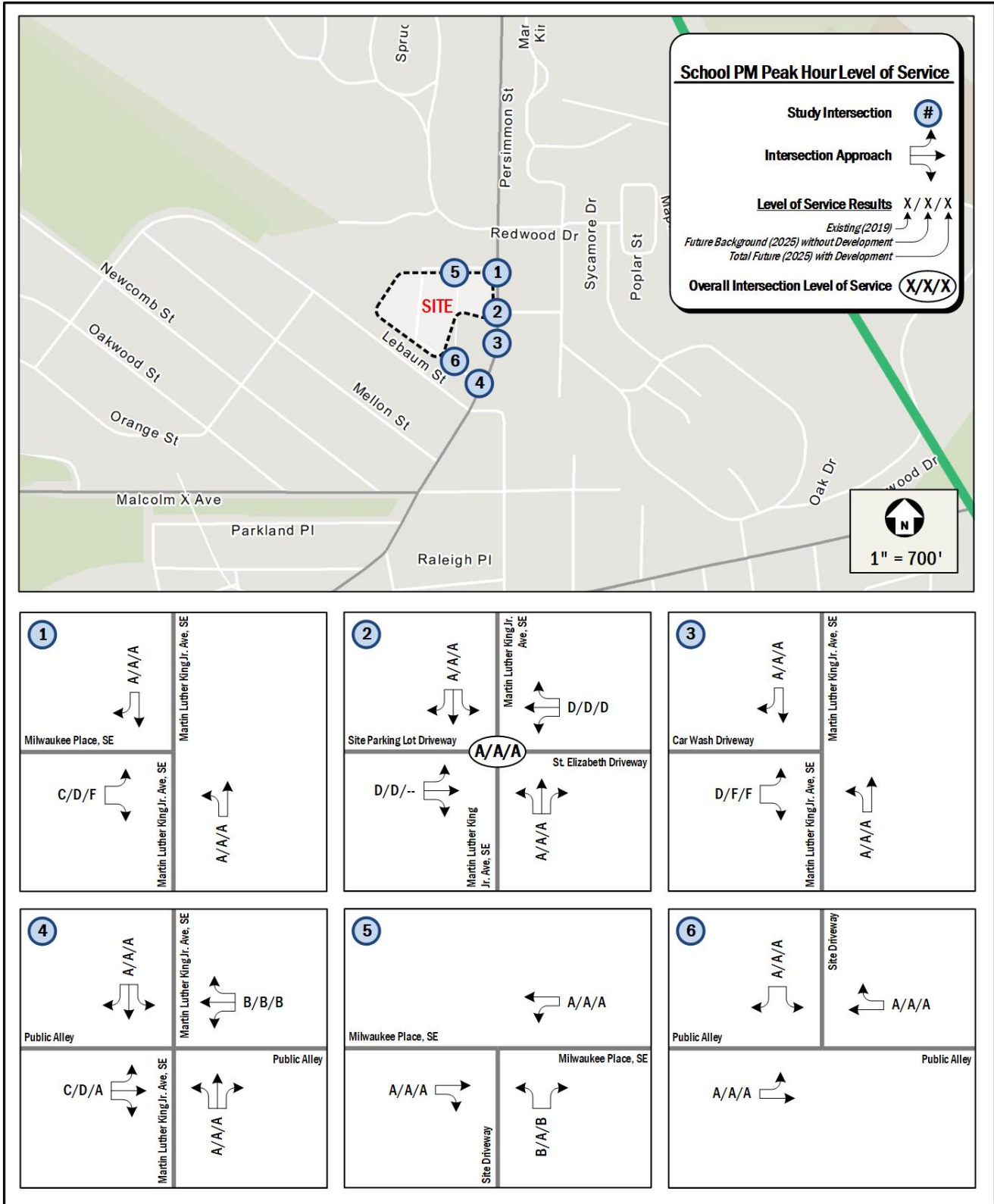


Figure 19: PM School Peak Hour Level of Service

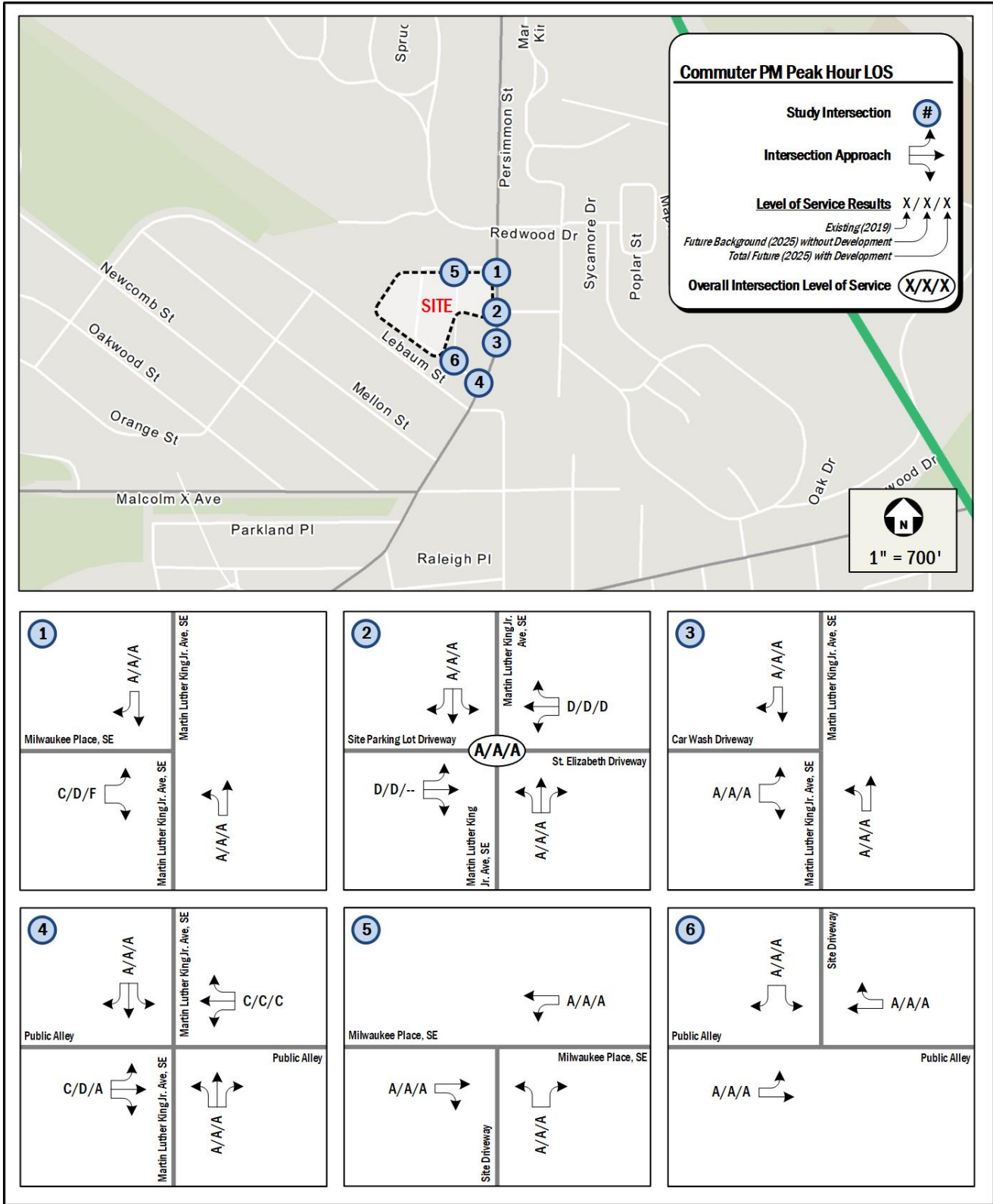


Figure 20: PM Commuter Peak Hour Level of Service



Table 5: LOS Results

| Intersection | Approach | Existing (2019) Conditions | | | | | | Future without Development (2025) Conditions | | | | | | Future with Development (2025) Conditions | | | | | |
|---|----------------|----------------------------|-----|---------------------|-----|-----------------------|-----|--|-----|---------------------|-----|-----------------------|-----|---|-----|---------------------|-----|-----------------------|-----|
| | | AM Peak Hour | | School PM Peak Hour | | Commuter PM Peak Hour | | AM Peak Hour | | School PM Peak Hour | | Commuter PM Peak Hour | | AM Peak Hour | | School PM Peak Hour | | Commuter PM Peak Hour | |
| | | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS |
| 1. Martin Luther King, Jr Ave & Milwaukee Place, SE | Overall | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Eastbound | 30.8 | D | 19.6 | C | 19.5 | C | 40.1 | E | 32.0 | D | 30.3 | D | 286.0 | F | 73.6 | F | 65.8 | F |
| | Northbound | 1.2 | A | 1.0 | A | 0.6 | A | 1.2 | A | 1.0 | A | 0.6 | A | 0.0 | A | 0.0 | A | 0.0 | A |
| | Southbound | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1. Martin Luther King, Jr Ave & Milwaukee Place, SE: (signalized) | Overall | - | - | - | - | - | - | - | - | - | - | - | - | 11.0 | B | 6.3 | A | 5.6 | A |
| | Eastbound | - | - | - | - | - | - | - | - | - | - | - | - | 52.5 | D | 51.7 | D | 51.8 | D |
| | Northbound | - | - | - | - | - | - | - | - | - | - | - | - | 7.2 | A | 1.7 | A | 1.4 | A |
| | Southbound | - | - | - | - | - | - | - | - | - | - | - | - | 5.5 | A | 3.7 | A | 4.0 | A |
