



Buildings, Technology, Academics/Athletics (BTA) V Capital Levy Program

Draft Non-Project SEPA Checklist

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For questions and more information about this document, please contact the following:

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While the BTA V Capital Levy Program Draft State Environmental Policy Act (SEPA) Non-Project Checklist is accessible and ADA compliant, the attached figures and appendices which support the checklist contain complex material that are not accessible. The following is a description of what is contained in the figures and appendices:

Figure 1 – District Map

Figure 1 is a map of the Seattle Public School District that shows the locations of all schools. The schools that are discussed in the non-project SEPA checklist are highlighted in yellow on the map.

Appendix A –Transportation Technical Report for the BTA V Programmatic SEPA Checklist

Appendix A consists of the Transportation Technical Report for the BTA V Capital Levy Program that was prepared by Heffron Transportation, Inc. The report describes the affected environment and potential transportation-related impacts that may occur with projects included in the BTA V Capital Levy Program. The report provides a program level (non-project) analysis of the types and ranges of impacts that could be expected from implementation of the BTA V program capacity and facility improvement projects, including roadways, traffic volumes, traffic operations, parking, and non-motorized facilities.

This concludes the description of the Final SEPA Checklist figures and appendices for the BTA V Capital Levy Program Non-Project SEPA Checklist.

BTA V Capital Levy Program

Draft Programmatic SEPA Checklist

May 2021

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CONTENTS

ENVIRONMENTAL CHECKLIST	1
A. Background.....	1
B. Environmental Elements	13
1. Earth.....	13
2. Air.....	16
3. Water	17
4. Plants.....	20
5. Animals.....	22
6. Energy and Natural Resources.....	24
7. Environmental Health	26
8. Land and Shoreline Use	31
9. Housing	38
10. Aesthetics.....	38
11. Light and Glare	40
12. Recreation.....	42
13. Historic and Cultural Preservation	45
14. Transportation	51
15. Public Services.....	55
16. Utilities	56
C. Signature	57
D. Supplemental Sheet for Non-project Actions	58
E. References.....	66
F. Acronyms and Abbreviations	68
G. Figure.....	70

APPENDIX

Appendix A Transportation Technical Report

FIGURE

Figure 1 Seattle District School Location Map	71
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TABLES

Table 1 Proposed Projects for BTA V Capital Levy Program	8
Table 2 School Site's Zoning, Current Land Use, and Adjacent Land Uses	31
Table 3 BTA V Capital Levy Program School Facilities within or adjacent to a Mapped Environmentally Critical Area.....	35
Table 4 SPS Facilities Adjacent to a City of Seattle Park	43
Table 5 Historic Information about BTA V Capital Levy Program Project Sites	46
Table 6 Applicable Historic and Cultural Resources Regulations and Laws.....	49

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ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of the proposed project, if applicable:

BTA V Capital Levy Program

2. Name of Applicant:

Seattle Public Schools (SPS)

3. Address and phone number of applicant and contact person:

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4. Date checklist prepared:

May 2021

5. Agency requesting checklist:

Seattle Public Schools (SPS)

6. Proposed timing or schedule (including phasing, if applicable):

This is a programmatic planning checklist that provides information on projects that may be included in the February 2022 Seattle Public Schools' (SPS) Building, Technology, and Academics/Athletics Capital Levy V Program (BTA V Capital Levy Program) ballot measure.

The timing for individual projects under the BTA V Capital Levy Program would vary according to the type of project. Projects involving a building addition or replacement may take up to several years to complete. The construction phase for athletic field projects (such as installing new field lighting at currently unlighted fields or the replacement of existing synthetic turf) would generally take approximately 1 to 3 months. Maintenance and repair projects may begin as soon as funding and planning are complete and may take several weeks to several months.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Projects identified in this BTA V Capital Levy Program checklist for levy funding may be constructed at a future date. However, as was the case for projects listed in the prior capital levies for SPS, the BTA V Capital Levy Program would be subject to approval by a public vote, and development at any of the schools or school facilities would be subject to additional project-level review under the State Environmental Policy Act (SEPA), as appropriate.

A SEPA project-level review is being prepared by SPS for the proposed replacement of Rainier Beach High School, and that document is expected to be available for public comment and review in spring 2021. The school replacement project was included in the prior Building Excellence (BEX) V Capital Levy Project list of projects to fund but did not include athletic field improvements and is not related to the BTA V Capital Levy Program environmental review.

Even though the athletic field improvements at Rainier Beach High School are not yet approved for funding, they are being included in the project-level review in the Rainier Beach High School Replacement Project SEPA checklist for full disclosure.

The proposed field improvement projects at Rainier Beach High School that are reviewed in this BTA V Capital Levy Program checklist include: replacement of existing synthetic turf & bleachers; track resurfacing; installation of tennis courts; relocation and conversion of practice field to synthetic turf; new field lighting; conversion of baseball and softball outfields to synthetic turf; and replacement of existing field lighting to light emitting diode (LED) lights.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Studies below are incorporated by reference into the BTA V Capital Levy Program checklist under Washington Administrative Code (WAC) 197-11-600(4)(b).

- Change in School Start Times Final SEPA Programmatic Environmental Impact Statement, ESA, November 2015.
- Draft Rainier Beach High School Replacement Project Transportation Technical Report. Prepared by Heffron Transportation, Inc., May 2021.
- Final BTA V Programmatic SEPA Checklist Transportation Technical Report. Prepared by Heffron Transportation, Inc., May 13, 2021.
- Structural Evaluation for Seattle Public Schools. Memorial Stadium Seattle Center, Seattle, Washington. Prepared by PCS Structural Solutions. September 15, 2017.
- Project Overview Seattle Public Schools JSCEE Central Kitchen Renovations. February 18, 2021. Prepared by IBI and JLR Hargis.
- Sacajawea Elementary School Master Plan. Prepared by Bassetti Architects. February 2019.
- John Muir Elementary School Master Plan. Prepared by Bassetti Architects February 2019.
- Draft Rainier Beach High School Replacement Noise Memo. Prepared by ESA. May 2021.
- Rainier Beach High School Replacement Project. Cultural Resources Short Report. Prepared by ESA. April 7, 2021.

- Draft Rainier Beach High School Replacement Light and Glare Report. Prepared by Stantec. May 2021.
- Rainier Beach High School Replacement Critical Areas Report. Prepared by ESA. May 2021.
- Building Excellence V Group 1 Site Evaluations Project. Limited Geotechnical Engineering Feasibility Analysis. Sacajawea Elementary School, 9801 20th Avenue Northeast, Seattle, Washington. Prepared by Associated Earth Sciences Inc. February 2019.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

The proposed BTA V Capital Levy Program planning will require review and decision by the Seattle Public School Board. Subsequent to School Board action, the proposal will be part of the February 2022 School Board ballot measure.

SPS and Seattle Department of Parks and Recreation (Parks) have a Joint Use Agreement for Parks' use of school fields that was updated December 13, 2019.

10. List any governmental approvals or permits that will be needed for your proposal, if known:

Most of the projects that involve additions or replacement of existing school structures will require permits from the City of Seattle. Some projects will also require departures from the development standards in residential zones. As part of the permit review process, the Seattle Department of Construction and Inspections (SDCI) will review the SEPA documents prepared by SPS along with the application and could place additional conditions on building projects. Depending on the project, City of Seattle permits or approvals that may be required include:

- Master Use Permit or Development Standards Departures
- Clearing and Grading Permit
- Demolition Permit
- Building/Mechanical Permit
- Electrical Permit
- Tree Removal
- Environmentally Critical Areas Review
- Seattle Landmarks Board

Other permits or approvals that may be required for the building projects include:

Washington Department of Ecology (Ecology)

- National Pollutant Discharge Elimination System (NPDES) Construction and Operation Permits

Washington Department of Fish & Wildlife

- Hydraulic Project Approval

Puget Sound Clean Air Agency (PSCAA)

- Notice of Demolition

New field lighting projects generally require the following City of Seattle approvals:

- Master Use Permit/Special Exception for Height of Poles
- Building Permit
- Electrical Permit

11. **Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.**

Project Background

This programmatic SEPA checklist describes the affected environment and potential impacts that may occur with the variety of projects included in the SPS BTA V Capital Levy Program, which cover projects to address increased enrollment capacity; improvements to athletic fields and lighting; and overall building maintenance, repair, and upgrade. Capital levies are part of SPS long-range plan to upgrade and renovate aging school facilities on a planned and predictable schedule, and play a key role in funding District technology equipment, software, and services. SPS has two 6-year capital levy programs that are put before voters for approval on an alternating basis.

BTA levies fund small renovations, major maintenance, and improvement projects in school buildings. Planning has begun for the District's next capital levy. It will support the District's long-range plans to upgrade and renovate aging school facilities and address growth in enrollment. The BTA V Capital Levy Program levy is expected to be on the ballot for February 2022 as a replacement for BTA IV Capital Levy Program, which expires in 2022. The project types listed in BTA V Capital Levy Program include: construction, renovation, additions, replacement, and modernization of school buildings throughout Seattle (increased enrollment capacity projects); improvements to athletic facilities; and a variety of maintenance projects.

A programmatic or non-project level checklist is appropriate for environmental review under SEPA because it is analyzing the funding mechanism that supports the implementation of the projects. However, it is too early to have sufficient information under SEPA to analyze most of the projects. The analysis in the programmatic checklist identifies

the types and ranges of impacts that could be expected from implementation of the increased capacity, field and lighting improvements, and maintenance projects based on the information currently available. SPS will conduct environmental review, as appropriate, for projects evaluated in this checklist when sufficient details for the projects become available.

Many of the projects included in the BTA V Capital Levy Program are repairs, remodeling, and maintenance activities to existing buildings, which are categorically except from SEPA under WAC 197-11-800(3).

This checklist was prepared in compliance with SEPA (Chapter 43.21C of the Revised Code of Washington [RCW]), the state SEPA rules (Chapter 197-11 of the WAC), and the School Board's Policy on SEPA Compliance (Policy No. 6890). It is an information document, developed to ensure that the public, agencies, decision makers, and other interested parties are informed about the potential environmental impacts for the proposed increased capacity, field and lighting improvements, and other projects included in the BTA V Capital Levy Program.

Project Description

As described above, this programmatic SEPA checklist describes the affected environment and potential impacts that may occur with the variety of projects included in the BTA V Capital Levy Program to be placed on the ballot in February 2022 for a public vote. The majority of the projects proposed are intended to upgrade or repair existing school facilities. There are only four school sites that are proposed for building alterations and only one school proposed for a complete replacement. The other large building project proposed is the seismic upgrade or demolition and replacement of Memorial Stadium.

The proposed BTA V Capital Levy Program projects are listed in one or more of the following categories and are described in more detail below and in **Table 1**:

1. Increased School Enrollment Capacity (Building Additions/ Modernizations/ Replacement).
2. Athletic Facility and Field Lighting Improvements (note: there is some overlap with maintenance, repair, and upgrades for some of the school sites that propose projects in addition to athletic facility and field lighting improvements).
3. Maintenance, Repair, and Upgrades.

1. Increased School Enrollment Capacity

Five of the BTA V Capital Levy Program projects would result in increased student school enrollment capacity. The projects would affect four elementary schools (classroom additions at B.F. Day Elementary School, Green Lake Elementary School, and John Muir Elementary School, and a replacement of Sacajawea Elementary School) and one middle school (modernization and expansion of Aki Kurose Middle School). These projects are proposed to help address increasing enrollment and capacity shortfalls. The potential increases in capacity would range from about 125 students to 320 students at each of

the school sites. This would add up to a combined 1,025 elementary school student seats and 132 middle school student seats to the District's capacity.

Appropriate additional project-level environmental review will be conducted on the increased capacity projects as they are identified and implemented.

2. Athletic Facility and Field Lighting Improvements

The proposed BTA V Capital Levy Program includes projects that would provide for athletic facility and field lighting improvements. Improvements to athletic fields, such as the conversion from natural to synthetic turf, are planned at Jane Addams Middle School and Boren K-8 School.

Installation of new field lighting is planned at Van Asselt Elementary School (Interim Site), Eckstein Middle School, Jane Addams Middle School, Boren K-8 School, Denny Middle School/Chief Sealth High School, Rainier Beach High School, and Nino Cantu Southwest Athletic Complex (SWAC).

Projects to replace existing synthetic turf or upgrade existing field lighting with newer technology are planned for Salmon Bay K-8 School, Ingraham High School, Rainier Beach High School, and Memorial Stadium. This work would also likely be exempt from SEPA and is intended to reduce the potential for light spill at property lines.

SPS and Parks have been working together to develop plans for installing lights at athletic fields around the City. Most of the lighting is being installed as mitigation for the impacts of SPS's change in school start times. In fall 2016, SPS changed start times so that high school students start at 8:50 a.m. and are dismissed at 3:20 p.m., approximately 1 hour later than the previous schedule. The later dismissal time for high schools means that school athletic fields are used for school practice and games later in the day, reducing the time that unlighted fields are available for community use under the Joint Use Agreement with Parks. This was identified as a significant adverse impact in the Change in School Start Times Programmatic Environmental Impact Statement (EIS) (SPS, 2015). Lighting of the fields would allow SPS and Parks to schedule events later in the evening than currently possible, extending the use of the fields during certain times of the year. The fields would assist in relieving the demand for all-season, multi-use, lighted fields in the City.

Appropriate additional project-level environmental review will be conducted on the athletic field and lighting projects as they are identified and implemented.

3. Maintenance, Repair, and Upgrades

Other BTA V Capital Levy Program projects include slope stability enhancements, drainage improvements, stormwater improvements, Americans with Disabilities Act (ADA)-compliant access improvements, shed installations, kitchen improvements, seismic upgrades, and lighting system upgrades. These system repair and maintenance projects were selected to address the backlog of maintenance and repair needs with no expected operational impacts.

Projects in this category include those at John Stanford Elementary, Maple Elementary, and North Beach Elementary School; Salmon Bay K–8 School; Ballard High School, Cleveland High School, Franklin High School, Nathan Hale High School, and Ingraham High School; and at the John Stanford Center for Educational Excellence (JSCEE), and John Marshall High School. The projects are expected to have limited construction-related impacts and are repairs, remodeling, and maintenance activities to existing buildings, which are categorically exempt from SEPA under WAC 197-11-800(3).

One of the BTA V Capital Levy Program is to address seismic upgrades needed at Memorial Stadium by either upgrading the existing structure or demolishing the existing structure and replacing it with a new stadium structure with seismic stability.

Demolition and replacement of Memorial Stadium was previously analyzed in the BEX V Capital Levy in 2019. However, that proposal was different from what is currently proposed because it proposed demolition and replacement with a school and stadium.

- 12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The proposed BTA V Capital Levy Program projects are located throughout the Seattle School District (see **Figure 1, School District Boundary Map**). Figure 1 illustrates schools that have a project in the BTA V Capital Levy Program with yellow highlight. The street location for each of these schools is provided in **Table 1**.

Table 1 Proposed Projects for BTA V Capital Levy Program

School Level and Potential Project Site/Street Location	Types of Projects for BTA V Capital Levy Program			
	Type of Project(s) (e.g., systems, technology, additions, expansions, field improvements, and/or lighting)	Range of Capacity Added (e.g., number of students)	Site Reconfiguration or Access Changes? (e.g., changes to driveways, parking, or bus loading)	Interim School Sites Required? (e.g., note when students would be housed at interim site and where)
Increased School Enrollment Capacity				
B.F. Day Elementary School 3921 Linden Ave N Seattle, WA 98103	Two-story addition, lunchroom, and gym Master plan being developed for 14 added classrooms	Capacity increase of 300 (to 650) Current capacity is 350 Enrollment Oct. 2020 was 363	No	Yes – John Marshall Elementary School
Green Lake Elementary School 2400 N 65th St Seattle, WA 98103	12-classroom addition (two stories) Master plan being developed for 17 added classrooms	Capacity increase of 320 (to 650) Current capacity is 330 Enrollment Oct. 2020 was 350	No	Yes – John Marshall Elementary School
John Muir Elementary School 3301 S. Horton St Seattle, WA 98144	2-classroom preschool addition; reconfigure open space (create 3 rooms); Total 5 new classrooms	Capacity increase of 125 Current capacity is 340 Enrollment Oct. 2020 was 359	No	No
Aki Kurose Middle School 3928 S Graham St Seattle, WA 98118	Modernization and Addition Nominated for Landmark	Capacity increase of 132 (to 1,000) Current capacity is 868 Oct. 2020 enrollment 727 Recent boundary change for Mercer MS will add enrollment	Loss of some on-site parking possible	Yes – Van Asselt Elementary School (interim site)
Sacajawea Elementary School 9501 20th Ave NE Seattle, WA 98115	Full replacement	Capacity increase of 280 (to 500) Current capacity is 220 Oct. 2020 enrollment 198 (previous enrollment 260 in 2012–13)	Will provide a master plan	Yes – John Marshall Elementary School

School Level and Potential Project Site/Street Location	Types of Projects for BTA V Capital Levy Program			
	Type of Project(s) (e.g., systems, technology, additions, expansions, field improvements, and/or lighting)	Range of Capacity Added (e.g., number of students)	Site Reconfiguration or Access Changes? (e.g., changes to driveways, parking, or bus loading)	Interim School Sites Required? (e.g., note when students would be housed at interim site and where)
Athletic Facility and Field Lighting Improvements (Replacement of Synthetic Turf and Upgrades to Existing Field Lighting Listed in this Category are Considered as Maintenance, Repair, and Upgrade Projects)				
Van Asselt Elementary School (Interim Site) 7201 Beacon Ave S Seattle, WA 98108	New field lighting	N/A	No	No
Eckstein Middle School 3003 NE 75th St Seattle, WA 98115	New field lighting	N/A	No	No
Rainier Beach High School Southeast Athletic Center (SEAC) 8815 Seward Park Ave S Seattle, WA 98118	Replacement of existing synthetic turf & bleachers, track resurfacing, replacement of tennis courts, relocation and conversion of practice field to synthetic turf & new field and/or security lighting at practice field and potential new lighting at tennis courts, and conversion of baseball & softball outfields to synthetic turf; replace existing field lighting to LED	N/A	To be coordinated with building replacement project	No - phased construction
Salmon Bay K-8 School 1810 NW 65th St Seattle, WA 98117	Replacement of existing synthetic turf & track resurfacing, and sinkhole exploration & repair	N/A	No	No
Boren K-8 School 5950 Delridge Way SW Seattle, WA 98106	Drainage improvement; new synthetic turf, track & field lighting	N/A	No	No

School Level and Potential Project Site/Street Location	Types of Projects for BTA V Capital Levy Program			
	Type of Project(s) (e.g., systems, technology, additions, expansions, field improvements, and/or lighting)	Range of Capacity Added (e.g., number of students)	Site Reconfiguration or Access Changes? (e.g., changes to driveways, parking, or bus loading)	Interim School Sites Required? (e.g., note when students would be housed at interim site and where)
Memorial Stadium 401 5th Ave N Seattle, WA 98109	Replacement of existing synthetic turf and field lighting; address structural conditions through seismic upgrade and/or demolition of Memorial Stadium and replacement with a new stadium.	No decrease in seating is anticipated	No change in parking capacity provided by existing adjacent surface lot	Yes – SPS stadium and field users would need to be relocated temporarily
Denny Middle School/Chief Sealth High School/ Southwest Athletics Center Southwest Athletic Center (SWAC) 2600 SW Thistle St Seattle, WA 98126	Replacement of existing synthetic turf at upper softball field and new field lighting	N/A	No	No
Ingraham High School Northwest Athletic Center (NWAC) 1819 N 135th St Seattle, WA 98133	Replacement of existing synthetic turf at the auxiliary field & stadium; tennis court paving, seating & fencing	N/A	No	No
Jane Addams Middle School 11051 34th Ave NE Seattle, WA 98125	Conversion of upper baseball field to synthetic turf & new field lighting; loop track improvements at upper baseball field	N/A	No	No
Maintenance, Repair, and Upgrades				
Ballard High School 1418 NW 65th St Seattle, WA 98117	New acrylic coating on tennis courts	N/A	No	No

School Level and Potential Project Site/Street Location	Types of Projects for BTA V Capital Levy Program			
	Type of Project(s) (e.g., systems, technology, additions, expansions, field improvements, and/or lighting)	Range of Capacity Added (e.g., number of students)	Site Reconfiguration or Access Changes? (e.g., changes to driveways, parking, or bus loading)	Interim School Sites Required? (e.g., note when students would be housed at interim site and where)
Cleveland High School 5511 15th Ave S Seattle, WA 98108	School buildings and on-site parking are located on the upper portion of site with no direct or ADA-compliant pedestrian access to the athletic facilities. The project would provide ADA access from the Cleveland High School building to the Cleveland High School athletic field	N/A	Potential limited tree clearing for accessible pathway between the gym and field	No
Franklin High School 3013 S Mt Baker Blvd Seattle, WA 98144	Parking lot - south of side of gym; grind and resurface parking lot; approximately 70 spaces; stormwater infiltration; card key access; new fence; new curb bumpers; arborist to advise on tree root disturbance; Upgrade lighting	N/A	No	No
Nathan Hale High School 10750 30th Ave NE Seattle, WA 98125	Site drainage repairs – potential creek restoration and stormwater management	N/A	No	No
John Stanford Center for Educational Excellence (JSCEE) 2445 3rd Ave S Seattle, WA 98124	New shed for mowers south of existing shed New shed for tractors, gators, top dressers, north of existing shed Central kitchen improvements	N/A	Potential loss of a few parking spots to accommodate new chiller	Would need temporary storage for food on-site
John Marshall Interim Site 520 NE Ravenna Blvd Seattle, WA 98115	Playground asphalt repairs	N/A	No	No
North Beach Elementary School 9018 24th Ave NW Seattle, WA 98117	Site slope stability measures (east lot line) and drainage improvements	N/A	No	No

School Level and Potential Project Site/Street Location	Types of Projects for BTA V Capital Levy Program			
	Type of Project(s) (e.g., systems, technology, additions, expansions, field improvements, and/or lighting)	Range of Capacity Added (e.g., number of students)	Site Reconfiguration or Access Changes? (e.g., changes to driveways, parking, or bus loading)	Interim School Sites Required? (e.g., note when students would be housed at interim site and where)
Maple Elementary School 4925 Corson Ave S Seattle, WA 98108	New grass playfield, asphalt exercise path, amphitheater, and learning garden	N/A	No	No

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site (underline): Flat, rolling, hilly, steep slopes, mountainous, other.**

Some of the school facility sites have been substantially graded, developed, or otherwise disturbed to create a relatively flat site. However, 14 of the sites have or are adjacent to steep slopes, as identified in B.1b below.

- b. What is the steepest slope on the site (approximate percent slope)?**

Fourteen of the BTA V Capital Levy Program project sites have slopes of 40% or more including: B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Sacajawea Elementary School, Eckstein Middle School, Boren K–8 School, Memorial Stadium, Denny Middle School/Chief Sealth, Ingraham High School, Ballard High School, Cleveland High School, Franklin High School, North Beach Elementary School, and Maple Elementary School. The remaining school project sites have slopes that are less steep than 40%.

- c. What general types of soils are found on the site (for example clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.**

No agricultural soils or prime farmland are located within the City of Seattle. As a densely urbanized area, much of its native soils have been extensively altered by filling, grading, and other activity. The BTA V Capital Levy Program project sites are primarily fill due to previous grading.

Many of the BTA V Capital Levy Program project sites include mineral soils dominated by clay, silt, or sand, as well as organic soils such as peats and mucks (see, for example, <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>) (NRCS, 2021).

- d. Are there any surface indications or a history of unstable soils in the immediate vicinity? If so, describe.**

The Seattle area is known to be in an active seismic area, as is the entire Puget Sound region. The City's geologically hazardous areas are defined by SDCI as Environmentally Critical Areas (ECA).

The BTA V Capital Levy Program project sites with a history of unstable soils include: B.F. Day Elementary School (potential slide area ECA); John Muir Elementary School (liquefaction-prone ECA); Rainier Beach High School (peat settlement zone ECA, liquefaction-prone ECA); Jane Addams Middle School (liquefaction-prone ECA); Franklin High School (liquefaction-prone ECA); and Nathan Hale High School (liquefaction-prone ECA). See Section B.8.h. of the checklist

e. Describe the purpose, type, total area, and approximate quantities of total affected area of any filling or grading proposed. Indicate source of fill.

Construction would be required for the additions at B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, and Aki Kurose Middle School, as well as the replacement at Sacajawea Elementary School. Expected future construction activities for the increased capacity projects would include site clearing, excavation and grading, and demolition and removal of existing facilities that could potentially impact earth resources.

Replacement or installation of new synthetic turf and field lighting at Van Asselt Elementary School (Interim Site), Eckstein Middle School, Jane Addams Middle School, Boren K–8 School, Rainier Beach High School, Memorial Stadium, Denny Middle School/Chief Sealth High School (SWAC), Salmon Bay K–8 School, Rainier Beach High School (practice field), and Ingraham High School and other potential sites would require limited fill and grade activities.

Maintenance and repair projects that may require fill or grading include: North Beach Elementary School (slope stabilization and drainage improvements); Maple Elementary School (new playfield, amphitheater, learning garden); Nathan Hale High School (site drainage, potential creek restoration); Rainier Beach High School (practice field and relocation of field activities), and Franklin High School (stormwater improvements).

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Activities for the increased capacity projects at B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Aki Kurose Middle School, and Sacajawea Elementary School would expose soils, increasing the potential for soil erosion, particularly in areas with steep slopes. B.F. Day Elementary and Sacajawea Elementary both have steep slopes of over 40% on their school sites in very limited locations along the perimeters of the site.

Installation of field lighting at Van Asselt Elementary School (Interim Site), Eckstein Middle School, Jane Addams Middle School, Boren K–8 School, Rainier Beach High School, Memorial Stadium, Denny Middle School/Chief Sealth High School (SWAC), Salmon Bay K–8 School, and Ingraham High School and other potential sites could result in erosion during replacement or new field light and turf installation.

Maintenance and repair projects that could result in erosion include: North Beach Elementary School (slope stabilization and drainage improvements); Maple Elementary School (new playfield, amphitheater, learning garden); Nathan Hale High School (site drainage, potential creek restoration); and Franklin High School (stormwater improvements).

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Activities for the increased capacity projects at B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Aki Kurose Middle School, and Sacajawea Elementary School would likely increase impervious surfaces on their sites. The percent of the site that would be covered with impervious surfaces after project construction depends on the plans for each site.

The conversion of grass to synthetic turf at athletic fields would result in increased impervious surface at Rainier Beach High School, Boren K–8 School, and Jane Addams Middle School. Per the City’s 2016 Stormwater Manual, under-drained natural or synthetic fields are considered to be pollution-generating hard surfaces and are modeled as 100% impervious.

