



# Rainier Beach High School Replacement Project

## Draft 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 Rainier Beach High School Replacement Project Draft State Environmental Policy Act (SEPA) 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, Rainier Beach High School Vicinity, Seattle, Washington.** Figure 1 is an aerial photograph of the Rainier Beach High School site including its surrounding neighborhood. The project parcel is outlined in red. There is an inset map showing where the site is located within the city of Seattle.

**Figure 2, Proposed Rainier Beach High School Conceptual Site Plan (subject to change).** Figure 2 provides a conceptual drawing of the proposed new configuration of the Rainier Beach High School facility including site buildings, athletic fields, and parking areas. For the most part, the athletic fields remain in the same place with the exception that the existing practice field is replaced by the new school structure and the existing basketball court area in the northeast of the site is replaced by a new practice field. Most of the existing parking spaces are relocated to the southeast portion of the site. The figure shows a variety of landscape improvements and provides labels for some of the proposed uses.

**Figure 3, Key to View Assessment Figure Locations, Seattle, Washington.** Figure 3 is an aerial photograph of the Rainier Beach High School site including its surrounding neighborhood. It is provided to demonstrate to the reader where the view assessment photos were taken. There is a red outline around the project site parcel. There are yellow arrows at 8 locations to indicate where a view assessment photo was taken and the arrow indicates the direction. The figures are Figure 3a through Figure 3h and each is described in more detail below.

**Figure 3a.** Figure 3a is a photo showing the view of the Project Site Facing West from Be'er Sheva Park Located at 8650 55<sup>th</sup> Avenue South. The view shows the front of the Rainier Beach High School building with trees, grass, and on-street car parking. There are no protected views identified in the photo.

**Figure 3b.** Figure 3b is a photo showing a View of the Project Site Facing West from Beach Court Apartments at 8630 Rainier Avenue South. The view shows a fence in the forefront and the baseball field with athletic field lighting and the school buildings in the distance. There are no protected views identified in the photo.

**Figure 3c.** Figure 3c is a photo showing a View of the Project Site Facing Southeast from the Starlighter Apartments at 8708 Rainier Avenue South. There is children's play equipment in the forefront. Fenced practice areas are seen in the middle of the photo and the baseball field is shown in the background with athletic field lighting. There are no protected views identified in the photo.

**Figure 3d.** Figure 3d is a photo showing a View Facing East across the School Site from the Sherwin-Williams Paint Store at 8824 Rainier Avenue South. The forefront of the photo shows vegetation growing over the fence and the back of a scoreboard obscuring some of view of the football/soccer stadium. Athletic field lighting is prominent and the performing arts structure is visible in the distance. The tops of several mountains are visible above some of the treetops in the distance to the far right. The views of this area of the project site will not change except for the upgrade of the existing lighting to LED lighting. No protected views would be impacted as a result of the project proposal.

**Figure 3e.** Figure 3e is a photo showing a View of the School Building from a residence at 9704 Hamlet Avenue South, facing south. The view in the back of the house shows a driveway and a large tree in the forefront and the side of the large high school building in the distance. There are no protected views identified in the photo.

**Figure 3f.** Figure 3f is a photo showing a view of the Project Site from a Residence Located at 8741 Hamlet Avenue South, Facing southwest. The view is of a fence in the forefront with a building structure and part of the performing arts building in the distance. Also seen in the distance are trees, athletic field lights, and utility lines and poles. There are no protected views identified in the photo.

**Figure 3g.** Figure 3g is a photo showing a View of the Project Site from a residential area to the North of the Project Site at the Corner of South Hamlet Street and 53<sup>rd</sup> Avenue South, facing West. The view to the right is of a fenced asphalt basketball court and a building and paved area to the left. In the distance are apartment complexes, athletic field lighting, and ball fields. There are no protected views identified in the photo.

**Figure 3h.** Figure 3h is a photo showing a View of the Project Site from Residences and a Trail at the Corner of South Henderson Street and 52<sup>nd</sup> Avenue South, Facing North. The view is of the football/soccer track and stadium and athletic field lighting. In the forefront are trees and utility lines. In the distance is the performing arts building. There are no protected views identified in the photo.

**Appendix A:** Transportation Technical Report Appendix A consists of a report titled, “Transportation Technical Report for Rainier Beach High School Replacement” prepared by Heffron Transportation, Inc. dated June 23, 2021. The report provides a project description; background conditions related to the transportation network, traffic volumes, parking, traffic safety, transit facilities and non-motorized facilities. The report addresses impacts of the proposed school replacement and concludes with recommendations. Attached to the end of the report are Appendix A – Level of Service Definitions, and Appendix B – Parking Utilization Study Data. There are figures and tables in the document, including in the appendices, which graphically depict and organizes data to support the findings in the report.

**Appendix B:** Light and Glare Report Appendix B consists of a report titled, “Rainier Beach High School Athletic Field Lighting Light and Glare Report” prepared by Stantec dated June 18, 2021. The report provides a description of the proposal, existing codes and policies, existing conditions, existing light and glare (including photographs), proposed equipment, and analysis. Analysis is provided for Glare, Spill Light, and Sky Glow. There are figures and photographs to support the findings in the report.

**Appendix C:** Environmentally Critical Areas Assessment Memo Appendix C consists of a memo titled, “Rainier Beach High School Replacement Project Environmentally Critical Areas Assessment” prepared by ESA. dated June 23, 2021. The memo provides a project description; methods for wetland delineation, review of existing information, results of the field investigation, description of Wetland A, and offsite features including streams. Regulatory implications and requirements are described along with wetland mitigation sequencing. Available upon request are photos, figures, wetland data forms, and the wetland rating form.

**Appendix D:** Noise Memo Appendix D consists of a memo titled, “Draft Rainier Beach High School Replacement Project – Noise Technical Memorandum” prepared by ESA dated June 18, 2021. The memo provides a project description, fundamentals of noise, City of Seattle Municipal code, noise sensitive receivers, existing conditions, proposed project noise assessments, parking, students, vehicular traffic, athletic activities, and construction. Tables support the findings in the report.

This concludes the description of the Draft SEPA Checklist figures and appendices for the Rainier Beach High School Replacement Project SEPA Checklist.

# **Rainier Beach High School Replacement Project**

## **Draft SEPA Checklist**

June 2021

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**APPENDICES**

- Appendix A: Transportation Technical Report
- Appendix B: Light and Glare Report
- Appendix C: Environmentally Critical Areas Memo
- Appendix D: Noise Memo

**TABLE**

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## ENVIRONMENTAL CHECKLIST

### A. BACKGROUND

**1. Name of the proposed project, if applicable:**

Rainier Beach High School Replacement Project

**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:**

June 2021

**5. Agency requesting checklist:**

Seattle Public Schools (SPS)

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

Construction is anticipated to begin in phases in early Spring 2022, and be substantially complete by early Fall 2025. Construction is scheduled to be completed in phases to allow for continuous occupancy of up to 750 students on the project site. Due to the types of activities in each phase, there is some overlap in the schedule.

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

Plans for many of the approved Seattle Public School capital levy projects were included in two prior environmental review documents. Rainier Beach High School was listed for funding for proposed increased capacity in the Building Excellence (BEX) V Draft Environmental Impact Statement (EIS) for funding which was passed. The links to the draft and final EIS are provided below:

- BEX V Draft Environmental Impact Statement (DEIS):  
[https://www.seattleschools.org/UserFiles/Servers/Server\\_543/File/District/Departments/Capital%20Projects%20and%20Planning/BEX%20V/BEX%20V%20Draft%20PEIS\\_A DA.pdf](https://www.seattleschools.org/UserFiles/Servers/Server_543/File/District/Departments/Capital%20Projects%20and%20Planning/BEX%20V/BEX%20V%20Draft%20PEIS_A DA.pdf)
- BEX V Final Environmental Impact Statement (FEIS):  
[https://www.seattleschools.org/UserFiles/Servers/Server\\_543/File/District/Departments/Capital%20Projects%20and%20Planning/SEPA/BEX%20V%20Final%20PEIS\\_A DA.PDF](https://www.seattleschools.org/UserFiles/Servers/Server_543/File/District/Departments/Capital%20Projects%20and%20Planning/SEPA/BEX%20V%20Final%20PEIS_A DA.PDF)

Environmental review for the new BTA V Capital Levy program is currently in progress and the projects proposed for funding in that levy are scheduled for a vote in February 2022. Projects identified in the BTA V Capital Levy checklist 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 is 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.

The projects proposed for funding for Rainier Beach High School that are being reviewed on a programmatic level in the BTA V Capital Levy program checklist include: the replacement of existing synthetic turf at the existing football/soccer stadium & bleachers; track re-surfacing; relocation of the practice field to the existing basketball court area and providing synthetic turf and potential new lighting; conversion of baseball and softball outfields from grass to synthetic turf; and replacement of existing field lighting to LED lights.

The project elements listed above are also reviewed at a project-level in this Rainier Beach High School Replacement Project checklist, but would not be expected to be constructed unless the February 2022 levy is passed.

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

- *Formation Thermal Conductivity Test & Data Analysis*, GRTI, December 18, 2021
- *Limited Hazardous Building Material Survey*, EHS-International, Inc., February 2021
- *Subsurface Exploration, Geologic Hazards, and Preliminary Geotechnical Engineering Report*, Associated Earth Sciences, Inc., August 4, 2020
- *Arborist Report*, Tree Solutions, Inc., March 25, 2021
- *Final Environmentally Critical Areas Assessment Memo*, ESA, June 2021
- *Draft Noise Technical Memorandum*, ESA, June 2021
- *Draft Cultural Resources Literature Review Short Report*, ESA, June 2021
- *Draft Light and Glare Report*, Stantec, June 2021
- *Final Transportation Technical Report*, Heffron Transportation, Inc., June 23, 2021

**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.**

Seattle Public Utilities (SPU) would provide an annual surface lease agreement to SPS. No other government approvals of other proposals directly affecting the property are known to be pending.

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

City of Seattle

- Building (Phased)

- Development Standard Departures
- Clearing and Grading Permit
- Demolition Permit
- Other: Mechanical Permit/Electrical Permit/Fire Alarm/Elevator Permits, Side Sewer Permit
- Tree & Vegetation Removal Permit
- Utility Work in the Right-of-Way (ROW)
- Street Improvement Plan

Washington Department of Ecology (Ecology)

- National Pollutant Discharge Elimination System (NPDES) Permit

Puget Sound Clean Air Agency

- Notice of Demolition
- Hazardous Materials Abatement

- 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**

Seattle Public Schools (SPS) periodically proposes public school levies to fund their projects. The SPS BEX V Capital Levy program generally includes projects proposed for funding for new construction, the renovation and modernization of existing school buildings throughout Seattle to allow for increased capacity, building systems repairs and replacements, and installation of exterior lighting at athletic fields. The BEX V Program is funded by a 6-year levy to replace, renovate, and modernize District buildings and address enrollment growth, earthquake, and safety issues; infrastructure upgrades; major preventative maintenance; and technology system improvements throughout the District. In 2019, Seattle voters passed the BEX V school levy. The push to improve, and ultimately replace, Rainier Beach High School has always been led by the community. In fact, it was RBHS students that led the advocacy to include RBHS in the BEX V levy. Based on this advocacy, the levy proposed funding to modernize Rainier Beach High School to enable it to increase its capacity to 1,600 students to serve the growing capacity needs of the District and to provide a building that both meets the District standards for educational spaces and creates a warm welcoming culture and inclusive environment to support the diversity of the students, their families, and communities.

Subsequent to passage of the BEX V school levy, SPS has proceeded with project planning and is now ready to provide SEPA project-level review for the project to increase capacity at Rainier Beach High School. This Checklist for the Rainier Beach High School Replacement Project has been prepared in compliance with the State Environmental Policy Act (SEPA) (Chapter 43.21C of the Revised Code of Washington [RCW]), the state SEPA rules (Chapter 197-11 of the Washington Administrative Code [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 of the proposed project.

### **Site Background and Description**

The existing Rainier Beach High School site is 21.7 acres and houses an original building from 1960 as well as additions that expanded the school over the years (Figure 1). Rainier Beach Junior-Senior High School opened in September 1960 with 1,257 students (845 in the junior-high level and 412 high-school students). The school building was originally designed for 1,500 students, but by 1967 was overcrowded with 2,159 students (Thompson and Marr, 2002). As a result, a separate Model Middle School program began in portables on the grounds in 1970 and was moved to a new permanent building—South Shore—in December 1973. The performing arts center was constructed and opened in 1998 and renamed the Paul Robeson Performing Arts Center in 2004. Enrollment for the 2020-21 school year is 787 students and has averaged 762 students per year since 2017. The school currently has 85 full-time-equivalent (FTE) employees, including teachers, instructional assistants, administrators, and operations staff (Wang, 2021).

The existing school buildings on site have cumulative space of approximately 182,500 square feet (sf). The existing main school building was constructed in 1960 and is located on the southeastern portion of the site. Four other buildings (a gymnasium, a performing arts center [constructed in 1998], a wood shop and drafting building, and an auto shop building) are located northwest of the main building.

The outdoor athletic fields at Rainier Beach High School are also known as the Southeast Athletic Complex (SEAC) and serve as the home fields for Rainier Beach High School as well as for some sports at other Seattle high schools (e.g., Cleveland High School varsity football, softball, and baseball). The SEAC is located on the western portion of the site and includes a lighted football/soccer field and track, a bleacher structure with seating for approximately 1,500 people, covered storage and press box, a natural turf utility field, a lighted baseball field, a lighted softball field, baseball and softball batting cages, two outdoor asphalt basketball courts, and support buildings housing a ticket booth, restrooms, concessions, scheduling office, storage, and maintenance equipment. There are three parking lots on the campus.

### **Proposed Project**

The proposed project would construct a new multi-story high school with up to approximately 283,000 square feet and improvements to the existing athletic fields (Figure 2, Appendix A). When complete, the school would have permanent enrollment capacity for up to 1,600 students in grades 9 through 12; however, it is noted that SPS does not anticipate full enrollment for 10 years or more after completion. Based on staffing for other Seattle high schools, SPS estimates that Rainier Beach High School could have between 130 and 160 employees if/when it is enrolled to its capacity of 1,600 students.

The proposed new school building would be located in the central portion of the site now occupied by the natural practice turf field and wood shop building. Two parking lots would be located at the southeastern portion of the site. Existing curb cuts along South Henderson Street would be eliminated and replaced by one.

The table of existing and proposed project elements is provided in Table 1.

**Table 1. Rainier Beach High School Replacement Existing and Project Elements**

| <b>Project Site Category</b> | <b>Existing</b>  | <b>Proposed</b>   |
|------------------------------|--|---|
| Building Structures          | <p>The existing school building facility, located on the east side of the property, houses a system of building units including the main school building and classrooms; the performing arts center building; the gymnasium; the Career and Technical Education (CTE) building; and the auto shop. The CTE building is not connected to the other three building units (main, performing arts, and gymnasium) by any interior hallway, and is housed in a separate rectangular building north of the other three building units. Covered walkways connect the gymnasium and the CTE building.</p> <p>Two portable classroom buildings are located directly south of the walkway along the southern façade of the CTE building.</p> | <p>Main school building structures would be demolished in phases. A new school structure would be constructed in phases in a new configuration on the project site which would displace the existing practice field.</p> <p>Other structures may be demolished or relocated as needed to accommodate the new school building.</p> <p>The new school would have general-use classrooms, special-education classrooms, science labs, learning commons, Career and Technical Education (CTE) labs, a Skills Center, library, art spaces, performing arts wing, gymnasiums and fitness spaces, health center, food service, multipurpose commons, administration, a Data Center, and support spaces.</p> <p>Site improvements would include a new on-site passenger vehicle drop-off/pick-up loop, an entry plaza, expanded and relocated parking, pedestrian paving, tree planting, landscaping, irrigation, selective clearing, grading, fencing, and site lighting. Portables may also be added to the school site, as needed. Excavation, fill, and grading are required during these activities.</p> <p>Portables would be demolished or relocated elsewhere on site. The portable classroom buildings would be relocated or demolished. New portable classrooms may be added to the project site as needed.</p> |
| Athletic Fields*             | Football/Soccer Field & Track  | <p>Football/Soccer Field &amp; Track would remain.</p> <p>Athletic Field Improvements include replacement of existing synthetic turf and LED upgrades to the existing lights.</p>   |
|                              | Utility (Practice) Field   | Utility (Practice) field would be replaced with the new school building structure.  |
|                              | Baseball Field   | <p>Baseball field would remain.</p> <p>Athletic Field Improvements include replacement of grass with synthetic turf and LED upgrades to the existing lights. Grass would remain if BTA V Capital Levy funding is not approved.</p>  |
|                              | Softball Field   | <p>Softball field would remain.</p> <p>Athletic Field Improvements include replacement of grass with synthetic turf and LED upgrades to the existing lights. Grass would remain if BTA V Capital Levy funding is not approved.</p>  |



| Project Site Category  | Existing  | Proposed   |
|--|---|--|
|  | Basketball Courts   | <p>Basketball courts would be removed and replaced with a new practice field.</p> <p>New field lighting would be installed at the new practice field.</p> <p>Includes replacement of asphalt and grass with new synthetic turf. Grass would remain if BTA V Capital Levy funding is not approved.</p>  |
| Additional Structures/Buildings  | Grandstand Spectator Bleachers and Support Buildings  | Grandstand spectator bleachers and support buildings housing a ticket booth, restrooms, concessions, scheduling office, storage, and maintenance equipment may be removed or reconfigured as needed for the new facility.  |
| Utilities  | Existing utilities currently at the site include electricity, natural gas, water, refuse service, telephone, storm drain, and sanitary sewer. | Utilities would be demolished and new utility services would be installed to serve the new building and associated facilities. Electricity, water, refuse service, telephone, storm drain, and sanitary sewer would continue to be provided to the school. This may include trenching and minor excavation and would be part of the overall construction at the site. A geothermal heating/cooling, displacement heat system would be installed, which requires boring geothermal wells in some areas of the site near the proposed new school building. Green stormwater infrastructure would also be provided. |
| Parking  | Three existing parking lots at the project site   | The project would reconfigure and expand on-site parking at the school. Two existing main parking lots would be located at the southeastern portion of the site and the new on-site passenger vehicle load/unload loop accessed from S Henderson Street and a second lot accessed from Seward Park Avenue S. These two parking areas would be physically connected by a tabletop driveway. Additional spaces are proposed along the northeast edge of the site with primary access from the same driveway on Seward Park Avenue S and/or from the south end of 53rd Avenue S.                                    |
| Site Preparation and Additional Work   | Site Conditions and Vegetation and Trees  | <p>Site improvements would include a new on-site passenger vehicle drop-off/pick-up loop, an entry plaza, pedestrian paving, vegetation and tree removal (including removal of exceptional trees), tree planting, landscaping, irrigation, selective clearing, grading, fencing, and site lighting.</p> <p>Construction staging would be provided on the existing school site.</p>   |
| * Athletic field improvements would only occur if BTA V Capital Levy funding is secured. |   |  |

- 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 school site is located at 8815 Seward Park Avenue South in Seattle, Washington (Parcels 3524049146, 3524049124, 3524049149, and 3524049192). The project site occupies most of a city block bounded by South Henderson Street to the south, Rainier Avenue South to the west, South Cloverdale Place and Grattan Place South to the north, 53rd Avenue South and Hamlet Avenue South to the northeast, and Seward Park Avenue South to the east. The project location is shown in Figure 1 and the site plan is shown in Figure 2.

The site is located in the NW quarter of Section 35, Township 24, Range 04. The site is made up of the following parcels and legal descriptions (King County, 2021):

- **3524049146.** POR OF GL 2 IN NW 1/4 DAF - BEG SW COR OF GL 2 TH ELY 208.75 FT TH N 00-07-22 W 163.75 FT TH N 89-54-13 W 31.75 FT TH N 00-07-22 W 276.50 FT TH S 89-54-13 E 63 FT TH N 00-07-22 W 461.67 M/L TH NELY ALG CLOVERDALE ST 232.49 FT TH S33-07-12E 462.50 FT TH E TO W LN OF 53RD AV S TH S 00-06-00 E 669.25 FT TO S LN SD GL TH N 89-54-13 W 645.45 FT TO BEG TGW LOTS 1 THRU 5 BLK 10 HILLMANS C D ATLANTIC CITY ADD AND LOTS 21 THRU 34 BLK 11 SD ADD AND VAC STS TGW A POR GL 2 IF ANY LY S OF S LN OF ABOVE SD ADD BETWN 53RD AV S & SEWARD PK AV S.
- **3524049124.** POR GL 3 LY N OF HENDERSON ST & W OF E LN OF 52ND S PROD N & LY E OF A LN 125 FT E OF & PLLW RAINIER AVE.
- **3524049149.** POR GL 3 BEG AT PT ON N LN OF HENDERSON ST 650 FT E OF E LN OF RAINIER AVE TH N 00-09-08 E 301.94 FT TO N LN SD GL TH E TO WLY LN OF SEWARD PARK AVE TH SLY TO N LN OF HENDERSON ST TH W TO BEG LESS S 100 FT OF E 100 FT THOF LESS ST PER 9311080867.
- **3524049192.** POR GL 3 DAF - BEG NXN OF N LN OF S HENDERSON ST & WLY LN OF SEWARD PARK AVE S TH W ALG SD N LN 100 FT TH NLY PLW WLY LN SD AVE 100 FT TH E PLW N LN SD ST 100 FT TO WLY LN SD AVE TH SLY ALG SD WLY LN 100 FT TO POB PER SEATTLE ORD# 91457.

## **B. ENVIRONMENTAL ELEMENTS**

### **1. Earth**

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

The overall topography across the property is generally flat to moderately sloping down to the west (AESI, 2020).

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

Site grades descend from an elevation high of approximately 27 feet within the northeastern quarter of the property to an elevation low of approximately 15 feet on the western edge of the property. These slopes appear to have been created by legal grading associated with development of the existing school (AESI, 2020).

**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.**

Associated Earth Sciences Inc. performed field explorations, a visual reconnaissance of the site, and a review of selected applicable geologic literature. A summary of soil types found on the project site is listed below (AESI, 2020):

- **Asphalt.** A surficial layer of existing asphalt was encountered within the southwest portion of the project site. The asphalt ranged from 2 to 3.5 inches in thickness.
- **Grass/Root Mat/Topsoil.** A surficial layer of grass, root mat, and organic topsoil was encountered at the locations of five explorations. This organic layer ranged from approximately 2 to 3 inches in thickness.
- **Fill.** The thickness of the observed fill soils ranged from approximately 3 feet to 8 feet.

**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.

- **Surficial Ground Rupture.** Based on AEIS's (2020) review of the Washington State Department of Natural Resources (WDNR) website, a fault trace associated with the Seattle Fault Zone is located about ½-mile north of the site. Due to the suspected long recurrence interval, and the distance of the site to the fault trace, the potential for surficial ground rupture along the Seattle Fault Zone is considered to be low during the expected life of the proposed structure.
- **Seismically Induced Landslides.** The potential for a seismically induced landslide at the site is low for the slopes along the west and southwest portions of the site, which were legally graded as part of original site development (AESI, 2020).
- **Liquefaction.** The encountered stratigraphy has a low potential for liquefaction due to its high silt content, thin zones of potentially liquefiable soils, and presence of significant shallow groundwater (AESI, 2020). The City of Seattle maps portions of the project site as an Environmentally Critical Area (ECA) liquefaction zone.
- **Peat Settlement Zone.** The City of Seattle maps the entire project location as a Category 2 ECA peat settlement prone area.

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

Expected construction activities for the project would include site clearing, excavation and grading, and demolition and removal of existing facilities. The project would require approximately 34,000 cubic yards of cut and 14,00 cubic yards of fill. The purpose of the grading and fill is to provide structural bearing subgrades. Existing fill soils would be removed from the site because they are not suitable for foundation bearing loads as indicated by the geotechnical engineer (AESI, 2020). Fill material required for the project would be sourced from an approved off-site location. Excavated material would be disposed of at an approved facility.

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

Construction activities at the site would expose soils, increasing the potential for soil erosion, particularly in areas with steep slopes.

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

The current combined impervious coverage on the site is approximately 60 percent. The proposed impervious coverage for the site would be reduced to approximately 50 percent.

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

SPS would be required to obtain an Ecology Construction Stormwater General Permit (also known as the National Pollutant Discharge Elimination System [NPDES] permit). This permit would require temporary erosion and sedimentation control (TESC) plans. Temporary erosion and sedimentation control Best Management Practices (BMPs) would be installed to minimize erosion during construction. BMPs would be specified by the SPS District in the construction contract documents that the construction contractor would be required to implement. BMPs may include but not be limited to:

- Maintaining cover measures atop disturbed ground, including erosion control matting, plastic sheeting, straw mulch, crushed rock or recycled concrete, or mature hydro seed.
- Providing storm drain inlet protection.
- Routing surface water away from work areas and steep slopes.
- Keeping staging areas and travel areas clean and free of track-out (materials adhering to motor vehicles and inadvertently carried out of the project site to a staging area or paved road).
- Covering work areas and stockpiled soils when not in use.
- Completing earthwork during dry weather and site conditions if possible.

## 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 project would likely result in emissions to the air during construction, which could last between 6 months and 3 years. Construction of this project could generate vehicle emissions, fugitive dust, or odors.

School buses and parent drop-off and pick-up trips would continue as existing practices. No increases in busses are anticipated.

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

There are no off-site sources of emissions or odors that would affect the proposed project.

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

SPS would identify site-specific mitigation measures necessary to minimize construction impacts during design. 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.

## 3. Water

- a. **Surface Water:**

1. **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.**

The project area is located approximately 300 feet west of Lake Washington.

No streams are mapped or were observed on site. However, the King County Interactive Mapping Tool (iMap) shows Mapes Creek as flowing east along South Henderson Street to the south, into Be'er Sheva Park to the east, before flowing into Lake Washington (King County, 2020b). During a November 19, 2020 site visit, this stream was observed to enter the park through the outlet of a culvert in the southwest corner of

the park. Upstream portions of this stream north of South Henderson Street within the vicinity of the school are piped and therefore are not part of the regulated riparian management area as defined in Seattle Municipal Code (SMC) 25.09.

One wetland occurs on the project site. The wetland is a depressional, palustrine forested (PFO), palustrine scrub-shrub (PSS), and palustrine emergent (PEM) wetland located in the northern extent of the project site and located to the southeast of Cloverdale Place South. It is bordered by the softball field to the southwest and residences to the northeast. The National Wetlands Inventory (NWI) maps a second freshwater/forested shrub wetland off site on the northwest side of Cloverdale Place South (USFWS, 2020).

Additional information is provided in the Final Environmentally Critical Areas Assessment Memo prepared for the project site (ESA 2021a).

**2. 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 project would not require any work on or over wetlands. Replacement of the existing turf field is proposed in the wetland buffer. Per SMC 25.09.160(C), development and any alteration to the functions and values of Category III wetlands and their associated buffer is generally prohibited unless the work meets one of the listed exemptions in the Code. However, Christy Carr (City of Seattle SDCI staff) indicated that the proposed project to convert grass to synthetic turf in the outfields is an existing use and the only change is material, from grass to artificial turf, so it can be reviewed as an exemption (maintenance/repair). There is no additional impact, since the field is already there. It is also exempt from critical areas review because the proposed improvement to the field is a change in material from natural turf to synthetic turf for an existing use. (Carr, 2021). Additional information is provided in the Final Environmentally Critical Areas Assessment Memo (ESA 2021b).

**3. 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 is proposed to be placed in or removed from surface water or wetlands.

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

The project would not require surface water withdrawals or diversions.

**5. 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) Flood Insurance Maps, the site is not located within a 100-year floodplain (FEMA, 2021).

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

The project would not involve the discharge of waste materials to any surface waters.

**b. Groundwater:**

**1. 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.**

Groundwater would not be withdrawn from a well for drinking water.

AESI encountered groundwater across the site at depths ranging from 5 to 22 feet. It is anticipated that the contractor may encounter the need for dewatering in advance of excavations. The contractor would be prepared to intercept any groundwater seepage entering the excavations and route it to a suitable discharge location (AESI, 2020).

**2. 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 would be discharged into the ground. The project site would not use septic tanks.

**c. Water Runoff (including stormwater)**

**1. Describe the source of runoff (including stormwater) 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.**

Runoff from building roofs and impervious surfaces is currently collected in a tight-line storm system and conveyed to the storm drainage main within the South Henderson Street right-of way. The storm main directly discharges into Lake Washington and would

continue to discharge to the same tight-line system for the proposed project after processing by bioretention cells.

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

No material would be discharged to ground or surface waters as a result of the proposed project.

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

The project would not alter or otherwise affect drainage patterns in the vicinity of the site.

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

**Construction:** BMPs specific to the site would be specified by SPS in the construction contract documents that the construction contractor would be required to implement. These may include but are not limited to:

- A Stormwater Pollution Prevention Plan (SWPPP), which includes a Temporary Erosion and Sediment Control (TESC) Plan, would be required to prevent sediment transport from the project site. Other erosion control measures would be incorporated, as necessary, in accordance with City of Seattle and Ecology requirements.
- Erosion control measures could include the use of catch basin inlet protection, a stabilized construction entrance, perimeter silt fences and mulch in exposed areas, armoring subgrade soils needed as working areas with rocks, catch basin filters, interceptor swales, hay bales, sediment traps, and other appropriate cover measures as specified in the SWPPP.
- All debris and spoil material would be transported off site to an appropriate disposal facility.
- Refueling would take place more than 100 feet from surface waters.

**School Operations:** The project may integrate green infrastructure, such as bioretention planting areas at the site and bioretention cells may be used to treat any new and replaced pollution-generating hard surfaces. Enhanced water quality treatment is required per City of Seattle Drainage Code as it includes more than 5,000 square feet of new plus replaced pollution-generating hard surface.



#### 4. Plants

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

Trees inventoried were documented in the Draft Arborist Report, prepared by Tree Solutions, Inc. (2021).

☒ deciduous trees: hawthorn, maple, aspen, cherry plum, other: Oregon ash; Homestead elm; paper birch; native willow; black locust; black cottonwood; horse chestnut; Monterey cypress; other ornamentals

☒ evergreen trees: fir, red cedar, pine, other

☒ shrubs: variety of ornamentals

☒ grass

☐ pasture

☐ crop or grain

☐ Orchards, vineyards, or other permanent crops.

☒ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other: Pacific willow; Nootka rose; slough sedge; reed canarygrass; bind weed

☐ water plants: water lily, eelgrass, milfoil, other

☐ other types of vegetation

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

The project would result in removal of vegetation including existing landscaping, plantings, and trees. This includes the removal of invasive species from the perimeter areas.

The new building would overlap the area where the existing utility field is located (natural turf) and the parking lot area located at approximately the middle of the project site (asphalt paving). Other alterations may include frontage improvements that would result in landscape or other enhancements. Vegetation would be impacted in these areas; overall, however, the project would expand vegetation throughout the site.

The Baseball and Softball outfields would be converted from grass to synthetic turf and the new practice field proposed for the northeast corner of the site would convert the asphalt and grass edging to new synthetic turf. The outfields would remain grass if BTA V Capital Levy funding is not secured.

The arborist report included the assessment of 189 trees located on site and in the adjacent right-of-way (Tree Solutions, Inc., 2021). Tree removal is proposed only for trees identified as posing some risk, with some requiring mitigation, removal, or pruning. There are currently 29 trees proposed for removal. Exceptional trees would be retained unless they pose a high or extreme risk. There are currently 5 exceptional trees proposed for removal.

Tree and vegetation removal plans would be reviewed as part of the project's permit application. A restoration plan is expected to be required for the removal of vegetation (including non-native or invasive plants) in environmentally critical areas (e.g., steep slope erosion hazard areas and their buffers, riparian corridors, wetlands, and wetland buffers).

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

No threatened or endangered plant species are known to be on or near the site (WDFW, 2021).

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

Proposed measures to preserve and enhance vegetation may include the following:

- Providing improvements along South Henderson Street to incorporate goals for a green pedestrian route
- Integration of green infrastructure
- Preservation of existing trees in good condition and new tree planting on the site
- Drought-tolerant, native, and adapted plants selected for suitability in the Puget Sound Lowlands, that include shrubs and groundcovers.
- School garden to support the school's culinary program, including terraced garden beds and a greenhouse

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

Bind weed and Himalayan blackberry were identified during the field investigation for the environmentally critical areas assessment (ESA, 2021a), and invasive English ivy was identified during the site inspection for the arborist report (Tree Solutions, Inc., 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. Examples include:**

Animals observed on the site are restricted to birds and animals typically found in urban areas. The project site is located approximately 300 feet west of Lake Washington and across the street from Be'er Sheva Park.

**Fish:** not applicable.

**Amphibians:** none observed.

**Reptiles:** none observed.

**Birds:** gull; American crow; rock pigeon; chickadee; robin; Steller's jay; northern flicker; Bewick's wren.

**Mammals:** Norway rat; raccoon; opossum.

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

According to the Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) program maps, there are no listed species on the project site. The U.S. Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS) Information for Planning and Consultation (IPaC) online tool does not designate critical habitat for threatened or endangered species on the site. Lake Washington, approximately 300 feet east of the project site, is listed as critical habitat for bull trout (USFWS, 2021). However, most habitat is likely only used as occasional foraging habitat.

The restored portion of Mapes Creek, located at nearby Be'er Shiva Park, provides refuge for fish and rearing habitat for juvenile Chinook salmon migrating to Puget Sound (City of Seattle, 2021c). Chinook salmon are listed under the Endangered Species Act as Threatened, Protected Status (NOAA, 2021).

There are no other threatened or endangered species known to be on or near the project site. Therefore, the potential for threatened or endangered animal species to be present is low.

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

The Puget Sound area is located within the Pacific Flyway, which is a flight corridor for migrating waterfowl and other avian fauna. The Pacific Flyway extends south from Alaska to Mexico and South America. No portion of the proposed project would interfere with or alter the Pacific Flyway.

Nearby Mapes Creek is a restored connection to the lakeshore and important to juvenile Chinook salmon that migrate from the Cedar River to Puget Sound along the lakeshore.

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

New trees and native plants are proposed throughout the site. These improvements are expected to increase habitat function and opportunities throughout the site.

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

Invasive animal species likely to be in the area include Norway rat, raccoon, opossum, and rodents that are typically found in urban areas.

## 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 school would require electricity to operate. Electricity would also be sourced partially from solar. Photovoltaics would be installed on the roof to increase the solar on-site energy capacity. Energy for heating and cooling would mostly be provided by a geothermal well field on site. No natural gas would be provided to the site.

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

The project is located at an existing school site, and the new 4-story replacement structure is not expected to affect the 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:**

Under 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 percent reduction in energy use beyond what is required by the Washington State Energy Code (Revised Code of Washington [RCW] 39.35D.040).

The proposed replacement project includes energy conservation features that would substantially reduce energy use compared to the existing school building energy use. Overall, the energy efficiency of the replacement school project would reduce demand for energy and natural resources. The following energy conservation features may be included:

- Highly efficient Mechanical System: A geothermal heating/cooling, displacement heat system would deliver high quality indoor air
- Solar panels
- Power metering providing feedback on building system energy consumption and opportunities to help identify modifications to maximize building efficiency
- Energy star-certified equipment
- LED lighting with a system tailored to the type of illumination desired within each space or areas (ambient, general, accent, display, task, emergency and exit)
- Lighting control devices may include: time clocks occupancy sensors, light reduction controls, photo sensors, dimming controls, and emergency egress lighting controllers
- Both covered and non-covered bike parking

**Athletic Field Lighting:** The majority of the existing athletic field lighting and poles would remain in place, though upgraded to LED. New lighting would be installed at the new practice field for school use only and would not add public use.

The LED lighting is proposed to reduce the electrical energy load used for lighting by approximately 33 percent compared to floodlights that use metal halide lamps.

A fully programmable control system with remote operation would allow the fields to be lighted independently and to automatically turn off after play is completed. This feature would ensure that lights would be on only during the hours that events are scheduled on each field. If necessary, the lights could also be operated manually through separate switches that would be installed. Field lights are in addition to general security lighting that would be provided around the site.

The control system would be connected to the SPS energy management system. The lighting controls would be operated and programmed by SPS staff only. Automated control of the lighting system would be located at the central office. Manual controls would be located inside a locked electrical cabinet on site with keyed access by SPS staff only. Public use of the lighting system would be scheduled through the Seattle Parks and Recreation Department (Parks), which would put in a request to SPS to program the lights to turn on and off for special events.

## 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.**

The project 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 the site. 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.

#### 1. **Describe any known or possible contamination at the site from present or past uses.**

According to the Ecology Facility/Site(s) database (Ecology, 2021), the Rainier Beach High School site is not known to have contamination from present or past uses.

EHS-International, Inc. (EHSI) conducted a Limited Hazardous Materials Survey of the existing buildings at the project site. The survey included

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 were identified throughout the existing buildings (EHSI, 2021).

**2. 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 would affect project development. Hazardous material abatement of the existing buildings prior to demolition would be performed.

**3. 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.

Chemicals stored and used during the operating life of the school would be limited to chemicals required during the course of teaching science and related types of classes. These chemicals would be stored in a flammable cabinet inside of a locked room accessed only by teaching staff.

**4. Describe special emergency services that might be required.**

The project would not require any special emergency services.

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

Proposed measures to reduce or control environmental health hazards may include those listed below:

- 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.

**b. Noise**

**1. 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, as well as overflights associated with

Boeing Field and Sea-Tac International Airport. These noises are currently heard at the Rainier Beach High School site. The City of Seattle regulates noise via the Seattle Noise Ordinance (SMC Chapter 25.08). The ordinance sets a limit for exterior sound levels based on land use, establishes quiet hours, and prohibits construction and maintenance activities during certain hours of the day.

**2. 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.**

**Construction:** Construction of school projects would generate noise and possibly vibration. Construction equipment and vehicles may include jackhammers, drill augers, 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.

**School Operations:** During school operations, as student enrollment increases at the school, there could be an increase in noise. Operations at the school would be audible to neighbors. Noise sources from high schools typically include student voices, school bells, regular vehicular traffic, and building mechanical equipment. A slight increase in noise would occur at the beginning and end of the school day and during lunch and recess periods. 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.

**Athletic Fields:** Improvements to the athletic fields are not expected to change spectator attendance or the frequency of facility use over what is currently scheduled. New lighting at the new practice field would be for school use only and not for public use. Replacement of the existing basketball courts with a new practice field is not expected to result in a marked increase in noise over existing conditions.

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

General measures that may be imposed on the project to reduce or control noise impacts may 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. 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, SPS would instruct contractors to implement measures to reduce noise impacts to comply with the noise ordinance, which may include additional muffling of equipment.
- School operations 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).

**Athletic Fields:** No marked change to existing use of the athletic fields is expected due to the replacement of the existing synthetic turf and the upgrades to the lighting and installation of new lighting at the new practice field.

## **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 project site is currently used to house a SPS public high school campus, with associated sports complex and accessory buildings. Adjacent property uses include:

- **North** – Real estate agency. Single-family residences are located northeast of the site.
- **South** – Multifamily residences and a shopping center. A vacant lot owned by Seattle Public Utilities is located southeast of the site.
- **East** – Be’er Sheva Park and Lake Washington
- **West** – Paint store, car wash, deli, auto sales, retail stores, apartment buildings, medical/dental offices, convenience store, office building, Dunlap Elementary School, and vacant lots. Rainier Beach Community Center, and the South Lake High School are located northwest of the site.

The project would not affect the current or adjacent land uses since the site has been used as a school since 1960 and would continue to be used as a school.



- 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?**

The site has been developed as a school since 1960. The site is not used for working farmland or working forest lands.

- 1. 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:**

No working forest lands are located near the project site. The project would not affect or be affected by farm operations.

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

The school building facility, located on the east side of the property, houses a system of building units including the main school building and classrooms; the performing arts center building; the gymnasium; the Career and Technical Education (CTE) building; and the auto shop. The CTE building is not connected to the other three building units (main, performing arts, and gymnasium) by any interior hallway, and is housed in a separate rectangular building north of the other three building units. Covered walkways connect the gymnasium and the CTE building. Two portable classroom buildings are located directly south of the walkway along the southern façade of the CTE building.

Athletic fields, located on the west side of the property, have accessory structures that include the bleachers, restroom and concession facilities, storage building, maintenance building, and fencing. Appurtenant structures and field lighting are also located on the project site.

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

Demolition of the school building, performance arts center and gym would be completed in phases (see also Section A.6, above).

Other site demolition activities may include the practice field, the demolition of appurtenant structures, storage, restrooms, parking areas; break up and removal of paved areas, subsurface foundations, field lighting, utilities, and footings; and other site construction within the site demolition area. Existing storm drain and sanitary sewer would be reused where possible, and demolished if no longer needed.

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

The current zoning classification of the school site is Residential Small Lot, Lowrise 2, and Lowrise 3 (City of Seattle 2021a and 2021b).

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

The current comprehensive plan designation of the site is Rainier Beach Residential Urban Village.

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

The project site is not within a shoreline jurisdiction. Therefore, there is no applicable Shoreline Master Program designation.

**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's ECA geographic information systems (GIS) data were reviewed to assess ECAs on the project site. The project site contains steep slopes, wetlands, liquefaction zone, peat settlement prone, riparian corridor (City of Seattle, 2021a and 2021b).

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

With the proposed replacement and expanded capacity, Rainier Beach High School could have enrollment of up to 1,600 students with between 130 and 160 employees when enrolled to capacity. Full enrollment at the proposed capacity is not expected for 10 or more years after completion.

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

The completed project would not displace any people. The students would move from one building on site to another while construction is ongoing.

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

No displacement would occur. Therefore, no mitigation measures are needed.

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

**Environmentally Critical Areas:** 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:

- 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).
- Mitigation plans would be developed in compliance with the City's ECA regulations (SMC 25.09).

**Compatibility with Existing Land Use Plans:**Seattle 2035 Comprehensive Plan (City of Seattle, 2020)

The project is compatible with Rainier Beach Land Use Policies, specifically:

- RB-P1 Encourage the revitalization of the South Henderson Street corridor as a safe and attractive conduit between the light rail station at Martin Luther King Jr. Way South and the commercial center along Rainier Avenue S.
- RB-P21 Improve connections to, and circulation within, public spaces (South Shore K-8, Rainier Beach Playfield, Rainier Beach High School, and between Be'er Sheva and Pritchard Beach).

## Rainier Beach Human Development Goals:

- RB-G13 Strong schools with excellent programs and strong enrollment, which encourage and support the educational development of exceptional students.
- RB-G17 Community-based implementation of neighborhood plan recommendations and other community projects.

## Rainier Beach Human Development Policies:

- RB-P40 Improve public safety when implementing any project or program within the community

The project is consistent with existing land use regulations and plans. The Seattle Municipal Code contains development standards for public schools in residential zones in SMC 23.51B.002. The Seattle Land Use Code (Chapter 23.79) acknowledges that schools have different requirements than residential buildings and design departures from the development standards in the Code may be permitted through the departures process. The departure process requires SPS to apply to the Director of the Department of Construction and Inspections (DCI) for departures. SDCl may approve departures if they meet certain criteria in SMC Chapter 23.79. The project would require a departure for building height.

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

The project is not located near any agricultural or forest lands of long-term commercial significance. No measures to ensure compatibility are required.

**9. Housing**

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

No housing units would be provided as part of the project.

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

No housing units would be eliminated.

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

The project would not cause housing impacts. Therefore, mitigation measures to control housing impacts would not be required.

**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 tallest height of the proposed new school structures is expected to be approximately 60-ft. The tallest existing school building is the performing arts building at approximately 46-ft with additional height from mechanical elements. A height departure would be needed because the maximum height allowed under the current zoning is 35-ft plus 15-ft for pitched roofs. SPS is seeking a departure to allow a four-story high building, as specifically allowed in the City Code for high school buildings. The principal exterior building material would be brick or masonry on the first two floors of the main building with metal panels above. Masonry material with a look of basalt, with the use of textured materials for the athletics portion of the building and the performing arts center and other structures.