| 2. Martin Luther King, Jr Ave & Parking Lot/St. Elizabeth's Driveway, SE | Overall | 11.0 | B | 5.5 | A | 5.8 | A | 10.2 | B | 5.6 | A | 6.3 | A | 6.3 | A | 3.9 | A | 3.7 | A |
| | Eastbound | 64.8 | E | 52.0 | D | 52.9 | D | 59.9 | E | 52.0 | D | 52.9 | D | - | - | - | - | - | - |
| | Westbound | 50.7 | D | 51.4 | D | 50.8 | D | 50.4 | D | 51.4 | D | 50.8 | D | 50.3 | D | 52.8 | D | 52.7 | D |
| | Northbound | 4.7 | A | 3.4 | A | 4.0 | A | 5.5 | A | 5.1 | A | 6.3 | A | 3.4 | A | 3.6 | A | 4.1 | A |
| | Southbound | 3.1 | A | 1.8 | A | 2.3 | A | 3.6 | A | 2.3 | A | 2.9 | A | 4.5 | A | 2.0 | A | 2.4 | A |
| 3. Martin Luther King, Jr Ave & Car Wash | Eastbound | 11.7 | B | 30.3 | D | 0.0 | A | 12.8 | B | 50.5 | F | 0.0 | A | 15.3 | C | 50.3 | F | 0.0 | A |
| | Northbound | 0.0 | A | 0.2 | A | 0.1 | A | 0.0 | A | 0.2 | A | 0.1 | A | 0.0 | A | 0.2 | A | 0.1 | A |
| 4. Martin Luther King, Jr Ave & Public Alley, SE | Eastbound | 31.8 | D | 19.0 | C | 22.1 | C | 47.8 | E | 28.8 | D | 33.5 | D | 0.0 | A | 0.0 | A | 0.0 | A |
| | Westbound | 23.1 | C | 11.1 | B | 16.4 | C | 33.2 | D | 12.9 | B | 21.7 | C | 34.8 | D | 12.3 | B | 21.3 | C |
| | Northbound | 0.1 | A | 0.2 | A | 0.1 | A | 0.1 | A | 0.2 | A | 0.1 | A | 3.2 | A | 1.1 | A | 0.7 | A |
| | Southbound | 0.1 | A | 0.1 | A | 0.1 | A | 0.1 | A | 0.1 | A | 0.1 | A | 0.0 | A | 0.1 | A | 0.1 | A |
| 5. Milwaukee Place & School Driveway, SE | Westbound | 4.3 | A | 4.6 | A | 2.0 | A | 4.3 | A | 4.5 | A | 2.0 | A | 0.0 | A | 4.6 | A | 0.0 | A |
| | Northbound | 0.0 | A | 10.0 | B | 9.3 | A | 0.0 | A | 10.0 | A | 9.3 | A | 10.4 | B | 10.9 | B | 9.4 | A |
| 6. Public Alley & School Driveway, SE | Eastbound | 1.3 | A | 3.0 | A | 1.5 | A | 1.2 | A | 3.1 | A | 1.5 | A | 0.0 | A | 3.2 | A | 0.0 | A |
| | Southbound | 9.1 | A | 9.0 | A | 8.6 | A | 9.1 | A | 9.0 | A | 8.6 | A | 0.0 | A | 9.5 | A | 0.0 | A |