Lighting improvements and the maintenance and repair projects are not expected to increase impervious surfaces at the school sites.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Potential erosion impacts would likely be avoided or mitigated as described below.

All projects would comply with the applicable City stormwater regulations. Some of the projects may require enhanced water quality treatment in accordance with the Seattle Municipal Code (SMC). Temporary erosion and sedimentation control Best Management Practices (BMPs) and construction water quality treatment measures would be installed, as required, to minimize erosion and to treat stormwater runoff during construction. BMPs specific to the site and project would be specified by SPS in the construction contract documents that the construction contractor would be required to implement. BMPs that may be implemented include:

- Temporary erosion and sedimentation control BMPs and construction water quality treatment measures would be installed to minimize erosion and treat stormwater runoff during construction.
- BMPs specific to the sites and projects would be specified by SPS in construction contract documents.
- Excavated soils would be reused on site to the extent feasible, but any unsuitable soil materials would be exported and imported fill may be required. Fill would be imported from approved sites.

During construction, BMPs would be employed to minimize clearing and grading impacts and runoff to ECAs and their buffers. These measures may include the following:

- All areas disturbed during construction would be restored to pre-construction conditions as soon as practicable.

- Where appropriate, a survey would be conducted to determine the presence of significant biological resources, including exceptional trees.
- Should an ECA be identified, measures would be taken during project design to avoid, minimize, or mitigate the impact on the critical area. Such measures could include redesigning the facility to avoid the ECA, or enhancing the ECA.
- For sites with steep slopes and riparian corridors, appropriate building setbacks and erosion control measures would be taken into consideration.
- Existing trees would be retained to the extent possible, and new trees and landscaping would be provided around the property in compliance with City requirements (SMC 25.11.090 and SMC 23.44.008.I).

Additional mitigation measures necessary to reduce or eliminate impacts at project sites would be identified during design and project-level environmental review for BTA V Capital Levy Program projects. Mitigation plans would be developed in compliance with the City's ECA regulations (SMC 25.09).

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Activities for the increased capacity projects at B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Aki Kurose Middle School, and Sacajawea Elementary School would likely result in emissions to the air during construction, which could last between 6 months and 2 years. Construction of school projects could generate vehicle emissions, fugitive dust, or odors.

Diesel fumes from idling buses are known to present a health hazard to students and nearby residents, but SPS has an anti-idling policy for buses that would reduce any impacts.

Athletic field and lighting improvements and maintenance and repair projects would result in minimal air emissions from operation of construction equipment for approximately 1 to 4 weeks.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known off-site sources of emissions or odor that would affect any of the BTA V Capital Levy Program projects.

c. Proposed measures to reduce or control emissions or other impacts to air, if any.

SPS would identify site-specific mitigation measures to minimize construction impacts during design and project-level environmental review for specific projects. These measures may include those listed below:

- Follow SPS anti-idling policy for buses.
- SPS would require contractors to implement measures to control dust and reduce vehicle emissions. Contractors would be required to comply with the Puget Sound Clean Air Agency's (PSCAA) Regulation I, Section 9.15 requiring reasonable precautions to avoid dust emissions, and Regulation I, Section 9.11 requiring the best available measures to control emissions of odor-bearing contaminants. The contractor would be required to comply with recommendations in the Washington Associated General Contractors brochure *Guide to Handling Fugitive Dust from Construction Projects* (1999).
- Future project development would be required to obtain all relevant permits and be subject to development regulations in effect at the time of permit application.

3. Water

a. Surface Water:

- i. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Sacajawea Elementary School, Rainier Beach High School, and Nathan Hale High School are the BTA V Capital Levy Program project sites that are in the immediate vicinity of a surface water body. The Sacajawea Elementary School site includes wetlands to the west and south. Nathan Hale High School includes several wetland areas and is in the vicinity of the South Fork (SF) of Thornton Creek. The Rainier Beach High School site has wetlands to the northwest of the site.

- ii. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

The replacement of Sacajawea Elementary School and the drainage improvements planned at Nathan Hale High School may require work over, in, or adjacent to the wetlands or SF of Thornton Creek on site. The Rainier Beach High School project is not expected to require work within 200 feet of the wetlands located in the northeast part of the site. If work is proposed within the wetland buffer, it will follow all City of Seattle regulations and requirements for approval.

- iii. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

No fill or dredge material would be placed or removed from surface water or wetlands for any of the BTA V Capital Levy Program projects.

- iv. Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities, if known.**

No surface water withdrawals or diversions are expected to be required for the BTA V Capital Levy Program projects.

- v. Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

According to the Federal Emergency Management Agency (FEMA) Floodplain maps, the only BTA V Capital Levy Program project site that is located within a 100-year floodplain is Nathan Hale High School. Drainage improvements and potential stream restoration are proposed for that school site.

- vi. Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No discharges of waste materials to surface waters are expected for any of the BTA V Capital Levy Program projects.

b. Groundwater:

- i. Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

No groundwater would be withdrawn from a well for drinking water or other purposes for any of the BTA V Capital Levy Program projects.

- ii. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals ... ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

No waste material is proposed for discharge into septic tanks or other sources for any of the BTA V Capital Levy Program projects.

c. Water Runoff (including stormwater)

- i. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

Activities for the increased capacity projects at B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Aki Kurose Middle School, and Sacajawea Elementary School would likely result in stormwater runoff during construction. The additions proposed at the schools would likely increase the amount of stormwater runoff from additional square footage of roof. If additional impervious surfaces are proposed for any of the project sites, stormwater flow would also increase.

The construction activity for the increased capacity projects for the schools listed above is not expected to change the collection and disposal of the water flow. The exception to this may be upgrades or improvements to existing stormwater infrastructures that may be included in school design. Details on stormwater are not currently available but would be analyzed during project-level review.

The athletic field projects would generate additional stormwater due to their increased size and less-pervious nature. Stormwater generated from the fields would be routed into an on-site water quality treatment system before entering the City's existing storm drainage system. The projects would comply with all City and state code requirements for stormwater discharge.

Several of the maintenance and repair projects proposed in the BTA V Capital Levy Program would include drainage or stormwater improvements. These include improvements at North Beach Elementary School, Boren K-8 School, Nathan Hale High School, and Franklin High School. Details are not currently available but would be analyzed during project-level review.

- ii. Could waste materials enter ground or surface waters? If so, generally describe.**

Waste materials are not expected to enter ground or surface waters for any of the BTA V Capital Levy Program projects.

- iii. Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**

Several maintenance and repair projects are proposed to address drainage issues, creek restoration, or stormwater management. These include drainage improvements at North Beach Elementary School, drainage improvement at Boren K-8 School, site drainage repairs and potential creek restoration at SF of Thornton Creek and stormwater management at Nathan Hale High School, and stormwater infiltration at Franklin High School. Details for each maintenance and repair project are not currently available but would be analyzed during project-level review.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

The BTA V Capital Levy Program projects would comply with all stormwater code requirements. SPS would also implement BMPs during construction at the school facilities, which may include:

- Use of perimeter silt fences and mulch in exposed area.
- Armoring subgrade soils needed while working in areas with rocks, catch basin filters, interceptor swales, hay bales, sediment traps, and other appropriate cover measures.
- BMPs specific to each site and project would be specified by SPS in the contract documents that the construction contractor would be required to implement.

4. Plants

The BTA V Capital Levy Program projects sites are located in different parts of the City of Seattle. Generally, the Puget Sound basin is home to a diversity of plant species that depend on marine, estuarine, freshwater, and terrestrial environments. The Seattle area has a variety of vegetation, including upland forest (deciduous, coniferous, and mixed), shrub lands, riparian forests, and wetlands. This flora includes species native to the region, as well as many non-native species. Vegetation found on most of the BTA V Capital Levy Program sites is identified below. Project-level analysis of each site would include a detailed list of vegetation.

a. Check the types of vegetation found on the site:

- ☒ Deciduous trees: alder; maple; aspen; other: black cottonwood, Oregon ash, willow, etc.
- ☒ Evergreen trees: Fir; cedar; pine; other: spruce, hemlock, pine, etc.
- ☒ Shrubs: Himalayan blackberry, Japanese knotweed
- ☒ Grass
- ☐ Pasture
- ☐ Crop or grain
- ☐ Orchards, vineyards, or other permanent crops
- ☒ Wet soil plants: cattail; buttercup; bulrush; skunk cabbage; other: reed canary grass, other
- ☐ Water plants: water lily; eelgrass; milfoil; other: sedges
- ☒ Other types of vegetation: Various other vascular, non-vascular, native, and non-native plant species including: cherry, hazelnut, locust, and ornamentals

b. What kind and amount of vegetation will be removed or altered?

Increased capacity projects at B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Aki Kurose Middle School, and Sacajawea Elementary School would likely result in the removal of vegetation, including existing landscaping such as trees, shrubs, and herbaceous vegetation. Other alterations may include frontage improvements that would result in the installation of landscaping or other enhancements.

Several of the proposed projects for athletic field improvements would alter vegetation by converting grass fields to synthetic turf, such as the proposed projects at Jane Addams Middle School, Rainier Beach High School, and Boren K–8 School.

Several of the BTA V Capital Levy Program replacement or new athletic field lighting projects would disturb the ground and vegetation. Most of the replacement lighting locations are in existing fields and would not need to disturb grass. If there is grass around the lighting locations, the grass would be returned to original conditions after the light installations are complete.

Replacement field lighting is planned for Rainier Beach High School, Franklin High School, and Memorial Stadium.

New lighting is planned for Van Asselt Elementary School (Interim Site), Eckstein Middle School, Rainier Beach High School, Boren K–8 School, Denny Middle School/Chief Sealth High School/SWAC, and Jane Addams Middle School.

Most of the maintenance and repair projects are not expected to impact vegetation at any of the BTA V Capital Levy Program project sites. However, the Cleveland High School project proposes ADA access improvements that may include tree clearance; the Nathan Hale High School project proposes potential creek restoration at SF Thornton Creek; and the Maple Elementary School project proposes the construction of a new playfield, amphitheater, and learning garden.

Trees are an integral component of many ECAs due to the habitat and soil stability they provide. Trees in the City are legally protected under various regulations in addition to the ECA code (SMC 25.09.320). These include the Tree Protection Ordinance (SMC 25.11) and the SEPA Plants and Animals Policy (SMC 25.05.675).

Under the Tree Protection Ordinance, more stringent protection measures are placed on “exceptional trees.” Exceptional trees are defined as a tree or group of trees that constitutes an important community resource because of its unique historical, ecological, or aesthetic value, and are specifically protected. Prior to construction at any site, a survey for exceptional trees would be conducted by a licensed arborist per SMC 25.11.

Impacts of future, specific development proposals would be addressed through regulations and/or project-specific environmental review.

c. List threatened or endangered species known to be on or near the site.

No federally listed endangered or threatened plant species or state-listed sensitive plant species are known to occur at any of the BTA V Capital Levy Program project sites (WDFW, 2021).

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Increased capacity projects at B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Aki Kurose Middle School, and Sacajawea Elementary School would likely include landscaping plans to enhance vegetation on the site, including City policies to incorporate native plants. If any exceptional trees are proposed for removal, the project would comply with City Tree Ordinance replacement requirements.

Construction of increased capacity BTA V Capital Levy Program projects would likely require tree removal, potentially including exceptional trees. Projects would be designed to minimize the removal of trees, especially exceptional trees, where possible, and trees would be removed and replaced in accordance with City of Seattle code. The designated Heritage tree at Franklin High School would not be impacted by the proposed maintenance project there.

Construction could also occur in or adjacent to ECAs and their buffers, although construction would avoid ECAs to the extent practicable and any development that would occur would comply with the City's ECA regulations.

The potential stream restoration at Nathan Hale High School and the proposed playfield, amphitheater, and garden at Maple Elementary School would preserve or enhance vegetation at those sites.

Landscaping and design plans would be analyzed in the project-level review of those BTA V Capital Levy Program projects.

e. List all noxious weeds and invasive species known to be on or near the site.

The geographic areas affected by the proposed projects are located within the City of Seattle. A variety of species of noxious and invasive species are found at the BTA V Capital Levy Program project sites, such as Himalayan blackberry, reed canarygrass, English holly, herb Robert, field bindweed, and knotweed (King County, 2021).

5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Project-level analysis of each BTA V Capital Levy Program project would include a list of animals likely to occur at each site. Only five of the BTA V Capital Levy Program project sites are near areas where salmon may be observed. Sacajawea Elementary School and

Jane Addams Middle School are located in proximity to Thornton Creek, and Boren and Denny Middle School/Chief Sealth High School (SWAC) are located in proximity to Longfellow Creek; both stream are fish-bearing and have documented use by a variety of salmonid species. To SPS's knowledge, Nathan Hale High School is the only school listed in the BTA V Capital Levy Program with a stream (SF of Thornton Creek) located on site. The south fork has documented fish, including a variety of salmonids. Rainier Beach High School is located approximately 300 feet east of Lake Washington, and the proposed field improvements proposed at the school site are not expected to have any impact on aquatic species.

The other BTA V Capital Levy Program project sites generally include other invertebrates, amphibians, birds, and mammals as listed below.

- ☒ **Invertebrates:** aquatic and terrestrial insects, other
- ☒ **Fish:** salmon, trout, bass, herring
- ☐ **Shellfish:** other: perch, rockfish
- ☒ **Amphibians:** frogs, salamanders
- ☒ **Birds:** bald eagles, owls (various species), hawks, heron, songbirds; other: osprey, mallards, peregrine falcon, purple martin, pileated woodpecker, belted kingfisher, waterfowl species, Canada goose. Other: starling and pigeon and species adapted to urban areas such as gulls, American crow, chickadee, robin, Steller's jay, northern flicker, and Bewick's wren
- ☒ **Mammals:** deer, bobcat, other: coyote, raccoon. Other: opossum, rat

b. List any threatened or endangered species known to be on near the site.

In King County, five wildlife species are listed as endangered or threatened under the Endangered Species Act (ESA), but these species are not likely to be found at the school facility BTA V Capital Levy Program project locations. These include Canada lynx (*Lynx canadensis*; Threatened), gray wolf (*Canis lupus*; Endangered), grizzly bear (*Ursus arctos*; Endangered), marbled murrelet (*Brachyramphus marmoratus*; Threatened), and northern spotted owl (*Strix occidentalis caurina*; Threatened).

King County contains federally designated critical habitat for marbled murrelet and northern spotted owl; no designated critical habitat is located in Seattle. Bald eagle (*Haliaeetus leucocephalus*) was removed from the federal list under ESA on August 8, 2007, but is federally protected under the Bald and Golden Eagle Protection Act. Bald eagles reside in Seattle. Fish species listed as endangered or threatened under the ESA and found in freshwater tributaries of Puget Sound (PS) include Chinook salmon (*Oncorhynchus tshawytscha*, Threatened, PS), steelhead (*O. mykiss*, Threatened, PS), and bull trout (*Salvelinus confluentus*, Threatened, PS). Coho salmon (*O. kisutch*) is a Candidate species for listing as Threatened. There is documented Chinook and steelhead presence in the segment of SF of Thornton Creek located on the Nathan Hale property. Coho are also documented along with a couple other non-listed species.

As the West Coast's only native freshwater turtle, the western pond turtle is listed as endangered by the state of Washington.

There are no other threatened or endangered species known to be on or near the BTA V Capital Levy Program project sites, which in general are in developed, urbanized areas and do not provide suitable habitat for these species. Therefore, the potential for threatened or endangered animal species to be present is low, except at Nathan Hale High School.

c. Is the site part of a migration route? If so, explain.

The Puget Sound region is also within the Pacific Flyway—a flight corridor for migrating waterfowl, migratory songbirds, and other birds. The Pacific Flyway extends from Alaska to Mexico and South America.

Anadromous trout and salmon migrate through the area river and stream systems, including urban streams in Seattle. None of the schools, except Nathan Hale High School, are located adjacent to any stream, only within proximity and with development (e.g., roads/homes) often separating the school from the stream.

The open channel portion of Mapes Creek is located across the stream from the Rainier Beach High School. It is a restored connection and important to juvenile Chinook salmon that migrate from the Cedar River to Puget Sound.

d. Proposed measures to preserve or enhance wildlife, if any.

One of the maintenance and repair projects at Nathan Hale High School involves stream restoration to enhance conditions for fish and wildlife. A long-term feasibility study to address drainage improvements is planned in coordination with Seattle Public Utilities (SPU) to address a combination of short- and long-term issues at the site.

BMPs would be followed during construction of the increased student capacity projects and for the maintenance and repair projects that involve drainage, stormwater, or slope stability improvements. Measures for future, specific development proposals would be addressed through regulations and/or project-specific environmental review.

e. List any invasive animal species known to be on or near the site.

Many species of invasive animal species are found within the City of Seattle, including rat (*Rattus* spp.), pigeon (*Columba livia*), and Asian gypsy moth (*Lymantria dispar*). These invasive species are likely to be found at BTA V Capital Levy Program project sites.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Activities for the increased capacity projects at B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Aki Kurose Middle School, and

Sacajawea Elementary School would require electricity to operate. The City of Seattle has prohibited the new installation of natural gas.

Installation of new lighting at Van Asselt Elementary School (Interim Site), Eckstein Middle School, Jane Addams Middle School, Boren K–8 School, Rainier Beach High School, and Denny Middle School/Chief Sealth High School (SWAC) would require electrical energy use.

Existing electrical lighting would be replaced or upgraded at Rainier Beach High School, Memorial Stadium, and Franklin High School.

Demolition of the existing Sacajawea Elementary School building for a replacement school would increase the amount of materials sent to landfills and would require new materials for construction.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Increased capacity projects, athletic field and lighting improvement projects, and maintenance and repair projects in the BTA V Capital Levy Program are all located at existing school and facility sites. They are not expected to affect the potential use of solar energy by adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The increased capacity BTA V Capital Levy Program projects propose energy conservation features that would substantially reduce their energy use compared to the existing school buildings. Overall, the energy efficiency of the increased capacity school projects is expected to reduce requirements for energy and natural resources.

Under Washington State Governor's Executive Order 05-01, public school construction projects receiving state assistance must be built to the Washington Sustainable Schools Protocol, or to Leadership in Energy and Environmental Design (LEED) Silver standards. The program requires a 10% reduction in energy use beyond what is required by the Washington State Energy Code (RCW 39.35D.040).

In 2006, the School Board adopted a Natural Resource Conservation Policy and Natural Resource Conservation Procedures. The goal of the Natural Resources Conservation Policy is to create and maintain sustainable, healthy school environments through a long-term resource management plan. SPS would model environmental stewardship by instituting a resource conservation management plan, to:

1. Reduce the use of energy, water, and other natural resources and encourage recycling.
2. Educate students, teachers, and staff about the importance of conserving natural resources.

3. Lessen environmental damage attributable to natural resources consumption.

Resolution 2020/21-18, "Transitioning Seattle Public Schools to 100% Clean and Renewable Energy," was passed unanimously by the board on February 10, 2021. The overarching goal of the resolution is to utilize fossil-free, clean energy throughout all District properties by 2040. The resolution sets a January 2023 deadline for an implementation plan to be presented to the board.

Installation of new athletic field lighting is proposed for Van Asselt Elementary School (Interim Site), Eckstein Middle School, Rainier Beach High School, Boren K–8 School, Denny Middle School/Chief Sealth High School (SWAC), and Jane Addams Middle School. Replacement of existing athletic field lighting is planned for BTA V Capital Levy Program projects at Rainier Beach High School, Memorial Stadium, and Franklin High School.

In general, both the replacement and new athletic field lights for SPS facilities would use high-efficiency LED floodlights to conserve energy. The LED floodlights would reduce the electrical energy load used for lighting by approximately 33% compared to floodlights that use metal halide lamps.

Some of the new lighting systems include a fully programmable control system with remote operation that allows the fields to be lighted independently and to automatically turn off after play is completed. This feature ensures that lights would be on only during the hours that events are scheduled on each field. If necessary, the lights can also be operated manually through separate switches.

Additionally, the new and replacement athletic field lighting would be in compliance with the Washington State Energy Code and the 2018 Seattle Energy Code (City of Seattle, 2018).

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

Activities for the increased capacity projects at the following sites all require some level of construction and could result in spills of construction-related materials and supplies: B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Aki Kurose Middle School, Sacajawea Elementary School,

Activities for field improvement and field lighting projects at the following sites would require minor construction and could result in spills of construction-related materials and supplies: Van Asselt Elementary School (Interim Site), Eckstein Middle School, Jane Addams Middle School, Boren K–8 School, Rainier Beach High School, Memorial Stadium, Denny Middle School/Chief Sealth High School (SWAC), Salmon Bay K–8 School, and Ingraham High School.

Maintenance and repair projects that would require minor construction elements that could result in spills of construction-related materials and supplies include: North Beach

Elementary School (slope stabilization and drainage improvements); Maple Elementary School (new playfield, amphitheater, learning garden); Nathan Hale High School (site drainage, potential creek restoration); and Franklin High School (stormwater improvements). The Memorial Stadium seismic upgrade or demolition and replacement with a new stadium would require a higher level of construction and therefore, a higher level of potential for spills.

All of the construction listed above may result in accidental spills of hazardous materials from construction equipment and vehicles. Spilled materials could include fuels, lubricants, solvents, antifreeze, and similar materials. If not contained, these contaminants could enter ground or surface water.

Hazardous materials could be encountered during demolition, grading, and excavation of sites. The types of hazardous materials encountered would depend on previous uses of the sites and construction materials in demolished structures. Disturbance of these materials during construction could release hazardous materials to the air or surface and groundwater or could expose construction workers unless proper handling methods were used.

i. Describe any known or possible contamination at the site from present or past uses.

Hazardous materials may be found in existing school buildings or facilities proposed for increased capacity. These existing buildings may include asbestos-containing materials (ACM); lead-containing paint (LCP); Arsenic (As) containing materials; polychlorinated biphenyl (PCB)-containing light ballasts; mercury-containing fluorescent light tubes, switches, and thermostats; and other regulated materials. Detectable levels of ACM, lead, and other regulated materials may also be present throughout the existing buildings. Phase I Environmental Site Assessments would be needed for B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Aki Kurose Middle School, and Sacajawea Elementary Schools prior to start of construction.

ii. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There are no known existing hazardous chemicals or conditions that might affect project development and design at any of the BTA V Capital Levy Program project sites.

iii. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Chemicals stored and used during construction would likely be limited to gasoline and other petroleum-based products required for maintenance and operation of construction equipment and vehicles.

During operation of school facilities, chemicals stored and used on site would be limited to cleaning supplies, as well as limited amounts of chemicals that are typically used in high school science classes.

iv. Describe special emergency services that might be required.

No special emergency services are expected to be required for any of the BTA V Capital Levy Program project sites.

v. Proposed measures to reduce or control environmental health hazards, if any:

SPS would identify site-specific mitigation measures necessary to minimize construction impacts during design and project level environmental review for specific projects. Measures may include those listed below:

- Measures to minimize impacts from hazardous materials would include site-specific investigations to determine the potential for hazardous materials and removal of any identified contaminants prior to demolition or construction. If hazardous materials are located within a building, appropriate provisions for removal, disposal, and worker safety would be followed. SPS would comply with applicable regulations for the removal and disposal of any hazardous materials found on site.
- Site-specific pollution prevention plans and spill prevention and control plans would be developed to prevent or minimize impacts from hazardous materials.
- New development would be subject to City zoning for allowable uses and activities, and City codes for handling hazardous materials as well as state and federal hazardous materials regulations.

b. Noise

i. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

In general, Seattle receives noise from sources that include: freeways, highways, and arterial streets, and overflights associated with Boeing Field and Sea-Tac International Airport. These noises impact the BTA V Capital Levy Program project sites depending on the location. The City of Seattle regulates noise via the Seattle Noise Ordinance (SMC Chapter 25.08). The ordinance sets limits for exterior sound

levels based on land use, establishes quiet hours, and prohibits construction and maintenance activities during certain hours of the day.

ii. What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Activities for the increased capacity projects at B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Aki Kurose Middle School, and Sacajawea Elementary School would result in increased noise from construction. Construction of school projects would generate noise and possibly vibration.

Construction equipment and vehicles may include jackhammers, track hoes, dump trucks, forklifts, and boom trucks. This equipment would be in use most during the early stages of construction, typically during the first 3 or 4 months of construction. For most of the construction period, exterior and interior work would generate noise levels much lower than those of the heavy construction phase of the project.

The Seattle Land Use Code allows construction equipment operations between the hours of 7 a.m. and 10 p.m. on weekdays and 9 a.m. and 10 p.m. on weekends and holidays. Construction would generally occur between 7 a.m. and 5 p.m. on weekdays. It is unlikely that construction would occur at night or on holidays. Weekend construction could occur in some cases.

During operation, increased student capacity at school sites could cause increases in noise from student and program activities. The increased capacity for each school is listed below. It is expected to take approximately 10 years to reach maximum capacity at the schools.

- B.F. Day Elementary School: Capacity increase of 300 (to 650). Current capacity is 350. Enrollment in October 2020 was 363.
- Green Lake Elementary School: Capacity increase of 320 (to 650). Current capacity is 330. Enrollment in October 2020 was 350.
- John Muir Elementary School: Capacity increase of 125. Current capacity is 340. Enrollment in October 2020 was 359.
- Aki Kurose Middle School: Increase capacity to 1,000 (from 868). Enrollment in October 2020 was 727.
- Sacajawea Elementary School: Increase capacity to 500 (from 220). Enrollment in October 2020 was 198 (previous enrollment was 260 in 2012–13).

Operations at the schools would be audible to neighbors and would be similar to existing conditions. Noise sources from elementary schools typically include student voices, school bells, building mechanical equipment, and regular vehicular traffic.

Noise at the schools would be audible to neighbors. A slight increase in noise at the beginning and end of the school day and during lunch and recess periods typically occurs. Noise generally occurs during normal school operating hours (approximately 7:00 a.m. to 6:00 p.m.), although evening events would occasionally be held at the schools. Additional car and bus trips could increase noise to neighboring residents.

Installation of new field lighting at Van Asselt Elementary School (Interim Site), Eckstein Middle School, Jane Addams Middle School, Boren K–8 School, Rainier Beach High School, Memorial Stadium, Denny Middle School/Chief Sealth High School (SWAC), Salmon Bay K–8 School, and Ingraham High School would also include limited areas of construction and increased construction noise for shorter time periods than for the increased capacity projects.

