September 2024

West Seattle Link Extension

Final Environmental Impact Statement

HISTORIC AND ARCHAEOLOGICAL RESOURCES TECHNICAL REPORT

Appendix N.5

SOUNDTRANSIT

U.S. Department of Transportation
Federal Transit Administration

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Appendix N.5
Historic and Archaeological Resources Technical Report

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Appendix N.5
West Seattle Link Extension
Historic and Archaeological Resources Technical Report

September 2024

Sound Transit

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Acronyms and Abbreviations

Acronym	Definition
Advisory Council	Advisory Council on Historic Preservation
EIS	Environmental Impact Statement
FTA	Federal Transit Administration
I.D.	identification
LiDAR	light detection and ranging
M.O.S.	minimum operable segment
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act of 1969
N.H.P.A.	National Historic Preservation Act
Section 106	Section 106 of the National Historic Preservation Act
SEPA	State Environmental Policy Act
WISAARD	Washington Information System for Architectural and Archaeological Records Data
WSBLE	West Seattle and Ballard Link Extensions

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1 INTRODUCTION

1.1 Overview

Central Puget Sound Regional Transit Authority (Sound Transit) is proposing to expand Link light rail transit service from SODO to West Seattle. The West Seattle Link Extension Project (the project) is a 4.1-mile corridor in the city of Seattle in King County, Washington, the most densely populated county of the Puget Sound region (Figure 1-1). The project would include stations at SODO, Delridge, Avalon, and Alaska Junction.

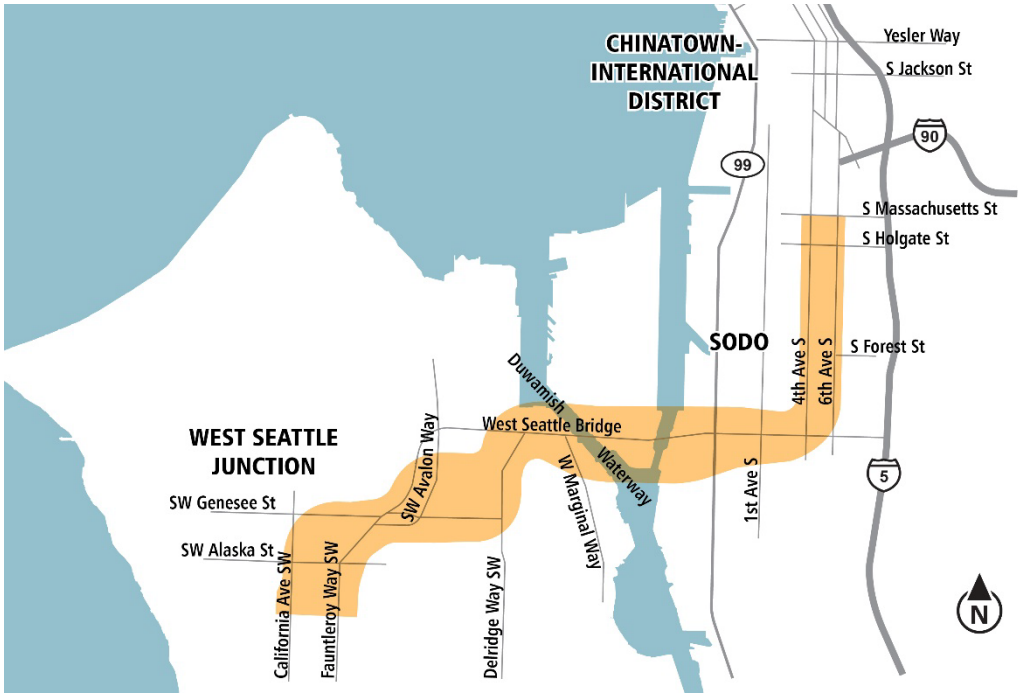
The project is part of the Sound Transit 3 Plan of regional transit system investments, funding for which was approved by voters in the region in 2016. Sound Transit and the Federal Transit Administration (FTA) are preparing this Final Environmental Impact Statement (EIS) for the project. The EIS is a joint National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) document. FTA is the lead federal agency under NEPA, and Sound Transit is the lead agency for SEPA.

The Draft EIS published in January 2022 evaluated both the West Seattle Link Extension and the Ballard Link Extension together as one West Seattle and Ballard Link Extensions (WSBLE) Project. The extensions were evaluated together in the WSBLE Draft EIS because of their location, schedule, and review efficiencies for partner agencies.

In July 2022, the Sound Transit Board directed that further studies be prepared for the Ballard Link Extension, to evaluate additional station options and other refinements (Motion M2022-57). Some of these project options and refinements require additional conceptual engineering and environmental review. Rather than delay completion of the environmental review process for the West Seattle Link Extension while additional review is conducted for the Ballard Link Extension, Sound Transit and FTA have decided to move forward under separate environmental reviews for each extension.

As described in the WSBLE Draft EIS, the two extensions will operate as separate lines, and the extensions are stand alone projects with independent utility. Proceeding with separate environmental review processes for each extension enables Sound Transit and FTA to minimize delay in delivering the West Seattle Link Extension while further analysis is undertaken on the Ballard Link Extension. Accordingly, this Final EIS is for the West Seattle Link Extension only. The Ballard Link Extension will undergo separate environmental review, building on the analysis that has already been completed.

Figure 1-1. West Seattle Link Extension Project Corridor



The West Seattle Link Extension would provide fast, frequent, and reliable light rail in Seattle and connect dense residential and job centers throughout the Puget Sound region. The Puget Sound Regional Council (the regional metropolitan planning organization) and the City of Seattle have designated the following Manufacturing/Industrial Center and urban village in the project corridor:

- **Manufacturing/Industrial Center.** The project corridor includes the Duwamish Manufacturing/ Industrial Center. SODO Station is in the Duwamish Manufacturing/Industrial Center.
- **Urban Village.** West Seattle Junction is a neighborhood in the project corridor designated by the City of Seattle as an urban village. The Alaska Junction and Avalon stations are in the West Seattle Junction Urban Village.

Puget Sound Regional Council

Puget Sound Regional Council, the regional metropolitan planning organization, develops policies and coordinates decisions about regional growth, transportation, and economic development planning within King, Kitsap, Pierce, and Snohomish counties. Puget Sound Regional Council is composed of over 80 jurisdictions, including all four counties; cities and towns; ports; state and local transportation agencies; and tribal governments within the region.

These designations indicate that these areas will continue to increase in residential and/or employment density over the next 30 years.

Existing local transit connections in the project corridor include bus and light rail. The King County Metro Transit (Metro) RapidRide C bus line currently provides service between West Seattle, Downtown Seattle, and South Lake Union. The RapidRide H bus line provides service between Burien and Downtown Seattle via Delridge. Other local bus service also operates in the project corridor.

Regional transit service in the project corridor includes regional bus service, ferry service, light rail, Sounder commuter rail, and Amtrak passenger rail service. Light rail currently operates

between the Angle Lake Station in the city of SeaTac and Northgate Station in Seattle, traveling through the Downtown Seattle Transit Tunnel. There is an existing light rail station in SODO in the West Seattle Link Extension Corridor.

Extensions of light rail are under construction north to Lynnwood, east to Bellevue and Redmond, and south to Federal Way, all of which are anticipated to be operational by 2026. Additional planned light rail extensions would continue south to the Tacoma Dome, expected to begin service in 2035, and north to Everett, planned to begin service between 2037 and 2041. The Ballard Link Extension is scheduled to begin service between SODO and Ballard in 2039. The West Seattle Link Extension is scheduled to open in 2032 and would include a new SODO station where riders to and from West Seattle could transfer to the existing SODO station and light rail system until the Ballard Link Extension begins operation. The Ballard Link Extension would permanently connect the West Seattle Link Extension to the existing 1 Line, allowing riders to continue north to Everett. Figure 1-2 shows the full system planned for operation in 2042 under the target schedule. Table 1-1 lists the project Build Alternatives.

Figure 1-2. Link Light Rail System Expansion

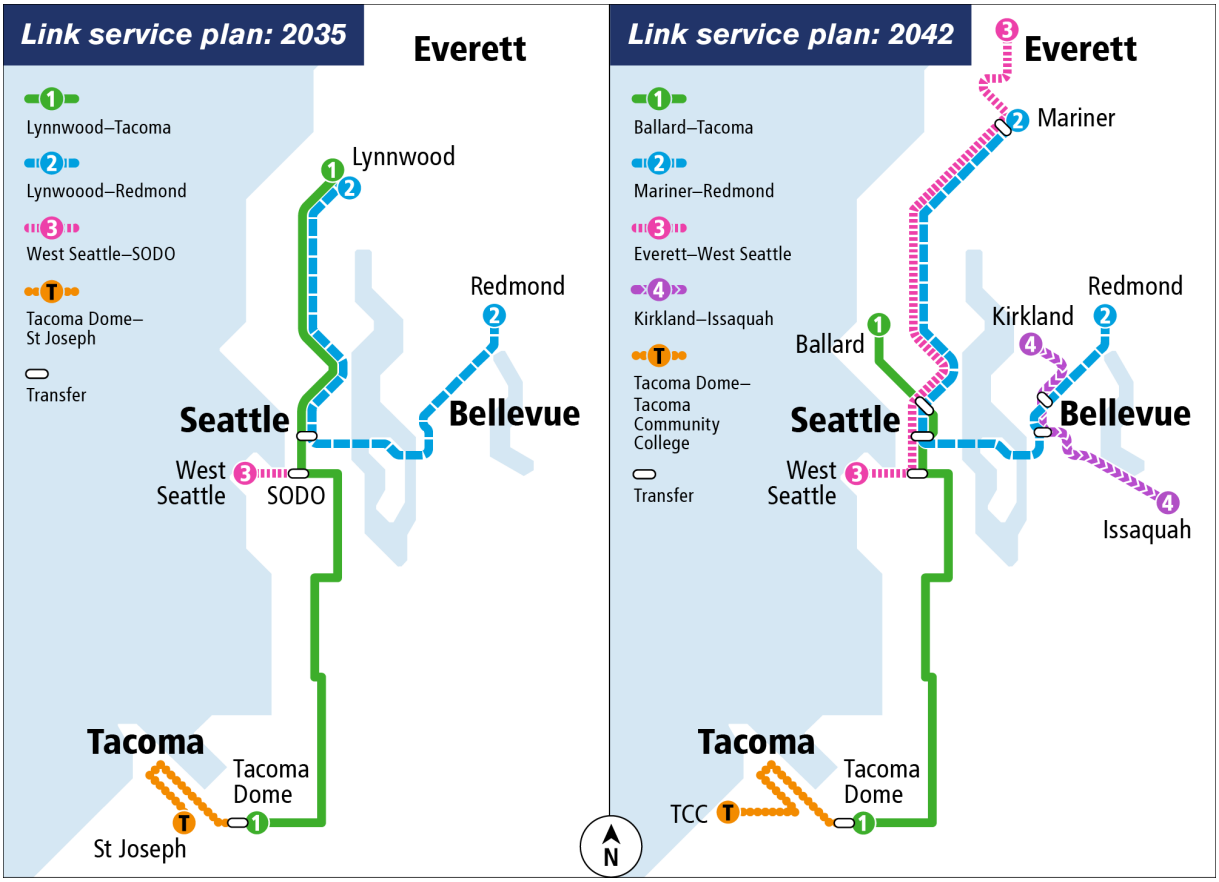


Table 1-1. Summary of West Seattle Link Extension Build Alternatives

Segment	Alternative or Design Option	Abbreviation	Stations (and Station Profile)	Connections
SODO	**Preferred At-Grade Lander Access Station Option**	**SODO-1c**	**SODO (At-Grade)**	**All Duwamish Segment alternatives.**
SODO	At-Grade Alternative	SODO-1a	SODO(At-Grade)	All Duwamish Segment alternatives.
SODO	At-Grade South Station Option	SODO-1b	SODO (At-Grade)	All Duwamish Segment alternatives.
SODO	Mixed Profile Alternative	SODO-2	SODO (Elevated)	All Duwamish Segment alternatives.
Duwamish (DUW)	**Preferred South Crossing Alternative**	**DUW-1a**	**None**	**All SODO Segment alternatives. All Delridge Segment alternatives.**
Duwamish (DUW)	South Crossing South Edge Crossing Alignment Option	DUW-1b	None	All SODO Segment alternatives. All Delridge Segment alternatives.
Duwamish (DUW)	North Crossing Alternative	DUW-2	None	All SODO Segment alternatives. All Delridge Segment alternatives.
Delridge (DEL)	**Preferred Andover Street Station Lower Height South Alignment Option**	**DEL-6b**	**Delridge (Elevated)**	**All Duwamish Segment alternatives. Connects to WSJ-5a and WSJ-5b.**
Delridge (DEL)	Dakota Street Station Alternative	DEL-1a	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-1, WSJ-2, and WSJ-4.
Delridge (DEL)	Dakota Street Station North Alignment Option	DEL-1b	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-1, WSJ-2, and WSJ-4.
Delridge (DEL)	Dakota Street Station Lower Height Alternative	DEL-2a	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-3a and WSJ-3b.
Delridge (DEL)	Dakota Street Station Lower Height North Alignment Option	DEL-2b	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-3a and WSJ-3b.
Delridge (DEL)	Delridge Way Station Alternative	DEL-3	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-1, WSJ-2, and WSJ-4.
Delridge (DEL)	Delridge Way Station Lower Height Alternative	DEL-4	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-3a and WSJ-3b.
Delridge (DEL)	Andover Street Station Alternative	DEL-5	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-1, WSJ-2, and WSJ-4.

Segment	Alternative or Design Option	Abbreviation	Stations (and Station Profile)	Connections
Delridge (DEL)	Andover Street Station Lower Height Alternative	DEL-6a	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-5a and WSJ-5b.
Delridge (DEL)	Andover Street Station Lower Height No Avalon Station Tunnel Connection Alternative	DEL-7	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-6.
West Seattle Junction (WSJ)	**Preferred Medium Tunnel 41st Avenue Station West Entrance Station Option**	**WSJ-5b**	**Avalon (Retained Cut), Alaska Junction (Tunnel)**	**Connects to DEL-6a and DEL-6b.**
West Seattle Junction (WSJ)	Elevated 41st/42nd Avenue Station Alternative	WSJ-1	Avalon (Elevated), Alaska Junction (Elevated)	Connects to DEL-1a, DEL-1b, DEL-3, and DEL-5.
West Seattle Junction (WSJ)	Elevated Fauntleroy Way Station Alternative	WSJ-2	Avalon (Elevated), Alaska Junction (Elevated)	Connects to DEL-1a, DEL-1b, DEL-3, and DEL-5.
West Seattle Junction (WSJ)	Tunnel 41st Avenue Station Alternative	WSJ-3a	Avalon (Tunnel), Alaska Junction (Tunnel)	Connects to DEL-2a, DEL-2b, and DEL-4.
West Seattle Junction (WSJ)	Tunnel 42nd Avenue Station Option	WSJ-3b	Avalon (Tunnel), Alaska Junction (Tunnel)	Connects to DEL-2a, DEL-2b, and DEL-4.
West Seattle Junction (WSJ)	Short Tunnel 41st Avenue Station Alternative	WSJ-4	Avalon (Elevated), Alaska Junction (Tunnel)	Connects to DEL-1a, DEL-1b, DEL-3, and DEL-5.
West Seattle Junction (WSJ)	Medium Tunnel 41st Avenue Station Alternative	WSJ-5a	Avalon (Retained Cut), Alaska Junction (Tunnel)	Connects to DEL-6a and DEL-6b.
West Seattle Junction (WSJ)	No Avalon Station Tunnel Alternative	WSJ-6	Alaska Junction (Tunnel)	Connects to DEL-7.

1.2 Project Description

Chapter 2 of the Final EIS, Alternatives Considered, provides an extensive overview of the project elements. This section of the cultural resources evaluation provides a brief overview of the project.

The West Seattle Link Extension would travel south from the SODO Station across South Lander Street either at-grade or on an elevated guideway and would continue south from south of South Lander Street toward South Spokane Street on an elevated guideway. In the vicinity of South Spokane Street, it would turn west on an elevated guideway either on the north or south side of the West Seattle Bridge, where it would cross the Duwamish Waterway (also known as the Duwamish River) on a light-rail-only, high-level fixed bridge structure. On the west side of the Duwamish Waterway, the guideway would remain mostly elevated to the west side of the Delridge valley. In the West Seattle Junction area, the guideway could be elevated or below ground. Up to three stations would be constructed in West Seattle: Delridge, Avalon, and Alaska Junction. The Delridge Station would be elevated, and the Avalon and Alaska Junction stations could be elevated or below ground. There is one alternative in West Seattle that does not include the Avalon Station. This alternative was added for study at the direction of the Sound Transit Board as a potential cost-savings measure (Motion M2022-57).

Segment-level project elements are described below. For greater detail on segment-level project elements, see the discussion in Section 2.1.3, Build Alternatives and Design Options, of the Final EIS.

1.2.1 SODO Segment

The SODO Segment includes the area between approximately South Massachusetts Street and South Forest Street in the SODO neighborhood. The SODO Station is the only station proposed in this segment. There is an existing SODO light rail station, and a new SODO station is proposed as part of the project. The new SODO Station would provide a transfer point to/from the 1 Line (future Ballard to Tacoma light rail line) via the existing SODO Station, and the two stations would therefore function as one SODO Station. One alternative and one design option include the relocation of the existing SODO Station. All SODO alternatives and options include relocation of a 230-kilovolt power line from the SODO Busway to 6th Avenue South between South Massachusetts Street and the Duwamish Segment boundary at South Forest Street.