Table 6: Queueing Results

| Intersection | Lane Group | Storage Length (ft) | Existing Conditions (2019) | | | | | | Future without Development Conditions (2025) | | | | | | Future with Development Conditions (2025) | | | | | |
|---|----------------|---------------------|----------------------------|--------|---------------------|--------|-----------------------|--------|--|--------|---------------------|--------|-----------------------|--------|---|--------|---------------------|--------|-----------------------|--------|
| | | | AM Peak Hour | | School PM Peak Hour | | Commuter PM Peak Hour | | AM Peak Hour | | School PM Peak Hour | | Commuter PM Peak Hour | | AM Peak Hour | | School PM Peak Hour | | Commuter PM Peak Hour | |
| | | | 50th % | 95th % | 50th % | 95th % | 50th % | 95th % | 50th % | 95th % | 50th % | 95th % | 50th % | 95th % | 50th % | 95th % | 50th % | 95th % | 50th % | 95th % |
| 1. Martin Luther King, Jr Ave & Milwaukee Place, SE | Eastbound LR | 100 | - | 16 | - | 15 | - | 13 | - | 40 | - | 27 | - | 22 | - | 253 | - | 70 | - | 94 |
| | Northbound LT | 100 | - | 10 | - | 4 | - | 3 | - | 1 | - | 6 | - | 3 | - | 0 | - | 0 | - | 0 |
| 1. Martin Luther King, Jr Ave & Milwaukee Place, SE (signalized) | Eastbound | 100 | - | - | - | - | - | - | - | - | - | - | - | - | 127 | 193 | 67 | 123 | 58 | 111 |
| | Northbound | 130 | - | - | - | - | - | - | - | - | - | - | - | - | 116 | 148 | 7 | 17 | 7 | 7 |
| | Southbound | 540 | - | - | - | - | - | - | - | - | - | - | - | - | 71 | 126 | 74 | 131 | 103 | 180 |
| 2. Martin Luther King, Jr Ave & Parking Lot/St. Elizabeth's Driveway, SE | Eastbound LTR | 95 | 37 | #91 | 11 | 57 | 61 | 57 | 34 | 87 | 11 | 38 | 22 | 61 | - | - | - | - | - | - |
| | Westbound LTR | 250 | 33 | 93 | 4 | 136 | 30 | 136 | 25 | 87 | 4 | 36 | 5 | 30 | 4 | 56 | 2 | 34 | 3 | 27 |
| | Northbound LTR | 400 | 127 | 206 | 68 | 38 | 212 | 38 | 156 | 280 | 115 | 322 | 146 | 391 | 83 | 190 | 91 | 249 | 107 | 294 |
| | Southbound LTR | 190 | 49 | 92 | 26 | 92 | 100 | 92 | 69 | 140 | 47 | 110 | 76 | 161 | 90 | 240 | 51 | 120 | 74 | 170 |
| 3. Martin Luther King, Jr Ave & Parking Lot | Eastbound LR | 25 | - | 0 | - | 3 | - | 0 | - | 0 | - | 4 | - | 0 | - | 0 | - | 4 | - | 0 |
| | Northbound LT | 225 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 |
| | Southbound TR | 50 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 |
| 4. Martin Luther King, Jr Ave & Public Alley, SE | Eastbound LTR | 150 | - | 49 | - | 16 | - | 7 | - | 67 | - | 25 | - | 11 | - | 2 | - | 0 | - | 0 |
| | Westbound LTR | 75 | - | 52 | - | 1 | - | 0 | - | 71 | - | 0 | - | 1 | - | 72 | - | 0 | - | 1 |
| | Northbound LTR | 90 | - | 1 | - | 1 | - | 0 | - | 1 | - | 1 | - | 0 | - | 10 | - | 5 | - | 3 |
| | Southbound LTR | 225 | - | 0 | - | 0 | - | 1 | - | 0 | - | 0 | - | 1 | - | 0 | - | 0 | - | 1 |
| 5. Milwaukee Place & School Driveway, SE | Eastbound TR | 225 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 |
| | Westbound LT | 100 | - | 4 | - | 3 | - | 1 | - | 4 | - | 3 | - | 1 | - | 0 | - | 3 | - | 0 |
| | Northbound LR | 425 | - | 0 | - | 1 | - | 0 | - | 0 | - | 1 | - | 0 | - | 7 | - | 5 | - | 4 |
| 6. Public Alley & School Driveway, SE | Eastbound LT | 700 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 |
| | Westbound TR | 150 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 |
| | Southbound LR | 425 | - | 6 | - | 5 | - | 1 | - | 6 | - | 4 | - | 1 | - | 0 | - | 5 | - | 0 |



TRANSIT

This section discusses the existing and proposed transit facilities in the vicinity of the school, accessibility to transit, and evaluates the overall transit impacts of the project.

The following conclusions are reached within this chapter:

- The school has adequate access to transit.
- The school is located 0.8 miles from the Congress Heights Metrorail Station.
- The school is surrounded by eight (8) metrobus routes that provide connectivity to the downtown core and other areas of the District, Maryland, and Virginia.

EXISTING TRANSIT SERVICE

The school is well served by Metrobus, which provides direct access to Metrorail. Combined, these transit services provide local, city wide, and regional transit connections and link the school with major cultural, residential, employment, and commercial destinations throughout the region. Figure 21 identifies the major transit routes, stations, and stops in the study area.

The school is located approximately 0.8 miles from the Congress Heights Metrorail Station. With the completion of the Saint Elizabeth's East Campus, the distance to the Congress Height Metrorail Station will decrease to 0.5 miles. The station is serviced by the Green, which provides direct connections to areas in the District and Montgomery County, Maryland. The Green Line connects the site to Greenbelt, MD to the north, extending through downtown Washington via Gallery Place-Chinatown and L'Enfant Plaza, before ending in Suitland, MD (Branch Avenue) to the south. Metrorail trains run frequently during the weekday morning and afternoon peak hours between 5:00 AM to 9:30 AM and 3:00 PM to 7:00 PM and approximately every 8 to 15 minutes during the weekday midday hours from 9:30 AM to 3:00 PM and every 8 to 20 minutes during the weekday off-peak periods and on weekends.