Operational noise from community use of the fields could be noticeable to neighbors of the school. It is anticipated that the fields would be lit from dusk until a pre-set time for field lights to be turned off at 10 p.m. New lighting would allow extended school use. Project-level environmental analysis would be conducted for any schools selected for new lighting.

Maintenance and repair projects that would require minor construction elements that could cause temporary increases in noise include: North Beach Elementary School (slope stabilization and drainage improvements); Nathan Hale High School (site drainage, potential creek restoration); and Franklin High School (stormwater improvements). The improvements at Maple Elementary School (new playfield, amphitheater, learning garden) may result in increased noise over the long-term from programmed school activities. Memorial Stadium is proposed for either seismic upgrades to address structural conditions or demolition with a stadium replacement. Construction for this work would likely take more than a year to complete and create temporary noise impacts.

iii. Proposed measures to reduce or control noise impacts, if any:

Potential impacts of future, specific development proposals would be addressed through regulations and/or separate project-specific environmental review. SPS would identify site-specific mitigation measures necessary to minimize construction impacts during design and project-level environmental review for specific projects. General measures that may be imposed on BTA V Capital Levy Program projects to reduce or control noise impacts include those listed below:

- Construction activities would be restricted to hours designated by SMC 25.08.425. The Seattle Land Use Code allows construction equipment operations between the hours of 7 a.m. and 10 p.m. on weekdays and 9 a.m. and 10 p.m. on weekends and holidays. It is expected that construction would generally occur between 7 a.m. and 5 p.m. on weekdays. It is unlikely that construction would occur at night or on holidays. Weekend construction could occur in some cases.

- If construction activities exceed permitted noise levels, the District would instruct contractors to implement measures to reduce noise impacts to comply with the noise ordinance, which may include additional muffling of equipment.
- If noise impacts for BTA V Capital Levy Program lighting projects are identified during project-level review, appropriate mitigation measures would be developed at that time.
- SPS would schedule evening games to end by 9:45 p.m. to minimize noise impacts on the neighborhood. Security lighting would be provided for an additional 15 minutes (until 10 p.m.) to allow players to safely leave the field.
- BTA V Capital Levy Program projects would adhere to the Seattle Noise Ordinance. The code further regulates noises considered “unreasonable” including “loud and raucous, and frequent repetitive or continuous sounds made by the amplified or unamplified human voice” between the hours of 10 p.m. and 7 a.m. During these hours, maximum allowable noise from one property to another within residential districts is reduced to 45 Leq (dBA).

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The current use of all of the BTA V Capital Levy Program project sites is the provision of public school education. Each of the project sites is adjacent to a variety of other land uses. See **Table 2** for adjacent property zones.

Table 2 School Site’s Zoning, Current Land Use, and Adjacent Land Uses

School Name	Zoning Designation/ Comprehensive Plan	Current Land Use	Adjacent Land Uses
Aki Kurose Middle School	SF 5000/ Single-Family Residential Area	School (Public)	Multi-Family Residential Neighborhood/Commercial Single-Family Residential
B.F. Day Elementary School	LR 2(M)/Fremont Hub Urban Village	School (Public)	Multi-Family Residential Neighborhood/Commercial Single-Family Residential
Ballard High School	LR2 (M)/Multi-Family Residential Area	School (Public)	Single-Family Residential Multi-Family Residential Neighborhood/Commercial
Boren K–8 School	SF 5000/ Single-Family Residential Area	School (Public)	Multi-Family Residential Neighborhood/Commercial Single-Family Residential

School Name	Zoning Designation/ Comprehensive Plan	Current Land Use	Adjacent Land Uses
Cleveland High School	LR2 (M)/Multi-Family Residential Area	School (Public)	Multi-Family Residential Neighborhood/Commercial Single-Family Residential
Denny Middle School/ Chief Sealth High School (SWAC)	SF 5000/ Single-Family Residential Area	School (Public)	Multi-Family Residential Neighborhood/Commercial Single-Family Residential
Eckstein Middle School	SF 5000/ Single-Family Residential Area	School (Public)	Multi-Family Residential Neighborhood/Commercial Single-Family Residential
Franklin High School	SF 5000/ Single-Family Residential Area	School (Public)	City-Owned Open Space Civic Single-Family Residential
Green Lake Elementary School	SF 5000/Single-Family Residential/Green Lake Urban Village	School (Public)	City-Owned Open Space Civic Neighborhood/Commercial Single-Family Residential
Ingraham High School	SF 7200/ Single-Family Residential Area	School (Public)	Civic Single-Family Residential
Jane Addams Middle School	SF 7200/Single-Family Residential Area	School (Public)	City-Owned Open Space Civic Single-Family Residential
John Marshall Elementary School	LR 3 (M)/Green Lake Residential Urban Village	School (Public)	Multi-Family Residential Neighborhood/Commercial Single-Family Residential
John Muir Elementary School	SF 5000/Single-Family Residential Area/Mt. Baker Hub Urban Village	School (Public)	Public Park Single-Family Residential
John Stanford Center for Educational Excellence	IG1 U/85/General Industrial	Office Building	Industrial
Maple Elementary School	SF 5000/ Single-Family Residential Area	School (Public)	Multi-Family Residential Neighborhood/Commercial Single-Family Residential

School Name	Zoning Designation/ Comprehensive Plan	Current Land Use	Adjacent Land Uses
Memorial Stadium	SM-UP 95 (M)/Uptown Urban Center	School Stadium	Multi-Family Residential Neighborhood/Commercial Civic Parking Garage Office City-Owned Open Space
Nathan Hale High School	SF 7200/ Single-Family Residential Area	School (Public)	City-Owned Open Space Civic Neighborhood/Commercial Single-Family Residential
North Beach Elementary School	SF 7200/ Single-Family Residential Area	School (Public)	Single-Family Residential
Rainier Beach High School	LR2 & LR3/Rainier Beach Residential Urban Village	School (Public)	Civic Multi-Family Residential Neighborhood/Commercial Single-Family Residential
Sacajawea Elementary School	SF 5000/Single-Family Residential/Northgate Hub Urban Village	School (Public)	Multi-Family Residential Neighborhood/Commercial Single-Family Residential
Salmon Bay K-8 School	SF 5000/ Single-Family Residential Area	School (Public)	Multi-Family Residential Neighborhood/Commercial Single-Family Residential
Van Asselt Elementary School (Interim Site)	LR1 (M)/ Multi-Family Residential Area	School (Public)	Religious Services Public Park Single-Family Residential

Source: City of Seattle, 2021d

Zoning Designations: SF 5000 = single-family lots that must be at least 5,000 square feet; SF 7200 = single-family lots that must be at least 7,200 square feet; LR 1 = Low-rise Multi-family (cottages, rowhouses, and townhouses); LR 2 = Low-rise Multi-family (townhouses, rowhouses, and apartments); LR 3 = Low-rise Multi-family (apartments, townhouses and rowhouses); IGI = General Industrial (general and heavy manufacturing, commercial uses, subject to some limits, high-impact uses as a conditional use, institutional uses in existing buildings, entertainment uses other than adult, transportation and utility services, and salvage and recycling uses).

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

None of the BTA V Capital Levy Program project sites have been used as working farmlands or working forest lands since the 1950s.

- i. Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:**

None of the BTA V Capital Levy Program projects sites would affect or be affected by surrounding working farm or forest land normal business operations.

- c. Describe any structures on the site.**

Each of the BTA V Capital Levy Program project sites includes an existing school, office building, or athletic field structure. Appurtenant structures vary according to location but may include storage buildings, sheds, greenhouses, and portables. Many of the sites also include other recreation and athletic facility structures.

- d. Will any structures be demolished? If so, what?**

The BTA V Capital Levy Program only lists Sacajawea Elementary School for complete demolition and replacement. B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, and Aki Kurose Middle School would include limited demolition of existing school structures to allow for partial additions or modernization. There is also a proposal to either provide a seismic upgrade or demolish the existing Memorial Stadium and replace it with a new stadium.

- e. What is the current zoning classification of the site?**

The District sites with projects listed in the BTA V Capital Levy Program include zoning designations as found in Seattle's Land Use Code, Title 23 of the SMC and listed in **Table 2**.

- f. What is the current comprehensive plan designation of the site?**

The City of Seattle Comprehensive Plan designation for each of the BTA V Capital Levy Program sites are listed in **Table 2** (City of Seattle, 2021a).

- g. If applicable, what is the current shoreline master program designation of the site?**

None of the BTA V Capital Levy Program projects are located in areas with Shoreline Master Program designations.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

The City of Seattle regulates ECAs through SMC Chapter 25.09. The City provides specific regulations for each ECA, which include protections for trees and vegetation, water quality, development setbacks around sensitive areas, and mandatory construction BMPs to prevent landslides and ensure building stability. The intent behind ECA regulations is to *“promote safe, stable, and compatible development that avoids adverse environmental impacts and potential harm”* on the adjacent properties, the surrounding neighborhood, the drainage basin, and the site itself (SMC 25.09).

The City’s ECA geographic information system (GIS) data were reviewed to assess which BTA V Capital Levy Program Capital Levy capacity and field lighting projects are located within or adjacent to ECAs. This high-level analysis was conducted to identify potential impacts on critical areas. See **Table 3** for the BTA V Capital Levy Program project sites and their associated mapped environmentally critical area(s) as mapped by the City of Seattle.

Table 3 BTA V Capital Levy Program School Facilities within or adjacent to a Mapped Environmentally Critical Area

BTA V Capital Levy Program School or Facility	Mapped Environmentally Critical Area(s)
B.F. Day Elementary School	Steep slopes on site (40% average)
John Muir Elementary School	Steep slopes on site (40% average)
Jane Addams Middle School	Liquefaction zone Salmon watershed area
Sacajawea Elementary School	Steep slopes on site (40% average) Wetlands
North Beach Elementary School	Steep slopes on site (40% average) Wildlife habitat (Great Blue Heron breeding area) – North Beach Elementary is within the Great Blue Heron Management Area, and a small portion of the southwest corner of the school is within the Great Blue Heron Management Core Zone. Potential slide area on adjacent property Riparian corridor on adjacent property Wetlands on adjacent property Known slide areas on adjacent property
Boren K–8 School	Steep slopes on site (40% average) Salmon watershed area
Eckstein Middle School	Steep slopes on site (40% average)

BTA V Capital Levy Program School or Facility	Mapped Environmentally Critical Area(s)
Memorial Stadium	The main part of the site is flat but there are steep slopes on site (40% average) adjacent to the site
Ballard High School	Steep slopes on site (40% average)
John Stanford Center for Educational Excellence	Liquefaction zone
Denny Middle School/Chief Sealth High School (SWAC)	Steep slopes on site (40% average) Salmon watershed area
Cleveland High School	Steep slopes on site (40% average)
Franklin High School	Liquefaction area on site Heritage tree
Ingraham High School	Steep slopes on site (40% average)
Nathan Hale High School	Riparian corridor on site Wetlands on site Liquefaction area on site Flood-prone area on site Steep slopes on site (40% average) on adjacent property Salmon watershed area Potential slide areas on adjacent property
Rainier Beach High School	Riparian corridor on site Liquefaction areas on site Peat settlement-prone area on site Wetland on site

Source: City of Seattle 2021c.

i. Approximately how many people would reside or work in the completed project?

Five of the BTA V Capital Levy Program projects would increase student school enrollment capacity. There are four elementary schools (classroom additions at B.F. Day Elementary School, Green Lake Elementary School, and John Muir Elementary School, and a replacement of Sacajawea Elementary School) and one middle school (modernization and expansion of Aki Kurose Middle School). The potential increases in capacity would range from about 125 students to 320 students at the different school sites. This would add up to a combined 1,025 elementary school student seats and 132 middle school student seats to the District's capacity. The number of staff and students would be provided in the project-level environmental review, as appropriate.

j. Approximately how many people would the completed project displace?

The BTA V Capital Levy Program increased capacity projects may temporarily displace students and faculty to interim sites. However, they would return to their original school after the additions and replacement are complete. See **Table 1** in Section A of this Checklist for a list of the BTA V Capital Levy Program project schools that may use an interim site during construction.

k. Proposed measures to avoid or reduce displacement impacts, if any:

SPS would provide interim school sites for students and faculty to use while their school is under construction.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Most of the BTA V Capital Levy Program projects are located at existing school sites, and as with most SPS facilities, they are generally located within residential neighborhoods, where school uses are allowed. The projects are accordingly generally compatible with existing land uses and plans for residential neighborhoods. However, schools located in residential zones often cannot meet code requirements for height, bulk, and other provisions. Chapter 23.51B provides development standards for public schools in single-family and multi-family zones. These include specifications for lot coverage, setbacks, and height for new schools, reconstructed schools, and additions. If those standards cannot be met, the Seattle Land Use Code (SMC Chapter 23.79) includes a procedure by which departures from the required development standards of the code can be granted for public school structures.

Memorial Stadium is located in a SM-UP 95 (M)/Uptown Urban Center zone and John Stanford Center for Educational Excellence is located in a IG1 U/85/General Industrial zone. Proposed projects at those sites are compatible with existing land uses and plans within those designated zones and would comply with SMC requirements.

All projects would comply with SMC requirements and be designed to conform to zoning requirements and design guidelines. If necessary, SPS would apply for development standard departure(s) as permitted by the SMC.

The proposed height of the new light poles at several BTA V Capital Levy Program project sites is taller than permitted by SMC if they are located in a residential area. The height limit for light poles in residential areas is 30 feet, and the proposed new poles for the athletic field lighting projects would be 70 to 80 feet (SMC 23.76). SMC 23.51B.002(D)(6) permits light poles at public school athletic fields to exceed the maximum permitted height up to a maximum of 100 feet through a special exception approval from SDCI. More detail is provided in Section B.11 of this checklist on Light and Glare.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

No measures are required because there are no BTA V Capital Levy Program projects located in designated agricultural or forest lands of long-term commercial significance.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

The proposed projects would not provide housing.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

The proposed projects would not eliminate housing.

c. Describe proposed measures to reduce or control housing impacts, if any.

No measures to reduce or control housing impacts are proposed.

10. Aesthetics

a. What is the tallest height of any of the proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The proposed height of the Sacajawea Elementary School is expected to be three-stories. Two-story additions are planned for B.F. Day Elementary School and Green Lake Elementary School. Other additions or modernizations planned for John Muir Elementary School and Aki Kurose Middle School have not been designed but may include similar or increased height as compared to existing buildings at the site. These additions are proposed to be a similar height to the existing buildings.

The tallest height of new light poles for the athletic field lighting improvements is expected to be approximately 80 feet.

Exterior building materials would be determined during project design and would be analyzed during project-level environmental review. For additions, exterior building materials would be selected for compatibility with the existing structure.

b. What views in the immediate vicinity would be altered or obstructed?

Through the City of Seattle SEPA regulations, public views of Mount Rainier, the Cascade and Olympic mountain ranges, Puget Sound, Lake Washington, Lake Union, the Ship Canal, and the Downtown Skyline are protected (SMC 25.05.675.P). The following schools or adjacent playfields are identified in SMC 25.05.657 as having protected views:

- Ballard High School
- Cleveland High School Playfield
- Green Lake Playfield or Park

- Maple Playfield

The BTA V Capital Levy Program projects planned for each of the schools listed above are not expected to alter or obstruct SEPA-protected views based on the nature of the proposals. The Ballard High School project only involves new acrylic for the tennis courts; the Cleveland High School project only involves ADA access from the gym to the field; and the Maple Elementary School project only involves ground activity for the new playfield, amphitheater, and learning garden. The Green Lake Elementary School project includes the addition of a two-story structure. That project would require additional analysis during the project-level environmental review after design plans are available.

The City also protects view corridors (SMC 23.49.024), scenic routes (Seattle ordinances #97025 and #114057), and views of landmarks (SMC 25.05.675.H). The Land Use Code provides for the preservation of specified view corridors through setback requirements. The increased capacity BTA V Capital Levy Program projects have the potential for impacts on view corridors, scenic routes, and views of landmarks depending on the proposed construction design. Based on the Sacajawea Master Plan for the Sacajawea Elementary School project (Bassetti Architects, 2019b), there are currently no view corridors, scenic routes, and views of landmarks from that school site. Therefore, no impacts would be expected. The other increased capacity projects do not have design plans yet. Those projects would require additional analysis during the project-level environmental review after design plans are available.

The increased capacity projects may alter views because the B.F. Day Elementary School and John Muir Elementary School propose two-story additions. If the John Muir Elementary School and Aki Kurose Middle School increase building height on the site, views from those school sites may be altered. Sacajawea Elementary School proposes a three-story replacement building that may increase building height on the site. However, there are no SEPA-protected views at any of those sites, and no view impacts are expected.

The replacement of existing athletic field lighting at Rainier Beach High School, Franklin High School, and Memorial Stadium is not expected to alter or obstruct SEPA-protected views because there is no change other than improving the lighting technology. The installation of new athletic field lighting at Van Asselt Elementary School (Interim Site), Eckstein Middle School, Jane Addams Middle School, Boren K-8, Denny/Sealth (SWAC), and Rainier Beach High School would alter the existing views but the thin poles would not be expected to obstruct views from public viewing areas, SEPA-protected or not.

The athletic field lighting systems would generally consist of approximately seven or eight galvanized steel poles with LED shielded floodlights. Poles for baseball infields are usually 70 feet tall, and poles for soccer and baseball outfields are generally 80 feet tall. The steel poles are designed to minimize size and bulk. The floodlights and brackets are designed to minimize quantity, size, and bulk.

Views across athletic fields would be altered by placement of new light poles. The light poles would be visible and may alter or obstruct views. The project-level environmental

analysis would include analysis as to whether there are SEPA-protected views that would be altered or obstructed.

c. Proposed measures to control or reduce aesthetic impacts, if any:

As mentioned in the Land Use section, the BTA V Capital Levy Program projects will conform to zoning requirements and design guidelines. If necessary, SPS would apply for departure(s) as described below.

Schools are typically located in residential zones and therefore often cannot meet code requirements for height, bulk, and other provisions. SMC Chapter 23.51B provides development standards for public schools in single-family and multi-family zones. The Code (SMC Chapter 23.79) acknowledges that due to the size and configuration of certain school sites, schools may not be able to meet these standards, and allows for a procedure by which departures from the required development standards of the code can be granted for public school structures. Departures may only be granted if the project meets certain criteria in SMC Chapter 23.79.

New lighting features at school facilities would be designed to comply with City code requirements. Athletic field lights would likely require a special exception to the height limit for the light poles, as allowed in SMC 23.51B.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Light and glare concerns at schools are primarily associated with lights for athletic fields; however, parking lot and security lighting may also create light and glare impacts on adjacent residential areas. The current Land Use Code standards for school lighting are found in SMC 23.51B.002.D.6.

Athletic Field Lighting

Projects to replace existing field lighting with newer technology that would reduce site spillage and lessen glare are planned for Salmon Bay K–8, Ingraham High School, Rainier Beach High School, and Memorial Stadium.

Installation of new field lighting is planned at Van Asselt Elementary School (Interim Site), Eckstein Middle School, Jane Addams Middle School, Boren K–8, Denny Middle School/Chief Sealth High School (SWAC), and Rainier Beach High School (including practice field and potential tennis court lighting).

Current City of Seattle guidelines recommend that athletic field spill light not exceed 1.0 foot-candles at residential property lines. To comply with this requirement, exemption to the height limit may be required at some school sites. This exemption is intended to ensure adequate illumination for safe play and reduce the amount of impacts from light and glare into the neighborhood.

The field lighting systems would operate from dusk to the pre-set curfew time. The lighting systems would be operated by a fully programmable control system with remote operation. The lights for the fields would be operated separately so that they could be turned off when not in use. The area lights would be on a separate zone and would remain on for a short time after each event to provide ample light for egress from the site following the completion of scheduled field use each evening.

The new lighting system would increase the overall light and glare in the area during evening hours. The proposal will produce direct glare, reflected glare, spill light (light trespass), and sky glow. A definition of the terms used is as follows:

- **Glare** is the sensation produced by luminance within the visual field that is sufficiently greater than the luminance to which the eyes are adapted to, causing annoyance, discomfort, or loss in visual performance and visibility.
- **Direct glare** describes when an observer can see directly into a luminaire's light source, where the lamp or the reflector are visible.
- **Foot-candle** a measurement of the light intensity, the illuminance being a 1-square-foot surface from a uniform source of light.
- **Luminance** refers to direct glare and reflected glare.
- **Reflected glare** describes when light reflected from a surface causes disability glare. It is assumed that the surface is not intentionally a light source. Surfaces attributable to reflected glare have a higher luminance than adjacent or nearby surfaces.
- **Spill light** is light from a source, which does not strike the area intended for illumination. Spill light can be characterized by foot-candles calculated or measured in a horizontal or vertical plane.
- **Light trespass** is when spill light extends beyond the property line of the owner of a light source, and onto or above another owner's property.
- **Sky glow** is the haze or glow of light emitted above the lighting installation and reduces the ability to view the darkened night sky. This is a combination of light emitted directly from the light source, light reflected upward from the illuminated surface, and light reflected from airborne particles between the light source and the illuminated surface.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

The field lighting systems would not pose a safety hazard or interfere with views from off-site locations.

c. What existing off-site sources of light or glare may affect your proposal?

Existing off-site sources of light or glare would not affect any of the BTA V Capital Levy Program project sites.

d. Proposed measures to reduce or control light and glare impacts, if any:

Light and glare associated with the BTA V Capital Levy Program projects would be minimized through proper lighting design. Lighting would be designed to minimize spillover to adjacent properties and would be controlled so that the sites are not lit after curfew hours. Lighting would comply with the requirements of SMC 23.41B.002.D.6. The lighting systems selected for the proposed athletic fields would be designed to minimize light and glare impacts. To reduce the amount of glare, spill light, and sky glow that is visible off site, the floodlights would need to be mounted higher than the 30 feet permitted by City code (SMC 23.76). The increased mounting height of 70 feet would reduce the maximum spill light at the residential property lines and meet the recommended practice of maximum of 1.0 foot-candles set by the City of Seattle.

SPS has proposed to use athletic field lighting systems designed to mitigate the negative impacts of light and glare. The proposed systems would consist of the latest technology available on the market for shielded LED floodlights designed for the lighting of athletic fields.

The use of high-efficiency LED arrays provides more precise control of light to be delivered to the field. The reflector and shielding design further reduce the amount of light transmitted off site and into the atmosphere. The floodlights would utilize an additional external visor mounted to the floodlight that extends in front of the floodlight. The floodlight design is similar to “full cutoff” style lights as they dramatically limit the amount of light that is emitted above the plane of the floodlight. The proposed lighting systems are similar to recently lighted fields at Roosevelt High School and Ballard High School.

A fully programmable automatic lighting controller would be provided. The controller could be operated remotely to turn lights off when the fields are not in use.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

SPS schools feature a variety of recreational features on site. Elementary schools typically have playground areas, hardscape play areas, and playfields, while middle and high schools can feature sports fields and, in some cases, running tracks. While these facilities are primarily used by the schools, many are available to the public outside of school hours.

Parks operates and maintains a large number of City parks, trails, gardens, playfields, swimming pools, and community centers within the vicinity of many of the BTA V Capital Levy Program project sites. **Table 4** includes information on park facilities adjacent to BTA V Capital Levy Program project schools.

Table 4 SPS Facilities Adjacent to a City of Seattle Park

School Facility	Adjacent Park Facility
B.F. Day Elementary School	B.F. Day Playground
John Muir Elementary School	York Playground
North Beach Elementary School	North Beach Park
Aki Kurose Middle School	Brighton Playfield
Sacajawea Elementary School	Sacajawea Playground
Maple Elementary School	Maplewood Playfield
Van Asselt Elementary School (Interim Site)	East Duwamish Greenspace
Jane Addams Middle School	Meadowbrook Playfield
Salmon Bay K–8 School	Salmon Bay Park (not Parks)
Ballard High School	Ballard Pool Ballard Tennis Courts
Denny Middle School/Chief Sealth High School (SWAC)	Longfellow Creek Greenspace
Cleveland High School	Cleveland Athletic Field
Franklin High School	Mount Baker Boulevard
Ingraham High School	Helene Madison Pool
Nathan Hale High School	Meadowbrook Community Center, Playfield, and Pool Nathan Hale Athletic Field
Rainier Beach High School	Be'er Sheva Park Rainier Beach Urban Farm and Wetland Rainier Beach Playfield
Memorial Stadium	None (note: Memorial Stadium is surrounded by the Seattle Center, which is not operated by Parks)

Source: City of Seattle, 2021c

Many Seattle schools have athletic facilities (football, soccer, baseball/softball fields, and tracks) that are used by students for daytime physical education classes, Monday through Friday, as well as for scholastic athletic practices after-school and on weekends. Some schools have lighted outdoor fields that can be used in the evenings. SPS and Parks have historically maintained a *Joint Use Agreement* (SPS and Parks, 2016) for shared use of athletic facilities. At school sites, SPS typically allows non-scholastic activities to be scheduled by Parks or other groups during times when they are not used for scholastic activities. Similarly, SPS is provided priority use of Parks facilities. As a result, sites owned by either entity that contain athletic facilities may be used for

practices or games associated with interscholastic athletics and for community uses such as youth and adult recreational sports and activities.

SPS and Parks' facilities are subject to the Joint Use Agreement and the Joint Athletic Facilities Development Program. Each is described in more detail below.

Joint Use Agreement

Over one-third of SPS's schools adjoin Parks land and facilities. SPS and Parks have cooperated since the 1920s in planning and jointly using these separately owned facilities and grounds to benefit students and community members. SPS and Parks entered into the Joint Use Agreement (Agreement) in May 1995. The Agreement sets forth guidelines for joint use of recreational facilities. Another stated purpose of the Agreement is to establish procedures for cooperation between the agencies and encouraging joint ventures.

Joint Athletic Facilities Development Program

Following creation of the Agreement, SPS and Parks formed a Joint Athletic Facilities Development Program (JAFDP) in 1997. The JAFDP identified and prioritized athletic facility projects that would *"increase the amount of capacity and improve the quality of play on city fields for youth and adults"* (JAFDP, 2015). The 2019 update (JAFDP, 2019) aimed to increase scheduling capacity and conduct a holistic examination of the field system. Parks and SPS are partners in this effort, jointly providing facilities and programming to meet the growing demand for field time and facilities.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The BTA V Capital Levy Program projects include improvements to athletic fields, such as the conversion from natural to synthetic turf (planned at Jane Addams Middle School and Boren K-8), or the installation of new field lighting (planned at Van Asselt Elementary School [Interim Site], Eckstein Middle School, Jane Addams Middle School, Boren K-8 School, Rainier Beach High School, and Denny Middle School/Chief Sealth High School [SWAC]). In general, the construction of BTA V Capital Levy Program projects may temporarily displace recreational space on school sites on a short-term basis but would allow for increased recreational use after construction.