1.2.1.1 Preferred Alternative

Preferred At-Grade Lander Access Station Option (SODO-1c)

Preferred Option SODO-1c is a refinement of the Draft EIS Preferred Alternative SODO-1a staggered configuration. It reflects Sound Transit Board direction in Motion 2022-57, which identifies the preferred alternative to explore opportunities to enhance access from the station platform to South Lander Street. Preferred Option SODO-1c would be similar to Alternative SODO-1a except for the station access. Heading south, Preferred Option SODO-1c would begin north of the existing SODO Station and travel at-grade west of and parallel to the existing Link light rail line in the SODO Busway. Preferred Option SODO-1c would continue south at grade under South Lander Street, which would be reconstructed as an overpass of the light rail tracks. The light rail tracks would then transition to an elevated guideway; buses would be displaced from the SODO Busway. The height of the guideway would range between a retained cut and approximately 20 feet high and would mostly be at grade.

The new SODO Station would be at-grade, immediately west of the existing SODO Station, and north of South Lander Street. The top of the station structure would be approximately 40 feet high. Station platforms would be side platforms, one of which would be shared between the future northbound connection of the project into the existing downtown tunnel and the existing southbound platform on the 1 Line to SeaTac, continuing to Federal Way (2026) and Tacoma (2035). Preferred Option SODO-1c has a staggered station configuration that was developed in order to avoid property owned by the United States Postal Service at 4th Avenue South and South Lander Street. This property is the location of the Carrier Annex and Distribution Center/Terminal Post Office (Carrier Annex/Terminal Post Office). The station design features a narrowed center platform and staggered side platforms, with the southbound platform shifted slightly north so that it is not on the Carrier Annex/Terminal Post Office property. The existing driveway at the Carrier Annex/Terminal Post Office facility's southern access point would be connected under the new South Lander Street overpass to 4th Avenue South, which would then maintain access to South Lander Street.

The existing at-grade pedestrian crossing of the light rail tracks at SODO Station would be closed, and a new pedestrian grade-separated crossing of both existing and new tracks would be used to access both stations. The station would not include the South Stacy Street cul-de-sac access to the west that is included in Alternative SODO-1a, and instead would include an access point at South Lander Street. Access to 4th Avenue South would occur via South Lander Street. A new bus turnaround would be created from 6th Avenue South, east of the station. The SODO Trail would be relocated east of the station area, adjacent to the existing light rail line.

1.2.1.2 Other Build Alternatives and Design Options

At-Grade Alternative (SODO-1a)

Alternative SODO-1a is a refinement to the Alternative SODO-1a in the Draft EIS. It includes the staggered station configuration described in the Draft EIS as the base alternative. Heading south, Alternative SODO-1a would begin north of the existing SODO Station and travel at-grade west of and parallel to the existing Link light rail line in the SODO Busway. The height of the guideway would range between a retained-cut and approximately 20 feet high and would mostly be at-grade.

The new SODO Station on the project would be at-grade, immediately west of the existing SODO Station, north of South Lander Street. The top of the station structure would be approximately 40 feet high. Station platforms would be side platforms, one of which would be shared between the future northbound connection of the project into the existing downtown tunnel and existing southbound platform on the existing light rail line to SeaTac, continuing to Federal Way (2026) and Tacoma (2035). Alternative SODO-1a has a staggered station configuration that was developed in order to avoid property owned by the United States Postal Service at 4th Avenue South and South Lander Street. This property is the location of the Carrier Annex and Distribution Center/Terminal Post Office (Carrier Annex/Terminal Post Office). The station design features a narrowed center platform and staggered side platforms, with the southbound platform shifted slightly north so that it is not on the Carrier Annex/Terminal Post Office property. The existing driveway at the Carrier Annex/Terminal Post Office facility's southern access point would be connected under the new South Lander Street overpass to 4th Avenue South, which then maintains access to South Lander Street.

The existing at-grade pedestrian crossing of the light rail tracks at SODO Station would be closed, and a new grade-separated pedestrian crossing of both existing and new tracks would be used to access both stations. South Stacy Street would be extended from 4th Avenue South

to a cul-de-sac on the west side of the station. A new bus turnaround would be created from 6th Avenue South, east of the station. The SODO Trail would be relocated east of the station area, adjacent to the existing light rail line.

This alternative would continue south at-grade under South Lander Street, which would be reconstructed as an overpass of the light rail tracks. The overpass would remove the need for traffic to stop for light rail trains, the frequency of which would increase with the combination of both the existing and new light rail lines. The light rail would transition to an elevated guideway within the SODO Busway south of South Lander Street. Buses would be displaced from the SODO Busway.

At-Grade South Station Option (SODO-1b)

Option SODO-1b would be similar to Alternative SODO-1a except for the SODO Station. A new at-grade station on the project would be west of and approximately 200 feet south of the existing SODO Station, just north of South Lander Street. The top of the station structure would be approximately 40 feet high. The existing SODO Station would be relocated 200 feet south of its current location to be next to the new SODO Station. Pedestrian access would be from a new South Lander Street overcrossing. Station platforms would be side platforms, one of which would be shared between the future northbound connection of the project into the existing downtown tunnel and the existing southbound platform on the existing light rail line to SeaTac, continuing to Federal Way (2026) and Tacoma (2035). A new bus turnaround would be created off 4th Avenue South, west of the station. As with Alternative SODO-1a, buses would be displaced from the SODO Busway.

Mixed Profile Alternative (SODO-2)

Alternative SODO-2 for the project would range between ground level and approximately 50 feet high. It would begin at-grade north of the existing SODO Station, west of and parallel to the existing Link light rail line in the existing SODO Busway. At South Walker Street, the alignment would transition to an elevated profile and would continue south over South Lander Street. The SODO Busway would be relocated to the west of the new rail line and new station and would be operational for buses after construction.

A new SODO Station on the project would be in an elevated profile north of South Lander Street. The top of the station structure would be approximately 70 feet high. Because this alternative would be elevated over South Lander Street, the street would remain as it is today, with a gated at-grade crossing of the existing light rail line. The existing SODO Station would be relocated as described for Option SODO-1b) and would be at-grade adjacent to the new elevated station. Pedestrian access would be on the north side of South Lander Street and from 4th Avenue South and 6th Avenue South. A new pedestrian grade-separated crossing of both existing and new tracks would be used to access both the new and relocated station. The SODO Trail would be relocated east of the station area, adjacent to the existing light rail line.

1.2.2 Duwamish Segment

The Duwamish Segment includes the area between South Forest Street in the SODO neighborhood and the intersection of Southwest Charlestown Street and Delridge Way Southwest in the North Delridge neighborhood. This segment does not include a station but does include a connection to the existing Operations and Maintenance Facility Central. All Duwamish Segment alternatives and options include relocation of a 230-kilovolt power line starting at the Duwamish Segment northern boundary at South Forest Street. The power line would be relocated from the SODO Busway to 6th Avenue South and Diagonal Avenue South

or across the Department of Highways District No. 1 property to connect to 5th Avenue South. Either relocation route would lead to the Seattle City Light electrical substation south of South Spokane Street. The transmission line itself does not meet the historic age criteria and was not surveyed and inventoried during this investigation.

1.2.2.1 Preferred Alternative

Preferred South Crossing Alternative (DUW-1a)

Preferred Alternative DUW-1a would continue south from South Forest Street along the west side of the existing light rail line on an elevated guideway, past the Operations and Maintenance Facility Central before heading southwest to cross over to the south side of the Spokane Street Bridge and the West Seattle Bridge.

This alternative would continue west and to the south side of the West Seattle Bridge. It would cross State Route 99 and would gradually increase in height as it travels west, because light rail cannot travel on grades as steep as automobiles can. The alternative would cross over the East Waterway, Harbor Island, and the West Waterway on a fixed, light-rail-only bridge. The height of the guideway in this segment would range between a belowground retained-cut and up to approximately 170 feet high. It would be at its highest when crossing the West Waterway, where it would be at approximately the same height as the West Seattle Bridge.

The bridge over the West Waterway would have a clearance of approximately 140 feet over the navigation channel.

West of the Duwamish Waterway crossing, this alternative would cross the northern edge of Pigeon Point in a combination of elevated guideway and retained-cut and fill before turning southwest on an elevated guideway that crosses Delridge Way Southwest.

A connection to the Operations and Maintenance Facility Central would be provided from tracks between South Forest Street and South Spokane Street. The northbound and southbound access tracks would be parallel to each other and would span over the BNSF Railway tracks and 6th Avenue South, then transition to at-grade to enter the operations and maintenance facility.

1.2.2.2 Other Build Alternatives and Design Options

South Crossing South Edge Crossing Alignment Option (DUW-1b)

Option DUW-1b would be similar to Alternative DUW-1a except it would cross the East and West Waterways on the south edge of Harbor Island. The height of this option would be the same as Alternative DUW-1a.

North Crossing Alternative (DUW-2)

Alternative DUW-2 would continue south from South Forest Street along the west side of the existing light rail line on an elevated guideway before heading west on a new fixed, light -rail - only bridge north of the existing West Seattle Bridge. The height of the guideway would range between approximately 30 feet and 170 feet high. It would be at its highest when crossing the West Waterway. The bridge over the West Waterway would have a clearance of approximately 140 feet over the navigation channel.

Where it crosses State Route 99, the alignment would gradually increase in height as it travels west. At the West Waterway, the bridge would be about the same height as the West Seattle Bridge. After crossing the West Waterway, the alternative would cross over the West Seattle Bridge to run south on the west side of Delridge Way Southwest.

A connection to the Operations and Maintenance Facility Central would be provided from north and south access tracks between South Forest Street and South Spokane Street. Unlike the south crossing alternative and option, the access tracks would not be parallel to each other because of the curve of the main alignment and the distance to the operations and maintenance facility. The northern access tracks south of South Forest Street would span 6th Avenue South and then transition to at-grade to enter the operations and maintenance facility. The southern access tracks would be elevated north of South Spokane Street and continue east from about 1st Avenue South to 6th Avenue South, and then transition to at-grade to enter the operations and maintenance facility.

1.2.3 Delridge Segment

The Delridge Segment includes the area between Southwest Charlestown Street and a boundary line between 31st Avenue Southwest and Fauntleroy Way Southwest. This segment includes one station, the Delridge Station. Some alternatives in this segment would only connect to tunnel alternatives in the adjacent West Seattle Junction Segment.

1.2.3.1 Preferred Alternative

Preferred Andover Street Station Lower Height South Alignment Option (DEL-6b)

Preferred Option DEL-6b is a refinement of Alternative DEL-6 (now known as Alternative DEL-6a) developed in response to public and agency comments and Sound Transit Board direction in Motion M2022-57 to study refinement options to enhance station access, prioritize an integrated and well-designed transfer experience from buses to light rail, and address concerns over potential displacements of organizations serving low-income populations and communities of color.

Preferred Option DEL-6b would be on an elevated guideway on the west side of Delridge Way Southwest, south of Southwest Andover Street. The height of the guideway would range between approximately 40 feet and 80 feet high. The alignment would travel west along the north side of Southwest Yancy Street on an elevated guideway, then cross Southwest Avalon Way in the vicinity of Southwest Yancy Street. Preferred Option DEL-6b would cross 32nd Avenue Southwest at-grade, resulting in the closure of a portion of 32nd Avenue Southwest and the construction of cul-de-sacs on the street to the north and south. Preferred Option DEL-6b would be similar to Alternative DEL-6a as it continues south along the east side of the West Seattle Bridge connection to Fauntleroy Way Southwest.

The station would be elevated, north of Southwest Andover Street and west of Delridge Way Southwest, in a northeast-southwest orientation. The top of the station structure would be approximately 70 feet high. This design option includes roadway improvements at the intersection of Delridge Way Southwest and 23rd Avenue Southwest to allow vehicle access and pedestrian crossings into the station area and Nucor Steel. Southwest Charlestown Street would be reconfigured west of Delridge Way Southwest and north of Southwest Andover Street to provide a dedicated circulation pathway for buses separate from freight and general purpose passenger vehicles.

1.2.3.2 Other Build Alternatives and Design Options

Dakota Street Station Alternative (DEL-1a)

Alternative DEL-1a would follow Delridge Way Southwest south on an elevated guideway to an elevated station. The guideway would be on the west side of Delridge Way Southwest except for in the vicinity of Southwest Andover Street, where it would be over Delridge Way Southwest.

The height of the guideway would range between approximately 70 feet and 150 feet high. The highest portion would be where the alignment climbs from the station in the Delridge valley up to the West Seattle Junction.

The station would be elevated between Delridge Way Southwest and 26th Avenue Southwest, south of Southwest Dakota Street, and oriented southwest-northeast. The top of the station structure would be approximately 110 feet high.

South of the station, the alternative would curve west and cross to the south side of the Southwest Genesee Street right-of-way, north of the West Seattle Golf Course. The guideway would continue west along the south edge of Southwest Genesee Street and connect to an elevated guideway in the West Seattle Junction Segment.

Dakota Street Station North Alignment Option (DEL-1b)

Option DEL-1b would be similar to Alternative DEL-1a except it would be within the Southwest Genesee Street right-of-way between the West Seattle Golf Course and the Longfellow Creek Natural Area, then shift to the north side of Southwest Genesee Street west of 28th Avenue Southwest. The height of the guideway would range between approximately 60 feet and 150 feet high. The highest portion would be where the alignment climbs from the station in the Delridge valley up to the West Seattle Junction. The top of the station structure would be approximately 110 feet high.

Dakota Street Station Lower Height Alternative (DEL-2a)

Alternative DEL-2a would follow the same alignment as Alternative DEL-1a to the station but would be at a lower elevation to connect to tunnel alternatives in the West Seattle Junction Segment. The height of the guideway would range between a tunnel and approximately 60 feet high. The top of the station structure would be approximately 60 feet high.

To accommodate the station, 25th Avenue Southwest would be permanently closed between Southwest Dakota Street and Southwest Genesee Street. From the station, the alternative would continue south to cross Southwest Genesee Street and would run along the northern edge of the West Seattle Golf Course. A tunnel portal for connecting to tunnel alternatives in the West Seattle Junction Segment would be in the northwest corner of the West Seattle Golf Course, south of Southwest Genesee Street and east of 31st Avenue Southwest.

Dakota Street Station Lower Height North Alignment Option (DEL-2b)

Option DEL-2b would be similar to Alternative DEL-2a, except it would shift to the north side of Southwest Genesee Street west of 28th Avenue Southwest. The height of the guideway would range between a tunnel and approximately 60 feet high. The top of the station structure would be approximately 60 feet high.

To accommodate the station, 25th Avenue Southwest would be permanently closed between Southwest Dakota Street and Southwest Genesee Street. Access to Southwest Genesee Street from 30th Avenue Southwest would be permanently closed with a turnaround at the south end of the road. The tunnel portal to enter a tunnel in the West Seattle Junction Segment would be north of Southwest Genesee Street, between Southwest Avalon Way and 30th Avenue Southwest.

Delridge Way Station Alternative (DEL-3)

Alternative DEL-3 would follow Delridge Way Southwest south on an elevated guideway to the Delridge Station. The station would be in the middle of Delridge Way Southwest, north of Southwest Dakota Street, and the top of the station structure would be approximately 90 feet high. Station access would be from adjacent streets, including both sides of Delridge Way Southwest.

South of the station, the alternative would curve west and cross to the south side of the Southwest Genesee Street right-of-way, north of the West Seattle Golf Course. The guideway would continue west along the south edge of Southwest Genesee Street and connect to an elevated guideway in the West Seattle Junction Segment. The height of the guideway would range between approximately 50 feet and 150 feet high. The highest portion would be where the alignment climbs from the station in the Delridge valley up to the West Seattle Junction.

Delridge Way Station Lower Height Alternative (DEL-4)

Alternative DEL-4 would follow the same alignment as Alternative DEL-3 to the station but would be at a lower elevation to connect to tunnel alternatives in the West Seattle Junction Segment. The height of the guideway would range between a tunnel and approximately 60 feet high. The top of the station would be approximately 90 feet high. Station access would be the same as Alternative DEL-3.

From the station, the alternative would continue south on the west side of Delridge Way Southwest and then turn west at Southwest Genesee Street, crossing Southwest Genesee Street to run along the northern edge of the West Seattle Golf Course. A tunnel portal for connecting to tunnel alternatives in the West Seattle Junction Segment would be in the northwest corner of the West Seattle Golf Course, south of Southwest Genesee Street and east of 31st Avenue Southwest.

Andover Street Station Alternative (DEL-5)

Alternative DEL-5 would be on an elevated guideway on the west side of Delridge Way Southwest, north of Southwest Andover Street. The height of the guideway would range between approximately 50 feet and 130 feet high. The alignment would travel west along Southwest Andover Street on an elevated guideway then south along Southwest Avalon Way in the vicinity of Southwest Yancy Street. The guideway would continue south along Southwest Avalon Way and turn west on the north side of Southwest Genesee Street. The highest portion of the guideway would be where the alignment climbs from the station in the Delridge valley up to the West Seattle Junction.

The station would be elevated, north of Southwest Andover Street and west of Delridge Way Southwest, in a northeast-southwest orientation. The top of the station structure would be approximately 100 feet high.

Andover Street Station Lower Height Alternative (DEL-6a)

Alternative DEL-6a (previously Alternative DEL-6 in the Draft EIS)_would be similar to Alternative DEL-5 up to and including the station. The top of the station structure would be approximately 90 feet high. The height of the guideway would range between a retained-cut and approximately 120 feet high. The elevated guideway would cross over Southwest Avalon Way and then turn south in the vicinity of 32nd Avenue Southwest to travel south along the east side of the West Seattle Bridge connection to Fauntleroy Way Southwest, transitioning from elevated into a retained cut. The alignment would turn west in the vicinity of Southwest Genesee Street in a retained cut, passing below Southwest Genesee Street.

Andover Street Station Lower Height No Avalon Station Tunnel Connection (DEL-7)

Alternative DEL-7 is included at the direction of the Sound Transit Board (Motion M2022-57) to study elimination of the Avalon Station as a potential cost-savings measure. This refinement would be similar to Preferred Option DEL-6b up to and including Delridge Station and reflects a more direct alignment between the Delridge Station and the West Seattle Junction Station with the elimination of an Avalon Station in the West Seattle Junction Segment. The top of the station structure would be approximately 70 feet high. The height of the guideway would range between approximately 30 feet and 80 feet. South of the station, the elevated guideway would continue west along Southwest Yancy Street and cross to the south side of Southwest Andover Street in an elevated guideway. A tunnel portal leading to Alternative WSJ-6 in the West Seattle Junction Segment would be in the vicinity of 32nd Avenue Southwest, east of the West Seattle Bridge. 32nd Avenue Southwest would no longer connect to Southwest Andover Street, but would end in a cul-de-sac south of the tunnel portal. The tunnel would continue west under the West Seattle Bridge towards 35th Avenue Southwest.