The existing athletic field light poles are approximately 80-ft. Light poles at the football field/track, baseball field, and softball fields are expected to remain and the bulbs would be upgraded to LED. The exception to this is that two of the existing 95-ft football field light poles would be relocated due to placement of the new school building. The new practice field would have four 60-ft lights installed. All other lighting (practice fields, parking lots, etc.) would be relocated as needed to accommodate programming.

- 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). There are no protected views of or from the Rainier Beach High School site, as identified in SMC 25.05.657. There are no known viewpoints that would be affected by construction of the project. Figure 3 provides a key to the location of the photos of representative views of the project site from each direction (see Figures 3a through 3h). There are no (or limited or obstructed) views from the streets surrounding the area, although not specifically designated as protected view areas.

Views from adjacent residences facing the school campus would be altered as the school buildings are demolished and replaced with a new contiguous multi-story building, which would include new exterior facades, a different roof line, and a relocated main entry. However, the character and use of the site as school buildings and athletic fields, would not change. The new school has been designed to be aesthetically appealing and recede into the landscape, and along with new trees, would be an improvement over the aesthetics of the view of the older existing school.

For example, the current view of the site from single-family residences located to the north and northeast of the project site (Figures 3f through 3g) are of the school buildings, athletic fields, and associated lighting. The current view from apartments and commercial businesses located west of the project site (Figures 3b through 3d) are also dominated by the school buildings, athletic fields, and associated lighting. After construction of the project, the view of the site from these locations would be of a newer school building that is taller but similar in height and scale. The current view of the site from the residences located south of the project site is of the stadium, stadium parking, and the classroom building (Figure 3h). After construction of the project, the view from these residences would be of the same stadium, a new building in the background, and relocated parking lots at the southeast of the project site.

**Athletic Field Lighting:** The existing 80-ft and 95-ft poles at the baseball and softball fields would be retained, as constructions allows, and upgraded to LED lights. A new practice field in the northeast corner of the site is proposed to be constructed with four 60-ft lights for school use only and would not add public use. Two of the existing 95-ft tall football field light poles are being relocated due to placement of the new school building.

The upgrades to LED lighting, relocation of several poles, or new installation of lighting at the new practice field is not expected to alter or obstruct SEPA-protected views, and would be similar to existing views (see Figures 3b through 3f, and Figures 3g and 3h).

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. There are no protected view corridors or scenic routes in the vicinity of the project site. The proposed project would not have impacts on view corridors, scenic routes, or views of landmarks.

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

**Athletic Field Lighting:** Lighting features at the new school facilities would be designed to comply with City code requirements. The majority of the field lights are existing and getting upgrades to LED lighting. If there are any new field lights needed, they would likely require a special exception to the height limit for the

light poles, as allowed in SMC 23.76, but would be the same height as the existing light poles.

**11. Light and Glare**

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

A light and glare technical report for athletic field lighting was prepared by lighting consultant Stantec (Stantec, June 2021) and is found in Appendix B.

**Proposed Parking Lot and Security Lighting:** Existing parking lot lights would be removed and new LED parking lot lights in new locations would be provided. Additional lighting would be provided as needed for the parking areas and general security.

**Proposed Athletic Field Lighting:** The existing 1000 watt shielded floodlights at the existing football, baseball and softball fields would be upgraded to shielded LED floodlights. Two 95-ft lights at the main athletic field would be relocated to accommodate the new school building. The project proposes to re-use existing light poles for the softball and baseball fields, if possible. This newer lighting would significantly reduce site spillage and lessen glare (Stantec 2021).

New lighting is proposed for the new practice field for school use only and would not add public use. The new athletic field lighting system at the practice field would consist of four 60-ft, galvanized steel poles with LED shielded floodlights. The proposed lighting for the field consists of 4 - 600 watt and 12 - 400 watt shielded LED floodlights. The floodlights would be mounted at the top of the poles. One additional low wattage "full cutoff" area light would be mounted at a height of 30-ft above grade on the two poles located on the west side of the field.

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

Existing standards for shielding of lights would continue to apply. The illumination systems would not pose a safety hazard or interfere with views from off-site locations when the lights are operating at night.

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

No off-site sources of light or glare would affect this proposal.

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

**School Operations:** Upgrades to LED lighting would significantly reduce site spillage and lessen glare. 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.

**Athletic Field Lighting:** The replacement of the existing athletic field floodlights at the football, baseball and softball fields would provide a reduction in the amount of “sky-glow” impacts surrounding the entire school site. The replacement LED floodlights would include extensive shielding limiting the amount of direct light emitted up into the atmosphere as compared to the existing floodlights. The new floodlights would be high efficiency with an approximate 30% decrease in the quantity of overall light needed to light the fields resulting in a corresponding reduction of reflected light from the field and adjacent surfaces.

Off-site exposure to low levels of direct glare from the proposed new lighting at the practice field is primarily to the residential properties directly east of the proposed field across 53rd Avenue South and the residential properties immediately adjacent to the north. These properties are at a slightly higher elevation to the field with direct exposure to the light poles and floodlight assemblies. Other residential properties located next to the adjacent residential properties would have minimal exposure to direct glare. Residential properties located farther away from the field would have minimal to no direct glare impacts. The proposed new lights will be below the code-requirements of 1.1 foot candles for spill light at property lines.

The proposed new lighting at the new practice field may use some of the measures listed below to reduce or control light and glare impacts:

- SPS would identify appropriate mitigation measures to reduce impacts at individual sites during project-level design and environmental review.
- To maximize glare reduction, the owner is providing additional mitigation with the use of “full cutoff” style LED floodlights that provide the most advanced light control and shielding currently available in the sports lighting industry. Additional reduction in direct glare is also provided by internal shielding of the LED diodes. The additional shielding nearly eliminates direct view of the very bright LED’s from off-site viewing locations.
- A fully programmable automatic lighting controller would be provided. The controller can be used to operate remotely to turn lights off when the field 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. High schools typically feature sports fields and, in some cases, running tracks and tennis courts. While these facilities are primarily used by the schools, many are available to the public outside of school hours. Recreational opportunities on the Rainier Beach High School site include a softball field, baseball field, basketball courts, a utility field, and a football/soccer field & track.

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 project site.

Parks and recreational opportunities in the vicinity of the Rainier Beach High School include the following:

- **Be'er Sheva Park** is located across the street from the project site and features views of Lake Washington, a boat ramp, picnic area, playground, and restroom facility.
- **Rainier Beach Urban Farm and Wetlands** is located approximately 0.3-mile northeast of the project site and north of Be'er Sheva Park, featuring a farm, food production education, a commercial kitchen, and cooking and nutrition education.
- **Pritchard Beach Bathhouse and Beach** is located approximately 0.5-mile northeast of the project site, featuring a lakefront swimming beach and waterfront views.
- **Rainier Beach Community Center** is 0.25-mile west of the project site, featuring a pool, gym, playground, indoor basketball court, shower and restroom facilities, spa, sauna, and game room, among other services for the community.
- **Rainier Beach Playfield** is located approximately 0.6 mile west of the project site. The playfield features tennis courts, ballfields (baseball, soccer), restrooms, and playgrounds.

The outdoor athletic fields at Rainier Beach High School are also known as the Southeast Athletic Complex (SEAC) and serve as the home fields for Rainier Beach High School as well as for some sports at other Seattle high schools (e.g., Cleveland High School varsity football, softball, and baseball).

Many Seattle schools have athletic facilities (football, soccer, tennis courts, 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. SPS and the Parks have historically maintained a Joint Use Agreement 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.

Seattle Department of Parks and Recreation (Parks) facilities and parks are subject to the Joint Use Agreement between Parks and SPS. SPS and Parks' facilities are subject to the Joint Use Agreement and the Joint Athletic Facilities Development Program. An exception to this is the new lighting proposed at the new practice field location at Rainier Beach High School which would be for school use only and would not add public use.



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

Construction of athletic field and field lighting as well as their relocation could disrupt the use of the athletic fields during the construction period. For a temporary time, fields would not be available for use.

Recreational facilities adjacent to the school could be temporarily impacted by construction activities. Impacts may include limited or restricted access, or a decreased pleasure of using the facility as a result of proximity to construction activities. Construction could be visible and audible to users nearby parks. Temporary portables may be located on the existing athletic facility sites. The portables would be removed after construction, and recreational use of the courts would be restored.

The amount of field use by Parks would not increase or decrease because they would not have use of the new practice field.

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

**Construction:** 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.

**School Operations and Athletic Fields:** Recreational opportunities for the school and community use would be enhanced by upgrading existing athletic field lighting to LED and relocating several existing 95-ft light poles that interfere with the bleachers on the north side of the football field. The new school facility (including the gym) would continue to provide and expand the availability of recreational facilities.

**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.**

There are no recorded buildings, structures, or sites known to exist within or near the project location that are currently listed in, or considered eligible for listing in, the National Register of Historic Places (NRHP), Washington Heritage Register, or Seattle Landmarks List.

The existing Rainier Beach High School is comprised of buildings constructed in 1960 and later. The original architect was John W. Maloney and the engineer was Worthington, Skilling, Helle & Jackson; the builder was Johnson-Morrison-Knudsen (Johnson Partnership, 2019).

SPS nominated the school to the Seattle Landmarks Preservation Board (Board) in August 2020 (Johnson Partnership, 2019); the Board determined that the school did not meet necessary landmark criteria and denied the nomination on September 16, 2020 (Doherty, 2020). The school has not been recorded on a DAHP historic property inventory form, nor has it been evaluated for its potential eligibility for listing in the NRHP. The school did not meet Seattle City Landmark criteria; it is unlikely that the school would be recommended or determined eligible for listing in the NRHP as City criteria closely follow NRHP criteria.

The parcels adjacent to the project site include buildings and structures that are over 25 years in age. Currently, none are listed in or have been recommended or determined eligible for listing in a historic register. The buildings are primarily single-family residences. The project does not propose direct impacts on any of these buildings or structures.

**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.**

No recorded archaeological sites, cemeteries, or traditional cultural properties are located within or adjacent to the project. The project location is classified in the DAHP Statewide Predictive Model as High to Very High Risk for containing precontact-era cultural resources (DAHP, 2021). No subsurface cultural resources assessments have been conducted within the project area. ESA concurs with the predictive model classification for this location.

Rainier Beach High School is located within the ancestral lands of the Southern Coast Salish people. Oral traditions support the presence of Southern Coast Salish people in this portion of Puget Sound since time immemorial, and this is also supported by archaeological evidence within the region (Kopperl et al., 2016). The DAHP Tribal Areas of Interest map identifies the following tribes with interest in the project area: Muckleshoot Indian Tribe, Samish Indian Nation, Snoqualmie Indian Tribe, Squaxin Island Tribe, Stillaguamish Tribe of Indians, Suquamish Tribe, and Tulalip Tribes (DAHP, 2020). This layer was developed by DAHP and participating tribes. Additionally, the project area is within the ancestral lands of the Duwamish Tribe (Lane, 1975).

No places with recorded Coast Salish names are known to exist within the project area or immediately adjacent parcels. However, there are two places with recorded Coast Salish names and a trail approximately 0.25-mile from the project area. The first place is *ḶḶcas* (Small Island; recorded as TL1LTCUS by T.T. Waterman), also known as Young's Island and Pritchard Island (Hilbert et. al, 2001:95 and 99, no. 126; Thrush, 2007:245-246, no. 94; Waterman, 1922:191, no. 99). The second place is *dəxʷwuqʷad* (Place of Loon or simply Loon; recorded as <sup>TUX</sup>WOO'KWIB by T.T. Waterman; Hilbert et al., 2001:95, no. 125;

Thrush, 2007:245, no. 93; Waterman, 1922:191, no. 98). The approximate location of a trail in this area is mapped at a very small (or low detail) scale by Thrush (2007:246) as leading generally northwest from Small Island to connect with a north-south trail that then curved west to lead over the hill and down to the Duwamish River valley. No name is given for this trail. Due to their distance from the project area, no impacts on either named places or the trail by the project are anticipated.

The community of Rainier Beach formed in 1893. The area was accessible by the Rainier Avenue Electric Railway (McKee and Reynolds, 1894; USGS, 1895; U.S. Coast and Geodetic Survey, 1902). Development began on the south side of the marshy inlet (Maring and Blake, 1895). By 1908, Hamlet Avenue S and Grattan Place S were established. Historical maps from the 1910s–1950 show a sparse number of buildings in the project area fronting Rainier Avenue S (Baist Map Company, 1912; Kroll Map Company, 1912, 1920; Pacific Aerial Surveys, 1937, 1957; Sanborn Map Company 1917, 1950). In 1958, SPS purchased a portion of the present-day school site from the City (Thompson and Marr, 2002). The site was significantly graded according to permit records, with 47,000 cubic yards moved and approximately 50,000 cubic yards of earth filled (Johnson Partnership, 2019). A pump house and water tank were installed in 1959, and in 1960 the 2-story brick school opened to students. Over time, portables were added and removed from the school grounds. SPS constructed an automotive shop in 1968 and a performing arts center in 2000 (Johnson Partnership, 2019:6). In 2001, SPS renovated the athletic fields. The track was reoriented east-west from its previous north-south alignment. SPS resurfaced the athletic fields with synthetic turf and constructed restrooms, concessions, bleachers, storage, and maintenance buildings (Johnson Partnership, 2019).

**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.**

The following information was reviewed: previous archaeological survey reports (DAHP, 2020, 2021), historical maps (Anderson Map Company, 1889, 1894; Baist Map Company, 1912; Kroll Map Company 1912, 1920; Maring and Blake, 1895; McKee and Reynolds, 1894; Sanborn Map Company, 1917, 1950; U.S. Coast and Geodetic Survey, 1902; USGS 1895, 1908, 1968; U.S. Surveyor General, 1861), government landowner records (U.S. Bureau of Land Management, 1995), aerial photographs (NETROnline, 2020; Pacific Aerial Surveys, 1937, 1957), published ethnographies and regional histories (Bagley, 1931; Buerge, 1984; Burke Museum, 2019; Duwamish Tribe, 2020; Hilbert et al., 2001; Johnson Partnership, 2019; Kopperl et al., 2016; Lane, 1975; McDonald, 1979; Rochester 2001; Seattle Public Schools Archives, 1965; Sherwood, 1978; Thompson and Marr, 2002; Thrush, 2007; Waterman, 1922; Wilma, 2001), geological maps and reports (AESI, 2020; Atwater and Moore 1992; Chrzastowski, 1983; King County,

2020; McManus, 1963; Thorson, 1980; Troost, 2011; Troost and Booth, 2008; Troost et al., 2005; WDNR, 2021), and soils surveys (NRCS, 2018).

**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.**

SPS is applying for state capital funds from the Washington Office of Superintendent of Public Instruction (OSPI). Use of state funds would require that the project go through additional cultural resources review under Governor's Executive Order 21-02 (formerly 05-05). The 21-02 review process requires documentation of consultation between the project proponent and DAHP and Tribes regarding potential impacts to cultural resources. SPS would consult with DAHP and Tribes regarding additional cultural resources assessment work for this project. SPS would develop future survey methodology and cultural resource field work in consultation with DAHP and Tribes, including the Duwamish Tribe.

Potential methodology could include conducting an archaeological survey prior to construction. If a preconstruction archaeological survey is not feasible, or if results of the survey indicate a continued High to Very High Risk for archaeological sites, SPS could formulate an Archaeological Resources Monitoring Plan (ARMP) and retain a professional archaeologist to conduct archaeological monitoring during some or all ground-disturbing construction of the project. Consultation with DAHP and Tribes under 21-02 may identify other assessment methods and preferred approaches. Prior to any fieldwork, SPS would notify and invite Tribes, including the Duwamish Tribe, to observe the work. At all times, state laws regarding cultural resources, including Archaeological Sites and Resources (RCW 27.53), Indian Graves and Records (RCW 27.44), Human Remains (RCW 68.50), and Abandoned and Historic Cemeteries and Historic Graves (RCW 68.60), are in force if archaeological sites or human remains are discovered. Based on the result of the analysis, measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources would be determined based on the nature, location, and potential impacts to any archaeological resource.

**14. Transportation**

A *Transportation Technical Report* (Heffron Transportation, Inc., June 2021) has been prepared for the proposed project, and the results of the report are summarized in this section. For further details on the *Transportation Technical Report*, please refer to 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.**

The existing Rainier Beach High School site is bounded on the east by Seward Park Avenue South, on the south by South Henderson Street, on the west by

private commercial properties, on the northwest by South Cloverdale Place and on northeast by private residential properties.

**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, the school site is directly served by King County Metro Transit (Metro). Stops served by Routes 7 and 106 are located on South Henderson Street. The eastbound stop for Route 7 is located across the street from the main school building just east of 53rd Avenue South (private street); the westbound stop for Route 106 is located at the southwest corner of the site just east of Rainier Avenue South. Link light rail service is provided by Sound Transit at the Rainier Beach Station located about ½-mile west of the school site at Martin Luther King Jr. Way South just south of South Henderson Street. Table 6 of the referenced Transportation Technical Report summarizes transit service provided within one-half mile of the project site.

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

Because the school is located within an Urban Village, there is no City of Seattle minimum code requirement for parking supply and no code-departure for reduced parking is required. However, the project would reconfigure and expand on-site parking at the school, providing a total of about 200 spaces—an increase of about 40 spaces compared to existing site conditions. Two main parking lots would be located at the southeastern portion of the site—one with 62 spaces and the new on-site passenger vehicle load/unload loop accessed from S Henderson Street and a second lot with 106 spaces accessed from Seward Park Avenue S. These two parking areas would be physically connected by a tabletop driveway designed to emphasize pedestrian movement, but would allow connection between the parking areas during peak-use periods. An additional 30 spaces are proposed along the northeast edge of the site with primary access from the same driveway on Seward Park Avenue S and/or from the south end of 53rd Avenue S.

The consolidation of access along S Henderson Street would eliminate two existing curb cuts and allow for an increase in on-street parking supply (adding about four spaces) along the site frontage. No other proposed changes to site frontage are expected to effect on-street parking supply in the vicinity.

A detailed study of parking conditions was prepared and is presented in the *Transportation Technical Report* (Appendix A). As presented in that report, the expanded school with enrollment of up to 1,600 students could generate a peak school-day demand ranging from 224 to 264 vehicles.

With the proposed on-site supply of about 200 spaces, the expanded school could generate excess demand of between 24 and 64 vehicles that may occur

along on-street parking in the site vicinity. This potential new parking overspill would most likely occur on-street in areas nearest the school that have unrestricted parking on school days. Based on the parking utilization study performed around the school, there were over 120 unused unrestricted on-street parking spaces along S Cloverdale Street, Grattan Place S, Wabash Avenue S, 53rd Avenue S, Hamlet Avenue S, and Seward Park Avenue S. After accounting for potential new overspill demand from nearby pipeline development projects (described previously) and the potential range of new overspill from Rainier Beach High School (when fully enrolled to capacity), on-street parking utilization in the study area is expected to remain between 62% and 74% with between 90 and 130 unused spaces remaining. Based on these estimates, the added school day demand would not represent a significant adverse impact.

The school would continue to host events periodically throughout the school year, and the project is not expected to increase the frequency of these events. As described in the referenced *Transportation Technical Report*, due to changes that may occur with the larger enrollment capacity, two of the larger events—the Open Houses—are anticipated to experience higher levels of attendance and participation. Since on-site parking for these two events is likely often full, added demand would be expected to occur on-street surrounding the site. The on-street supply could accommodate the overflow demand of some of the larger events at the high school. However, for the largest events, all on-street parking along the roadways surrounding the school site could be at or above capacity. These conditions likely already occur occasionally with well-attended basketball games, and the change in school enrollment capacity is not expected to change these existing conditions.

The outdoor athletic fields at Rainier Beach High School are also known as the Southeast Athletic Complex (SEAC) and serve as the home fields for Rainier Beach High School as well as for some sports at other Seattle high schools (e.g., Cleveland High School varsity football, softball, and baseball). The use of the site by other schools' sports teams would not be affected by the replacement project. However, the larger enrollment capacity made possible by the school-replacement project could result in more evenings with multiple concurrent smaller events that cause on-street parking overspill more frequently. To mitigate potential event-related impacts, event parking mitigation measures are recommended.

**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).**

The project would consolidate vehicular access on South Henderson Street to one driveway—located about 30 feet west of the existing eastern driveway serving the main parking lot. The western driveway and the wide access serving the kitchen staff parking would be eliminated. The access driveway on Seward

Park Avenue South would be reconstructed in about its existing location. In coordination with the Seattle Department of Transportation (SDOT), the segment of 53rd Avenue South along the site frontage would be widened and improved with curb and sidewalk on the west side (adjacent to the school). For all frontages (including South Henderson Street, Seward Park Avenue South, 53rd Avenue South, and South Cloverdale Place), sidewalk and curb ramps would be improved to meet current design standards, as required by SDOT. No other physical changes to the surrounding transportation network are proposed as part of the project. School buses would continue to have the option to use the load zone on the north (westbound) side of South Henderson Street.

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

The project would not use or occur in the immediate vicinity of water or air transportation. However, Sound Transit's Rainer Beach Link light rail station is located about ½-mile west of the project site. Students, staff, and site visitors are expected to use Link light rail service to access the site vicinity on school days and for 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?**

The traffic analysis conducted for this SEPA Checklist reflected conditions with the Rainier Beach High School Replacement project complete and increased enrollment to its planned capacity of up to 1,600 students (a net increase of 838 students compared to the school's average enrollment over the past 4 years, an increase of 100 students over its original capacity, and below its historic peak enrollment of 2,159 students from 1967). Based on adjusted daily trip generation rates published for high schools by the Institute of Transportation Engineers, the replaced and expanded school is estimated to generate a net increase of about 1,300 trips per day (750 in, 750 out). The peak traffic volumes would continue to occur in the morning just before classes begin (300 trips between 8:00 and 9:00 a.m.) and in the afternoon around dismissal (20 trips between 3:15 and 4:15 p.m.).

During the most recent academic year, the school was served by up to eight smaller special education (SPED) buses; no change to the number of buses is anticipated. Other truck trips expected to continue serving the site include deliveries of food and supplies, trash and recycling pick-up, and occasional maintenance. Overall, school buses and small trucks likely represent about 3 percent of the total daily traffic.

For more information about the anticipated school traffic generation, refer to Appendix A, *Transportation Technical Report* (Heffron Transportation Inc., June 2021).

- 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 site.

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

The following identifies measures to reduce adverse impacts during short-term construction and long-term operations of the Rainier Beach High School Replacement project. With these measures, the project would not result in significant adverse transportation impacts.

#### **Short-Term Conditions – Construction**

- A. Construction Transportation Management Plan (CTMP):** The District would require the selected contractor to develop a Construction Transportation Management Plan (CTMP) that addresses traffic and pedestrian control during each major construction phase of the new facility. It would define truck routes, lane closures, walkway closures, and parking or load/unload area disruptions, as necessary. To the extent possible, the CTMP would direct trucks along the shortest route to arterials and away from residential streets to avoid unnecessary conflicts with resident and pedestrian activity. The CTMP may also include measures to keep adjacent streets clean on a daily basis at the truck exit points (such as street sweeping or on-site truck wheel cleaning) to reduce tracking dirt off site.

#### **Long-Term Conditions – Operations**

- A. Event Management Plan:** Prior to each school year, the District should work with the school principal to develop an Event Management Plan to reduce parking impacts during large evening events (those expected to have 900 or more attendees/participants). Measures could include: (1) avoiding scheduling large in-school events concurrent with a large event at the Southeast Athletic Complex; (2) providing information to families about transportation alternatives for the events (e.g., Metro and Link service details); and (3) separating large events by grade to reduce overall attendance on any given evening. SPS currently manages events through these methods and would continue this practice.
- B. Develop Neighborhood Communication Plan for School Events:** The District and school administration should develop a neighborhood communication plan to inform nearby neighbors of large events each year. The plan should be updated annually (or as events are scheduled) and should provide information about the dates, times, and rough magnitude of attendance. The communication would be intended to allow neighbors to plan for the



occasional increase in on-street parking demand that would occur with large events.

- C. **Update Right-of-Way and Curb-Side Signage:** The District should work with SDOT to confirm the locations, extent, and signage (such as times of restrictions) of the school-bus load zone on the north side of South Henderson Street.
- D. **Coordinate with Metro Transit:** The District should coordinate with Metro to confirm transit service availability and capacity as enrollment approaches its design capacity of 1,600 students.

## 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.**

**Construction:** Construction activities would not create an increased need for public services.

**School Operations:** With the proposed replacement and expanded capacity, Rainier Beach High School could have enrollment of up to 1,600 students with between 130 and 160 employees when enrolled to capacity. The increase in capacity would be 900 students and associated increase in number of employees (an increase from 700 to 1,600 students). Full capacity is not expected to be reached for 10 years after project construction.

SPS usually provides two police officers and two school security for each football game. Security is increased to meet the need if problems are expected. The Seattle Police Department is informed of all game dates and times.

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

**Construction:** 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 the project 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 would include provisions to maintain emergency service access.

**School Operations:** A new combined service for water supply would be required to provide adequate fire and domestic services (AHBL, 2021).

## 16. Utilities

- a. **Underline utilities currently available at the site:**

Existing utilities currently at the site include electricity, natural gas, water, refuse service, telephone, storm drain, and sanitary sewer.

**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.**

**School Facilities.** Increased capacity would require provision of utilities to service the new construction and provide adequate standard of service. Existing utilities would be demolished and new utility services would be installed to serve the new building and associated facilities. Electricity, water, refuse service, telephone, storm drain, and sanitary sewer would continue to be provided to the school. This may include trenching and minor excavation and would be part of the overall construction at the site. A geothermal heating/cooling, displacement heat system would be installed, which requires boring geothermal wells in some areas of the site near the proposed new school building.

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 the project site, including electricity, cable, and telephone lines, are not expected to 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. Utility providers would be consulted prior to demolition, excavation, and other digging activities to ensure utility lines are unaffected during construction.

The following specific proposals are planned for the project:

- **Sanitary Sewer Service.** The sanitary sewer service is provided by Seattle Public Utilities (SPU). An existing sanitary manhole is located at the southeast corner of the site. Two sanitary pumps would be required to pump sewage away from the building. One pump for the school's waste pipes (restrooms, facets, showers, etc.) and one for the kitchen waste line. A 2,000-gallon grease trap would also be required for the kitchen waste line.
- **Gas.** The existing gas line and meter would be decommissioned.
- **Green Stormwater Infrastructure.** Design measures include the incorporation of green infrastructure to reduce flows into the City's stormwater system.
- **Electrical.** A new Seattle City Light (SCL) electrical service would be installed on site originating at the SW corner of the property. This single electrical service would provide services to individual electrical services at the existing field pump, a new electrical service at the NW corner of the high school building, and a new electrical service at the East end of the building. The SCL utility service would be installed in a continuous concrete duct bank located 3 to 4 feet below grade where installed around the site.
- **Athletic Field Lighting.** Existing and new lights would be provided electricity through an existing electrical panel at the school. It is expected that the

overall energy use would be lowered because of the installation of the LED lighting to replace existing lighting. The LED lighting is proposed to reduce the electrical energy load used for lighting by approximately 33 percent compared to floodlights that use metal halide lamps. If there is any relocation of poles required or installation athletic lighting or security lighting, limited excavation may be required.

## 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: Michael Skutack

Name of Signee: Michael Skutack

Position and  
Agency/Organization: Sr. Project Manager, Capital Projects & Planning

Date Submitted: June 28, 2021

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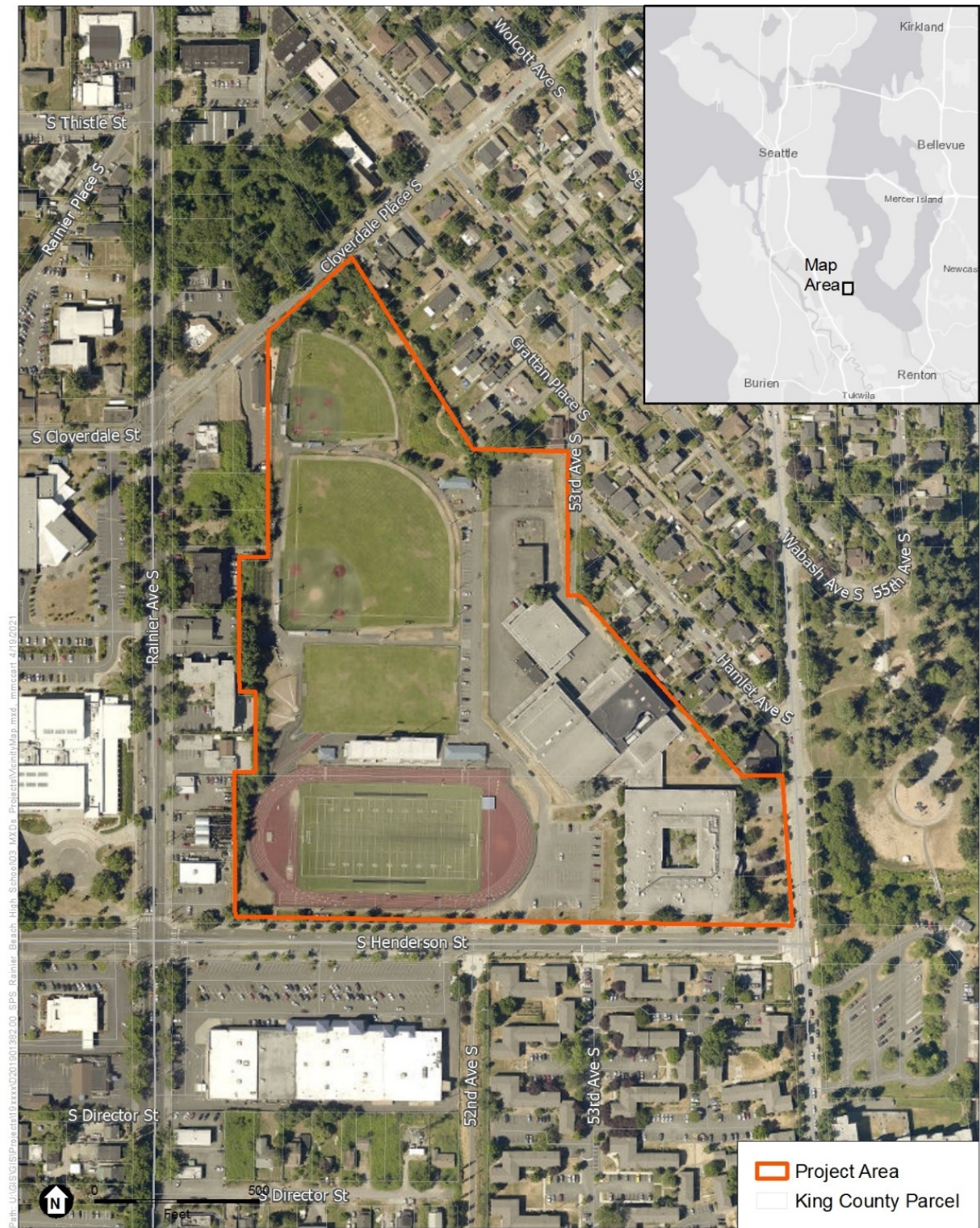
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## FIGURES



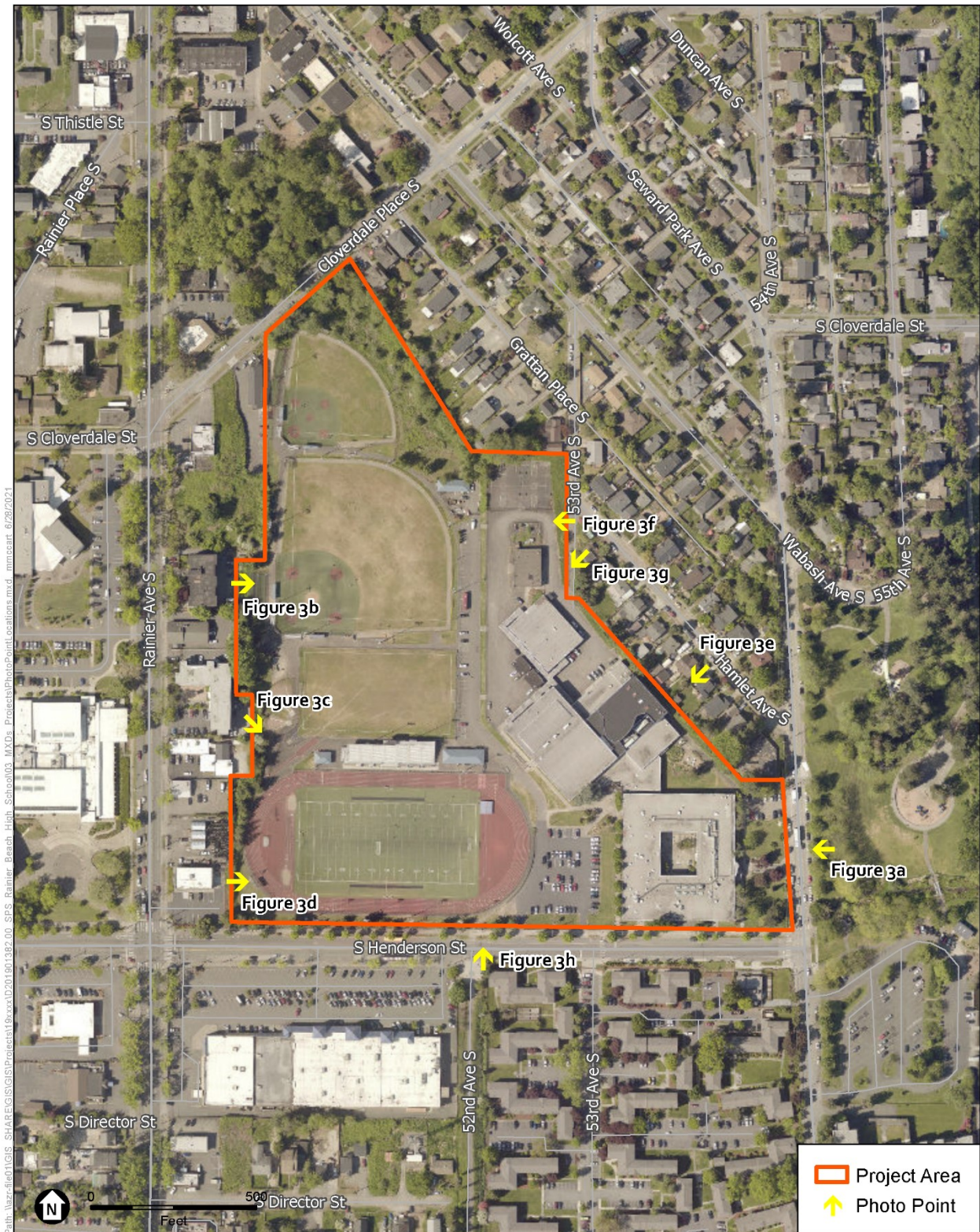
**Figure 1**  
Rainier Beach High School Vicinity, Seattle, Washington





**Figure 2**  
Proposed Rainier Beach High School Conceptual Site Plan (subject to change)





SOURCES: King County, 2019; ESA, 2021

SPS Rainier Beach High School

**Figure 3**  
Key to View Assessment Figure Locations, Seattle, Washington





**Figure 3a**

View of Project Site Facing West from Be'er Sheva Park Located at 8650 55th Avenue South



**Figure 3b**

View of Project Site Facing West from Beach Court Apartments at 8630 Rainier Avenue South





**Figure 3c**

View of Project Site Facing Southeast from Starlighter Apartments at 8708 Rainier Avenue South



**Figure 3d**

View Facing East across School Site from Sherwin-Williams Paint Store at 8824 Rainier Avenue South





**Figure 3e**  
View of School Building from 9704 Hamlet Avenue South, Facing South



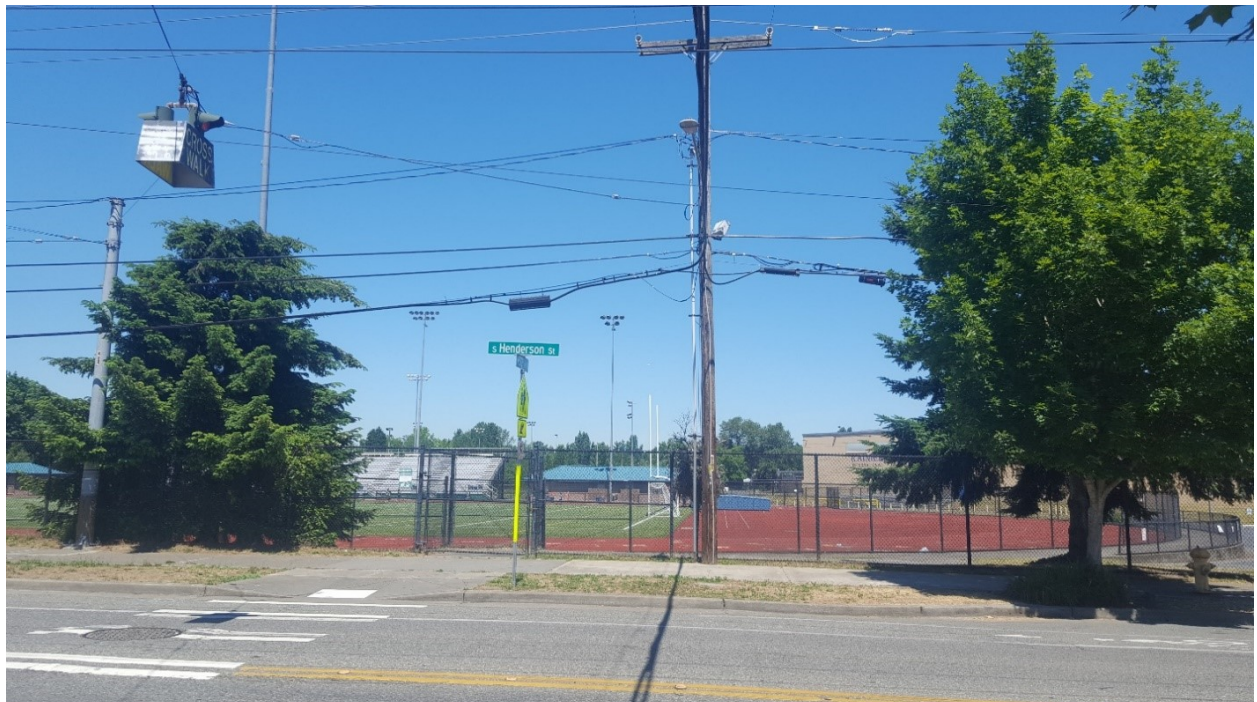
**Figure 3f**  
View of Project Site from Residence Located at 8741 Hamlet Avenue South, Facing Southwest





**Figure 3g**

View of Project Site from Residential Area to North of Project Site at Corner of South Hamlet Street and 53rd Avenue South, Facing West



**Figure 3h**

View of Project Site from Residences and Trail at Corner of South Henderson Street and 52nd Avenue South, Facing North

# **APPENDIX A: TRANSPORTATION TECHNICAL REPORT**

# TRANSPORTATION TECHNICAL REPORT

for the

## **Rainier Beach High School Replacement Project**

PREPARED FOR:

**Seattle Public Schools**

PREPARED BY:



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**June 23, 2021**

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# 1. INTRODUCTION

This report presents the transportation impact analyses for the Seattle Public Schools' (SPS) proposed Rainier Beach High School Replacement project. The scope of analysis and approach were based on extensive past experience performing transportation impact analyses for projects throughout the City of Seattle, including numerous analyses prepared for SPS projects. This report documents the existing conditions in the site vicinity, presents estimates of project-related traffic, and evaluates the anticipated impacts to the surrounding transportation system including transit, parking, safety, and non-motorized facilities. These analyses were prepared to support the SEPA Checklist for this project.

At the time of this analysis, all SPS buildings were closed due to the COVID-19 pandemic crisis, which affected traffic volumes and travel patterns throughout Seattle and near the site. Therefore, the analyses were prepared using a combination of baseline traffic data collected in the vicinity by the Seattle Department of Transportation (SDOT) from 2017 through 2019 and new data collected in 2020 and 2021. The data were adjusted to reflect non-COVID conditions using standards and practices recommended by the Institute of Transportation Engineers (ITE)<sup>1</sup> and other industry professionals.<sup>2</sup>

## 1.1. Project Description

SPS proposes to replace and expand Rainier Beach High School at its existing site—8815 Seward Park Avenue S—in the Rainier Beach neighborhood of Seattle. The following describes the site and proposal.

### 1.1.1. Existing Site

The existing Rainier Beach High School site is 21.7 acres and houses an original building from 1960 as well as additions that expanded the school over the years. The site is bounded on the east by Seward Park Avenue S, on the south by S Henderson Street, on the west by private commercial properties, on the northwest by S Cloverdale Street, and on northeast by private residential properties.

The existing school buildings on site have cumulative space of approximately 182,500 square feet (sf).<sup>3</sup> The existing main school building was constructed in 1960 and is located on the southeastern portion of the site. Four other buildings (a gymnasium, a performing arts center (constructed in 1998), a wood shop and drafting building, and an auto shop building) are located northwest of the main building. The Southeast Athletic Complex is located on the western portion of the site and includes a lighted football/soccer field and track with all associated field events, a bleacher structure with seating for approximately 1,500 people, covered storage, and press box, a natural turf utility field, a lighted baseball field, a lighted softball field, baseball and softball batting cages, two outdoor asphalt concrete basketball courts, and support buildings housing a ticket booth, restrooms, concessions, scheduling office, storage, and maintenance equipment.

There are three formally established parking lots on the campus totaling about 160 spaces. The largest lot, located west of the main school building, has 72 spaces, and the linear lot, along the east side of the grass utility field and baseball field, has 51 spaces. Both are accessed from two driveways on S Henderson Street. The eastern lot (with about 16 spaces though striping has faded and evolved over the years) is accessed from a driveway on Seward Park Avenue S. There are four reserved spaces for kitchen staff located between the main school building and S Henderson Street with a wide curb cut on S Henderson Street. The paved areas north of the school buildings are used for occasional parking (with 16 striped spaces). Access to those paved areas occurs from the north via 53<sup>rd</sup> Avenue S, which ends at the school site just south of Hamlet Avenue S. The southern site frontage on S Henderson Street between Seward

<sup>1</sup> ITE, *What a Transportation Professional Needs to Know About Counts and Studies during a Pandemic*, July 2020.

<sup>2</sup> Kittelson & Associates, *Estimating Traffic Volumes Under COVID-19 Pandemic Conditions*, April 2, 2020.

<sup>3</sup> Bassetti Architects, Rainier Beach High School Schematic Design Report, January 29, 2021.



## Rainier Beach High School Replacement Project Transportation Technical Report

Park Avenue S and 52<sup>nd</sup> Avenue S is signed for school bus load only from 7:00 A.M. to 7:00 P.M. (except Saturday, Sunday, and holidays).

According to information published in *Building for Learning, Seattle Public Schools Histories, 1862-2000*,<sup>4</sup> Rainier Beach Junior-Senior High School opened in September 1960 with 1,257 students (845 in the junior-high level and 412 high-school students). The school building was originally designed for 1,500 students, but by 1967 was overcrowded with 2,159 students. As a result, a separate Model Middle School program began in portables on the grounds in 1970 and was moved to a new permanent building—South Shore—in December 1973. The performing arts center was constructed and opened in 1998 and renamed the Paul Robeson Performing Arts Center in 2004. The school’s current enrollment capacity is listed as 1,088 students. Enrollment for the 2020-21 school year is 787 students and has averaged 762 students per year since 2017.<sup>5</sup> The school currently has 85 full-time-equivalent (FTE) employees (including 25 part-time staff), including teachers, instructional assistants, administrators, and operations staff.<sup>6</sup> School hours during the 2019-20 school year, prior to the COVID-19 pandemic, were 8:55 A.M. to 3:45 P.M.