The site is also serviced by local Metrobus routes, providing connectivity to the downtown core and other areas of the District, Maryland, and Virginia. Table 7 shows a summary of the bus route information for the routes within a quarter-mile walkshed of the site, including service hours, headway, and distance to the nearest bus stop.

Figure 21 shows a detailed inventory of the existing Metrobus stops within a quarter-mile walkshed of the site. Each stop is evaluated based on the guidelines set forth by WMATA's *Guidelines for the Design and Placement of Transit Stops*. A detailed breakdown of individual bus stop amenities and conditions is included in the Technical Appendix.

PLANNED TRANSIT SERVICE

MoveDC

Due to growth of population, jobs, and retail in several neighborhoods in the District, and the potential for growth in other neighborhoods, the District's infrastructure is challenged with the need for transportation investments to support the recent growth and to further strengthen neighborhoods. In order to meet these challenges and capitalize on future opportunities, DDOT has developed a plan to identify transit challenges and opportunities and to recommend investments. *MoveDC* is a long-range plan that provides a vision for the future of DC's transportation system, specifically in a way that expands transportation choices while improving the reliability of all transportation modes.

The MoveDC report outlines recommendations by mode with the goal of having them complete by 2040. The plan hopes to achieve a transportation system for the District that includes:

- 70 miles of high-capacity transit (streetcar or bus)
- 200 miles of on-street bicycle facilities or trails
- Sidewalks on at least one side of every street
- New street connections
- Road management/pricing in key corridors and the Central Employment Area
- A new downtown Metrorail loop
- Expanded commuter rail
- Water taxi

Outlined in the MoveDC plan, the Anacostia Streetcar Line is proposed from M Street SE to Congress Heights. The proposed line will run along Martin Luther King Jr Avenue, adjacent to the school.

SCHOOL EXPANSION-GENERATED TRANSIT IMPACTS

The school is projected to generate 85 net transit trips (85 inbound, 0 outbound) during the morning peak, 49 net transit trips (0 inbound, 49 outbound) during the school afternoon peak and 33 net transit trips (0 inbound, 33 outbound) during the commuter afternoon peak.

WMATA studied capacity of Metrorail stations in its *Station Access & Capacity Study (2008)*. The study analyzed the capacity of Metrorail stations for their “vertical transportation” capacity, which relates to the capacity of a station’s elevators, stairs, and escalators to shuttle patrons between the street, mezzanine, and platforms. The study also analyzed a station’s capacity to process riders at fare card gates. For both analyses, volume-to-capacity ratios were calculated for existing data (from 2005) and projections for the year 2030. According to the study, the Congress Heights station can accommodate future growth at all access points.

WMATA also studied capacity along Metrobus routes. DC’s *Transit Future System Plan (2010)* lists the bus routes with the highest load factor (a ratio of passenger volume to bus capacity). A load factor is considered unacceptable if it is over 1.2 during peak periods, or over 1.0 during off-peak or weekend periods. According to this study all bus routes within the vicinity of the school have acceptable load factors.

Based on the survey data collected and the estimated trip generation, the proposed student and staff enrollment increase is projected to generate a manageable number of new transit trips. As such, the existing transit service is expected to accommodate the additional transit trips.



Table 7: Bus Route Information

| Route Number | Route Name | Service Hours | Headway | Walking Distance to Nearest Bus Stop |
|--------------|--|---|-----------|--------------------------------------|
| A2,6,7,8 | Anacostia-Congress Heights Line | Weekdays: 4:13 AM-3:43 AM Weekend: 6:05 AM-6:21 PM | 20-25 min | 0.1 mile, 2 min |
| A4 | Anacostia-Fort Drum | Weekdays: 5:17 AM-1:23 AM Weekend: 5:45 AM-3:02 AM | 10-15 min | 0.1 mile, 2 min |
| A9 | Martin Luther King Jr limited line | Northbound: 6:05 AM-9:03 AM Weekend: 4:14 PM-7:28 PM | 10-20 min | 0.1 mile, 2 min |
| W2,W3 | United Medical Center- Anacostia Line | Weekdays: 5:52 AM- 12:35 AM Weekend: 6:00 AM-7:50 PM | 20-30 min | 0.1 mile, 2 min |

Table 8: Transit Stop Requirements

| Feature | Basic Stop | Enhanced Service Bus Stop | Transit Center |
|--|-----------------------|---------------------------|----------------|
| Bus Stop Sign | Yes | Yes | Yes |
| ADA 5'x8' Landing Pad - at a minimum, a clear, unobstructed, paved boarding area that is 8 feet deep (perpendicular to the curb) by 5 feet wide (parallel to the curb) and compliant with the ADA Accessibility Guidelines (ADAAG) | Yes | Yes | Yes |
| Sidewalk - connected by a paved sidewalk that is at least 4 feet wide | Yes | Yes | Yes |
| Lighting - adequate lighting either from street lights, lights from an adjacent business, or shelter lighting (particularly stops that are served in the evenings) | Evening Service | Yes | Yes |
| Seating | Trip Generator Based | Yes | Yes |
| Information Case - detailed schedule information on services | Yes | Yes | Yes |
| Trash Receptacle - trash receptacle (particularly at locations that are close to fast food establishments and convenient stores) | Site Specific | Yes | Yes |
| Shelter(s) - shelter with interior seating if there are 50 or more boardings per day (including transfers) | 1 (50+ boardings/day) | 1 | 2+ |
| System Map | Contingent on Shelter | Yes | Yes |
| Real-time Display (LED + Audio) | Optional | Yes | Yes |
| Interactive Phone System On-Site - real time bus arrival information through an interactive phone and push button audio system | No | No | Yes |
| Expanded Boarding & Alighting Area (Rear-door Access) | No | Site Specific | Yes |
| Bus Bay (Pull Off) | No | Site Specific | Yes |



Figure 21: Existing Transit Facilities



PEDESTRIAN FACILITIES

This section summarizes the existing and future pedestrian access to the school and reviews walking routes to and from the school.