Memorial Stadium is proposed for either seismic upgrades and/or demolition and replacement with a new stadium to address structural conditions. Construction for this work would likely take more than a year to complete, and athletic and other activities would not be able to be scheduled during that time.

c. Proposed measures to reduce or control impacts on recreation, including recreational opportunities to be provided by the project or applicant, if any:

Recreational opportunities for the school and community use would be enhanced with the installation of field improvement projects and playground upgrades and allow for increased hours of use. Installation of lights would allow SPS and Parks to schedule

events later in the evening than currently possible and help meet the demand for athletic field use in the City.

Recreational facilities at and adjacent to the schools included as increased capacity projects in the BTA V Capital Levy Program could be temporarily impacted by construction activities. Impacts may include facility closures, limited or restricted access, or a decreased pleasure using the facility as a result of proximity to construction activities.

Construction could be visible and audible to users nearby parks. Construction-related traffic could delay access to parks and displace parking. Temporary portables may be located on existing tennis courts or outdoor basketball courts during construction. The portables would be removed after construction and recreational use of the courts would be restored.

Memorial Stadium would not be available for recreational events (such as sports and concerts) during the seismic upgrade or demolition and replacement project.

Larger school buildings to accommodate added capacity could reduce the amount of recreational space on the site. However, most of the BTA V Capital Levy Program increased capacity projects would include upgrades of recreational equipment and spaces and would better incorporate recreational features into the site. Athletic field improvements and lighting would enhance recreational opportunities for schools and for community use.

SPS would comply with construction BMPs to minimize construction noise, dust, and transportation issues during construction, reducing potential disruptions to recreational users. SPS would coordinate construction schedules with Parks to minimize disruptions to park use. SPS would identify site-specific mitigation measures necessary to minimize construction impacts during design and project-level environmental review for specific projects.

13. Historic and Cultural Preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.**

Buildings, structures, or sites, located on or near the BTA V Capital Levy Program project sites that are over 45 years old and listed in or eligible for listing in national, state, or local preservation registers are listed in **Table 5**. This table also includes buildings, structures, or sites that are over 25 years in age, which is the local preservation register (Seattle Landmarks) age criterion. The status of each school with regard to its potential for listing in a local, state, or national historic register is included. Several of the schools are designated Seattle Landmarks, and several have been Determined Eligible by the Washington State Department of Archaeology and Historic Preservation (DAHP) for listing in the National Register of Historic Places (NRHP).

Table 5 Historic Information about BTA V Capital Levy Program Project Sites

School Facility/ Property	Date Built	Address	Architect/ Architectural Firm	Known Additions	Historic Register Status ^a
John Muir Elementary School	1971	3501 S Horton St	Leon Bridges & Edward Burke	1991 (Streeter/Dermanis & Associates)	SL: Unevaluated; NRHP: Determined Not Eligible
B.F. Day Elementary School	1891	3921 Linden Ave N	John Parkinson	1901 (James Stephen); 1916 (Edgar Blair); 1991 (B.J.S.S. Group)	SL: Designated NRHP: Unevaluated
Green Lake Elementary School	1970	2400 N 65th St	Manson Bennett	—	SL: Determined Not Eligible; NRHP: Unevaluated
Maple Elementary School	1971	4925 Corson Ave S	Durham, Anderson & Freed Co.	—	SL: Unevaluated; NRHP: Unevaluated
Salmon Bay K–8 School	1931	1810 NW 65th St	Floyd A. Naramore	—	SL: Unevaluated; NRHP: Determined Eligible
John Stanford Center for Educational Excellence	1954	2445 3rd Ave South	Unknown	2002 (Dana, Larson, Roubal Associates Architects & Engineers)	SL: Unevaluated; NRHP: Unevaluated
Boren K–8 School	1963	5950 Delridge Way SW	Naramore, Bain, Brady & Johanson	—	SL: Unevaluated; NRHP: Unevaluated
John Marshall Elementary School (Interim Site)	1927	520 NE Ravenna Boulevard	Floyd A. Naramore	—	SL: Unevaluated; NRHP: Determined Eligible
North Beach Elementary School	1958	9018 24th Ave NW	John Graham & Co.	—	SL: Unevaluated; NRHP: Unevaluated
Sacajawea Elementary School	1959	9501 20th Ave NE	Waldron & Dietz	—	SL: Unevaluated NRHP: Determined Not Eligible
Aki Kurose Middle School	1952	3928 S. Graham St	William Mallis	—	SL: Nominated and Under Consideration; NRHP: Unevaluated
Eckstein Middle School	1950	3003 NE 75th St	William Mallis	1968 (unknown architect)	SL: Designated; NRHP: Unevaluated
Jane Addams Middle School	1949	11051 34th Ave NE	Mallis, DeHart & Hopkins	1951 (Mallis, DeHart & Hopkins)	SL: Unevaluated NRHP: Unevaluated
Ballard High School	1999	1418 NW 65th St	Mahlum & Nordfors	—	SL & NRHP: n/a (<25 years old)
Ingraham (NWAC) High School	1959	1819 N 135th St	Naramore, Bain, Brady & Johanson	2004 (Rolluda Architects); 2012 (Integrus Architecture)	SL: Designated; NRHP: Unevaluated

School Facility/ Property	Date Built	Address	Architect/ Architectural Firm	Known Additions	Historic Register Status ^a
Cleveland High School	1925	5511 15th Ave S	Floyd A. Naramore	1958 (J.W. Maloney); 1970 (Edward Mahlum)	SL: Designated; NRHP: Unevaluated
Nathan Hale High School	1963	10750 30th Ave NE	Mallis & DeHart	1972 (DeHart, Lands and Hall); 2012 (Mahlum Architects)	SL: Unevaluated; NRHP: Unevaluated
Franklin High School	1911	3013 S Mt Baker Blvd	Edgar Blair	1958 (John W. Maloney; demolished ca. 1989); 1990 Renovation (Bassetti Norton Metler Rekevics)	SL: Designated; NRHP: Determined Eligible as Contributing Resource to Mount Baker Park Historic District
Rainier Beach (SEAC) High School	1960	8815 Seward Park Ave S	John W. Maloney	1998 (Streeter & Associates Architects)	SL: Determined Not Eligible; NRHP: Unevaluated
Chief Sealth International High School / Denny International Middle School (SWAC)	2011	2600 SW Thistle	Sierra-Martin Architects	—	SL & NRHP: n/a (<25 years old)
Memorial Stadium	1947	369 Republican St	George W. Stoddard	1965 office building (architect unknown)	SL: Unevaluated; NRHP: Determined Eligible
Van Asselt Elementary School (interim site)	1950	7201 Beacon Ave S	Jones & Bindon	—	SL: Designated; NRHP: Unevaluated

^a NRHP = National Register of Historic Places; SL = Seattle Landmark.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

Individual environmental review would be completed for project-specific development proposals. That review would be location-specific to the proposed project and focused on the potential for both precontact and historic-era cultural resources such as landmarks, features, burials, cemeteries, recorded archaeological sites, recorded Coast Salish named places, and past cultural resources assessments and studies that have occurred in or near the proposed project location.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

Only four of the BTA V Capital Levy Program projects propose construction for additions or modernization, and only one project is planned for a full replacement. Memorial Stadium is proposed for a seismic upgrade or demolition and replacement of the stadium. Impacts to cultural and historic resources are not expected for those projects because of the protections already in place and outlined in more detail below.

Other BTA V Capital Levy Program projects are generally located at existing or relocated field sites or are maintenance and repair projects at existing school sites. However, individual environmental review would be completed for project-specific development proposals. Methods for identification would include reviewing records of past cultural resources assessments, archaeological site records, and recorded historic built environment resources at the DAHP; a review of historical maps and aerial photographs; and published histories and indigenous ethnographic sources.

The BTA V Capital Levy Program projects include the demolition and replacement of one school and limited demolition to allow for additions at four other schools. The remaining projects are on fields or interior work, which would not affect the school building or facility even if the building was a designated landmark (unless the interior is landmarked).

Projects funded under the BTA V Capital Levy Program would be subject to historic and cultural resources protections under local regulations and state law; if a project would receive state funding from the Office of the Superintendent of Public Instruction (OSPI), compliance with Washington State Governor's Executive Order 21-02 (formerly 05-05) would be required (**Table 6**). Order 21-02 includes a set process for consultation with DAHP and Tribes, with DAHP as approval authority over cultural resources review. SPS follows the SEPA (Chapter 43.21C RCW), the state SEPA rules (Chapter 197-11 WAC), and the School Board's Policy on SEPA Compliance (Policy No. 6890).

Public notice of land use actions is sent to area Tribes and the DAHP for projects that undergo SEPA review. New construction must comply with applicable federal and state requirements regarding historic and cultural resources. For projects that would receive state funding from the OSPI or have a federal nexus, consultation would follow the process required under those regulations.

SPS projects requiring a Master Use Permit (MUP) are subject to the Seattle SEPA rules regarding Historic Preservation (SMC 25.05.675) and the Landmarks Preservation Ordinance (SMC 25.12). For projects that require a MUP and propose demolition or substantial modifications of a building over 50 years old, referral to the Landmarks Preservation Board is required (SMC 25.05.675H). For projects involving structures that appear to meet the criteria for designation, but have not yet been evaluated, any interested person may refer the structure to the Landmarks Preservation Board for

consideration. If designated as a landmark, a Controls and Incentives Agreement would be negotiated between the property owner and the Landmarks Preservation Board. If a property is referred and denied for landmark designation, the project cannot be conditioned or denied on the basis of historic preservation. Proposals for new construction adjacent to designated landmarks are referred to the City's Historic Preservation Officer for an assessment of any adverse impacts and comments on possible mitigation measures (SMC 25.05.675).

Table 6 Applicable Historic and Cultural Resources Regulations and Laws

Jurisdiction Level	Name	Reference
Local	Seattle Public Schools SEPA Policy	Policy No. 6890
Local	Seattle SEPA rules – Historic Preservation (if a MUP is needed)	SMC 25.05.675
Local	Seattle Landmarks Preservation Ordinance (may apply if a MUP is needed)	SMC 25.12
State	Archaeological Sites and Resources Act	RCW 27.53
State	Washington Heritage Register	RCW 7.34.200 & 25-12 WAC
State	Indian Graves and Records Act	RCW 27.44
State	Human Remains	RCW 68.50
State	Abandoned and Historic Cemeteries and Historic Graves	RCW 68.60
State	Governor's Executive Order 21-02 (formerly 05-05)	GEO 21-02

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Impacts to cultural and historic resources are not anticipated due to the nature of the BTA V Capital Levy Program projects because of the project-level review that would be completed. Information on measures to avoid, minimize, or compensate for loss, changes to, and disturbance would be included for projects, as appropriate. Some of those measures are described in more detail below.

Subsurface cultural (archaeological) resources may be present at the project locations proposed under the BTA V Capital Levy Program. Subsurface cultural resources, if present, are protected under local regulations and state law. An archival review and/or field study may be required to identify the archaeological potential of a project location. Typical mitigation measures include alteration of the project to avoid the archaeological resource, providing interpretation of the resource, archaeological investigation, or excavation and recovery of artifacts. Archaeological resources are subject to state laws administered by the DAHP; excavation within the boundaries of or adjacent to archaeological sites that are protected under RCW 27.53 requires an Archaeological Site

Alteration, Excavation, and Monitoring Permit from the DAHP. Construction would require ground disturbance, which could impact subsurface cultural resources, if present. Individual project-level analysis would be conducted on each project and, depending on the project, an Inadvertent Discovery Plan (IDP) would be prepared to address potential impacts.

Sacajawea Elementary School is proposed for replacement and is unevaluated for eligibility as a City of Seattle Landmark. If it is determined to be eligible for listing in a historic register or designation as a City of Seattle Landmark, impacts would be mitigated through obtaining a Certificate of Approval from the Landmarks Preservation Board and by designing the building to be architecturally sympathetic with the existing school.

Seismic upgrades and/or the demolition and replacement of Memorial Stadium would impact the stadium structure, which may meet the criteria for designation as a City of Seattle Landmark. Memorial Wall is currently located at the site of Memorial Stadium and would be respectfully retained, but may be relocated to accommodate the work on Memorial Stadium.

The BTA V Capital Levy Program projects developed pursuant to the provisions of this proposal would be subject to environmental review (if they meet or exceed thresholds for environmental review) and to the State of Washington's and City's regulations related to the protection of historic and cultural resources.

Measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources may include those listed below:

- Compliance with local, state, and federal laws regarding historic and cultural resources, as applicable.
- SPS acknowledges the Landmarks Preservation Board's interest in and mission to preserve cultural and historic resources within the City of Seattle. To mitigate impacts on cultural resources during previous capital programs, SPS has worked cooperatively with the Landmarks Preservation Board, both in the evaluation of historical significance and in the design of individual projects, while reserving its legal rights with respect to City jurisdiction. SPS understands that any proposals for demolition, historic renovations, and new construction at designated City of Seattle Landmarks will be reviewed by the Landmarks Preservation Board and may require a Certificate of Approval.
- Potential impacts on designated City of Seattle Landmarks would be evaluated by the City's Historic Preservation Officer, as required under SMC 25.12.350.
- Before construction at any BTA V Capital Levy Program project for increased capacity or field lighting, SPS would typically conduct a cultural resources analysis and develop an IDP to outline protocols to be followed in the event that cultural resources are observed. Typical protocols are construction work stoppages and immediate notifications to the City, DAHP, and affected Tribes.

Mitigation and/or avoidance measures would be coordinated with the City, DAHP, affected Tribes, and other stakeholders as needed.

14. Transportation

A *Transportation Technical Report* (Heffron Transportation, Inc., May 13, 2021) has been prepared in support of this programmatic checklist, and information from the report is summarized in this section. For further details, please refer to the *Transportation Technical Report*, which is Appendix A of this checklist.

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Seattle public schools are located on a variety of types of streets throughout the City of Seattle that include arterials, collectors, and local access streets. Figure 1 in the referenced *Transportation Technical Report* shows Seattle roadways serving the BTA V Capital Levy Program project sites. School access varies by site. Some schools have on-site parking lots with one or more vehicular access driveways; many have adjacent on-street passenger-vehicle and or school-bus load/unload zones.

Some of the BTA V Capital Levy Program projects would add enrollment capacity and include frontage improvements that would result in landscape and other enhancements, revisions to site access points on the adjacent streets, relocation of bus or passenger vehicle loading, or installation of sidewalks, ADA-compliant ramps, or pedestrian walkways. These BTA V Capital Levy Program projects would be subject to individual project-level review of impacts on the transportation system at the time of design and permitting and may also be subject to City of Seattle Street Improvement Permitting (SIP) review process.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

Yes, transit service in Seattle is primarily provided by King County Metro Transit (Metro) and Sound Transit. Community Transit and Pierce Transit also provide limited bus service to and from Seattle, typically during the weekday commute periods. Every bus is configured to accommodate wheelchairs and is also equipped with bicycle racks.

Fixed bus routes operate on published schedules and may be classified as local, express, commuter, or RapidRide routes. Local routes typically provide supplemental neighborhood stops to a paired route providing two-way service between destinations within Seattle and surrounding areas, from morning through evening, 5 to 7 days per week. Commuter bus service provides service to major employment destinations, operating only during the weekday morning and evening peak commute periods, traveling to major employment centers in the morning and away from employment centers in the evening, with a more limited number of stops along the way. Express routes provide fewer stops along a service corridor, for the purpose of providing shorter

travel times to destinations. RapidRide routes provide service through high-volume corridors, often with frequencies of less than 10 minutes between departures. RapidRide stations often feature digital passenger information signs and off-board payment terminals, to expedite passenger loading. Table 6 in the referenced *Transportation Technical Report* summarizes existing transit service near the BTA V Capital Levy Program project sites.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

Table 4 in the referenced *Transportation Technical Report* summarizes existing parking conditions at and around the BTA V Capital Levy Program project sites. Table 5 summarizes published parking demand rates for schools and is followed by specific parking demand information gathered for Seattle schools. Detailed parking assessments would be conducted as part of project-level design and permitting for individual projects that could impact parking due to increased enrollment capacity or changes to existing on-site or nearby on-street parking.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

Table 2 and Table 7 in the referenced *Transportation Technical Report* summarize existing roadways and non-motorized facilities near the BTA V Capital Levy Program project sites. None of the projects that are planned to add capacity to schools (at B.F. Day Elementary School, Green Lake Elementary School, John Muir Elementary School, Sacajawea Elementary School, and Aki Kurose Middle School) are expected to result in changes to the overall roadway network or intersections. However, some of the projects could include frontage improvements that would result in landscaping and other enhancements, revisions to site access points on the adjacent streets, relocation of bus or passenger vehicle loading, or installation of sidewalks, ADA-compliant ramps, or pedestrian walkways. These projects would be subject to individual project-level review of impacts on the transportation system at the time of design and permitting and may also be subject to City of Seattle SIP review process.

None of the projects that would improve athletic fields would result in changes to the overall roadway network or intersections.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The projects identified in the BTA V Capital Levy Program would not use or occur in the immediate vicinity of water or air transportation. However, Sound Transit's Link Light service and stations are located near some of the school sites. For those schools, students, staff, and site visitors may use Link light rail service to access the site vicinity on school days and/or for evening or weekend events.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?**

Table 3 in the referenced *Transportation Technical Report* summarizes published trip generation rates for schools and is followed by specific trip generation information gathered for Seattle schools. Five of the BTA V Capital Levy Program projects would result in increased student enrollment capacity—four elementary schools (classroom additions at B.F. Day Elementary School, Green Lake Elementary School, and John Muir Elementary School, and a replacement of Sacajawea Elementary School) and one middle school (modernization and expansion of Aki Kurose Middle School). The potential increases in capacity would range from about 125 students to 320 students at each of the school sites. Based on the average daily trip generation rates published in the Institute of Transportation Engineers' *Trip Generation Manual* (10th Edition, ITE, 2017), these capacity increases could generate added traffic at each site in the range of 250 to 650 trips per day. Based on the rates derived specifically for Seattle schools, the added enrollment capacity could result in 80 to 210 morning peak hour trips, 60 to 150 afternoon peak hour trips, and 20 to 50 commute PM peak hour trips. For those projects, project-level review of site access and local area transportation impacts would be based either on rates derived specifically for those schools, rates derived for other similar Seattle schools, or the published ITE rates. Changes in school-generated traffic can also be influenced by changes to on-site parking, nearby on-street parking, or site access conditions. Detailed analysis of these changes would also be included for those projects that consist of such elements.

Most Seattle elementary and middle schools are served by yellow school buses, but the numbers of buses vary at each site. Other truck trips made to schools commonly consist of food and supply deliveries, trash and recycling pick-up, and occasional maintenance. Overall, school buses and small trucks likely represent between 2% and 4% of total daily traffic at each school. The BTA V Capital Levy Program projects that would add enrollment capacity to school sites may or may not change the number of school bus and truck trips made to each site; changes to school bus and truck trips would be evaluated at the time of project-level analysis.

Improvements to athletic fields, such as the conversion from natural to synthetic turf (planned at Jane Addams Middle School and Boren K–8 School), or installation of new field lighting (planned at Van Asselt Elementary School [Interim Site], Eckstein Middle School, Jane Addams Middle School, Boren K–8 School, and Denny Middle School/Chief Sealth High School [SWAC]) would increase the frequency and times of field use. Athletic field lighting projects can result in increased PM peak hour traffic generation during the fall and winter months when natural light conditions would otherwise not permit the use of fields. They can also result in increased traffic generation during later evening times (between 6:00 and 10:00 p.m.), depending on the spectator capacity and types of activities scheduled at the site. Based on traffic generation rates derived for scholastic

and recreational athletics at other Seattle school sites (presented in the referenced *Transportation Technical Report*), these projects would generate between 240 and 300 additional trips per day during part of the year. During other times, the fields and natural lighting conditions allow scholastic and recreational use. Peak volumes could occur in the PM peak and early-evening hours, with increases ranging from 60 to 85 trips per hour. The athletic field improvement projects would be subject to individual project-level review of impacts on the transportation system at the time of design and permitting.

Projects that simply replace existing synthetic turf or field lighting with newer technology (planned for Salmon Bay K–8 School, Ingraham High School, Rainier Beach High School, and Memorial Stadium) would not change the traffic generation for those facilities.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

The proposal would not interfere with the movement of agricultural or forest products on streets in the area because no agricultural or working forest lands are located within the vicinity of the project sites.

h. Proposed measures to reduce or control transportation impacts, if any:

If an individual project would increase vehicle trips or parking demand, site-specific, project-level transportation analysis would be conducted prior to its implementation. If potential operational or safety impacts are identified through project-level analysis, mitigation measures would be identified to minimize or avoid those impacts. The types of transportation-related measures that could be considered for the BTA V Capital Levy Program projects would depend on the exact type, size, and nature of the proposed project, but could include the following:

- Construction Transportation Management Plans.
- Engagement with the Seattle Schools Traffic Safety Committee.
- Access and parking management measures, typically in the form of Transportation Management Plans (TMP).
- Intersection channelization and/or control improvements.
- Frontage improvements such as curb, gutter, sidewalk, or walkway improvements.
- Coordination with Metro regarding locations and operational requirements for bus stops along the site frontage.
- Monitoring of traffic or parking conditions at and around a school site.
- Event Management Plan and Event Communication Plans for adjacent neighbors.

- Establishment, expansion, and/or relocation of school-bus and/or passenger vehicle loading areas.

In some cases, parking mitigation measures could be imposed as conditions for approval of a project and any associated code departures. The types of measures that have been considered for District projects include reconfigurations of on-street parking where street widths allow, establishment of parking duration restrictions for on-street parking near schools, modifications to existing parking restrictions, expansions or changes to existing Restricted Parking Zones (RPZs), and operational requirements (such as staggering concurrent events, or preparation and distribution of event schedules for events held in assembly spaces on school sites). If a project is determined to require parking mitigation, specific measures would be developed through coordination with the District, City staff, and neighborhood representatives.

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.**

Although five of the BTA V Capital Levy Program projects would result in increased student school enrollment capacity, no increased need for public services is expected. These include four elementary schools (classroom additions at B.F. Day Elementary School, Green Lake Elementary School, and John Muir Elementary School, and a replacement of Sacajawea Elementary School) and one middle school (modernization and expansion of Aki Kurose Middle School). The potential increases in capacity would range from about 125 students to 320 students at each of the school sites. This would add up to a combined 1,025 elementary school student seats and 132 middle school student seats to the District's capacity. However, the increase in capacity between 125 and 320 students at the individual BTA V Capital Levy Program project sites would not result in an increased need for fire and police protection services beyond what is currently available.

- b. Proposed measures to reduce or control direct impacts on public services, if any.**

Construction vehicles and heavy equipment would use local roads, and there could be temporary detours and traffic delays. Access to all residential and commercial properties near BTA V Capital Levy Program projects would be maintained during construction.

Local public service providers would be made aware of any potential roadway impacts that could adversely affect response times. Transportation plans and construction management plans would include provisions to maintain emergency service access.

16. Utilities

a. Underline utilities currently available at the site:

All of the BTA V Capital Levy Program project sites have electricity, telephone, sanitary sewer, water, and refuse service. Most (but not all) areas have cable/fiber optics, and natural gas. Project-specific information on site-specific utilities would be determined during the design, environmental review, and permitting of individual projects.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Increased capacity BTA V Capital Levy Program projects would require the provision of utilities to service the new construction and provide adequate the standard of service. These projects include the classroom additions at B.F. Day Elementary School, Green Lake Elementary School, and John Muir Elementary School; the replacement of Sacajawea Elementary School; and the modernization and expansion of Aki Kurose Middle School.

Utility providers would be consulted prior to demolition, excavation, and other digging activities to ensure that utility lines are unaffected during construction. Construction impacts on utilities would generally be associated with temporary disruptions to overhead or underground utility services. During excavation, underground utilities such as water and sewer lines could be encountered, and localized service disruption may occur. Overhead utility lines that are located on the perimeter of project sites, including electricity, cable, and telephone lines, would not be affected during construction. Disruptions to overhead utilities could occur as utility lines are connected to new facilities. These disruptions would be short-term and coordinated with the utility provider.

The athletic field and lighting improvement projects and maintenance and repair projects may require demolition and provision of new utilities to manage the replacement and new lighting projects. The new lights require additional electricity, which would be provided by an existing electrical panel at the school. All existing utilities in the vicinity of the light pole locations would be relocated. Installation of the light poles and connecting power to them would require limited excavation.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Rebecca S. Asencio

Name of signee: Rebecca S. Asencio

Position and
Agency/Organization: Capital Planning Manager, Seattle Public Schools

Date Submitted: 5/14/21

D. SUPPLEMENTAL SHEET FOR NON-PROJECT ACTIONS

(IT IS NOT NECESSARY to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

The BTA V Capital Levy Program projects are intended to: increase capacity projects at five school sites; provide athletic facility and field lighting improvements at nine schools or facilities; and provide maintenance, repair, and upgrades at eight school sites, including the seismic upgrade or demolition and replacement of Memorial Stadium with a new stadium (see **Table 1** of Part A of this SEPA checklist).

Increase of Discharge to Water: None of the BTA V Capital Levy Program projects would be expected to result in increased discharges to water.

Increase of Emissions to Air: Activities for all of the BTA V Capital Levy Program projects would likely result in minimal emissions to the air from construction vehicle emissions, fugitive dust, or odors during construction. The construction period could last between approximately 2 weeks and 2 years, depending on the project.

Diesel fumes from idling buses are known to present a health hazard to students and nearby residents, but SPS has an anti-idling policy for buses that would reduce any impacts.

Increase of Release of Hazardous Materials: Activities for all of the BTA V Capital Levy Program projects require some level of construction and could result in accidental spills of construction-related materials, supplies, construction equipment, and vehicles. Spilled materials could include fuels, lubricants, solvents, antifreeze, and similar materials. If not contained, these contaminants could enter ground or surface water.

Increase of Production of Noise: Activities for all of the BTA V Capital Levy Program projects have the potential to increase noise temporarily during construction. Construction equipment and vehicles may include jackhammers, track hoes, dump trucks, forklifts, and boom trucks. This equipment would be in use most during the early stages of construction for the increased capacity projects, typically during the first 3 or 4 months of construction. The increased capacity projects and the proposal for a seismic upgrade or demolition of Memorial Stadium and replacement with a new stadium would likely result in the longest construction phases of the BTA V Capital Levy Program projects.

During operation, increased student capacity projects could cause minimal increases in noise from staff and student conversations and other programmed outdoor activity at the school.