### 1.1.2. Proposed Site Changes

The proposed project would construct a new four-story high school with up to 276,000 sf and surface improvements to the existing athletic fields. When complete, the school would have permanent enrollment capacity for up to 1,600 students in grades 9 through 12; however, it is noted that SPS does not anticipate full enrollment for 10 years or more after completion. The new school would have general-use classrooms, special-education classrooms, science labs, learning commons, CTE labs, a Skills Center, library, art spaces, performing arts wing, gymnasiums and fitness spaces, health center, food service, multipurpose commons, administration, a Data Center, and support spaces. Site improvements would include a new on-site passenger vehicle drop-off/pick-up loop, an entry plaza, expanded and relocated parking (totaling about 200 spaces), a relocated practice field (for school-use only) with synthetic turf and lights, and replacement of spectator bleachers at main football/soccer field and track.<sup>7</sup>

The proposed new school building would be located in the central portion of the site now occupied by the natural turf field and wood shop building. Two parking lots would be located at the southeastern portion of the site—one with 62 spaces and the new on-site passenger vehicle load/unload loop—would be accessed from a new single driveway on S Henderson Street. It would have an internal connection to a second lot—with 106 spaces—that would be accessed from the existing driveway on Seward Park Avenue S. Additional parking (about 30 spaces) is proposed along the northeast edge of the site with primary access from the same existing driveway on Seward Park Avenue S and/or from the south end of 53<sup>rd</sup> Avenue S. Two existing curb cuts along S Henderson Street would be eliminated. The site’s S Henderson Street frontage would remain signed for school bus loading. Figure 1 shows the site plan with the location of the proposed replacement school, parking areas, and access locations.

Students will remain on-site during the period of construction, which is anticipated to begin in phases in 2022, and be substantially complete by August 2025. Future analyses (without and with the project) presented in this report reflect conditions for fall 2025, when the project is expected to be complete. Although full enrollment of 1,600 students is not anticipated for several years beyond opening, that enrollment level was assumed to occur in 2025 for the purpose of this analysis. Based on staffing for other Seattle high schools, SPS estimates that Rainier Beach High School could have between 130 and 160 employees (including about 40 part-time) if/when it is enrolled to its planned capacity of 1,600 students.<sup>8</sup>

<sup>4</sup> Nile Thompson and Carolyn J. Marr; *Building for Learning, Seattle Public Schools Histories, 1862-2000*; 2002.

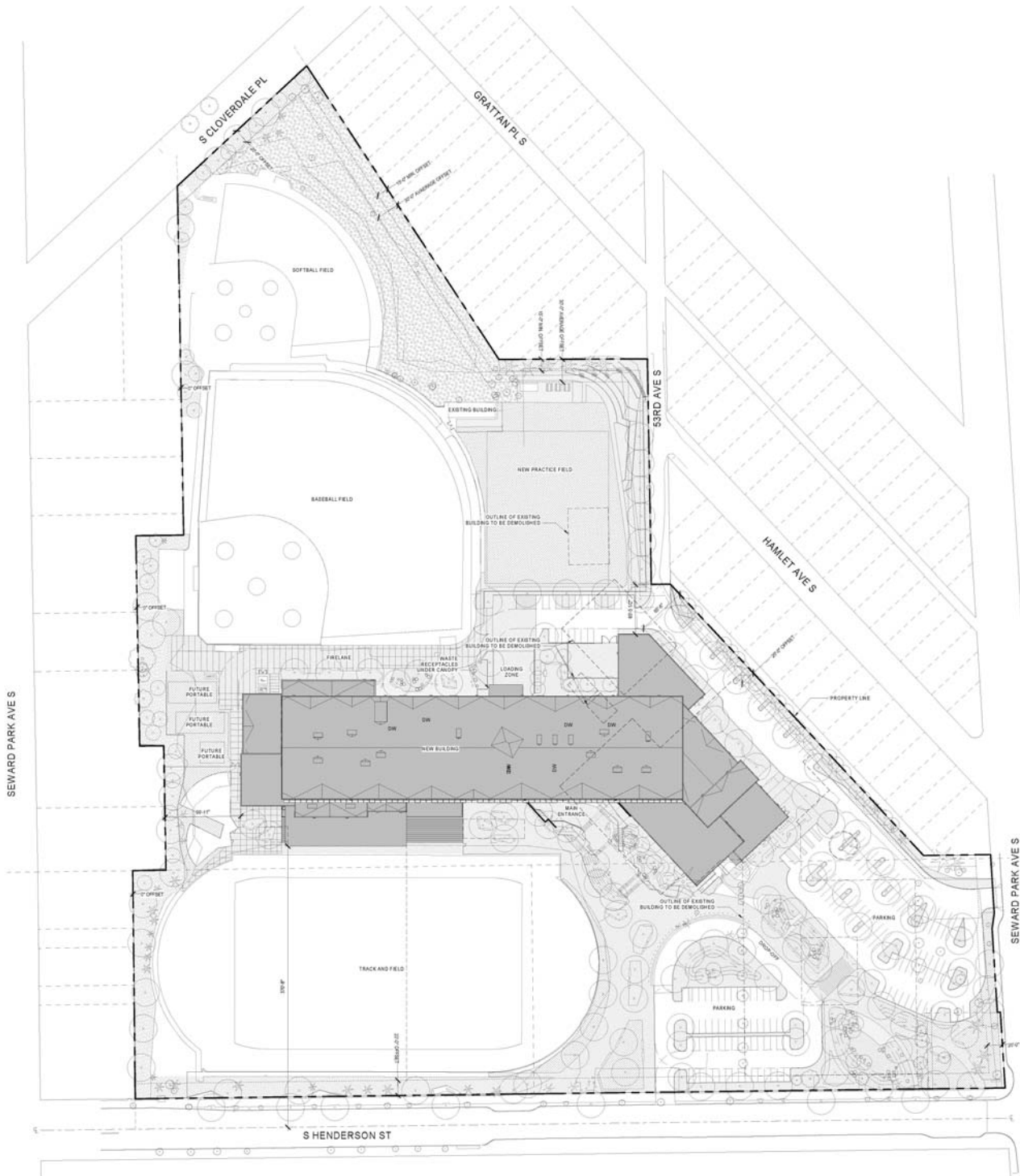
<sup>5</sup> SPS, *P223 Enrollment Reports*, Oct. 2017 through Oct. 2020.

<sup>6</sup> Email communication, T. Wang, SPS, April 2, 2021.

<sup>7</sup> Project description from *Rainier Beach High School Schematic Design Report*, Bassetti Architects, Jan. 29, 2021.

<sup>8</sup> Email communication, T. Wang, SPS, April 2, 2021.





Source: Bassetti Architects, Architectural Site/Code Plan, 95% Schematic Design Sheet G1.00, January 29, 2021

## Rainier Beach High School Replacement Project

Figure 1  
Proposed Site Plan





## 2. BACKGROUND CONDITIONS

This section presents the existing and future conditions without the proposed project. The impacts of the proposed project were evaluated against these base conditions. As described above, the school's current enrollment has ranged from 760 to 790 students for many years, well below the capacity of 1,088 students. To present a conservative worst-case analysis, year 2025 without-project conditions assume the current enrollment rather than the school's capacity, and no additional trips would be generated by the school during the analysis hours. The additional trips associated with those approximately 300 students are assessed as a potential project impact later in Section 3.

The following sections describe the existing roadway network, traffic volumes, traffic operations (in terms of levels of service), traffic safety, transit facilities, non-motorized facilities, and parking.

Figure 2 shows the project site location and vicinity street system. The following seven off-site intersections (listed according to control type) plus site access driveways were selected for study based on the size of the proposed project, local traffic counts, and travel routes used to access and egress the area.

### Signal Controlled

- S Henderson Street / Rainier Avenue S
- S Henderson Street / Renton Avenue S
- S Cloverdale Street / Rainier Avenue S
- Rainier Avenue S / Seward Park Avenue S
- Rainier Avenue S / 51<sup>st</sup> Avenue S

### All-Way-Stop Controlled

- S Henderson Street / Seward Park Avenue S
- S Cloverdale Place / Seward Park Avenue S

## 2.1. Transportation Network

### 2.1.1. Existing Network

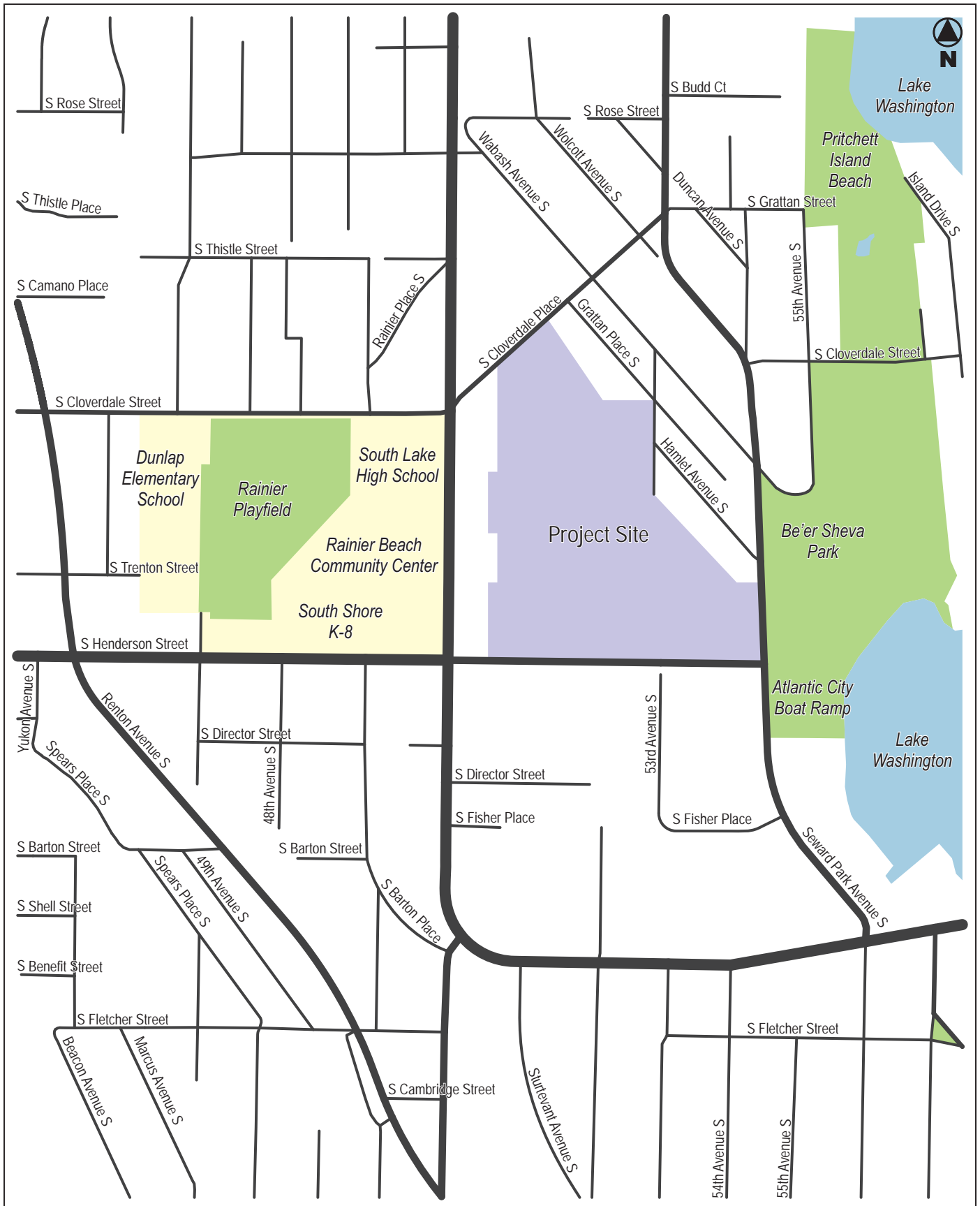
The surrounding area consists of a mix of commercial and institutional uses (schools and churches) to the west, residential uses to the north and south, and recreation (park and waterfront) areas to the east. Key roadways that serve the site are described below. Roadway classifications are based on the City's Street Classification Map.<sup>9</sup> Speed limits are 25 miles per hour (mph) on arterials (unless otherwise signed) and 20 mph on local access streets.

**S Henderson Street** is an east-west arterial that connects between Seward Park Avenue S on the east and Martin Luther King Jr. Way S on the west. Between Seward Park Avenue S and Rainier Avenue S, it is designated as a Minor Arterial; west of Rainier Avenue S, it is a Principal Arterial. There are school zones with speed limits of 20 mph near Rainier Beach High School and South Shore K-8 School to the west; both are enforced when beacons flash. The roadway generally has one travel lane in each direction with additional lanes at major intersections. There are segments with bike lanes on both sides and segments with sharrows.<sup>10</sup> There are curbs and sidewalks on both sides with intermittent segments with parallel on-street parking.

**Seward Park Avenue S** is a north-south Minor Arterial that connects between S Morgan Street on the north and Rainier Avenue S on the south. Near the site, there is a 20-mph school zone with flashing beacons. It has one travel lane in each direction with curbs and sidewalks on both sides. There are intermittent segments with parallel on-street parking on one or both sides.

<sup>9</sup> Seattle Department of Transportation (SDOT), Interactive Street Classification Maps, accessed March 2021.

<sup>10</sup> A "sharrow" is a shared-lane pavement marking that is placed in the roadway lane to highlight the shared space; however, unlike a bicycle lane it does not delineate a particular part of the roadway that a bicyclist should use.



## Rainier Beach High School Replacement Project

Figure 2  
Site Location and Vicinity

**Rainier Avenue S** is north-south Principal Arterial that connects downtown Seattle to the south City limits and continues into Renton. In the vicinity of the site from just north of S Henderson Street, the roadway has five lanes (two in each direction plus a center turn lane or median in some locations). Just north of S Henderson Street, the outside lanes transition to bus-only lanes just south of S Cloverdale Street. North of S Cloverdale Street, the roadway has one general-purpose lane in each direction, a northbound bus-only lane, and a two-way, center-left-turn lane. Near the South Shore School site, there is a 20-mph school zone with flashing beacons for southbound traffic; the northbound signage indicates it is in effect when children are present. The roadway has curbs and sidewalks on both sides.

**S Cloverdale Street/Place** is east-west Collector Arterial that connects between Seward Park Avenue S on the east and Beacon Avenue S on the west. It has two travel lanes (one in each direction) with turn pockets added at major intersections. For much of its length, the roadway is marked with sharrows. There are curbs on both sides and sidewalk along the north side; the sidewalk on the south side has intermittent gaps. Parallel on-street parking also occurs intermittently on both sides.

**51<sup>st</sup> Avenue S** is a north-south Minor Arterial that extends south of the site vicinity from Rainier Avenue S to Beacon Avenue S at S Leo Street. Near the site, it has a bike lane in the southbound direction; the northbound lane is marked with sharrows. There are curbs, sidewalks, and parallel parking on both sides.

**53<sup>rd</sup> Avenue S** is a north-south local-access street that extends for about three blocks south of Wabash Avenue S to the Rainier Beach High School site with a dead end at the school access just south of Hamlet Avenue S. The roadway is relatively narrow (approximately 20-feet of asphalt drive lane) with pre-fabricated concrete curb segments that separate a sidewalk from the roadway. On-street parking occurs intermittently along the west side.

### **2.1.2. Planned Improvements**

The following plans and programs were reviewed to determine if any planned transportation improvements could affect the roadways and intersections near Rainier Beach High School by fall 2025 when the replacement project is planned to be complete and occupied.

*City of Seattle's Adopted 2021-2026 Proposed Capital Improvement Program (CIP)*<sup>11</sup> – The Transportation element of the plan includes the ongoing *Route 7 Transit-Plus Multimodal Corridor project*, which will continue to make street improvement in partnership with King County Metro on Rainier Avenue S including dedicated bus lanes, bus queue jumps, improvements to crossings and transit connections to help people access transit safely. The project began in 2016 and is planned to continue to 2022. Another related project affecting Rainier Avenue S is the *Vision Zero Rainier Improvements* effort. Phases 1 and 2 reconfigured the arterial between S Alaska Street and S Henderson Street. In 2021, SDOT plans to install a new traffic signal at the S Rose Street intersection and has restored funding for sidewalk upgrades along the corridor.

*Adopted Seattle Bicycle Master Plan (BMP)*<sup>12</sup> – The plan proposes future protected bicycle lanes extending east from Martin Luther King Jr. Way S along S Henderson Street to Rainier Avenue S and then continuing south along Rainier Avenue S to the south City limit. A Neighborhood Greenway (referred to as the Rainier Valley NGW) was implemented along the 46<sup>th</sup> Avenue S corridor west of the South Shore K-8 site extending north from S Henderson Street to S Holly Street before turning west to 39<sup>th</sup> Avenue S. In April 2020, due to the COVID-19 pandemic crisis, the City implemented a Stay Healthy Street along the Rainier Valley NGW. An in-street local connector is proposed along

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<sup>11</sup> City of Seattle, 2020.

<sup>12</sup> City of Seattle, March 2015.



Seward Park Avenue S. The *Seattle Bicycle Master Plan – 2019-2024 Implementation Plan*<sup>13</sup>, which defines the priorities of the projects, does not identify any additional projects for implementation in the site vicinity by 2024.

*Seattle’s Neighborhood Greenway Network*<sup>14</sup> – Neighborhood greenway information provided by SDOT indicates no additional greenways currently in design or planning stages in the site vicinity.

*Levy to Move Seattle – Workplan Report*<sup>15</sup> – This document outlines SDOT’s workplan to deliver citywide transportation projects and services funded in part or in full by the *Levy to Move Seattle* (approved by voters in 2015). The nine-year workplan (2016-2024) documents achievements and challenges and sets the agency’s plan for future years. The workplan includes the Multimodal Corridor and Vision Zero projects listed previously in the 2021-2026 CIP). In addition, the work plan identifies a stairway improvement for year 2021 in the S Henderson Street alignment between 39<sup>th</sup> and 41<sup>st</sup> Avenues S

*Your Voice, Your Choice*<sup>16</sup> – SDOT’s participatory budgeting initiative, in which Seattle residents decide how to spend a portion of the City’s budget on small-scale park and street improvements, does not list any current projects near the school site.

The recent Rainier Avenue Multimodal Corridor improvements resulted in signal operational and channelization changes along Rainier Avenue S at the S Cloverdale Street and S Henderson Street intersections. Therefore, signal operational details, timing information, and operational models were obtained from SDOT and incorporated into the intersection modeling of existing and future conditions with and without the Rainier Beach High School replacement project. None of the other planning documents above included any transportation improvements that are expected to affect the roadway network operations or intersection capacity within the study area by 2025.

## **2.2. Traffic Volumes**

### **2.2.1. Historical Traffic Volumes**

The City of Seattle Department of Transportation (SDOT) has performed traffic counts on Rainier Avenue S (south of S Othello Street) nearly every month since 2006. These counts were compiled to show how morning peak hour, PM peak hour, and daily traffic volumes in the study area have changed over the past 15 years. Figure 3 shows the morning, PM, and weekday daily volumes from 2006 through 2020 prior to the COVID-19 pandemic. As shown, these counts indicate relatively stable or slightly declining volumes over the past 15 years. Even before the pandemic, peak hour traffic volumes showed a noticeable decline since 2017, which may be related to capacity reductions further north along Rainier Avenue S that were made as part of the City’s Vision Zero project.

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<sup>13</sup> SDOT, June 13, 2019.

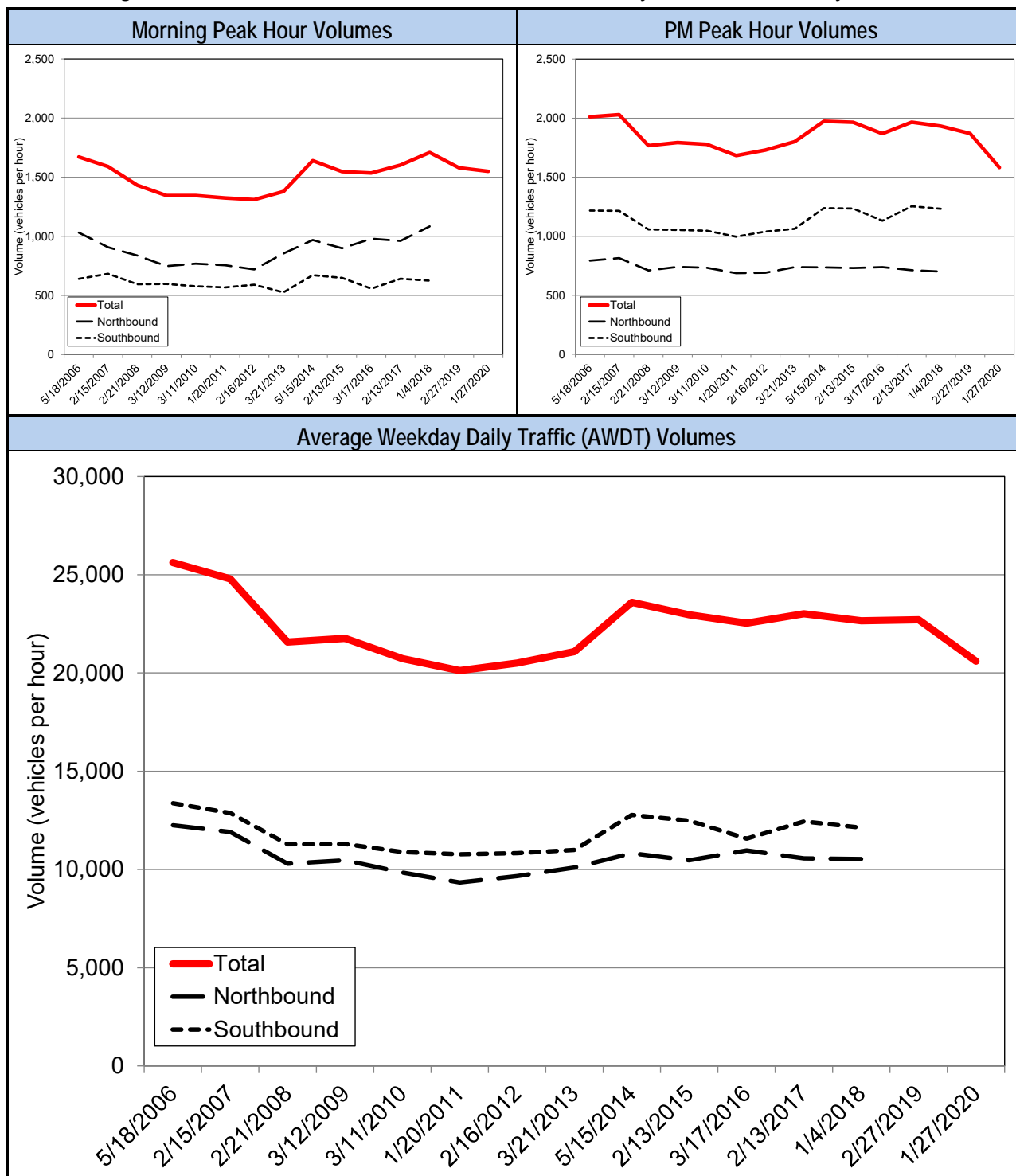
<sup>14</sup> <https://www.seattle.gov/transportation/projects-and-programs/programs/greenways-program>, Map updated January 24, 2020, Accessed February 2021.

<sup>15</sup> SDOT, November 2018.

<sup>16</sup> City of Seattle, Your Voice, Your Choice, <https://www.seattle.gov/transportation/projects-and-programs/programs/pedestrian-program/yvyc-program>, accessed February 2021.



**Figure 3. Traffic Volumes on Rainier Avenue S – May 2006 thru January 2020**

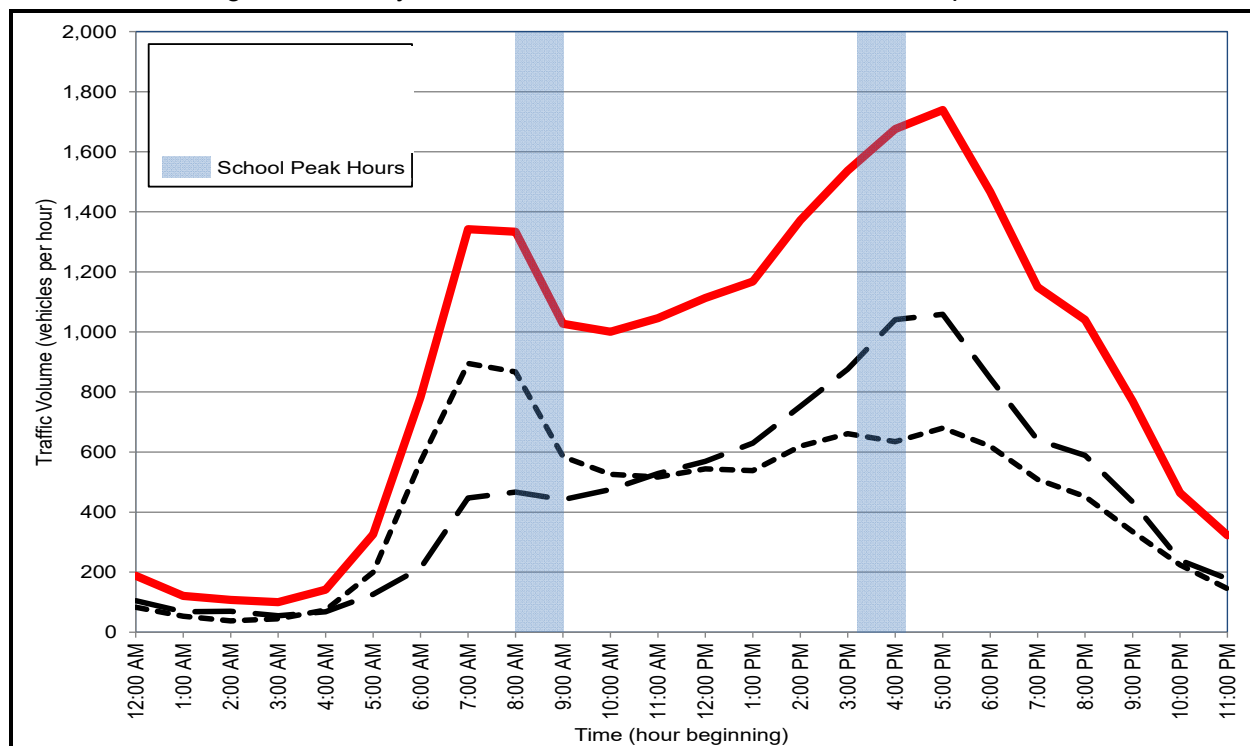


Source: Permanent counter data at S Othello Street, Seattle Department of Transportation Traffic Count Database, May 2020.

In addition, 24-hour traffic count data collected on Rainier Avenue S south of S Cloverdale Street over seven days in April 2018 were compiled to show how volumes in the site vicinity change by time of day. Figure 4 shows the average weekday volumes by hour of the day. As shown, the volumes follow peaking

characteristics common on Seattle arterials with distinct peaks during the traditional AM and PM peak hours and with PM peak hour volumes about 30% higher than AM peak hour volumes. The northbound volume (toward downtown Seattle) is higher in the morning and southbound volume (away from downtown Seattle) is higher in the afternoon. Based on the normal school hours (8:55 A.M. to 3:45 P.M.) the school's morning peak hour is expected to occur from 8:00 to 9:00 A.M., the school's afternoon peak hour is expected to occur from 3:15 to 4:15 P.M.; the school peak hours are highlighted for reference. The volume during the school's morning peak hour is about 23% lower than the PM peak hour; volume during the school's afternoon peak hour is about 12% lower than the PM peak hour.

**Figure 4. Hourly Traffic Volumes on Rainier Avenue S – April 2018**



*Source: Average weekday volumes from machine counts performed by Idax Data Solutions on Rainier Avenue S south of S Cloverdale Street, Thursday, April 19 through Wednesday, April 25, 2018.*

## 2.2.2. Existing Traffic Volumes

All SPS schools were closed with remote learning in effect at the time of the analysis, and it was not possible to collect new representative traffic data specifically for the Rainier Beach High School Replacement project. However, extensive recent historical data were available from SDOT and from Idax Data Solutions (a count data vendor) at several of the study area intersections and associated roadways. Peak period turning movement counts at five of the seven study-area intersections were performed by SDOT and Idax Data Solutions in 2016, 2018, and 2019. In addition, multi-day, 24-hour machine counts were performed on several of the study area roadways in 2018 and 2019. All of those counts reflect conditions with Rainier Beach High School (and all other schools) open and operating normally.

## Rainier Beach High School Replacement Project Transportation Technical Report

New peak period turning movement counts were performed at three of the study-area intersections in March 2021 to supplement the available data. Then, consistent with industry guidance and practice, all volumes were compiled, adjusted, and balanced to reflect normalized (non-COVID) peak hour traffic volumes for 2021. Table 1 lists the study-area traffic data compiled and used for this analysis to evaluate morning arrival, afternoon dismissal, and PM peak hour conditions.

Table 1. Traffic Count Data

| Type & Location                             | Day(s), Date(s)     | Count Periods                        | Source                                       |
|---|---------------------|--------------------------------------|--|
| <b>Peak Period Turning Movement Counts</b>  |                     |                                      |  |
| S Henderson St / Rainier Ave S              | Tue., May 7, 2019   | 7:00to 9:00 A.M.<br>4:00to 6:00 P.M. | Idax Data Solutions                          |
| Rainier Ave S / 51 <sup>st</sup> Ave S      | Tue., May 7, 2019   | 7:00to 9:00 A.M.<br>4:00to 6:00 P.M. | Idax Data Solutions                          |
| Rainier Ave S / Seward Park Ave S           | Tue., May 7, 2019   | 7:00to 9:00 A.M.<br>4:00to 6:00 P.M. | Idax Data Solutions                          |
| S Cloverdale St / Rainier Ave S             | Thu., Mar 1, 2018   | 6:30 A.M. to 6:45 P.M.               | SDOT   |
| S Henderson St / Renton Ave S               | Tue., Mar. 15, 2016 | 7:00to 9:00 A.M.<br>4:00to 6:00 P.M. | Idax Data Solutions                          |
|   | Tue., Mar. 2, 2021  | 7:00to 9:30 A.M.<br>3:00to 6:00 P.M. | Heffron Transportation / Idax Data Solutions |
| S Cloverdale PI / Seward Park Ave S         | Tue., Mar. 2, 2021  | 7:00to 9:30 A.M.<br>3:00to 6:00 P.M. | Heffron Transportation / Idax Data Solutions |
| S Henderson St / Seward Park Ave S          | Tue., Mar. 2, 2021  | 7:00to 9:30 A.M.<br>3:00to 6:00 P.M. | Heffron Transportation / Idax Data Solutions |
| <b>Daily Machine Counts</b>                 |                     |                                      |  |
| Renton Ave S<br>south of S Henderson St     | May 6 – 12, 2019    | 7-days                               | Idax Data Solutions                          |
| Seward Park Ave S<br>north of Rainier Ave S | May 14 – 20, 2019   | 7-days                               | SDOT   |
| Rainier Ave S<br>south of S Cloverdale St E | Apr. 19 – 25, 2018  | 7-days                               | Idax Data Solutions                          |
| S Cloverdale PI<br>south of Grattan PI S    | Jan. 21 – 27, 2018  | 7-days                               | SDOT   |

Figure 5, Figure 6, and Figure 7 show the estimated existing (2021) normalized peak hour traffic volumes at the study area intersections for the morning, afternoon, and PM peak hour conditions, respectively.







# Rainier Beach High School Replacement Project

Figure 5  
Existing (2021) Normalized Traffic Volumes  
Morning Peak Hour





# Rainier Beach High School Replacement Project

Figure 6  
Existing (2021) Normalized Traffic Volumes  
Afternoon Peak Hour



# Rainier Beach High School Replacement Project

Figure 7  
Existing (2021) Normalized Traffic Volumes  
PM Peak Hour

### 2.2.3. Forecast Without-Project Traffic Volumes

As described, the replacement project is planned to be substantially complete for occupancy by fall 2025. The annual traffic counts conducted by SDOT since 2006 on Rainier Avenue S and presented previously in Figure 3, show that traffic has remained relatively unchanged or decreased over that period. However, to account for recent and ongoing development throughout Seattle and within the site vicinity, a 1% annual growth rate was applied to the normalized 2021 volumes to estimate 2025-without-project volumes at all study-area intersections. This is consistent with rates used for traffic analyses of other developments in Seattle and likely results in a conservatively high estimate of background traffic.

Additionally, the SDCI's Property and Building Activity permit map was reviewed to determine if any large future development projects are planned that could potentially generate additional traffic in the project study area. Based on that review, six projects (listed in Table 2 below) were identified for specific inclusion in the traffic forecasts.

Table 2. Pipeline Development Projects Included in Traffic Forecasts

| Permit #   | Project Address                      | Program  | Pipeline Trip Estimates |           |    | Sources   |
|------------|--------------------------------------|--|-------------------------|-----------|----|---|
|            |                                      |  | Morning                 | Afternoon | PM |   |
| 3032366-LU | 8600 Rainier Ave S                   | 207 apt. units, 10,600 sf food bank, 39-43 pkg spaces    | 23                      | 24        | 48 | Fehr & Peers <sup>1</sup> ,<br>Heffron Transp. <sup>2</sup> |
| 3036963-EG | 4524 S Henderson St                  | 122 affordable apt. units, support spaces, 28 pkg spaces | 28                      | 29        | 40 | Heffron Transp. <sup>3</sup>                                |
| 3036645-LU | 9025 46 <sup>th</sup> Ave S          | 42 efficiency units, no pkg.                             | 13                      | 13        | 15 | Heffron Transp. <sup>3</sup>                                |
| 3033410-LU | 9400 Rainier Ave S                   | 306 apt. units, 8,453 sf retail, 146 pkg spaces          | 70                      | 73        | 89 | Transpo Group <sup>4</sup><br>Heffron Transp. <sup>2</sup>  |
| 3033729-LU | 9280 Waters Ave S                    | 31 apt. units, no pkg                                    | 9                       | 10        | 11 | Heffron Transp. <sup>3</sup>                                |
| 3027128-LU | 4215 S Trenton St & 8803 MLK Jr Wy S | 34 condo units, 10 live-work units, 59 parking spaces    | 20                      | 21        | 27 | TENW <sup>5</sup><br>Heffron Transp. <sup>2</sup>           |

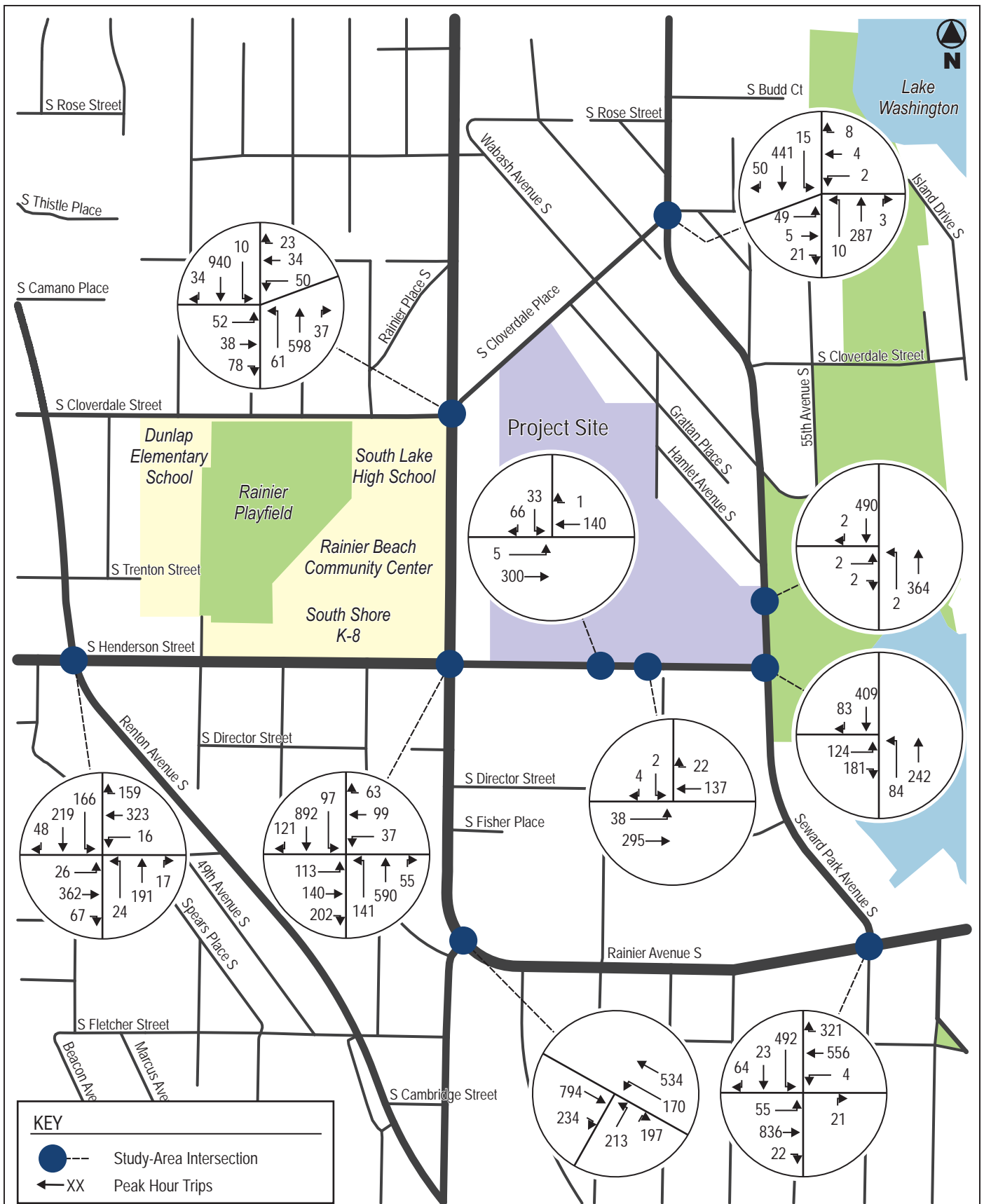
Source: SDCI Property and Building Activity portal, March 2021.

1. Rainier Beach Transit-Oriented Development Transportation Impact Analysis, Fehr & Peers, July 2019.
2. Traffic study did not provide trip estimates for the school's morning or afternoon peak hours, those estimated by Heffron Transportation, Inc. based on available program data and time of day trip generation data from ITE's Trip Generation Manual.
3. Traffic study no available, trips estimated by Heffron Transportation, Inc. based on available program data.
4. 9400 Rainier Avenue S – Trip Generation and Parking Analysis, Transpo Group, July 18, 2019
5. 4215 S Trenton Street (MUP 3025113) and 8803 Martin Luther King Jr. Way S (MUP 3027128) Traffic & Parking Impact Analysis – Transportation Engineering NorthWest, June 29, 2017.

Some of the above developments have been constructed and may be partially or fully occupied in 2021; however, since some of the traffic counts collected and used for this analysis occurred in 2019, trips expected to be generated by each project were added to study-area intersections during all three analysis peak hours. There are a number of smaller pipeline development projects (ranging from two to eight residential units) within the vicinity. However, those are expected to have negligible impacts to traffic and parking within the study area during the identified peak hours, were not required by the City to prepare traffic analyses, and would be accounted for by the 1% compound annual growth rate. Figure 8, Figure 9, and Figure 10 show the forecast 2025-without-project traffic volumes for the morning, afternoon, and PM peak hours, respectively.

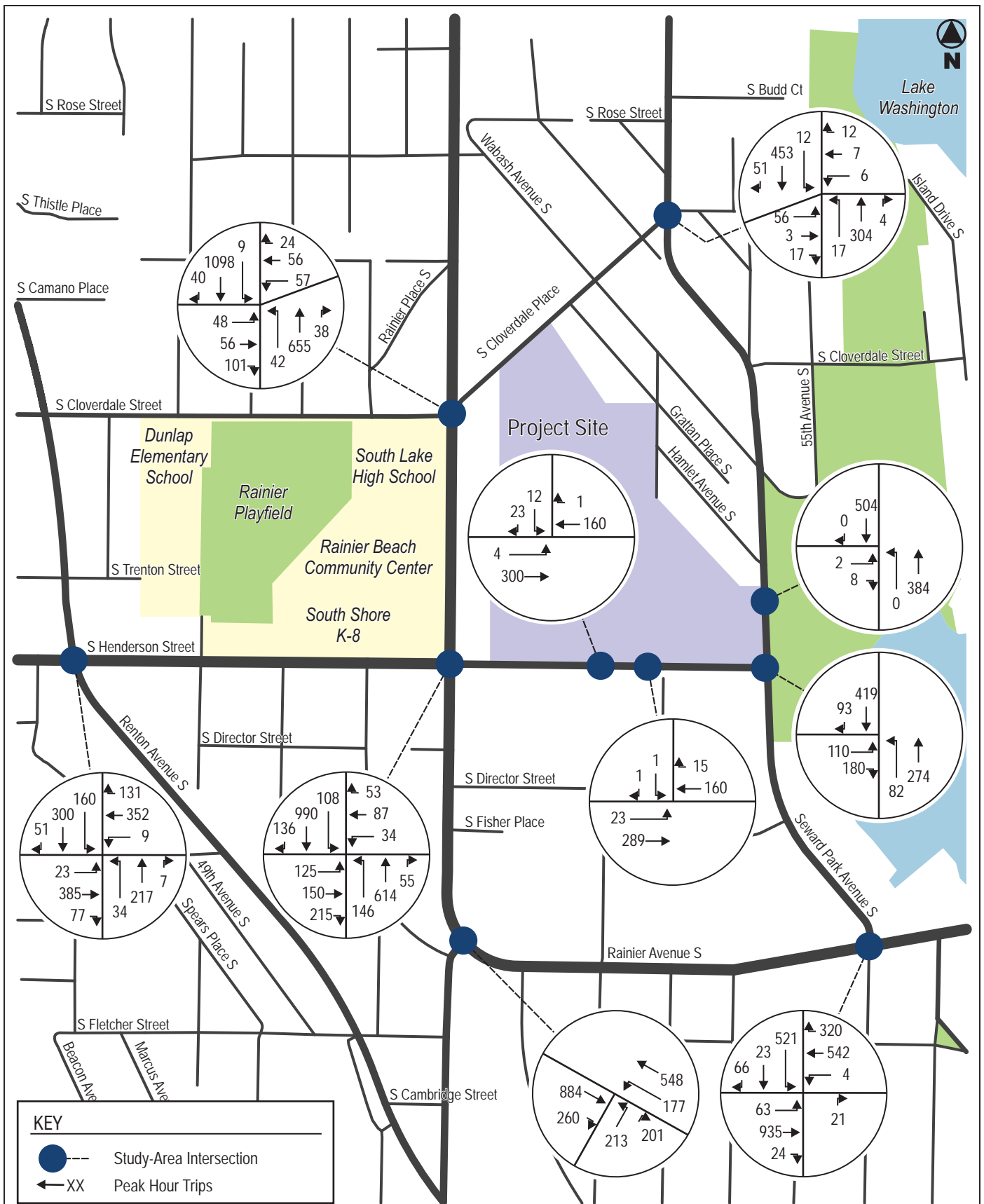
Typically, without-project traffic volumes would be adjusted to reflect the permitted enrollment capacity of Rainier Beach High School. However, to present a conservative worst-case analysis, the existing enrollment (ranging from 760 to 790 students) was assumed as part of the 2025-without-project condition.





# Rainier Beach High School Replacement Project

Figure 9  
Forecast 2025-Without-Project Traffic Volumes  
Afternoon Peak Hour



# Rainier Beach High School Replacement Project

Figure 10  
Forecast 2025-Without-Project Traffic Volumes  
PM Peak Hour



## 2.3. Traffic Operations

Level of service (LOS) is a qualitative measure used to characterize traffic operating conditions. Six letter designations, “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. 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.

Levels of service for the study area intersections were determined based on methodologies established in the *Highway Capacity Manual (HCM)*, 6<sup>th</sup> Edition<sup>17</sup> using the *Synchro 10.3* analysis software. Appendix A summarizes level of service thresholds and definitions for signalized and unsignalized intersections. The modeling assumptions for existing conditions, including signal timing and phase splits for all signalized intersections, were provided by SDOT.<sup>18</sup> The modeling assumptions for 2025-without-project conditions were modified to ensure compliance with SDOT’s new policy for signal timing, which codifies support for mobility while minimizing delay to pedestrians<sup>19</sup> and recent/ongoing implementation of Leading Pedestrian Intervals (LPIs). Table 3 summarizes existing and forecast 2025-without-project levels of service at the study-area intersections for morning, afternoon, and PM peak hours.