1.2.4 West Seattle Junction Segment

The West Seattle Junction Segment includes the area generally west of 31st Avenue Southwest, between Southwest Charleston Street, and Southwest Hudson Street. Most alternatives and design options would have two stations: Avalon and Alaska Junction. One alternative would have only the Alaska Junction Station.

1.2.4.1 Preferred Alternative

Preferred Medium Tunnel 41st Avenue Station West Entrance Station Option (WSJ-5b)

Preferred Option WSJ-5b is a refinement of Alternative WSJ-5 analyzed in the Draft EIS, and it was refined based on the Sound Transit Board's direction to explore an option to shift a station entrance to 42nd Avenue Southwest at the Alaska Junction Station to improve access to the Alaska Junction. Preferred Option WSJ-5b begins in a retained cut south of Southwest Yancy Street and follows the east side of the West Seattle Bridge connection to Fauntleroy Way Southwest. Southwest Genesee Street would be permanently closed approaching 35th Avenue Southwest. This alignment enters a tunnel at Southwest Genesee Street and 37th Avenue Southwest. The alignment then curves to the southwest between 37th Avenue Southwest to 41st Avenue Southwest. It terminates at Southwest Hudson Street, with tail tracks in a north-south orientation under 41st Avenue Southwest. Stations would be located as follows:

- **Avalon Station** – Avalon Station would be in a lidded retained cut south of Southwest Genesee Street, beneath 35th Avenue Southwest with the top of the station structure approximately 30 feet above the existing ground surface. Station entrances would be on either side of 35th Avenue Southwest.
- **Alaska Junction Station** – The Alaska Junction Station would be in a tunnel beneath 41st Avenue Southwest and Southwest Alaska Street. Station entrances would be on either side of Southwest Alaska Street. Preferred Option WSJ-5b is a station option to Alternative WSJ-5a and would be the same as Alternative WSJ-5a, except the entrance south of Southwest Alaska Street would be on the west side of 41st Avenue Southwest, closer to the Alaska Junction. The entrance north of Southwest Alaska Street would not change.

1.2.4.2 Other Build Alternatives and Design Options

Elevated 41st/42nd Avenue Station Alternative (WSJ-1)

Alternative WSJ-1 would be elevated along the south side of Southwest Genesee Street between 31st Avenue Southwest and Fauntleroy Way Southwest. The height of the guideway would range between approximately 30 feet and 80 feet high. The alternative would turn southwest to the west side of Fauntleroy Way Southwest. The guideway would turn south in the vicinity of 41st Avenue Southwest and Southwest Alaska Street and continue south to Southwest Hudson Street. The guideway would end on the west side of 42nd Avenue Southwest and would include tail tracks south of the Alaska Junction Station. Stations would be located as follows:

- **Avalon Station –** Avalon Station would be elevated along the south side of Southwest Genesee Street, east of 35th Avenue Southwest. The top of the station structure would depend on which alternative it connects with in the Delridge Segment but would be approximately 70 to 80 feet high.
- **Alaska Junction –** The Alaska Junction Station would be elevated between 41st Avenue Southwest and 42nd Avenue Southwest, south of Southwest Alaska Street. The top of the station structure would depend on which alternative it connects with in the Delridge Segment, but it would be approximately 70 to 80 feet high.

Elevated Fauntleroy Way Station Alternative (WSJ-2)

Alternative WSJ-2 would be elevated along the south side of Southwest Genesee Street between 31st Avenue Southwest and Fauntleroy Way Southwest. The height of the guideway would range between approximately 30 feet and 70 feet high.

The alignment would head southwest on Fauntleroy Way Southwest and continue along the west side of Fauntleroy Way Southwest. The guideway would cross to the east side of Fauntleroy Way Southwest south of Southwest Oregon Street.

Elevated tail tracks would begin south of the Alaska Junction Station and end within the Fauntleroy Way Southwest right-of-way just past Southwest Edmunds Street. Stations would be located as follows:

- **Avalon Station –** Avalon Station would be elevated along the south side of Southwest Genesee Street and east of 35th Avenue Southwest. The top of the station structure would depend on which alternative it connects with in the Delridge Segment, but it would be approximately 60 to 70 feet high.
- **Alaska Junction Station –** This station would be elevated southeast of Fauntleroy Way Southwest straddling Southwest Alaska Street. The top of the station structure would be approximately 60 feet high.

Tunnel 41st Avenue Station Alternative (WSJ-3a)

Alternative WSJ-3a would be in a tunnel under Southwest Genesee Street heading west from 31st Avenue Southwest then curve to the southwest between 37th Avenue Southwest and 41st Avenue Southwest. The tunnel would end in the vicinity of Southwest Hudson Street, with tail tracks in a north-south orientation under 41st Avenue Southwest. The guideway would be entirely in a tunnel. Stations would be located as follows:

- **Avalon Station –** The Avalon Station would be beneath Fauntleroy Way Southwest. Station entrances would be on the west side of Fauntleroy Way Southwest and on the east side of 35th Avenue Southwest.
- **Alaska Junction Station –** The Alaska Junction Station would be beneath 41st Avenue Southwest and Southwest Alaska Street. Station entrances would be on either side of Southwest Alaska Street along the east side of 41st Avenue Southwest.

Tunnel 42nd Avenue Station Option (WSJ-3b)

Option WSJ-3b would be the same as Alternative WSJ-3a, except the tunnel would extend to 42nd Avenue Southwest instead of 41st Avenue Southwest. The tunnel would end in the vicinity of Southwest Hudson Street, with tail tracks in a north-south orientation under 42nd Avenue Southwest. The Avalon Station would be the same as described for Alternative WSJ-3a. The Alaska Junction Station would be in a tunnel beneath 42nd Avenue Southwest and Southwest Alaska Street. Station entrances would be on either side of Southwest Alaska Street, with one on the east side and one on the west side of 42nd Avenue Southwest.

Short Tunnel 41st Avenue Station Alternative (WSJ-4)

Alternative WSJ-4 would be on elevated guideway along the south side of Southwest Genesee Street from 31st Avenue Southwest to the west side of Fauntleroy Way Southwest. It would continue along the west side of Fauntleroy Way Southwest on elevated guideway before transitioning to at-grade near 37th Avenue Southwest. 37th Avenue Southwest and 38th Avenue Southwest would be modified to end in a turnaround between Southwest Genesee Street and Fauntleroy Way Southwest. The guideway would turn west near Southwest Oregon Street and transition into a tunnel with a portal in the vicinity of Southwest Oregon Street and 38th Avenue Southwest. The tunnel would turn south and end south of Southwest Hudson Street, with tail tracks in a north-south orientation along and under 41st Avenue Southwest. The height of the guideway would range between a tunnel and approximately 40 feet high. Stations would be located as follows:

- **Avalon Station –** Avalon Station would be elevated along the south side of Southwest Genesee Street and east of 35th Avenue Southwest. The top of the station structure would be approximately 60 to 70 feet high.
- **Alaska Junction Station –** The Alaska Junction Station would be in a tunnel beneath 41st Avenue Southwest and south of Southwest Alaska Street. Station entrances would be on Southwest Alaska Street and Southwest Edmunds Street.

Medium Tunnel 41st Avenue Station Alternative (WSJ-5a)

Alternative WSJ-5a (previously WSJ-5 in the Draft EIS) would begin in a retained cut south of Southwest Yancy Street and follow the east side of the West Seattle Bridge connection to Fauntleroy Way Southwest. Southwest Genesee Street would be permanently closed approaching 35th Avenue Southwest. This alignment would enter a tunnel at Southwest Genesee Street and 37th Avenue Southwest. The alignment would then curve southwest west of 37th Avenue Southwest to 41st Avenue Southwest. It would terminate at Southwest Hudson Street, with tail tracks in a north-south orientation under 41st Avenue Southwest. Stations would be located as follows:

- **Avalon Station –** Avalon Station would be in a lidded retained cut south of Southwest Genesee Street, beneath 35th Avenue Southwest with the top of the station structure approximately 30 feet above the existing ground surface. Station entrances would be on either side of 35th Avenue Southwest.

- **Alaska Junction Station –** The Alaska Junction Station would be in a tunnel beneath 41st Avenue Southwest and Southwest Alaska Street. Station entrances would be on either side of Southwest Alaska Street along the east side of 41st Avenue Southwest.

No Avalon Station Tunnel (WSJ-6)

Alternative WSJ-6 is included at the direction of the Sound Transit Board (Motion M2022-57) to study elimination of the Avalon Station as a cost-savings measure. Alternative WSJ-6 would continue in a tunnel from where it would connect to Alternative DEL-7 in the Delridge Segment, at 35th Avenue Southwest between Southwest Andover Street and Southwest Dakota Street. The tunnel would curve southwest to 41st Avenue Southwest. It would terminate at Southwest Hudson Street, with tail tracks in a north-south orientation under 41st Avenue Southwest. The guideway would be entirely in a tunnel. This alternative would not include an Avalon Station. The station would be located as follows:

- **Alaska Junction Station –** The Alaska Junction Station would be same as the station described for WSJ-5a.

1.3 Purpose of Report

The intent of the Historic and Archaeological Resources Technical Report is to provide detailed information on the historic built environment, archaeological environment, and cultural resources in the vicinity of the construction of the project. In supplying technical information on the historic built environment as well as the archaeological environment, the document serves to assist the project in making an informed decision regarding potential project effects to these resources in compliance with applicable federal, state, and local laws and guidelines.

Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of their undertakings on historic properties (sites, districts, buildings, structures, or objects) that are listed in or eligible for listing in the National Register of Historic Places (National Register). These analyses are documented in this Historic and Archaeological Resources Technical Report that meets Section 106 and National Environmental Policy Act requirements.

The project is broken into smaller geographic areas called segments. The project has four segments (SODO, Duwamish, Delridge, and West Seattle Junction). Within each segment, individual project alternatives are examined for specific impacts to both built environment and archaeological resources.

Data for archaeological resources were derived from numerous sources, including recorded archaeological sites, previous cultural resources surveys in the region, historic and archival records and maps, and geographic and ethnographic sources. Because the project is in a highly developed area, archaeological fieldwork to date for this project has been limited to the archaeological monitoring of geotechnical boreholes drilled in support of project engineering and design. Additional archaeological investigation will be phased as the project progresses and will occur following property acquisitions and right-of-entry permissions.

Data for built environment resources are based on evaluation of more than 800 individual buildings and structures. Each of these resources was evaluated in the field and recorded on state of Washington Historic Property Inventory forms, which are stored in the statewide database known as the Washington Information System for Architectural and Archaeological Records Data (WISAARD). The survey examined and photographed built environment resources that were determined to have been built in or before 1980. Properties that were

surveyed and inventoried over 5 years prior to their date of survey for this project were photographed, and the WISAARD entries were updated and included in the survey. The results of this effort are presented in Section 9, Field Investigation Results.

The report is organized as follows:

- **Section 2, Regulatory Background,** provides an overview of national, state, and local regulations regarding cultural resources.
- **Section 3, Area of Potential Effects,** describes the project's area of potential effects.
- **Section 4, Environmental and Cultural Context,** provides an overview of the environmental and cultural context of the project corridor.
- **Section 5, Methods,** describes the methods used to conduct the archaeological and historic built environment evaluations.
- **Section 6, Section 106 Consultation,** provides an overview of agency and Tribal consultation to date.
- **Section 7, Archaeological Records Search,** summarizes the previously identified resources on file in WISAARD.
- **Section 8, Archaeological Research Design,** describes the archaeological objectives and expectations for the project.
- **Section 9, Field Investigation Results,** presents the results of the field investigations.
- **Section 10, Application of Criteria of Adverse Effect,** describes the project's effects to historic properties.
- **Section 11, Summary and Recommendations,** summarizes the report findings and recommends potential measures to avoid, minimize, or resolve adverse effects.
- **Section 12** lists the references cited in this report.

1.4 Key Personnel

This report was prepared in accordance with the Secretary of the Interior's Standards and Guidelines for the Identification of Historic Properties (*Federal Register* Volume 48, Issue 44716) by individuals who meet or exceed the Secretary of the Interior's Professional Qualifications Standards (Code of Federal Regulations Title 36, Part 61 [as amended and annotated]) and follows contemporary professional standards for the preparation of cultural resources reports. A complete list of principal contributors to this technical report is provided in Table 1-2.

Table 1-2. Key Personnel

Name	Qualifications	Roles and Responsibilities
Michael Chidley	Master of Arts, Senior Archaeologist	Senior Reviewer
Connie Walker Gray	Master of Urban Planning, Senior Architectural Historian	Principal Investigator, Built Environment
Matthew Sterner	Master of Arts, Senior Archaeologist	Principal Investigator, Archaeology
Michelle Yellin	Master of Urban Planning, Architectural Historian	Architectural Historian
Patrick Elliott	Master of Science, Archaeologist	Project Field Director, Archaeology
Christopher Bryant	Bachelor of Science, Geographic Information Systems Specialist	Geospatial Analysis and Map Production
Jessica Jones	Bachelor of Arts, Geographic Information Systems Specialist	Geographic Information Systems Specialist, Archaeologist
Patricia Ambacher	Master of Arts, Architectural Historian	Architectural Historian
Aisha Fike	Master of Arts, Architectural Historian	Architectural Historian

2 REGULATORY BACKGROUND

2.1 Federal Laws and Authorities

Cultural resources are protected by federal, state, and local laws, regulations, and guidelines. The two main federal laws are the National Historic Preservation Act (United States Code Title 54 Section 300101-307108) and the National Environmental Policy Act of 1969 (NEPA). The implementing regulation for Section 106 of the National Historic Preservation Act is the Protection of Historic Properties (Code of Federal Regulations Title 36, Part 800). Historic properties are defined as any prehistoric or historic district, site, building, structure, or object listed in or eligible for the National Register. Under the National Historic Preservation Act, a property possesses significance if it meets the National Register criteria listed in Code of Federal Regulations Title 36, Part 60.4 and retains sufficient integrity to convey that significance.

Section 106 gives equal consideration to historic properties listed in or determined eligible for listing in the National Register. The National Register Criteria for Evaluation (36 Code of Federal Regulations Part 63) are used to evaluate a historic property to determine whether it possesses historic significance, is of sufficient age, and retains sufficient integrity to convey any potential significance. A historic property can be eligible for the National Register either individually, as part of a historic district, or both. The significance of each historic property was evaluated in relation to the following National Register eligibility criteria:

- Criterion A – association with events that have made a significant contribution to broad patterns of history
- Criterion B – association with the life of a historically significant person
- Criterion C – embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction
- Criterion D – has yielded, or is likely to yield, information important in history or prehistory (this generally is understood to refer to archeological significance)

To be eligible for listing in the National Register, a property must be 50 years old, or, if it is less than 50 years old, possess exceptional significance. A property must also retain sufficient integrity to convey its significance.

Cultural resources must also be given consideration under NEPA, and the National Historic Preservation Act encourages maximum coordination with NEPA. NEPA establishes national policies and goals for the protection of the environment, including cultural resources. One of the mandates of NEPA is to “preserve important historic, cultural, and natural aspects of our national heritage” (Section 101 [United States Code Title 42, Section 4331]).

Section 4(f) of the United States Department of Transportation Act of 1966 also applies to historic properties and mandates that Department of Transportation agencies, including the FTA, cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historic sites unless there is no feasible and prudent alternative to the use of the land, and the action includes all possible planning to minimize the harm to the property resulting from use.

The project may be partially funded by FTA, and is defined as a federal undertaking. As such compliance with Section 106 of the National Historic Preservation Act (Code of Federal Regulations Title 36, Part 800) is required. The FTA will serve as the lead federal agency responsible for Section 106 compliance, including consultation, identification of historic

properties, evaluation of National Register eligibility, determination of adverse effects, and resolution of adverse effects. Historic properties are identified in consultation with the State Historic Preservation Officer, Tribes, and other consulting parties, and must qualify for listing in the National Register by meeting specific criteria and standards of integrity (Code of Federal Regulations Title 36, Part 60.4).

Under Section 106, an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Section 106 regulations require the federal agency (or agencies) to follow a process for satisfying the Section 106 requirements after a federal undertaking has been defined:

- Initiate Section 106 by consulting with the State Historic Preservation Officer and the federally recognized Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, and Confederated Tribes and Bands of the Yakama Nation. Sound Transit also coordinated with the non-federally recognized Duwamish Tribal Organization and Snohomish Tribe, as well as other interested parties. This consultation is ongoing throughout the Section 106 process.
- Identify and evaluate potential historic properties for National Register eligibility.
- Assess whether the project will affect historic properties, and whether effects will be adverse.
- Resolve adverse effects to historic properties through consultation.

Historic properties include sites, districts, buildings, structures, and objects. Some historic properties can also be Cultural Landscapes or Traditional Cultural Properties if they meet the applicable criteria in National Register Bulletins 18 and 38, respectively. The regulations also encourage coordination with the environmental review process required by other statutes, including NEPA and Section 4(f) of the United States Department of Transportation Act of 1966.

2.2 Washington State Regulations

Washington state regulations that pertain to cultural resources include the Washington State Environmental Policy Act (SEPA; Chapter 43.21C Revised Code of Washington) and the Washington Heritage Register (27.34.200 Revised Code of Washington) administered by the Washington State Department of Archaeology and Historic Preservation. Under SEPA, project effects on historic properties must be considered in weighing the overall effect of the project on the environment. SEPA requires the consideration of significant impacts on cultural and historic resources, requires that effects on cultural and historic resources be taken into account in the threshold determination process (Washington Administrative Code 197-11-330) and be considered in the final environmental impact statement (Washington Administrative Code 197-11-440), and stipulates that historic and cultural preservation is an element of the environment (Washington Administrative Code 197-11-444). The Washington Heritage Register functions within the state of Washington as the state-wide version of the National Register and follows similar criteria. It is administered by the Washington State Department of Archaeology and Historic Preservation and emphasizes local and statewide significance. Any building or site listed in the National Register is automatically listed in the Washington Heritage Register.