Proposed measures to avoid or reduce such increases are:

Water: As stated in Section B.3.d. of the checklist, the BTA V Capital Levy Program projects would comply with all stormwater code requirements. SPS would implement BMPs during construction and operations at the school facilities.

Air: As stated in Section B.2.c. of the checklist, SPS would identify site-specific mitigation measures to minimize construction impacts during design and project-level environmental review for specific projects.

Hazardous Materials: As stated in Section B.7.a. of the checklist, SPS would identify site-specific mitigation measures necessary to minimize construction impacts during design and project-level environmental review for specific projects.

Noise: As stated in Section B.7.b. of the checklist, potential impacts of future, specific development proposals would be addressed through regulations and/or separate project-specific environmental review. SPS would identify site-specific mitigation measures necessary to minimize construction impacts during design and project-level environmental review for specific projects.

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Plants: Increased capacity projects in the BTA V Capital Levy Program would likely result in the removal of vegetation, including existing landscaping, trees, shrubs, and herbaceous vegetation. Other alterations may include frontage improvements that would result in the installation of landscaping or other enhancements.

Several of the proposed projects for athletic field and field lighting improvements would alter vegetation. These include projects at Jane Addams Middle School, which would convert grass fields to turf, and the Rainier Beach High School project, which includes the installation of up to four tennis courts, relocation and conversion of the practice field to synthetic turf, and conversion of grass baseball and softball outfields to synthetic turf.

Animals/Fish/Marine Life: One of the maintenance and repair projects at Nathan Hale High School involves stream restoration to enhance conditions for fish and wildlife. A long-term feasibility study is planned in coordination with SPU to address a combination of short- and long-term issues at the site.

There are no threatened or endangered species known to be on or near enough to the BTA V Capital Levy Program project sites to result in adverse impacts. The project sites are generally located in developed, urbanized areas and do not provide suitable habitat for these species, and the potential for threatened or endangered animal species to be present is low.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

Plants: As stated in Section B.4.b. of the checklist, increased capacity projects would likely include landscaping plans to enhance vegetation on the site, including adhering to City policies to incorporate native plants.

Construction of increased capacity BTA V Capital Levy Program projects would likely require tree removal, potentially including exceptional trees. However, projects would be designed to minimize the removal of trees (especially exceptional trees) where possible, and trees would be removed and replaced in accordance with City of Seattle code. The designated Heritage tree at Franklin High School would not be impacted by the proposed maintenance project at the site.

Construction could also occur in or adjacent to ECAs and their buffers, although construction would avoid ECAs to the extent practicable, and any development would comply with the City's ECA regulations.

The potential stream restoration at Nathan Hale High School and the proposed playfield, amphitheater, and garden at Maple Elementary School would preserve or enhance vegetation at those sites.

Landscaping and design plans would be analyzed in project-level reviews for individual BTA V Capital Levy Program projects.

Animals/Fish/Marine Life: As stated in Section B.5.d. of the checklist, BMPs would be followed during construction of the increased student capacity projects and for the maintenance and repair projects that involve work near wetlands or streams. The potential stream restoration at Nathan Hale High School would preserve or enhance animal, fish, and marine life at the site.

3. How would the proposal be likely to deplete energy or natural resources?

Energy/Natural Resources: Activities for the increased capacity projects for the BTA V Capital Levy Program projects would require electricity to operate. The City of Seattle has prohibited the new installation of natural gas facilities.

Installation of new field lighting is proposed at six school sites and would require electrical energy use.

Existing electrical field lighting would be replaced or upgraded at Rainier Beach High School, Memorial Stadium, and Franklin High School.

Proposed measures to protect or conserve energy and natural resources are:

Energy: As stated in Section B.6.c. of the checklist, the increased capacity BTA V Capital Levy Program projects propose energy conservation features that would substantially reduce their energy use compared to the existing school buildings. Overall, the energy efficiency of the increased capacity school projects is expected to reduce requirements for energy and natural resources over the long term.

In general, both the replacement and new athletic field lights for the BTA V Capital Levy Program projects would use high-efficiency LED floodlights to conserve energy. The LED floodlights would reduce the electrical energy load used for lighting by approximately 33% compared to floodlights that use metal halide lamps.

Some of the new field lighting systems include a fully programmable control system with remote operation that allows the fields to be lighted independently and to automatically turn off after play is completed. This feature ensures that lights would be on only during the hours that events are scheduled on each field. If necessary, the lights can also be operated manually through separate switches.

Additionally, the new and replacement athletic field lighting would be in compliance with the Washington State Energy Code and the 2018 Seattle Energy Code (City of Seattle, 2018).

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Parks, Wilderness, Wild and Scenic Rivers: The BTA V Capital Levy Program projects are not expected to use or affect environmentally sensitive areas or areas designated for governmental protection; such as parks, wilderness, or wild and scenic rivers.

ESA: The BTA V Capital Levy Program projects are not expected to use or affect areas with ESA-listed species, with the exception of the proposed project at Nathan Hale High School. The proposal involves stream restoration to enhance conditions for fish and wildlife.

Historic or Cultural Sites: As stated in Section B.13.a. of the checklist, there are a variety of historic and cultural resources at the BTA V Capital Levy Program project sites. **Table 5** identifies the status of each school with regard to its potential for listing in a local, state, or national historic register. Several of the schools are designated Seattle Landmarks, and several have been Determined Eligible by the DAHP for listing in the NRHP.

Only four of the BTA V Capital Levy Program projects propose building construction for additions or modernization, and only one project is planned for a full building replacement. Memorial Stadium is proposed for a seismic upgrade or demolition and replacement of the stadium. Impacts to cultural and historic impacts are not expected for those projects because of the protections in place and described in more detail below. Other BTA V Capital Levy Program projects are generally located at existing or relocated field sites or are maintenance and repair projects at existing school sites. However, individual environmental review would be completed for project-specific development proposals.

Wetlands: Sacajawea Elementary School, Rainier Beach High School, and Nathan Hale High School are the BTA V Capital Levy Program project sites that are in the immediate vicinity of a surface water body. The Sacajawea Elementary School site includes wetlands to the west and south. Nathan Hale High School includes several wetland areas and is in the vicinity of the SF of Thornton Creek. The Rainier Beach High School site has wetlands to the northwest

of the site and is in proximity to Lake Washington. The replacement of Sacajawea Elementary School and the drainage improvements planned at Nathan Hale High School may require work over, in, or adjacent to the wetlands or SF of Thornton Creek. The Rainier Beach High School project is not expected to require work within 200 feet of the wetlands in the northeast of the site.

Floodplains: The BTA V Capital Levy Program projects are not expected to use or affect floodplains.

Farmlands: The BTA V Capital Levy Program projects are not expected to use or affect prime farmlands.

Proposed measures to protect such resources or to avoid or reduce impacts are:

Parks, Wilderness, Wild and Scenic Rivers: No measures are expected to be needed or required.

ESA: A long-term feasibility study is planned in coordination with SPU to address a combination of short- and long-term issues at the site addressing drainage improvements or stream restoration at the Nathan Hale High School. BMPs would be implemented during project activities to avoid or reduce impacts to ESA species, and the overall project intent is to enhance habitat for ESA species.

Historic or Cultural Sites: Impacts to cultural and historic resources are not expected because of the avoidance and protection measures listed in Section B.13.d. of the checklist. Individual environmental review would occur for project-specific development proposals. The reviews would be location-specific to the proposed project and focused on the potential for both precontact and historic-era cultural resources such as landmarks, features, burials, cemeteries, recorded archaeological sites, recorded Coast Salish named places, and past cultural resources assessments and studies that have occurred in or near the project location.

Wetlands: The Sacajawea Elementary School site includes wetlands to the west and south, and the Rainier Beach High School site has wetlands to the northwest of the site. No impacts to the wetlands on the sites are expected. Nathan Hale High School includes several wetland areas and is in the vicinity of the SF of Thornton Creek, and the proposed work would comply with all regulatory requirements. The proposed work would result in improvements to wetlands and the stream on the site in the long term. As stated in Section B.3.d. of the checklist, SPS would implement BMPs during construction of BTA V Capital Levy Program projects, which would protect impacts to wetlands and wetland buffers.

Floodplains: None required.

Farmlands: None required.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The current use of all of the BTA V Capital Levy Program project sites is the provision of public school education, and that would not change. None of the proposed projects is likely to affect land and shoreline use, including the encouragement of land or shoreline uses incompatible with existing plans.

Proposed measures to avoid or reduce shoreline and land use impacts are:

As stated in Section B.8.a. of the checklist, most of the BTA V Capital Levy Program projects are located at existing school sites, and as with most SPS facilities, they are generally located within residential neighborhoods, where school uses are allowed. The projects are accordingly generally compatible with existing land uses and plans for residential neighborhoods. However, schools located in residential zones often cannot meet code requirements for height, bulk, and other provisions. Chapter 23.51B provides development standards for public schools in single-family and multi-family zones. These include specifications for lot coverage, setbacks, and height for new schools, reconstructed schools, and additions. If those standards cannot be met, the Seattle Land Use Code (SMC Chapter 23.79) includes a procedure by which departures from the required development standards of the code can be granted for public school structures.

Memorial Stadium is located in a SM-UP 95 (M)/Uptown Urban Center zone and John Stanford Center for Educational Excellence is located in a IG1 U/85/General Industrial zone. Proposed projects at those sites are compatible with existing land uses and plans within those designated zones and would comply with SMC requirements.

All projects would comply with SMC requirements and be designed to conform to zoning requirements and design guidelines. If necessary, SPS would apply for development standard departure(s) as permitted by the SMC.

If needed, a special exception to the height limit for poles on athletic fields would be requested to comply with existing codes. This special exception would ensure adequate illumination and reduce the amount of impacts from light and glare into the neighborhood.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Transportation: As stated in Section B.14 of the checklist, five of the BTA V Capital Levy Program projects would result in increased student enrollment capacity. Potential increases in capacity would range from about 125 students to 320 students at each of the school sites. These capacity increases could generate added traffic at each site. For those projects, project-level review of site access and local area transportation impacts would be provided. Changes in school-generated traffic can also be influenced by changes to on-site parking, nearby on-street parking, or site access conditions. Detailed analysis of these changes would also be included for those projects that consist of such elements.

The BTA V Capital Levy Program projects that would add enrollment capacity to school sites may or may not change the number of school bus and truck trips made to each site; changes to school bus and truck trips would be evaluated at the time of project-level analysis.

Improvements to athletic fields, such as the conversion from natural to synthetic turf or installation of new field lighting, would increase the frequency and times of field use. Athletic field lighting projects can result in increased PM peak hour traffic generation during the fall and winter months when natural light conditions would otherwise not permit the use of the fields. They can also result in increased traffic generation during later evening times (between 6:00 and 10:00 p.m.), depending on the spectator capacity and types of activities scheduled at the site. The athletic field improvement projects would be subject to individual project-level review of impacts on the transportation system at the time of design and permitting.

Projects that simply replace existing synthetic turf or field lighting with newer technology would not change the traffic generation for those facilities.

Public Services: The increase in capacity between 125 and 320 students at the individual BTA V Capital Levy Program project sites is not expected to increase the need for fire and police protection services beyond what is currently available.

Utilities: Increased capacity BTA V Capital Levy Program projects would require the provision of utilities to service the new construction and provide an adequate standard of service.

Proposed measures to reduce or respond to such demand(s) are:

Transportation: As stated in Section B.14 of the checklist, if an individual project would increase vehicle trips or parking demand, site-specific, project-level transportation analysis would be conducted prior to its implementation. If potential operational or safety impacts are identified through project-level analysis, mitigation measures would be identified to minimize or avoid those impacts. The types of transportation-related measures that could be considered for the BTA V Capital Levy Program projects would depend on the exact type, size, and nature of the proposed project. Examples of measures to reduce or control transportation impacts are included in Section B.14.h. of the checklist.

In some cases, parking mitigation measures could be imposed as conditions for approval of a project and any associated code departures.

Public Services: As stated in Section B.15.b. of the checklist, construction vehicles and heavy equipment would use local roads, and there could be temporary detours and traffic delays. Access to all residential and commercial properties near BTA V Capital Levy Program project sites would be maintained during construction.

Local public service providers would be notified of any potential roadway impacts that could adversely affect response times. Transportation plans and construction management plans would include provisions to maintain emergency service access.

Utilities: As stated in Section B.16.b. of the checklist, utility providers would be consulted prior to demolition, excavation, and other digging activities to ensure that utility lines are unaffected during construction. Construction impacts on utilities would generally be associated with temporary disruptions to overhead or underground utility services. During excavation, underground utilities such as water and sewer lines could be encountered, and localized service disruption may occur. Overhead utility lines that are located on the perimeter of project sites, including electricity, cable, and telephone lines, would not be affected during construction. Disruptions to overhead utilities could occur as utility lines are connected to new facilities. These disruptions would be short term and coordinated with the utility provider.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

Conflicts with Local, State/Federal Laws: There are no known conflicts or additional requirements. At this time, no impacts are anticipated. Specific implementing actions would be further evaluated for impacts prior to the construction of BTA V Capital Levy Program projects.

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F. ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
ACM	asbestos-containing materials
Agreement	Joint Use Agreement
As	Arsenic
BMPs	Best Management Practices
BEX	Building Excellence
BTA	Building, Technology, and Academics/Athletics
DAHP	Washington State Department of Archaeology and Historic Preservation
dBA	A-weighted decibel
ECA	Environmentally Critical Area
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
GIS	geographic information system
IDP	Inadvertent Discovery Plan
ITE	Institute of Transportation Engineers
JAFDP	Joint Athletic Facilities Development Program
JSCEE	John Stanford Center for Educational Excellence
LCP	lead-containing paint
LED	light emitting diode
LEED	Leadership in Energy and Environmental Design
Leq	equivalent sound level
Metro	King County Metro Transit
MUP	Master Use Permit
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWAC	Northwest Athletic Center
OSPI	Office of the Superintendent of Public Instruction
Parks	Seattle Department of Parks and Recreation
PCBs	polychlorinated biphenyls
PHS	Priority Habitats and Species
PSCAA	Puget Sound Clean Air Agency

Acronym/Abbreviation	Definition
RCW	Revised Code of Washington
RPZ	Restricted Parking Zone
SEAC	Southeast Athletic Center
SEPA	State Environmental Policy Act
SF	South Fork
SIP	Street Improvement Permitting
SMC	Seattle Municipal Code
SPS	Seattle Public Schools
SWAC	Southwest Athletics Center Southwest Athletic Center
TMP	Transportation Management Plan
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife

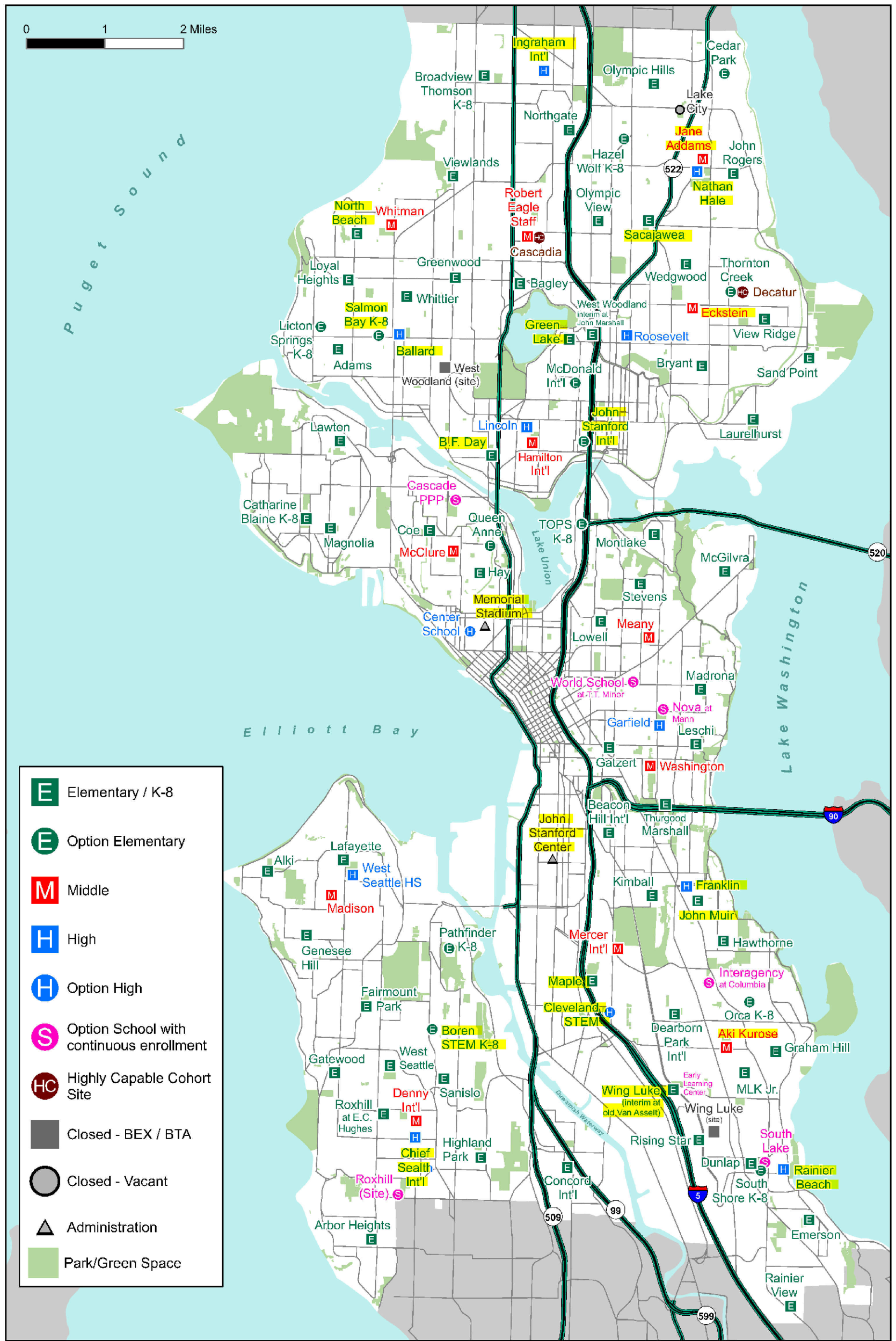
G. FIGURE

2020-21



All District Schools

Map Data:
2020-21
Last updated:
2/25/2020



The names on this map are not intended to reflect the official name of any school building. They are instead intended to ensure better public understanding based upon familiar reference, particularly in situations where program and school building names differ. This information has been compiled by SPS staff from a variety of sources and is subject to change without notice. SPS makes no representations or warranties, expressed or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. SPS shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited. MapFile: SPS_District_2020_ALL_Schools

Figure 1
Seattle District School Location Map

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APPENDIX A
TRANSPORTATION TECHNICAL REPORT

TRANSPORTATION TECHNICAL REPORT

for the

BTA V Programmatic SEPA Checklist

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May 13, 2021

TABLE OF CONTENTS

1. INTRODUCTION	1
2. BTA V PROJECTS SUMMARY	1
3. RELATIONSHIP TO PLANS AND POLICIES.....	3
4. AFFECTED ENVIRONMENT	6
4.1. Roadways	6
4.2. Traffic Volumes	11
4.3. Traffic Operations	14
4.4. Parking	16
4.5. Transit	21
4.6. Non-Motorized Facilities	26
5. IMPACTS OF PROPOSED PROJECTS.....	31
5.1. School Capacity Projects.....	31
5.2. School Athletic Field Improvements and Lighting	32
5.3. Short-Term Construction Impacts	34
6. MITIGATION MEASURES	35

LIST OF FIGURES

Figure 1. Seattle Roadways Serving the Potential BTA V Project Sites.....	7
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LIST OF TABLES

Table 1. Summary of Potential BTA V Projects and Potential Range of Transportation Impacts.....	2
Table 2. Primary Roadways Serving Potential BTA V Project Sites.....	8
Table 3. Published ITE Trip Generation Rates for Schools	12
Table 4. Parking Characteristics in the Vicinity of Potential BTA V Project Sites	17
Table 5. Published ITE Parking Generation Rates for Schools.....	20
Table 6. Public Transit Service within One-Quarter Mile of Potential BTA V Project Sites	22
Table 7. Non-Motorized Characteristics at Potential BTA V Project Sites	27

1. INTRODUCTION

This report describes the affected environment and potential transportation-related impacts that may occur with projects included in Seattle Public Schools' (SPS) future Building, Technology, and Academics/Athletics Capital Levy V (BTA V) Program. The BTA V program proposes construction, renovation, additions, replacement, and modernization of school buildings throughout Seattle (some of which would increase enrollment capacity), improvements to athletic facilities, and a variety of maintenance projects.

The information in this report is provided at a planning level of detail consistent with a programmatic analysis of potential effects. The analysis identifies the types and ranges of impacts that could be expected from implementation of the BTA V program capacity and facility improvement projects. SPS will conduct project-level review, including detailed traffic and parking impact analyses, when required and when sufficient project-level details are available.

2. BTA V PROJECTS SUMMARY

This section of the report identifies the SPS school sites proposed to be included in the BTA V program along with the types of improvements planned and the potential for transportation-related impacts. A detailed list of the potential project sites and types of projects is provided in Table 1 of the *Programmatic SEPA Environmental Checklist*.

The transportation-related impacts may range from: 1) none, such as for minor building or facility systems maintenance projects; 2) short-term construction impacts only, such as for drainage, amenity, or re-surfacing projects, or 3) short-term and long-term impacts, such as for school additions or athletic field improvements that result in new construction and added enrollment capacity or increased site activity. An example of a project with short-term impacts might be a facility maintenance project that temporarily reduces the available number of parking stalls while construction equipment and materials are staged on-site; whereas, a long-term impact could be associated with a building expansion project or athletic field improvement that results in a long-term increase in the number of daily vehicle trips and parking demand in the vicinity of the site.

The projects discussed in this report and their projected potential level of transportation-related impact are summarized in Table 1 on the following page. Individual, project-level analysis is required to determine the full potential for and persistence of impacts to traffic and parking.

Table 1. Summary of Potential BTA V Projects and Potential Range of Transportation Impacts

Potential Project Site	Project Type	Potential for Parking or Traffic Impacts
Elementary Schools		
B.F. Day	Addition with capacity increase	Short-term and long-term impacts
Green Lake	Addition with capacity increase	Short-term and long-term impacts
Maple	Playfield and amenity improvements	Short-term and/or construction impacts
John Muir	Addition with capacity increase	Short-term and long-term impacts
North Beach	Site slope and drainage improvements	Short-term and/or construction impacts
Sacajawea	School replacement	Short-term and long-term impacts
K-8 Schools		
Boren	Playfield / amenity improvements; field lighting	Short-term and long-term impacts
Salmon Bay	Playfield / amenity improvements	Short-term and/or construction impacts
Middle Schools		
Aki Kurose	Addition with capacity increase	Short-term and long-term impacts
Eckstein	Field lighting	Potential for long-term impacts
Jane Addams	Playfield / amenity improvements; field lighting	Short-term and long-term impacts
High Schools		
Ballard	Amenity maintenance	None expected
Cleveland	Americans with Disabilities Act (ADA) Access improvements	Short-term and/or construction impacts
Franklin	Amenity maintenance and improvement	Short-term and/or construction impacts
Nathan Hale	Amenity maintenance and stormwater drainage	Short-term and/or construction impacts
Ingraham	Amenity maintenance and improvement	None expected
Rainier Beach	Field / amenity additions and improvements	Negligible long-term impacts
Other Facilities		
John Stanford Center for Educational Excellence (JSCEE)	Facility storage addition	Short-term and/or construction impacts
John Marshall (interim ^a)	Maintenance	None expected
Van Asselt (interim ^a)	Field lighting	Potential for long-term impacts
Memorial Stadium	Field lighting replacement and structural improvement or replacement	Short-term and/or construction impacts
Chief Sealth (Southwest Athletics Center (SWAC))	Amenity improvement and field lighting	Short-term and long-term impacts

Source: SPS, BTA V Program Matrix, March 2021

a. Sites serve as interim facilities for schools while they are under construction.

3. RELATIONSHIP TO PLANS AND POLICIES

The following sections describe the plans and policies that relate to transportation and school facilities. Combined, these plans and policies establish Seattle's multimodal transportation policy framework intended to shift Seattle's transportation systems from auto-orientation toward a system of facilities that supports transit and non-motorized trips as the preferred modes of travel. They also focus on the system's safety. Each policy or plan described below was reviewed to determine if any planned transportation improvements could affect the roadways and intersections near proposed BTA V project sites.

3.1.1. Seattle Comprehensive Plan

The Seattle *Comprehensive Plan (Plan)* identifies the City's land use strategy for accommodating future job and housing growth; it was first adopted in 1994, underwent major revision in 2016, and the most recent updates to the plan were adopted in 2020.

The *Plan* defines the City's goals, describes policies in support of each goal, and shows how transportation infrastructure, policies and programs will be developed to ensure that the transportation system can safely, equitably, and efficiently support future growth. The *Plan* includes mode shift goals that promote a transition away from single-occupant vehicles (SOV) toward walking, biking, transit and carpools.

Transportation Goal TG 3 states:

Meet people's mobility needs by providing equitable access to, and encouraging use of, multiple transportation options.

The city has adopted many subsequent policies in support of this goal that are relevant to the proposed BTA V projects, including:

- T 3.1 Develop and maintain high-quality, affordable, and connected bicycle, pedestrian, and transit facilities.*
- T 3.11 Develop and maintain bicycle and pedestrian facilities, including public stairways, that enhance the predictability and safety of all users of the street and that connect to a wide range of key destinations throughout the city.*
- T 3.13 Prioritize bicycle and pedestrian investments on the basis of increasing use, safety, connectivity, equity, health, livability, and opportunities to leverage funding.*
- T 3.14 Develop and implement programs to educate all users of the street on rules of the road, rights, and responsibilities.*

Transportation Goal TG 6 states:

Provide and maintain a safe transportation system that protects all travelers, particularly the most vulnerable users.

Policies adopted by the City policies in support of this goal that are relevant to the proposed BTA V projects include:

- T 6.6 Invest in education measures that increase mutual awareness among motorists, pedestrians, and bicyclists.*
- T 6.7 Implement innovative and effective measures to improve safety that combine engineering, education, evaluation, and enforcement.*
- T 6.8 Make safety a priority in all transportation plans and projects, including project prioritization criteria.*



Consistent with the Comprehensive Plan, the Seattle Department of Transportation (SDOT) has developed a number of subsequent plans that focus on specific transportation modes, as described in the following sections.