The following conclusions are reached within this chapter:

- The existing pedestrian infrastructure surrounding the school provides a good walking environment. There are sidewalks along the majority of primary routes from the school to pedestrian destinations.
- The site will improve the overall pedestrian environment by eliminating two (2) curb cuts along Martin Luther King Jr Avenue, removing vehicular-pedestrian conflict.
- An elevated pedestrian walkway will be added between the existing and proposed building.

PEDESTRIAN STUDY AREA

Facilities within a quarter-mile of the school were evaluated as well as routes to nearby transit facilities and prominent retail and neighborhood destinations. The school is accessible to transit options such as the bus stops located along Martin Luther King Jr Avenue and Mellon Street. Figure 22 shows suggested pedestrian pathways, walking time and distances, and barriers and areas of concern.

PEDESTRIAN INFRASTRUCTURE

This section outlines the existing and proposed pedestrian infrastructure within the pedestrian study area.

Existing Conditions

A review of pedestrian facilities surrounding the school shows that most facilities meet DDOT standards, resulting in a well-connected pedestrian network and a good walking environment.

Figure 23 shows a detailed inventory of the existing pedestrian infrastructure surrounding the school. Sidewalks, crosswalks, and curb ramps are evaluated based on the guidelines set forth

by DDOT's *Design Engineering Manual (2018)* in addition to ADA standards. Sidewalk widths and requirements for the District are shown below in Table 9.

The site is surrounded by a well connected pedestrian network. The pedestrian facilities around the site provide a quality walking environment with very few streets lacking sidewalk.

ADA standards require that curb ramps be provided wherever an accessible route crosses a curb and must have a detectable warning. Additionally, curb ramps shared between two crosswalks are not desired. As shown in Figure 23, under existing conditions most curb ramps with detectable warnings are present within the vicinity of the school.

SCHOOL EXPANSION GENERATED PEDESTRIAN IMPACTS

This section summarizes the impacts of the proposed student enrollment and faculty/staff increase on the overall pedestrian operations in the vicinity of the school.

Pedestrian Trip Generation

The school is expected to generate 30 net new walking trips (30 inbound, 0 outbound) during the morning peak hour, 22 net new walking trips (0 inbound, 22 outbound) during the afternoon school peak hour, and 14 net new walking trips (0 inbound, 14 outbound) during the afternoon commuter peak hour. The origins and destinations are likely to be students and staff members that walk to:

- Between their residences and the school
- Retail locations outside of the school; and
- Neighborhood destinations such as libraries and parks in the vicinity of the school.

In addition to these trips, the transit trips generated by the school will also generate pedestrian demand between the school and nearby transit stops.

Currently the existing pedestrian network has the capacity to absorb the newly generated pedestrian trips to and from the

Table 9: Sidewalk Requirements

| Street Type | Min. Buffer Width | Min. Sidewalk Unobstructed Width | Total Min. Sidewalk Width |
|--------------------------------------|-------------------|----------------------------------|---------------------------|
| Low- to Moderate-Density Residential | 4-6 ft | 6 ft | 10 ft |
| High-Density Residential | 4-8 ft | 8 ft | 13 ft |
| Central DC and Commercial Areas | 4-10 ft | 10 ft | 16 ft |



school. Therefore, no new pedestrian connections to the school are proposed.

Pedestrian Improvements

The site will improve the overall pedestrian environment by eliminating two (2) curb cuts along Martin Luther King Jr Avenue, removing vehicular-pedestrian conflict.

As part of the proposed development an elevated pedestrian walkway will be added between the existing and proposed building. The proposed walkway will ensure pedestrian safety for students walking from the existing building to the proposed building. Frequent travel between the two buildings will be necessary as only the existing building will have certain facilities such as a cafeteria and specialty classes such as music and arts.