The Washington heritage register is an official listing of historically significant sites and properties found throughout the state. The Washington Heritage Register includes districts, sites, buildings, structures, and objects that have been identified and documented as being significant in local or state history, architecture, archaeology, engineering, or culture. The

program was established in 1971 as an alternative to the National Register. Listing in the Washington Heritage Register is strictly an honorary designation and raises public awareness about historic and cultural values.

Washington state laws include requirements related to archaeological sites. Revised Code of Washington 27.53 (Archaeological Sites and Resources) prohibits unpermitted disturbance of archaeological sites, defined as a geographic locality in Washington that contains archaeological objects. Revised Code of Washington 27.44 (Indian Graves and Records) and Revised Code of Washington 68.50 (Human Remains) require notification procedures and work stoppage in the event of a discovery of human remains. In addition, work will be conducted in accordance with Revised Code of Washington 76.09 (Confidentiality of Information).

2.3 City of Seattle

In addition to federal and state laws, the City of Seattle also has codes and ordinances that must be followed. The City of Seattle's Landmarks Preservation Ordinance (Seattle Municipal Code 25.12) states that in order to be eligible for landmark status a property must be at least 25 years old, possess integrity or the ability to convey its significance, and meet at least one of six criteria:

- Criterion A. It is the location of, or is associated in a significant way with, a historic event with a significant effect upon the community, City, state, or nation.
- Criterion B. It is associated in a significant way with the life of a person important in the history of the City, state, or nation.
- Criterion C. It is associated in a significant way with a significant aspect of the cultural, political, or economic heritage of the community, City, state or nation.
- Criterion D. It embodies the distinctive visible characteristics of an architectural style, or period, or a method of construction.
- Criterion E. It is an outstanding work of a designer or builder.
- Criterion F. Because of its prominence of spatial location, contrasts of siting, age, or scale, it is an easily identifiable visual feature of its neighborhood or the city and contributes to the distinctive quality or identity of such neighborhood or the City.

A Certificate of Approval is required prior to demolition of a Seattle Landmark or new construction in a historic district. Only the Seattle Landmarks Preservation Board can determine whether a property meets this threshold. A certificate of approval from the Board is required to alter or demolish a landmark. Greater detail regarding City of Seattle review of actions related to designated landmarks can be found at https://library.municode.com/wa/seattle/codes/municipal_code?nodeId=TIT25ENPRHIPR_CH25.12LAPR.

Seattle Municipal Code 25.05.675(H)) has specific policies regarding mitigation for impacts from projects adjacent to or across the street from designated City landmarks. According to the ordinance, when a project is proposed adjacent to or across the street from a designated site or structure, the project would be referred to the City's Historic Preservation Officer for an assessment of any adverse impacts on the designated landmark and for comments on possible mitigating measures. Measures may be required to ensure the compatibility of the proposed project with the color, material and architectural character of the designated landmark and to reduce impacts on the character of the landmark's site. Subject to the overview policy set forth in Section 25.05.665, measures may be required and are limited to the following: sympathetic façade treatment; sympathetic street treatment sympathetic design treatment; and

reconfiguration of the project and/or relocation of the project on the project site, that measures shall not include reductions in a project's gross floor area.[1]

On sites with potential archaeological significance, an assessment of the archaeological potential of the site may be required. Subject to the criteria of the overview policy set forth in Seattle Municipal Code 25.05.665, measures that may be required for adverse impacts to an archaeological site include, but are not limited to: relocation of the project on the site; providing markers, plaques, or recognition of discovery; imposing a delay of as much as 90 days (or more than 90 days for extraordinary circumstances) to allow archaeological artifacts and information to be analyzed; and excavation and recovery of artifacts. It also has policies for assessing and mitigating impacts from potential archaeological sites including analysis needed for all sites within 200 feet of the meander line or otherwise known to potentially have archaeological resources on site, procedurally clarified in Seattle Department of Construction and Inspections Director's Rule 2-98.

[1] Seattle Municipal Code also requires that proposed actions that (1) involve structures that exceed thresholds B for Footnote (1) for 25.05.800.B.6 and 25.05.800.B.7 and (2) appear to meet criteria set forth in Chapter 25.12 for Landmark designation are subject to referral to the Department of Neighborhoods pursuant to Section 25.12.370.

3 AREA OF POTENTIAL EFFECTS

The area of potential effects includes all areas where one or more of the alternatives could affect historic built environment or archaeological resources. The area of potential effects for any federally funded project must consider both direct and indirect effects to historic built environment or archaeological resources. The FTA, in consultation with the State Historic Preservation Officer, Tribes, and other consulting parties, determines the Section 106 area of potential effects, which becomes the study area for historic built environment and archaeological resources for the alternatives evaluated in the EIS.

The area of potential effects for each alternative is generally defined as an area within an adjacent tax parcel (or 200-foot buffer if parcels are very large) for at-grade and elevated sections, within an adjacent tax parcel above tunnel alignments, and within 200 feet of the boundaries of any station or other facility that is constructed as part of the project. In addition, based on consultation with the State Historic Preservation Officer and other parties, the area of potential effects has been expanded to include one parcel adjacent to known demolition areas throughout the project corridor, as well as other location-specific areas as described in the following paragraph. Based on consultation, design refinements, and/or information from other environmental disciplines, the definition of the area of potential effects may be expanded or reduced where a more detailed review of potential effects indicates that a smaller or larger study area is appropriate. The State Historic Preservation Officer concurred with the FTA's area of potential effects definition for the project on February 25, 2020 (see Attachment N.5F, Agency and Tribal Consultation Letters).

The area of potential effects extends from elements of the project alternatives (e.g., guideway, station locations, and construction staging areas) to the nearest tax parcel or a maximum of 200 feet where large tax parcels are adjacent to project elements. One parcel is a standard area of potential effects extent for linear transportation projects, because potential direct and indirect effects to historic properties typically do not extend beyond one parcel. Where the area of potential effects bisects parcels and/or includes portions of historic districts individual effects to the resource on that parcel is considered as well as effects to the larger parcel and/or historic district as a unit. In addition to the areas described above and as illustrated on Figure 3-1, one other area adjacent to the project was included in the area of potential effects to account for potential visual effects. In the Delridge Segment, Southwest Genesee Street between 26th Avenue Southwest and 30th Avenue Southwest, where one project alternative includes a high guideway, the area of potential effects extends to two parcels to the north of Southwest Genesee Street.

On March 25, 2021, FTA, in cooperation with Sound Transit, defined a revised area of potential effects; the State Historic Preservation Officer agreed with the revised area of potential effects for the West Seattle and Ballard Link Extensions on March 26, 2021.

FTA, in cooperation with Sound Transit, continued consultation with the State Historic Preservation Officer, Tribes, and other consulting parties on September 7, 2021 by providing an amended area of potential effects that reflected design modifications in the Chinatown-International District Segment (within the Ballard Link Extension) and Duwamish Segment. The State Historic Preservation Officer conditionally concurred with the revised area of potential effects for both extensions on October 5, 2021. As the projects advance, FTA and Sound Transit will continue to consult with the State Historic Preservation Officer and other consulting parties on the projects to address specific concerns including but not limited to historic districts in the Ballard Link Extension and individual resources in both the West Seattle and Ballard Link Extensions. FTA and Sound Transit continue to consult with the State Historic Preservation Officer, Tribes, and consulting parties, most recently on August 3, 2023, to solicit feedback on

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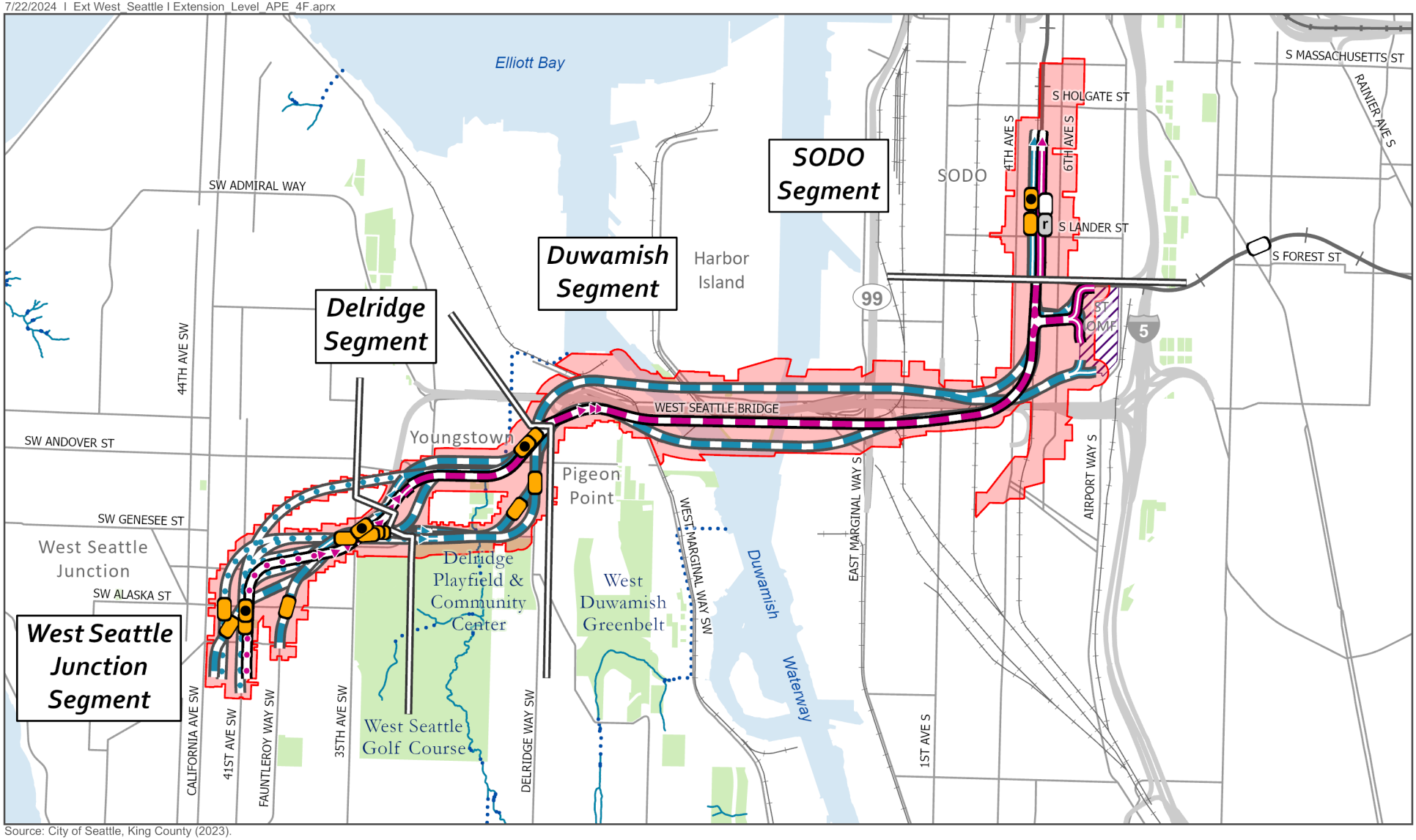

Source: City of Seattle, King County (2023).

Preferred Alternative
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Other Alternatives
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station (● *Indicates Preferred Alternative*)
- New
- (r) Relocated
- Existing

- Segment Line
- Sound Transit Operations and Maintenance Facility (ST OMF)
- Existing Link Light Rail
- (c) East Link Light Rail (Under Construction)
- Railroad
- Stream
- Piped Stream
- Park

- Area of Potential Effects

FIGURE 3-1
Area of Potential Effects
West Seattle Link Extension

0 0.5 1 Mile

N

the revised area of potential effects, which removes the portion of the area of potential effects associated with the Ballard Link Extension and also incorporates areas where new design elements have been identified for the West Seattle Link Extension Project. The State Historic Preservation Officer concurred with this area of potential effect definition on August 14, 2023.

Detours and haul routes that would be used temporarily during construction have not yet been fully identified. Sound Transit and FTA will continue to consult with the State Historic Preservation Officer, Tribes, and other consulting parties as project planning continues and these areas are more fully understood. Haul routes are anticipated to be on existing, heavily used public rights-of-way. For discussion of detours and haul routes in historic districts, see Section 10.2, Overview of Temporary Construction-Related Effects.

While the area of potential effects was developed to consider potential effects to all historic properties, potential effects to archaeological sites within the area of potential effects are anticipated only where ground disturbance would occur. For this reason, when considering a project's effects to archaeological resources, the focus centers more generally on the construction footprint or other construction (e.g., staging and access) and operational activities that can directly impact intact archaeological resources.

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4 ENVIRONMENTAL AND CULTURAL CONTEXT

This section provides an overview of the natural, environmental, and cultural context for the areas within the area of potential effects. The historical context is provided in Attachment N.5C1, an attachment to the Built Environment Inventory Plan and Historic Context (Attachment N.5C).

4.1 Natural Setting

This section describes the environmental setting of the area of potential effects. A review of the physical setting is important to evaluate how geologic and natural characteristics affect human behavior, to help generate expectations of precontact and historical archaeological site distribution and the activities that occurred at these sites, and to generate field methods from these expectations.

The area of potential effects falls within the western hemlock vegetation zone, which is the most extensive vegetation zone in western Washington (Franklin and Dyrness 1988). Native species in this area may include Douglas-fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), western redcedar (*Thuja plicata*), red alder (*Alnus rubra*), big leaf maple (*Acer macrophyllum*), with an understory of salal (*Gaultheria shallon*), hairy brackenfern (*Pteridium aquilinum pubescens*), western brackenfern (*Pteridium aquilinum*), western swordfern (*Polystichum munitum*), blackberry (*Rubus ursinus*), red huckleberry (*Vaccinium parvifolium*), evergreen huckleberry (*Vaccinium ovatum*), Cascade Oregon grape (*Berberis nervosa*), Pacific rhododendron (*Rhododendron macrophyllum*), Nootka rose (*Rosa nutkana*), oceanspray (*Holodiscus*), and orange honeysuckle (*Lonicera ciliosa*) (Franklin and Dyrness 1988; Soil Survey Staff 2019).

Prior to urban development, native fauna in the project vicinity included bear (*Ursus americanus*), beaver (*Castor canadensis*), cougar (*Puma concolor*), coyote (*Canis latrans*), deer and elk (*Cervidae*), duck (*Anatidae*), muskrat (*Ondatra zibethicus*), and river otter (*Lontra canadensis*). There is continued presence of coho (*Oncorhynchus kisutch*), chinook (*Oncorhynchus tshawwytscha*), and chum (*Oncorhynchus keta*) in the Green-Duwamish River watershed because they use the river and tributaries for transportation and rearing. Anadromous fish of the Green-Duwamish River basin include dolly varden (*Salvelinus malma malma*), steelhead (*Oncorhynchus mykiss irideus*), and sea-run cutthroat trout (*Oncorhynchus clarkii clarkii*). Regionally, coho, chinook, and sockeye salmon (*Oncorhynchus nerka*) are abundant. The drainages through the lakes connecting the western end of the watershed provide a unique setting for the salmon as they use the nearshore and shoreline environment to spawn (Williams et al. 1975).

4.2 Geomorphic Setting

The area of potential effects lies within the Puget Lowland physiographic province, an elongated structural and topographic basin bounded by the Olympic Mountains to the west and the Cascade Range to the east, likely formed by north to south scarp faults at the edge of each boundary (Alt and Hyndman 1995; Troost and Booth 2008). Further formation of the area began during the quaternary period (2.5 million years ago) as glaciers, through numerous events of transgression and regression, shaped the sides of the basin edges and deposited glacial material thousands of feet thick, mantling much older sea floor deposits. The result of these two unique but often coincidental events is a complex regional geologic context. In addition, ongoing

and much more rapid fluvial and coastal formation processes are shaping the region, the effects of which are determined by material type, gravity, and microclimate. The result is a mosaic of geologic deposits that vary substantially across Seattle's urban setting.

The Seattle Fault Zone is an approximately west-to-east-trending system of young faults running through the southern portion of the area of potential effects and extending farther into south Seattle and across Lake Washington into Bellevue (Blakely et al. 2002). Fault events that have occurred within and around the Seattle Fault Zone date back to the late Holocene; however, there is some sparse and inconsistent evidence that lesser earthquakes occurred during the late Pleistocene period (Nelson et al. 2003). One of the most noteworthy events along the Seattle Fault Zone occurred approximately 1,100 years ago, which caused substantial regional uplift, subsidence, and a related tsunami event (Atwater and Moore 1992; ten Brink et al. 2006; Larson and Lewarch 1995). Furthermore, it is likely that this event and similar events caused much of the mass-wasting deposits that blanket the terminal margins of the elevated glacial drift planes around the area of potential effects.

Also along the terminal margins of the drift plains are Holocene-age alluvium and beach deposits, although some have since been capped by fill events. For example, the Duwamish River was in a steeply walled subglacial meltwater channel turned valley that was filled in by a substantial mudflow deposit from an eruption of Mount Rainier approximately 5,600 years ago. The mudflow deposit, known as the Osceola Mudflow, extended to the Duwamish River mouth and deposited over 100 feet of sediment. Deposits consisted of black medium volcanic sands with grains of andesite and traces of mud and organics collected during transportation (Dragovich et al. 1994; Troost and Booth 2008). The Duwamish River floodplain was broadened by the mudflow deposits that entered the channel and flowed into Puget Sound, likely forming the Duwamish River delta that is now occupied largely by Harbor Island, an artificial island that has been expanded and reshaped by humans to its present size.