3.1.2. Move Seattle

*Move Seattle*¹ is the 10-year Strategic Vision for Transportation throughout the City of Seattle and “...describes a holistic transportation approach, linked to land use, that integrates our bicycle, pedestrian, transit, and freight plans.” It highlights where the City should focus investments to improve safety and mobility and includes a 10-year project list with maintenance and operations priorities. The Move Seattle document also presents strategic goals and performance metrics to measure success and accountability. School-related goals include: 1) Improve safety in school zones, 2) Create a traffic safety education kit for community groups and schools to promote road safety and Vision Zero; 3) Partner with SPD to install at least 12 new school zone cameras, and 4) Improve school walking routes at up to 12 locations and upgrade school zone signage at up to 15 locations each year.

3.1.3. Seattle Transit Master Plan

The *Transit Master Plan*,² (TMP) adopted in 2012 and amended in 2016, defines the critical role that transit plays in meeting the City’s goals related to sustainability, equity, economic productivity, sustainability, and livability. Developed with feedback from King County Metro (Metro) and Sound Transit, the TMP identifies the types of transit facilities, services, programs, and system features that will be required to meet Seattle’s transit needs through 2030, based upon market analysis, review of future growth patterns, and evaluation of transit needs. The TMP identifies Seattle’s Frequent Transit Network (FTN), which is a vision for a network of transit corridors that connect the city’s urban centers and villages with high-quality transit service within a short walk for most residents, identifies high-priority corridors for transit capital investments, and prioritizes multimodal project coordination.

The TMP specifically acknowledges that youth are particularly reliant on transit, and establishes a goal that the City work to expand access to Orca cards for students through partnerships with school and transit providers. Additionally, it encourages route designs that serve student needs and passenger information systems that meet the expectations of tech-savvy youth. Two of the policies outlined in the TMP Summary Report specifically address schools.

Policy ToN1.2: Direct most development within urban villages, urban centers, and along the Frequent Transit Network – Use zoning and public investment to encourage development along FTN corridors. Strategies for directing development toward transit corridors may include: Building community centers, schools, courthouses, and other civic buildings along transit corridors.

Policy ToN3.3: Plan for density that responds to the character of existing development – Plan for buildings of a similar scale and character to existing structures to ensure successful integration of land use intensification. Prioritize increased density near existing activity centers, such as schools, shopping centers, job centers, or medical facilities.

¹ Seattle Department of Transportation (SDOT), 2015.

² City of Seattle, 2016.

3.1.4. City of Seattle Pedestrian Master Plan

The City's *Pedestrian Master Plan*³ (PMP) defines the actions needed to improve walkability and accessibility in Seattle. The PMP establishes objectives to complete and maintain the city-wide pedestrian system, improve walkability and pedestrian safety on all streets, and to encourage more people to walk for transportation, recreation, and health. Components that relate to schools include the following implementation actions: 1) improving signage (including school zones), 2) increasing participation in pedestrian safety, education, encouragement programs, and 3) increasing the numbers of children walking or biking to or from school. At the time of this report, the *2020-2024 Implementation Plan*⁴ was the most current enactment of the PMP.

3.1.5. City of Seattle Bicycle Master Plan

The City's *Bicycle Master Plan*⁵ (BMP), sets forth a vision of riding a bicycle that is a comfortable and integral part of daily life in Seattle for people of all ages and abilities, and provides a blueprint to make it easier to decide to ride a bike. A stated goal of the BMP is to support bicycle mobility in safe routes to school to encourage bicycle travel by students, as a means to help improve their health and mental development. The BMP identifies existing and recommended future trails, cycle tracks, bicycle lanes, shared use facilities, and neighborhood greenways. The highest priority projects, planned to be constructed by 2024, are identified in the *BMP Implementation Plan*.⁶ The following lists key strategies and actions included in the BMP that specifically address schools.

Strategy 5.2 Develop a bicycle parking implementation program

Action 5.2.2—Prioritize the installation of bicycle racks and on-street bicycle corrals in high-demand locations. High-demand locations include, but are not limited to, neighborhood business districts, community centers, libraries, universities and colleges, employment centers, parks, and schools. Determine when bicycle parking should be sheltered bicycle parking, such as at schools where students/staff will park their bicycles for extended periods of time.

Strategy 6.1 Develop a bicycle safety program

Action 6.1.1 Provide bicycle education for primary school children. Work with schools to continue and expand the Safe Routes to School program to teach children to safely walk and ride a bicycle to school.

Action 6.1.2 Assess the feasibility and cost of including middle school and high school roadway safety education in Seattle schools.

Strategy 7.9 Build and expand upon public partnerships

Action 7.9.5 - Engage with the Seattle Public Schools to continue to partner with Safe Routes to School, on traffic safety education, and encouragement of walking and biking to school.

Strategy 7.17 Establish a broad-based funding approach

Action 7.17.8 Capitalize on the multiple benefits of bicycling to fund neighborhood initiatives out of a variety of fund sources, such as the Safe Routes to School program. The Neighborhood Street Fund, Family and Education Levy, and Neighborhood Park and Street Funds are potential funding opportunities for community-driven projects.

³ SDOT, 2009.

⁴ SDOT, 2019.

⁵ SDOT, adopted 2014.

⁶ SDOT, 2019.



4. AFFECTED ENVIRONMENT

This section describes existing characteristics of the overall transportation system in the City of Seattle and includes the roadways and other transportation facilities serving the schools and/or sites that could be improved as part of the BTA V program.

4.1. Roadways

4.1.1. Existing Roadways

All roadways in Seattle have designated functional classifications, which depend on the types of trips they serve and the relative levels of traffic volumes they carry. These functional classifications represented varying levels of emphasis on mobility and access. Higher classes (e.g., freeways and arterials) provided a high degree of mobility and have more limited access to adjacent land uses, accommodating higher traffic volumes at higher speeds. Lower classes (e.g., residential and commercial access streets) provided a high degree of access to adjacent land and are not intended to serve through traffic, carrying lower traffic volumes at lower speeds. Collectors generally provided a more balanced emphasis on traffic mobility and access to land uses.

Seattle public schools are located on a variety of types of streets that include arterials, collectors, and local access streets. For schools located on arterial streets, vehicle trips to and from the school sites may be more easily accommodated, but it may be more important that activities at the school occur in a way that does not impede mobility for other vehicles on the adjacent streets. For schools located on local access streets, activities at the school are less likely to affect mobility on the adjacent streets, but it may be more important to manage school-generated vehicle traffic.

In addition to functional classifications, the City has designated some of Seattle's arterial streets as Major Truck Streets, which accommodate significant freight movement through the city and connect to major freight traffic generators. If a school is located on or near a Major Truck Street, roadway characteristics and potential issues would be similar to those of any other arterial roadway, but there would likely be a higher proportion of truck traffic traveling past the school site.

The City updated its street-type standards in 2017,⁷ taking into consideration adjacent land uses and the envisioned character of the street. These new standards provide more specific direction for design elements and supplement the traditional functional classification system by responding to community needs and desires. Because the character and function of a street may change several times over short distances, the updated street standards allow for sections of the same street to reflect localized community needs or Complete Streets objectives.

For the purpose of this report, the roadways in the vicinity of the proposed projects are classified primarily according to their arterial or local access classification. Further analysis would be required on a project-specific basis to examine the potential for impacts to more discrete characteristics of the street type standards. Figure 1 presents a map of roadways with freeway, arterial, or collector designations that serve the school sites being considered for BTA V Program projects. Table 2 summarizes the functional classifications of the roadways nearest the proposed project sites.

⁷ City of Seattle, 2017. <https://streetsillustrated.seattle.gov/sitemap/>, accessed March 2021.

Figure 1. Seattle Roadways Serving the Potential BTA V Project Sites

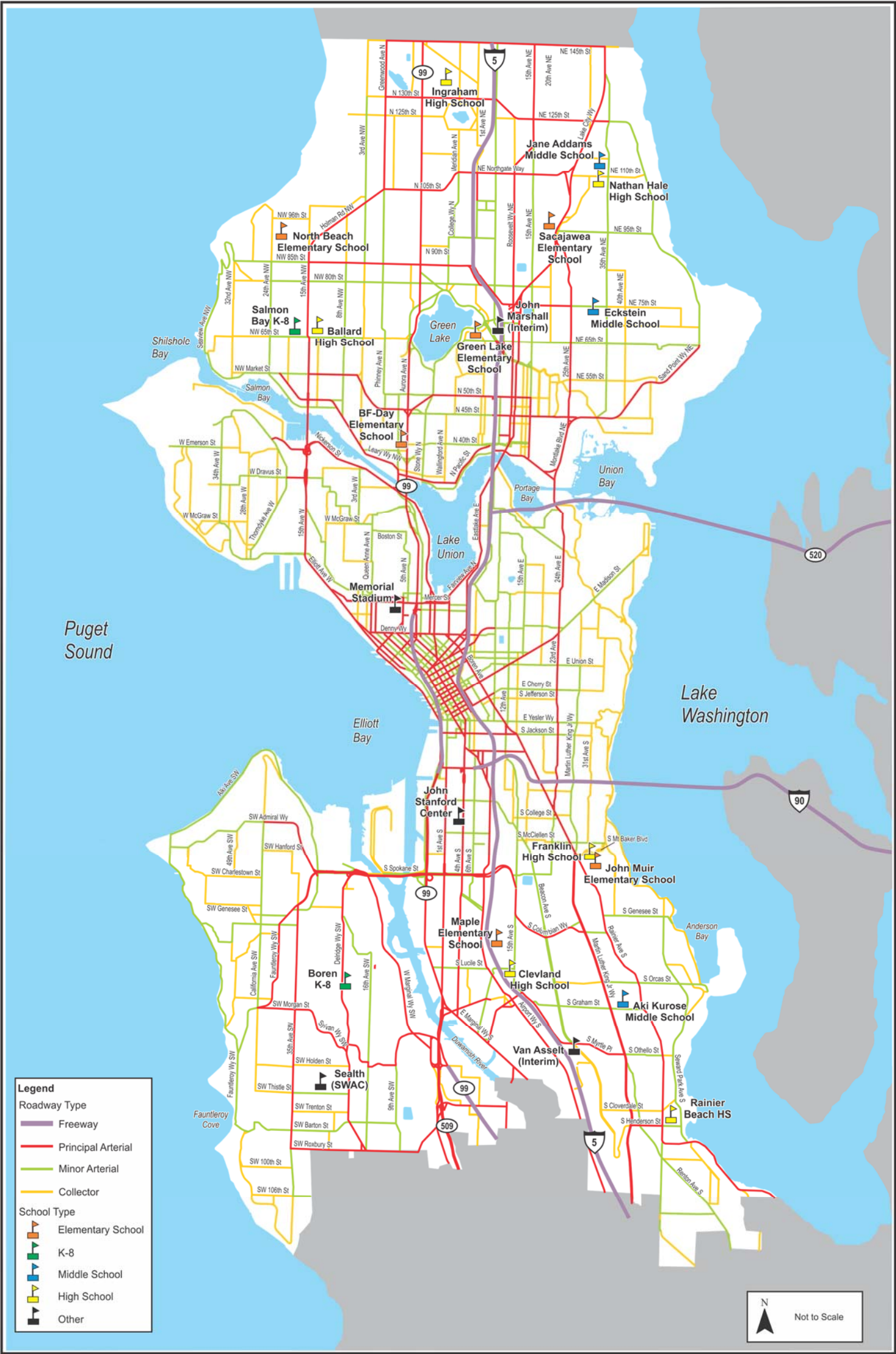


Table 2. Primary Roadways Serving Potential BTA V Project Sites

Potential Project Site	Adjacent Street(s) ¹		Other Nearby Major Street(s) ²	
	Street Name	Classification	Street Name	Classification
Elementary Schools				
B.F Day	Fremont Avenue N Linden Avenue N N 41 st Street	Collector Arterial Local Access Local Access	Aurora Avenue N	Principal Arterial (Major Truck Street)
Green Lake	Sunnyside Avenue N Woodlawn Avenue N 1 st Avenue NE	Local Access Collector Arterial Local Access	N 65 th Street East Green Lake Way N Latona Avenue NE	Minor Arterial Minor Arterial Collector Arterial
Maple	Corson Avenue S S Shelton Street	Local Access Local Access	15 th Avenue S S Lucile Street S Columbian Way	Minor Arterial Minor Arterial Principal Arterial
John Muir	S Horton Street 34 th Avenue S S Hinds Street	Local Access Local Access Local Access	Rainier Avenue S	Principal Arterial
North Beach	24 th Avenue NW NW 90 th Street	Collector Arterial Local Access	NW 96 th Street NW 85 th Street	Collector Arterial Minor Arterial
Sacajawea	25 th Avenue NE 17 th Avenue NE NE 96 th Street NE 94 th Street	Local Access Local Access Local Access Local Access	15 th Avenue NE Lake City Way NE	Minor Arterial Principal Arterial
K-8 Schools				
Salmon Bay	NW 65 th Street NW 67 th Street 18 th Avenue NW 19 th Avenue NW	Minor Arterial Local Access Local Access Local Access	15 th Avenue NW 20 th Avenue NW	Principal Arterial (Major Truck Street) Collector Arterial (south of NW 65 th Street)
Boren	Delridge Way SW Croft Place SW 22 nd Avenue SW	Principal Arterial Local Access Local Access	SW Orchard Street/ Sylvan Way SW 23 rd Avenue SW	Principal Arterials Minor Arterial

Table 2. Primary Roadways Serving Potential BTA V Project Sites

Potential Project Site	Adjacent Street(s) ¹		Other Nearby Major Street(s) ²	
	Street Name	Classification	Street Name	Classification
Middle School				
Aki Kurose	S Juneau Street	Local Access	Martin Luther King Jr. Way S Rainier Avenue S	Principal Arterial
	39 th Avenue S	Local Access		Principal Arterial
	42 nd Avenue S	Local Access		
	S Graham Street	Minor Arterial		
Eckstein	NE 75 th Street	Minor Arterial	35 th Avenue NE	Minor Arterial
	30 th Avenue NE	Local Access	25 th Avenue NE	Principal Arterial
	33 rd Avenue NE	Local Access		
Jane Addams	NE 115 th Street	Collector Arterial	Lake City Way NE	Principal Arterial (Major Truck Street)
	31 st Avenue NE	Local Access	35 th Avenue NE	Minor Arterial
	34 th Avenue NE	Local Access	Ravenna Avenue NE	Collector Arterial
	NE 110 th Street	Collector Arterial		
High Schools				
Ballard	15 th Avenue NW	Principal Arterial (Major Truck Street)	14 th Avenue NW	Collector Arterial
	NW 65 th Street	Minor Arterial		
	NW 67 th Street	Local Access		
Cleveland	15 th Avenue S	Minor Arterial	Swift Avenue S	Principal Arterial
	S Lucile Street	Minor Arterial		
Franklin	Rainier Avenue S	Principal Arterial (Major Truck Street)	S McClellan Street (east of Rainier)	Minor Arterial Collector Arterial
	S Mt Baker Blvd	Collector Arterial	S McClellan Street (west of Rainier)	
	31 st Avenue	Minor Arterial		
	S Martin Luther King Jr. Way S (north of Rainier)	Principal Arterial (Major Truck Street)		
	S Martin Luther King Jr. Way S (south of Rainier)			
Nathan Hale	NE 110 th Street	Collector Arterial	Lake City Way NE	Principal Arterial (Major Truck Street)
	35 th Avenue NE	Minor Arterial		
	30 th Avenue NE	Collector Arterial		

Table 2. Primary Roadways Serving Potential BTA V Project Sites

Potential Project Site	Adjacent Street(s) ¹		Other Nearby Major Street(s) ²	
	Street Name	Classification	Street Name	Classification
Ingraham	N 130 th Street Meridian Ave N N 135 th Street Ashworth Ave N	Principal Arterial Collector Arterial Local Access Local Access	Aurora Avenue N Roosevelt Way N	Principal Arterial (Major Truck Street) Collector Arterial
Rainier Beach	Seward Park Ave S S Henderson Street	Minor Arterial Minor Arterial / Principal Arterial	Rainier Avenue S S Cloverdale Street	Principal Arterial Collector Arterial
Other Facilities				
JSCEE	S Lander Street 3 rd Avenue S	Minor Arterial (Major Truck Street) Local Access	4 th avenue S 1 st Avenue S	Principal Arterial (Major Truck Street) Principal Arterial (Major Truck Street)
John Marshall (interim)	NE 68 th Street Weedin Place NE NE Ravenna Boulevard Oswego Place NE	Local Access Minor Arterial Minor Arterial Local Access	NE 65 th Street Roosevelt Way NE 12 th Avenue NE East Green Lake Way N	Minor Arterial Principal Arterial Principal Arterial Minor Arterial
Van Asselt (interim)	S Myrtle Street Beacon Avenue S (South of S Myrtle Street) S Othello Street	Principal Arterial Collector Arterial Local Access	Swift Avenue S Beacon Avenue S (North of S Myrtle Street)	Principal Arterial Minor Arterial
Memorial Stadium	5 th Avenue N 4 th Avenue N Harrison Street (West of 5 th Avenue N)	Principal Arterial Local Access Local Access	Mercer Street Denny Way Aurora Ave N	Principal Arterial (Major Truck Street) Principal Arterial (Major Truck Street) Principal Arterial
Chief Sealth / SWAC	SW Thistle Street 30 th Avenue SW 29 th Avenue SW 26 th Avenue SW SW Trenton Street	Minor Arterial Local Access Local Access Local Access Collector Arterial	Delridge Way SW 35 th Avenue SW	Principal Arterial Principal Arterial

Source: SDOT. (2018). *Seattle Streets [Shapefile]*. Retrieved from <https://data-seattlecitygis.opendata.arcgis.com/datasets/seattle-streets>, and SDOT. (2019). *Freight Network [Shapefile]*. Retrieved from <https://data-seattlecitygis.opendata.arcgis.com/datasets/freight-network>.

1. Adjacent roadway(s) that provide either vehicle access or primary pedestrian access to the school site.
2. Nearest roadway(s) with principal arterial, minor arterial, or collector arterial functional classification not directly adjacent to school site.

4.1.2. Planned Roadway Improvements

Guided by the plans and policies outlined previously in Section 3 additional improvements and programs are implemented in furtherance of stated goals and objectives. Each year, the City of Seattle adopts a Capital Improvement Program (CIP) that defines planned City expenditures for infrastructure, programs, and services over the following six-year period. Transportation infrastructure includes roadways and non-motorized facilities, and expenditures include construction of new facilities as well as maintenance of existing facilities. The *2021-2026 Transportation Capital Improvement Program*⁸ includes planned spending of approximately \$7 billion over the six-year period and lists large capital projects such as the Alaskan Way Main Corridor Project, the Central Waterfront project, and several corridor improvements throughout Seattle. It also includes plans for transportation maintenance and rehabilitation, neighborhood programs, asset preservation, and systems improvement.

The *Move Seattle* program approved by voters in November 2015, is a multimodal transportation package that integrates recommendations developed in the City's various modal plans, and includes a list of high-priority projects that are intended to be implemented within the next 10 years. In addition to 24 major corridor, transit, and trail projects, *Move Seattle* identifies implementation of localized non-motorized improvements to improve pedestrian safety, including improvements along school walking routes and within school zones. The workplan for *Move Seattle* was updated in 2018, and a delivery plan was published in February 2021 in response to shifts in funding paradigms as a result of the COVID-19 pandemic.

Extensions of Sound Transit's Link light rail line are currently under construction, with the extension from the University District to Roosevelt and Northgate planned to be commence service on October 2, 2021. The East Link extension, with a new station on Interstate 90 near Rainier Avenue S, is planned to commence service in 2023. At the time of this report, the West Seattle and Ballard Link Extensions were in the planning phase, with start of service projected for 2031 and 2036, respectively. This extension would provide new Light Rail service from West Seattle through Downtown to Denny, South Lake Union, Seattle Center, Smith Cove, Interbay, and Ballard.⁹

4.2. Traffic Volumes

4.2.1. School Buildings

Traffic associated with schools is dependent on a number of factors, including the number and grade of students, school location, typical travel modes (Metro bus, yellow school bus, student drivers, parent drop-off / pick-up, walk, bicycle, etc.) and availability of parking. School-related traffic is typically highest during the morning arrival and afternoon dismissal periods. Depending on school start time, traffic generated during morning arrival can occur within the background AM peak period (typically between 7:00 and 9:00 A.M.). Most schools are dismissed in the early afternoon (before 4:00 P.M.) and the dismissal traffic generally does not occur within the background PM peak period (which typically occurs between 4:30 and 6:00 P.M.).

Traffic generation for development projects is generally estimated using rates and equations published in the latest edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*.¹⁰ This manual is widely used and reflects standard practice for estimating traffic expected to result from planned development. For schools, trip generation estimates may be developed using one of two methods: apply nationally-accepted rates or derive rates based on local conditions. For new schools, rates published in the ITE Manual can be applied. ITE has compiled surveys of vehicle trip generation for existing sites

⁸ City of Seattle, 2020. <http://www.seattle.gov/city-budget-office/capital-improvement-program-archives/2021-2026-proposed-cip>, accessed March 2021.

⁹ Sound Transit, 2021. <https://www.soundtransit.org/system-expansion>, accessed March 2021.

¹⁰ ITE, 10th Edition, September 2017.



throughout the United States, and has developed rates and equations based on variables such as numbers of students and school-building sizes. Table 3 summarizes the published trip rates based on student population. These rates reflect all traffic generated at the schools by staff, parent-vehicles, student-vehicles, and school buses. It is important to note that the ITE trip generation rates were developed based on samples of schools throughout the nation. Many of these likely included suburban school sites with substantial on-site parking and little public transit use. As a result, they may not apply to many Seattle area schools.

Table 3. Published ITE Trip Generation Rates for Schools

School Facility (ITE Land Use Code)	Average Vehicle Trip Rates Per Student			
	Weekday	AM Peak Hour	School PM Peak Hour	Commute PM Peak Hour
Elementary School (LU 520)	1.89	0.67	0.34	0.17
Middle School/Junior High (LU 522)	2.13	0.70	0.35	0.17
High School (LU 530) Suburban/Urban	2.03	0.55	0.33	0.14

Source: Institute of Transportation Engineers, September 2017.

Although the above average rates may be appropriate for some locations or some school types, each school will be evaluated on a case-by-case basis. For expansions of existing schools, actual counts of the existing school are preferred. This method works best for schools located in areas where school-related traffic can easily be isolated and identified, and traffic counts can be used to develop rates specifically for that school.

For past analyses, including modernizations or replacement of Seattle schools and SPS field improvement and lighting projects, site-specific traffic generation rates have been developed based on traffic counts conducted at the existing sites and compared to the published ITE rates. For example, trip generation data have been collected for other elementary schools in Seattle that were being modernized, replaced or redeveloped. For this analysis, average morning arrival and afternoon dismissal peak hour trip generation rates were derived from video trip generation counts at five existing Seattle Schools: Schmitz Park (before it was closed), Arbor Heights, Loyal Heights, Olympic Hills, and Thornton Creek. The average morning peak hour trip generation rate was found to be 0.65 trips per student; the afternoon peak hour rate was found to be 0.47 trips per student. These rates are comparable to the average rates published for Elementary Schools in the *Trip Generation Manual*. Since these rates were derived from counts at other Seattle elementary schools and reflect current trends related to family-vehicle drop-off and pick-up activities, they may most appropriate for use in evaluating the future conditions at sites where new counts are not possible or where school-related traffic cannot easily be isolated and identified. Estimates of trips generated by other mode (e.g., pedestrian and bicycle) are developed using observations, counts, and/or information provided by school administration staff.

Similarly, average rates have been derived from counts collected at three Seattle high schools—Garfield, Roosevelt, and Ingraham High Schools. These rates better reflect the likely transportation conditions that exist at and around Seattle high schools, including limited availability of parking and common student use of Metro Transit. For morning peak hour conditions when students and staff arrive at the school, a rate of 0.36 trips per student was derived, which is about 65% of the published ITE rate and accounts for a higher number of students that arrive by transit (Metro) compared to the schools in the national rate database. For the afternoon peak hour condition when students are dismissed and many leave the site for the day, a rate of 0.25 trips per student was derived. This rate is about 75% of the published ITE rate. Trip generation for

high schools during the afternoon is typically spread out over several hours as students often stay at the site after the school day for extracurricular activities and as staff have variable end-of-day schedules. As a result, the afternoon peak hour volume is usually less than the morning peak hourly volume. During the commuter PM peak hour, high schools typically generate relatively little traffic compared to the morning arrival and afternoon dismissal periods. A rate of 0.11 trips per student was derived and is about 80% of the published ITE rate for high schools. This is reasonable given that commuter PM peak hour trips for high schools typically include some staff leaving for the day, and student or public use of site amenities such as theater spaces, gymnasiums, athletic fields, and or commons spaces.

For existing school sites where traffic counts at driveways can be used to develop site-specific trip generation rates, those rates are commonly applied for analyses of local impacts to site access and nearby intersections. However, for some school sites (such as those with on-street loading/unloading areas, that are located near other schools or traffic generators, and/or where traffic and parking have been impacted by reductions in in-person attendance due to the COVID-19 pandemic), it may not be possible to isolate school-related traffic from current counts to determine site-specific trip generation rates. For these cases, trip generation estimates are developed using the most current published rates available from ITE, or rates from a similar Seattle school where data are available.

4.2.2. Athletic Facilities at Schools

Many Seattle schools have athletic facilities (football, soccer, baseball/softball fields, and tracks) that are used by students for daytime physical education classes, Monday through Friday, as well as for scholastic athletic practices after-school and on weekends. Some schools have lighted outdoor fields that can be used in the evenings. SPS and the Seattle Parks and Recreation (SPR) department have historically maintained a *Joint Use Agreement*¹¹ for shared use of athletic facilities. At school sites, SPS typically allows non-scholastic activities to be scheduled by SPR or other groups during times when they are not used for scholastic activities. Similarly, SPS is provided priority use of SPR facilities. As a result, sites owned by either entity that contain athletic facilities may be used for practices or games associated with interscholastic athletics and for community uses such as youth and adult recreational sports and activities. At locations where field lights are present, the availability and frequency of use is typically higher, depending on the field surface. For example, lighted synthetic athletic fields often experience regular use year-round until 9:30 or 10:30 P.M. Natural surface fields and fields that are not lighted are typically not used as frequently over winter months due to natural lighting conditions and playing surface issues.