Table 3. Level of Service Summary – Existing (2021) and 2025-Without-Project Conditions

| Intersections                          | Morning Peak Hour<br>(8:00–9:00 A.M.) |                    |                     |       | Afternoon Peak Hour<br>(3:15–4:15 P.M.) |       |                     |       | PM Peak Hour<br>(4:30–5:30 P.M.) |       |                     |       |
|--|---------------------------------------|--------------------|---------------------|-------|---|-------|---------------------|-------|----------------------------------|-------|---------------------|-------|
|  | Existing<br>(2021)                    |                    | 2025 w/o<br>Project |       | Existing<br>(2021)                      |       | 2025 w/o<br>Project |       | Existing<br>(2021)               |       | 2025 w/o<br>Project |       |
|  | LOS <sup>1</sup>                      | Delay <sup>2</sup> | LOS                 | Delay | LOS                                     | Delay | LOS                 | Delay | LOS                              | Delay | LOS                 | Delay |
| <b>Signalized</b>                      | LOS <sup>1</sup>                      | Delay <sup>2</sup> | LOS                 | Delay | LOS                                     | Delay | LOS                 | Delay | LOS                              | Delay | LOS                 | Delay |
| S Henderson St / Rainier Ave S         | C                                     | 31.0               | C                   | 31.8  | C                                       | 34.5  | D                   | 38.0  | D                                | 36.4  | D                   | 44.0  |
| S Henderson St / Renton Ave S          | C                                     | 25.4               | C                   | 26.3  | C                                       | 28.6  | C                   | 29.8  | C                                | 30.5  | C                   | 32.0  |
| Rainier Ave S / S Cloverdale St        | B                                     | 16.7               | B                   | 19.2  | C                                       | 30.3  | C                   | 34.1  | D                                | 37.9  | D                   | 47.1  |
| Rainier Ave S / 51 <sup>st</sup> Ave S | B                                     | 16.0               | B                   | 15.9  | B                                       | 17.1  | B                   | 17.6  | B                                | 17.9  | B                   | 18.8  |
| Rainier Ave S / Seward Park Ave S      | B                                     | 10.4               | B                   | 11.5  | B                                       | 14.0  | B                   | 14.9  | B                                | 15.1  | B                   | 16.4  |
| <b>All-Way-Stop Controlled</b>         | LOS                                   | Delay              | LOS                 | Delay | LOS                                     | Delay | LOS                 | Delay | LOS                              | Delay | LOS                 | Delay |
| S Henderson St / Seward Park Ave S     | D                                     | 25.4               | D                   | 30.5  | C                                       | 21.7  | D                   | 25.4  | C                                | 19.3  | C                   | 22.3  |
| S Cloverdale Pl / Seward Park Ave S    | C                                     | 17.0               | C                   | 19.1  | C                                       | 16.2  | C                   | 18.0  | C                                | 17.2  | C                   | 19.6  |

Source: Heffron Transportation, Inc., April 2021.

1. Level of service.
2. Average seconds of delay per vehicle.

<sup>17</sup> Transportation Research Board 2016.

<sup>18</sup> M. Dunlap, SDOT, February 18, 2021.

<sup>19</sup> SDOT, *Policy for Traffic Signal Cycle Time, and Pedestrian Signal Timing and Actuation*, January 27, 2021. The new policy reduces walk speed calculations, and establishes criteria for pedestrian recall phases.



As shown, all seven of the study area intersections currently operate at LOS D or better during the analysis peak hours. The assumed background growth and added pipeline development trips are forecast to increase average delays by up to nine seconds per vehicle and operations at two locations would degrade from LOS C to LOS D—the S Henderson Street intersections with Rainier Avenue S and Seward Park Avenue S during the afternoon peak hour (due to increases in delay of less than four seconds). However, all study area intersections are expected to remain operating at LOS D or better during all three peak hours in 2025 without the project.

## **2.4. Parking Supply and Occupancy**

On-street parking at and around the Rainier Beach High School site was surveyed to determine the existing parking supply and parking occupancy. This information was then used to estimate how parking utilization could be affected by new parking demand generated with the school replacement project operating at its full capacity (which is presented later in Section 3.5). The following sections describe the parking supply as well as the current parking occupancy and utilization rates.

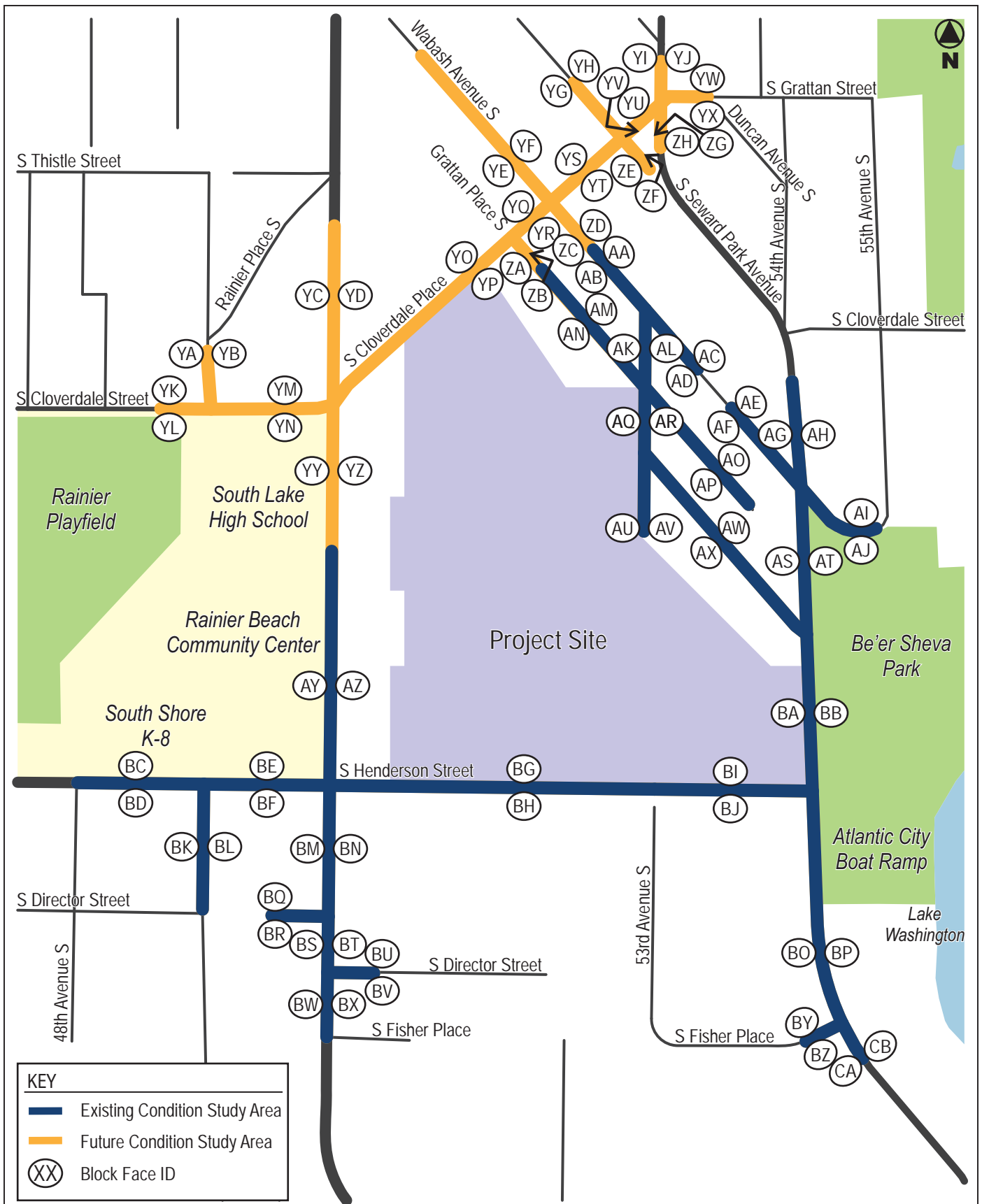
### **2.4.1. Methodology and Study Area**

Detailed on-street parking studies were performed and supply was documented according to the methodology outlined in the City's Tip #117. Although Tip #117 was created for another purpose, it outlines the City's preferred methodology to determine the number and type of on-street parking spaces that may exist within a defined study area, and how much of that supply is currently utilized at different times of the day.

The study area for the on-street parking analysis included all roadways within an 800-foot *walking* distance from the school site, as is typically required by the City of Seattle. The 800-foot walking distance results in a study area that extends to 48<sup>th</sup> Avenue S to the west, S Cloverdale Place to the north, just east of Seward Avenue S, and just south of S Fisher Place. It is noted that, although there is site frontage along the south side of S Cloverdale Place, there is not currently any pedestrian access from that street to the school site; however, the project proposes to renovate the pedestrian connection to S Cloverdale Place at the northwest corner of the project site. The on-street parking near that future pedestrian access was considered as part of an expanded study area, and evaluated separate from the primary study area. The north and northeastern portion of study area consists primarily of single-family residential land uses, many of which have garages and driveways and/or off-street parking accessed via alleys. The remainder of the study area consists of multi-family, commercial, and institutional land uses. Details about parking supply and occupancy are provided in the following sections.

The study area was separated into individual block faces. A block face consists of one side of a street between two cross-streets. For example, the north side of S Henderson Street, between Rainier Avenue S and Seward Park Avenue S is one block face (identified as block face 'BG' for this study). Figure 11 shows the study area and block face designations.





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Figure 11  
Overall Study Area for On-Street Parking Occupancy Surveys

### **2.4.2. Existing On-Street Parking Supply**

Each block face was measured and analyzed to determine the number of available on-street parking spaces. First, common street features—such as driveways, fire hydrants, and special parking zones—were noted and certain distances adjacent to the street features were documented. No on-street parking capacity was assumed within 30 feet of a signalized or marked intersection, within 20 feet of an uncontrolled intersection, within 15 feet on either side of a fire hydrant, or within 5 feet on either side of a driveway or alley. The remaining unobstructed lengths between street features were converted to legal on-street parking spaces using values in the City’s Tip #117. Based on extensive past experience of Heffron Transportation preparing on-street parking utilization studies, a trend has been observed that the increased popularity of smaller cars and the tendency for drivers to park closer together in areas with higher utilization can result in more available supply than would be suggested by the Tip #117 guidance. Detailed parking supply by block face is provided in Appendix B.

The parking supply survey determined that there are 206 on-street parking spaces within the primary study area (block faces currently within 800 feet walking distance to the site) and 181 have no signed restrictions. After accounting for school-bus and exempt vehicle parking restrictions along S Henderson Street (totaling 22 spaces), the total supply is 184 spaces in the morning and mid-morning, and 203 spaces in the evening. The expanded study area (the area expected to be within 800 feet walking distance after pedestrian site access is re-established on S Cloverdale Place) has an additional 157 on-street parking spaces, of which 156 have no signed restrictions. After accounting for school-bus and exempt vehicle parking restrictions along S Henderson Street, the total overall on-street parking supply is 341 spaces in the morning and mid-morning, and 360 spaces in the evening. Table 4 summarizes the existing parking supply for both study areas.

### **2.4.3. On-Street Parking Occupancy**

At the time of this analysis, Seattle schools were operating with remote learning due to the COVID-19 pandemic crisis. Some residents also shifted to home-based work during the pandemic and despite the gradual reopening of businesses and services like indoor dining (which could operate at 25% capacity at the time of data collection). As a result, midday on-street parking demand generated by residents within Seattle’s residential neighborhoods, such as the streets within the project study area, may be higher than normal, while school-related demand is limited or absent. In addition, it is noted that the Atlantic City Boat Ramp parking lot operated as a COVID-19 test site in February and as a vaccination site in March. Rainier Beach High School was providing student meals for pickup just outside of the Kitchen/Staff parking lot along S Henderson Street.

Parking occupancy counts were performed in February and March 2021. Weekday occupancy counts were performed during early morning (between 7:00 and 7:45 A.M.), the time when staff would typically begin to arrive at the school, and mid-morning (between 10:30 and 11:15 A.M.), the time when school-day parking is typically highest. Evening counts were performed (between 7:30 and 8:15 P.M.) when school events would typically occur. The counts for the existing study area were performed on Tuesday, February 23 and Thursday, February 25, 2021; counts for the entire study area (including the block faces that would be added with new access to S Cloverdale Place) were performed on Tuesday, March 23 and Thursday, March 25, 2021. In addition, historic counts that reflect conditions when school was in session were obtained from Google Earth aerial photography (May 2017 and May 2019). The aerials were estimated to have been taken between 10:30 A.M. and 12:00 P.M. aligning roughly with the mid-morning time-period. The counts for each day were compiled and averaged.

The results of the parking occupancy surveys are summarized in Table 4. On-street parking utilization was calculated using the methodology described in Tip #117 and is the number of vehicles parked on-street divided by the number of legal on-street parking spaces within the study area or on a specific block

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face. The study area utilization totals are also summarized in Table 4. Detailed summaries of the on-street parking occupancy by block face for all counts are provided in Appendix B.

Table 4. On-Street Parking Occupancy Survey Results

| Time Period Surveyed  | Existing Condition (Primary) Study Area <sup>a</sup> |                       |               | Future Condition (Extended) Study Area <sup>b</sup> |                       |               |
|---|--|-----------------------|---------------|---|-----------------------|---------------|
|   | Parking Supply                                       | Total Vehicles Parked | % Utilization | Parking Supply                                      | Total Vehicles Parked | % Utilization |
| <b><i>Weekday Early Morning (7:00 to 7:45 A.M.)</i></b>           |  |                       |               |   |                       |               |
| Tuesday, February 23, 2021  | 184 <sup>c</sup>                                     | 92                    | 50%           |   | n/a <sup>f</sup>      |               |
| Thursday, February 25, 2021                                       | 184 <sup>c</sup>                                     | 89                    | 48%           |   | n/a <sup>f</sup>      |               |
| Tuesday, March 23, 2021   | 184 <sup>c</sup>                                     | 89                    | 48%           | 341 <sup>c</sup>                                    | 149                   | 44%           |
| Thursday, March 25, 2021  | 184 <sup>c</sup>                                     | 92                    | 50%           | 341 <sup>c</sup>                                    | 147                   | 43%           |
| <i>Average</i>  | <i>184 <sup>c</sup></i>                              | <i>91</i>             | <i>49%</i>    | <i>341 <sup>c</sup></i>                             | <i>148</i>            | <i>43%</i>    |
| <b><i>Weekdays Mid-Morning (10:30 to 11:15 A.M.)</i></b>          |  |                       |               |   |                       |               |
| Tuesday, February 23, 2021  | 184 <sup>c</sup>                                     | 94                    | 51%           |   | n/a <sup>f</sup>      |               |
| Thursday, February 25, 2021                                       | 184 <sup>c</sup>                                     | 86                    | 47%           |   | n/a <sup>f</sup>      |               |
| Tuesday, March 23, 2021   | 184 <sup>c</sup>                                     | 84                    | 46%           | 341 <sup>c</sup>                                    | 141                   | 41%           |
| Thursday, March 25, 2021  | 184 <sup>c</sup>                                     | 87                    | 47%           | 341 <sup>c</sup>                                    | 140                   | 41%           |
| <i>Average</i>  | <i>184 <sup>c</sup></i>                              | <i>88</i>             | <i>48%</i>    | <i>341 <sup>c</sup></i>                             | <i>141</i>            | <i>41%</i>    |
| <b><i>Historic Weekdays Mid-Morning (10:30 to 12:00 P.M.)</i></b> |  |                       |               |   |                       |               |
| Monday, May 22, 2017  | 184 <sup>c, d</sup>                                  | 92                    | 50%           | 341 <sup>c, d</sup> <sup>146</sup>                  | 155                   | 45%           |
| Thursday, May 9, 2019   | 184 <sup>c, d</sup>                                  | 89                    | 48%           | 341 <sup>c, d</sup>                                 | 136                   | 40%           |
| <i>Average</i>  | <i>184 <sup>c, d</sup></i>                           | <i>91</i>             | <i>49%</i>    | <i>341 <sup>c, d</sup></i>                          |                       | <i>43%</i>    |
| <b><i>Weekday Evenings (7:30 to 8:15 P.M.)</i></b>                |  |                       |               |   |                       |               |
| Tuesday, February 23, 2021  | 203 <sup>e</sup>                                     | 88                    | 43%           |   | n/a <sup>f</sup>      |               |
| Thursday, February 25, 2021                                       | 203 <sup>e</sup>                                     | 85                    | 42%           |   | n/a <sup>f</sup>      |               |
| Tuesday, March 23, 2021   | 203 <sup>e</sup>                                     | 95                    | 47%           | 360 <sup>e</sup>                                    | 164                   | 46%           |
| Thursday, March 25, 2021  | 203 <sup>e</sup>                                     | 91                    | 45%           | 360 <sup>e</sup>                                    | 160                   | 44%           |
| <i>Average</i>  | <i>203 <sup>e</sup></i>                              | <i>90</i>             | <i>44%</i>    | <i>360 <sup>e</sup></i>                             | <i>162</i>            | <i>45%</i>    |

Source: Heffron Transportation, Inc., April 2021

- Existing Condition Study Area consists of all block faces currently accessible within an 800-foot walking distance of the site reflecting no current pedestrian access from S Cloverdale Place.
- Future Condition Study Area consists of all block faces anticipated to be accessible within an 800-foot walking distance of the site reflecting planned re-establishment of pedestrian access from S Cloverdale Place.
- Parking supply values exclude 19 spaces signed for School Bus Only (7am – 7 pm excluding Sat/Sun/Hol) and 3 spaces signed for King County Exempt Vehicles Only.
- Restrictions for the historic counts may vary slightly from the current restrictions identified.
- Parking supply value excludes 3 spaces signed for King County Exempt Vehicles Only.
- n/a – Parking occupancy counts not performed for Future Condition Study Area on these dates.

For the purpose of evaluating the potential on-street parking impacts associated with new developments, the City considers utilization rates of 85% or higher to be effectively full, and when City staff may start to evaluate parking management measures to reduce utilization. As shown, the survey determined that parking utilization was below this level during all time periods, including the historic counts, and ranged



between 40% and 51% over the 12 separate observations in 2021. The results based on the historic aerial images indicate that on-street demand and occupancy was virtually identical to the 2021 observations.

Published residential parking accumulation rates for suburban areas<sup>20</sup> suggest weekday demand typically begins to decline after 6:00 A.M. when residents leave their homes for work and school. By mid-morning demand may be 36% to 50% of the overnight peak demand. Past observations and parking demand surveys performed around numerous other Seattle school sites have shown that during normal (non-pandemic) conditions, on-street demand typically declines 15% to 25% between 7:00 and 10:00 A.M. As a result, demand that may normally be generated by the school may be off-set when residents leave parking for trips to work or other destinations. Within the study area, unused parking averaged between 90 and 118 spaces over the 14 separate observations within the existing conditions study area. Within the overall study area anticipated for future conditions, unused parking average between 186 and 205 spaces across eight separate observation periods.

As noted previously in Section 2.2.3, new residential and commercial development projects are planned or under construction within the site vicinity. One of the developments—at 8600 Rainier Avenue S—may contribute new on-street parking demand within the parking study area described. This development will have up to 221 affordable housing units and a 10,600-sf food bank with on-site parking for up to 43 vehicles. The transportation and parking analysis prepared for the project indicates it could generate a peak parking demand overspill of up to 75 vehicles during the overnight hours. Demand estimates for the defined study periods (early morning, midday, and early evening) were derived using time-of-day parking accumulation data published for multi-family residential uses in ITE’s *Parking Generation*. Based on their locations, sizes, and proximity, the remaining five pipeline development projects are expected to generate negligible on-street parking demand within the study area. Based on this analysis, on-street parking utilization within the study area is estimated to increase to about 61% in the early morning, 56% in the midday, and 59% in the early evenings. Utilization would remain well below the 85% level considered full by the City with between 130 and 150 unused spaces.

#### **2.4.4. Off-Street Parking**

There are three formally-established parking lots on the campus totaling about 160 spaces. The largest lot west of the main school building (with 72 spaces) and the linear lot along the east side of the grass utility field and baseball field (with 51 spaces) are accessed from two driveways on S Henderson Street. The eastern lot (with about 16 spaces though striping has faded and evolved over the years) is accessed from a driveway on Seward Park Avenue S. There are four reserved spaces for kitchen staff located between the main school building and S Henderson Street with a wide curb cut on S Henderson Street. The paved areas north of the gymnasium and performing arts center and surrounding the wood shop and auto shop buildings are used for occasional parking (with 16 striped spaces but room for many more vehicles). Access to those paved areas occurs from the north via 53<sup>rd</sup> Avenue S, which ends at the school site just south of Hamlet Avenue S.

Parking occupancy counts in February and March 2021 found negligible school-day (morning and midday) demand due to the ongoing COVID-19-related remote learning conditions in effect at the time. However, occupancy counts for the on-site lots were recorded from the same historic aerials referenced previously for the on-street portion of the study. The demand from the historic aerials was 110 vehicles in May 2017 and 125 vehicles in May 2019; enrollment levels reported for the school at the time of those images was 682 and 745, respectively, which indicates a parking demand rate of about 0.165 vehicles per student. This rate is within the range of rates observed at other Seattle high schools—0.14 vehicles per student at Roosevelt and Garfield High Schools and 0.20 vehicles per students at Ingraham High School.

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<sup>20</sup> ITE, *Parking Generation*, 5<sup>th</sup> Edition, January 2019, Time of Day Distribution for Parking Demand, Multifamily Housing.

Although there was negligible parking demand within the on-site parking lots on school days, counts performed on-site in March 2021 found some demand generated as a result of use of the athletic facilities. The baseball and softball fields were in use (with fields lighted) on March 23 and 25 with participants and spectators. Parking demand (totaling 56 and 51 vehicles, respectively) was observed in the main lot, the parking adjacent to the athletic fields, and in the un-marked paved area north of the school buildings. This level of demand reflects typical use of the baseball and softball fields common during spring, and is consistent with studies performed for other athletic field complexes at SPS sites.

## 2.5. Traffic Safety

Collision data for the study-area intersections and nearby roadway segments were obtained from SDOT's Open Data Portal for the period between January 1, 2018 and the most recent records available as of March 9, 2021 (3.2 years). The data, summarized below in Table 5, were examined to determine if there are any unusual traffic safety conditions that could impact or be impacted by the proposed project.

Table 5. Collision Summary (January 1, 2018 through March 1, 2021)

| Intersection   | Rear-End | Side-Swipe | Left Turn | Right Angle | Ped / Cycle | Other <sup>a</sup> | Total for 3.2 Years | Average/Year |
|--|----------|------------|-----------|-------------|-------------|--------------------|---------------------|--------------|
| S Henderson St / Rainier Ave S                               | 2        | 1          | 1         | 7           | 5           | 2                  | 18                  | 5.7          |
| Rainier Ave S / 51 <sup>st</sup> Ave S                       | 1        | 0          | 2         | 5           | 1           | 3                  | 12                  | 3.8          |
| Rainier Ave S / Seward Park Ave S                            | 1        | 0          | 2         | 8           | 0           | 0                  | 11                  | 3.5          |
| S Henderson St / Renton Ave S                                | 0        | 0          | 1         | 1           | 5           | 1                  | 8                   | 2.5          |
| S Cloverdale St / Rainier Ave S                              | 2        | 0          | 20        | 1           | 1           | 0                  | 6                   | 1.9          |
| S Henderson St / Seward Park Ave S                           | 0        | 0          | 0         | 0           | 0           | 0                  | 0                   | 0.0          |
| S Cloverdale Pl / Seward Park Ave S                          | 0        | 0          | 0         | 0           | 0           | 0                  | 0                   | 0.0          |
| Roadway Segment  | Rear-End | Side-Swipe | Left Turn | Right Angle | Ped / Cycle | Other <sup>a</sup> | Total for 3.2 Years | Average/Year |
| Rainier Avenue S (between S Cloverdale St & S Henderson St)  | 15       | 4          | 0         | 2           | 2           | 2                  | 25                  | 7.9          |
| S Henderson St (between Rainier Ave S and Seward Park Ave S) | 5        | 0          | 0         | 1           | 1           | 1                  | 8                   | 2.5          |
| Seward Park Avenue S (between Hamlet Ave S & S Henderson St) | 1        | 0          | 0         | 1           | 1           | 1                  | 4                   | 1.3          |
| S Cloverdale Pl (between Rainier Ave S and Grattan Place)    | 0        | 0          | 0         | 0           | 0           | 0                  | 0                   | 0.0          |

Source: City of Seattle Department of Transportation, <https://data-seattlecitygis.opendata.arcgis.com/datasets/collisions>, March 9, 2021.

a. 'Other' collisions included eight vehicles striking an object of the roadway, three vehicles striking parked vehicles, one vehicle striking a fixed object, and one collision with insufficient information to determine type.

Unsignalized intersections with five or more collisions per year and signalized intersections with 10 or more collisions per year are considered high collision locations by the City. None of the intersections meet the criteria for a high-collision location. The study area intersection with the highest number of collisions was the S Henderson Street / Rainier Avenue S intersection west of the site, which has averaged 5.7 collisions per year since January 2018. Of the 18 total collisions at this intersection, 9 occurred in

2018, with fewer occurrences each subsequent year and no collisions were reported for 2021 at the time the data were reviewed. At this same location, four of the five pedestrian incidents occurred in 2018, with no pedestrian incidents reported since 2019.

The study-area roadway segment with the highest total number of collisions was along Rainier Avenue S, between Cloverdale Place S and Hamlet Avenue S. Of 15 rear-end collisions along this segment, 8 occurred in 2020, five of which occurred on days when schools were closed (either due to COVID-19 or during summer). None of the reported collisions at study-area intersections or roadway segments resulted in fatalities. Overall, these data do not indicate any unusual traffic safety conditions.

## 2.6. Transit Facilities and Service

The school site is directly served by King County Metro Transit (Metro). Stops served by Routes 7 and 106 are located on S Henderson Street. The eastbound stop for Route 7 is located across the street from the main school building just east of 53<sup>rd</sup> Avenue S (private street); the westbound stop for Route 106 is located at the southwest corner of the site just east of Rainier Avenue S. Link light rail service is provided by Sound Transit at Rainier Beach Station located about ½-mile west of the school site at Martin Luther King Jr. Way S just south of S Henderson Street. In the site vicinity, the City has designated Rainier Avenue S as a Major Transit Street; S Henderson Street, Seward Park Avenue S, and Renton Avenue S are all designated as Minor Transit Street. To the west, Martin Luther King Jr. Way S is designated as a Major Transit Street north of S Henderson Street and a Minor Transit Street to the south.<sup>21</sup> Table 6 summarizes transit service provided within one-half mile of the project site.

Table 6. Existing Transit Service within One-Half Mile of the Project Site

| Route           | Closest Stops  | Areas Served   | Typical Weekday Headways <sup>a</sup> (minutes) |
|-----------------|--|--|---|
| Link Light Rail | Rainier Beach Station  | Angle Lake, SeaTac Airport, Rainier Beach, Mount Baker, Columbia City, Beacon Hill, Downtown, Capitol Hill, University of Washington | 6 – 15  |
| 7               | Rainier Avenue S / S Henderson Street / Seward Park Avenue S | Downtown, Mount Baker, Columbia City, Rainier Beach, S Prentice Street   | 7 – 15  |
| 106             | Rainier Avenue S / S Henderson Street / Seward Park Avenue S | Chinatown/International District, Mount Baker, Columbia City, Rainier Beach, Skyway, Renton  | 10 – 30   |
| 107             | Rainier Avenue S / S Henderson Street / Seward Park Avenue S | Beacon Hill Station, Georgetown, Rainier Beach Station, Lakeridge, Renton Transit Center   | 15 – 32   |

Sources: Sound Transit and King County Metro Transit online schedules and route information, March 2021.

a. Headway is the time between consecutive trains or buses by direction.

SPS provides transportation to Rainier Beach High School students who qualify. As outlined in the current *Transportation Service Standards*:<sup>22</sup>

*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.*

<sup>21</sup> Seattle Department of Transportation (SDOT), Interactive Street Classification Maps, accessed March 2021.

<sup>22</sup> SPS, *Revised Transportation Service Standards 2020-21: Ridership Eligibility*, Effective Sept. 1, 2020.





- a. *ORCA cards will not be provided for students who do not attend an SPS school but continue to participate in a SPS-school athletics program.*

*Specialized transportation is provided in the following circumstances:*

- a. *Students who require specialized transportation services as determined by their Individualized Education Program (IEP).*
- b. *Students requiring medical transportation as approved by District Health Services.*

A segment of the curb lane on the north side of S Henderson Street adjacent to the school site is reserved for “School Bus Only, 7 AM to 7 PM.” This area is occasionally used to load/unload school buses carrying Special Education (SPED) students to and from school. Under normal (non-COVID) conditions, approximately eight yellow school buses (typically smaller 25-foot long) serve the site. In addition, this area is used by school buses transporting students to and from field trips, off-site athletics, or other off-site extra-curricular activities.

*Metro Connects*<sup>23</sup> is the adopted long-range vision for Metro’s future service and capital projects. It provides plans for new local, frequent, and RapidRide service by 2025. A new local route is indicated along Seward Park Avenue S and S Henderson Street that would connect Link stations at Mount Baker and Rainier Beach. It also indicates a new RapidRide R Line along Rainier Avenue S between the University of Washington and Rainier Beach, which would replace the existing Route 7 service. Metro has completed conceptual project design for the new RapidRide R Line, but due to the ongoing COVID-19 pandemic and related budget and ridership impacts, has paused planning, design, and implementation. It is uncertain if the R Line will be implemented before 2027; however, if and when it is implemented, it is expected to operate along Rainier Avenue S and west along S Henderson Street, with stop locations to be determined during future planning phases.

## **2.7. Non-Motorized Facilities**

Sidewalks exist on both sides of the arterial streets in the vicinity of the project site; they are intermittent on local access streets. There is a shared-use non-motorized trail along 52<sup>nd</sup> Avenue S south of the school site between S Fisher Place and S Henderson Street. The signalized study-area intersections have crosswalks across all legs with pedestrian signals (except for the east leg at the Rainier Avenue S / Seward Park Avenue S intersection, which has no crossing). There are crosswalks with signage across S Henderson Street at 46<sup>th</sup>, 50<sup>th</sup>, 52<sup>nd</sup>, and 53<sup>rd</sup> Avenues S; the crossings at 46<sup>th</sup> and 50<sup>th</sup> Avenues S are equipped with pedestrian-actuated Rectangular Rapid Flashing Beacons (RRFBs). There are protected bike lanes in each direction along S Henderson Street, which transition to sharrows in the outside lanes east of 50<sup>th</sup> Avenue S. In April 2020, due to the COVID-19 pandemic crisis, the City implemented a Stay Healthy Street along the Rainier Valley NGW.

The 2019 counts at the S Henderson Street / Rainier Avenue S intersection indicated a high level of pedestrian activity, with more than 340 pedestrian crossings recorded in the morning peak period and over 580 in the PM peak period. Pedestrian volumes in the afternoon were slightly lower. The count data indicated low bicycle volume, with eight or fewer recorded in all directions over two hours in the morning and afternoon. It is noted that those counts were conducted in May when weather on the count day was dry and temperatures were above average. School staff<sup>24</sup> indicated that pre-pandemic bicycle usage at the school site was relatively low, with about 10 students and staff with bikes on campus on a regular basis.

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<sup>23</sup> King Country Metro; adopted January 23, 2017.

<sup>24</sup> Email from A. Thomas – Activity Coordinator, Rainier Beach High School, March 25, 2021.



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The City of Seattle's currently adopted *CIP* was reviewed to determine if any pedestrian facility improvements are planned in the area. As described previously *Section 2.1.2*, the *CIP* includes the ongoing *Route 7 Transit-Plus Multimodal Corridor project*, which will complete improvements to crossings and transit connections. In addition, the *Vision Zero Rainier Improvements* effort includes funding for sidewalk upgrades along the corridor. The *CIP* also includes funding over the next five years to advance the *Pedestrian Master Plan*<sup>25</sup> recommendations; however, no specific planned non-motorized facility improvements are listed for the study area roadways or intersections.<sup>26</sup>

The *Safe Routes to School 5-Year Action Plan for Seattle*<sup>27</sup> identified the Rainier Beach Campus Safe Passage Project as a community-led initiative using place-based interventions to improve safety and security in the Rainier Beach campus area. Among other agencies and organizations, SDOT supported the program to increase adult guardianship in the Rainier Beach campus area and improve safety for students.

The *BMP* identifies planned bicycle infrastructure improvements and the recommended network is shown on Figure 12. As shown, a future cycle track facility (protected bike lane) is proposed to extend east from Martin Luther King Jr. Way S along S Henderson Street to Rainier Avenue S and then continue south along Rainier Avenue S to the south City limit. A Neighborhood Greenway (referred to as the Rainier Valley NGW) was implemented along the 46<sup>th</sup> Avenue S corridor west of the South Shore K-8 site extending north from S Henderson Street to S Holly Street before turning west to 39<sup>th</sup> Avenue S. An in-street local connector is proposed along Seward Park Avenue S. As described previously, the signal operations analyses reflect recent policy changes to increase crossing times for pedestrians as well as advance signal for pedestrians using crosswalks.

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<sup>25</sup> SDOT, June 2017.

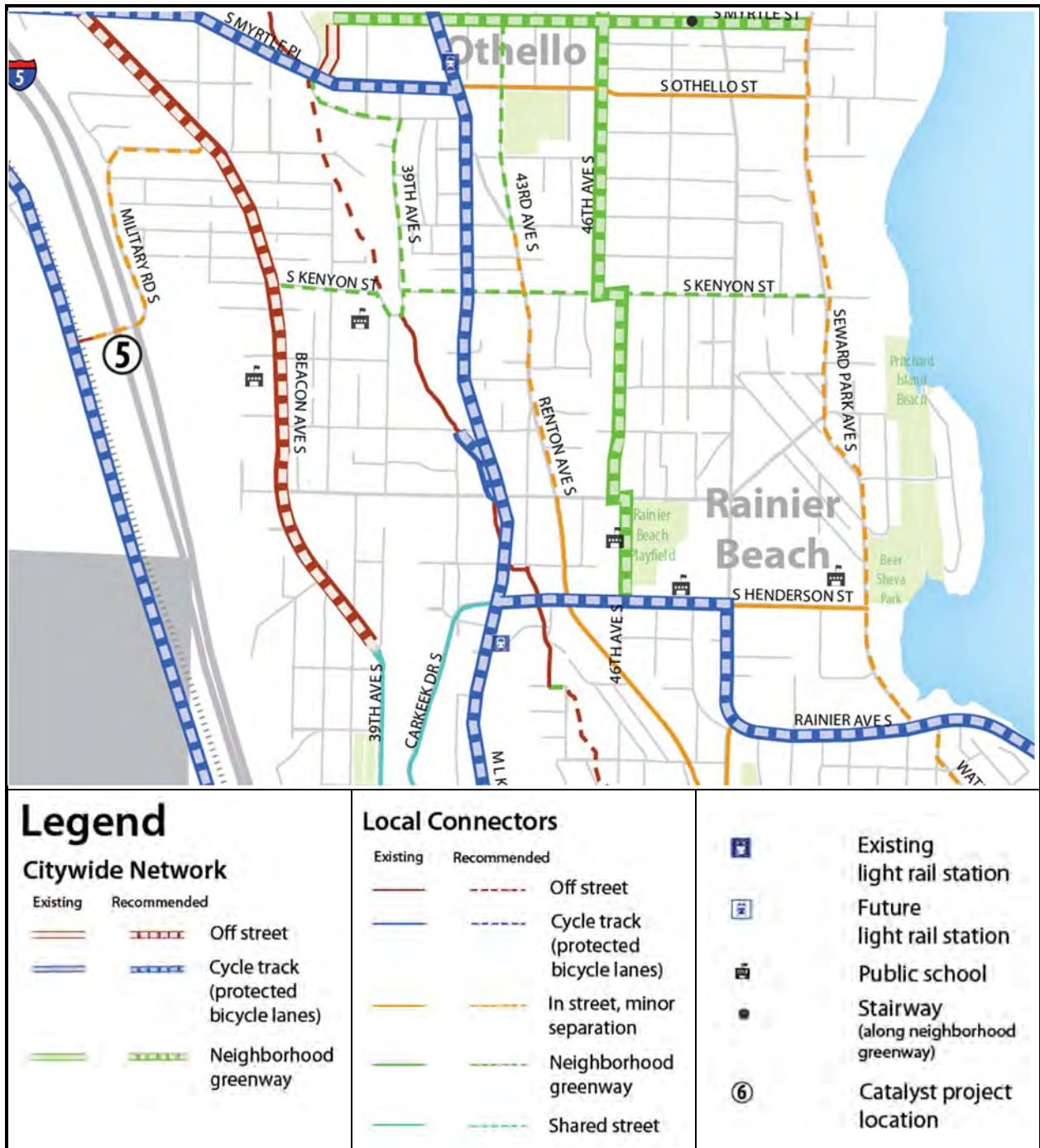
<sup>26</sup> SDOT, December 2019.

<sup>27</sup> Seattle Department of Transportation; *Safe Streets, Healthy Schools and Communities*; Fall 2015.





Figure 12. Bicycle Master Plan Recommended Network



Source: Adopted Seattle Bicycle Master Plan (BMP), City of Seattle, April 2014.

## 3. PROJECT IMPACTS

This section describes conditions that would exist with the Rainier Beach High School Replacement project and the school operating at its planned enrollment capacity of up to 1,600 students. Vehicle trip estimates associated with the school replacement and expansion were added to the 2025-without-project traffic volume forecasts. Level of service analyses were performed to determine the proposed project's impact on traffic operations in the study area. Parking demand and the potential change to on-street parking utilization was also estimated. Potential impacts to safety, transit, and non-motorized facilities are also presented along with analysis of possible construction-related transportation impacts.

### 3.1. Transportation Network

The project would consolidate vehicular access on S Henderson Street to one driveway—located about 30 feet west of the existing eastern driveway serving the main parking lot. The western driveway and the wide access serving the kitchen staff parking would be eliminated. The access driveway on Seward Park Avenue S would be reconstructed in about its existing location. In coordination with SDOT, the segment of 53<sup>rd</sup> Avenue S along the site frontage would be widened and improved with curb and sidewalk on the west side (adjacent to the school). For all frontages (including S Henderson Street, Seward Park Avenue S, 53<sup>rd</sup> Avenue S, and S Cloverdale Place), sidewalk and curb ramps would be improved as required by SDOT. No other physical changes to the surrounding transportation network are proposed as part of the project. School buses would continue to have the option to use the load zone on the north (westbound) side of S Henderson Street.

### 3.2. Traffic Volumes

The proposed project is expected to result in new vehicular, pedestrian, and bicycle activity on the surrounding transportation network. With the replacement and expansion, the school is expected to have a peak enrollment capacity of up to 1,600 students. The school project is expected to generate an increase in daily and peak hour traffic compared to without-project conditions, which assumed the existing enrollment level of 762 students. The following describes the method used to estimate project-generated traffic.

#### 3.2.1. School Trip Generation

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. However, due to the ongoing COVID-19 pandemic crisis and remote learning since March 2020, it was not possible to obtain representative counts at the existing Rainier Beach High School site. Therefore, trip generation for the proposed replacement project was estimated using average rates derived from counts collected previously at three other Seattle high schools—Garfield, Roosevelt, and Ingraham High Schools. These rates reflect the likely transportation conditions that exist at and around Rainier Beach High School, including limited availability of parking and anticipated student use of Metro. Standard rates for a high school published in the Institute of Transportation Engineers' *Trip Generation Manual*<sup>28</sup> were not used since the published ITE rates are based on data from schools that had considerable variability in number of students transported by bus, on-site parking available for students/staff, and the types of facilities provided.

For morning peak hour conditions when students and staff would arrive at the school, a rate of 0.36 trips per student, the average of counts performed around Garfield High School,<sup>29</sup> Roosevelt High School,<sup>30</sup>

<sup>28</sup> ITE, 10<sup>th</sup> Edition, September 2017.

<sup>29</sup> Heffron Transportation, Inc., 2004.

<sup>30</sup> Heffron Transportation, Inc., 2009.



and Ingraham High School,<sup>31</sup> was selected and applied. This rate is about 65% of the published ITE rate and accounts for a higher number of students that are expected to arrive by transit (due to limited parking availability and common mode-of-travel trends for Seattle high schools). 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 (also derived from counts performed around Roosevelt,<sup>32</sup> Garfield, and Ingraham High School) was applied. 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, which matches the high-end of rates derived from counts at Roosevelt and Garfield, was applied 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. Table 7 shows the resulting trip generation estimates for the expanded Rainier Beach High School at its planned enrollment capacity of 1,600 students. The estimated net change from normalized current conditions is also presented. The trip generation values presented include school bus trips, employee trips, and student trips.

**Table 7. Rainier Beach High School Replacement Project – Trip Generation Estimates**

| Site Condition    | Enrollment<br>(students) | Morning Peak Hour<br>(8:00 to 9:00 A.M.) |            |            | Afternoon Peak Hour<br>(3:15 to 4:15 P.M.) |            |            | PM Peak Hour<br>(4:30 to 5:30 P.M.) |           |           |
|-------------------|--------------------------|--|------------|------------|--|------------|------------|-------------------------------------|-----------|-----------|
|                   |                          | In                                       | Out        | Total      | In   | Out        | Total      | In                                  | Out       | Total     |
| Proposed School   | 1,600 <sup>a</sup>       | 315                                      | 260        | 575        | 155  | 245        | 400        | 80                                  | 95        | 175       |
| Existing School   | -762 <sup>b</sup>        | -150                                     | -125       | -275       | -75  | -115       | -190       | -40                                 | -45       | -85       |
| <b>Net Change</b> | <b>838</b>               | <b>165</b>                               | <b>135</b> | <b>300</b> | <b>80</b>                                  | <b>130</b> | <b>210</b> | <b>40</b>                           | <b>50</b> | <b>90</b> |

Source: Heffron Transportation, Inc., March 2021.

a. Proposed future capacity of the school.

b. Average enrollment of the existing school from 2017 to 2021.

### 3.2.2. Trip Distribution and Assignment

The proposed building replacement project would modify access and on-site parking at the school, which would also affect the distribution of site-generated traffic. The existing configuration of the school includes access points at the southeast corner of the site with two access driveways on S Henderson Street for visitor parking, as well as automobile load/unload, and one access driveway for staff on Seward Park Avenue S. The project would reconfigure and expand student and visitor parking as well as automobile load/unload at the southeast corner of the site. Access on S Henderson Street would be consolidated to one two-way driveway and the Seward Park Avenue S access would be connected to all parking on the site. These changes are expected to change the trip patterns on the local roadway network. Special Education (SPED) buses load and unload students on the north side of S Henderson Street just west of the Seward Park Avenue S intersection. A new on-site load/unload area would be provided for SPED buses along the east side of the school building with inbound access from the north using 53<sup>rd</sup> Avenue S and

<sup>31</sup> Heffron Transportation, Inc., 2017.

<sup>32</sup> Heffron Transportation, Inc., 2002 and 2009.

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egress to Seward Park Avenue S. The on-street school bus load/unload zone is proposed to remain for occasional use by school buses for athletics, activities, and field trips.

Project trip distribution patterns and assignments were developed for the morning, afternoon, and commuter PM peak hours using a combination of resources including: 1) the school's enrollment and draw areas, 2) historical traffic counts and directional patterns at intersections adjacent to the site, 3) population density data within the subsectors of the draw areas; 4) employment location of residents living within the enrollment draw areas from *OnTheMap*,<sup>33</sup> 5) school-bus volume information from the District; and 6) *Google Maps* predictive travel-route and travel-time mapping resource. The resulting trip patterns also reflect typical habits of some family drivers linking student drop-off and pick-up trips with trips to and from work or other destinations.

Peak hour trip assignments for two school conditions—1) existing school and access configuration and 2) proposed expanded school at capacity with the new access configuration—were compared to determine the net changes in trips and travel routes expected to occur with the project. Figure 13, Figure 14, and Figure 15 show the traffic distribution patterns and assignments of net new trips for the morning, afternoon, and PM peak hours, respectively.