Thick glacially derived deposits underlie the modern fill surfaces of the non-tideflat portions of the project corridor. The most common of the deposits are Vashon-aged dating to approximately 16,400 years before present (Troost and Booth 2008). There is evidence for at least seven glacial episodes that affected the Seattle area (Troost and Booth 2008). Surface geologic units in and around the area of potential effects are composed largely of Vashon glacial drift, deposited during the most recent advance of the Frasier Glaciation (Booth et al. 2005). Glacial drift deposits comprise a tapestry of mostly silts and sands, well sorted to unsorted, with a range of gravel depending on advancement, retreat, or position directly under the ice. Beneath the mantle of glacial material are interglacial deposits consisting of sediments deposited when the area of potential effects was free from ice and proglacial lakes were numerous from the bounding of Puget Sound by ice blockage to the north at Admiralty Inlet (Mullineaux et al. 1965). More recent deposits during this phase are unconsolidated materials such as fine sands and silts to silty clays, depending on location of the late Pleistocene and Holocene glacial lakes behind the retreating glaciers and fluvial channels. A result of the unconsolidated materials underlying glacial deposits on the higher-elevated landforms is landslides and other mass-wasting events. These less consolidated landforms are more susceptible to failure during periods of tectonic activity.

Natural Resources Conservation Service soil mapping of the area of potential effects depicts a highly urbanized area developed from heavy anthropogenic modification of the landscape throughout the history of Seattle. In the area of potential effects, most of the land is classified as "Urban land" with less than 5 percent of the total area of the area of potential effects mapped solely as native soil series. The native soil series, classified as the Alderwood series, is limited to forested areas of West Seattle on the west and east sides of Pigeon Point Park and to the south of West Seattle Stadium. Alderwood series soils derive from glacial drift and outwash

deposits and are found on hills and ridges modified glacially on glacial drift plains. Common stratigraphy of this soil begins with a relatively thick brown gravelly sandy loam A-horizon abruptly contacting a weak B-horizon to older B-horizon of very gravelly sandy loam with variants of brown coloration, finally contacting abruptly extremely hard light brownish gray to gray extremely firm to dense very gravelly sandy loam (Soil Survey Staff 2019).

Another minor soil constituent paired with the Urban Land classification and found scattered throughout the urban landscape is the Everett soil series. The Everett soil series, similar to the Alderwood series, derives from glacial outwash deposited on glacial drift plains. However, differences from the Alderwood series include additional deposition on other glacially derived landforms such as kames, moraines, escarpments, and eskers. The parent material is yellowish-brown loose and cobbly sand likely from terminal outwash deposits of the Vashon stade following the glaciers' final retreat (Soil Survey Staff 2019).

The area of potential effects crosses the anthropogenically altered Duwamish-Green River watershed, which locally receives its waters from stormwater and combined sewer overflows (King County Staff 2016; Williams et al. 1975). Closer to its montane source, however, the watershed is fed by both major and minor tributaries of creeks and rivers, including the Black River. Drainage basins within this watershed include Longfellow Creek and the Duwamish Waterway.

4.3 Precontact Context

The cultural context for the project is provided to give the reader a broader understanding of the region, highlighting those elements that distinguish the study area in the region's history. The following sections are intended to provide the reader with a basic context for understanding the archaeological and historical environment. The primary sources for the material presented here are Ames and Maschner (1999) and Kopperl et al. (2016). Both sources divided the precontact record into five distinct phases. The development of these phases follows general trends based on activity types that can be traced in the archaeological record. Kopperl et al. (2016) does not attribute names to the various phases, rather choosing chronological dates based on calibrated radiocarbon analyses to reference the various phases. Because Ames and Maschner (1999) ascribe more commonly accepted names to differentiate between precontact phases, those identifiers were adopted here. Descriptions of trends in material culture below are likely at least somewhat the result of natural processes that have degraded organic materials that may have been part of precontact tool kits.

4.3.1 Paleo Indian Period

The Paleo Indian period is identified by Ames and Maschner (1999) as the earliest period of native habitation in North America and in the Puget Sound area. While Ames and Maschner (1999) describe the period with the chronological date of "prior to 12,500 years before present," Kopperl et al. (2016) more specifically define the period as falling between 14,000 cal[2] before present and 12,000 cal before present.

Kopperl et al. (2016) define this period as one of regional and climate stabilization with the arrival of the first hunter-gatherers to establish residence in western Washington. Paleo Indian culture has been identified at a few isolated locations in Washington (such as Sequim and East Wenatchee), generally on coastlines and in river valleys. Archaeological materials from these

[2] "cal" represents calibrated years derived from carbon-14 dating from known archaeological contexts.

sites usually include tools made of stone, bone, and antler, and suggest practices and activities restricted to hunting, fishing, and food gathering. No archaeological sites from this temporal period have been identified in the Puget Sound area.

4.3.2 Archaic Period

As defined by Ames and Maschner (1999), the Archaic period in Washington spans from 12,500 to 6,400 years before present. While Kopperl et al. (2016) define this period even more tightly (12,000 cal before present to 8,000 cal before present), both define the period as one of great environmental change during which precontact populations were developing more sophisticated strategies to adapt to the changing environmental conditions. This is a period that is not well understood in Washington, with few sites across the state. Generally, the archaeological record from this period consists of sites with pebble/cobble tool assemblages that include larger folate (Cascade-style) points. Lithic materials at these sites are generally coarse-grained lithic materials such as argillite and basalt (Morgan et al. 1998). Not far from the area of potential effects, the Bear Creek site located in Redmond dates to this period (Kopperl et al. 2016).

4.3.3 Early Pacific Period

Ames and Maschner (1999) define the Early Pacific period, from 6,400 to 3,800 years before present, as one marked by a change in precontact resource exploitation towards littoral environments and coastal habitats. Precontact groups became increasingly sedentary as their focus shifted to shallow coastal waters and beaches, although terrestrial and riverine habitats remained important. Kopperl et al. (2016) refer to this phase as the “third analytical time period” and suggest quite a different time range of 8,000 cal before present to 5,000 cal before present. They define the phase simply as a time of “important reorganization of hunter-gatherer subsistence and technology.”

Ames and Maschner (1999) indicate that archaeological artifact assemblages begin to be dominated by bone tools, primarily in the form of unilaterally and bilaterally barbed harpoon heads. Adze blades crafted out of slate and marine shell suggest the manipulation of wood products and woodworking. Labrets, flaked stone drills, pendants, and abraders appear during this period. Matson and Coupland (1995) suggest that the advent of the new technological variability may represent the beginning of distinct cultural patterning.

4.3.4 Middle Pacific Period

During Ames and Maschner’s (1999) Middle Pacific Period (circa 3,800 to 1,500 years before present), sea levels had stabilized, creating more environmental stability and certainty. Cultural units were developing in the form of villages of plank houses, and social stratification based on wealth or prestige appears in the archaeological record. The development of food preservation and storage technologies advanced, and the dietary focus seemed to shift to salmon. Morgan et al. (1998) suggest that the increased use of food storage techniques as well as advances in technological efficiency may have resulted in increased population growth during this period.

During this period, tools and other technologies became increasingly sophisticated as the focus on resource procurement became more seasonally adapted. Numerous bone tool technologies proliferated as procurement increasingly focused on near-shore and riverine resources. The use of canoes, groundstone net sinkers, and wooden fish weirs become increasingly common. In addition to the typical artifacts found in archaeological contexts, Ames and Maschner (1999) suggest that new technologies emerged in the form of cordage, basketry, and hats. Also, items

of personal adornment (stone and shell beads and items made of native copper) become more commonplace, again suggesting the development of more robust social stratification.

Kopperl et al. (2016) suggest an earlier date range for what they describe as their "fourth analytical time period," from 5,000 cal before present to 2,500 cal before present. They define the period as one marked by the appearance of shell middens and the development of old growth Douglas-fir and western hemlock forests in the Puget lowlands (Kopperl et al. 2016). They also describe this period as marked by shifts in the hunter-gatherer economic and technical organization, presumably toward greater social sedentism.

4.3.5 Late Pacific Period

The final precontact phase that ends with the arrival of the Euroamericans 200 to 250 years ago is defined as the Late Pacific period by Ames and Maschner (1999), proposed as beginning around 1,800 to 1,500 years before present. They characterize the period as one of continued sedentism with the development of plank house villages with associated fortifications such as ditches and embankments in longer-used, winter villages. Economies continue to be predominantly salmon-based, and advances in storage techniques allowed for the development of longer-operating seasonal villages. Ames and Maschner (1999) indicate that during this time regional differences appear in both artifact types as well as art, suggesting increased diversity among social and cultural groups based on regional adaptation and diversity.

Kopperl et al. (2016), who begin the "fifth analytical time period" around 2,500 cal before present, recognize many similarities with the Ames and Maschner model, citing this period as one defined by an increase in the appearance of shell middens. The period also includes "adaptations to localized environmental changes caused by the 1,100 cal before present earthquake on the Seattle Fault and possible changes in economic and social organization as a result of Euroamerican contact" (Kopperl et al. 2016).

4.4 Ethnographic Context

Both the ethnography and ethnohistory of the Puget Sound region have been extensively presented by numerous scholars, including Ames and Maschner (1999), Carlson (1990), Matson and Coupland (1995), Ruby and Brown (2010), Suttles and Lane (1990), and Waterman (1920). All of these scholars contributed to the general understanding of ethnographic lifeways and geographic landmarks throughout the Puget Sound region and were heavily consulted for information regarding place names and landmarks of important ethnographic locations throughout the area of potential effects. These data were among factors used in the development of the Archaeological Sensitivity Area study developed and presented in Section 8.3, Archaeological Expectations. The following discussion presents a general ethnographic context for the project vicinity.

The project falls within the ethnographic region of the Coast Salish people, a group of indigenous people stretching from the Columbia River to southwestern British Columbia who shared a common language. Coast Salish culture, while exhibiting regional variation, generally relied on anadromous fish as a dietary staple, mostly in the form of salmon and steelhead. Supplementing this diet were land mammals, shellfish, and plant resources collected as part of a seasonal cycle.

By the period of Euroamerican arrival, Coast Salish peoples lived in permanent winter villages mostly in coastal settings or along rivers or streams. Villages consisted of plank houses, generally constructed from cedar, that were shared by multiple families. The villages had no

recognized “chief,” but rather were led by the wealthier heads of a household unit. Matson and Coupland (1995) identify other cultural characteristics as an emphasis on personal wealth and status, multi-family households, and complex exchange systems.

Euroamericans began settling in the Puget Sound area in the 1850s, initially drawn by the abundant timber resources, the agricultural potential, and the abundance of salmon (Kirk and Alexander 1995). The natural protection and potential trade possibilities associated with Elliott Bay also drew Euroamericans to the Seattle waterfront, ultimately resulting in the signing of the Point Elliott Treaty on January 22, 1855, by Isaac Stevens, Governor of Washington Territory; Chief Seattle of the Duwamish and Suquamish Tribes; Snoqualmie Chief Patkanim; Lummi Chief Chow-its-hoot; and other chiefs, subchiefs, and Tribal delegates. After the Treaty of Point Elliott was signed in 1855, the Duwamish people were forced to leave their ancestral villages around Seattle and move to designated reservations to preserve their heritage and culture. Two reservations were established specifically for the Duwamish. The United States established both the Muckleshoot and Port Madison reservations as homelands for Duwamish people. Following the reservation’s establishment in 1857, the Tribe and its members came to be known as Muckleshoot, rather than by the historic Tribal names of their Duwamish and Upper Puyallup ancestors.

4.5 Historic Context

The historic context for the area of potential effects is provided in Attachment N.5C1, an attachment to the Built Environment Inventory Plan and Historic Context, which includes the West Seattle and Ballard Link Extensions Historic Context and National Register of Historic Places Criterion A Eligibility Requirements document. The document, which was prepared as part of the WSBLE Draft EIS Section 106 consultation process prior to the separation of the environmental review for the two extensions, provides a historic context for Seattle and each of the eight neighborhoods in both the West Seattle and Ballard Link Extensions area of potential effects from approximately 1851 until 1980 and identifies prevailing historic themes that are reflected in the built environment.

5 METHODS

Background research and field investigations were performed to determine if National Register-eligible or listed archaeological and historic built environment resources may be affected by the project. Research and fieldwork were conducted by archaeologists that meet the Secretary of the Interior's Professional Qualifications Standards for archaeology and historians that meet the Secretary of the Interior's Professional Qualifications Standards for history and architectural history. The following sections describe the methods used for conducting background research, Tribal coordination, field surveys, geotechnical monitoring, and geoarchaeological investigations.

5.1 Background Research

5.1.1 Archaeological Records Search

A records search for the area of potential effects and its vicinity was conducted using WISAARD for both archaeological and historic built environment records. This database, developed by the Washington State Department of Archaeology and Historic Preservation, contains all cultural resource reports and documents submitted to that agency since 1995.

The records search for archaeological resources covered the area of potential effects plus an additional 0.25-mile radius ("desktop research area") to better understand the archaeological context within which the project will be constructed. The team reviewed and analyzed the search results to help develop expectations and objectives for archaeological and/or ethnographic resources in the area of potential effects. Development of these expectations also included consideration of archaeological resources in highly sensitive areas (e.g., within 200 feet of historically documented United States government meander lines). They also reviewed ethnographic place-name data from research reports that discussed the potential for traditional cultural properties in the region. The results of the archaeological records search are presented in Section 7, Archaeological Records Search.

5.1.2 Historic Built Environment Records Search

The results of the records search for historic built environment resources within the area of potential effects are included with the field investigation results in Section 9.

5.1.3 Archival Research

Extensive archival research was conducted on the history of the area and built resources within the area of potential effects. Primary and secondary sources, including historic maps, photographs, newspaper articles, previous building surveys and context statements, and local historians were consulted. This information was used to develop the historical context and aided in the evaluations of building and structures in the area of potential effects. The repositories and materials reviewed are summarized below.

5.1.3.1 Photograph Collections

King County Department of Assessments

The King County Department of Assessments offers an online Parcel Viewer through the King County Geographic Information System Center. All parcels within King County are searchable, and many of the property reports for individual parcels include digitized historic photographs of the properties that were taken either at the time of construction or during various surveys.

Museum of History and Industry

The Museum of History and Industry in Seattle collects and preserves artifacts and stories of the Puget Sound region's diverse history. Selections of their photography and ephemera collections have been digitized and are available online as part of the University of Washington's digital collections.

Seattle Municipal Archives

The Seattle Municipal Archives offers a large selection of their collections online, including a database of photographs from the 1880s to the present and focusing on subjects such as public works, city events, city sites and facilities, and elected officials.

5.1.3.2 Newspaper Archives

The Seattle Times Archives

Accessed through the Seattle Public Library, *The Seattle Times* has digitized its entire archives of news articles from 1895 (as *The Seattle Daily Times*) to the present.

5.1.4 Historic Maps

5.1.4.1 Baist Real Estate Atlas of Seattle

The Baist Company, based in Philadelphia, published real estate atlases for many United States cities in the early twentieth century. The atlases show plats, some structures, streets, and railways around the city. Baist published atlases for Seattle in 1905, 1908, 1912, and 1920. The Seattle Public Library has digitized the 1905 map, which was consulted for this report (G. William Baist Company 1905).

5.1.4.2 Kroll Atlas Maps

The Kroll Map Company dates to the 1870s, making it one of the oldest businesses in the Seattle area. Kroll Maps document street grid, street name, parcel size, and general footprint and use of built environment resources (Kroll Map Company 1909 to 1947).

5.1.4.3 Sanborn Fire Insurance Maps

Sanborn Map Company was a publisher of detailed maps of more than 12,000 United States cities and towns in the nineteenth and twentieth centuries. Sanborn Fire Insurance Maps were originally created to allow fire insurance companies to assess their total liability in urbanized areas of the United States. Digital copies of the Sanborn Fire Insurance Maps were accessed via the Seattle Public Library (Sanborn Map Company 1905 to 1951).

5.1.4.4 United States Geological Survey Topographical Maps

The United States Geological Survey's topographical maps are general-use maps at medium scales that present elevations (contour lines), hydrography, geographic place-names, and a variety of cultural features. Historic topographic maps were originally published as paper documents in the period from 1884 to 2006 but are currently created from digital geographical information system databases. Historic topographic maps were accessed via the United States Geological Survey's topoView website (United States Geological Survey 1909, 2020).

5.1.5 Local Repositories

5.1.5.1 Pacific Coast Architecture Database

This Pacific Coast Architecture Database includes information on a range of buildings, architects, and architectural firms in California, Oregon, and Washington. It also highlights the work of landscape architects, engineers, urban planners, builders, and developers. The database provides bibliographic information for further research. It is a searchable, online database created in 2002 by Alan Michelson, and is now hosted by the University of Washington, Seattle.

5.1.5.2 Seattle Department of Neighborhoods

The Seattle Department of Neighborhoods provides information on locally designated landmarks, historic districts, and historic built environment resources surveys and context statements. The department has an online database, Seattle Historical Sites, that can be used to search by address, parcel number, or property attributes. If a property is in the database, it will provide a physical description, a property history, and a recommendation if the property qualifies as a historic property.

5.1.5.3 Seattle Public Library – Seattle Culture and Local History

The Seattle Room at Seattle Public Library contains documents, newspaper archives, and thousands of photographs of historic Seattle. It also contains city and street directories, maps, oral histories, unpublished manuscripts, and postcards from the early days of Seattle. Much of the collection is available online through the library's Special Collections Online website.

5.1.5.4 Washington State Archives – Puget Sound Regional Branch

When necessary for providing sufficient information to ascertain National Register eligibility, King County property record cards on file at the Washington State Archives Puget Sound Regional Branch were consulted. Property record cards generally contain the record of tax assessments, historic building photographs, and other pertinent building data between 1937 and 1972.

5.1.6 Miscellaneous Online Databases

5.1.6.1 Ancestry.com

Ancestry.com materials, including United States census records from 1790 to 1940 and city directories, were available through the Los Angeles Public Libraries.

5.1.6.2 Redfin.com

The Redfin.com website was used for photographs of buildings in the area of potential effects that were not accessible from the public right-of-way.