Scholastic Athletics

Interscholastic athletics that utilize fields at the high school level include football, soccer, softball, baseball, track, ultimate, and lacrosse. Trip generation for these activities depends on participation levels and attendance, and also fluctuates based on the sport, level of competition, and day of week. Field space most often supports after-school practices, which generate very little additional traffic since students typically stay at school for practice; however, those trips can be shifted to occur during the PM commuter peak hour instead of the after-school hours. Higher levels of traffic can be generated by competitions, which occur once or twice per week per sport, and include both home and away games. High school varsity games for some sports, primarily football or soccer, may be scheduled to occur at one of the four stadium sites located in the quadrants of the City or at Memorial Stadium. Based on numerous observations of participants and spectators for all types of events over many years from 2000 to 2019,¹² most activities typically have between 30 and 60 participants (athletes, coaches, trainers, and support staff) with between 35 and 135 spectators.

¹¹ *An Agreement for the Joint Use of Facilities between the Seattle School District No. 1 and Seattle Parks and Recreation 2016-2019*, Extended to August 9, 2021.

¹² Heffron Transportation, Inc., 2000, 2012, 2015, and 2019.

Observations of traffic flows for high-school-level sports after games indicated that athletic events may generate trips at rates ranging from about 0.30 to 0.58 trips per participant / spectator. For a typical scholastic athletic event (baseball, softball, soccer, lacrosse, or ultimate), this relates between 20 and 95 total trips during the hours before and after a practice, game, or match. Depending on the type and time of event, a portion of participant and/or spectator traffic generated by athletic fields could occur during the commuter PM peak hour of adjacent roadways.

Outdoor middle school interscholastic athletics occur in the fall and spring seasons (there are typically no outdoor winter sports) and include soccer, ultimate, and track. Practices typically occur in the early afternoon (after school) and less frequently than for high school sports, often one or two times per week, instead of every day. Competitions and games often occur on weekends at one of the four quadrant stadiums. There are no sanctioned interscholastic athletics for elementary schools.

Community Recreational Athletics

Community youth or adult-recreational athletics are the most common activity scheduled by SPR at Seattle school sites. Historical spectator and participant counts performed by Heffron Transportation for youth and adult athletic activities indicate the number of adults (driving age), including coaches and officials was between 30 and 60. An average game or practice is estimated to generate approximately 60 vehicle trips (30 inbound and 30 outbound). These estimates assume most adults drive to these activities in separate vehicles, which is typical for adult recreational soccer and is likely conservatively high for most youth sports activities, since some children typically carpool to athletic practices.

Effect of Field Lighting

Field lights have been added to many existing athletic fields throughout the District. Lights allow increased use of the athletic field for scholastic and non-scholastic recreational activities by increasing the ability to hold practices and some competitive games later in the day during the school year. The primary increase in field use due to the lighting project has been non-scholastic recreational athletics scheduled through SPR, such as youth and adult soccer, baseball and softball, lacrosse, and ultimate. The field lights can add capacity on weeknights and weekends during winter months from sunset until 9:45 P.M. (lights are typically scheduled to turn off at 10 P.M.).

4.3. Traffic Operations

The following describes typical traffic operational conditions around Seattle area elementary, middle, K-8, and high schools.

Elementary Schools. Students typically arrive by yellow school bus, parent drop-off, walking, or bicycling. Morning drop-off operations tend to be relatively efficient. Parents and buses arrive, drop off students, and leave the site area without substantial impacts to traffic operations or parking. Afternoon pick-up often results in short-term congested conditions for traffic and parking in the school vicinity, since parents typically park for longer periods and wait for children to be dismissed.

K-8 and Middle Schools. K-8 and middle schools draw from larger geographic areas than most elementary schools, and typically have a larger portion of the student population arrive by bus. Also, a higher percentage of students may choose to walk or bike to school, which decreases the level of parental pick-up and drop-off. As a result, on-site vehicle queuing needs are typically less (proportionally based on student population) than those for elementary schools. Separation of bus loading zones, vehicle pick-up/drop-off zones, and pedestrian routes to parking is important when it can be provided. Operations around middle schools are similar to those described for elementary

schools. A larger volume of buses loading or queuing in the travel lanes of neighborhood streets is more common, given the larger portion of the student population served by school bus.

High Schools. High school traffic and parking patterns differ from elementary and middle schools as student pick-up and drop-off levels are lower or staggered (due to before- or after-school activities), and many students may drive their own vehicles. In addition, Metro is the primary provider of student transportation for high schools and is reflected in the trip generation and parking demand rates derived from counts at SPS site. School-related parking is typically higher than it is for elementary or middle schools. Student parking demand can be influenced by the availability of on-site or on-street parking, transit convenience and location, types of before- and after-school activities, incentive or transportation program management, and levels of car- ownership/car-access by students.

Operating conditions for roadways and intersections are measured by level of service (LOS), which is a qualitative measure used to characterize traffic operating conditions of roadways and intersection. Six letter designations, LOS “A” through “F,” are used to define level of service. LOS A is the best and represents good traffic operations with little or no delay to motorists. LOS F is the worst and indicates poor traffic operations with long delays.¹³ Roadway operations surrounding school sites vary, depending on the types of roadways (arterials versus local access streets), ~~and~~ of traffic, types of traffic control (signalized or stop-sign control), and local area land use and commuting patterns.

Morning peak hour traffic from some schools can overlap with the AM peak hour of the surrounding roadway system, and it is not uncommon for local streets and intersections to operate at poor levels of service typical of the commuter peak periods. These would be defined as signalized arterial intersections that operate at or below LOS D, and unsignalized intersections (such as local access streets or site driveways) that operate at LOS E or F. Since schools typically dismiss students in the early afternoon, school traffic does not typically overlap with peak commuter traffic. Thus, intersections and streets near most schools often operate with less congestion in the early-afternoon and commuter PM peak hours than they do during the AM peak hour.

The City of Seattle does not have adopted intersection level of service standards; however, project-related intersection delay that causes a signalized intersection to operate at LOS E or F, or increases delay at a signalized intersection that is projected to operate at LOS E or F without the project, may be considered a significant adverse impact, if increases are greater than 5 seconds. The City may tolerate LOS E or F conditions for automobiles at signalized intersections where physical constraints limit opportunities for widening or where it has established priority for other modes such as transit, pedestrian, or bicycle movements. The City may also tolerate delays in the LOS E or F range at unsignalized intersections where changes such as conversion to all-way-stop-control or signalization are not applicable or desirable.

In April 2021, the City of Seattle began implementation of a new *School Streets* program. School Streets, are provided when requested by schools, and are open for people walking, rolling, and biking to school, and closed to pass-through traffic, including parents. The goals of the program are to provide social distancing space for daily arrival at school start times, reduce traffic congestion in front of schools, encourage families to walk or bike to school, or park a few blocks away and walk.

¹³ Transportation Research Board, 2010.

4.4. Parking

4.4.1. Parking Characteristics of School Sites

Parking supply and demand in Seattle varies greatly from neighborhood to neighborhood. Public parking is typically provided on-street. In most of the City's residential neighborhoods, on-street parking is unrestricted, meaning it has no cost or time restriction. In commercial districts or in very dense residential neighborhoods (e.g., Capitol Hill), parking may have time limits during certain times of day, be part of a Restricted Parking Zone (RPZ) that limits the length of time non-permit holders may park or be metered with costs that vary between \$1.00 and \$4.00 per hour, or be unrestricted. The City also has implemented No Parking along many arterials during certain times of the day to improve traffic operations or transit service. The City continuously monitors neighborhood parking conditions, and implements changes to cost and time restrictions as needed to maintain balance between parking supply and demand.¹⁴

Private parking for residential, commercial, industrial, and institutional development, where it is provided, is typically via surface spaces, surface lots, or garages that are provided on-site. In higher-density neighborhoods and commercial areas, there is typically a charge to park in a parking garage or surface lot that is not directly serving a specific commercial development.

Seattle public schools are located in a variety of neighborhoods that also vary widely in their parking characteristics. Many schools have surface parking lots on-site, but the capacities of the lots differ from school to school. Some schools are able to accommodate peak parking demand on-site, while others may rely on additional off-site public parking, such as on-street parking, that is available in the neighborhood. For a typical school day with no special events, most schools have established procedures and locations for school bus and parent-vehicle drop-off/pick-up activities. At some schools these activities occur on-site within parking lots or designated loading/unloading areas, while other schools utilize on-street spaces along site frontages. Table 4 summarizes the parking characteristics of the proposed BTA V project sites included in this report.

¹⁴ City of Seattle, 2021. <https://www.seattle.gov/transportation/projects-and-programs/programs/parking-program/paid-parking-information/street-parking-rates>, accessed March 2021.

Table 4. Parking Characteristics in the Vicinity of Potential BTA V Project Sites

Potential Project Site	On-Site Parking	On-Street Parking ¹
Elementary Schools		
B.F. Day	Two surface lots, both are accessed from Linden Avenue N	On-street parking in the vicinity is generally unrestricted, with some scattering of RPZ and time-limited parking to the south and west of the school site. On Fremont Avenue N and Linden Avenue N adjacent to the school, parking during peak student loading periods is restricted by School Bus Only zones. Parking is prohibited on N 39 th Street and N 41 st Street adjacent to the school.
Green Lake	No on-site parking.	On-street parking in the vicinity is generally unrestricted, with some localized time-restricted locations associated with adjacent commercial and institutional developments. On Sunnyside Avenue N and N 65 th St adjacent to the school, parking during peak student loading periods is restricted to school bus only and 5-minute school loading zones.
Maple	Surface lot accessed from Corson Avenue S.	On-street parking in the vicinity is generally unrestricted. On Corson Avenue S adjacent to the school, parking during peak student loading periods is restricted by a School Bus Only zone.
John Muir	Surface lot accessed from S Walden Street	On-street parking in the vicinity is generally unrestricted. Along S Walden Street and 34 th Avenue S adjacent to the school, parking during peak student loading periods is restricted by a School Bus Only Zone and a 15-minute School Load Only zone.
North Beach	Loop driveway accessed from 24 th Avenue NW has small amount of on-site parking.	On-street parking in the vicinity is generally unrestricted but limited in availability adjacent to the school. Parking is prohibited on the east side of 24 th Avenue NW and north side of NW 90 th Street adjacent to the school during peak student loading periods.
Sacajawea	Surface parking accessed from 20 th Avenue NE	On-street parking in the vicinity is generally unrestricted. Along 20 th Avenue NE adjacent to the school, parking during peak student loading periods is restricted by School Bus Only zones.
K-8 Schools		
Boren	Surface parking accessed from Delridge Way SW	On-street in the vicinity of the site is generally unrestricted. Along Delridge Way SW adjacent to the school, parking during peak student loading periods is restricted by School Bus Only Zones and 15-minute School Load Only zones.
Salmon Bay	No on-site parking.	On-street parking in the vicinity is generally unrestricted, with some localized restrictions. Parking is prohibited on the west side of 18 th Avenue NW and the east side of 19 th Avenue NW adjacent to the school during peak student loading periods to accommodate school buses.

Table 4. Parking Characteristics in the Vicinity of Potential BTA V Project Sites

Potential Project Site	On-Site Parking	On-Street Parking ¹
Middle School		
Aki Kurose	Gated surface parking lot accessed from internal site driveway. Site driveway can be accessed from 39 th Avenue S and 42 nd Avenue S.	On-street parking in the vicinity is generally unrestricted. Along S Graham Street adjacent to the school, parking during peak student loading periods is restricted by School Bus Only zones and 15-minute School Load Only zones.
Eckstein	Two surface parking lots accessed from 30 th Avenue NE and NE 75 th Street.	On-street parking in the vicinity is generally unrestricted. Along 30 th Avenue and NE 75 th Street adjacent to the school, parking during peak student loading periods is restricted by School Bus Only zones and 5-minute School Load Only zones.
Jane Addams	Surface lot accessed from 31 st Avenue NE (also accessible from 34 th Avenue NE, but entrance is typically gated).	On-Street parking in the vicinity is generally unrestricted. Along 34 th Avenue NE adjacent to the school, parking during peak student loading periods is restricted by School Bus Only zones and 15-minute School Load Only zones.
High Schools		
Ballard	Surface lot accessed from 15 th Avenue NW and NW 67 th Street. Additional small surface lot accessed from NW 67 th Street. Loop driveway accessed from NW 65 th St has small amount of on-site parking.	Mixed on-street parking conditions in the vicinity. Parking is time-restricted on 15 th Avenue NW adjacent to the school and along pockets of commercial development in the vicinity. Parking is generally unrestricted in residential neighborhoods in the vicinity.
Cleveland	Two surface lots: one accessed from 15 th Avenue S; one from S Lucile St..	Parking is prohibited along S Lucile Street and is prohibited in peak directions along 15 th Avenue S, but otherwise is generally unrestricted in the school vicinity. Parking is prohibited on the west side of 15 th Avenue S adjacent to the site during school hours to accommodate school buses.
Franklin	No on-site parking; gated off-site lot at corner of S Byron St / Wetmore Ave S with access from S Byron St.	School buses are accommodated on the south side of S Mount Baker Boulevard adjacent to the school. On-street parking is prohibited on streets adjacent to the school, and the school vicinity is located within RPZ 16. On-street parking in the residential neighborhoods beyond the RPZ is generally unrestricted.
Nathan Hale	Two surface lots accessed from 30 th Avenue NE; small lot accessed from NE 110 th St.	On-street parking in the vicinity is generally unrestricted. Parking is prohibited on the south side of NE 110 th Street during peak student loading periods to accommodate school buses.
Ingraham	Surface lots accessed from Ashworth Avenue N and N 135 th Street.	Mixed on-street parking conditions in the vicinity. Parking is prohibited at all times on N 130 th Street and the east side of Ashworth Avenue N. Parking is prohibited during school hours on the west side of Ashworth Avenue N. On N 135 th Street adjacent to the school, parking is prohibited during peak student loading periods to accommodate school buses.

Table 4. Parking Characteristics in the Vicinity of Potential BTA V Project Sites

Potential Project Site	On-Site Parking	On-Street Parking ¹
Rainier Beach	Surface lots, one accessed from S Henderson St, one from Seward Park Ave S	Mixed on-street parking conditions in the vicinity. School bus loading is accommodated on the north side of S Henderson Street adjacent to the school; parking is prohibited along the other segments of S Henderson Street and the other Minor and Principal arterials in the vicinity of the school. Parking is generally unrestricted in residential neighborhoods in the vicinity.
Other Facilities		
JSCEE	Three surface lots accessed from 3 rd Avenue S	Mixed on-street parking conditions in the vicinity, primarily time-limited parking restrictions.
John Marshall (interim)	Surface lot accessed from NE 68 th Street (lot also has a gated access point that connects to the neighboring park and ride lot)	Mixture of unrestricted and time-limited on-street parking conditions in the vicinity. Along NE 68 th Street and NE Ravenna Boulevard adjacent to the school, parking during peak student loading periods is restricted by School Bus Only zones.
Van Asselt (interim)	Three surface lots; two accessed from S Myrtle Street, one accessed from shared access on Beacon Ave S.	On-street parking in the vicinity is generally unrestricted. Along Beacon Avenue S parking is prohibited, except during peak student loading periods to accommodate school buses.
Memorial Stadium	Surface lot accessed from Harrison Street (exit only to Republican Street)	Mixed on-street parking conditions, primarily time-limited and paid parking restrictions. No unrestricted parking was identified in the vicinity of the site.
Chief Sealth / SWAC	Three surface lots (two at Sealth and one at SWAC) accessed from SW Thistle Street.	School bus loading is accommodated on the north side of SW Thistle Street adjacent to the school, and parking is otherwise prohibited along the street. Parking is prohibited on the east side of 27 th Avenue SW during peak student loading periods to accommodate school buses at the adjacent Denny International Middle School. Parking is generally unrestricted in residential neighborhoods in the vicinity.

1. Source: SDOT. (2021). Block face [Shapefile]. Retrieved from <https://data-seattlecitygis.opendata.arcgis.com/datasets/blockface>.

4.4.2. Parking Demand from Schools

Similar to trip generation, parking demand for development projects may be estimated using rates and equations in ITE's *Parking Generation*.¹⁵ Parking demand for Seattle schools can vary based on a number of factors. *Parking Generation* has included surveys of parking demand for existing sites throughout the United States and developed rates based on numbers of students. The *Parking Generation* reference is also widely used and reflects standard practice for estimating parking demand expected from planned development. Table 5 summarizes the ITE parking demand rates based on student population.

¹⁵ ITE, 5th Edition, January 2019.

Table 5. Published ITE Parking Generation Rates for Schools

School Facility (ITE Land Use Code)	Peak Parking Demand Rates Per Student		
	Average Weekday Peak	Range of Observations	85 th Percentile Peak
Elementary School (LU 520)	0.13	0.06 to 0.24	0.20
Middle School/Junior High (LU 522)	0.09	0.07 to 0.12	0.12
High School (LU 530)	0.26	0.16 to 0.34	0.32

Source: ITE, 2019.

Although ITE rates may be appropriate for some locations or some school types, each school is typically evaluated on a case-by-case basis. For example, parking demand counts and observations performed by Heffron Transportation at four Seattle high schools (Rainier Beach, Roosevelt, Garfield, and Ingraham High School) range from 0.14- to 0.20-vehicles-per-student, which are at or near the lower end of the published range for ITE observations, and better reflect Seattle-area school transportation conditions.

It is sometimes determined that staffing levels (particularly for elementary and middle schools) provide a more reliable basis for estimating school-day parking demand than student enrollment. For past analyses of modernizations, replacements, or redevelopments of Seattle schools, site-specific parking demand rates based on staffing levels have also been developed using counts conducted at the existing school sites. Observations performed by Heffron Transportation at numerous Seattle elementary schools indicate school-day peak parking demand rates ranging from 1.06 to 1.23 vehicles parked per employee.¹⁶

4.4.3. Parking Demand from Athletic Facilities at Schools

Athletic-field-related parking demand generated by the majority of interscholastic and community youth or adult recreational athletics (soccer, ultimate, lacrosse, softball, and baseball), like trip generation, is influenced by participation levels and attendance. Observations of scholastic athletics by Heffron Transportation indicate that events may generate parking demand at rates ranging from about 0.6 to 0.7 vehicle per participant/spectator. These result in typical parking demand of between 30 and 95 vehicles for each game, depending on the on the sport, level of competition, and day of week. However, those rates do not reflect higher levels of transit use that may occur at and around some City of Seattle school sites.

Parking demand observations for recreational use of athletic fields indicate peak demand ranging from 30 to 60 vehicles per event. Parking demand at sites with consecutively-scheduled activities typically peaks during the periods between games. This is the time when participants and spectators from one game may be finishing or leaving the site and those from the next game are arriving. Sites with multiple fields can experience concurrent overlapping peaks if schedules are not staggered.

Field lighting could extend the duration of the parking impact during the winter months but would not increase the demand compared to the typical use described above.

¹⁶ Heffron Transportation, Inc., 2013 and 2014.

4.5. Transit

Transit service in Seattle is primarily provided by King County Metro Transit (Metro) and Sound Transit. Community Transit and Pierce Transit also provide limited bus service to and from Seattle, typically during the weekday commute periods. Every bus is configured to accommodate wheelchairs and is also equipped with bicycle racks.

Fixed bus routes operate on published schedules and may be classified as local, express, commuter, or RapidRide routes. Local routes typically provide supplemental neighborhood stops to a paired route providing two-way service between destinations within Seattle and surrounding areas, from morning through evening, five to seven days per week. Commuter bus service provides service to major employment destinations, operating only during the weekday morning and evening peak commute periods, traveling to major employment centers in the morning and away from employment centers in the evening, with a more limited number of stops along the way. Express routes provide fewer stops along a service corridor, for the purpose of providing shorter travel times to destinations. RapidRide routes provide service through high-volume corridors, often with frequencies of less than 10 minutes between departures. RapidRide stations often feature digital passenger information signs and off-board payment terminals, to expedite passenger loading. Table 6 summarizes existing transit service at the proposed BTA V project sites included in this report.

Table 6. Public Transit Service within One-Quarter Mile of Potential BTA V Project Sites

Potential Project Site	Transit Route	Destinations Served	Typical Weekday Frequency (minutes)
Elementary Schools			
B.F Day	5	Shoreline CC, Greenwood, Fremont, Queen Anne, Downtown	15
	Express 26	Northgate, Wallingford, So Lk Union, Downtown	30
	Express 28	Broadview, Greenwood, Crown Hill, Ballard, Fremont, Queen Anne, Downtown	5-30
Green Lake	Express 26	Northgate, Wallingford, South lake Union, Downtown	30
	45	Loyal Heights, Crown Hill, Greenwood, Green Lake, Roosevelt, Ravenna, University District, UW Station	7-15
	62	Sand Point, Ravenna, Green Lake, Wallingford, Queen Anne, South Lake Union, Downtown	6-15
Maple	60	Broadway, First Hill, Beacon Hill, Georgetown, White Center, Westwood Village	10-25
	107	Beacon Hill, Georgetown, Rainier Beach, Lakeridge, West Hill, Renton Transit Center	15-30
John Muir	7	Rainier Beach, Columbia City, Mt. Baker Station, Downtown	7-12
North Beach ^a	40	Northgate, Loyal heights, Crown Hill, Ballard, Fremont, Queen Anne, Downtown	7-15
	45	Loyal Heights, Crown Hill, Greenwood, Green Lake, Roosevelt, Ravenna, University District, UW Station	7-15
Sacajawea	73	Jackson Park, Maple Leaf, University District, UW Station	10-30
	Commuter 309	Kenmore, lake Forest Park, Lake City, South Lake Union, Downtown, First Hill	Five A.M. departures; Four P.M. departures
	372	Bothell, Kenmore, Lake Forest Park, Ravenna, University District, UW Campus	5-15
	Commuter 373	Aurora Village, Meridian Park, Jackson Park, Maple Leaf, Ravenna, University District, UW Station	15-30
	522	Woodinville, Bothell, Kenmore, Lake Forest Park, Lake City, Downtown	15-30
K-8 Schools			
Boren	120	Burien, White Center, Delridge, West Seattle, Downtown	7-20

Table 6. Public Transit Service within One-Quarter Mile of Potential BTA V Project Sites

Potential Project Site	Transit Route	Destinations Served	Typical Weekday Frequency (minutes)
Salmon Bay	RapidRide D Line	Crown Hill, Ballard, Magnolia, Interbay, Queen Anne, Uptown, Downtown	6-15
Middle Schools			
Aki Kurose	7	Rainier Beach, Columbia City, Mt. Baker Station, Downtown	7-12
	106	Seattle Link Light Rail Stations, Rainier Beach, Bryn Mawr, Skyway, Renton Transit Center	10-15
Eckstein	Commuter 64	Jackson Park, Lake City, Wedgwood, Ravenna, University District, Downtown, First Hill	Six A.M. departures, Nine P.M. departures
	65	Jackson Park, Lake City, Meadowbrook, wedgwood University District, UW Station	15
	372	Bothell, Kenmore, Lake Forest Park, Ravenna, University District, UW Campus	5-15
Jane Addams	Commuter 64	Jackson Park, Lake City, Wedgwood, Ravenna, University District, Downtown First Hill	Six A.M. departures, Nine P.M. departures
	65	Jackson Park, Lake City, Meadowbrook, wedgwood University District, UW Station	15
High Schools			
Ballard	RapidRide D Line	Crown Hill, Ballard, Magnolia, Interbay, Queen Anne, Uptown, Downtown	6-15
Cleveland	60	Broadway, First Hill, Beacon Hill, Georgetown, White Center, Westwood Village	10-25
	107	Beacon Hill, Georgetown, Rainier Beach, Lakeridge, West Hill, Renton Transit Center	15-30
Franklin	Link Light Rail Mt Baker Station	Angle Lake, SeaTac, Tukwila, Rainier Beach, Rainier Valley, Columbia City, Mount Baker, Beacon Hill, Downtown, Capitol Hill, Univ. District	6-15
	7	Rainier Beach, Columbia City, Mt. Baker Station, Downtown	7-12
	14	Mount Baker, International District, Downtown	15
	106	Seattle Link Light Rail Stations, Rainier Beach, Bryn Mawr, Skyway, Renton Transit Center	10-15
Nathan Hale	Commuter 64	Jackson Park, Lake City, Wedgwood, Ravenna, University District, Downtown, First Hill	Six A.M. departures, Nine P.M. departures
	65	Jackson Park, Lake City, Meadowbrook, wedgwood University District, UW Station	15

Table 6. Public Transit Service within One-Quarter Mile of Potential BTA V Project Sites

Potential Project Site	Transit Route	Destinations Served	Typical Weekday Frequency (minutes)
Ingraham	Local 345	Northgate, Haller Lake, Shoreline	20-30
	346	Northgate, Haller Lake, Parkwood, Meridian Park, Shoreline	20-30
	RapidRide E Line	Downtown Seattle to Aurora Village Transit Center via Aurora Avenue	5-10
Rainier Beach	7	Rainier Beach, Columbia City, Mt. Baker Station, Downtown	7-12
	106	Seattle Link Light Rail Stations, Rainier Beach, Bryn Mawr, Skyway, Renton Transit Center	10-15
	107 ^b	Beacon Hill, Georgetown, Rainier Beach, Lakeridge, West Hill, Renton Transit Center	15-30
Other			
JSCEE	Link Light Rail SODO Station	Angle Lake, SeaTac, Tukwila, Rainier Beach, Rainier Valley, Columbia City, Mount Baker, Beacon Hill, Downtown, Capitol Hill, Univ. District	6-15
	21	White center, Roxhill, High Point, West Seattle, SODO, Downtown Seattle	15-20
	50	Alki, Admiral District, Alaska Junction, SODO, Columbia City, Seward Park, Othello Station	20-30
	Local 101	Renton, Tukwila, SODO, Downtown	15-30
	Commuter 102	Fairwood, Renton, Tukwila, SODO, Downtown	Ten A.M. departures, ten P.M. departures
	131	Burien, Highland Park, Downtown	10-30
	132	Burien, South Park, Downtown	20-30
	150	Kent, Southcenter, Tukwila, Downtown	12-30
John Marshall (interim)	Express 26	Northgate, Green Lake, Wallingford, Downtown	12-30
	45	UW Station, Univ. District, Ravenna, Roosevelt, Green Lake, Greenwood, Drown Hill, Loyal Heights	8-15
	62	Sand Point, View Ridge, Ravenna, Green Lake, Wallingford, Queen Anne, S. Lk Union, Downtown	6-15
	Commuter 64	Jackson Park, Lake City, wedgwood, Ravenna, University District, Downtown, First Hill	Six A.M. departures, nine A.M. departures
	542	Redmond, Montlake, University District, and limited service to Green Lake Park & Ride	10-30

Table 6. Public Transit Service within One-Quarter Mile of Potential BTA V Project Sites

Potential Project Site	Transit Route	Destinations Served	Typical Weekday Frequency (minutes)
Van Asselt (interim)	36	Rainier Beach, Seward Park, Columbia City, Beacon Hill, International District, Downtown	8-15
	107	Renton Transit Center, Lakeridge, Rainier view, Rainier Beach, Georgetown, Beacon Hill.	15-30
Memorial Stadium	3	North Queen Anne, East Queen Anne, Downtown, First Hill, Madrona	15-45
	4	North Queen Anne, East Queen Anne, Downtown, First Hill, Judkins Park	8-30
	5	Shoreline CC, Greenwood, Fremont, Queen Anne, Downtown	15
	Express 26	Northgate, Wallingford, South Lk Union, Downtown	30
	Express 28	Broadview, Greenwood, Crown Hill, Ballard, Fremont, Queen Anne, Downtown	5-30
	RapidRide E Line	Downtown Seattle to Aurora Village Transit Center via Aurora Avenue	5-10
Chief Sealth / SWAC	21 ^c	Arbor Heights, White Center, Roxhill, High Point, West Seattle, SODO, Downtown	15-20

Source: King County Metro, 2021; Sound Transit, 2021.