The net new peak hour school trips were added to the forecast 2025-without-project traffic volumes to reflect future conditions with the expanded school. Figure 16, Figure 17, and Figure 18 show the forecast 2025-with-project volumes for the morning, afternoon, and PM peak hours, respectively.

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<sup>33</sup> Version 6, United States Census Bureau, web-based mapping and reporting application, <https://onthemap.ces.census.gov/>, accessed March 2021.















# Rainier Beach High School Replacement Project

Figure 16  
Forecast 2025-With-Project Traffic Volumes  
Morning Peak Hour



# Rainier Beach High School Replacement Project

Figure 17  
Forecast 2025-With-Project Traffic Volumes  
Afternoon Peak Hour





# Rainier Beach High School Replacement Project

Figure 18  
Forecast 2025-With-Project Traffic Volumes  
PM Peak Hour



### 3.3. Traffic Operations

Intersection levels of service for future with-project conditions were evaluated using the same methodology described previously. The additional enrollment capacity is expected to increase pedestrian trips and the number of pedestrian crossings at nearby study intersections, including pedestrian trips between the site and transit stops (such as the Rainier Beach Link Station and future RapidRide R Line west of the site). The operational analyses accounted for potential increases in pedestrian crossing activity, the peaking characteristics of school traffic (school drop-off and pick-up primarily occurs during about 20 minutes in the peak hours), and changes to access patterns (including SPED school buses).

Table 8 shows the results of the analysis; levels of service for the without-project conditions are shown for comparison. The table shows that traffic generated by the proposed expanded and reconfigured Rainier Beach High School is expected to add between zero and 5.4 average seconds of delay per vehicle to the study area intersections. All seven study-area intersections are forecast to remain operating at LOS D or better during all three analysis peak hours, which is an acceptable level of service. Therefore, the project would not result in significant adverse impacts to study-area traffic operating conditions.

Table 8. Level of Service Summary – Forecast 2025 Conditions Without- and With-Project

| Intersections                          | Morning Peak Hour<br>(8:00–9:00 A.M.) |       |              |       | Afternoon Peak Hour<br>(3:15–4:15 P.M.) |       |              |       | PM Peak Hour<br>(4:30–5:30 P.M.) |       |              |       |
|--|---------------------------------------|-------|--------------|-------|---|-------|--------------|-------|----------------------------------|-------|--------------|-------|
|  | Without Project                       |       | With Project |       | Without Project                         |       | With Project |       | Without Project                  |       | With Project |       |
|  | LOS                                   | Delay | LOS          | Delay | LOS                                     | Delay | LOS          | Delay | LOS                              | Delay | LOS          | Delay |
| <b>Signalized</b>                      |                                       |       |              |       |   |       |              |       |                                  |       |              |       |
| S Henderson St / Rainier Ave S         | C                                     | 31.8  | D            | 37.2  | D                                       | 38.0  | D            | 39.6  | D                                | 44.0  | D            | 44.3  |
| S Henderson St / Renton Ave S          | C                                     | 26.3  | C            | 31.7  | C                                       | 29.8  | C            | 31.0  | C                                | 32.0  | C            | 32.6  |
| Rainier Ave S / S Cloverdale St        | B                                     | 19.2  | B            | 19.0  | C                                       | 34.1  | C            | 34.3  | D                                | 47.1  | D            | 47.4  |
| Rainier Ave S / 51 <sup>st</sup> Ave S | B                                     | 15.9  | B            | 17.1  | B                                       | 17.6  | B            | 18.2  | B                                | 18.8  | B            | 18.9  |
| Rainier Ave S / Seward Park Ave S      | B                                     | 11.5  | B            | 11.8  | B                                       | 14.9  | B            | 15.0  | B                                | 16.4  | B            | 16.8  |
| <b>All-Way-Stop Controlled</b>         |                                       |       |              |       |   |       |              |       |                                  |       |              |       |
| S Henderson St / Seward Park Ave S     | D                                     | 30.5  | D            | 30.7  | D                                       | 25.4  | D            | 27.2  | C                                | 22.3  | C            | 22.9  |
| S Cloverdale Pl / Seward Park Ave S    | C                                     | 19.1  | C            | 23.1  | C                                       | 18.0  | C            | 19.3  | C                                | 19.6  | C            | 20.1  |

Source: Heffron Transportation, Inc., April 2021.

1. Level of service.
2. Average seconds of delay per vehicle.

### 3.4. Site Access

Passenger vehicle load/unload would occur in a designated area within the main parking lot on the southeast corner of the site. Some students may also be dropped off or picked up by family members from on-street parking spaces in the site vicinity for convenience; however, the trip assignments assume all traffic entering and exiting the site to reflect worst-case conditions. Analysis of the site access driveways indicates all three would operate at LOS A overall and all movements operating at LOS C or better during all three analysis periods with the project.

## 3.5. Parking Supply and Demand

### 3.5.1. Changes to Parking Supply

Because the school is located within an Urban Village, there is no City of Seattle minimum code-requirement for parking supply and no code-departure for reduced parking is required. However, the project would reconfigure and expand on-site parking at the school, providing a total of about 200 spaces—an increase of about 40 spaces compared to existing site conditions. Two main parking lots would be located at the southeastern portion of the site—one with 62 spaces and the new on-site passenger vehicle load/unload loop accessed from S Henderson Street and a second lot with 106 spaces accessed from Seward Park Avenue S. These two parking areas would be physically connected by a tabletop driveway designed to emphasize pedestrian movement, but would allow connection between the parking areas during peak-use periods. An additional 30 spaces are proposed along the northeast edge of the site with primary access from the same driveway on Seward Park Avenue S and/or from the south end of 53<sup>rd</sup> Avenue S.

The consolidation of access along S Henderson Street would eliminate two existing curb cuts and allow for an increase in on-street parking supply (adding about four spaces) along the site frontage. No other proposed changes to site frontage are expected to effect on-street parking supply in the vicinity.

### 3.5.2. Parking Demand

#### School Day Parking

Parking demand estimates for the expanded Rainier Beach High School were developed based on the counts and observations from historical aerials of the existing school, combined with rates and data derived from counts at three other Seattle high schools. The estimated peak school-day parking demand is expected to range from 0.14- to 0.165-vehicles-per-student. These are the range of rates observed at Rainier Beach, Roosevelt, and Garfield High Schools, but lower than the rate observed at Ingraham High School. Based on the observations and rate derived for Rainier Beach High School and given its proximity to Link light-rail and the future RapidRide R transit service, the school is expected to generate demand at the lower end of the range of observed rates. Therefore, the expanded school with enrollment of up to 1,600 students could generate a peak school-day demand ranging from 224 to 264 vehicles.

With the proposed on-site supply of about 200 spaces, the expanded school could generate excess demand of between 24 and 64 vehicles that may occur along on-street parking in the site vicinity. This potential new parking overspill would most likely occur on-street in areas nearest the school that have unrestricted parking on school days. Based on the parking utilization study performed around the school, there were over 120 unused unrestricted on-street parking spaces along S Cloverdale Street, Grattan Place S, Wabash Avenue S, 53<sup>rd</sup> Avenue S, Hamlet Avenue S, and Seward Park Avenue S. After accounting for potential new overspill demand from nearby pipeline development projects (described previously) and the potential range of new overspill from Rainier Beach High School (when fully enrolled to capacity), on-street parking utilization in the study area is expected to remain between 62% and 74% with between 90 and 130 unused spaces remaining. Based on these estimates, the added school day demand would not represent a significant adverse impact.

#### Event Parking

Rainier Beach High School would continue to host activities and events regularly throughout the school year. The types, sizes, and frequency of events will depend on the curriculum, programs, and enrollment level of the school at that time. However, based on activity and event schedules at the existing school, many of these events and activities are expected to consist of meetings, club activities, and sports practices or games (on the athletic fields and in the gymnasium). These types of activities

may occur daily and consist of between 15 and 50 participants and/or spectators. They may include monthly booster meetings, parent organization meetings and programs, student presentations, evening club activities and movies, and specialized activities (e.g., robotics). It is likely that there would be two or more activities in various locations on the site simultaneously. Parking demand generated by these smaller types of events and activities would typically be accommodated within the on-site parking lots with some generating demand on-street near the site.

In addition, the school would also continue to have three or four larger events each month that may draw higher levels of participation and/or spectators. The following lists and describes the types of larger evening or weekend events likely to occur on site during each of the three school-year quarters. About three or four of the larger events each quarter (about one per month) involve full-school attendance with parents/guardians and staff. These are expected to be the highest-attendance events. The remaining events listed often involve only a portion of the student body (e.g., only one grade level or only athletes from one sports season) and would have lower attendance.

## Fall

- **Viking Family Night (Open House / Curriculum Night)** – Parents and guardians of students in all four grades attend with activities held in the entire school including assembly spaces.
- **Senior Parent Night** – Parents/guardians of senior students attend to learn about graduation requirements, classroom expectations, staff and community organization, and other items.
- **Homecoming** – May consist of combination of events such as dance, community tailgate, and/or other activities.
- **Fall Plays / Concerts** – Drama and music performances held in the performing arts center, auditorium/theater with students, families, and staff attending.
- **Financial Aid Night** – Students and families learn about financial aid opportunities (e.g., grants and scholarships) for future education.
- **Ninth-Grade Family Night** – Ninth-grade students and families meet teachers and receive information about credit requirements, counseling, and other programs.
- **Halloween Events** – Events such as a Haunted House may be held in commons, assembly spaces, or theater over one or more days.
- **Fall Sports banquets** – Fall sports athletes (football, cross-country, girls' soccer, volleyball, girls swimming, and golf), parents/guardians, and coaches may attend events held in assembly spaces and/or commons.

## Winter

- **Senior Fundraiser / Movie Night** – Seniors attend movie night in the Performing Arts Center.
- **Future Viking (New Student) and Family Night** – Incoming students, families, staff and coaches attend event held in the commons, gymnasium, auditorium/theater, and other areas.
- **Winter Music, Drama, and or Talent Shows** – Students perform for families, staff, and guests in the performing arts center
- **Winter Ball/Dance** – Students, some staff, and chaperones may attend from all four grades—usually held in a commons or assembly spaces.
- **Winter Sports Banquets** – Winter sport teams may hold separate recognition event for team participants, coaches, and families.





## Spring

- **Spring Sports Banquets** – Spring sports athletes (baseball, softball, boys' soccer, track, and tennis) and parents, guardians, and coaches may attend event in the commons.
- **Multicultural Assembly Night** – All school event with students, staff, and families attending in the performing arts center and/or other locations on campus.
- **College Signing Party** – Junior and/senior students and families celebrate their college selections in the cafeteria or other assembly spaces.
- **International Baccalaureate (IB) Program Orientation** – Students and families learn about IB program to prepare them for college, usually held in library.
- **Spring Dance** – All-school dance may be held in commons or assembly spaces or off-site.
- **Spring Drama, Music, or Talent Shows** – Student performances with parents, students, staff, and community attending in the performing arts center, some with evening rehearsals and some over multiple days or weekends.
- **Future Viking (New Student) and Family Night** – Incoming students, families, staff and coaches attend event held in the commons, gymnasium, auditorium/theater, and other areas.
- **Graduation Reception** – Graduating seniors, families, guests and staff may attend a reception in a commons space (graduation and Senior Prom typically held off-site).

The following describes the events, approximate participation, and estimated attendance, as well as the estimated changes expected due to the school replacement and enrollment capacity increase.

### Concerts, Plays, and Talent Shows:

- School performances may occur four to eight times per year in the performing arts center with seating for about 520. Conditions would be similar to the existing performing arts center.

### Open House:

- An Open House for current students is held in late-September or October. Attendance at other Seattle high schools at the proposed level of enrollment may be 800 or more.
- Open Houses for incoming students are held in Winter and Spring; attendance at other Seattle high schools at the proposed level of enrollment may be about 500.
- Attendance is likely to increase above existing levels due to larger enrollment.

### Athletic Games

- **Basketball** – The school hosts 8 to 10 home varsity games per year each for boys' and girls' basketball. The larger events include 50 to 100 participants on days with double headers (e.g., junior varsity and varsity); the numbers of spectators/attendees can range from 200 to 1,500, depending on the teams' performance and opponents.
- **Football** – The school hosts four to six varsity football games per year for both Rainier Beach and Cleveland High School, with about 50 participants and attendance that ranges from 200 to 800 for most games. Games with higher expected attendance are held off-site at Memorial Stadium.
- The above levels of attendance are similar to other Seattle high schools with enrollments of approximately 1,600 to 1,700; therefore, the replacement project and added enrollment is not expected to change participation levels or attendance at the athletic games. Based on Heffron Transportation's experience working with schools and athletic directors evaluating traffic and parking demand associated with varsity football and basketball games (including the four SPS facilities located at Nathan Hale/Jane Addams, Ingraham, Rainier Beach, and Denny/Sealth), the



primary influence on attendance for high school games is team performance (i.e., record or expected record) and rivalry games.

### **Other Events**

- The school would continue to host a variety of specialized events that may include Multicultural Assembly Night, IB Program orientation, College Signing Night, and sports banquets, which may draw attendance of 200 about 400 persons.
- Other evening events (such as parent meetings) for schools enrolled at up to 1,600 students typically have fewer than 200 participants and attendance is not expected to be affected by the larger enrollment capacity.

### **Non-Scholastic and Other Schools Use of Athletic Facilities:**

- The school's athletic facilities are regularly used on weekends, evenings, and summer days for other school sports and recreational sports by adult and youth sports organizations that are scheduled by Seattle Parks and Recreation (SPR) pursuant to the *Joint Use Agreement*<sup>34</sup> between SPS and SPR.
- These activities would continue to occur at the site and would not be affected by the change in enrollment capacity of Rainier Beach High School.

Based on the above information about current events and the anticipated changes that may occur with the larger enrollment capacity, two of the larger events—the Open Houses—are anticipated to experience higher levels of attendance and participation. Since on-site parking for these two events is likely often full, added demand would be expected to occur on-street surrounding the site. The school has an event planner and administrative staff who work to avoid two large events on the same night and communicate with SPR when there is a large school event to avoid overlapping parks events.<sup>35</sup>

The new performing arts center would have the same capacity as the existing facility—550 seats. The new main gymnasium would have bleacher seating for about 1,430 persons (the existing gym has bleacher seating for about 1,800); the auxiliary gym could accommodate about 600. Typically for larger events, there are between 2.5 and 3.5 persons attending for each parked vehicle. These rates account for higher levels of carpooling (parents and students in a single vehicle) as well as drop-off activity that does not generate parked vehicles. At these rates, a capacity event in the performing arts center could generate parking demand between 160 and 220 vehicles, nearly all of which could be accommodated on site. However, similar to existing conditions, a full event in the gymnasium (such as a well-attended basketball game) could cause parking demand to exceed the on-site supply and spill over to on-street parking.

As presented previously, the on-street parking study performed around the site indicated that utilization on non-event weeknights averaged 45% with nearly 200 unused spaces. After accounting for potential added demand from other development projects in the vicinity, utilization may increase to about 59% with about 150 unused spaces. At this level, an increase of about 100 vehicles parked on street would cause utilization to exceed the 85% level considered full by the City; 150 additional on-street vehicles would push utilization to 100% full. Based on the attendee-per-parked-vehicle rates above, events with total attendance of 850 to 1,000 would likely cause on-street parking utilization to exceed the 85% level; events with more than about 1,200 attendees are estimated to result in full parking conditions (100%) within 800 feet of the site and could impact streets beyond 800 feet.

Based on these analyses, the on-street supply could accommodate the overflow demand of some of the larger events at the high school. However, for the largest events, all on-street parking along the roadways

<sup>34</sup> *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.

<sup>35</sup> Email communications, L. Thomasson, RBHS Admin. Secretary and F. Griffin, SPS Dir. Facility Operations, June 2021.

surrounding the school site could be at or above capacity. These conditions likely already occur occasionally with well-attended basketball games and the change in school enrollment capacity is not expected to change these existing conditions.

The outdoor athletic fields at Rainier Beach High School are also known as the Southeast Athletic Complex (SEAC) and serve as the home fields for Rainier Beach High School as well as for some sports at other Seattle high schools (e.g., Cleveland High School varsity football, softball, and baseball). The use of the site by other schools' sports teams would not be affected by the replacement project. However, the larger enrollment capacity made possible by the school-replacement project could result in more evenings with multiple concurrent smaller events that cause on-street parking overspill more frequently. In order to mitigate potential event-related impacts, additional event parking mitigation measures (expanding on the existing measures) are recommended and are summarized in the *Findings and Recommendations* section.

### **3.6. Traffic Safety**

The project could increase traffic at the study-area intersections and statistically, the number of collisions could increase as traffic increases. However, the collision data provided for the study area did not indicate any unusual collision patterns that would impact or be impacted by the proposed project.

### **3.7. Transit**

New transit trips are expected to be generated by students, teachers, and staff at the site; however, the traffic and parking demand estimates do not specifically rely on reductions in auto trips to account for any added transit usage. Student trips are expected to occur on Metro and Sound Transit Link light rail as ORCA cards are provided for eligible students. SPS coordinates with Metro to address expected student demand on certain routes. Since the nearest stops are located adjacent to and west of the school on S Henderson Street, coordination with Metro is recommended to confirm service availability and capacity as enrollment approaches its design capacity of 1,600 students. As noted previously, SPS does not anticipate full enrollment for 10 years or more after completion.

### **3.8. Non-Motorized Facilities**

Rainier Beach High School, with its proposed increased enrollment capacity, is expected to generate more pedestrian trips within the site vicinity than the existing school. It is anticipated that some increase in pedestrian activity would occur along S Henderson Street, S Cloverdale Place, 53<sup>rd</sup> Avenue S, and Seward Park Avenue S adjacent to the school, and Rainier Avenue S to the west. There would also likely be increases in bicycle trips within the site vicinity. The additional pedestrian activity was accounted for in the off-site and driveway operations analysis.

The site frontages already have sidewalks and marked crosswalks along primary school walking routes. SPS would coordinate sidewalk and other non-motorized improvements with SDOT as part of the Street Improvement Permitting (SIP) process, which occurs during building permitting with the City. Improvements to sidewalks and ramps may be required as part of the SIP to bring those facilities up to current design standards.

On site, the project would provide the code-required 192 bicycle parking spaces (144 long-term covered and secured spaces and 48 short-term spaces), which would be a substantial increase compared to current conditions and is expected to accommodate the level of demand for the expanded school. The project is not expected to result in adverse impacts to non-motorized facilities.

### 3.9. Short-Term Construction Impacts

Construction activities at the site would occur in phases while the school remains open and in operation for the duration of the effort. Construction is planned to begin in 2022, and be substantially completed by August 2025. The following describes the anticipated construction-related transportation impacts based on current planning being conducted by the General Contractor / Construction Manager (GCCM) contractor and SPS.<sup>36</sup>

#### 3.9.1. Demolition, Earthwork, and Employee Activity

Construction would require demolition and earthwork that would also occur in phases. Current construction plans anticipate an early site package, tentatively planned to begin in early 2022, with drilling for geothermal wells, which will require some site demolition and preparatory excavation, plus drilling spoils that will be exported. After the early site work, Phase 1 earthwork for construction of the main athletics and classroom wing is estimated to require export of about 16,050 cubic yards (cy) of excavated material and import of about 5,550 cy of fill material. This effort is planned to begin at permit issuance—currently targeted for summer 2022 and involve transport over about two to three months. Phase 2 earthwork is estimated to require export of about 17,650 cy of excavated material and import of about 8,900 cy of fill material. Phase 2 would begin with demolition of the main school classroom building in early summer 2024 with subsequent earthwork planned to begin in summer 2024. Phase 2 earthwork and transport would likely extend two to three months into fall 2024.

The Phase 1 earthwork and transport effort would haul about 21,600 cy over two to three months beginning in summer 2022. Assuming an average of 20-cubic yards per truck (truck/trailer combination), the Phase 1 transport could generate a total of about 1,080 truckloads (one truck trip in and one truck trip-out for each truckload), an average of 18 to 30 truckloads per day, and 4 to 8 truck trips per hour on an average eight-hour day. The Phase 2 earthwork and transport effort would haul about 26,550 cy over two to three months beginning in summer 2024. The Phase 2 transport could generate a total of about 1,330 truckloads, an average of 22 to 35 truckloads per day, and 3 to 9 truck trips per hour on an average day. These volumes of truck traffic may be noticeable to residents living adjacent to the site or near the truck access points, but are not expected to result in significant impacts to traffic operations in the site vicinity.

The construction of the project would also generate employee, equipment, and material-delivery trips to and from the site. It is anticipated that construction workers would arrive at the construction site before the morning peak traffic period on local area streets and depart the site prior to the PM peak period; construction work shifts for schools are usually from 7:00 A.M. to 3:30 P.M., with workers arriving between 6:30 and 6:45 A.M. but work not starting until 7:00 A.M. Generally, it is preferred that construction employee arrival and departures as well as transport and delivery of materials for construction not occur during student arrival or dismissal times to avoid conflicts. The number of workers at the project site at any one time would vary depending upon the construction element being implemented; however, the peak number of workers is expected to range from 150 to 200 persons.

#### 3.9.2. Construction-Period Access Operations

The proposed new main school building would be constructed in Phase 1 north of the football / soccer / track facility. The staging area for Phase 1 will be focused on the northeast corner of the site. Access for employees, equipment, and materials may occur from both S Henderson Street at the western access driveway and from 53<sup>rd</sup> Avenue S at the north. Current construction planning anticipates that large-truck access for early site work will primarily occur from S Henderson Street; large-truck access during Phase 1 would first occur from S Henderson Street and then transition to 53<sup>rd</sup> Avenue S. Large-truck access

<sup>36</sup> Email communications, P. McGlothlin – Senior Project Manager, Lydig Construction, April and June, 2021.

during Phase 2 would occur from a combination of both access points with final-stage construction being entirely accessed from S Henderson Street. Daily access for construction employee vehicles and smaller trucks are expected to occur via 53<sup>rd</sup> Avenue S for the duration of the construction effort.

During construction, pedestrians (including students) will be routed around construction activities using temporary walkways, fencing, and signage, but movements around the campus would be partially restricted. Student and staff access between the school buildings and the athletic fields would be provided along designated walking paths managed with coordinated delivery times and dedicated flaggers with access control fencing and gates, as needed. Due to their existing narrow width, construction access may affect or require interim modifications to the existing access driveways on S Henderson Street.

The curb-side frontage on the north side of S Henderson Street, which is currently used for school-bus load/unload, would remain and is expected to adequately accommodate the number of buses that serve the school during the construction effort, until the on-site SPED bus load area is completed.

### **3.9.3. Construction-Period Parking Conditions**

Parking that is currently located along the east side of the ball fields and north of and surrounding the auto shop and performing arts center would be unavailable since access to those areas would be eliminated for construction and staging. In addition, two portable classrooms may be temporarily placed in the main parking lot and could displace 12 spaces. Minor modifications to other on-site parking may also occur during various stages of construction; however, current construction planning indicates the project would retain parking supply for 76 vehicles (or 88 vehicles if portables are not placed in the main lot). Based on the historical parking demand rates, this could result in added parking overspill of 32 to 42 vehicles on school days during the construction period and on-street utilization between 65% and 74%. The added demand may be noticeable to residents living near the school, but it would not represent a significant adverse impact to parking.

The loss of 32 to 42 spaces during construction could cause added overspill to street parking during events held at the school and could result in increased frequency for utilization approaching or above 85%. Therefore, an event parking management plan is recommended for the construction period to reduce demand and minimize concurrent large events.

For construction employee parking, the *Student and Community Workforce Agreement (SCWA)*,<sup>37</sup> requires that either on-site or on-street parking be available within four blocks of the project site or that the contractor will secure a designated lot for off-site parking and shuttle workers to and from that lot. During times with peak levels of construction employees, it is anticipated that off-site parking will be needed. Although, the construction effort is not expected to result in significant new impacts to study area parking conditions, it would be appropriate for the school to periodically review the on-site parking utilization to determine if adjustments to student parking policies or temporary parking locations should be considered during the major construction phases.

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<sup>37</sup> SPS, *SCWA Master Template*, Adopted and Executed October 1, 2020.

## 4. SUMMARY AND RECOMMENDATIONS

The following sections summarize the findings and recommendations of the analysis.

### 4.1. Short-Term Conditions – Construction

- Construction activities at the site would occur in phases while the school remains open and in operation for the duration of the effort. Construction is planned to begin in 2022, and be substantially completed by August 2025.
- During construction, pedestrians (including students) will be routed around construction activities using temporary walkways, fencing, and signage. Movements around the campus would be partially restricted over the length of construction.
- Parking supply on the campus may fluctuate during the construction effort; however, current construction planning indicates the project would retain parking supply for 76 vehicles (or 88 vehicles if portables are not placed in the main lot). On-street utilization could increase to between 65% and 74% on school days during the construction effort, which may be noticeable to residents living near the school, but it would not represent a significant adverse impact to parking.
- During times with peak levels of construction employees, it is anticipated that the SCWA will require off-site parking with a shuttle connection to the site.
- The Phase 1 earthwork and transport effort would haul about 21,600 cy over two to three months beginning in summer 2022 and could generate an average of 18 to 30 truckloads per day, and 4 to 8 truck trips per hour on an average day. The Phase 2 earthwork and transport effort would haul about 26,550 cy over two to three months beginning in summer 2024 and could generate 22 to 35 truckloads per day, and 3 to 9 truck trips per hour on an average day.
- Large-truck access for early site work will primarily occur from S Henderson Street; large-truck access during Phase 1 would first occur from S Henderson Street and then transition to 53<sup>rd</sup> Avenue S. Large-truck access during Phase 2 would occur from a combination of both access points with final-stage construction being entirely accessed from S Henderson Street. Daily access for construction employee vehicles and smaller trucks are expected to occur via 53<sup>rd</sup> Avenue S for the duration of the construction effort.

It is recommended that the contractor and SPS develop a Construction Transportation Management Plan that addresses student and staff access to, from, and within campus during each major construction phase. Details to be included in this plan are described in Section 4.3.

### 4.2. Long-Term Conditions – Operations

- With the proposed replacement and expanded capacity, Rainier Beach High School could have enrollment of up to 1,600 students with between 130 and 160 employees when enrolled to capacity. This is nearly double the school's existing enrollment of 762 students and 85 staff.
- When fully enrolled at its proposed capacity (not expected for 10 or more years after completion), the school is estimated to generate increases of 300 trips (165 in, 135 out) in the morning peak hour (8:00 to 9:00 A.M.), 210 trips (80 in, 130 out) in the afternoon peak hour (3:15 to 4:15 P.M.); and 90 trips in the PM peak hour (4:30 to 5:30 P.M.).
- The additional traffic and pedestrian activity generated by the proposed expanded and reconfigured Rainier Beach High School is expected to add some delay to several study-area intersections (up to 5.4 seconds of delay per vehicle); however, all seven study-area intersections are forecast to remain operating at LOS D or better during all three analysis peak hours. The project would not result in significant adverse impacts to study-area traffic operating conditions.





- Analysis of the site access driveways indicates all three would operate at LOS A overall and all movements would operate at LOS C or better during all three analysis periods with the project.
- The expanded school with enrollment of up to 1,600 students could generate a peak school-day demand ranging from 224 to 264 vehicles. With the proposed on-site supply (200 spaces), the expanded school could generate excess demand of between 24 and 64 vehicles that may occur along on-street parking in the site vicinity. On-street parking utilization in the study area is expected to remain between 62% and 74% with between 90 and 130 unused spaces. The added school day demand would not represent a significant adverse impact.
- The school would continue to host evening events regularly during the school year. Two of the larger events—the Open Houses—are anticipated to experience higher levels of attendance and participation when the school is enrolled to its proposed enrollment capacity. Since on-site parking for these two events is typically full, any added demand would be expected to occur on-street surrounding the site.
- Capacity events in the performing arts center could generate parking demand between 160 and 220 vehicles, nearly all of which could be accommodated on site. However, as currently occurs, a full event in the gymnasium (such as a well-attended basketball game) could cause parking demand to exceed the on-site supply and spill over to on-street parking. The on-street supply could accommodate the overflow demand of some of the larger events at the high school. However, for the largest events, all on-street parking along the roadways surrounding the school site could be at or above capacity. These conditions likely already occur occasionally with well-attended basketball games and the change in school enrollment capacity is not expected to change these existing conditions.

In order to mitigate potential parking impacts of large events, an Event Parking Management Plan is recommended and elements of the recommended plan are re summarized in the following section.

### **4.3. Recommendations**

The following identifies measures to reduce adverse impacts during short-term construction and long-term operations of the Rainier Beach High School Replacement project.

#### **4.3.1. Short-Term Conditions – Construction**

- A. Construction Transportation Management Plan (CTMP):** The District should require the selected contractor to develop a Construction Transportation Management Plan (CTMP) that addresses traffic and pedestrian control during each major construction phase of the new facility. It would define truck routes, lane closures, walkway closures, and parking or load/unload area disruptions, as necessary. To the extent possible, the CTMP would direct trucks along the shortest route to arterials and away from residential streets to avoid unnecessary conflicts with resident and pedestrian activity. The CTMP may also include measures to keep adjacent streets clean on a daily basis at the truck exit points (such as street sweeping or on-site truck wheel cleaning) to reduce tracking dirt offsite.
- B. Construction-period Parking Management Plan:** Due to the temporary loss of on-site parking and added event-related parking overspill to on-street parking, SPS and school administration staff should develop an Event Parking Management Plan for implementation during the construction period. The plan would encourage students and families to use non-auto modes (e.g., Metro and Link service) for events and expand on existing practices of school staff who already work to avoid two large events on the same night and communicate with SPR when there is a large school event to avoid overlapping parks events.

#### 4.3.2. Long-Term Conditions – Operations

- C. **Event Management Plan:** Prior to each school year, the SPS should work with the school principal to develop an Event Management Plan (building on existing practices) to reduce parking impacts during large evening events (those expected to have 850 or more attendees/participants). Measures could include: 1) Avoid scheduling large in-school events concurrent with a large event at the Southeast Athletic Complex; 2) providing information to families about transportation alternatives for the events (e.g., Metro and Link service details); and 3) separating large events by grade to reduce overall attendance on any given evening.
- D. **Develop Neighborhood Communication Plan for School Events:** The District and school administration should develop a neighborhood communication plan to inform nearby neighbors of large events each year. The plan should be updated annually (or as events are scheduled) and should provide information about the dates, times, and rough magnitude of attendance. The communication would be intended to allow neighbors to plan for the occasional increase in on-street parking demand that would occur with large events.
- E. **Update right-of-way and curb-side signage:** The District should work with SDOT to confirm the locations, extent, and signage (such as times of restrictions) of the school-bus load zone on the north side of S Henderson Street.
- F. **Coordinate with Metro Transit:** The District should coordinate with Metro to confirm transit service availability and capacity as enrollment approaches its design capacity of 1,600 students.



## APPENDIX A

# LEVEL OF SERVICE DEFINITIONS



## Rainier Beach High School Replacement Project Transportation Technical Report

Levels of service (LOS) are qualitative descriptions of traffic operating conditions. These levels of service are designated with letters ranging from LOS A, which is indicative of good operating conditions with little or no delay, to LOS F, which is indicative of stop-and-go conditions with frequent and lengthy delays. Levels of service for this analysis were developed using procedures presented in the *Highway Capacity Manual, Sixth Edition* (Transportation Research Board, 2016).

### Signalized Intersections

Level of service for signalized intersections is defined in terms of average delay for all vehicles that travel through the intersection. Delay can be a cause of driver discomfort, frustration, inefficient fuel consumption, and lost travel time. Specifically, level-of-service criteria are stated in terms of the average delay per vehicle in seconds. Delay is a complex measure and is dependent on a number of variables including: number and type of vehicles by movement, intersection lane geometry, signal phasing, the amount of green time allocated to each phase, transit stops and parking maneuvers. Table A-1 shows the level of service criteria for signalized intersections from the *Highway Capacity Manual, Sixth Edition*.

Table A-1. Level of Service for Signalized Intersections

| Level of Service | Average Control Delay Per Vehicle |
|------------------|-----------------------------------|
| A                | ≤ 10 seconds                      |
| B                | > 10 – 20 seconds                 |
| C                | > 20 – 35 seconds                 |
| D                | > 35 – 55 seconds                 |
| E                | > 55 – 80 seconds                 |
| F                | > 80 seconds                      |

Source: Transportation Research Board, *Highway Capacity Manual*, Exhibit 19.8, 2016.

### Unsignalized Intersections

For unsignalized intersections, level of service is based on the average delay per vehicle for each turning movement. The level of service for all-way stop or roundabout-controlled intersections is based upon the average delay for all vehicles that travel through the intersection. The level of service for a one- or two-way, stop-controlled intersection, delay is related to the availability of gaps in the main street's traffic flow, and the ability of a driver to enter or pass through those gaps. Table A-2 shows the level of service criteria for unsignalized intersections from the *Highway Capacity Manual, Sixth Edition*.

Table A-2. Level of Service Criteria for Unsignalized Intersections

| Level of Service | Average Control Delay per Vehicle |
|------------------|-----------------------------------|
| A                | 0 – 10 seconds                    |
| B                | > 10 – 15 seconds                 |
| C                | > 15 – 25 seconds                 |
| D                | > 25 – 35 seconds                 |
| E                | > 35 – 50 seconds                 |
| F                | > 50 seconds                      |

Source: Transportation Research Board, *Highway Capacity Manual*, Exhibit 20.2, 2016.



## APPENDIX B

### PARKING UTILIZATION STUDY DATA



Project **Rainier Beach High School**

| Block Face ID | Street Name          | Street Segment                           | Side of Street | Existing Parking Supply |  |              |                                   |                                     |                      |                                   |                                  |                                   |
|---------------|----------------------|--|----------------|-------------------------|--|--------------|-----------------------------------|-------------------------------------|----------------------|-----------------------------------|----------------------------------|-----------------------------------|
|               |                      |  |                | Unrestricted Parking    | School Bus Only 7a-7p<br>Exc Sat/Sun/Hol | 3 Minute PLZ | 30 Min L/U Only 7a-6p<br>Everyday | King County Exempt<br>Vehicles Only | Total Parking Spaces | Total Parking Spaces -<br>Morning | Total Parking Spaces -<br>Midday | Total Parking Spaces -<br>Evening |
| AA            | Wabash Avenue S      | Existing 800' Boundary and 53rd Avenue S | NE             | 10                      | 0  | 0            | 0                                 | 0                                   | 10                   | 10                                | 10                               | 10                                |
| AB            | Wabash Avenue S      | Existing 800' Boundary and 53rd Avenue S | SW             | 9                       | 0  | 0            | 0                                 | 0                                   | 9                    | 9                                 | 9                                | 9                                 |
| AC            | Wabash Avenue S      | 53rd Avenue S and 800' Boundary          | NE             | 6                       | 0  | 0            | 0                                 | 0                                   | 6                    | 6                                 | 6                                | 6                                 |
| AD            | Wabash Avenue S      | 53rd Avenue S and 800' Boundary          | SW             | 5                       | 0  | 0            | 0                                 | 0                                   | 5                    | 5                                 | 5                                | 5                                 |
| AE            | Wabash Avenue S      | 800' Boundary and Seward Park Avenue S   | NE             | 7                       | 0  | 0            | 0                                 | 0                                   | 7                    | 7                                 | 7                                | 7                                 |
| AF            | Wabash Avenue S      | 800' Boundary and Seward Park Avenue S   | SW             | 10                      | 0  | 0            | 0                                 | 0                                   | 10                   | 10                                | 10                               | 10                                |
| AG            | Seward Park Avenue S | 800' Boundary and Wabash Avenue S        | W              | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AH            | Seward Park Avenue S | 800' Boundary and Wabash Avenue S        | E              | 1                       | 0  | 0            | 0                                 | 0                                   | 1                    | 1                                 | 1                                | 1                                 |
| AI            | Wabash Avenue S      | Seward Park Avenue S and 55th Avenue S   | NE             | 2                       | 0  | 0            | 0                                 | 0                                   | 2                    | 2                                 | 2                                | 2                                 |
| AJ            | Wabash Avenue S      | Seward Park Avenue S and 55th Avenue S   | SW             | 6                       | 0  | 0            | 0                                 | 0                                   | 6                    | 6                                 | 6                                | 6                                 |
| AK            | 53rd Avenue S        | Wabash Avenue S and Grattan Place S      | W              | 5                       | 0  | 0            | 0                                 | 0                                   | 5                    | 5                                 | 5                                | 5                                 |
| AL            | 53rd Avenue S        | Wabash Avenue S and Grattan Place S      | E              | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AM            | Grattan Place S      | Existing 800' Boundary and 53rd Avenue S | NE             | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AN            | Grattan Place S      | Existing 800' Boundary and 53rd Avenue S | SW             | 2                       | 0  | 0            | 0                                 | 0                                   | 2                    | 2                                 | 2                                | 2                                 |
| AO            | Grattan Place S      | 53rd Avenue S and Dead End               | NE             | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AP            | Grattan Place S      | 53rd Avenue S and Dead End               | SW             | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AQ            | 53rd Avenue S        | Grattan Place S and Hamlet Avenue S      | W              | 5                       | 0  | 0            | 0                                 | 0                                   | 5                    | 5                                 | 5                                | 5                                 |
| AR            | 53rd Avenue S        | Grattan Place S and Hamlet Avenue S      | E              | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AS            | Seward Park Avenue S | Wabash Avenue S and Hamlet Avenue S      | W              | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AT            | Seward Park Avenue S | Wabash Avenue S and Hamlet Avenue S      | E              | 8                       | 0  | 0            | 0                                 | 0                                   | 8                    | 8                                 | 8                                | 8                                 |
| AU            | 53rd Avenue S        | Hamlet Avenue S and Dead End             | W              | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AV            | 53rd Avenue S        | Hamlet Avenue S and Dead End             | E              | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AW            | Hamlet Avenue S      | 53rd Avenue S and Seward Park Avenue S   | NE             | 18                      | 0  | 0            | 0                                 | 0                                   | 18                   | 18                                | 18                               | 18                                |



Project **Rainier Beach High School**

| Block Face ID | Street Name          | Street Segment                         | Side of Street | Existing Parking Supply |  |              |                                   |                                     |                      |                                   |                                  |                                   |
|---------------|----------------------|--|----------------|-------------------------|--|--------------|-----------------------------------|-------------------------------------|----------------------|-----------------------------------|----------------------------------|-----------------------------------|
|               |                      |  |                | Unrestricted Parking    | School Bus Only 7a-7p<br>Exc Sat/Sun/Hol | 3 Minute PLZ | 30 Min L/U Only 7a-6p<br>Everyday | King County Exempt<br>Vehicles Only | Total Parking Spaces | Total Parking Spaces -<br>Morning | Total Parking Spaces -<br>Midday | Total Parking Spaces -<br>Evening |
| BU            | S Director Street    | Rainier S Avenue S and 800' Boundary   | N              | 1                       | 0  | 0            | 0                                 | 0                                   | 1                    | 1                                 | 1                                | 1                                 |
| BV            | S Director Street    | Rainier S Avenue S and 800' Boundary   | S              | 4                       | 0  | 0            | 0                                 | 0                                   | 4                    | 4                                 | 4                                | 4                                 |
| BW            | Rainier Avenue S     | S Director S Street and S Fisher Place | W              | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BX            | Rainier Avenue S     | S Director S Street and S Fisher Place | E              | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BY            | S Fisher Place       | 800' Boundary and Seward Park Avenue S | N              | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BZ            | S Fisher Place       | 800' Boundary and Seward Park Avenue S | S              | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| CA            | Seward Park Avenue S | S Fisher Place and 800' Boundary       | SW             | 0                       | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| CB            | Seward Park Avenue S | S Fisher Place and 800' Boundary       | NE             | 4                       | 0  | 0            | 0                                 | 0                                   | 4                    | 4                                 | 4                                | 4                                 |
| <b>Total</b>  |                      |  |                | <b>181</b>              | <b>19</b>                                | <b>3</b>     | <b>0</b>                          | <b>3</b>                            | <b>206</b>           | <b>184</b>                        | <b>184</b>                       | <b>203</b>                        |

Project      **Rainier Beach High School**

[illegible]



Project **Rainier Beach High School**

|               |                      |   |                | Existing Supply                |                               |                                | Existing Parking Occupancy |                  |                   |                  |         |                          |                  |                   |                  |         |                               |                   |         |                   |                  |                   |                  |         |
|---------------|----------------------|---|----------------|--------------------------------|-------------------------------|--------------------------------|----------------------------|------------------|-------------------|------------------|---------|--------------------------|------------------|-------------------|------------------|---------|-------------------------------|-------------------|---------|-------------------|------------------|-------------------|------------------|---------|
| Block Face ID | Street Name          | Street Segment                              | Side of Street | Total Parking Spaces - Morning | Total Parking Spaces - Midday | Total Parking Spaces - Evening | Early Morning              |                  |                   |                  |         | Mid-Morning              |                  |                   |                  |         | Mid-Morning (Historic)        |                   |         | Evening           |                  |                   |                  |         |
|               |                      |   |                |                                |                               |                                | 7:00 A.M. to 7:45 A.M.     |                  |                   |                  |         | 10:30 A.M. to 11:15 A.M. |                  |                   |                  |         | 7:30 P.M. to 8:15 P.M.        |                   |         |                   |                  |                   |                  |         |
|               |                      |   |                |                                |                               |                                | Tuesday 2/23/2021          | Thursday 2/25/21 | Tuesday 3/23/2021 | Thursday 3/25/21 | Average | Tuesday 2/23/2021        | Thursday 2/25/21 | Tuesday 3/23/2021 | Thursday 3/25/21 | Average | 5/22/2017 Monday (11:40 A.M.) | 5/9/2019 Thursday | Average | Tuesday 2/23/2021 | Thursday 2/25/21 | Tuesday 3/23/2021 | Thursday 3/25/21 | Average |
|               |                      |   |                |                                |                               |                                |                            |                  |                   |                  |         |                          |                  |                   |                  |         |                               |                   |         |                   |                  |                   |                  |         |
| BO            | Seward Park Avenue S | S Henderson Street and S Fisher Place       | W              | 0                              | 0                             | 0                              | 0                          | 0                | 0                 | 0                | 0       | 0                        | 0                | 0                 | 0                | 0       | 0                             | 0                 | 0       | 0                 | 0                | 0                 | 0                | 0       |
| BP            | Seward Park Avenue S | S Henderson Street and S Fisher Place       | E              | 10                             | 10                            | 10                             | 7                          | 6                | 7                 | 7                | 7       | 6                        | 4                | 7                 | 7                | 6       | 3                             | 5                 | 4       | 5                 | 6                | 7                 | 8                | 7       |
| BQ            | S Director Street    | Dead End and Rainier N Avenue S             | N              | 0                              | 0                             | 0                              | 0                          | 0                | 0                 | 0                | 0       | 0                        | 0                | 0                 | 0                | 0       | 0                             | 0                 | 0       | 0                 | 0                | 0                 | 0                | 0       |
| BR            | S Director Street    | Dead End and Rainier N Avenue S             | S              | 0                              | 0                             | 0                              | 0                          | 0                | 0                 | 0                | 0       | 0                        | 0                | 0                 | 0                | 0       | 0                             | 0                 | 0       | 0                 | 0                | 0                 | 0                | 0       |
| BS            | Rainier Avenue S     | S Director N Street and S Director S Street | W              | 0                              | 0                             | 0                              | 0                          | 0                | 0                 | 0                | 0       | 0                        | 0                | 0                 | 0                | 0       | 0                             | 0                 | 0       | 0                 | 0                | 0                 | 0                | 0       |
| BT            | Rainier Avenue S     | S Director N Street and S Director S Street | E              | 0                              | 0                             | 0                              | 0                          | 0                | 0                 | 0                | 0       | 0                        | 0                | 0                 | 0                | 0       | 0                             | 0                 | 0       | 0                 | 0                | 0                 | 0                | 0       |
| BU            | S Director Street    | Rainier S Avenue S and 800' Boundary        | N              | 1                              | 1                             | 1                              | 0                          | 0                | 0                 | 0                | 0       | 0                        | 1                | 0                 | 0                | 0       | 0                             | 1                 | 1       | 0                 | 0                | 0                 | 0                | 0       |
| BV            | S Director Street    | Rainier S Avenue S and 800' Boundary        | S              | 4                              | 4                             | 4                              | 0                          | 1                | 0                 | 0                | 0       | 0                        | 1                | 0                 | 0                | 0       | 2                             | 0                 | 1       | 0                 | 0                | 0                 | 0                | 0       |
| BW            | Rainier Avenue S     | S Director S Street and S Fisher Place      | W              | 0                              | 0                             | 0                              | 0                          | 0                | 0                 | 0                | 0       | 0                        | 0                | 0                 | 0                | 0       | 0                             | 0                 | 0       | 0                 | 0                | 0                 | 0                | 0       |
| BX            | Rainier Avenue S     | S Director S Street and S Fisher Place      | E              | 0                              | 0                             | 0                              | 0                          | 0                | 0                 | 0                | 0       | 0                        | 0                | 0                 | 0                | 0       | 0                             | 0                 | 0       | 0                 | 0                | 0                 | 0                | 0       |
| BY            | S Fisher Place       | 800' Boundary and Seward Park Avenue S      | N              | 0                              | 0                             | 0                              | 0                          | 0                | 0                 | 0                | 0       | 0                        | 0                | 0                 | 0                | 0       | 0                             | 0                 | 0       | 0                 | 0                | 0                 | 0                | 0       |
| BZ            | S Fisher Place       | 800' Boundary and Seward Park Avenue S      | S              | 0                              | 0                             | 0                              | 0                          | 0                | 0                 | 0                | 0       | 0                        | 0                | 0                 | 0                | 0       | 0                             | 0                 | 0       | 0                 | 0                | 0                 | 0                | 0       |
| CA            | Seward Park Avenue S | S Fisher Place and 800' Boundary            | SW             | 0                              | 0                             | 0                              | 0                          | 0                | 0                 | 0                | 0       | 0                        | 0                | 0                 | 0                | 0       | 0                             | 0                 | 0       | 0                 | 0                | 0                 | 0                | 0       |
| CB            | Seward Park Avenue S | S Fisher Place and 800' Boundary            | NE             | 4                              | 4                             | 4                              | 4                          | 3                | 4                 | 4                | 4       | 4                        | 2                | 3                 | 3                | 3       | 2                             | 3                 | 3       | 3                 | 3                | 3                 | 4                | 3       |
| Total         |                      |   |                | 184                            | 184                           | 203                            | 92                         | 89               | 89                | 92               | 91      | 94                       | 86               | 84                | 87               | 88      | 92                            | 89                | 91      | 88                | 85               | 95                | 91               | 90      |