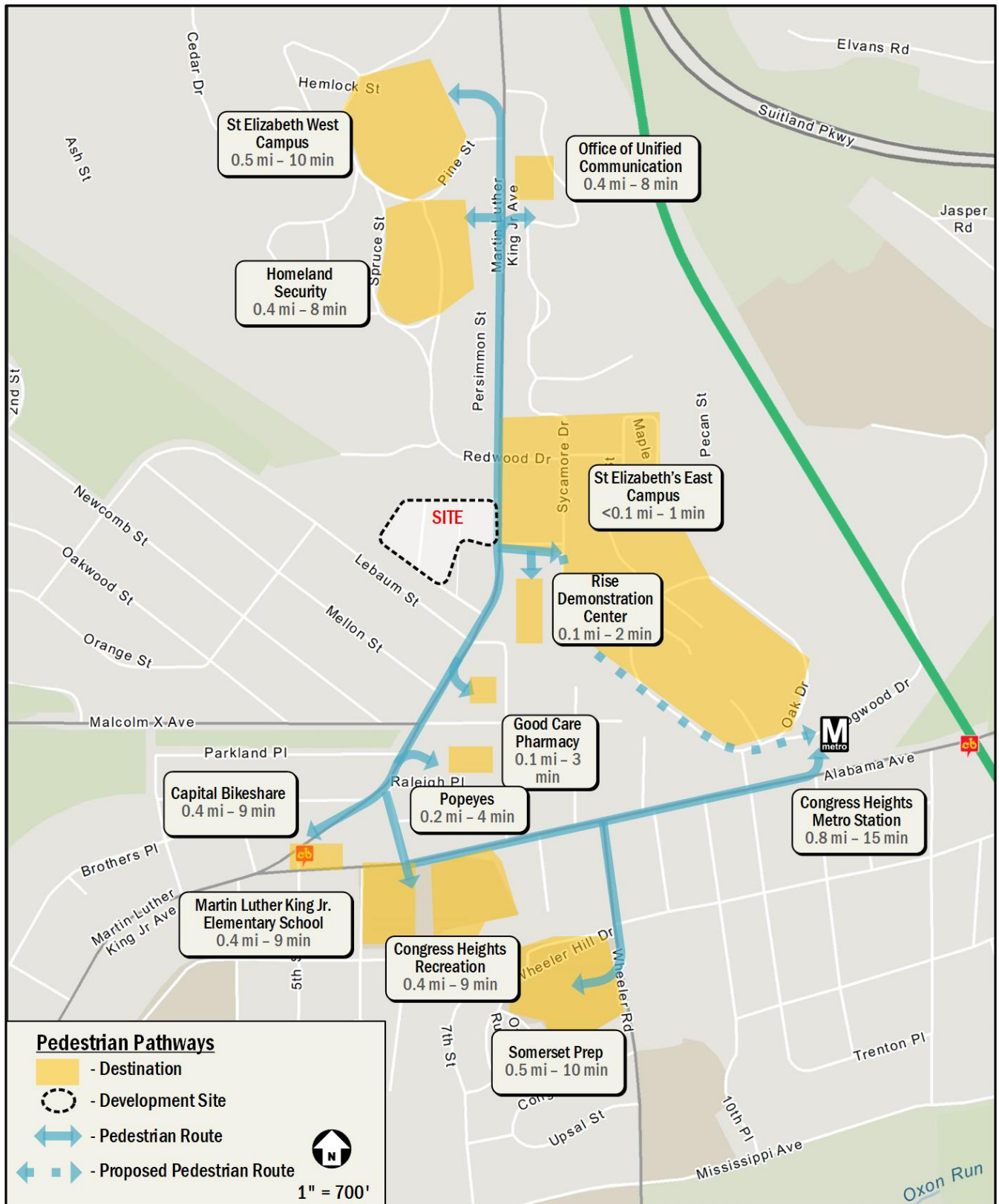


Figure 22: Pedestrian Pathways

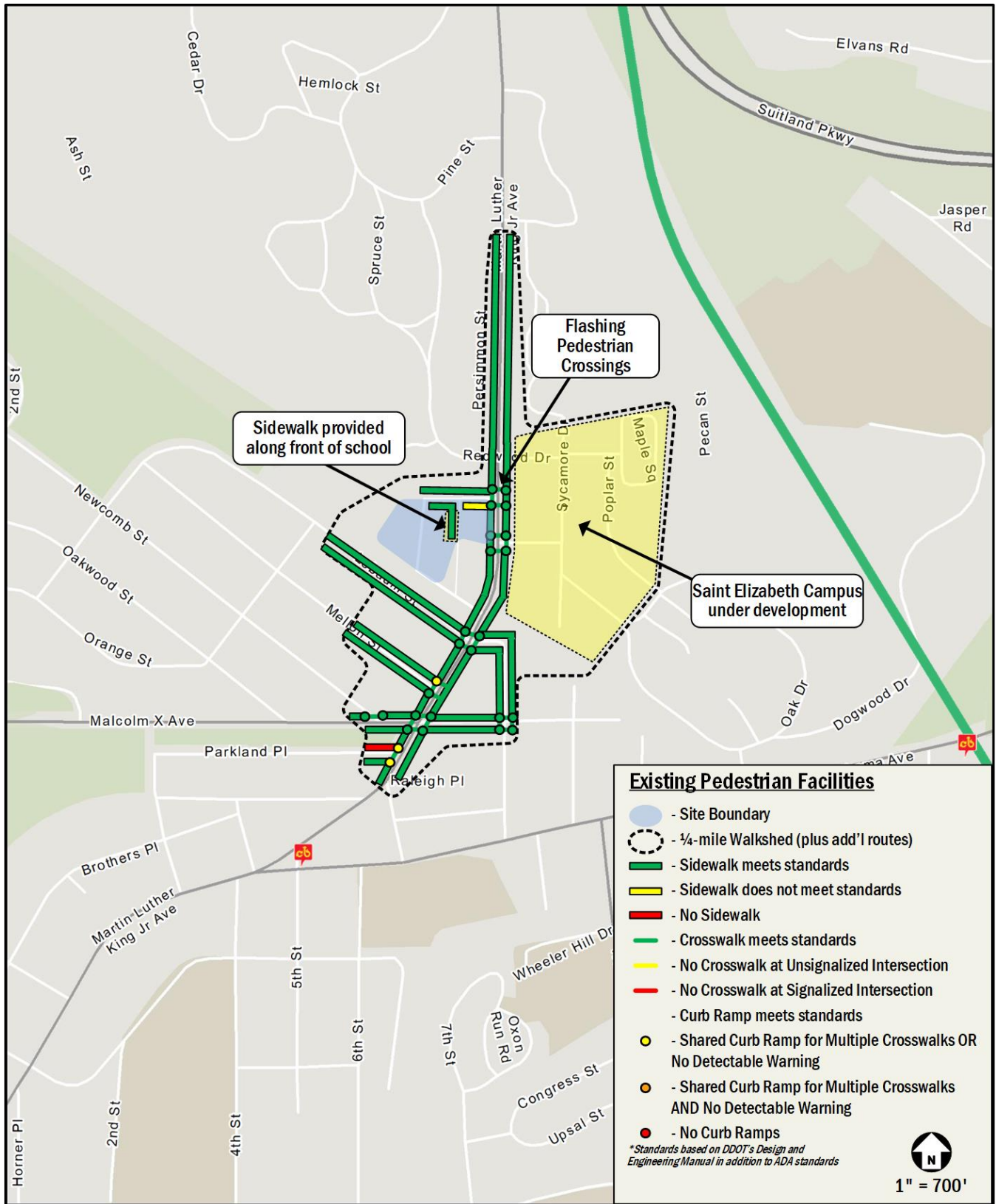


Figure 23: Existing Pedestrian Facilities



BICYCLE FACILITIES

This section summarizes existing and future bicycle access, reviews the quality of cycling routes to and from the school, and presents recommendations.

The following conclusions are reached within this chapter:

- The school has direct access to nearby bicycle facilities including bicycle lanes along Malcom X Avenue and Martin Luther King Jr Avenue and signed routes along Alabama Avenue.
- The school is within a half-mile walk of one (1) Capital Bikeshare station.

EXISTING BICYCLE FACILITIES

The school has connectivity to existing on- and off-street bicycle facilities. A bicycle lane runs along Martin Luther King Jr Avenue from Upsal Street to Alabama Avenue as well as Malcom X Avenue just south of the site. The bicycle lane along Malcom X will give the site connectivity to the proposed South Capitol Street Trail extension. Additionally, a signed bicycle route is located along Alabama Avenue.

In addition to personal bicycles, the Capital Bikeshare program provides additional cycling options for employees of the school. The Bikeshare program has placed over 500 Bikeshare stations across Washington, DC, Arlington, and Alexandria, VA, Montgomery County, MD, and most recently Fairfax County, VA, with 4,300 bicycles provided. There is one (1) existing Capital Bikeshare station within a half-mile walk of the school. The station is located at Martin Luther King Jr Avenue and Alabama Avenue with 7 docks available.