5.1.6.3 Zillow.com

The Zillow.com website was used for photographs of buildings in the area of potential effects that were not accessible from the public right-of-way.

5.2 Field Investigations

5.2.1 Archaeological Investigations

Due to the developed nature of the study area and intrusive nature of archaeological survey and testing, archaeological investigations will be phased to occur following right-of-entry permissions or property acquisition. At any time during any phase of planning and construction, if additional historic properties are identified, FTA will evaluate the project's effects on National Register-eligible properties and resolve any adverse effects per stipulations of the programmatic agreement developed for the project in consultation with the State Historic Preservation Officer, Tribes, and other consulting parties.

5.2.1.1 Archaeological Monitoring of Geotechnical Boreholes

Archaeological investigation of the area of potential effects to date has been limited to the monitoring of geotechnical boreholes that are currently being conducted in support of project design. In 2019, a cultural resources assessment, monitoring, and inadvertent discovery plan (Bumback et al. 2019) was developed to coincide with the geotechnical investigation. While the geotechnical boring effort is ongoing, to date Sound Transit identified 36 geotechnical borehole locations throughout the West Seattle Link Extension project corridor. A total of 15 borings were monitored for archaeological resources.

To most effectively use the geotechnical work to help understand the archaeological environment for the project, the archaeological team conducted extensive background research to identify Archaeological Sensitivity Areas (see Section 8.3.1, Archaeological Sensitivity Area Study) throughout the project corridor. Some areas were defined as high-probability after reviewing geologic data, data on known archaeological sites and previous archaeological investigations in the area, the archaeological predictive model developed by the Washington State Department of Archaeology and Historic Preservation, ethnographic place name locations, United States government meander lines (as stipulated in City of Seattle code), and historical archives, maps, and records. By layering these data streams, the team identified the 15 borehole locations for archaeological monitoring in the project corridor.

5.2.1.2 Archaeological Survey and Inventory Plan

A Preliminary Archaeological Survey and Inventory Plan for the project was prepared in January 2020. The intent of the plan was to identify the archaeological field survey and recording strategy that would accompany the project through construction. The plan presents a phased approach to the archaeological investigation, timed to correspond with major milestones of project development and construction. The full text of the Preliminary Archaeological Survey and Inventory Plan for the project is presented in Attachment N.5D, Archaeological Survey and Inventory Plan (2020).

If, at any point during the project, additional testing or data recovery efforts are required, additional documents may be drafted and subject to coordination and review with FTA, Washington State Department of Archaeology and Historic Preservation, and participating Tribes. If additional historic properties are identified, FTA, in consultation with the State Historic Preservation Officer, affected Tribes, and other consulting parties, will follow protocols developed in the programmatic agreement to resolve adverse effects to historic resources. This document will also include an archaeological treatment plan that will provide steps and protocols for additional archaeological investigations through the completion of the construction.

5.2.1.3 Archaeological Sensitivity Areas

For this technical report, a study of Archaeological Sensitivity Areas was originally developed based on numerous factors including historical and geographic setting, previously identified archaeological resources, cultural resources studies, ethnographic information, and predictive modeling and was presented in Bumback et al. 2019. Each of these research streams was evaluated and the results combined to present a comprehensive profile of archaeological sensitivity and potential impacts as they relate to the project. The original list of Archaeological Sensitivity Areas has been updated with new information and several additional new areas have been designated. The complete list of Archaeological Sensitivity Areas appears in Attachment N.5E, Geotechnical Investigation, Cultural Assessment, and Inadvertent Discovery Plan (Sterner et al. 2023), as Appendix A.

5.2.1.4 Geoprobe Investigation Areas

Limited archaeological directed testing has occurred within the area of potential effects, in the Duwamish Segment. In 2022, four geoprobes were excavated at the direction of the archaeological team to define the boundaries of an archaeological site previously identified on the west side of the Duwamish Waterway channel. Geoprobe testing did not identify any remnants of the site.

5.2.1.5 Shovel Test Probe Investigation Areas

In addition to geoprobe investigations, several shovel test probe investigations were completed within the area of potential effects in the Duwamish Segment. In 2023, shovel testing was completed in coordination with archaeological monitoring of select geotechnical borings. Shovel test probes were excavated prior to drilling at three locations in the Pigeon Point area, west of the Duwamish Waterway. Shovel pit testing did not identify any archaeological materials.

5.2.2 Historic Built Environment Resource Investigations

To identify historic built environment resources that are potentially eligible for listing in the National Register, the survey process included preparation of Historic Property Inventory forms for all properties within the area of potential effects that are 50 years or older, based on National Register guidance. This analysis assumes 2030 as the year of action because it is expected that any potential direct impacts will have occurred by that point in construction. Based on this criterion, the inventory will consider all properties within the area of potential effects that were built in 1980 or earlier.

To identify known historic properties and/or designated Seattle landmarks within the area of potential effects, information was collected on the developmental history of the area, the historic districts, and the individual buildings, using the following sources:

- Federal, state, and local lists and nomination forms of identified historic properties, including the National Register, the Washington Heritage Register, online register lists for the King County Historic Preservation Program and the City of Seattle, and local landmark or historic designations.
- Various sources and databases, including those maintained by the Washington State Department of Archaeology and Historic Preservation and the City of Seattle regarding existing historic built environment resources in the area of potential effects, including historical maps, photographs, and local histories.
- Fire insurance maps, historical maps and photographs, and oral histories, including those on record with the University of Washington and public libraries.
- Mapping of buildings, structures, objects, and districts in the area of potential effects by construction date from city directories, building permit files, and County tax assessor records.

The inventory considered information for any properties that have been previously recorded in WISAARD.

To identify potential historic properties not yet identified, an extensive field survey was undertaken. The survey involved examining and photographing buildings and structures in the area of potential effects that were determined to have been built in or before 1980. Properties that were surveyed and inventoried over 5 years ago were photographed, and the Historic Property Inventory entries were updated and included in the survey. The following steps were taken to identify, evaluate, and record historic built environment resources:

- Construction dates were established using data from the King County Tax Assessor.
- A parcel-by-parcel pedestrian survey of properties in the area of potential effects and built in or before 1980 were conducted by architectural historians meeting the Secretary of the Interior's Professional Qualifications Standards.
- Each resource was visually evaluated, photographed from the public right-of-way, and noted for its character-defining features. When properties were inaccessible, Sound Transit requested right of entry. The following information was collected on each historic built environment resource:
  - The precise location
  - The architectural style (if identifiable)
  - The type and materials of distinctive features
  - The quantity and types of alterations
  - The overall physical integrity
  - The potential to contribute to a historic district

The Historic Property Inventory forms are recorded in WISAARD, project number 2019-02-01457.[3] The inventories were prepared using information on the physical description of each resource collected in the field. A Statement of Significance for each resource was prepared based on historic research of the history of the project vicinity and neighborhoods.

[3] Previous versions of this report provided a different WISAARD project number, 2018-08-06480. Please refer to the new project number, 2019-02-01457, for the most current project information.

To determine whether historic built environment resources are eligible for listing in the National Register, Sound Transit applied the criteria for evaluation, as documented in *National Park Service Bulletin 15: How to Apply the National Register Criteria for Evaluation* (National Park Service 1997).

According to the bulletin:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded, or may be likely to yield, information important in prehistory or history.

Unless clearly identified as part of an eligible historic district, each property evaluation was considered a part of a potential historic district.

The National Register Bulletin 15 defines a district as an area that "possesses a significant concentration linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development" (National Park Service 1997). In addition to significance, potential historic districts must also retain integrity, meaning that "the majority of the components that make up the district's historic character must possess integrity even if they are individually undistinguished" (National Park Service 1997).

The built environment within all segments of the area of potential effects has experienced a substantial amount of change and modern infill in the past several years. Many buildings within the area of potential effects have experienced varying levels of alteration throughout the recent years or have been entirely demolished. This greatly diminishes the potential for any eligible historic districts. Groups of related buildings that still share an aesthetic and/or historical significance may not retain enough integrity individually or collectively to be able to convey their significance as a potential district.

Section 106 requires the identification of historic properties listed or eligible for listing in the National Register that are in the area of potential effects. Senior historians completed the identification of historic properties by evaluating the surveyed properties in the area of potential effects in accordance with National Register evaluation criteria and made recommendations for eligibility for listing in the National Register on each property surveyed. National Register evaluation criteria are detailed in Section 2.1, Federal Laws and Authorities.

5.3 Historic Context and National Register of Historic Places Criterion A Eligibility Requirements

The Built Environment Inventory Plan (Attachment N.5C) includes the West Seattle and Ballard Link Extensions Historic Context and National Register of Historic Places Criterion A Eligibility Requirements document (Attachment N.5C1). As stated in Section 4.5, the FTA and Sound Transit developed this historic context to guide and standardize inventory and evaluation of

historic built environment resources, consistent with National Park Service Bulletin 15, *How to Apply the National Register Criteria for Evaluation* (National Park Service 1997) and *The Components of a Historic Context: A National Register White Paper* (Wyatt 2009).

The purpose of the document is to identify clear thresholds for evaluating historic resources under Criterion A. To be considered for listing under Criterion A, a property must be associated with one or more events important in the defined historic context, and it must retain historic integrity (National Park Service 1997:12).

Criterion A recognizes properties associated with single events, such as the founding of a town, or with a pattern of events, repeated activities, or historic trends, such as the gradual rise of a port city's prominence in trade and commerce. The event or trends, however, must clearly be important within the associated context: settlement, in the case of the town, or development of a maritime economy, in the case of the port city.

The Built Environment Inventory Plan also identified anticipated property types that would likely be National Register-eligible within the historic context. The context informed evaluation and potential National Register eligibility under Criteria B, C, and D, but eligibility under Criterion A on a local, state-wide, or national level is the focus of this document.

6 SECTION 106 CONSULTATION

FTA is consulting with the Washington State Historic Preservation Officer, Tribes, local jurisdictions, and other parties that meet conditions for consulting parties[4] as part of the Section 106 process.

Section 6.1 describes Section 106 consultation prior to publication of the WSBLE Draft EIS, and includes consultation related to historic properties in both the West Seattle and Ballard Link Extensions. Section 6.2 summarizes consultation subsequent to publication of the WSBLE Draft EIS and focuses on historic properties within the West Seattle Link Extension area of potential effects.

6.1 Section 106 Consultation Prior to Publication of the WSBLE Draft EIS

On February 2, 2018, FTA initiated government-to-government consultation with the federally recognized Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, and Confederated Tribes and Bands of the Yakama Nation. Later that month, Sound Transit began coordination with the non-federally recognized Duwamish Tribal Organization and Snohomish Tribe, and coordinated with staff members at the City of Seattle.

On February 25, 2019, FTA, in cooperation with Sound Transit, initiated Section 106 consultation with the State Historic Preservation Officer and the federally recognized Tribes listed above. Sound Transit also coordinated with the non-federally recognized Tribes. Letters were prepared and sent to the State Historic Preservation Officer and the Tribes that notified them of the undertaking, invited them to participate in the environmental review process, provided a scoping notice, and initiated Section 106 consultation (Attachment N.5F).

FTA, in cooperation with Sound Transit, solicited information from the Tribes about the presence of any known archaeological sites, Traditional Cultural Properties, and/or properties of religious and spiritual significance that could be affected by construction of the project. The area of potential effects and a draft Archaeological Survey and Inventory Plan were provided to the State Historic Preservation Officer and the Tribes on February 25, 2019, for review, and a Built Environment Inventory Plan was provided to the State Historic Preservation Officer for review on April 23, 2020. The Built Environment Inventory Plan is included in Attachment N.5C, and the Archaeological Survey and Inventory Plan is included in Attachment N.5D.

In addition to the State Historic Preservation Officer and the Tribes listed above, FTA, in cooperation with Sound Transit, consulted with the following parties:

- Alliance for Pioneer Square
- City of Seattle Historic Preservation Officer
- Historic Seattle
- Historic South Downtown Community Preservation and Development Authority
- King County Historic Preservation Program

[4] Code of Federal Regulations Title 36, Part 800.2(F)(5) defines additional consulting parties as "…individuals and organizations with a demonstrated interest in the undertaking may participate as consulting parties due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties."

- Martin Smith Inc.
- Seattle Chinatown International District Preservation and Development Authority
- Washington Trust for Historic Preservation
- InterIm CDA
- Southwest Seattle Historical Society

A meeting was held on March 30, 2021, to discuss project development and the area of potential effects, and further meetings and opportunities to consult are anticipated as the project advances.

FTA and Sound Transit continued to consult with the State Historic Preservation Officer, Tribes, and consulting parties, most recently on September 7, 2021 to solicit feedback on the revised area of potential effects and determinations of National Register eligibility of properties within the area of potential effects. As discussed in Section 3, the State Historic Preservation Officer provided conditional concurrence on the revised area of potential effects on October 5, 2021, "with the understanding that important additional information will be forthcoming (See Attachment N5.F)." Subsequently, the State Historic Preservation Officer, FTA, and Sound Transit met on November 18, 2021, to discuss conditional concurrence and area of potential effects concerns voiced by consulting parties and the State Historic Preservation Officer. On November 9, 2021, the State Historic Preservation Officer concurred with FTA's determinations of National Register eligibility for all but 26 resources.

Table 6-1 lists the letters regarding Section 106 consultation. Copies of the letters are included in Attachment N.5F.

6.2 WSBLE Draft EIS Comment Period Comments

During the WSBLE Draft EIS comment period (January 28 through April 28, 2022), Sound Transit received comments from Section 106 consulting parties regarding historic properties within the project areas of potential effects. Also during the comment period the public was afforded an opportunity to provide comments on historic properties and eligibility determinations pursuant to Code of Federal Regulations Title 36, Part 800.8(c)(1)(iii). Sound Transit and FTA received comments from the following consulting parties during this period:

- Alliance for Pioneer Square (multiple dates)
- Seattle Chinatown International District Preservation and Development Authority (April 25, 2022)
- Wing Luke Museum (April 26, 2022)
- Historic South Downtown (April 26, 2022)
- Martin Smith Inc. (April 27, 2022)
- Washington State Department of Archaeology and Historic Preservation (April 27, 2022)
- Historic Seattle (April 28, 2022)
- The Washington Trust for Historic Preservation (April 28, 2022)
- City of Seattle (April 28, 2022)

In addition, Sound Transit coordinated with Section 106 consulting parties in a meeting on April 5, 2022, to discuss the WSBLE Draft EIS to review historic property documentation in the document, discuss methods for National Register of Historic Places eligibility determinations, and methods for Section 106 effects determinations.

Copies of the WSLBE Draft EIS comment period comment letters provided by Section 106 consulting parties are included in Attachment N.5F.

Although a variety of comments were transmitted in the letters and meeting, many of the comments were related to resources, including the Seattle Chinatown and the Pioneer Square-Skid Road National Historic Districts, that are entirely within the Ballard Link Extension area of potential effects. They will be addressed as part of Section 106 consultation associated with the Ballard Link Extension Draft and Final EISs. Please see Appendix O.1, WSBLE Draft EIS Comment Summary, for a summary of comments received during the Draft EIS comment period. This summary also includes summaries of letters from consulting parties.

6.3 Section 106 Consultation Subsequent to the WSBLE Draft EIS Comment Period

In a July 10, 2023, letter to the State Historic Preservation Officer, Tribes, and consulting parties, Sound Transit shared the decision that the environmental review process for the two link light rail extensions (West Seattle Link Extension and Ballard Link Extension) would continue separately. The two projects have different opening dates, and they will ultimately function as separate lines, with the West Seattle Link Extension connecting to Everett and the Ballard Link Extension connecting to Tacoma. The two projects are also now on different schedules for completion of environmental review.

FTA, in coordination with Sound Transit, consulted the State Historic Preservation Officer, Tribes, and consulting parties on August 2, 2023, to solicit feedback on the revised area of potential effects, which removes the Ballard Link Extension and incorporates areas where new design elements have been identified for the West Seattle Link Extension Project. In addition, FTA invited consulting parties to confirm their interest in continuing as Section 106 consulting parties for the West Seattle Link Extension Project, as redefined. The following consulting parties expressed an interest to continue participating in the Section 106 process:

- Alliance for Pioneer Square
- City of Seattle Historic Preservation Officer
- Washington Trust for Historic Preservation

In addition, invitations to consult were sent to other interested and affected parties within the revised area of potential effects.

As discussed in Section 3, Area of Potential Effects, as project design is advanced, FTA continues to consult with the State Historic Preservation Officer, Tribes, and consulting parties. In a letter dated August 14, 2023, the State Historic Preservation Officer concurred with the revised area of potential effects. As of September 6, 2023, the City of Seattle Historic Preservation Officer and the Suquamish Indian Tribe of the Port Madison Reservation have also concurred with the area of potential effects.

Sound Transit, in coordination with FTA, held regular (approximately semi-monthly) meetings with Section 106 consulting parties starting in January 2024 to discuss the project and its potential effects to historic properties. See Table 6-1 for specific meeting dates and discussion topics.

As discussed in Sections 9 and 10 of this report, FTA, in letters to Section 106 consulting parties and Tribes dated March 18, 2024, and a letter to the State Historic Preservation offer dated March 22, 2024, made determinations of National Register eligibility for historic built environment properties newly identified within the revised project area of potential effects. In that same correspondence, FTA determined that the preferred alternative would adversely affect historic properties, and noted which specific historic properties would be affected. The State Historic Preservation Officer concurred with these determinations on April 16, 2024.

On June 28, 2024, FTA notified the Advisory Council on Historic Preservation (Advisory Council) that the West Seattle Link Extension Project will have an adverse effect on historic properties and invited the Advisory Council on Historic Preservation to participate in the Section 106 consultation process and development of the programmatic agreement for the project. In a letter to FTA dated July 15, 2024, the Advisory Council acknowledged the notification and declined to participate in the consultation to resolve adverse effects.