Project      **Rainier Beach High School**

|               |                      |  |                | Existing Parking Supply        |                               |                                | Existing Parking Utilization |                  |                   |                  |         |                          |                  |                   |                  |         |                               |                   |         |                   |                  |                   |                  |         |
|---------------|----------------------|--|----------------|--------------------------------|-------------------------------|--------------------------------|------------------------------|------------------|-------------------|------------------|---------|--------------------------|------------------|-------------------|------------------|---------|-------------------------------|-------------------|---------|-------------------|------------------|-------------------|------------------|---------|
| Block Face ID | Street Name          | Street Segment                             | Side of Street | Total Parking Spaces - Morning | Total Parking Spaces - Midday | Total Parking Spaces - Evening | Early Morning                |                  |                   |                  |         | Mid-Morning              |                  |                   |                  |         | Mid-Morning (Historic)        |                   |         | Evening           |                  |                   |                  |         |
|               |                      |  |                |                                |                               |                                | 7:00 A.M. to 7:45 A.M.       |                  |                   |                  |         | 10:30 A.M. to 11:15 A.M. |                  |                   |                  |         | 7:30 P.M. to 8:15 P.M.        |                   |         |                   |                  |                   |                  |         |
|               |                      |  |                |                                |                               |                                | Tuesday 2/23/2021            | Thursday 2/25/21 | Tuesday 3/23/2021 | Thursday 3/25/21 | Average | Tuesday 2/23/2021        | Thursday 2/25/21 | Tuesday 3/23/2021 | Thursday 3/25/21 | Average | 5/22/2017 Monday (11:40 A.M.) | 5/9/2019 Thursday | Average | Tuesday 2/23/2021 | Thursday 2/25/21 | Tuesday 3/23/2021 | Thursday 3/25/21 | Average |
| AA            | Wabash Avenue S      | Existing 800' Boundary and 53rd Avenue S   | NE             | 10                             | 10                            | 10                             | 0%                           | 0%               | 0%                | 0%               | 0%      | 10%                      | 0%               | 0%                | 20%              | 8%      | 40%                           | 50%               | 45%     | 0%                | 0%               | 0%                | 10%              | 3%      |
| AB            | Wabash Avenue S      | Existing 800' Boundary and 53rd Avenue S   | SW             | 9                              | 9                             | 9                              | 22%                          | 22%              | 44%               | 33%              | 30%     | 22%                      | 11%              | 22%               | 22%              | 19%     | 22%                           | 33%               | 28%     | 22%               | 22%              | 33%               | 56%              | 33%     |
| AC            | Wabash Avenue S      | 53rd Avenue S and 800' Boundary            | NE             | 6                              | 6                             | 6                              | 133%                         | 100%             | 117%              | 133%             | 121%    | 117%                     | 67%              | 100%              | 100%             | 96%     | 50%                           | 33%               | 42%     | 117%              | 67%              | 117%              | 83%              | 96%     |
| AD            | Wabash Avenue S      | 53rd Avenue S and 800' Boundary            | SW             | 5                              | 5                             | 5                              | 20%                          | 20%              | 0%                | 0%               | 10%     | 20%                      | 20%              | 40%               | 20%              | 25%     | 40%                           | 40%               | 40%     | 20%               | 20%              | 0%                | 0%               | 10%     |
| AE            | Wabash Avenue S      | 800' Boundary and Seward Park Avenue S     | NE             | 7                              | 7                             | 7                              | 57%                          | 57%              | 57%               | 57%              | 57%     | 71%                      | 57%              | 57%               | 57%              | 61%     | 43%                           | 43%               | 43%     | 71%               | 86%              | 71%               | 114%             | 86%     |
| AF            | Wabash Avenue S      | 800' Boundary and Seward Park Avenue S     | SW             | 10                             | 10                            | 10                             | 60%                          | 70%              | 40%               | 60%              | 58%     | 60%                      | 70%              | 50%               | 40%              | 55%     | 10%                           | 10%               | 10%     | 80%               | 70%              | 70%               | 50%              | 68%     |
| AG            | Seward Park Avenue S | 800' Boundary and Wabash Avenue S          | W              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               |         |
| AH            | Seward Park Avenue S | 800' Boundary and Wabash Avenue S          | E              | 1                              | 1                             | 1                              | 100%                         | 200%             | 100%              | 200%             | 150%    | 100%                     | 200%             | 100%              | 200%             | 150%    | 100%                          | 200%              | 150%    | 100%              | 100%             | 200%              | 100%             | 125%    |
| AI            | Wabash Avenue S      | Seward Park Avenue S and 55th Avenue S     | NE             | 2                              | 2                             | 2                              | 0%                           | 0%               | 0%                | 0%               | 0%      | 0%                       | 0%               | 0%                | 0%               | 0%      | 0%                            | 0%                | 0%      | 0%                | 0%               | 0%                | 0%               | 0%      |
| AJ            | Wabash Avenue S      | Seward Park Avenue S and 55th Avenue S     | SW             | 6                              | 6                             | 6                              | 0%                           | 0%               | 0%                | 0%               | 0%      | 0%                       | 0%               | 0%                | 0%               | 0%      | 50%                           | 33%               | 42%     | 33%               | 17%              | 100%              | 50%              | 50%     |
| AK            | 53rd Avenue S        | Wabash Avenue S and Grattan Place S        | W              | 5                              | 5                             | 5                              | 60%                          | 60%              | 60%               | 60%              | 60%     | 40%                      | 40%              | 40%               | 40%              | 40%     | 0%                            | 60%               | 30%     | 60%               | 60%              | 60%               | 60%              | 60%     |
| AL            | 53rd Avenue S        | Wabash Avenue S and Grattan Place S        | E              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| AM            | Grattan Place S      | Existing 800' Boundary and 53rd Avenue S   | NE             | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| AN            | Grattan Place S      | Existing 800' Boundary and 53rd Avenue S   | SW             | 2                              | 2                             | 2                              | 150%                         | 150%             | 150%              | 100%             | 138%    | 100%                     | 50%              | 50%               | 50%              | 63%     | 0%                            | 100%              | 50%     | 200%              | 200%             | 150%              | 100%             | 163%    |
| AO            | Grattan Place S      | 53rd Avenue S and Dead End                 | NE             | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| AP            | Grattan Place S      | 53rd Avenue S and Dead End                 | SW             | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| AQ            | 53rd Avenue S        | Grattan Place S and Hamlet Avenue S        | W              | 5                              | 5                             | 5                              | 20%                          | 40%              | 20%               | 40%              | 30%     | 0%                       | 40%              | 0%                | 20%              | 15%     | 80%                           | 0%                | 40%     | 20%               | 20%              | 20%               | 20%              | 20%     |
| AR            | 53rd Avenue S        | Grattan Place S and Hamlet Avenue S        | E              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| AS            | Seward Park Avenue S | Wabash Avenue S and Hamlet Avenue S        | W              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| AT            | Seward Park Avenue S | Wabash Avenue S and Hamlet Avenue S        | E              | 8                              | 8                             | 8                              | 38%                          | 38%              | 25%               | 38%              | 35%     | 25%                      | 38%              | 25%               | 38%              | 32%     | 25%                           | 63%               | 44%     | 25%               | 38%              | 38%               | 25%              | 32%     |
| AU            | 53rd Avenue S        | Hamlet Avenue S and Dead End               | W              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| AV            | 53rd Avenue S        | Hamlet Avenue S and Dead End               | E              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| AW            | Hamlet Avenue S      | 53rd Avenue S and Seward Park Avenue S     | NE             | 18                             | 18                            | 18                             | 56%                          | 56%              | 61%               | 50%              | 56%     | 33%                      | 39%              | 39%               | 33%              | 36%     | 39%                           | 50%               | 45%     | 44%               | 56%              | 44%               | 44%              | 47%     |
| AX            | Hamlet Avenue S      | 53rd Avenue S and Seward Park Avenue S     | SW             | 19                             | 19                            | 19                             | 58%                          | 63%              | 42%               | 47%              | 53%     | 58%                      | 58%              | 32%               | 42%              | 48%     | 37%                           | 53%               | 45%     | 63%               | 63%              | 47%               | 53%              | 57%     |
| AY            | Rainier Avenue S     | 800' Boundary and S Henderson Street       | W              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| AZ            | Rainier Avenue S     | 800' Boundary and S Henderson Street       | E              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BA            | Seward Park Avenue S | Hamlet Avenue S and S Henderson Street     | W              | 9                              | 9                             | 9                              | 22%                          | 22%              | 11%               | 22%              | 19%     | 44%                      | 33%              | 22%               | 22%              | 30%     | 89%                           | 89%               | 89%     | 0%                | 22%              | 33%               | 0%               | 14%     |
| BB            | Seward Park Avenue S | Hamlet Avenue S and S Henderson Street     | E              | 13                             | 13                            | 13                             | 38%                          | 23%              | 38%               | 31%              | 33%     | 54%                      | 31%              | 54%               | 23%              | 41%     | 77%                           | 62%               | 70%     | 31%               | 23%              | 23%               | 38%              | 29%     |
| BC            | S Henderson Street   | 48th Avenue S and 50th Avenue S            | N              | 11                             | 11                            | 11                             | 9%                           | 9%               | 45%               | 45%              | 27%     | 36%                      | 55%              | 45%               | 64%              | 50%     | 73%                           | 36%               | 55%     | 27%               | 9%               | 27%               | 36%              | 25%     |
| BD            | S Henderson Street   | 48th Avenue S and 50th Avenue S            | S              | 6                              | 6                             | 6                              | 100%                         | 83%              | 67%               | 50%              | 75%     | 83%                      | 50%              | 50%               | 83%              | 67%     | 83%                           | 100%              | 92%     | 67%               | 67%              | 67%               | 67%              | 67%     |
| BE            | S Henderson Street   | 50th Avenue S and Rainier Avenue S         | N              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BF            | S Henderson Street   | 50th Avenue S and Rainier Avenue S         | S              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BG            | S Henderson Street   | Rainier Avenue S and 53rd Avenue S         | N              | 0                              | 0                             | 6                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | 50%     | 67%               | 83%              | 50%               | 63%              |         |
| BH            | S Henderson Street   | Rainier Avenue S and 53rd Avenue S         | S              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BI            | S Henderson Street   | 53rd Avenue S and Seward Park Avenue S     | N              | 0                              | 0                             | 13                             | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | 54%     | 31%               | 62%              | 54%               | 50%              |         |
| BJ            | S Henderson Street   | 53rd Avenue S and Seward Park Avenue S     | S              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BK            | 50th Avenue S        | S Henderson Street and S Director Street   | W              | 13                             | 13                            | 13                             | 15%                          | 15%              | 15%               | 15%              | 15%     | 15%                      | 15%              | 15%               | 15%              | 15%     | 8%                            | 23%               | 16%     | 15%               | 23%              | 15%               | 15%              | 17%     |
| BL            | 50th Avenue S        | S Henderson Street and S Director Street   | E              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BM            | Rainier Avenue S     | S Henderson Street and S Director N Street | W              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BN            | Rainier Avenue S     | S Henderson Street and S Director N Street | E              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                       | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |

Project **Rainier Beach High School**

|               |                      |   |                | Existing Parking Supply        |                               |                                | Existing Parking Utilization |                  |                   |                  |         |                         |                  |                   |                  |         |                               |                   |         |                   |                  |                   |                  |         |
|---------------|----------------------|---|----------------|--------------------------------|-------------------------------|--------------------------------|------------------------------|------------------|-------------------|------------------|---------|-------------------------|------------------|-------------------|------------------|---------|-------------------------------|-------------------|---------|-------------------|------------------|-------------------|------------------|---------|
| Block Face ID | Street Name          | Street Segment                              | Side of Street | Total Parking Spaces - Morning | Total Parking Spaces - Midday | Total Parking Spaces - Evening | Early Morning                |                  |                   |                  |         | Mid-Morning             |                  |                   |                  |         | Mid-Morning (Historic)        |                   |         | Evening           |                  |                   |                  |         |
|               |                      |   |                |                                |                               |                                | 7:00 A.M. to 7:45 A.M        |                  |                   |                  |         | 10:30 A.M. to 11:15 A.M |                  |                   |                  |         | 7:30 P.M. to 8:15 P.M.        |                   |         |                   |                  |                   |                  |         |
|               |                      |   |                |                                |                               |                                | Tuesday 2/23/2021            | Thursday 2/25/21 | Tuesday 3/23/2021 | Thursday 3/25/21 | Average | Tuesday 2/23/2021       | Thursday 2/25/21 | Tuesday 3/23/2021 | Thursday 3/25/21 | Average | 5/22/2017 Monday (11:40 A.M.) | 5/9/2019 Thursday | Average | Tuesday 2/23/2021 | Thursday 2/25/21 | Tuesday 3/23/2021 | Thursday 3/25/21 | Average |
|               |                      |   |                |                                |                               |                                |                              |                  |                   |                  |         |                         |                  |                   |                  |         |                               |                   |         |                   |                  |                   |                  |         |
| BO            | Seward Park Avenue S | S Henderson Street and S Fisher Place       | W              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                      | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BP            | Seward Park Avenue S | S Henderson Street and S Fisher Place       | E              | 10                             | 10                            | 10                             | 70%                          | 60%              | 70%               | 70%              | 68%     | 60%                     | 40%              | 70%               | 70%              | 60%     | 30%                           | 50%               | 40%     | 50%               | 60%              | 70%               | 80%              | 65%     |
| BQ            | S Director Street    | Dead End and Rainier N Avenue S             | N              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                      | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BR            | S Director Street    | Dead End and Rainier N Avenue S             | S              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                      | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BS            | Rainier Avenue S     | S Director N Street and S Director S Street | W              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                      | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BT            | Rainier Avenue S     | S Director N Street and S Director S Street | E              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                      | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BU            | S Director Street    | Rainier S Avenue S and 800' Boundary        | N              | 1                              | 1                             | 1                              | 0%                           | 0%               | 0%                | 0%               | 0%      | 0%                      | 100%             | 0%                | 0%               | 25%     | 0%                            | 100%              | 50%     | 0%                | 0%               | 0%                | 0%               | 0%      |
| BV            | S Director Street    | Rainier S Avenue S and 800' Boundary        | S              | 4                              | 4                             | 4                              | 0%                           | 25%              | 0%                | 0%               | 6%      | 0%                      | 25%              | 0%                | 0%               | 6%      | 50%                           | 0%                | 25%     | 0%                | 0%               | 0%                | 0%               | 0%      |
| BW            | Rainier Avenue S     | S Director S Street and S Fisher Place      | W              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                      | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BX            | Rainier Avenue S     | S Director S Street and S Fisher Place      | E              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                      | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BY            | S Fisher Place       | 800' Boundary and Seward Park Avenue S      | N              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                      | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| BZ            | S Fisher Place       | 800' Boundary and Seward Park Avenue S      | S              | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                      | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| CA            | Seward Park Avenue S | S Fisher Place and 800' Boundary            | SW             | 0                              | 0                             | 0                              | NS                           | NS               | NS                | NS               | NS      | NS                      | NS               | NS                | NS               | NS      | NS                            | NS                | NS      | NS                | NS               | NS                | NS               | NS      |
| CB            | Seward Park Avenue S | S Fisher Place and 800' Boundary            | NE             | 4                              | 4                             | 4                              | 100%                         | 75%              | 100%              | 100%             | 94%     | 100%                    | 50%              | 75%               | 75%              | 75%     | 50%                           | 75%               | 63%     | 75%               | 75%              | 75%               | 100%             | 81%     |
| Total         |                      |   |                | 184                            | 184                           | 203                            | 50%                          | 48%              | 48%               | 50%              | 49%     | 51%                     | 47%              | 46%               | 47%              | 48%     | 50%                           | 48%               | 49%     | 43%               | 42%              | 47%               | 45%              | 44%     |

Project **Rainier Beach High School**

| Block Face ID | Street Name          | Street Segment                           | Side of Street | Overall Parking Supply |  |              |                                   |                                     |                      |                                   |                                  |                                   |
|---------------|----------------------|--|----------------|------------------------|--|--------------|-----------------------------------|-------------------------------------|----------------------|-----------------------------------|----------------------------------|-----------------------------------|
|               |                      |  |                | Unrestricted Parking   | School Bus Only 7a-7p<br>Exc Sat/Sun/Hol | 3 Minute PLZ | 30 Min L/U Only 7a-6p<br>Everyday | King County Exempt<br>Vehicles Only | Total Parking Spaces | Total Parking Spaces -<br>Morning | Total Parking Spaces -<br>Midday | Total Parking Spaces -<br>Evening |
| AA            | Wabash Avenue S      | Existing 800' Boundary and 53rd Avenue S | NE             | 10                     | 0  | 0            | 0                                 | 0                                   | 10                   | 10                                | 10                               | 10                                |
| AB            | Wabash Avenue S      | Existing 800' Boundary and 53rd Avenue S | SW             | 9                      | 0  | 0            | 0                                 | 0                                   | 9                    | 9                                 | 9                                | 9                                 |
| AC            | Wabash Avenue S      | 53rd Avenue S and 800' Boundary          | NE             | 6                      | 0  | 0            | 0                                 | 0                                   | 6                    | 6                                 | 6                                | 6                                 |
| AD            | Wabash Avenue S      | 53rd Avenue S and 800' Boundary          | SW             | 5                      | 0  | 0            | 0                                 | 0                                   | 5                    | 5                                 | 5                                | 5                                 |
| AE            | Wabash Avenue S      | 800' Boundary and Seward Park Avenue S   | NE             | 7                      | 0  | 0            | 0                                 | 0                                   | 7                    | 7                                 | 7                                | 7                                 |
| AF            | Wabash Avenue S      | 800' Boundary and Seward Park Avenue S   | SW             | 10                     | 0  | 0            | 0                                 | 0                                   | 10                   | 10                                | 10                               | 10                                |
| AG            | Seward Park Avenue S | 800' Boundary and Wabash Avenue S        | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AH            | Seward Park Avenue S | 800' Boundary and Wabash Avenue S        | E              | 1                      | 0  | 0            | 0                                 | 0                                   | 1                    | 1                                 | 1                                | 1                                 |
| AI            | Wabash Avenue S      | Seward Park Avenue S and 55th Avenue S   | NE             | 2                      | 0  | 0            | 0                                 | 0                                   | 2                    | 2                                 | 2                                | 2                                 |
| AJ            | Wabash Avenue S      | Seward Park Avenue S and 55th Avenue S   | SW             | 6                      | 0  | 0            | 0                                 | 0                                   | 6                    | 6                                 | 6                                | 6                                 |
| AK            | 53rd Avenue S        | Wabash Avenue S and Grattan Place S      | W              | 5                      | 0  | 0            | 0                                 | 0                                   | 5                    | 5                                 | 5                                | 5                                 |
| AL            | 53rd Avenue S        | Wabash Avenue S and Grattan Place S      | E              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AM            | Grattan Place S      | Existing 800' Boundary and 53rd Avenue S | NE             | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AN            | Grattan Place S      | Existing 800' Boundary and 53rd Avenue S | SW             | 2                      | 0  | 0            | 0                                 | 0                                   | 2                    | 2                                 | 2                                | 2                                 |
| AO            | Grattan Place S      | 53rd Avenue S and Dead End               | NE             | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AP            | Grattan Place S      | 53rd Avenue S and Dead End               | SW             | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AQ            | 53rd Avenue S        | Grattan Place S and Hamlet Avenue S      | W              | 5                      | 0  | 0            | 0                                 | 0                                   | 5                    | 5                                 | 5                                | 5                                 |
| AR            | 53rd Avenue S        | Grattan Place S and Hamlet Avenue S      | E              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AS            | Seward Park Avenue S | Wabash Avenue S and Hamlet Avenue S      | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AT            | Seward Park Avenue S | Wabash Avenue S and Hamlet Avenue S      | E              | 8                      | 0  | 0            | 0                                 | 0                                   | 8                    | 8                                 | 8                                | 8                                 |
| AU            | 53rd Avenue S        | Hamlet Avenue S and Dead End             | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AV            | 53rd Avenue S        | Hamlet Avenue S and Dead End             | E              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AW            | Hamlet Avenue S      | 53rd Avenue S and Seward Park Avenue S   | NE             | 18                     | 0  | 0            | 0                                 | 0                                   | 18                   | 18                                | 18                               | 18                                |
| AX            | Hamlet Avenue S      | 53rd Avenue S and Seward Park Avenue S   | SW             | 19                     | 0  | 0            | 0                                 | 0                                   | 19                   | 19                                | 19                               | 19                                |

Project **Rainier Beach High School**

| Block Face ID | Street Name          | Street Segment                              | Side of Street | Overall Parking Supply |  |              |                                   |                                     |                      |                                   |                                  |                                   |
|---------------|----------------------|---|----------------|------------------------|--|--------------|-----------------------------------|-------------------------------------|----------------------|-----------------------------------|----------------------------------|-----------------------------------|
|               |                      |   |                | Unrestricted Parking   | School Bus Only 7a-7p<br>Exc Sat/Sun/Hol | 3 Minute PLZ | 30 Min L/U Only 7a-6p<br>Everyday | King County Exempt<br>Vehicles Only | Total Parking Spaces | Total Parking Spaces -<br>Morning | Total Parking Spaces -<br>Midday | Total Parking Spaces -<br>Evening |
| AY            | Rainier Avenue S     | 800' Boundary and S Henderson Street        | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| AZ            | Rainier Avenue S     | 800' Boundary and S Henderson Street        | E              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BA            | Seward Park Avenue S | Hamlet Avenue S and S Henderson Street      | W              | 9                      | 0  | 0            | 0                                 | 0                                   | 9                    | 9                                 | 9                                | 9                                 |
| BB            | Seward Park Avenue S | Hamlet Avenue S and S Henderson Street      | E              | 13                     | 0  | 0            | 0                                 | 0                                   | 13                   | 13                                | 13                               | 13                                |
| BC            | S Henderson Street   | 48th Avenue S and 50th Avenue S             | N              | 11                     | 0  | 0            | 0                                 | 0                                   | 11                   | 11                                | 11                               | 11                                |
| BD            | S Henderson Street   | 48th Avenue S and 50th Avenue S             | S              | 6                      | 0  | 0            | 0                                 | 0                                   | 6                    | 6                                 | 6                                | 6                                 |
| BE            | S Henderson Street   | 50th Avenue S and Rainier Avenue S          | N              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BF            | S Henderson Street   | 50th Avenue S and Rainier Avenue S          | S              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BG            | S Henderson Street   | Rainier Avenue S and 53rd Avenue S          | N              | 0                      | 6  | 0            | 0                                 | 0                                   | 6                    | 0                                 | 0                                | 6                                 |
| BH            | S Henderson Street   | Rainier Avenue S and 53rd Avenue S          | S              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BI            | S Henderson Street   | 53rd Avenue S and Seward Park Avenue S      | N              | 0                      | 13                                       | 0            | 0                                 | 0                                   | 13                   | 0                                 | 0                                | 13                                |
| BJ            | S Henderson Street   | 53rd Avenue S and Seward Park Avenue S      | S              | 0                      | 0  | 0            | 0                                 | 3                                   | 3                    | 0                                 | 0                                | 0                                 |
| BK            | 50th Avenue S        | S Henderson Street and S Director Street    | W              | 13                     | 0  | 0            | 0                                 | 0                                   | 13                   | 13                                | 13                               | 13                                |
| BL            | 50th Avenue S        | S Henderson Street and S Director Street    | E              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BM            | Rainier Avenue S     | S Henderson Street and S Director N Street  | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BN            | Rainier Avenue S     | S Henderson Street and S Director N Street  | E              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BO            | Seward Park Avenue S | S Henderson Street and S Fisher Place       | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BP            | Seward Park Avenue S | S Henderson Street and S Fisher Place       | E              | 7                      | 0  | 3            | 0                                 | 0                                   | 10                   | 10                                | 10                               | 10                                |
| BQ            | S Director Street    | Dead End and Rainier N Avenue S             | N              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BR            | S Director Street    | Dead End and Rainier N Avenue S             | S              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BS            | Rainier Avenue S     | S Director N Street and S Director S Street | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BT            | Rainier Avenue S     | S Director N Street and S Director S Street | E              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BU            | S Director Street    | Rainier S Avenue S and 800' Boundary        | N              | 1                      | 0  | 0            | 0                                 | 0                                   | 1                    | 1                                 | 1                                | 1                                 |
| BV            | S Director Street    | Rainier S Avenue S and 800' Boundary        | S              | 4                      | 0  | 0            | 0                                 | 0                                   | 4                    | 4                                 | 4                                | 4                                 |

Project **Rainier Beach High School**

| Block Face ID | Street Name          | Street Segment                         | Side of Street | Overall Parking Supply |  |              |                                   |                                     |                      |                                   |                                  |                                   |
|---------------|----------------------|--|----------------|------------------------|--|--------------|-----------------------------------|-------------------------------------|----------------------|-----------------------------------|----------------------------------|-----------------------------------|
|               |                      |  |                | Unrestricted Parking   | School Bus Only 7a-7p<br>Exc Sat/Sun/Hol | 3 Minute PLZ | 30 Min L/U Only 7a-6p<br>Everyday | King County Exempt<br>Vehicles Only | Total Parking Spaces | Total Parking Spaces -<br>Morning | Total Parking Spaces -<br>Midday | Total Parking Spaces -<br>Evening |
| BW            | Rainier Avenue S     | S Director S Street and S Fisher Place | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BX            | Rainier Avenue S     | S Director S Street and S Fisher Place | E              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BY            | S Fisher Place       | 800' Boundary and Seward Park Avenue S | N              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| BZ            | S Fisher Place       | 800' Boundary and Seward Park Avenue S | S              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| CA            | Seward Park Avenue S | S Fisher Place and 800' Boundary       | SW             | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| CB            | Seward Park Avenue S | S Fisher Place and 800' Boundary       | NE             | 4                      | 0  | 0            | 0                                 | 0                                   | 4                    | 4                                 | 4                                | 4                                 |
| YA            | 50th Avenue S        | 800' Boundary and S Cloverdale Street  | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| YB            | 50th Avenue S        | 800' Boundary and S Cloverdale Street  | E              | 5                      | 0  | 0            | 0                                 | 0                                   | 5                    | 5                                 | 5                                | 5                                 |
| YC            | Rainier Avenue S     | 800' Boundary and S Cloverdale Street  | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| YD            | Rainier Avenue S     | 800' Boundary and S Cloverdale Street  | E              | 5                      | 0  | 0            | 1                                 | 0                                   | 6                    | 6                                 | 6                                | 6                                 |
| YE            | Wabash Avenue S      | 800' Boundary and Cloverdale Place S   | SW             | 19                     | 0  | 0            | 0                                 | 0                                   | 19                   | 19                                | 19                               | 19                                |
| YF            | Wabash Avenue S      | 800' Boundary and Cloverdale Place S   | NE             | 19                     | 0  | 0            | 0                                 | 0                                   | 19                   | 19                                | 19                               | 19                                |
| YG            | Wolcott Avenue S     | 800' Boundary and Cloverdale Place S   | SW             | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| YH            | Wolcott Avenue S     | 800' Boundary and Cloverdale Place S   | NE             | 9                      | 0  | 0            | 0                                 | 0                                   | 9                    | 9                                 | 9                                | 9                                 |
| YI            | Seward Park Avenue S | Duncan Avenue S and S Grattan Street   | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| YJ            | Seward Park Avenue S | Duncan Avenue S and S Grattan Street   | E              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| YK            | S Cloverdale Street  | 800' Boundary and 50th Avenue S        | N              | 4                      | 0  | 0            | 0                                 | 0                                   | 4                    | 4                                 | 4                                | 4                                 |
| YL            | S Cloverdale Street  | 800' Boundary and 50th Avenue S        | S              | 6                      | 0  | 0            | 0                                 | 0                                   | 6                    | 6                                 | 6                                | 6                                 |
| YM            | S Cloverdale Street  | 50th Avenue S and Rainier Avenue S     | N              | 2                      | 0  | 0            | 0                                 | 0                                   | 2                    | 2                                 | 2                                | 2                                 |
| YN            | S Cloverdale Street  | 50th Avenue S and Rainier Avenue S     | S              | 3                      | 0  | 0            | 0                                 | 0                                   | 3                    | 3                                 | 3                                | 3                                 |
| YO            | S Cloverdale Place   | Rainier Avenue S and Grattan Place S   | NW             | 21                     | 0  | 0            | 0                                 | 0                                   | 21                   | 21                                | 21                               | 21                                |
| YP            | S Cloverdale Place   | Rainier Avenue S and Grattan Place S   | SE             | 19                     | 0  | 0            | 0                                 | 0                                   | 19                   | 19                                | 19                               | 19                                |
| YQ            | S Cloverdale Place   | Grattan Place S and Wabash Avenue S    | NW             | 3                      | 0  | 0            | 0                                 | 0                                   | 3                    | 3                                 | 3                                | 3                                 |
| YR            | S Cloverdale Place   | Grattan Place S and Wabash Avenue S    | SE             | 2                      | 0  | 0            | 0                                 | 0                                   | 2                    | 2                                 | 2                                | 2                                 |

Project **Rainier Beach High School**

| Block Face ID | Street Name          | Street Segment                            | Side of Street | Overall Parking Supply |  |              |                                   |                                     |                      |                                   |                                  |                                   |
|---------------|----------------------|---|----------------|------------------------|--|--------------|-----------------------------------|-------------------------------------|----------------------|-----------------------------------|----------------------------------|-----------------------------------|
|               |                      |   |                | Unrestricted Parking   | School Bus Only 7a-7p<br>Exc Sat/Sun/Hol | 3 Minute PLZ | 30 Min L/U Only 7a-6p<br>Everyday | King County Exempt<br>Vehicles Only | Total Parking Spaces | Total Parking Spaces -<br>Morning | Total Parking Spaces -<br>Midday | Total Parking Spaces -<br>Evening |
| YS            | S Cloverdale Place   | Wabash Avenue S and Wolcott Avenue S      | NW             | 8                      | 0  | 0            | 0                                 | 0                                   | 8                    | 8                                 | 8                                | 8                                 |
| YT            | S Cloverdale Place   | Wabash Avenue S and Wolcott Avenue S      | SE             | 6                      | 0  | 0            | 0                                 | 0                                   | 6                    | 6                                 | 6                                | 6                                 |
| YU            | S Cloverdale Place   | Wolcott Avenue S and Seward Park Avenue S | NW             | 4                      | 0  | 0            | 0                                 | 0                                   | 4                    | 4                                 | 4                                | 4                                 |
| YV            | S Cloverdale Place   | Wolcott Avenue S and Seward Park Avenue S | SE             | 1                      | 0  | 0            | 0                                 | 0                                   | 1                    | 1                                 | 1                                | 1                                 |
| YW            | S Grattan Street     | Duncan Avenue S and Seward Park Avenue S  | N              | 1                      | 0  | 0            | 0                                 | 0                                   | 1                    | 1                                 | 1                                | 1                                 |
| YX            | S Grattan Street     | Duncan Avenue S and Seward Park Avenue S  | S              | 1                      | 0  | 0            | 0                                 | 0                                   | 1                    | 1                                 | 1                                | 1                                 |
| YY            | Rainier Avenue S     | S Cloverdale Street and Blockface AY      | W              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| YZ            | Rainier Avenue S     | S Cloverdale Street and Block Face AZ     | E              | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| ZA            | Grattan Place S      | Cloverdale Place S and Blockface AN       | SW             | 4                      | 0  | 0            | 0                                 | 0                                   | 4                    | 4                                 | 4                                | 4                                 |
| ZB            | Grattan Place S      | Cloverdale Place S and Blockface AM       | NE             | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| ZC            | Wabash Avenue S      | Cloverdale Place S and Blockface AB       | SW             | 9                      | 0  | 0            | 0                                 | 0                                   | 9                    | 9                                 | 9                                | 9                                 |
| ZD            | Wabash Avenue S      | Cloverdale Place S and Blockface AA       | NE             | 4                      | 0  | 0            | 0                                 | 0                                   | 4                    | 4                                 | 4                                | 4                                 |
| ZE            | Wolcott Avenue S     | Cloverdale Place S and Dead End           | SW             | 1                      | 0  | 0            | 0                                 | 0                                   | 1                    | 1                                 | 1                                | 1                                 |
| ZF            | Wolcott Avenue S     | Cloverdale Place S and Dead End           | NE             | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| ZG            | Seward Park Avenue S | 800' Boundary and S Cloverdale Street     | SW             | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| ZH            | Seward Park Avenue S | 800' Boundary and S Cloverdale Street     | NE             | 0                      | 0  | 0            | 0                                 | 0                                   | 0                    | 0                                 | 0                                | 0                                 |
| <b>Total</b>  |                      |   |                | <b>337</b>             | <b>19</b>                                | <b>3</b>     | <b>1</b>                          | <b>3</b>                            | <b>363</b>           | <b>341</b>                        | <b>341</b>                       | <b>360</b>                        |



Project      **Rainier Beach High School**

|               |                      |  |                | Overall Supply                 |                               |                                | Overall Occupancy      |                  |         |                          |                  |         |                               |                   |         |                        |                  |         |
|---------------|----------------------|--|----------------|--------------------------------|-------------------------------|--------------------------------|------------------------|------------------|---------|--------------------------|------------------|---------|-------------------------------|-------------------|---------|------------------------|------------------|---------|
| Block Face ID | Street Name          | Street Segment                           | Side of Street | Total Parking Spaces - Morning | Total Parking Spaces - Midday | Total Parking Spaces - Evening | Early Morning          |                  |         | Mid-Morning              |                  |         | Mid-Morning (Historic)        |                   |         | Evening                |                  |         |
|               |                      |  |                |                                |                               |                                | 7:00 A.M. to 7:45 A.M. |                  |         | 10:30 A.M. to 11:15 A.M. |                  |         |                               |                   |         | 7:30 P.M. to 8:15 P.M. |                  |         |
|               |                      |  |                |                                |                               |                                | Tuesday 2/23/2021      | Thursday 2/25/21 | Average | Tuesday 2/23/2021        | Thursday 2/25/21 | Average | 5/22/2017 Monday (11:40 A.M.) | 5/9/2019 Thursday | Average | Tuesday 2/23/2021      | Thursday 2/25/21 | Average |
| AA            | Wabash Avenue S      | Existing 800' Boundary and 53rd Avenue S | NE             | 10                             | 10                            | 10                             | 0                      | 0                | 0       | 0                        | 2                | 1       | 4                             | 5                 | 5       | 0                      | 1                | 1       |
| AB            | Wabash Avenue S      | Existing 800' Boundary and 53rd Avenue S | SW             | 9                              | 9                             | 9                              | 4                      | 3                | 4       | 2                        | 2                | 2       | 2                             | 3                 | 3       | 3                      | 5                | 4       |
| AC            | Wabash Avenue S      | 53rd Avenue S and 800' Boundary          | NE             | 6                              | 6                             | 6                              | 7                      | 8                | 8       | 6                        | 6                | 6       | 3                             | 2                 | 3       | 7                      | 5                | 6       |
| AD            | Wabash Avenue S      | 53rd Avenue S and 800' Boundary          | SW             | 5                              | 5                             | 5                              | 0                      | 0                | 0       | 2                        | 1                | 2       | 2                             | 2                 | 2       | 0                      | 0                | 0       |
| AE            | Wabash Avenue S      | 800' Boundary and Seward Park Avenue S   | NE             | 7                              | 7                             | 7                              | 4                      | 4                | 4       | 4                        | 4                | 4       | 3                             | 3                 | 3       | 5                      | 8                | 7       |
| AF            | Wabash Avenue S      | 800' Boundary and Seward Park Avenue S   | SW             | 10                             | 10                            | 10                             | 4                      | 6                | 5       | 5                        | 4                | 5       | 1                             | 1                 | 1       | 7                      | 5                | 6       |
| AG            | Seward Park Avenue S | 800' Boundary and Wabash Avenue S        | W              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| AH            | Seward Park Avenue S | 800' Boundary and Wabash Avenue S        | E              | 1                              | 1                             | 1                              | 1                      | 2                | 2       | 1                        | 2                | 2       | 1                             | 2                 | 2       | 2                      | 1                | 2       |
| AI            | Wabash Avenue S      | Seward Park Avenue S and 55th Avenue S   | NE             | 2                              | 2                             | 2                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| AJ            | Wabash Avenue S      | Seward Park Avenue S and 55th Avenue S   | SW             | 6                              | 6                             | 6                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 3                             | 2                 | 3       | 6                      | 3                | 5       |
| AK            | 53rd Avenue S        | Wabash Avenue S and Grattan Place S      | W              | 5                              | 5                             | 5                              | 3                      | 3                | 3       | 2                        | 2                | 2       | 0                             | 3                 | 2       | 3                      | 3                | 3       |
| AL            | 53rd Avenue S        | Wabash Avenue S and Grattan Place S      | E              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| AM            | Grattan Place S      | Existing 800' Boundary and 53rd Avenue S | NE             | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| AN            | Grattan Place S      | Existing 800' Boundary and 53rd Avenue S | SW             | 2                              | 2                             | 2                              | 3                      | 2                | 3       | 1                        | 1                | 1       | 0                             | 2                 | 1       | 3                      | 2                | 3       |
| AO            | Grattan Place S      | 53rd Avenue S and Dead End               | NE             | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| AP            | Grattan Place S      | 53rd Avenue S and Dead End               | SW             | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| AQ            | 53rd Avenue S        | Grattan Place S and Hamlet Avenue S      | W              | 5                              | 5                             | 5                              | 1                      | 2                | 2       | 0                        | 1                | 1       | 4                             | 0                 | 2       | 1                      | 1                | 1       |
| AR            | 53rd Avenue S        | Grattan Place S and Hamlet Avenue S      | E              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| AS            | Seward Park Avenue S | Wabash Avenue S and Hamlet Avenue S      | W              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| AT            | Seward Park Avenue S | Wabash Avenue S and Hamlet Avenue S      | E              | 8                              | 8                             | 8                              | 2                      | 3                | 3       | 2                        | 3                | 3       | 2                             | 5                 | 4       | 3                      | 2                | 3       |
| AU            | 53rd Avenue S        | Hamlet Avenue S and Dead End             | W              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| AV            | 53rd Avenue S        | Hamlet Avenue S and Dead End             | E              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| AW            | Hamlet Avenue S      | 53rd Avenue S and Seward Park Avenue S   | NE             | 18                             | 18                            | 18                             | 11                     | 9                | 10      | 7                        | 6                | 7       | 7                             | 9                 | 8       | 8                      | 8                | 8       |
| AX            | Hamlet Avenue S      | 53rd Avenue S and Seward Park Avenue S   | SW             | 19                             | 19                            | 19                             | 8                      | 9                | 9       | 6                        | 8                | 7       | 7                             | 10                | 9       | 9                      | 10               | 10      |
| AY            | Rainier Avenue S     | 800' Boundary and S Henderson Street     | W              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| AZ            | Rainier Avenue S     | 800' Boundary and S Henderson Street     | E              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BA            | Seward Park Avenue S | Hamlet Avenue S and S Henderson Street   | W              | 9                              | 9                             | 9                              | 1                      | 2                | 2       | 2                        | 2                | 2       | 8                             | 8                 | 8       | 3                      | 0                | 2       |
| BB            | Seward Park Avenue S | Hamlet Avenue S and S Henderson Street   | E              | 13                             | 13                            | 13                             | 5                      | 4                | 5       | 7                        | 3                | 5       | 10                            | 8                 | 9       | 3                      | 5                | 4       |
| BC            | S Henderson Street   | 48th Avenue S and 50th Avenue S          | N              | 11                             | 11                            | 11                             | 5                      | 5                | 5       | 5                        | 7                | 6       | 8                             | 4                 | 6       | 3                      | 4                | 4       |
| BD            | S Henderson Street   | 48th Avenue S and 50th Avenue S          | S              | 6                              | 6                             | 6                              | 4                      | 3                | 4       | 3                        | 5                | 4       | 5                             | 6                 | 6       | 4                      | 4                | 4       |
| BE            | S Henderson Street   | 50th Avenue S and Rainier Avenue S       | N              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BF            | S Henderson Street   | 50th Avenue S and Rainier Avenue S       | S              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |

Project      **Rainier Beach High School**

|               |                      |   |                | Overall Supply                 |                               |                                | Overall Occupancy      |                  |         |                          |                  |         |                               |                   |         |                        |                  |         |
|---------------|----------------------|---|----------------|--------------------------------|-------------------------------|--------------------------------|------------------------|------------------|---------|--------------------------|------------------|---------|-------------------------------|-------------------|---------|------------------------|------------------|---------|
| Block Face ID | Street Name          | Street Segment                              | Side of Street | Total Parking Spaces - Morning | Total Parking Spaces - Midday | Total Parking Spaces - Evening | Early Morning          |                  |         | Mid-Morning              |                  |         | Mid-Morning (Historic)        |                   |         | Evening                |                  |         |
|               |                      |   |                |                                |                               |                                | 7:00 A.M. to 7:45 A.M. |                  |         | 10:30 A.M. to 11:15 A.M. |                  |         |                               |                   |         | 7:30 P.M. to 8:15 P.M. |                  |         |
|               |                      |   |                |                                |                               |                                | Tuesday 2/23/2021      | Thursday 2/25/21 | Average | Tuesday 2/23/2021        | Thursday 2/25/21 | Average | 5/22/2017 Monday (11:40 A.M.) | 5/9/2019 Thursday | Average | Tuesday 2/23/2021      | Thursday 2/25/21 | Average |
| BG            | S Henderson Street   | Rainier Avenue S and 53rd Avenue S          | N              | 0                              | 0                             | 6                              | 3                      | 4                | 4       | 1                        | 3                | 2       | 4                             | 1                 | 3       | 5                      | 3                | 4       |
| BH            | S Henderson Street   | Rainier Avenue S and 53rd Avenue S          | S              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BI            | S Henderson Street   | 53rd Avenue S and Seward Park Avenue S      | N              | 0                              | 0                             | 13                             | 7                      | 10               | 9       | 13                       | 12               | 13      | 9                             | 1                 | 5       | 8                      | 7                | 8       |
| BJ            | S Henderson Street   | 53rd Avenue S and Seward Park Avenue S      | S              | 0                              | 0                             | 0                              | 3                      | 0                | 2       | 3                        | 1                | 2       | 1                             | 0                 | 1       | 0                      | 0                | 0       |
| BK            | 50th Avenue S        | S Henderson Street and S Director Street    | W              | 13                             | 13                            | 13                             | 2                      | 2                | 2       | 2                        | 2                | 2       | 1                             | 3                 | 2       | 2                      | 2                | 2       |
| BL            | 50th Avenue S        | S Henderson Street and S Director Street    | E              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BM            | Rainier Avenue S     | S Henderson Street and S Director N Street  | W              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BN            | Rainier Avenue S     | S Henderson Street and S Director N Street  | E              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BO            | Seward Park Avenue S | S Henderson Street and S Fisher Place       | W              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BP            | Seward Park Avenue S | S Henderson Street and S Fisher Place       | E              | 10                             | 10                            | 10                             | 7                      | 7                | 7       | 7                        | 7                | 7       | 3                             | 5                 | 4       | 7                      | 8                | 8       |
| BQ            | S Director Street    | Dead End and Rainier N Avenue S             | N              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BR            | S Director Street    | Dead End and Rainier N Avenue S             | S              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BS            | Rainier Avenue S     | S Director N Street and S Director S Street | W              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BT            | Rainier Avenue S     | S Director N Street and S Director S Street | E              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BU            | S Director Street    | Rainier S Avenue S and 800' Boundary        | N              | 1                              | 1                             | 1                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 1                 | 1       | 0                      | 0                | 0       |
| BV            | S Director Street    | Rainier S Avenue S and 800' Boundary        | S              | 4                              | 4                             | 4                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 2                             | 0                 | 1       | 0                      | 0                | 0       |
| BW            | Rainier Avenue S     | S Director S Street and S Fisher Place      | W              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BX            | Rainier Avenue S     | S Director S Street and S Fisher Place      | E              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BY            | S Fisher Place       | 800' Boundary and Seward Park Avenue S      | N              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| BZ            | S Fisher Place       | 800' Boundary and Seward Park Avenue S      | S              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| CA            | Seward Park Avenue S | S Fisher Place and 800' Boundary            | SW             | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| CB            | Seward Park Avenue S | S Fisher Place and 800' Boundary            | NE             | 4                              | 4                             | 4                              | 4                      | 4                | 4       | 3                        | 3                | 3       | 2                             | 3                 | 3       | 3                      | 4                | 4       |
| YA            | 50th Avenue S        | 800' Boundary and S Cloverdale Street       | W              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| YB            | 50th Avenue S        | 800' Boundary and S Cloverdale Street       | E              | 5                              | 5                             | 5                              | 1                      | 0                | 1       | 1                        | 0                | 1       | 2                             | 1                 | 2       | 1                      | 0                | 1       |
| YC            | Rainier Avenue S     | 800' Boundary and S Cloverdale Street       | W              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| YD            | Rainier Avenue S     | 800' Boundary and S Cloverdale Street       | E              | 6                              | 6                             | 6                              | 3                      | 2                | 3       | 6                        | 4                | 5       | 0                             | 0                 | 0       | 3                      | 5                | 4       |
| YE            | Wabash Avenue S      | 800' Boundary and Cloverdale Place S        | SW             | 19                             | 19                            | 19                             | 14                     | 12               | 13      | 14                       | 10               | 12      | 12                            | 13                | 13      | 14                     | 16               | 15      |
| YF            | Wabash Avenue S      | 800' Boundary and Cloverdale Place S        | NE             | 19                             | 19                            | 19                             | 16                     | 13               | 15      | 12                       | 13               | 13      | 13                            | 6                 | 10      | 18                     | 15               | 17      |
| YG            | Wolcott Avenue S     | 800' Boundary and Cloverdale Place S        | SW             | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| YH            | Wolcott Avenue S     | 800' Boundary and Cloverdale Place S        | NE             | 9                              | 9                             | 9                              | 6                      | 7                | 7       | 4                        | 5                | 5       | 2                             | 2                 | 2       | 7                      | 5                | 6       |
| YI            | Seward Park Avenue S | Duncan Avenue S and S Grattan Street        | W              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |
| YJ            | Seward Park Avenue S | Duncan Avenue S and S Grattan Street        | E              | 0                              | 0                             | 0                              | 0                      | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                      | 0                | 0       |

Project **Rainier Beach High School**

|               |                      |   |                | Overall Supply                 |                               |                                | Overall Occupancy     |                  |         |                          |                  |         |                               |                   |         |                       |                  |         |
|---------------|----------------------|---|----------------|--------------------------------|-------------------------------|--------------------------------|-----------------------|------------------|---------|--------------------------|------------------|---------|-------------------------------|-------------------|---------|-----------------------|------------------|---------|
| Block Face ID | Street Name          | Street Segment                            | Side of Street | Total Parking Spaces - Morning | Total Parking Spaces - Midday | Total Parking Spaces - Evening | Early Morning         |                  |         | Mid-Morning              |                  |         | Mid-Morning (Historic)        |                   |         | Evening               |                  |         |
|               |                      |   |                |                                |                               |                                | 7:00 A.M. to 7:45 A.M |                  |         | 10:30 A.M. to 11:15 A.M. |                  |         |                               |                   |         | 7:30 P.M to 8:15 P.M. |                  |         |
|               |                      |   |                |                                |                               |                                | Tuesday 2/23/2021     | Thursday 2/25/21 | Average | Tuesday 2/23/2021        | Thursday 2/25/21 | Average | 5/22/2017 Monday (11:40 A.M.) | 5/9/2019 Thursday | Average | Tuesday 2/23/2021     | Thursday 2/25/21 | Average |
| YK            | S Cloverdale Street  | 800' Boundary and 50th Avenue S           | N              | 4                              | 4                             | 4                              | 1                     | 0                | 1       | 2                        | 1                | 2       | 0                             | 0                 | 0       | 0                     | 0                | 0       |
| YL            | S Cloverdale Street  | 800' Boundary and 50th Avenue S           | S              | 6                              | 6                             | 6                              | 0                     | 1                | 1       | 3                        | 2                | 3       | 0                             | 0                 | 0       | 1                     | 1                | 1       |
| YM            | S Cloverdale Street  | 50th Avenue S and Rainier Avenue S        | N              | 2                              | 2                             | 2                              | 0                     | 0                | 0       | 0                        | 0                | 0       | 2                             | 0                 | 1       | 0                     | 0                | 0       |
| YN            | S Cloverdale Street  | 50th Avenue S and Rainier Avenue S        | S              | 3                              | 3                             | 3                              | 0                     | 0                | 0       | 0                        | 0                | 0       | 1                             | 0                 | 1       | 0                     | 0                | 0       |
| YO            | S Cloverdale Place   | Rainier Avenue S and Grattan Place S      | NW             | 21                             | 21                            | 21                             | 2                     | 1                | 2       | 1                        | 1                | 1       | 3                             | 2                 | 3       | 2                     | 3                | 3       |
| YP            | S Cloverdale Place   | Rainier Avenue S and Grattan Place S      | SE             | 19                             | 19                            | 19                             | 0                     | 1                | 1       | 1                        | 1                | 1       | 6                             | 8                 | 7       | 1                     | 1                | 1       |
| YQ            | S Cloverdale Place   | Grattan Place S and Wabash Avenue S       | NW             | 3                              | 3                             | 3                              | 0                     | 0                | 0       | 0                        | 3                | 2       | 4                             | 2                 | 3       | 1                     | 0                | 1       |
| YR            | S Cloverdale Place   | Grattan Place S and Wabash Avenue S       | SE             | 2                              | 2                             | 2                              | 1                     | 0                | 1       | 1                        | 0                | 1       | 1                             | 0                 | 1       | 0                     | 0                | 0       |
| YS            | S Cloverdale Place   | Wabash Avenue S and Wolcott Avenue S      | NW             | 8                              | 8                             | 8                              | 3                     | 3                | 3       | 2                        | 3                | 3       | 2                             | 3                 | 3       | 6                     | 5                | 6       |
| YT            | S Cloverdale Place   | Wabash Avenue S and Wolcott Avenue S      | SE             | 6                              | 6                             | 6                              | 2                     | 3                | 3       | 2                        | 3                | 3       | 4                             | 3                 | 4       | 2                     | 4                | 3       |
| YU            | S Cloverdale Place   | Wolcott Avenue S and Seward Park Avenue S | NW             | 4                              | 4                             | 4                              | 0                     | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                     | 0                | 0       |
| YV            | S Cloverdale Place   | Wolcott Avenue S and Seward Park Avenue S | SE             | 1                              | 1                             | 1                              | 0                     | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                     | 0                | 0       |
| YW            | S Grattan Street     | Duncan Avenue S and Seward Park Avenue S  | N              | 1                              | 1                             | 1                              | 3                     | 3                | 3       | 2                        | 2                | 2       | 1                             | 2                 | 2       | 2                     | 3                | 3       |
| YX            | S Grattan Street     | Duncan Avenue S and Seward Park Avenue S  | S              | 1                              | 1                             | 1                              | 0                     | 0                | 0       | 0                        | 0                | 0       | 2                             | 1                 | 2       | 0                     | 0                | 0       |
| YY            | Rainier Avenue S     | S Cloverdale Street and Blockface AY      | W              | 0                              | 0                             | 0                              | 0                     | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                     | 0                | 0       |
| YZ            | Rainier Avenue S     | S Cloverdale Street and Block Face AZ     | E              | 0                              | 0                             | 0                              | 0                     | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                     | 0                | 0       |
| ZA            | Grattan Place S      | Cloverdale Place S and Blockface AN       | SW             | 4                              | 4                             | 4                              | 3                     | 3                | 3       | 1                        | 1                | 1       | 1                             | 2                 | 2       | 3                     | 3                | 3       |
| ZB            | Grattan Place S      | Cloverdale Place S and Blockface AM       | NE             | 0                              | 0                             | 0                              | 0                     | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                     | 0                | 0       |
| ZC            | Wabash Avenue S      | Cloverdale Place S and Blockface AB       | SW             | 9                              | 9                             | 9                              | 1                     | 1                | 1       | 1                        | 1                | 1       | 4                             | 1                 | 3       | 4                     | 3                | 4       |
| ZD            | Wabash Avenue S      | Cloverdale Place S and Blockface AA       | NE             | 4                              | 4                             | 4                              | 3                     | 3                | 3       | 3                        | 3                | 3       | 2                             | 1                 | 2       | 2                     | 3                | 3       |
| ZE            | Wolcott Avenue S     | Cloverdale Place S and Dead End           | SW             | 1                              | 1                             | 1                              | 1                     | 2                | 2       | 1                        | 0                | 1       | 1                             | 0                 | 1       | 2                     | 2                | 2       |
| ZF            | Wolcott Avenue S     | Cloverdale Place S and Dead End           | NE             | 0                              | 0                             | 0                              | 0                     | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                     | 0                | 0       |
| ZG            | Seward Park Avenue S | 800' Boundary and S Cloverdale Street     | SW             | 0                              | 0                             | 0                              | 0                     | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                     | 0                | 0       |
| ZH            | Seward Park Avenue S | 800' Boundary and S Cloverdale Street     | NE             | 0                              | 0                             | 0                              | 0                     | 0                | 0       | 0                        | 0                | 0       | 0                             | 0                 | 0       | 0                     | 0                | 0       |
| Total         |                      |   |                | 341                            | 341                           | 360                            | 149                   | 147              | 148     | 141                      | 140              | 141     | 155                           | 136               | 146     | 164                   | 160              | 162     |

Project **Rainier Beach High School**

|               |                      |  |                | Overall Supply                 |                               |                                | Overall Parking Utilization |                  |         |                          |                  |         |                               |                   |         |                        |                  |         |
|---------------|----------------------|--|----------------|--------------------------------|-------------------------------|--------------------------------|-----------------------------|------------------|---------|--------------------------|------------------|---------|-------------------------------|-------------------|---------|------------------------|------------------|---------|
| Block Face ID | Street Name          | Street Segment                           | Side of Street | Total Parking Spaces - Morning | Total Parking Spaces - Midday | Total Parking Spaces - Evening | Early Morning               |                  |         | Mid-Morning              |                  |         | Mid-Morning (Historic)        |                   |         | Evening                |                  |         |
|               |                      |  |                |                                |                               |                                | 7:00 A.M. to 7:45 A.M       |                  |         | 10:30 A.M. to 11:15 A.M. |                  |         |                               |                   |         | 7:30 P.M. to 8:15 P.M. |                  |         |
|               |                      |  |                |                                |                               |                                | Tuesday 2/23/2021           | Thursday 2/25/21 | Average | Tuesday 2/23/2021        | Thursday 2/25/21 | Average | 5/22/2017 Monday (11:40 A.M.) | 5/9/2019 Thursday | Average | Tuesday 2/23/2021      | Thursday 2/25/21 | Average |
| AA            | Wabash Avenue S      | Existing 800' Boundary and 53rd Avenue S | NE             | 10                             | 10                            | 10                             | 0%                          | 0%               | 0%      | 0%                       | 20%              | 10%     | 40%                           | 50%               | 45%     | 0%                     | 10%              | 5%      |
| AB            | Wabash Avenue S      | Existing 800' Boundary and 53rd Avenue S | SW             | 9                              | 9                             | 9                              | 44%                         | 33%              | 39%     | 22%                      | 22%              | 22%     | 22%                           | 33%               | 28%     | 33%                    | 56%              | 45%     |
| AC            | Wabash Avenue S      | 53rd Avenue S and 800' Boundary          | NE             | 6                              | 6                             | 6                              | 117%                        | 133%             | 125%    | 100%                     | 100%             | 100%    | 50%                           | 33%               | 42%     | 117%                   | 83%              | 100%    |
| AD            | Wabash Avenue S      | 53rd Avenue S and 800' Boundary          | SW             | 5                              | 5                             | 5                              | 0%                          | 0%               | 0%      | 40%                      | 20%              | 30%     | 40%                           | 40%               | 40%     | 0%                     | 0%               | 0%      |
| AE            | Wabash Avenue S      | 800' Boundary and Seward Park Avenue S   | NE             | 7                              | 7                             | 7                              | 57%                         | 57%              | 57%     | 57%                      | 57%              | 57%     | 43%                           | 43%               | 43%     | 71%                    | 114%             | 93%     |
| AF            | Wabash Avenue S      | 800' Boundary and Seward Park Avenue S   | SW             | 10                             | 10                            | 10                             | 40%                         | 60%              | 50%     | 50%                      | 40%              | 45%     | 10%                           | 10%               | 10%     | 70%                    | 50%              | 60%     |
| AG            | Seward Park Avenue S | 800' Boundary and Wabash Avenue S        | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| AH            | Seward Park Avenue S | 800' Boundary and Wabash Avenue S        | E              | 1                              | 1                             | 1                              | 100%                        | 200%             | 150%    | 100%                     | 200%             | 150%    | 100%                          | 200%              | 150%    | 200%                   | 100%             | 150%    |
| AI            | Wabash Avenue S      | Seward Park Avenue S and 55th Avenue S   | NE             | 2                              | 2                             | 2                              | 0%                          | 0%               | 0%      | 0%                       | 0%               | 0%      | 0%                            | 0%                | 0%      | 0%                     | 0%               | 0%      |
| AJ            | Wabash Avenue S      | Seward Park Avenue S and 55th Avenue S   | SW             | 6                              | 6                             | 6                              | 0%                          | 0%               | 0%      | 0%                       | 0%               | 0%      | 50%                           | 33%               | 42%     | 100%                   | 50%              | 75%     |
| AK            | 53rd Avenue S        | Wabash Avenue S and Grattan Place S      | W              | 5                              | 5                             | 5                              | 60%                         | 60%              | 60%     | 40%                      | 40%              | 40%     | 0%                            | 60%               | 30%     | 60%                    | 60%              | 60%     |
| AL            | 53rd Avenue S        | Wabash Avenue S and Grattan Place S      | E              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| AM            | Grattan Place S      | Existing 800' Boundary and 53rd Avenue S | NE             | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| AN            | Grattan Place S      | Existing 800' Boundary and 53rd Avenue S | SW             | 2                              | 2                             | 2                              | 150%                        | 100%             | 125%    | 50%                      | 50%              | 50%     | 0%                            | 100%              | 50%     | 150%                   | 100%             | 125%    |
| AO            | Grattan Place S      | 53rd Avenue S and Dead End               | NE             | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| AP            | Grattan Place S      | 53rd Avenue S and Dead End               | SW             | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| AQ            | 53rd Avenue S        | Grattan Place S and Hamlet Avenue S      | W              | 5                              | 5                             | 5                              | 20%                         | 40%              | 30%     | 0%                       | 20%              | 10%     | 80%                           | 0%                | 40%     | 20%                    | 20%              | 20%     |
| AR            | 53rd Avenue S        | Grattan Place S and Hamlet Avenue S      | E              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| AS            | Seward Park Avenue S | Wabash Avenue S and Hamlet Avenue S      | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| AT            | Seward Park Avenue S | Wabash Avenue S and Hamlet Avenue S      | E              | 8                              | 8                             | 8                              | 25%                         | 38%              | 32%     | 25%                      | 38%              | 32%     | 25%                           | 63%               | 44%     | 38%                    | 25%              | 32%     |
| AU            | 53rd Avenue S        | Hamlet Avenue S and Dead End             | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| AV            | 53rd Avenue S        | Hamlet Avenue S and Dead End             | E              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| AW            | Hamlet Avenue S      | 53rd Avenue S and Seward Park Avenue S   | NE             | 18                             | 18                            | 18                             | 61%                         | 50%              | 56%     | 39%                      | 33%              | 36%     | 39%                           | 50%               | 45%     | 44%                    | 44%              | 44%     |
| AX            | Hamlet Avenue S      | 53rd Avenue S and Seward Park Avenue S   | SW             | 19                             | 19                            | 19                             | 42%                         | 47%              | 45%     | 32%                      | 42%              | 37%     | 37%                           | 53%               | 45%     | 47%                    | 53%              | 50%     |
| AY            | Rainier Avenue S     | 800' Boundary and S Henderson Street     | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| AZ            | Rainier Avenue S     | 800' Boundary and S Henderson Street     | E              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BA            | Seward Park Avenue S | Hamlet Avenue S and S Henderson Street   | W              | 9                              | 9                             | 9                              | 11%                         | 22%              | 17%     | 22%                      | 22%              | 22%     | 89%                           | 89%               | 89%     | 33%                    | 0%               | 17%     |
| BB            | Seward Park Avenue S | Hamlet Avenue S and S Henderson Street   | E              | 13                             | 13                            | 13                             | 38%                         | 31%              | 35%     | 54%                      | 23%              | 39%     | 77%                           | 62%               | 70%     | 23%                    | 38%              | 31%     |
| BC            | S Henderson Street   | 48th Avenue S and 50th Avenue S          | N              | 11                             | 11                            | 11                             | 45%                         | 45%              | 45%     | 45%                      | 64%              | 55%     | 73%                           | 36%               | 55%     | 27%                    | 36%              | 32%     |
| BD            | S Henderson Street   | 48th Avenue S and 50th Avenue S          | S              | 6                              | 6                             | 6                              | 67%                         | 50%              | 59%     | 50%                      | 83%              | 67%     | 83%                           | 100%              | 92%     | 67%                    | 67%              | 67%     |
| BE            | S Henderson Street   | 50th Avenue S and Rainier Avenue S       | N              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BF            | S Henderson Street   | 50th Avenue S and Rainier Avenue S       | S              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BG            | S Henderson Street   | Rainier Avenue S and 53rd Avenue S       | N              | 0                              | 0                             | 6                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | 83%                    | 50%              | 67%     |
| BH            | S Henderson Street   | Rainier Avenue S and 53rd Avenue S       | S              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |

Project **Rainier Beach High School**

|               |                      |   |                | Overall Supply                 |                               |                                | Overall Parking Utilization |                  |         |                          |                  |         |                               |                   |         |                        |                  |         |
|---------------|----------------------|---|----------------|--------------------------------|-------------------------------|--------------------------------|-----------------------------|------------------|---------|--------------------------|------------------|---------|-------------------------------|-------------------|---------|------------------------|------------------|---------|
| Block Face ID | Street Name          | Street Segment                              | Side of Street | Total Parking Spaces - Morning | Total Parking Spaces - Midday | Total Parking Spaces - Evening | Early Morning               |                  |         | Mid-Morning              |                  |         | Mid-Morning (Historic)        |                   |         | Evening                |                  |         |
|               |                      |   |                |                                |                               |                                | 7:00 A.M. to 7:45 A.M.      |                  |         | 10:30 A.M. to 11:15 A.M. |                  |         |                               |                   |         | 7:30 P.M. to 8:15 P.M. |                  |         |
|               |                      |   |                |                                |                               |                                | Tuesday 2/23/2021           | Thursday 2/25/21 | Average | Tuesday 2/23/2021        | Thursday 2/25/21 | Average | 5/22/2017 Monday (11:40 A.M.) | 5/9/2019 Thursday | Average | Tuesday 2/23/2021      | Thursday 2/25/21 | Average |
| BI            | S Henderson Street   | 53rd Avenue S and Seward Park Avenue S      | N              | 0                              | 0                             | 13                             | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | 62%                    | 54%              | 58%     |
| BJ            | S Henderson Street   | 53rd Avenue S and Seward Park Avenue S      | S              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BK            | 50th Avenue S        | S Henderson Street and S Director Street    | W              | 13                             | 13                            | 13                             | 15%                         | 15%              | 15%     | 15%                      | 15%              | 15%     | 8%                            | 23%               | 16%     | 15%                    | 15%              | 15%     |
| BL            | 50th Avenue S        | S Henderson Street and S Director Street    | E              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BM            | Rainier Avenue S     | S Henderson Street and S Director N Street  | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BN            | Rainier Avenue S     | S Henderson Street and S Director N Street  | E              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BO            | Seward Park Avenue S | S Henderson Street and S Fisher Place       | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BP            | Seward Park Avenue S | S Henderson Street and S Fisher Place       | E              | 10                             | 10                            | 10                             | 70%                         | 70%              | 70%     | 70%                      | 70%              | 70%     | 30%                           | 50%               | 40%     | 70%                    | 80%              | 75%     |
| BQ            | S Director Street    | Dead End and Rainier N Avenue S             | N              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BR            | S Director Street    | Dead End and Rainier N Avenue S             | S              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BS            | Rainier Avenue S     | S Director N Street and S Director S Street | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BT            | Rainier Avenue S     | S Director N Street and S Director S Street | E              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BU            | S Director Street    | Rainier S Avenue S and 800' Boundary        | N              | 1                              | 1                             | 1                              | 0%                          | 0%               | 0%      | 0%                       | 0%               | 0%      | 0%                            | 100%              | 50%     | 0%                     | 0%               | 0%      |
| BV            | S Director Street    | Rainier S Avenue S and 800' Boundary        | S              | 4                              | 4                             | 4                              | 0%                          | 0%               | 0%      | 0%                       | 0%               | 0%      | 50%                           | 0%                | 25%     | 0%                     | 0%               | 0%      |
| BW            | Rainier Avenue S     | S Director S Street and S Fisher Place      | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BX            | Rainier Avenue S     | S Director S Street and S Fisher Place      | E              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BY            | S Fisher Place       | 800' Boundary and Seward Park Avenue S      | N              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| BZ            | S Fisher Place       | 800' Boundary and Seward Park Avenue S      | S              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| CA            | Seward Park Avenue S | S Fisher Place and 800' Boundary            | SW             | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| CB            | Seward Park Avenue S | S Fisher Place and 800' Boundary            | NE             | 4                              | 4                             | 4                              | 100%                        | 100%             | 100%    | 75%                      | 75%              | 75%     | 50%                           | 75%               | 63%     | 75%                    | 100%             | 88%     |
| YA            | 50th Avenue S        | 800' Boundary and S Cloverdale Street       | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| YB            | 50th Avenue S        | 800' Boundary and S Cloverdale Street       | E              | 5                              | 5                             | 5                              | 20%                         | 0%               | 10%     | 20%                      | 0%               | 10%     | 40%                           | 20%               | 30%     | 20%                    | 0%               | 10%     |
| YC            | Rainier Avenue S     | 800' Boundary and S Cloverdale Street       | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| YD            | Rainier Avenue S     | 800' Boundary and S Cloverdale Street       | E              | 6                              | 6                             | 6                              | 50%                         | 33%              | 42%     | 100%                     | 67%              | 84%     | 0%                            | 0%                | 0%      | 50%                    | 83%              | 67%     |
| YE            | Wabash Avenue S      | 800' Boundary and Cloverdale Place S        | SW             | 19                             | 19                            | 19                             | 74%                         | 63%              | 69%     | 74%                      | 53%              | 64%     | 63%                           | 68%               | 66%     | 74%                    | 84%              | 79%     |
| YF            | Wabash Avenue S      | 800' Boundary and Cloverdale Place S        | NE             | 19                             | 19                            | 19                             | 84%                         | 68%              | 76%     | 63%                      | 68%              | 66%     | 68%                           | 32%               | 50%     | 95%                    | 79%              | 87%     |
| YG            | Wolcott Avenue S     | 800' Boundary and Cloverdale Place S        | SW             | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| YH            | Wolcott Avenue S     | 800' Boundary and Cloverdale Place S        | NE             | 9                              | 9                             | 9                              | 67%                         | 78%              | 73%     | 44%                      | 56%              | 50%     | 22%                           | 22%               | 22%     | 78%                    | 56%              | 67%     |
| YI            | Seward Park Avenue S | Duncan Avenue S and S Grattan Street        | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| YJ            | Seward Park Avenue S | Duncan Avenue S and S Grattan Street        | E              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| YK            | S Cloverdale Street  | 800' Boundary and 50th Avenue S             | N              | 4                              | 4                             | 4                              | 25%                         | 0%               | 13%     | 50%                      | 25%              | 38%     | 0%                            | 0%                | 0%      | 0%                     | 0%               | 0%      |
| YL            | S Cloverdale Street  | 800' Boundary and 50th Avenue S             | S              | 6                              | 6                             | 6                              | 0%                          | 17%              | 9%      | 50%                      | 33%              | 42%     | 0%                            | 0%                | 0%      | 17%                    | 17%              | 17%     |
| YM            | S Cloverdale Street  | 50th Avenue S and Rainier Avenue S          | N              | 2                              | 2                             | 2                              | 0%                          | 0%               | 0%      | 0%                       | 0%               | 0%      | 100%                          | 0%                | 50%     | 0%                     | 0%               | 0%      |
| YN            | S Cloverdale Street  | 50th Avenue S and Rainier Avenue S          | S              | 3                              | 3                             | 3                              | 0%                          | 0%               | 0%      | 0%                       | 0%               | 0%      | 33%                           | 0%                | 17%     | 0%                     | 0%               | 0%      |

Project **Rainier Beach High School**

|               |                      |   |                | Overall Supply                 |                               |                                | Overall Parking Utilization |                  |         |                          |                  |         |                               |                   |         |                        |                  |         |
|---------------|----------------------|---|----------------|--------------------------------|-------------------------------|--------------------------------|-----------------------------|------------------|---------|--------------------------|------------------|---------|-------------------------------|-------------------|---------|------------------------|------------------|---------|
| Block Face ID | Street Name          | Street Segment                            | Side of Street | Total Parking Spaces - Morning | Total Parking Spaces - Midday | Total Parking Spaces - Evening | Early Morning               |                  |         | Mid-Morning              |                  |         | Mid-Morning (Historic)        |                   |         | Evening                |                  |         |
|               |                      |   |                |                                |                               |                                | 7:00 A.M. to 7:45 A.M.      |                  |         | 10:30 A.M. to 11:15 A.M. |                  |         |                               |                   |         | 7:30 P.M. to 8:15 P.M. |                  |         |
|               |                      |   |                |                                |                               |                                | Tuesday 2/23/2021           | Thursday 2/25/21 | Average | Tuesday 2/23/2021        | Thursday 2/25/21 | Average | 5/22/2017 Monday (11:40 A.M.) | 5/9/2019 Thursday | Average | Tuesday 2/23/2021      | Thursday 2/25/21 | Average |
|               |                      |   |                |                                |                               |                                |                             |                  |         |                          |                  |         |                               |                   |         |                        |                  |         |
| YO            | S Cloverdale Place   | Rainier Avenue S and Grattan Place S      | NW             | 21                             | 21                            | 21                             | 10%                         | 5%               | 8%      | 5%                       | 5%               | 5%      | 14%                           | 10%               | 12%     | 10%                    | 14%              | 12%     |
| YP            | S Cloverdale Place   | Rainier Avenue S and Grattan Place S      | SE             | 19                             | 19                            | 19                             | 0%                          | 5%               | 3%      | 5%                       | 5%               | 5%      | 32%                           | 42%               | 37%     | 5%                     | 5%               | 5%      |
| YQ            | S Cloverdale Place   | Grattan Place S and Wabash Avenue S       | NW             | 3                              | 3                             | 3                              | 0%                          | 0%               | 0%      | 0%                       | 100%             | 50%     | 133%                          | 67%               | 100%    | 33%                    | 0%               | 17%     |
| YR            | S Cloverdale Place   | Grattan Place S and Wabash Avenue S       | SE             | 2                              | 2                             | 2                              | 50%                         | 0%               | 25%     | 50%                      | 0%               | 25%     | 50%                           | 0%                | 25%     | 0%                     | 0%               | 0%      |
| YS            | S Cloverdale Place   | Wabash Avenue S and Wolcott Avenue S      | NW             | 8                              | 8                             | 8                              | 38%                         | 38%              | 38%     | 25%                      | 38%              | 32%     | 25%                           | 38%               | 32%     | 75%                    | 63%              | 69%     |
| YT            | S Cloverdale Place   | Wabash Avenue S and Wolcott Avenue S      | SE             | 6                              | 6                             | 6                              | 33%                         | 50%              | 42%     | 33%                      | 50%              | 42%     | 67%                           | 50%               | 59%     | 33%                    | 67%              | 50%     |
| YU            | S Cloverdale Place   | Wolcott Avenue S and Seward Park Avenue S | NW             | 4                              | 4                             | 4                              | 0%                          | 0%               | 0%      | 0%                       | 0%               | 0%      | 0%                            | 0%                | 0%      | 0%                     | 0%               | 0%      |
| YV            | S Cloverdale Place   | Wolcott Avenue S and Seward Park Avenue S | SE             | 1                              | 1                             | 1                              | 0%                          | 0%               | 0%      | 0%                       | 0%               | 0%      | 0%                            | 0%                | 0%      | 0%                     | 0%               | 0%      |
| YW            | S Grattan Street     | Duncan Avenue S and Seward Park Avenue S  | N              | 1                              | 1                             | 1                              | 300%                        | 300%             | 300%    | 200%                     | 200%             | 200%    | 100%                          | 200%              | 150%    | 200%                   | 300%             | 250%    |
| YX            | S Grattan Street     | Duncan Avenue S and Seward Park Avenue S  | S              | 1                              | 1                             | 1                              | 0%                          | 0%               | 0%      | 0%                       | 0%               | 0%      | 200%                          | 100%              | 150%    | 0%                     | 0%               | 0%      |
| YY            | Rainier Avenue S     | S Cloverdale Street and Blockface AY      | W              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| YZ            | Rainier Avenue S     | S Cloverdale Street and Block Face AZ     | E              | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| ZA            | Grattan Place S      | Cloverdale Place S and Blockface AN       | SW             | 4                              | 4                             | 4                              | 75%                         | 75%              | 75%     | 25%                      | 25%              | 25%     | 25%                           | 50%               | 38%     | 75%                    | 75%              | 75%     |
| ZB            | Grattan Place S      | Cloverdale Place S and Blockface AM       | NE             | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| ZC            | Wabash Avenue S      | Cloverdale Place S and Blockface AB       | SW             | 9                              | 9                             | 9                              | 11%                         | 11%              | 11%     | 11%                      | 11%              | 11%     | 44%                           | 11%               | 28%     | 44%                    | 33%              | 39%     |
| ZD            | Wabash Avenue S      | Cloverdale Place S and Blockface AA       | NE             | 4                              | 4                             | 4                              | 75%                         | 75%              | 75%     | 75%                      | 75%              | 75%     | 50%                           | 25%               | 38%     | 50%                    | 75%              | 63%     |
| ZE            | Wolcott Avenue S     | Cloverdale Place S and Dead End           | SW             | 1                              | 1                             | 1                              | 100%                        | 200%             | 150%    | 100%                     | 0%               | 50%     | 100%                          | 0%                | 50%     | 200%                   | 200%             | 200%    |
| ZF            | Wolcott Avenue S     | Cloverdale Place S and Dead End           | NE             | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| ZG            | Seward Park Avenue S | 800' Boundary and S Cloverdale Street     | SW             | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| ZH            | Seward Park Avenue S | 800' Boundary and S Cloverdale Street     | NE             | 0                              | 0                             | 0                              | NS                          | NS               | NS      | NS                       | NS               | NS      | NS                            | NS                | NS      | NS                     | NS               | NS      |
| Total         |                      |   |                | 341                            | 341                           | 360                            | 44%                         | 43%              | 43%     | 41%                      | 41%              | 41%     | 45%                           | 40%               | 43%     | 46%                    | 44%              | 45%     |

## **APPENDIX B: LIGHT AND GLARE REPORT**



# Rainier Beach High School Athletic Field Lighting



## Light and Glare Report June 18, 2021

Prepared for:

Seattle Public Schools  
Capital Projects  
Seattle, Washington

Prime Consultant:



Lighting Consultant:



## Proposal

A new practice field at Rainier Beach High School is proposed to be constructed with lights. Included is the replacement of the existing floodlights on the existing poles at the football, baseball and softball fields. Two of the existing 95' tall football field light poles are being relocated due to placement of the new school building.

The design levels for the new practice field lighting are proposed at a Class IV level of play. Class IV is the lowest recommended level listed in RP-8 (Recommended Practice for Sports Lighting) by the Illuminating Engineering Society. The field is designed to an average maintained lighting level of 29 foot-candles. The lighting system is designed using a .95 design factor to achieve the initial lighting levels.

These lighting design levels meet current practices for both the City of Seattle and Seattle School District for the lighting of athletic fields. The proposed lighting levels will be consistent with recently lighted fields at Roosevelt High School and Ballard High School.

The existing designed lighting levels for the football, baseball and softball fields will not be increased and remain at IES Class IV level of play.

## Existing Codes and Policies

Section 23.51B.002 (Public schools in residential zones) of the Seattle Municipal Code limits the height of lighting standards in Single Family and Lowrise zones. Section D-6-a permits light standards up to a maximum height of 100 feet, "if the Director determines that the additional height is necessary to ensure adequate illumination and that impacts from light and glare are minimized to the greatest extent practicable". In addition, Section 23.46.020 (Light and glare standards) paragraph A of the Seattle Municipal Code also requires that "Exterior lighting be shielded or directed away from adjacent uses". Also, current City of Seattle guidelines recommend that athletic field spill light not exceed 1.0 foot-candles initial at residential property lines.

***To comply with existing codes an exemption to the height limit is requested. This exemption will ensure adequate illumination and reduce the number of impacts from light and glare into the neighborhood.***

## Existing Conditions

A survey of the existing site was conducted on May 20<sup>th</sup>, 2021. The school site is located within a residential community between Rainier Avenue South – Seward Park Avenue South (East to West) and South Henderson Street - Grattan Place South (North to South). The field is located on the west side of the school site. The site is adjacent to residential homes along Grattan Place South and Hamlet Avenue South to the north and northeast. The existing fields are located adjacent to apartment units to the west.

The school site is generally flat. The fields and the school buildings are at a slightly lower elevation than the properties located to the west, north and northeast.



Field View From S. Henderson Street



S Henderson Street Looking West



Properties West of Football Field



Apartments West of Baseball Field



View of Homes NE of Baseball Field



Property West of Softball Field



View of Homes North of Softball Field



View of Homes Northeast of Existing Basketball Courts



View of Homes East of Existing Basketball Courts



View Looking SW from 53<sup>rd</sup> Ave. S. at Hamlet Ave S.



View Looking East from 53<sup>rd</sup> Ave. S at Hamlet Ave S.



View Overlooking Softball Field from Grattan Place S.



## Existing Light and Glare

A survey of the existing lighting in the area was conducted on May 20<sup>th</sup>, 2021. Light readings were taken at the school site on and surrounding the athletic fields and on several residential streets.

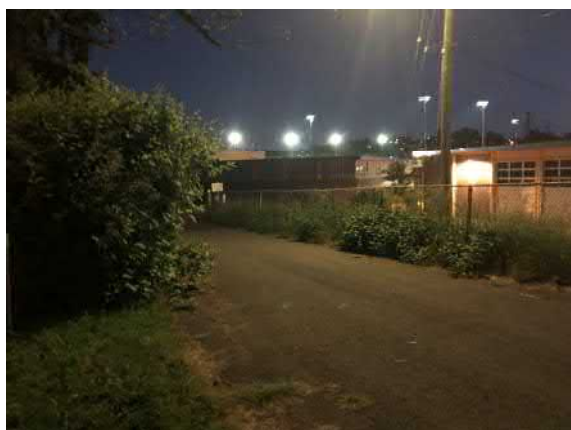
The existing light sources on the school site consist of parking lot lighting, building perimeter lighting, school covered area lighting and the football, baseball and softball fields. The primary component of the lighting are the high wattage shielded floodlights at the athletic fields. The parking lot lights were not turned on during the survey.



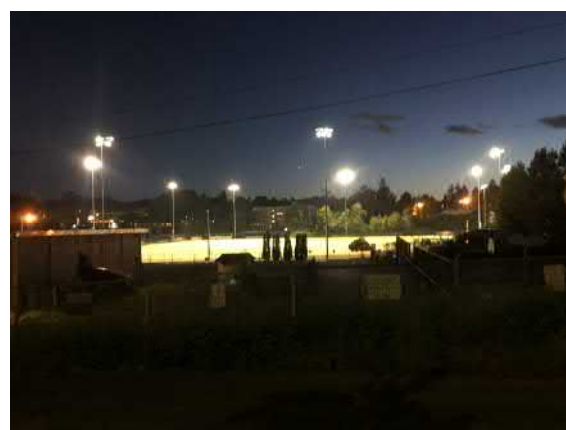
Existing School Building Wall Pack Lights



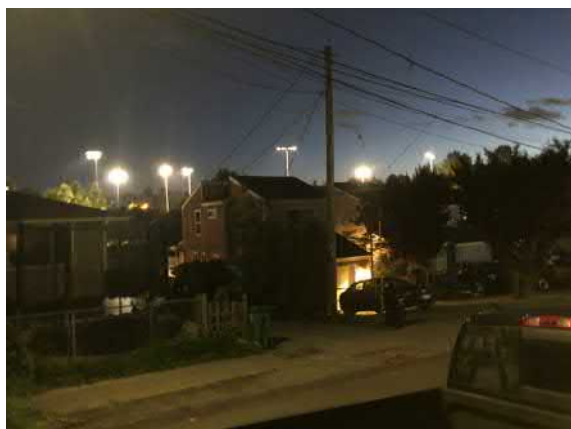
Existing Covered Area and Parking Lot Lights



Existing Football Lights - From 53<sup>rd</sup> Ave. S at Hamlet Ave S.



Existing Baseball Lights - From 53<sup>rd</sup> Ave. S at Hamlet Ave S.



Existing Softball/Baseball Lights - From Grattan Place S.

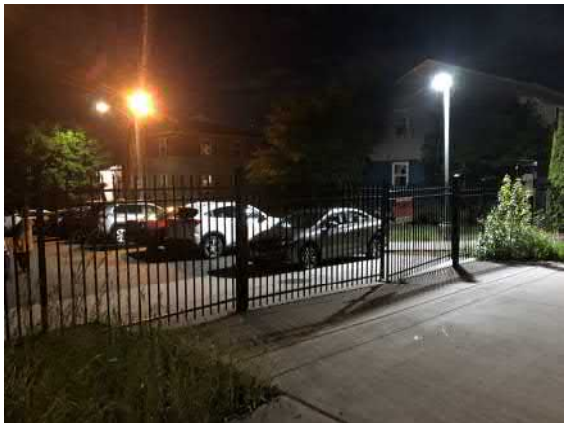


Existing Wall Pack Light – Maintenance Building

The existing light sources surrounding the site are typical for a suburban residential area. The primary component of the lighting is associated with streetlights surrounding the school. The streetlights along South Henderson Street, Hamlet Avenue South, 53<sup>rd</sup> Avenue South and Grattan Place South are LED cobra head style mounted to existing utility poles at an approximate height of 20' above grade. The balance of the lighting is associated with adjacent commercial and residential properties with parking lights, porch\yard lights and interior lighting visible through windows.



Existing Street Lighting S. Henderson Street



Existing Parking Lot Lighting S. Henderson Street



Existing Street Lighting 53<sup>rd</sup> Ave. S.



Existing Residential Lights – Grattan Place S.

Various measured lighting levels on and surrounding the site are as follows (Foot-Candles).

|   |                             |
|---|-----------------------------|
| Athletic Fields                             | 10 - 50 ft-c (Horizontal)   |
| Spill Light East of Softball Field          | 1.9 - 3.4 ft-c (Horizontal) |
| Spill Light East of Baseball Field          | 1.4 - 2.8 ft-c (Horizontal) |
| Wall Pack Light on School Building          | 15.0 ft-c (Max Horizontal)  |
| Canopy Light on School Building             | 20.0 ft-c (Max Horizontal)  |
| School Parking Lot Floodlight               | 4.0 ft-c (Max Horizontal)   |
| Streetlight – S. Henderson Street           | 5.0 ft-c (Max Horizontal)   |
| Crosswalk – S. Henderson Street             | 3.3 ft-c (Max Horizontal)   |
| Streetlight – 53 <sup>rd</sup> Avenue South | 1.4 ft-c (Max Horizontal)   |
| Streetlight – Grattan Place South           | 1.4 ft-c (Max Horizontal)   |

## Proposed Equipment

The new athletic field lighting system at the practice field will consist of four 60' tall, galvanized steel poles with LED shielded floodlights. The proposed lighting for the field consists of 4 - 600 watt and 12 - 400 watt shielded LED floodlights. The floodlights will be mounted at the top of the poles. One additional low wattage "full cutoff" area light will be mounted at a height of 30' above grade on the two poles located on the west side of the field.

The existing 1000 watt shielded floodlights at the existing football, baseball and softball fields will be upgraded to shielded LED floodlights.

Seattle Public Schools has proposed to use an athletic field lighting system designed to mitigate the negative impacts of light and glare. The proposed system consists 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 provide 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 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 system is similar to recently lighted fields at Roosevelt High School and Ballard High School.



Shielded LED Floodlight used at Roosevelt\Ballard HS Fields

## Analysis

For the purposes of this report lighting impacts associated with the demolition of existing school buildings and construction of new school buildings are recognized as similar. The quantity and location of the light sources associated with building perimeter, pedestrian access and parking will vary. However, the use of newer LED technology with improved shielding and lighting controls will ensure no large increase in lighting impacts.

The proposed lighting system at the new practice field will increase the amount of light in that area of the school site during evening hours. The primary impacts of the lighting system are direct glare, reflected glare, spill light (light trespass), and "sky glow".