Figure 24 illustrates the existing bicycle facilities in the study area.

PLANNED BICYCLE FACILITIES

MoveDC

The MoveDC plan outlines several bicycle improvements in the vicinity of the school. These improvements are broken up into four tiers that rank the priority for implementation. The four tiers are broken down as follows:

Tier 1

Investments should be considered as part of DDOT’s 6-year Transportation Improvement Program (TIP) and annual

work program development if they are not already included. Some projects may be able to move directly into construction, while others become high priorities for advancement through the Project Development Process.

Tier 2

Investments within this tier are not high priorities in the early years of MoveDC implementation. These investments could begin moving through the Project Development Process if there are compelling reasons for their advancement.

Tier 3

Investments within this tier are not priorities for DDOT-led advancement in the early years of MoveDC’s implementation. They could move forward earlier under circumstances, such as real estate development initiatives and non-DDOT partnerships providing the opportunity for non-District-led completion of specific funding.

Tier 4

Generally, investments within this tier are not priorities for DDOT-led advancement and are lower priority for project development in the early years of implementation.

Due to the timeline of the proposed development, this report will focus on the Tier 1 and Tier 2 recommendations within the vicinity of the site.

In direct relation to Southeast Academy, MoveDC Tier 1 outlines a 4.25 mile South Capitol Street trail located predominately within the I-295 corridor. The proposed trail will run from Firth Sterling Avenue to Shepard Parkway, and will connect to the Malcolm X Avenue bicycle lane just south of the site.

Although these projects are discussed in the MoveDC plan, they are not currently funded nor included in DDOT’s Transportation Improvement Plan thus they will not be assumed as complete for the proposes of this CTR.

SCHOOL EXPANSION BICYCLE IMPACTS

This section summarizes the impacts of the proposed student enrollment on the overall bicycle operations surrounding the school.

Bicycle Trip Generation

The school is expected to generate 1 net new bicycle trips (1 inbound, 0 outbound) during the morning peak hour, 2 net new



bicycle trips (0 inbound, 2 outbound) during the afternoon school peak hour, and 1 net new bicycle trip (0 inbound, 1 outbound) during the afternoon commuter peak hour.

On-site Bicycle Facilities

Per zoning regulations, the proposed site is required to provide five (5) long-term and eighteen short-term bicycle parking spaces. The proposed site will include five (5) long-term bicycle parking spaces within the building and twenty (20) short-term bicycle parking spaces along the perimeter of the site.

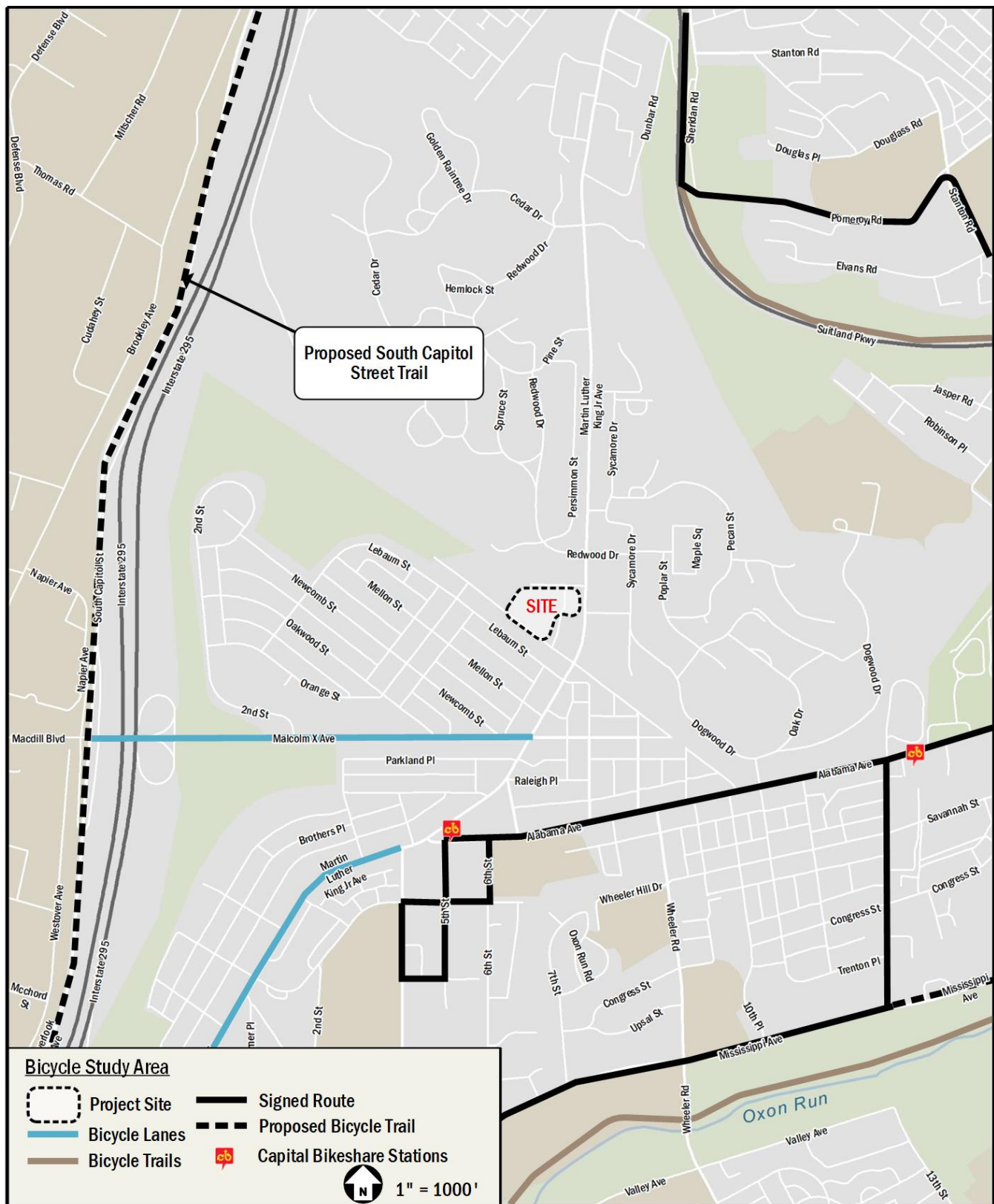


Figure 24: Existing Bicycle Facilities

SUMMARY AND CONCLUSIONS

This report is a Comprehensive Transportation Review (CTR) for Friendship Public Charter School's (FPCS) Southeast Academy.