Table 6-1. Section 106 Consultation

Date	Format	From	To	Description
February 5, 2018	Letter	FTA	Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation	Initiation of government-to-government consultation
February 6, 2018	Letter	Sound Transit	Duwamish Tribal Organization, Snohomish Tribe	Invitation to participate in SEPA early scoping
February 8, 2018	Email	Snoqualmie Indian Tribe	FTA	Letter indicating cultural resources concern and requesting cultural resources survey
February 12, 2018	Email	Sound Transit	Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation	Invitation to participate in SEPA early scoping
February 14, 2019	Letter	Sound Transit	Duwamish Tribal Organization, Snohomish Tribe	Scoping notification and invitation to participate in the environmental review process
February 15, 2019	Email	Sound Transit	Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, the State Historic Preservation Officer	Transmittal of SEPA Determination of Significance and scoping meeting invitation
February 25, 2019	Letter	FTA	Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, the State Historic Preservation Officer	Section 106 initiation and invitation to participate in environmental review process
March 5, 2019	Email/ Form	The State Historic Preservation Officer	FTA	Participating agency acceptance letter

Date	Format	From	To	Description
May 10, 2019	Letter	FTA	Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, the State Historic Preservation Officer	Transmittal of Agency Coordination Plan and request for concurrence with proposed schedule
May 10, 2019	Email	Sound Transit	Duwamish Tribal Organization, Snohomish Tribe	Transmittal of Agency Coordination Plan and request for concurrence with proposed schedule
May 21, 2019	Letter	The State Historic Preservation Officer	FTA	Concurrence with schedule proposed in the Agency Coordination Plan
July 23, 2019	Letter	FTA	Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, the State Historic Preservation Officer	Request for concurrence with area of potential effects and No Adverse Effects determination for geotechnical investigation
July 24, 2019	Email	Sound Transit	Duwamish Tribal Organization, Snohomish Tribe	Request for concurrence with area of potential effects and No Adverse Effects determination for geotechnical investigation
August 9, 2019	Letter	The State Historic Preservation Officer	FTA	Area of potential effects and No Adverse Effects determination concurrence for geotechnical investigation
September 9, 2019	Letter	Sound Transit	Duwamish Tribal Organization, Snohomish Tribe, the State Historic Preservation Officer	Request for EIS methodology review
September 10, 2019	Letter	FTA	Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation	Request for EIS methodology review
September 26, 2019	Letter	The State Historic Preservation Officer	Sound Transit	EIS methodology comment letter
February 12, 2020	Letter	FTA	Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, the State Historic Preservation Officer	Request for comments on area of potential effects and Archaeological Survey and Inventory Plan

Date	Format	From	To	Description
February 20, 2020	Letter	Sound Transit	Duwamish Tribal Organization, Snohomish Tribe	Request for comments on area of potential effects and Archaeological Survey and Inventory Plan
February 25, 2020	Letter	The State Historic Preservation Officer	FTA	Area of potential effects concurrence and archaeological inventory methodology comments
April 21, 2020	Email	FTA	The State Historic Preservation Officer	Transmittal on the Built Environment Inventory Plan
April 23, 2020	Email	The State Historic Preservation Officer	FTA	Concurrence with Built Environment Inventory Plan
August 31, 2020	Letter	FTA	Freeway Park Association, City of Seattle Historic Preservation Office, Martin Smith Inc., Alliance for Pioneer Square King County Historic Preservation Program, Historic Seattle, Historic South Downtown Community Preservation and Development Authority, Washington Trust for Historic Preservation, Seattle Center, Seattle Chinatown International District Preservation and Development Authority,	Section 106 consulting party invitation and area of potential effects map
September 14, 2020	Email	City Historic Preservation Officer	FTA	Consulting party acceptance letter and FTA response
September 23, 2020	Email	Historic Seattle	FTA	Consulting party acceptance letter
September 24, 2020	Email	Washington Trust for Historic Preservation	FTA	Consulting party acceptance letter
September 29, 2020	Email	Alliance for Pioneer Square	FTA	Consulting party acceptance letter and comment on area of potential effects
September 29, 2020	Email	Seattle Chinatown International District Preservation & Development Authority	FTA	Consulting party acceptance letter and comment on area of potential effects
September 29, 2020	Letter	Historic South Downtown Community Preservation and Development Authority	FTA	Consulting party acceptance letter and comment on area of potential effects
September 30, 2020	Email	Martin Smith Inc.	FTA	Consulting party acceptance letter and comment on area of potential effects

Date	Format	From	To	Description
December 7, 2020	Letter	FTA	Southwest Seattle Historical Society, InterIm CDA	Section 106 consulting party invitation
December 21, 2020	Letter	InterIm CDA	FTA	Consulting party acceptance letter and comment on area of potential effects
December 29, 2020	Email	Southwest Seattle Historical Society	FTA	Consulting party acceptance letter
March 22, 2021	Email	FTA	City Historic Preservation Officer, Historic Seattle, Historic South Downtown Community Preservation and Development Authority, InterIm CDA, King County Historic Preservation Program, Martin Smith Inc., Alliance for Pioneer Square, Seattle Chinatown International District Preservation & Development Authority, Southwest Seattle Historical Society, Washington Trust for Historic Preservation	N.H.P.A. Section 106 Consulting Party Kickoff Meeting Notice and Coordination Plan
March 22, 2021	Email	FTA	The State Historic Preservation Officer, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation	N.H.P.A. Section 106 Consulting Party Kickoff Meeting Notice and Coordination Plan
March 25, 2021	Letter	FTA	Historic Seattle, Alliance for Pioneer Square, City Historic Preservation Officer, Historic South Downtown Community Preservation and Development Authority, InterIm CDA, King County Historic Preservation Program, Martin Smith Inc., Seattle Chinatown International District Preservation & Development Authority, Southwest Seattle Historical Society, Washington Trust for Historic Preservation, The State Historic Preservation Officer	N.H.P.A. Section 106 Area of Potential Effects Amendment
March 25, 2021	Letter	FTA	Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation	N.H.P.A. Section 106 Area of Potential Effects Amendment; and National Environmental Policy Act, Administrative Draft EIS
March 26, 2021	Letter	The State Historic Preservation Officer	FTA	Area of potential effects concurrence

Date	Format	From	To	Description
March 30, 2021	Letter	Sound Transit	Duwamish Tribal Organization, Snohomish Tribe	N.H.P.A. Section 106 Area of Potential Effects, Cultural Resources Technical Report, Agency and Tribal Coordination plan, and National Environmental Policy Act, Administrative Draft EIS Methodologies
April 30, 2021	Letter	InterIm CDA	FTA	Section 106 Consultation Comments
September 3, 2021	Letter	FTA	Historic Seattle, Alliance for Pioneer Square, City Historic Preservation Officer, Historic South Downtown Community Preservation and Development Authority, InterIm CDA, King County Historic Preservation Program, Martin Smith Inc., Seattle Chinatown International District Preservation & Development Authority, Southwest Seattle Historical Society, Washington Trust for Historic Preservation	N.H.P.A. Section 106 Area of Potential Effects Amendment and National Register Eligibility Determinations
September 7, 2021	Letter	FTA	The State Historic Preservation Officer, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation	N.H.P.A. Section 106 Area of Potential Effects Amendment and National Register Eligibility Determinations
September 20, 2021	Email	Sound Transit	Duwamish Tribal Organization	N.H.P.A. Section 106 Area of Potential Effects Amendment and National Register Eligibility Determinations
September 27, 2021	Email	Duwamish Tribal Organization	Sound Transit	Area of Potential Effects Amendments and National Register Eligibility Determinations
October 5, 2021	Letter	The State Historic Preservation Officer	FTA	Revised area of potential effects comments
October 6, 2021	Email	City Historic Preservation Officer	FTA	N.H.P.A. Section 106 Area of Potential Effects Amendment and National Register Eligibility Determinations
October 6, 2021	Letter	Alliance for Pioneer Square	FTA	N.H.P.A. Section 106 Area of Potential Effects Amendment and National Register Eligibility Determinations
October 6, 2021	Letter	Historic South Downtown Community Preservation and Development Authority	FTA	N.H.P.A. Section 106 Area of Potential Effects Amendment and National Register Eligibility Determinations

Date	Format	From	To	Description
October 7, 2021	Letter	Martin Smith Inc.	FTA	N.H.P.A. Section 106 Area of Potential Effects Amendment and National Register Eligibility Determinations
November 9, 2021	Letter	The State Historic Preservation Officer	FTA	National Register Eligibility Determinations
Various dates	Letter	Alliance for Pioneer Square	Sound Transit	Comments on WSBLE Draft EIS
April 5, 2022	Meeting	Sound Transit	All Consulting Parties	WSBLE Section 106 Consulting Parties Draft EIS Briefing
April 25, 2022	Letter	Seattle Chinatown International District Preservation & Development Authority	Sound Transit	Comments on WSBLE Draft EIS
April 26, 2022	Letter	Wing Luke Museum	Sound Transit	Comments on WSBLE Draft EIS
April 26, 2022	Letter	Historic South Downtown Community Preservation and Development Authority	Sound Transit	Comments on WSBLE Draft EIS
April 27, 2022	Letter	Martin Smith Inc	Sound Transit	Comments on WSBLE Draft EIS
April 27, 2022	Email	The State Historic Preservation Officer	FTA	Comments on WSBLE Draft EIS
April 28, 2022	Letter	Historic Seattle	Sound Transit	Comments on WSBLE Draft EIS
April 28, 2022	Letter	Washington Trust for Historic Preservation	Sound Transit	Comments on WSBLE Draft EIS
April 28, 2022	Letter	City of Seattle	Sound Transit	Comments on WSBLE Draft EIS
January 23, 2023	Meeting	Sound Transit	State Historic Preservation Officer	WSBLE project overview
April 13, 2023	Email	Historic Seattle	Sound Transit	Update on Section 106 process following Draft EIS publication
April 26, 2023	Email	FTA	Historic Seattle	Update on Section 106 process following Draft EIS publication

Date	Format	From	To	Description
July 10, 2023	Letter	Sound Transit	The State Historic Preservation Officer, Muckleshoot Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Duwamish Tribe, Snohomish Tribe	Announce decision to separate the environmental review processes for the two Link extensions
July 10, 2023	Letter	Sound Transit	Historic Seattle, Alliance for Pioneer Square, City Historic Preservation Officer, Historic South Downtown Community Preservation and Development Authority, InterIm CDA, King County Historic Preservation Program, Martin Smith Inc., Seattle Chinatown International District Preservation & Development Authority, Southwest Seattle Historical Society, Washington Trust for Historic Preservation, Seattle Center Redevelopment Office	Announce decision to separate the environmental review processes for the two Link extensions
August 2, 2023	Letter	FTA	The State Historic Preservation Officer, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation	N.H.P.A. Section 106 Area of Potential Effects amendment, removing the Ballard Link Extension
August 2, 2023	Letter	FTA	Historic Seattle, Alliance for Pioneer Square, City Historic Preservation Officer, Historic South Downtown Community Preservation and Development Authority, InterIm CDA, King County Historic Preservation Program, Martin Smith Inc., Seattle Center Redevelopment Office, Seattle Chinatown International District Preservation & Development Authority, Southwest Seattle Historical Society, Washington Trust for Historic Preservation	N.H.P.A. Section 106 Area of Potential Effects amendment, removing the Ballard Link Extension and invitation to confirm interest in Section 106 consultation for the West Seattle Link Extension Project.
August 14, 2023	Letter	The State Historic Preservation Officer	FTA	Concurrence on revised area of potential effects.
August 21 and 31, 2023	Email	City Historic Preservation Officer	FTA	Indicated interest in remaining a Consulting Party, and no comment on area of potential effects.
September 5-13, 2023	Letter	Sound Transit	Duwamish Tribal Organization, Snohomish Tribe	Request for comments on area of potential effects
September 5, 2023	Email	Suquamish Indian Tribe of the Port Madison Reservation	FTA	Concurrence on area of potential effects

Date	Format	From	To	Description
September 11, 2023	Email	Alliance for Pioneer Square	FTA	Indicated interest in remaining a Consulting Party
September 19, 2023	Email	FTA	Washington Trust for Historic Preservation, Seattle Center Redevelopment Office, Southwest Seattle Historical Society, King County Historic Preservation Program, Martin Smith Inc., Seattle Chinatown International District Preservation & Development Authority, Historic South Downtown Community Preservation and Development Authority, InterIm CDA, Historic Seattle	Requested interest in remaining a Consulting Party for WSLE
September 19, 2023	Email	Seattle Center	FTA	No longer interested in remaining a Consulting Party for WSLE
October 10, 2023	Email	Washington Trust for Historic Preservation	FTA	Indicated interest in remaining a Consulting Party
October 27, 2023	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation	West Seattle Link Extension Briefing with the Suquamish Tribe
October 31, 2023	Meeting	Stillaguamish Tribe of Indians of Washington	Sound Transit	Stillaguamish Tribal Meeting and tour of Stillaguamish facility
November 2, 2023	Meeting	Sound Transit (FTA present)	Muckleshoot Indian Tribe	West Seattle Link Extension Briefing with the Muckleshoot Indian Tribe
December 11, 2023	Meeting	Sound Transit (FTA present)	The State Historic Preservation Officer (staff)	West Seattle Link Extension National Register Eligibility Consultation Record to discuss five non-concurrence properties with the State Historic Preservation Officer and FTA
December 12, 2023	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation, Stillaguamish Tribe of Indians of Washington, Snoqualmie Tribe, Tulalip Tribes, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe	Section 106 process briefing
December 14, 2023	Meeting	Sound Transit (FTA present)	Muckleshoot Indian Tribe	Discussed archaeology focused on Pigeon Point

Date	Format	From	To	Description
December 18, 2023	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation, Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 consulting parties briefing
December 19, 2023	Meeting	Sound Transit	Suquamish Indian Tribe of the Port Madison Reservation	Discussed meetings for 2024, Section 106 logistics
January 5, 2024	Meeting	Sound Transit (FTA present)	The State Historic Preservation Officer (staff)	West Seattle Link Extension National Register Eligibility Consultation Record to discuss two remaining non-concurrence properties with the State Historic Preservation Officer and FTA
January 7, 2024	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation, Stillaguamish Tribe of Indians of Washington, Snoqualmie Tribe, Tulalip Tribes, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting
January 17, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation, Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Eligibility and Effects Overview
February 13, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation, Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 1
February 23, 2024	Meeting	Sound Transit (FTA present)	Muckleshoot Indian Tribe	Site visit to Pigeon Point to discuss project impacts

Date	Format	From	To	Description
February 27, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation, Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 2
March 14, 2024	Meeting	Sound Transit (FTA present)	Muckleshoot Indian Tribe	West Seattle Link Extension consultation – discussed agreement pathways
March 18, 2024	Letter	FTA	City Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation, Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Eligibility and Effects Determination
March 22, 2024	Letter	FTA	The State Historic Preservation Officer	West Seattle Link Extension Section 106 Eligibility and Effects Determination
March 25, 2024	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation, Stillaguamish Tribe of Indians of Washington, Snoqualmie Tribe, Tulalip Tribes, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe	Discussed goals of West Seattle Link Extension consulting party meeting series, project approach, and archaeology approach
March 26, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Office, Alliance for Pioneer Square, Washington Trust for Historic Preservation, Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 3
March 28, 2024	Meeting	Sound Transit (FTA present)	Muckleshoot Indian Tribe	Duwamish Crossing – discussion during meeting focused on importance of education on Muckleshoot history and environment, mitigation opportunities and agreement progress
March 28, 2024	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation	Presented updated information on barge use for the Duwamish crossing

Date	Format	From	To	Description
April 8, 2024	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation, Stillaguamish Tribe of Indians of Washington, Snoqualmie Tribe, Tulalip Tribes, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe	West Seattle Link Extension Section 106 Tribes Biweekly Meeting Series – Approach to archaeology, investigation to date, treatment plan update
April 9, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Office, Alliance for Pioneer Square, Washington Trust for Historic Preservation, Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 4
April 11, 2024	Letter	The State Historic Preservation Officer	FTA	West Seattle Link Extension Project Section 106 Consultation – Determination of Eligibility and Effects letter (2019-02-01457)
April 12, 2024	Email	The State Historic Preservation Officer (staff)	FTA	Notice that the 2018 and 2019 projects were merged in WISAARD, and that the West Seattle Link Extension project now is under the WISAARD project number 2019-02-01457
April 16, 2024	Letter	The State Historic Preservation Officer	FTA	Revised – West Seattle Link Extension Project Section 106 Consultation – Determination of Eligibility and Effects letter (2019-02-01457)
April 16, 2024	Email	Suquamish Indian Tribe of the Port Madison Reservation	FTA	Concurrence with FTA's Finding of Effect (Adverse Effect to Historic Properties). Also, request for correction be made to the West Seattle Link Extension Historic and Archaeological Resources Technical Report in Section 4.4 Ethnographic Context on page 4-6, where Chief Seattle is referred to as Duwamish only. Request for correction to reference Chief Seattle as Duwamish and Suquamish.
April 17, 2024	Letter	Duwamish Tribe	Sound Transit	Comments on West Seattle Link Extension project

Date	Format	From	To	Description
April 18, 2024	Letter	City Historic Preservation Officer	FTA	Noted "general" concurrence on area of potential effects, National Register eligibility, and effects, Requested additional information regarding impacts to Fire Station 14 and statement that effects to properties whose National Register eligibility had not yet been concurred on could not be assessed for effects.
April 22, 2024	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation, Stillaguamish Tribe of Indians of Washington, Snoqualmie Tribe, Tulalip Tribes, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe	West Seattle Link Extension Section 106 Tribes Biweekly Meeting Series – Discussed ground disturbance
April 23, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Office, Alliance for Pioneer Square, Washington Trust for Historic Preservation, Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 5
May 9, 2024	Meeting	Sound Transit (FTA present)	Muckleshoot Indian Tribe	Discussion on mitigation for West Seattle Link Extension
May 13, 2024	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation, Stillaguamish Tribe of Indians of Washington, Snoqualmie Tribe, Tulalip Tribes, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe	West Seattle Link Extension Section 106 Tribes Biweekly Meeting Series
May 14, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 6