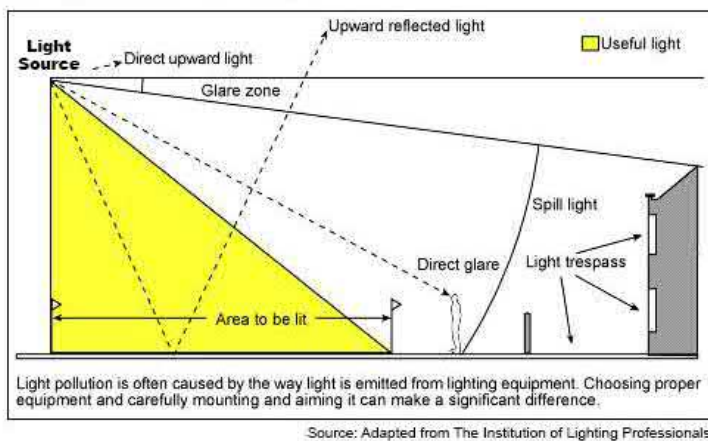


Diagram illustrating Direct-Glare, Spill Light and Light Trespass

## GLARE

The athletic field lighting system will generate visible glare. The primary sources of glare from the proposed lighting system consist of direct glare from the floodlights and reflected glare (luminance) off the poles, floodlights, athletic field surface, and surfaces around the playing field.

The amount of glare that is present correlates directly to how much of the floodlight lamp and reflector can be observed. The intent of Seattle Municipal Code Section 23.24.020 is to have floodlight luminaires directed as far down as possible to reduce the amount of glare that is visible from off-site locations.

To reduce the amount of glare that is visible off-site the floodlights will need to be mounted higher than 30 feet. At a height of 30 feet the visibility of the high wattage LED's and reflectors from the adjacent residences is excessive. With the increased mounting heights floodlights will have steeper aiming angles resulting in more effective use of the floodlight shields. A very small portion of the LED diodes and reflectors will be visible off site with the increased height.

Direct glare will be visible from all directions overlooking the site. The amount of glare visible depends on proximity to the site, orientation of the floodlights, distribution of intervening buildings, terrain or vegetation that would block the glare. The impacts of direct glare are extremely difficult to quantify, as varying conditions such as existing ambient light levels and current atmospheric conditions will vary the impact. Elevation differences between the level of the sports field lights and the viewpoint is a key determinant in the existence of glare at any given viewing location.

To maximize glare reduction, the owner is providing additional mitigation with the use of "full cutoff" style LED floodlights that provide the most advanced light control and shielding currently available in the sports lighting industry. Additional reduction in direct glare is also provided by internal shielding of the LED diodes. The additional shielding nearly eliminates direct view of the very bright LED's from off-site viewing locations.

Off-site exposure to low levels of direct glare is primarily to the residential properties directly east of the proposed field across 53<sup>rd</sup> Avenue South and the residential properties immediately adjacent to the north. These properties are at a slightly higher elevation to the field with direct exposure to the light poles and floodlight assemblies. Other residential properties located next to the adjacent residential properties will have minimal exposure to direct glare. Residential properties located farther away from the field will have minimal to no direct glare impacts.

The removal of the existing unshielded building mounted wall packs and parking lot floodlight will reduce the existing direct glare impacts to these residences. The replacement of the existing athletic field floodlights at the football, baseball and softball fields will provide a significant reduction in the amount of direct glare impacts surrounding the entire school site. The replacement LED floodlights will include extensive shielding as compared to the existing floodlights. The floodlights will be high efficiency resulting in an approximate 30% decrease in the quantity of floodlights and overall light needed to light the fields.

Reflected glare would be visible from all directions overlooking the site, depending direct views into the site, exposure to poles/floodlights, distribution of intervening buildings, terrain or vegetation that would block the glare. Of the surfaces that are visible from off site locations, the synthetic athletic field surface would be the greatest contributor to reflected glare. The amount of light reflected from synthetic turf is generally equivalent to natural turf. It may be slightly higher depending on how the surfaces wear, direction of how the fibers lay and which direction they are viewed from. The difference in amount of reflected glare visible between the surfaces is minimal. Reflected light off the floodlight housings, floodlight visors. poles are a lesser contributor.

The residential properties to the north and east are at a higher elevation and have the greatest amount of exposure to reflected glare. These properties are close to the fields with direct view of the field surfaces, adjacent grass/pavement surfaces, light poles, and floodlight assemblies. The main component of the impact is the light reflected off the synthetic turf field surface.

Residential properties that are located farther away from the field or below the field will have low to minimal reflected glare impacts. These properties will have limited to no direct views of the playing surface due to their location away from the fields. The reflected glare impact associated with the poles and floodlights is much less from more remote viewing points, as the impact is reduced at greater distances. This is true even though reflected glare from the floodlights and tops of the poles will be visible at greater distances due to their elevation above the field.



Direct glare from unshielded floodlights (Edmonds-Woodway HS),  
Reflected glare from synthetic turf surface.



Direct glare reduction with use of shielded LED floodlights  
Reflected glare from synthetic turf surface.

The below photos show the athletic field lighting system recently installed at Roosevelt HS. The use of the highly shielded LED floodlights dramatically minimizes lighting impacts to the surrounding properties. The shielding was adjusted post installation to further reduce spill and glare impacts into the ROW and condominiums located south of the football field.



Roosevelt HS LED Lighting System

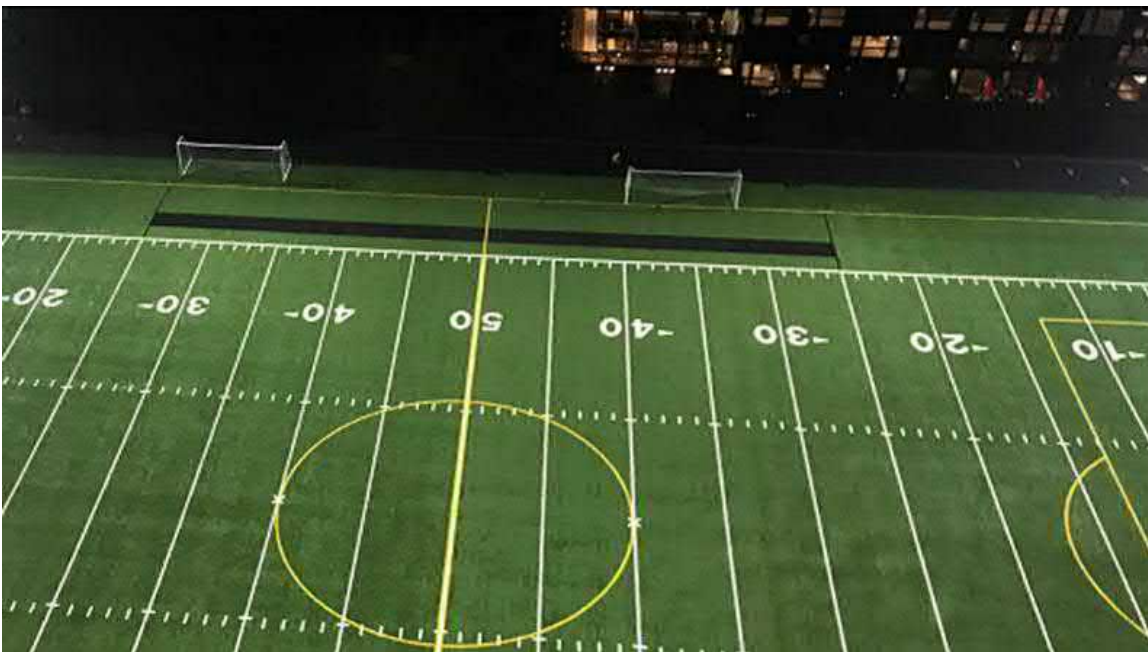


Roosevelt HS LED Lighting System





Roosevelt HS LED Lighting System



Roosevelt HS LED Lighting System

*The increased mounting heights for the practice field light poles will dramatically decrease the overall amount of glare visible from off-site locations as compared to using 30' pole height. The use of the latest generation of shielded floodlights will dramatically reduce the amount of visible glare compared to standard shielded and unshielded LED floodlighting systems. It is critical that taller poles are used to minimize glare as much as practical. At 30-foot mounting heights the surrounding residences will be more fully exposed to excessive levels of direct glare from the floodlights. Glare impacts will be evaluated after construction of the lighting system and adjustments to the shielding and aiming of the floodlights will be implemented as necessary. Replacement of the existing athletic field floodlights with new high efficiency shielded LED floodlights will reduce the overall impacts of direct glare at the site.*

## SPILL LIGHT

The athletic field lighting system will generate minimal amounts of spill light. Spill light impacts will be below the maximum recommended allowable level of 1.0 foot-candles set by the City of Seattle. The minor spill light impacts are located at residential properties directly north of the proposed field and east of 53<sup>rd</sup> Avenue South. The maximum amount of spill light along a small section of these property lines is 0.60 foot-candles. The spill light drops off to 0.0 footcandles within 20 feet of the property lines.

The increase in pole height from 30 feet to 60 feet tall will dramatically reduce the amount of spill light generated by the practice field lighting system. The higher pole heights allow the floodlights to be aimed down to the athletic field and away from the adjacent properties. This height also provides for greater effectiveness of the internal\external shielding on the floodlights to control the emitted light and prevent light escaping beyond the site.

The increased mounting heights increase the angle of aiming below the horizontal level of the floodlights. At a mounting height of 30 feet this project would require aiming angles of 15 degrees (worst case) and 24 degrees (best case) below the horizontal plane of the floodlight. The increased mounting height to 60 feet will provide for aiming angles of 30 degrees (worst case) and 45.0 degrees (best case) below the horizontal plane of the floodlight.

The use of steeper aiming angles allows for less direct light to be delivered beyond the boundaries of the playing surface. The external shielding blocks more direct light and more light is delivered to the field with the use of increased mounting heights. The proposed taller mounting heights are typical for this application and similar to many existing installations throughout the City. The use of shorter mounting heights is typical to the lighting of driving ranges which requires that light is delivered over hundreds of feet down range to light the back of a golf ball to distances over 300 feet.

The vertical spill light from the field lighting has been calculated along the adjacent residential property lines on the north and east side of the field (See sheets SPL-1 and SPL-2). The light readings are calculated in foot-candles. The calculated light readings do not account for the existing trees and vegetation that will provide some screening to reduce spill light at the property lines.

At the standard mounting height of 60 feet the maximum amount of measurable light generated along the residential property line north of the practice field is 0.90 foot-candles. At the standard mounting height of 60 feet the amount of measurable light generated along the residential property line east of the practice field is 0.20 foot-candles.

At the non-standard mounting height of 30 feet the maximum amount of measurable light generated along the residential property line north of the practice field is 3.45 foot-candles. At the non-standard mounting height of 30 feet the amount of measurable light generated along the residential property line east of the practice field is 2.1 foot-candles.

The replacement of the existing athletic field floodlights at the football, baseball and softball fields will provide a significant reduction in the amount of spill light impacts surrounding the athletic fields. The replacement LED floodlights utilize precise optics and include extensive shielding as compared to the existing floodlights. The amount of spill light generated at the residential properties to the north and west of the fields will be less than the current amount of spill light.

***The increased mounting height for the practice field light poles will dramatically reduce the maximum spill light at the residential property lines as compared to using 30' pole height. Increased mounting height also reduces spill light to meet recommended practice of maximum of 1.0 foot-candles set by the City of Seattle. Spill light impacts will be evaluated after construction of the lighting system and adjustments to the shielding and aiming of the floodlights will be implemented as necessary. Replacement of the existing athletic field floodlights with new high efficiency shielded LED floodlights will reduce the overall impacts of spill light at the site.***

## **SKY GLOW**

The practice field lighting system will generate a minimal amount of “sky glow”. The “sky glow” impacts will be located near the practice field.

The amount of “sky glow” that is visible from a lighting system is difficult to quantify. There is no current method to calculate “sky glow” but it is recognized that there is a direct correlation to the amount of direct and reflected light that is emitted into the atmosphere. The amount of visible “sky glow” is dependent on a multitude of factors. Several factors include the amount of ambient light that exists, darkness of the night sky, amount of moonlight, atmospheric conditions, level of cloud ceiling, amount particulate matter, location of the observer and age of the observer.

To reduce the amount of “sky glow” that is visible the floodlights will need to be mounted higher than 30 feet. At a height of 30 feet the amount of direct light emitted into the atmosphere is excessive. With the increased mounting heights floodlights will have steeper aiming angles resulting in more effective use of the external shields. Most of the total light output will be directed down to the field with the increased mounting height.

To maximize “sky glow” reduction the owner is providing additional mitigation with the use of “full cutoff” style LED floodlights that provide the most advanced light control and shielding currently available in the sports lighting industry. The use of this equipment will block a significant amount of direct light that is emitted into the atmosphere.

Based on the existing conditions and the limited impact expected with the installation of the new practice field lights, the impact of the project on “sky-glow” evident in the surrounding area will likely be minor. “The appearance of “sky-glow” will be very minor with heavy low overcast skies and be most prevalent during conditions of dense fog.

The replacement of the existing athletic field floodlights at the football, baseball and softball fields will provide a reduction in the amount of “sky-glow” impacts surrounding the entire school site. The replacement LED floodlights will include extensive shielding limiting the amount of direct light emitted up into the atmosphere as compared to the existing floodlights. The new floodlights will be high efficiency with an approximate 30% decrease in the quantity of overall light needed to light the fields resulting in a corresponding reduction of reflected light from the field and adjacent surfaces.

***The increased mounting heights for the practice field light poles will decrease the overall amount of “sky-glow” visible as compared to using 30' pole height. The use of the latest generation of shielded floodlights will dramatically reduce the amount of direct light emitted into the atmosphere compared to the older shielded floodlighting systems. It is critical that taller poles are used to minimize “sky-glow”. The amount of “sky-glow” visible will be localized to the area above the practice field and immediate vicinity. The amount of “sky-glow” generated will be less than the recently lighted fields using LED floodlights at Ballard High School and Roosevelt High School and will be much less as compared to the amount generated using 30' poles. Replacement of the existing athletic field floodlights with new high efficiency shielded LED floodlights will reduce the overall impacts of “sky glow” at the site.***

## Controls

The new athletic field lighting system will be connected to a fully programmable control system with remote operation. There will be separate switches installed to manually operate the lights at the site if necessary. The field lights will be on a separate lighting zone with a separate switch. This will allow the field lights to be turned off after play is completed. The area lights are on a separate zone and will remain on for a short time after each event to provide ample light for egress from the site.



## **APPENDIX C: ENVIRONMENTALLY CRITICAL AREAS MEMO**



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# memorandum

date June 23, 2021

to Paul Popovich, Seattle Public Schools

from Jessica Redman, PWS

subject Rainier Beach High School Replacement Project Environmentally Critical Areas Assessment

Environmental Science Associates (ESA) was retained by Seattle Public Schools to delineate wetlands and streams located within 200 feet of the Rainier Beach High School property. The critical areas assessment is part of the Rainier Beach High School Replacement Project (Project). The Project proposes to replace the existing Rainier Beach High School with a new multi-story high school, renovate the existing performance arts center, and improve the existing athletic fields. Construction on the new Rainier Beach High School is scheduled to begin during the summer of 2022.

The Project is located at 8815 Seward Park Avenue South in Seattle, Washington. The 13.9-acre site is located in Section 35, Township 24N, Range 04E, and is a combination of three parcels (King County Parcels 3534049124, 3524049146, and 3524049149). The site is bordered by South Henderson Street to the south, Seward Park Avenue South to the east, and Cloverdale Place South to the northwest. Residential developments border the site to the west and northeast. Athletic fields take up the majority of the property and include a softball field, a baseball field, and a track. The general area is highly developed and primarily comprised of single-family homes. Be'er Sheva Park is located to the east of the site across Seward Park Avenue South on the shore of Lake Washington.

The findings of the critical areas assessment are based on an analysis of existing background information, a field investigation conducted by ESA biologists on November 19, 2020, and a review of the current City of Seattle Municipal Code (SMC) Chapter 25.09 – *Regulations for Environmentally Critical Areas*.

## Methods

Prior to conducting field work, ESA staff reviewed existing literature, maps, and other materials to identify wetlands and streams or site characteristics indicative of wetlands on the parcel.

The characteristics of an area that result in a “wetland” classification have been formally defined by federal and state agencies. Methods defined in the Regional Supplement to the U.S. Army Corps of Engineers 1987 Wetlands Delineation Manual (Corps, 2010) were used to determine the presence and extent of wetlands on the site. The methodology is based upon three essential characteristics of wetlands: (1) hydrophytic vegetation; (2) hydric

soils; and (3) wetland hydrology. Field indicators of these three characteristics must all be present in order to determine that an area is a wetland (unless problem areas or atypical situations are encountered). The “routine on-site determination method” was used to determine the wetland boundaries. The routine method is used for areas equal to or less than 5 acres in size, or for larger areas with relatively homogeneous vegetative, soil, and hydrologic properties.

During the November 19, 2020 field effort, formal wetland data plots were established where information regarding each of the three wetland parameters (vegetation, soils, and hydrology) was recorded. Data sheets for each of the formal data plots are provided in Attachment A. This information was used to distinguish wetlands from non-wetlands. Wetland boundaries were identified and recorded using a Trimble Global Positioning System (GPS unit).

Wetland functions were assessed using the Washington State Department of Ecology’s (Ecology) Wetland Rating System for Western Washington: 2014 Update (Hruby, 2014). Ratings are based on whether a specific wetland performs a specific function and the relative level to which the function is performed. An assessment of wetland functions is inherent in the system. This system was developed to differentiate wetlands based on their sensitivity to disturbance, their significance, their rarity, our ability to replace them, and the beneficial functions they provide to society. Attachment B provides additional information about the Ecology rating system wetland categories and completed Ecology rating forms for the project.

## **Findings**

### **Review of Existing Information**

Natural Resources Conservation Service (NRCS) soil maps show one soil type within the parcel: urban land-Alderwood complex (USDA, 2020). This soil type is composed of a gravelly sandy loam profile, with a moderately well-drained drainage class, and is not considered to be hydric by the NRCS (USDA, 2020).

The United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps an 0.9-acre freshwater forested/shrub wetland at the northern portion of the Project site, southeast of Cloverdale Place South. A second freshwater/forested shrub wetland, 0.6-acre in size, is mapped offsite on the northwest side of Cloverdale Place South (USFWS, 2020). The King County Development Services Office’s (DSO) Water & Sewer Map also maps these features (King County, 2020a).

No streams are mapped onsite. However, the King County Interactive Mapping Tool (iMap) maps Mapes Creek as flowing east along South Henderson Street to the south, into Be’er Sheva Park to the east, before flowing into Lake Washington (King County, 2020b). According to the Washington Department of Fish and Wildlife (WDFW) SalmonScape interactive mapping, this creek is an intermittent stream that does not support salmonid species (WDFW, 2020).

### **Field Investigation**

The following section describes the results of the field investigation conducted by ESA wetland ecologists (Jessica Redman and Amanda Brophy) on November 19, 2020. Ecologists identified and delineated the boundary of one on-site wetland (Wetland A). Wetland A is approximately 1.20 acres (52,570 Sq. feet) in size. No other

wetlands or streams occur onsite. A detailed discussion of Wetland A is provided below. One wetland and one stream were also observed offsite. These offsite features are also discussed in the following sections.

**Table 1. Wetland Characteristics**

| Wetland Name | Approximate Wetland Area (square feet) | Hydrogeomorphic Type | Cowardin Class |
|--------------|--|----------------------|----------------|
| Wetland A    | 52,570                                 | Depressional         | PFO/PSS/PEM    |

## Onsite Features

### Wetland A

**Overview:** Wetland A is a depressional, palustrine forested (PFO), palustrine scrub-shrub (PSS), and palustrine emergent (PEM) wetland located in the northern extent of the project site. The wetland is located to the southeast of Cloverdale Place South and is bordered by the softball field to the southwest and residences to the northeast. Data plots (DP) 1 and 3 characterize the wetland, DP2 and 4 characterize the adjacent upland (see Attachment A).

**Vegetation:** The forested and scrub-shrub classes of Wetland A were dominated by Pacific willow (*Salix lucida*) and Nootka rose (*Rosa nutkana*), respectively. Pacific willow has a wetland indicator status of FACW and Nootka rose has a wetland indicator status of facultative (FAC), which meet the hydrophytic vegetation criteria. The emergent class of Wetland A is dominated by slough sedge (*Carex obnupta*) and reed canarygrass (*Phalaris arundinacea*), which have a wetland indicator status of obligate (OBL) and facultative wetland (FACW), respectively, and meet the hydrophytic vegetation criteria. Other vegetation present included bind weed (*Calystegia sepium*) and Himalayan blackberry (*Rubus armeniacus*), which are both tolerant to wet conditions.

**Soils:** Soils within the wetland are generally a grayish brown (10YR 5/2) sandy loam with redoximorphic features (7.5YR 5/8) as concentrations in the matrix. These soils meet criterion for hydric soil indicator F3 (Depleted Matrix). Soils meeting criteria for hydric indicator S5 (Sandy Redox) were also found and included coated sand grains colored reddish brown (5YR 4/6) located in a black (10YR 2/1) matrix.

**Hydrology:** During the November 2020 site visit, a high-water table (within 12-inches) and soils saturated to the surface were observed; therefore, the wetland meets criteria for wetland hydrology indicators A2 (High Water Table) and A3 (Saturation). Hydrology inputs to the wetland appear to be primarily a shallow water table and precipitation.

**Wetland Rating and Functions:** Using Ecology's 2014 updated Wetland Rating System (Hruby, 2014), Wetland A scores 17 points, categorizing it as a Category III wetland (see Attachment B). It has moderate function (7 points) for improving water quality due to its lack of an outlet, persistent plants which cover more than 95% of its surface area, and its location in a basin where an aquatic resource is on the 303(d) list. However, it has a low function (5 points) to reduce flooding because it is located in a subbasin where little flooding occurs. The wetland

also has a low habitat function (4 points) due to its lack of plant and hydroperiod diversity. Additionally, the area surrounding the wetland has little potential to support its habitat functions, as its land use is characterized as high intensity due to its location in a highly developed landscape.

## Uplands

During observation of upland areas adjacent to the wetland, hydrophytic vegetation was recorded. Red fescue (*Festuca rubra*) was the dominant species, which has an indicator status of facultative (FAC). Other species observed in these areas, including tansy ragwort (*Senecio jacobaea*) and Scotch broom (*Cytisus scoparius*) are more adapted to upland conditions. Soils met the hydric indicator F3 (depleted matrix). However, throughout the areas determined to be upland, no wetland hydrology indicators were met, confirming upland conditions.

## Offsite Features

### Wetlands

ESA did not have permission to access the private parcel to the north (King County parcel 3870400051) where NWI and King County DSO maps an offsite wetland. However, during the November 19, 2020 site visit, conditions in this area were observed from the public right-of-way. Vegetation observed was largely grasses and Himalayan blackberry. The forested overstory was a mix of deciduous species including bigleaf maple (*Acer macrophyllum*) and red alder (*Alnus rubra*). No apparent wetland conditions were observed.

ESA also performed a topographic analysis using the elevation contours provided on iMap. The lowest point of this parcel is within a depressional area measured at 25-foot elevation. The parcel then rises to a 35-foot elevation at an approximately 32 percent slope. If a wetland was present on the site, it would likely occur within this depression. Based on aerial photo interpretation, observed conditions, its position in the landscape, and using Wetland A as a reference, a wetland on this parcel would likely also be Categorized as a Category III wetland with a low habitat score. Category III wetlands with a “low” habitat score are allotted a 60-foot buffer per SMC (see discussion below). The closest point of this depression to the Project parcel is approximately 115 feet. Therefore, the wetland and associated buffer are likely located away from all anticipated project impacts. Accordingly, this wetland will not be part of any future wetland and wetland buffer impacts analyses for this project. No other offsite wetlands were observed within 200 feet of the Project parcel.

### Streams

One stream, Mapes Creek, was observed offsite to the east within the limits of Be'er Sheva Park. The stream was observed to enter the park through the outlet of a culvert in the southwest corner of the park. Upstream portions of this stream north of South Henderson Street within the vicinity of the school are piped. During the November 19, 2020 site visit, the stream was flowing and was approximately 4 to 6 inches deep. The channel was a low gradient stream channel with a bankful width of 4 to 6 feet, meeting the requirements of a Type F (fish-bearing stream). Per SMC 25.09.912.D(5), a 100-foot riparian management area protective buffer is required from the ordinary high water mark (OHWM) of all streams. The riparian management area, along with the watercourse itself, are known as the riparian corridor and subjected to critical area regulations put forth in SMC 25.09. During the site visit, the eastern extent of the Project parcel was determined to be approximately 115 to 120 feet away from westernmost portion of the stream, and therefore, located outside of the riparian corridor. As a result, Mapes

Creek will not be part of any future stream or stream buffer impact analysis for this project. No other offsite streams were observed within 200 feet of the Project parcel.

## Regulatory Implications

Wetlands are protected and regulated by law under Sections 404 and 401 of the Clean Water Act, which is upheld in the state of Washington by the U.S. Army Corps of Engineers (USACE) and Ecology. Wetlands are locally regulated by the City of Seattle under SMC Chapter 25.09 – *Regulations for Environmentally Critical Areas*. Per SMC 25.09.160, wetlands are rated and the habitat function is determined according to Ecology’s 2014 updated Wetland Rating System (Hruby, 2014). The size of the wetland buffer is based on the category and habitat score (low, moderate, or high). According to SMC 25.09.160(B), habitat scores between 3 and 4 points are considered “low”, habitat scores of 5, 6 or 7 are considered “moderate”, and habitats scores of 8 or 9 are considered “high” (Ecology 2018).

Per Table A for SMC 25.09.160, the standard buffer width for a Category III wetlands over 100 square feet in total size with a low level of habitat function is 60 feet.

**Table 2: Wetland buffers at the Rainier Beach High School Site**

| Wetland Name | Wetland Category | Habitat Score | SMC Standard Wetland Buffer (feet) |
|--------------|------------------|---------------|------------------------------------|
| Wetland A    | III              | 4 (low)       | 60                                 |

## Regulatory Requirements

The project is still in design and the potential effects to Wetland A or its associated buffer were not estimated for this critical areas assessment. However, the replacement of grass with turf on two areas of the field that intersect with the wetland buffer has been discussed. According to a personal communication with the City, if it is an existing use and the only change is in material (from grass to turf) it would be reviewed as maintenance and repair (Curry 2021). Per SMC 25.09.045.F, maintenance and repair of an existing development is exempt from the provisions of Chapter 25.09 – *Regulations for Environmentally Critical Areas*, and therefore, would not undergo local critical areas review.

Depending on any additional project elements still in design, and their proposed location to the wetland and required buffer area, the following are regulatory considerations that may apply to the project.

### Section 404 Permit

The USACE regulates discharges of dredged or fill materials into waters of the United States, including wetlands and streams, under Section 404 of the Clean Water Act. The purpose of the Clean Water Act is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” A Section 404 permit may be

required if a proposed project involves filling wetlands or altering streambeds or other waters of the U.S. The USACE will determine if wetlands are jurisdictional under Section 404.

To apply for a Section 404 permit, the applicant submits a Joint Aquatic Resources Permit Application (JARPA) and supporting information. The USACE has established two types of permit programs under Section 404: Nationwide and Individual. Nationwide permits (NWP) are issued when a proposed activity will have minimal adverse impacts to wetlands and fits into the limitations for one of the 52 NWPs authorized in 2017. All other projects are evaluated under the Individual Permit process. The USACE determines which permitting process is used for a proposed project. The USACE will require that wetland impacts be avoided or minimized to the extent practicable, and mitigation will likely be required for unavoidable wetland impacts.

For activities that require a federal permit, occur on federal lands, or receive federal funding, the federal lead agency is required to consult with the National Marine Fisheries Service (NMFS) and the USFWS with respect to the proposed activities direct and indirect effects on species and habitats that are afforded protection under the Endangered Species Act. In addition, compliance with the National Historic Preservation Act is required, including consultation with affected Native American tribes and potentially a cultural resources survey.

## Section 401 Water Quality Certification

State permitting for activities in wetlands is administered by Ecology. The Water Quality Certification process under Section 401 of the federal Clean Water Act is usually triggered through a Section 404 permit application. Section 401 directs each state to certify that proposed in-water activities will not adversely affect water quality or violate state aquatic protection laws. Any conditions attached to the 401-certification become part of the Section 404 permit.

## Local Critical Areas Review

The City of Seattle regulates activities allowed in wetlands and wetland buffer through SMC 25.09.160 – *Development Standards for Wetlands and Wetland Buffers*. Per 25.09.160(C), development and any alteration to the functions and values of Category III wetlands and their associated buffer is prohibited. However, some low impact developments that are frequently associated with field improvements may be allowed with permission of the Director. If impacts to wetlands and/or their buffers cannot be avoided, mitigation will be required.

## Wetland Mitigation

### ***Mitigation sequencing:***

Before approving a project that will impact wetlands, agencies require project applicants to document that impacts have been avoided and minimized in accordance with the following preferred sequence for mitigation:

- a) Avoiding the impact altogether by not taking a certain action or parts of an action;
- b) Minimizing the impacts by limiting the degree or magnitude of the action;
- c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- d) Reducing or eliminating the impact over time by preservation and maintenance operations;



- e) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and
- f) Monitoring the impact and the compensation projects undertaken under subsection 25.09.065.B.1.e and taking appropriate corrective measures.

Applicants for permits to alter wetlands or their buffers must demonstrate that the above sequence has been followed to the greatest extent possible. Wetland impacts that cannot be avoided through the first two steps of the above sequence will require compensatory mitigation as described below.

If compensatory mitigation is required, per SMC 25.09.065(B)3, compensatory mitigation should occur onsite. If onsite mitigation is not feasible, the preferred location of mitigation sites is in the following order: within the same creek watershed; followed by within City of Seattle limits; and lastly, within the same Watershed Resource Inventory Area.

### ***City of Seattle Mitigation Ratios***

The City of Seattle mitigation requirements for wetlands are included in Table A for SMC 25.09.065. Impacts to Category III wetlands require the following mitigation ratios (replacement: impact area):

- Restoration or creation – 2:1
- Rehabilitation – 4:1
- Enhancement – 8:1

### ***Wetland Buffer Averaging***

Per SMC 25.09.160 (E), buffer width averaging may be allowed, on a case-by-case basis, when the following conditions are met:

- a) development in the buffer area will not reduce wetland functions or values,
- b) the total area contained in the buffer area after averaging is no less than the total area that would be contained within the buffer required (110 feet for Category III wetland), and
- c) the buffer at its narrowest point is never less than 75 percent of the buffer width required.

To ensure a no net loss of ecological function, as a result of the buffer averaging, mitigation of the buffer post-construction may be required. Mitigation may include buffer enhancement through plantings of native shrubs and trees, since existing conditions of the buffer are largely degraded.

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# Photos

(available upon request)

# Figures

(available upon request)

# **Wetland Data Forms**

(available upon request)

# **Wetland Rating Form**

(available upon request)

## **APPENDIX D: NOISE MEMO**





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# memorandum

date June 18, 2021

to Paul Popovich, Seattle Public Schools

from Susumu Shirayama, ESA

subject DRAFT Rainier Beach High School Replacement Project - Noise Technical Memorandum

Seattle Public Schools (SPS) is proposing to replace Rainier Beach High School (RBHS) as part of the 2019 Building Excellence V (BEX V) funding. RBHS is located at 8815 Seward Park Avenue S., Seattle, WA 98118.

The proposed project would construct a new multi-story high school with up to approximately 283,000 square feet and improvements to the existing athletic fields. When complete, the school would have permanent enrollment capacity for up to 1,600 students in grades 9 through 12; however, it is noted that SPS does not anticipate full enrollment for 10 years or more after completion. Based on staffing for other Seattle high schools, SPS estimates that Rainier Beach High School could have between 130 and 160 employees if/when it is enrolled to its capacity of 1,600 students.

The proposed new school building would be located in the central portion of the site now occupied by the natural practice field and wood shop building. Two parking lots would be located at the southeastern portion of the site.

This memorandum describes the methodology of identifying potential noise impacts due to the replacement of RBHS.

## ***Fundamentals of Noise***

The decibel (dB) is a conventional unit for measuring the amplitude of sound as it accounts for the large variations in sound pressure amplitude and reflects the way people perceive changes in sound. When describing sound and its effect on humans, A-weighted (dBA) sound levels are typically used to account for the response of the human ear. The term “A-weighted” refers to a filtering of the noise signal in a manner corresponding to the way the human ear perceives sound. Leq is the equivalent sound level over a specified period of time, typically, 1 hour (i.e., Leq(h)). Leq is also referred to as the average sound level.

People judge the relative magnitude of sound sensation by subjective terms such as “loudness” or “noisiness.” A change in sound level of 3 dB is considered “just perceptible,” a change in sound level of 5 dB is considered “clearly noticeable,” and a change of 10 dB is recognized as “twice as loud.”

Because decibels are logarithmic values, they cannot be combined by normal algebraic addition. For example, when the decibel values of two sources differ by 0 to 1 dB, combining them would add 3 dB to the higher level for the combined sound level. When the decibel levels of two sources differ by more than 1 dB, combining them

would add between 0 to 3 dBA to the higher level, depending on the relative difference. At a difference of 10 dB or more, the higher noise source dominates, and there is no addition to the higher level source (i.e., there is no effective change in the overall decibel value with or without the addition of the lower noise level source).

When noise propagates over a distance, the noise level reduces (i.e., attenuates) with distance. The degree to which it diminishes depends on the type of noise source and the propagation path. Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, referred to as “spherical spreading.” Stationary point sources of noise, including stationary mobile sources, such as idling vehicles, attenuate at a rate of 6 dBA for acoustically “hard” sites and 7.5 dBA for acoustically “soft” sites, for each doubling of distance from the reference measurement, as their energy is continuously spread out over a spherical surface. Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No attenuation from the ground surface is assumed for hard sites, and the 6 dBA reduction in noise levels with doubling of distance is only from the geometric spreading of the noise from the source (e.g., for hard sites, 80 dBA at 50 feet attenuates to 74 at 100 feet, 68 dBA at 200 feet). Soft sites are those with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees; in addition to the 6 dBA reduction from geometric spreading, soft sites provide an additional attenuation of up to 1.5 dBA per doubling distance from the surface. In a typical analysis the given ground surface is somewhere between a hard and a soft site; therefore, for a conservative estimate, the hard-site attenuation rate of 6 dBA for point sources is typically used in analyses, rather than attempt to determine the exact surface conditions between each source and receptor.

Roadways and highways consist of several localized noise sources on a defined path and hence are treated as “line” sources, which approximate the effect of several point sources. Noise from a line source propagates over a cylindrical surface, often referred to as “cylindrical spreading.” Line sources (e.g., traffic noise from vehicles) attenuate at a rate of between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement. Therefore, noise due to a line source attenuates less (about half) with distance than that of a point source.

### ***City of Seattle Municipal Code***

The City of Seattle Municipal Code (SMC Chapter 25.08) regulates noise in the City. Noise is typically defined as an unwanted sound that can disrupt quality of life (EPA, 2016). The City sets exterior sound level limits according to the land use of both the property generating the noise (the source) and the property receiving the noise. From one property to another when both properties are within a residential district, the maximum allowable noise during weekday daytime and evening hours (7:00 a.m. to 10:00 p.m.) is limited to 55 Leq (dBA). This is the maximum noise that may be generated from a specific property that is experienced by another property (not the cumulative noise from all surrounding properties and activities).

SMC Chapter 25.08.500E 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 10:00 p.m. and 7:00 a.m. During these nighttime hours, maximum allowable noise from one property to another within residential districts is reduced to 45 Leq (dBA). RBHS is located within residential districts per City of Seattle Zoning.

**Table 1. Exterior Sound Level Limits**

| District of Sound Source      | Residential Receiving Property (Experiencing the Noise) |                            |
|-------------------------------|---|----------------------------|
|                               | 7a.m. – 10 p.m. Limit (Leq)                             | 10 p.m.– 7a.m. Limit (Leq) |
| <b>Residential</b>            | 55 dBA  | 45 dBA                     |
| <b>Commercial</b>             | 57 dBA  | 47 dBA                     |
| <b>Industrial</b>             | 60 dBA  | 50 dBA                     |
| Source: SMC Chapter 25.08.410 |   |                            |

For noise sources that are not continuous, higher levels are allowed for short durations. The code specifies that shorter duration noises up to 15 dBA above the continuous limit are allowable, as long as the hourly Leq exterior sound level limit is not exceeded (SMC 25.08.410.B).

SMC Chapter 25.08.425 describes sounds created by construction and maintenance equipment. Considering the proposed project is a public project, the exterior sound level limits presented in Table 1, as measured from the property line of the real property of another person or at a distance of 50 feet from the construction or maintenance equipment making the sound, whichever is greater, may be exceeded between 7 a.m. and 10 p.m. on weekdays and between 9 a.m. and 10 p.m. On weekends and legal holidays, it may be exceeded by 25 dBA for equipment on construction sites, including but not limited to crawlers, tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, graders, off-highway trucks, ditchers, trenchers, compactors, compressors, and pneumatic-powered equipment.

SMC Chapter 25.08.540A exempts sounds created by bells, chimes, or carillons not operating for more than 5 minutes in any one hour for the hours between 7 a.m. and 10 p.m. on weekdays and between 9 a.m. and 10 p.m. on weekends and legal holidays.

### **Noise Sensitive Receivers**

Noise sensitive receivers in the vicinity of RBHS include single- and multi-family residences. A large apartment complex is located to the south of S Henderson St. Two apartment buildings along Rainier Ave S are located to the west. Single-family residences are located to the northeast.

### **Existing Condition**

Due to COVID-19 and school closure, existing noise conditions were not measured for this project. Instead, existing noise levels are estimated based on the existing traffic volumes. **Table 2** includes the existing PM Peak Hour traffic volumes and estimated noise levels in hourly Leq. Noise levels are calculated by using Federal Highway Administration's Traffic Noise Model. Note that all traffic volumes are considered as regular auto. No trucks/buses were included. This is considered a conservative approach because the estimated existing noise levels would be lower than the one including trucks/buses.

**Table 2. Existing Noise Levels**

| Roadways                  | PM Peak Hour Traffic Volumes | Estimated Noise Levels at Receiver Property Line Closest to RBHS | Distance between Roadway and Receiver Property Line Closest to RBHS |
|---------------------------|------------------------------|--|---|
| <b>S Henderson St</b>     | 473                          | 53.7 dBA Leq(h)  | 45 feet   |
| <b>Rainier Ave S</b>      | 1896                         | 53.2 dBA Leq(h)  | 200 feet  |
| <b>S Cloverdale Place</b> | 210                          | 48.9 dBA Leq(h)  | 60 feet   |
| <b>Seward Park Ave S</b>  | 859                          | 56.8 dBA Leq(h)  | 40 feet   |

Source: Heffron, 2021; ESA, 2021.

Noise levels in Table 2 can be lower when receivers are further away from roadways. However, considering the project site is an urban environment, the existing noise levels will not be much quieter than what is included in Table 2.

### ***Proposed Project Noise Assessments***

Increasing student capacity by replacing the existing school would not change the types of noise or timing of noise at the school. Residents of neighboring properties would likely notice a slight increase in noise at the beginning and end of the school day and during lunch and recess periods from the increased number of students. Additional car and bus trips for student drop-off and pickup would likely increase noise to neighboring residents. The following subsections describe potential noise sources and its effects to the neighboring properties.

#### **Parking**

The proposed project includes new parking spaces. Two main parking lots would be located at the southeastern portion of the site—one with 62 spaces and the new on-site passenger vehicle load/unload loop accessed from S Henderson Street and a second lot with 106 spaces accessed from Seward Park Avenue S. These two parking areas would be physically connected by a tabletop driveway designed to emphasize pedestrian movement, but would allow connection between the parking areas during peak-use periods. An additional 46 spaces are proposed along the northeast edge of the site with primary access from the same driveway on Seward Park Avenue S and/or from the south end of 53<sup>rd</sup> Avenue S.

Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment Manual includes the methodology to estimate parking noise based on the number of cars. From each parking space, the estimated noise levels would be 44 dBA, 47 dBA, and 43 dBA for 62 spaces, 106 spaces, and 46 spaces, respectively. Since none of the parking spaces exceed 55 dBA, it is considered less than significant impact.

#### **Students**

Students would exit the building for recess, lunch, and/or beginning and end of the school. Students may be located on available benches throughout the school for recess and lunch time. However, it is assumed that the duration of recess and lunch time would be short-term events. In the mornings and afternoons, students would gather around the drop off, pick up, and building entrance areas. The noise from student's voices would also be short-term events. The main entrance area is approximately 400 feet away from the southern residential property line. The drop-off area is approximately 200 feet away from the eastern residential property line. Due to the short-

term events and their distance away from residential properties, the hourly noise level would not exceed 55 dBA and it would be considered less than significant.

### Vehicular Traffic

The traffic report included 2025 traffic volumes with and without the project. Table 3 includes the PM peak hour volumes and predicted noise levels at the receiver property line closest to RBHS.

**Table 3. 2025 Traffic Volumes and Estimated Noise Levels**

| Roadways                     | 2025 PM Peak Hour Traffic Volumes |              | Estimated Noise Levels at Receiver Property Line Closest to RBHS |              | Distance between Roadway and Receiver Property Line Closest to RBHS |
|------------------------------|-----------------------------------|--------------|--|--------------|---|
|                              | Without Project                   | With Project | Without Project  | With Project |   |
| <b>S Henderson St</b>        | 500                               | 580          | 53.9 dBA   | 54.6 dBA     | 45 feet   |
| <b>Rainier Ave S</b>         | 2,026                             | 2,033        | 53.5 dBA   | 53.5 dBA     | 200 feet  |
| <b>S Cloverdale Place</b>    | 240                               | 240          | 49.5 dBA   | 49.5 dBA     | 60 feet   |
| <b>Seward Park Ave S</b>     | 898                               | 910          | 57.0 dBA   | 57.0 dBA     | 40 feet   |
| <b>53<sup>rd</sup> Ave S</b> | --                                | 10           | --   | 43.0 dBA     | 20 feet   |

**Notes:**

The traffic volume without project for 53<sup>rd</sup> Ave S was not included in the traffic report.

Source: Heffron, 2021; ESA, 2021.

Noise levels due to vehicular traffic would not exceed 55 dBA for the proposed project except Seward Park Avenue S. However, the noise levels from Seward Park Ave S exceeds 55 dBA without the proposed project and there would be no increase due to the project. Therefore, all noise due to vehicular traffic would be considered less than significant impact.

### Athletic Activities

The level of athletic activities would be similar to existing school conditions and the bleacher capacity would also be similar to the existing capacity. The practice field would be relocated from its current location north of the football/soccer field to the northeastern portion of the school where the existing basketball courts are. Considering that athletic activities already are occurring at the basketball courts in the northeast portion of the site, the noise environment is not expected to change significantly with the location of the practice field there. With the proposed project, the noise level generated from athletic activities would not be expected to increase significantly because the new practice field would be for school use only.

### Construction

As described in the section of City of Seattle Municipal Code, SMC Chapter 25.08.425 describes sounds created by construction and maintenance equipment. Considering the proposed project is a public project, the exterior sound level limits presented in Table 1, as measured from the property line of the real property of another person or at a distance of 50 feet from the construction or maintenance equipment making the sound, whichever is

greater, may be exceeded between 7 a.m. and 10 p.m. on weekdays and between 9 a.m. and 10 p.m. on weekends and legal holidays. It may be exceeded by 25 dBA for equipment on construction sites, including but not limited to crawlers, tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, graders, off-highway trucks, ditchers, trenchers, compactors, compressors, and pneumatic-powered equipment. Following is the common practice to reduce the noise from construction activities.

- Construction hours should be limited to follow SMC.
- Construction equipment is maintained in a good condition and equipped with mufflers.
- If feasible, stay away from noise sensitive receivers.
- When equipment is not used, it should be turned off instead of idling.
- If necessary, temporary noise barrier can be installed to block the direct line-of-sight.
- Residences in the vicinity of the school should be notified before construction starts.

It is assumed that the contractor would follow SMC to limit the noise levels less than 80 dBA as measured from the property line of the real property of another person or at a distance of 50 feet from the construction or maintenance equipment making the sound, whichever is greater. Therefore, the impact would be considered less than significant.

## **References**

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