This report reviews transportation aspects of the school's modernization and expansion plan as it pertains to the School's Board of Zoning Adjustment (BZA) application #20082.

The purpose of this study is to evaluate whether the proposed school will have a detrimental impact to the surrounding transportation network. This report concludes that the proposal will not have a detrimental impact to the surrounding transportation network assuming all planned site design elements are implemented.

Proposed Project

FPCS Southeast Academy is located at 645 Milwaukee Place, SE in Washington DC. It is bounded by Milwaukee Place SE to the north, a public alley to the south and Martin Luther King Jr Avenue SE to the east. The site currently contains one building that serves 590 Pre-K to 6th grade students. 130 7th to 8th grade students are currently located in the adjacent Tech Prep high school building, in addition to 416 9th to 12th grade students. There are 108 surface parking spaces allocated to the Southeast Academy located on east and south side of the building. Site access and site egress is provided via five (5) curb cuts on Martin Luther King Jr Avenue, Milwaukee Place, and a 15' Public Alley. The school is also adjacent to a car wash which shares an access point along Martin Luther King Jr Avenue with the school.

The Applicant is seeking to expand the existing school to accommodate 728 Pre-K to 8th grade students. The expansion will include additional educational space, a gymnasium, improvements to the existing public alley, and additional space for pick-up/drop-off activity. The proposed site will consist of two buildings including the existing building and a proposed building that will replace the eastern parking lot. The existing building will be used for elementary students (Pre-K to 5th grade) while the new building will be used for the middle school students (6th to 8th grade). (This project includes relocating the 7th and 8th grade students from Tech Prep to the new building). The proposed site will contain two parking lots, including the existing southern parking lot and a proposed western parking lot. Although not directly related to the new construction at Southeast Academy, by relocating 7th and 8th grade students to the new building, Tech Prep will expand their

population to 600 students. As such, the overall campus will increase by 192 students, with an increase of 184 students at Tech Prep, but only an increase of 8 total Pre-K to 8th grade students at Southeast Academy.

As part of the proposed plans, two (2) of the existing curb cuts along Martin Luther King Jr Avenue will be eliminated. The curb cut that serves the car wash will be narrowed and relocated further from the existing signalized intersection.

Multi-Modal Impacts and Recommendations

Transit

The school is served by regional and local transit services via Metrobus and Metrorail. The School is currently 0.8 miles from the Congress Heights Station, with Metrobus stops located within walking distance of the site along Martin Luther King Jr Avenue and Mellon Street. With the completion of the Saint Elizabeth's East Campus, the distance to the Congress Heights Station will decrease to 0.5 miles.

Pedestrian

The school is surrounded by a well-connected pedestrian network that provides an adequate walking environment. Most roadways within a quarter-mile radius provide sidewalks, crosswalks and acceptable curb ramps, particularly along the primary walking routes.

The site will improve the overall pedestrian environment by eliminating two (2) curb cuts along Martin Luther King Jr Avenue, removing vehicular-pedestrian conflict.

As part of the proposed development an elevated pedestrian walkway will be added between the existing and proposed building. The proposed walkway will ensure pedestrian safety for students walking from the existing building to the proposed building. Frequent travel between the two buildings will be necessary as only the existing building will have certain facilities such as a cafeteria and specialty classes such as music and arts.

Bicycle

The site has adequate connectivity to existing on- and off-street bicycle facilities. The site is within a quarter mile radius of bicycle lanes along Malcom X Avenue. Additionally, one (1) Capital Bikeshare station is located within a half-mile of the school with 7 available docks.

Per zoning regulations, the proposed site is required to provide five (5) long-term and eighteen short-term bicycle parking

spaces. The proposed site will include five (5) long-term bicycle parking spaces within the building and twenty (20) short-term bicycle parking spaces along the perimeter of the site.

Vehicular

The school is accessible from several principal and minor arterials such as Martin Luther King Jr Avenue and Malcolm X Avenue, as well as an existing network of collector and local roadways.

In order to determine potential impacts on the transportation network, this report performed analyses of intersection delays and queues. The capacity analysis results were compared to the acceptable levels of delay typically set by DDOT standards, as well as existing queues, to determine areas of concern that will negatively impact the roadways near the school.

The vehicular capacity analysis results in the following conclusions:

- Under existing and future conditions, the majority of intersections in the study are operate under acceptable conditions.
- In the Future (2025) with Development conditions, the eastbound delay at the intersection of Martin Luther King Jr Avenue and Milwaukee Place increases from a LOS D or E to an LOS F in all three scenarios.
- A signal is warranted at the intersection of Martin Luther King Jr Avenue and Milwaukee Place as a result of school-related traffic; however, the signal is only warranted during the AM Peak Hour when there is a short, but significant increase in traffic. Traffic Control Officer reinforcement may mitigate capacity issues at this intersection.
- The school will not have detrimental impact to the surrounding network.

Transportation Demand Management

- Student TDM Elements
 - The school will encourage carpooling by offering a parent listserv which will allow parents to find carpool matches.
 - The school will require all drop-off and pick-up activities to take place within the designated curbside locations.
 - The school will coordinate bike safety/education courses for students.
- The school will offer DC One Cards to all students to encourage the use of public transportation.
- Faculty/Staff TDM elements
 - The school will offer a transit benefit program to faculty and staff to encourage the use of public transportation.
 - All faculty and staff who drive to school will be instructed to park on campus.
 - The school will encourage carpooling by offering a staff listserv which will allow staff to find carpool matches.
 - All faculty/staff will complete training on TDM procedures.
- School-Wide TDM Elements
 - The school will assign a staff member to serve as Transportation Management Coordinator (TMC) who will be responsible for oversight of the TDM plan, adherence to driving and parking regulations, and encourage and facilitate carpooling.
 - The school will implement policies for deliveries to the campus to minimize the impact of this traffic on the neighborhood.
 - The school will install outdoor bicycle parking racks to promote additional bicycle activity.
 - The school will participate in the Safe Routes to School Program.