- Nearest stops are 0.3 miles from the project site, at NW 85th Street & 24th Ave NW.
- Provides direct bus connection from Rainier Beach High School to Rainier Beach Station of Link light rail station, located about 0.65-mile west of the school, providing connection to Rainier Beach, Rainier Valley, Columbia City, Mount Baker, Beacon Hill, Downtown, Capitol Hill, University District, with typical frequencies of 6 – 15 minutes.
- Nearest stop is 0.3 miles from the project site, at 35th Avenue SW & SW Thistle Street; route operates express service in the A.M.

The SPS Transportation Department provides yellow bus, door-to-door, Metro, and cab service to a variety of students attending Seattle public schools and Head Start. Eligibility for District-provided transportation depends on several factors including grade level and proximity to assigned schools. The following describes the basic eligibility considerations outlined in the District's *Transportation Service Standards*:¹⁷ Note that exceptions are defined for individuals based on health requirements, educational program needs, or based on certain geographical considerations.

High School students who live within the boundaries of the Seattle School District and who live more than 2 miles from their assigned school are eligible for an ORCA card. Currently, all high schools utilize Metro for their primary regular program transportation. Some geographic areas with limited Metro service require supplemental school bus transportation.

¹⁷ SPS, *Revised Transportation Service Standards 2020-21: Ridership Eligibility*, Effective Sept. 1, 2020.

Middle School students who live within the boundaries of the District and who live more than 2.0 miles from their assigned school are eligible for transportation. District-arranged transportation is available for those students attending a middle school in their service area or linked service area. Orca cards may be provided for students enrolled in a school outside of their service area, linked service area, or residing more than 2.0 miles from their assigned school.

Elementary and **K-8** students who live within the attendance area or linked attendance area boundaries and outside the designated walk boundaries are eligible for district-arranged transportation. District arranged transportation is not provided for students who by parent or student choice have enrolled in a school other than their assigned school. Orca cards may be provided for attendance area K-8 school 6th through 8th grade students enrolled in a school outside of their attendance area if they live more than 2.0 miles from the school.

4.6. Non-Motorized Facilities

Seattle public schools are a major generator of non-motorized travel, primarily via pedestrian and bicycle trips. Pedestrian trips include those made entirely by walking, and trips that require walking to and from transit stops. Non-motorized trips utilize facilities such as sidewalks, crosswalks, intersections, and paths or trails that are separated from the roadway with physical barriers, physical delineators, or painted lines.

Many areas throughout Seattle have pedestrian facilities that include completed sidewalk networks and/or paved pedestrian pathways. Some areas, particularly those beyond the original city limits, do not have completed sidewalk networks. Signalized intersections typically include marked crosswalks with pedestrian signals. Marked crosswalks are also present at some stop-controlled intersections and mid-block locations. All intersections that do not have marked crosswalks are still considered to have crosswalks under City code. This means that, even if an intersection is not marked with crosswalks, it is still considered a legal crosswalk and drivers must yield to pedestrians at that intersection. Crossing guards are often provided at crosswalks close to schools, most typically elementary schools. When deployed, adult guards are typically stationed at arterial crossings while student guards are sometimes used on local streets.

In addition to sidewalks, non-motorized facilities in Seattle include other pathways and trails that are separated from roadways. Cycle tracks are protected, two-way bicycle lanes, typically separated from adjacent vehicle traffic by a barrier. In-street bicycle lanes may also have minor separation, such as painted lines. Other roadway lanes are marked with “sharrows” indicating that motorists should share the lane with cyclists. “Neighborhood greenways” are designated residential streets with low motorized traffic volumes and speeds that are designed to accommodate safe and pleasant travel for pedestrians and bicyclists.

Table 7 summarizes existing non-motorized characteristics in the vicinity of the proposed BTA V project sites included in this report.

Table 7. Non-Motorized Characteristics at Potential BTA V Project Sites

Facility Name	Non-Motorized Characteristics
Elementary Schools	
B.F. Day	<p>The area has a complete sidewalk system. Marked crosswalks are provided at several unsignalized intersections adjacent to the school site. Marked crosswalks and pedestrian signals are provided at nearby signalized intersections. Painted Bike Lanes exist along each side of Fremont Ave NE</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a citywide protected bicycle lane along Fremont Avenue N west of the site, in-street minor separation along N 39th Street south of the site, and local neighborhood greenways along N 41st Street, Linden Avenue N, and N 38th Street, to the north, east, and south of the site, respectively.</p>
Green Lake	<p>The area has a complete sidewalk system. Marked crosswalks are provided at unsignalized intersections adjacent to the school. NE 65th street has sharrows for bikes.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a citywide neighborhood greenway along Sunnyside Avenue and 1st Avenue NE, and a segment of protected bicycle lane along NE 65th Street at the site's south frontage</p>
Maple	<p>The area has a complete sidewalk system. Marked crosswalks are provided at unsignalized intersections adjacent to the school. A neighborhood greenway exists along 12th Avenue S.</p> <p>Recommended future projects in the <i>Plan</i> in the site vicinity include an off-street local connector west of the site, between the Chief Sealth Trail to the north and S Lucille Street to the south.</p>
John Muir	<p>The area has a complete sidewalk system. Marked crosswalks are provided at unsignalized intersections adjacent to the school. A neighborhood greenway extends along 34th Avenue S to the north and diverts east along S Horton Street before heading south again along 36th Avenue S.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include extending the citywide neighborhood greenway along 34th Avenue S south of the site, and local neighborhood greenways along S Walden Street and S Horton Street north of the site.</p>
North Beach	<p>All school frontages have sidewalks, but they are intermittent in the surrounding area. Speed humps are provided on 24th Avenue NW as traffic calming measures. Marked crosswalks are provided at unsignalized intersections adjacent to the school.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a local neighborhood greenway along NW 90th street east of the site and 23rd Avenue W south of the site, connecting to a citywide neighborhood greenway along NW 83rd Street.</p>
Sacajawea	<p>Only the east side of 20th Avenue NE and the west side of 20th Avenue NE along the school frontage have sidewalks in the vicinity of the school. Marked crosswalks are provided at unsignalized intersections adjacent to the school. A walkway along NE 95th Street provides a pedestrian link between Lake City Way NE and 20th Avenue NE.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a local neighborhood greenway along 20th Avenue NE east of the site connecting to a citywide neighborhood greenway along NE 98th Street north of the site.</p>

Table 7. Non-Motorized Characteristics at Potential BTA V Project Sites

Facility Name	Non-Motorized Characteristics
K-8 Schools	
Boren	<p>The area has a complete sidewalk system. A marked flashing crosswalk is provided along Delridge Way SW at the south side of the school building. A marked crosswalk and pedestrian signals are provided at the nearby signalized intersection at SW Juneau Street and Delridge Way SW. A neighborhood greenway extends along SW Juneau Street and continues along Croft Place SW.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a citywide protected bike lane along Delridge Way SW west of the site.</p>
Salmon Bay	<p>The area has a complete sidewalk system. Marked crosswalks are provided at the unsignalized intersection of NW 65th Street/18th Avenue NW adjacent to the school, and on all legs of nearby signalized intersections. NW 65th Street has sharrows, and 20th Avenue NW has painted bicycle lanes south of NW 65th Street. A neighborhood greenway extends along 17th Avenue NW.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include local neighborhood greenways along NW 70th Street and NW 64th Street north and south of the site, respectively.</p>
Middle School	
Aki Kurose	<p>The area has a complete sidewalk system. Marked crosswalks are provided at unsignalized intersections adjacent to the school. Marked crosswalks and pedestrian signals are provided at nearby signalized intersections. A neighborhood greenway extends along 39th Ave S west of the site.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a citywide protected bicycle lane along M L King Jr Way S west of the site and local neighborhood greenways along S Juneau Street to the north and 42nd Avenue S to the east.</p>
Eckstein	<p>The area has a complete sidewalk system. Marked crosswalks are provided at unsignalized intersections adjacent to the school. Marked crosswalks and pedestrian signals are provided at nearby signalized intersections. NE 75th street has marked bike lanes along both sides of the road.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a citywide protected bicycle lane along 35th Avenue NE east of the site, and local neighborhood greenways along 31st Avenue NE and 33rd Avenue NE to the north and east of the site, respectively.</p>
Jane Addams	<p>The area has a complete sidewalk system. Marked crosswalks are provided at unsignalized intersections adjacent to the school. Marked crosswalks and pedestrian signals are provided at nearby signalized intersections. 35th Avenue NE has sharrows for bikes.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a protected bicycle lane along 35th Avenue NE west of the site, a neighborhood greenway along 30th Avenue NE west of the site, and minor in-street separations along NE 115th Street and NE 110th Street, to the north and south of the site, respectively.</p>
High Schools	
Ballard	<p>The area has a complete sidewalk system. Marked crosswalks are provided at the signalized intersections along 15th Avenue NW, and at unsignalized intersections along NW 65th Street adjacent to the school. NW 65th Street has sharrows, and 8th Avenue NW has painted bicycle lanes.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a local protected bike lane along 14th Avenue NW south of the site, and local neighborhood greenways along NW 70th Street, 12th Avenue NW, and NW 64th Street to the north, east, and south of the site, respectively.</p>

Table 7. Non-Motorized Characteristics at Potential BTA V Project Sites

Facility Name	Non-Motorized Characteristics
Cleveland	<p>The area has a complete sidewalk system. 15th Avenue S has bike lanes to the north and south of the school, but sharrows adjacent to the school. S Lucile Street has a combination of bike lanes and sharrows. 12th Avenue S is a neighborhood greenway.</p> <p>There are no recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity.</p>
Franklin	<p>The area has a complete sidewalk system. Crosswalks are provided at signalized intersections along Rainier Avenue S and Martin Luther King Jr Way S, and at some unsignalized intersections along S Mount Baker Boulevard adjacent to the school. There is a pedestrian overpass across Rainier Avenue S and Martin Luther King Jr Way S, directly to the west of the school. 31st Avenue S has bike lanes to the north of S McClellan Street. 34th Avenue S is a neighborhood greenway.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a citywide protected bicycle lane along M L King Jr Way S west of the site, a citywide neighborhood greenway along 34th Avenue S west of the site, in-street minor separations along the north and south legs of S Mount Baker Boulevard north of the site, and local neighborhood greenways along 31st Avenue S and S Walden Street north and south of the site, respectively.</p>
Nathan Hale	<p>All school frontages have sidewalks, but they are intermittent in the surrounding area. Marked crosswalks are provided at two unsignalized intersections along NE 110th Street, and the intersection of NE 110th Street/30th Avenue NE is all-way stop-controlled but without crosswalks. A sharrow extends along 35th Avenue NE.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a protected bicycle lane along 35th Avenue north, neighborhood greenways along NE 105th Street and 32nd Avenue NE south of the site, and minor in-street separations along 30th Avenue NE west of the site and NE 110th Street north of the site.</p>
Ingraham	<p>All school frontages have sidewalks, but they are intermittent in the surrounding area. Meridian Avenue N has sharrows. Marked crosswalks and pedestrian signals are provided at nearby signalized intersections.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a protected bike lane on N 130th Street, between Linden Avenue N and 5th Avenue N, and a neighborhood greenway along Ashworth Avenue N west of the site and N 135th Street north of the site.</p>
Rainier Beach	<p>Major school frontages have sidewalks, but they are intermittent in the surrounding area. Marked crosswalks are provided at the signalized intersection of Rainier Avenue S/S Henderson Street, and at unsignalized intersections along S Henderson Street adjacent to the school. S Henderson Street has bike lanes to the east of 52nd Avenue S and sharrows to the west.</p> <p>There are no recommended future projects in the <i>Bicycle Master Plan</i> in the immediate site vicinity.</p>
Other Facilities	
JSCEE	<p>The area has a complete sidewalk system. Marked crosswalks are provided at unsignalized intersections adjacent to the school. Marked crosswalks and pedestrian signals are provided at nearby signalized intersections. A sharrow extends along S Lander Street.</p> <p>There are no recommended future projects in the <i>Bicycle Master Plan</i> in the immediate site vicinity.</p>

Table 7. Non-Motorized Characteristics at Potential BTA V Project Sites

Facility Name	Non-Motorized Characteristics
John Marshall (interim)	<p>The area has a complete sidewalk system. Marked crosswalks are provided at unsignalized intersections adjacent to the school. Marked crosswalks and pedestrian signals are provided at nearby signalized intersections. Painted bike lanes run along both sides of NE Ravenna Boulevard, and along 65th Street to the east of Ravenna Boulevard. West of NE Ravenna Boulevard, NE 65th Street has a sharrow.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a citywide protected bicycle lane along East Green Lake Way N northwest of the site, and minor in-street separations along Latona Avenue NE and Weedin Place NE southwest and northeast of the site.</p>
Van Asselt (interim)	<p>The area has a complete sidewalk system. Marked crosswalks are provided at unsignalized intersections adjacent to the school. Marked crosswalks and pedestrian signals are provided at nearby signalized intersections. Beacon Avenue S has sharrows, and S Myrtle Street has painted bike lanes on both sides of the road.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include a citywide off-street bicycle track along Beacon Avenue S and a local neighborhood greenway along S Kenyon Street north of the site.</p>
Memorial Stadium	<p>The area has a complete sidewalk system. Marked crosswalks and pedestrian signals are provided at nearby signalized intersections. A protected bike lane extends along 5th Avenue N north of Republican Street and turns east to continue on Mercer Street. A painted bike lane continues to the north along 5th Avenue N north of Mercer Street.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include citywide protected bicycle lanes along 5th Avenue N and 1st Avenue N east and west of the site, respectively, and a local neighborhood greenway along Thomas Street south of the site.</p>
Chief Sealth / SWAC	<p>All school frontages have sidewalks, but they are intermittent in the surrounding area. There is a crosswalk on SW Thistle Street connecting the school site to the Longfellow Creek Legacy Trail, a north-south multi-use path located between SW Thistle Street and SW Trenton Street. SW Thistle Street has sharrows. 30th Avenue SW in a neighborhood Greenway.</p> <p>Recommended future projects in the <i>Bicycle Master Plan</i> in the site vicinity include minor in-street separations along the east-west streets SW Holden, SW Thistle, and SW Barton, connecting neighborhood greenways running north-to-south, and planned citywide protected bicycle lanes along 35th Avenue SW and SW Roxbury Street.</p>

Sources: SDOT. (2018). *Existing Bike Facilities [Shapefile]*. (<https://data-seattlecitygis.opendata.arcgis.com/datasets/existing-bike-facilities>.)
SDOT. (2014). *April 2014 Adopted Bicycle Master Plan*.
SDOT. (2021). *Sidewalks [Shapefile]*. (<https://data-seattlecitygis.opendata.arcgis.com/datasets/sidewalks>.)
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5. IMPACTS OF PROPOSED PROJECTS

The proposed BTA V program projects would increase school enrollment capacity at up to five schools (in addition to what has been evaluated for previously adopted District programs) and make athletic field improvements with new exterior field lighting at up to four locations. These program elements are expected to result in increased vehicle trips and potentially increased parking demand in the areas surrounding these sites. The potential types of long-term operational impacts that could result from the capacity and athletic field improvement projects are described in the following sections. Projects planned at Maple and North Beach Elementary Schools, Salmon Bay K-8, Ballard, Franklin, and Ingraham High Schools, and at the JSCEE, John Marshall, and Memorial Stadium sites, are not expected to result in long-term transportation impacts (no long-term traffic or parking increases), but may have short-term construction-related impacts to traffic and/or parking. The following describes the range of potential transportation impacts for all of the projects included in the BTA V program.

5.1. School Capacity Projects

5.1.1. Roadways

None of the projects that are planned to add capacity to schools (at B.F. Day, Green Lake, John Muir, and Sacajawea Elementary Schools, and Aki Kurose Middle School) are expected to result in changes to the overall roadway network or intersections. However, some of the projects could include frontage improvements that would result in landscape and other enhancements, revisions to site access points on the adjacent streets, relocation of bus or passenger vehicle loading, or installation of sidewalks, ADA compliant ramps, or pedestrian walkways. These projects would be subject to individual project-level review of impacts to the transportation system at the time of design and permitting and may also be subject to City of Seattle Street Improvement Permitting (SIP) review process.

5.1.2. Traffic Volumes

Five of the BTA V proposed projects would result in increased student enrollment capacity—four elementary schools (classroom additions at B.F. Day, Green Lake, and John Muir, and a replacement of Sacajawea Elementary) and one middle school (modernization and expansion of Aki Kurose). The potential increases in capacity would range from about 125 students to 320 students at each of the school sites. Based on the range of rates presented previously, these capacity increases have the potential to result in added traffic at each site in the range of 80 to 210 morning peak hour trips, 60 to 150 afternoon peak hour trips, and 20 to 50 commute PM peak hour trips. For those projects, project-level review of site access and local area transportation impacts would be based either on rates derived specifically for those schools, rates derived for other similar Seattle schools, or the published ITE rates. Changes in school-generated traffic can also be influenced by changes to on-site parking, nearby on-street parking, or site access conditions. Detailed analysis of these changes would also be included for those projects that consist of such elements.

5.1.3. Traffic Operations

For the proposed projects that would result in increases in student enrollment capacity, project-level review of site access and local area traffic operations would be conducted. Changes to on-site parking, nearby on-street parking, or site access conditions can also influence traffic operations of site driveways and nearby intersections, and would also be included in project-level analysis when specific projects are selected. The analyses would focus on the hours most affected by school traffic—the morning arrival and afternoon dismissal peak hours.

5.1.4. Parking

Detailed parking assessments would be conducted as part of project-level design and permitting for individual projects that could impact parking due to increased enrollment capacity or changes to existing on-site or nearby on-street parking. Similar to the approach that would be applied to traffic generation estimates, parking demand rates may be derived specifically for each school or developed based on rates presented Section 4.4. Each site would be evaluated on a case-by-case basis.

Code-required minimum off-street parking standards are typically established by the Seattle Municipal Code (SMC). However, the SMC does not have a “School Zone” in its land use code; instead, schools are subject to the development standards (setback, height, lot coverage, etc.) of the underlying zoning. The City has minimum code requirements for off-street vehicle parking at schools in residential zones (typically based on the size of assembly spaces); however, since most schools are in residential neighborhoods (often zoned “single family”) and were established many years ago, they often do not (or cannot) meet the current zoning requirements for parking or on-site school-bus load/unload. Meeting these standards could substantially and adversely impact the educational program, community amenities of the site, or require acquisition of surrounding property. Therefore, the City’s code permits the District to request “departures” from some provisions of the land use code. The departure process is established by SMC 23.79.002. It is possible that some of the capacity projects may require departures from the on-site parking or school-bus loading code requirements.

5.1.5. Transit

None of the BTA V proposed projects are expected to impact transit service or facilities. Changes in school capacity or enrollment could cause minor increases in some bus ridership, which would be expected to be easily accommodated by existing transit capacity. However, the projects planned for elementary schools would be expected to rely more heavily on yellow school bus transportation. Therefore, changes to public transit ridership are expected to be related to staff or some older middle school students (associated with the Aki Kurose Middle School expansion). The increases would be very small and no adverse impacts to transit are expected to occur. At school sites where there are existing adjacent transit stops, a minor relocation of bus stops may be requested or desired to accommodate operational needs along site frontages. If necessary, the District would coordinate such changes with Metro and the City of Seattle.

5.1.6. Non-Motorized Facilities

Maintenance, construction, and/or replacement of sidewalks or walkways could be included as part of some of the BTA V capacity projects. These are typically required when the improvement would include substantial renovation or new construction. Some projects may also be required to replace or install ADA compliant ramps at corners or intersections adjacent to school sites. Improvements to sidewalks or walkways would be considered a project benefit, and therefore, no adverse impacts to non-motorized facilities are expected to occur.

5.2. School Athletic Field Improvements and Lighting

5.2.1. Roadways

None of the projects that would improve athletic fields are expected to result in changes to the overall roadway network or intersections.

5.2.2. Traffic Volumes

Improvements to athletic fields, such as the conversion from natural to synthetic turf (planned at Jane Addams and Boren K-8), or installation of new field lighting (planned at Van Asselt, Eckstein, Jane Addams, Boren K-8, and Chief Sealth / SWAC) would be expected to increase the frequency and times of field use. Athletic field lighting projects can result in increased PM peak hour traffic generation during the fall and winter months when natural light conditions would otherwise not permit use of fields. They can also result in increased traffic generation during later evening times (between 6:00 and 10:00 P.M.), depending on the spectator capacity and types of activities scheduled at the site. Based on traffic generation rates derived for scholastic and recreational athletics at other Seattle school sites (presented previously), these projects are anticipated to result in increases in PM peak and early-evening hour trip generation ranging from 60 to 85 trips.

Projects that simply replace existing synthetic turf or field lighting with newer technology (planned for Salmon Bay K-8, Ingraham High School, Rainier Beach High School, and Memorial Stadium), would not change the traffic or parking demand for those facilities.

5.2.3. Traffic Operations

For the athletic field improvement projects that would result in increases in trip generation, project-level review of site access and local area traffic operations would be conducted prior to installation. The analyses would focus on the hours most affected by added athletic field activity, which are typically the PM peak and early-evening peak hours for field lighting projects.

5.2.4. Parking

As described, improvements to athletic fields may increase the frequency and times of field use and generate new or added parking demand at new times of day. Based on parking demand rates derived for scholastic and recreational athletics at other Seattle school sites (presented previously), these projects are anticipated to generate added demand of 30 to 95 vehicles for scholastic athletic events and about 30 vehicles for recreation athletics. Peak demand at each site would depend on the number of fields that could be used simultaneously with consecutive scheduling.

Detailed parking assessments would be conducted as part of project-level design and permitting for individual projects that could impact parking due to increased athletic field use. Similar to the approach that would be applied to traffic generation estimates, parking demand may be adjusted based on local conditions (such as availability and use of transit). Each site would be evaluated on a case-by-case basis.

5.2.5. Transit

None of the BTA V proposed athletic field projects are expected to impact transit service or facilities. Some field users may use transit to access the sites in some locations; however, increases would be very small and no adverse impacts to transit are expected to occur.

5.2.6. Non-Motorized Facilities

None of the BTA V proposed athletic field projects are expected to impact non-motorized facilities. Some field users would likely use non-motorized facilities to access the sites; however, increases would be small and no adverse impacts to non-motorized transportation are expected to occur.

5.3. Short-Term Construction Impacts

5.3.1. School Capacity Projects

Construction activities for projects that would add capacity (such as replacements, classroom additions, or modernizations) are also likely to result in construction-related transportation impacts. Often the most noticeable construction impacts are related to earthwork (e.g., export of demolition and excavation materials from a site) needed for grading and foundations. The construction efforts would also generate employee, equipment, and material-delivery trips to and from the sites. The numbers of workers at any project site at any one time vary depending upon the construction element being implemented.

For some projects, such as classroom additions, construction may occur while students occupy a site. In other instances, such as for school replacements, students may be relocated to another, interim site, during the construction period (typically one or two school years). If construction occurs while students remain on site, pedestrians and vehicle access at the site and in immediate vicinity may be affected.

Construction employee parking may be accommodated on-site at some locations; however, it often occurs on-street at and around school sites.

The specific construction-related transportation impacts for each capacity project would be evaluated on a site-by-site basis at the time of project-level review and permitting.

5.3.2. Athletic Field Improvement Projects

Construction activities for the athletic field projects may result in limited construction-related transportation impacts. The replacement or installation of synthetic or natural turf, installation of field lighting, and resurfacing of tracks and tennis courts can usually be completed within one to three months. The traffic and parking generation related to construction is typically minimal. The specific construction-related transportation impacts for each athletic field improvement project would be evaluated on a site-by-site basis at the time of project-level review and permitting.

5.3.3. Other BTA V Projects

The remaining BTA V projects (those other than the capacity and athletic field projects described above), would range from slope stability enhancements, drainage improvements, storm-water improvements, ADA-compliant access improvements, shed installations, kitchen improvements, seismic upgrades, and lighting system upgrades that could have some limited construction-related transportation impacts. Most commonly, they could result in temporary displacement or unavailability of facilities or parking areas, but are not expected to result in adverse impacts to traffic or parking conditions at or around those sites.

6. MITIGATION MEASURES

As described previously, if an individual project is anticipated to result in increases in vehicle trips or parking demand, it is expected that site-specific, project-level transportation analysis would be conducted prior to its implementation. If potential operational or safety impacts are identified through project-level analysis, mitigation measures would be identified to minimize or avoid those impacts. The types of transportation-related measures that could be considered for the BTA V projects would depend on the exact type, size, and nature of the proposed project, but could include the following:

- Construction Transportation Management Plans;
- Engagement with the Seattle Schools Traffic Safety Committee;
- Access and parking management measures, typically in the form of Transportation Management Plans (TMP);
- Intersection channelization and/or control improvements;
- Frontage improvements such as curb, gutter, sidewalk, or walkway improvements;
- Coordination with Metro regarding locations and operational requirements for bus stops along the site frontage;
- Monitoring of traffic or parking conditions at and around a school site;
- Event Management Plan and Event Communication Plans for adjacent neighbors; and
- Establishment, expansion, and/or relocation of school-bus and/or passenger vehicle loading areas.

In some cases, parking mitigation measures could be imposed as conditions for approval of a project and any associated code departures. The types of measures that have been considered for District projects include reconfigurations of on-street parking where street widths allow, establishment of parking duration restrictions for on-street parking near schools, modifications to existing parking restrictions, expansions or changes to existing Restricted Parking Zones (RPZs), and operational requirements (such as staggering concurrent events, or preparation and distribution of event schedules for events held in assembly spaces on school sites). If a project is determined to require parking mitigation, specific measures would be developed through coordination with the District, City staff, and neighborhood representatives.