Date	Format	From	To	Description
May 28, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation, Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 7
May 28, 2024	Letter	FTA	3633 LLC, Buffalo Industries Inc., Charles and Gail Irish, Betty Lindmark, Marilyn Kennel and Alan McMurray, Nesor Investment Co., Quad-Mac LLC, Redwall LLC, Riverside Mill LLC, TCMM LLC	Invitation to to participate as a consulting party under Section 106 of the NRHP for the Sound Transit West Seattle Link Extension Project for individual property owners with properties adversely affected by preferred alternative
June 7, 2024	Email	Colleen Raymond (TCMM LLC)	FTA	Accepting invitation to participate as consulting party in Section 106 for West Seattle Link Extension
June 10, 2024	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation, Stillaguamish Tribe of Indians of Washington, Snoqualmie Tribe, Tulalip Tribes, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe	West Seattle Link Extension Section 106 Tribes Biweekly Meeting Series
June 11, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 8
June 11, 2024	Email	Alan McMurray (Cettolin House)	FTA	Accepting invitation to participate as consulting party in Section 106 for West Seattle Link Extension
June 12, 2024	Phone Call	Charles Irish	FTA	Phone call from individual consulting party wanting more information on the Section 106 process
June 20, 2024	Email	Daniel O'Malley (Redwall LLC)	FTA	Accepting invitation to participate as consulting party in Section 106 for West Seattle Link Extension

Date	Format	From	To	Description
June 24, 2024	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation, Stillaguamish Tribe of Indians of Washington, Snoqualmie Tribe, Tulalip Tribes, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe	West Seattle Link Extension Section 106 Tribes Biweekly Meeting Series
June 25, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 9
June 28, 2024	Email	FTA	Advisory Council on Historic Preservation	Invitation to participate in the Section 106 consultation process and development of the Programmatic Agreement for the West Seattle Link Extension Project.
July 3, 2024	Email	Sound Transit	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Draft Programmatic Agreement sent to consulting parties for review and comment by July 19, 2024
July 8, 2024	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation, Stillaguamish Tribe of Indians of Washington, Snoqualmie Tribe, Tulalip Tribes, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe	West Seattle Link Extension Section 106 Tribes Biweekly Meeting Series – Review of Programmatic Agreement Draft 1
July 9, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 10 – Review of Programmatic Agreement Draft 1

Date	Format	From	To	Description
July 15, 2024	Letter	Advisory Council on Historic Preservation	FTA	Declining to participate in the West Seattle Link Extension Section 106 consultation to resolve adverse effects.
July 18, 2024	Email	Sound Transit	Charles Irish	Follow up email (after phone call) to confirm Sound Transit's error in identifying Mr. Irish's property as being adversely affected by the West Seattle Link Extension Preferred Alternative. It will not be adversely affected by the Preferred Alternative, and thus Mr. Irish would not be considered a consulting party for Section 106 consultation.
July 18, 2024	Email	Muckleshoot Indian Tribe	Sound Transit	Comments on the West Seattle Link Extension Draft 1 Programmatic Agreement
July 18, 2024	Email	City Historic Preservation Officer	Sound Transit	Comments on the West Seattle Link Extension Draft 1 Programmatic Agreement
July 19, 2024	Email	Suquamish Indian Tribe of the Port Madison Reservation	Sound Transit	Comments on the West Seattle Link Extension Draft 1 Programmatic Agreement
July 19, 2024	Letter	State Historic Preservation Officer	Sound Transit	Comments on the West Seattle Link Extension Draft 1 Programmatic Agreement
July 22, 2024	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation, Stillaguamish Tribe of Indians of Washington, Snoqualmie Tribe, Tulalip Tribes, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe	West Seattle Link Extension Section 106 Tribes Biweekly Meeting Series – Review of comments on Programmatic Agreement Draft 1 from Tribes
July 23, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 11 - Review of comments on Programmatic Agreement Draft 1 from Consulting Parties

Date	Format	From	To	Description
August 8, 2024	Meeting	Sound Transit (FTA present)	Marilyn Kennell, Alan T McMurray, Colleen Raymond, Daniel O'Malley	West Seattle Link Extension Section 106 Consulting Party Orientation
August 12, 2024	Meeting	Sound Transit (FTA present)	Suquamish Indian Tribe of the Port Madison Reservation, Stillaguamish Tribe of Indians of Washington, Snoqualmie Tribe, Tulalip Tribes, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe	West Seattle Link Extension Section 106 Tribes Biweekly Meeting Series – Review of Draft 2 of Programmatic Agreement
August 13, 2024	Meeting	Sound Transit (FTA present)	City Historic Preservation Officer, The State Historic Preservation Officer, Alliance for Pioneer Square, Washington Trust for Historic Preservation Suquamish Indian Tribe of the Port Madison Reservation, Snoqualmie Indian Tribe, Tulalip Tribes of Washington, Confederated Tribes and Bands of the Yakama Nation, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington	West Seattle Link Extension Section 106 Consulting Parties Biweekly Meeting Series – Meeting 12 – Review of Draft 2 Programmatic Agreement

N.H.P.A. = National Historic Preservation Act

7 ARCHAEOLOGICAL RECORDS SEARCH

7.1 WISAARD Records

A records search was conducted using the Washington State Department of Archaeology and Historic Preservation's WISAARD system to identify known archaeological sites as well as previously completed cultural resources studies within the desktop research area. The search results are described in Section 7.2, Previous Archaeological Studies.

The historic resources team also conducted a search on WISAARD for historic built environment resources listed or eligible for listing in the National Register. The search results, along with the results of the field investigations, are presented in Section 9. All records searches were completed by June 2023.

As shown in Table 7-1, there are 10 previously identified archaeological sites currently known within the desktop research area, which contains the area of potential effects, for the project. Four archaeological resources (45KI688, 45KI529, 45KI530 and 45KI1353) fall within the area of potential effects, all within the Duwamish Segment, and are discussed below. The remaining archaeological sites fall within the desktop research area and would not have potential construction or operational impacts. However, their location in the vicinity may be used to understand additional resource types that may be encountered during archaeological investigations for the project.

7.1.1 45KI688

Recorded in 2003, archaeological site 45KI688 is a few blocks west of Interstate 5 in SODO. The site consists of a thick deposit of historical-period refuse. The location, ages, and character of the artifacts correspond closely to documentary evidence for the Seattle Industrial District Dump (Bishop and Turnberg 1984). The site was first identified as part of the Sound Transit Central Link Light Rail project and was determined to be not eligible for listing in the National Register by the State Historic Preservation Officer in November 2003.

7.1.2 45KI529 and 45KI530

Archaeological sites 45KI529 and 45KI530 represent two manifestations of a single, ongoing historical event along Spokane Street beneath the Spokane Street Viaduct. Both sites were first identified in 2002 and subsequently tested as part of the Spokane Street Viaduct Widening project. The sites likely represent materials associated with the Jackson Street Regrade project as well as dredge spoils from the Duwamish Waterway in the late nineteenth and early twentieth centuries. Fill material was needed to raise the grade of the tidal zone and stabilize the landform for further development. The State Historic Preservation Officer concurred with the Federal Highway Administration in 2006 that 45KI529 and 45KI530 were not eligible for listing in the National Register.

Table 7-1. Previously Recorded Archaeological Sites (East to West)

Site Number	Site Type	Brief Description	National Register Eligibility Determination	Segment	Within Area of Potential Effect?
45KI688	Historic landfill	Seattle Industrial District Landfill.	Not eligible	Duwamish	Yes
45KI1425	Historic utility	Portion of wooden water pipe.	Not eligible	Duwamish	No
45KI722	Historic transportation	Abandoned segment of Columbia & Puget Sound railroad grade.	Not contributing	Duwamish	No
45KI529	Historic landfill	South Spokane Street dump #2.	Not eligible	Duwamish	Yes
45KI530	Historic landfill	South Spokane Street dump #1.	Not eligible	Duwamish	Yes
45KI1346	Isolate	Single precontact lithic flake identified in geoprobe.	Not evaluated	Duwamish	No
45KI52	Precontact village site	Identified on 1894 Seattle map. Not archaeologically verified.	Not evaluated	Duwamish	No
45KI1353	Precontact shell midden	Burned bone and shell fragments identified in geotechnical borings excavated in 1985.	Not evaluated	Duwamish	Yes
45KI1186	Historic residential structure	Residential structure demolition debris.	Not evaluated	West Seattle Junction	No
45KI1187	Historic residential structure	Residential structure demolition debris.	Not evaluated	West Seattle Junction	No

7.1.3 45KI1353

Although not officially recorded as an archaeological site until 2017 (Lockwood 2017), 45KI1353 was first identified by Hal Kennedy in 1985. At that time, Kennedy observed what appeared to be midden soils and possible archaeological deposits in two geotechnical boreholes being conducted along Southwest Marginal Place. Included in the sample were shell fragments, fish and mammal bones, fire-cracked rock, charcoal, and a single lithic flake. Originally, Kennedy assumed a possible association between these materials and 45KI52, a reported precontact ethnographic site approximately 200 meters to the southeast. While Kennedy did not formally record the site at the time, Dr. Christopher Lockwood codified Kennedy's findings in an archaeological site form in 2017 at the request of the Washington State Department of Archaeology and Historic Preservation. Archaeological site 45KI1353 may or may not be an extension of 45KI52, but because the location or physical existence of 45KI52 has never been field-verified, Kennedy's find was given a new and unique site number. The eligibility for listing on the National Register for 45KI1353 has not yet been determined.

7.2 Previous Archaeological Studies

To develop a more robust understanding of the rich cultural history (both precontact and historical-period) a review of archaeological reports and associated literature regarding cultural resources studies was completed within the desktop research area. Table 7-2 lists the cultural resources surveys that have been conducted within the desktop research area for the West Seattle Link Extension as of February 2023.

The majority of the 19 cultural resources studies identify historical-period resources, with only a handful identifying precontact cultural components within the desktop research area. While none of the 19 studies cover the entire area of potential effects for the project, they represent a major contribution to the archaeological and historic context of the project vicinity by a number of different cultural resource management firms and transportation agencies.

Table 7-2. Previous Cultural Resource Investigations within the Desktop Research Area (Generally East to West)

National Archaeological Database	Author(s)	Date	Title	Within Area of Potential Effect?
1686058	Gunn, Kenny	2015	SC 35 Alaska Junction Telecommunications Facility, 4545 Fauntleroy Way Southwest, Seattle	No
1348205	Earley, Amber	2006	Cultural Resources Assessment of the Duwamish Bikeway Project, Seattle	No
1681488	Berger, Margaret	2011	Cultural Resources Assessment of the Duwamish River Habitat Restoration Program	Yes
1339785	Robbins, Jeffrey R.	1998	Seaboard Lumber Aquatic Restoration Project Seattle, Cultural Resource Assessment	No
1339757	Robbins, Jeffrey R.	1996	Cultural Resource Monitoring Alki Transfer/Combined Sewer Overflow Facilities Project West Seattle Tunnel	No

National Archaeological Database	Author(s)	Date	Title	Within Area of Potential Effect?
1339794	Robbins, Jeffrey R.	1998	Cultural Resources Monitoring Alki Transfer/CSO Facilities	Yes
1343250	The Johnson Partnership	2004	East Marginal Way Grade Separation Project, Cultural Resources Analysis for National Historic Preservation Act Section 106 Review, Includes Addendum to Report	No
1680161	Chidley, Michael	2011	Cultural Resources Assessment for the State Route 99 Spokane Street Overcrossing Project, King County, Washington	No
1680716	Bartoy, Kevin	2011	State Route 99 South Hudson Street to Ward Street Automated Viaduct Closure Gates Project, Results of Monitoring Program No Adverse Effect	No
1694915	Bush, Kelly	2020	Archaeological Investigation for the East Marginal Way Corridor Design Improvement Project	Yes
1348804	Gillis, Nicole	2005	SR 99 Alaskan Way & Seawall Replacement Project, Archaeological Monitoring and Review of Geotechnical Borings from South Spokane Street to Battery Street Tunnel	No
1346259	Cole, Stephen C.	2005	Revised Archaeological Monitoring of Construction Excavations in the Spokane Street Viaduct Project, Utilities Relocation Phase (Contract 3), Seattle	Yes
1681221	Robbins, Jeffrey, and Lynn L. Larson	1995	South Spokane Street Viaduct Widening Project Cultural Resource Assessment Seattle, Washington – Final Report	No
1685046	Stevenson, Alex	2014	Archaeological Inventory for the South Spokane Street at Interstate 5 Seismic Backbone Project for Seattle Public Utilities, City of Seattle	No
1691484	Shong, Michael	2017	Spokane Backbone Seismic Upgrade Project – Archaeological Monitoring	No
1688116	Valentino, Alicia	2016	Results of Archaeological Monitoring, Sound Transit University Link Light Rail Maintenance of Way Building Project (U810), Seattle, King County, Washington	No
1689038	Valentino, Alicia	2017	South Lander Street Grade Separation Project, Cultural Resources Assessment	No
1339836	Courtois, Shirley	1999	Central Link Rail Transit Project Historic and Prehistoric Archaeological Sites Historic Resources Native American Traditional Cultural Properties Paleontological Sites	No
1339816	Courtois, Shirley	1999	Sound Transit Central Link Light Rail EIS Historic and Archaeological Resources Technical Report	No

8 ARCHAEOLOGICAL RESEARCH DESIGN

The results of the background research were used to establish a framework for the archaeological expectations for the project. Expectations for where archaeological deposits could potentially be identified are based on environmental data and the relationship of that data to an understanding of human behavior. Precontact human habitation was dependent on the availability of water and the ease with which resources could be procured and transported. With a change in precontact resource exploitation towards littoral environments and coastal habitats coinciding with the Early Pacific period, habitation areas were increasingly along coastal, river and lake margins. During the historic period, landscape modification methods, including the removal of sediment and filling of topographical depressions, have a unique effect on archaeological site preservation and visibility. By understanding these effects, expectations about archaeological potential can be generated and subsequently used to inform archaeological resource location and identification. Sections 8.1, Precontact and Ethnographic Archaeology, and 8.2, Historical-period Archaeology, examine the geologic, geomorphic, and cultural behaviors presented in Section 4, Environmental and Cultural Context, and focus on the desktop research area to help better understand archaeological expectations.

8.1 Precontact and Ethnographic Archaeology

The majority of the project corridor crosses areas composed of glacial till and outwash deposited by the Puget lobe of the Cordilleran ice sheet during the late Pleistocene (Troost et al. 2005). Glacial till is an unconsolidated (poorly sorted and unstratified) mix of sediments deposited along glacial margins. Glacial outwash is composed of laminated and interbedded sands and gravels, carried and deposited by glacial meltwater (Troost et al. 2005). The formation of these landforms occurred between 17,400 and 16,400 years ago, during the late Pleistocene (Troost et al. 2005) and represented a period in which there was no opportunity for human occupation. Because human occupation of the land surface could only occur after the formation of these landforms (i.e., after 16,400 years ago), the physical remains of these activities would be on the ground surface of these landforms.

Portions of the project corridor occur in areas mapped as Holocene tidal flats, described as silt and sand containing some shells that were historically exposed along broad coastal benches at low tide but are now covered with artificial fill (Troost et al. 2005). The most extensive area of tidal flats crossed by the alignment occurs along the Duwamish Waterway. Lesser areas mapped as Holocene alluvium occur along the lower Duwamish, where alluvial deposits are buried by historic fill (Troost et al. 2005). While the Holocene tidal flat deposits are of the appropriate age to contain precontact archaeological deposits, these deposits accumulated in an environment that was frequently inundated. Therefore, while precontact human groups may have used these areas for limited activities (i.e., resource procurement and or processing), the archaeological deposits resulting from these activities would be limited in extent and the likelihood of encountering them is low. Areas of high archaeological sensitivity in these deposits are considered to be limited to locations of ethnographic place names, ethnographic village sites, and water-related places. However, most if not all of these locations have been severely affected by historical and recent fill events.

The Seattle area landscape has undergone extensive modification since the first Euroamerican settlements were established in the area (Benoit 1979, Huber et al. 2010, Williams 2015). As mentioned above, widespread landscape modification can dramatically affect archaeological resources that may remain in the area of potential effects. By understanding these effects,

expectations about archaeological potential can be generated for developed areas and then used to assess the potential for archaeological deposits to be present within the project corridor.

From 1898 to 1931, the Seattle Engineering Department undertook nearly 60 projects to alter Seattle's topography (Klingle 2001). The three projects relevant to the project footprint are the Jackson Street Regrade, Duwamish Waterway, and Beacon Hill South Canal projects.

The Jackson Street Regrade, which occurred between 1907 and 1910, removed hills as high as 85 feet from west to east along Jackson Street, sluicing the material to fill the adjacent Elliott Bay tidal flats.

The Duwamish Waterway excavation included the dredging of two parallel canals, the west and east, running north to south within the Duwamish River delta. The East Waterway was the first to be excavated starting in 1895. The East Waterway would not be completed until 1904, when the West Waterway excavation promptly began. By project end, several million cubic yards of bay sediments were spread across the Duwamish River tideflats, which created hundreds of acres of new land (Williams 2015).

The Beacon Hill South Canal project began in 1901 as one of Seattle's most prominent engineers Eugene Semple and his contractors schemed to cut a 300-foot-deep waterway connecting Elliott Bay with Lake Washington. While the plan never fully came to fruition, seven blocks from the base to toe of Beacon Hill were removed by water cannon and sluiced across the Duwamish River tideflats. By the project's end 3 years later, approximately 52 acres of the former tideflats were filled (Williams 2015).

Predicting the location of precontact archaeological remains throughout the project corridor is relatively straightforward. Ethnographic and archaeological data suggest that for the last few thousand years, precontact native inhabitants were congregating predominantly along coastal, river, and lake margins. With much of the current study area traversing historically tidal areas (that were filled during the early historic period) and upland settings (in the case of much of West Seattle), the opportunity to identify landforms that might have resembled what was present 200 to several thousand years ago is minimal. The locations that most closely resemble historical landforms remain at the northern terminus of the project corridor as well as around the Duwamish Waterway. These areas retain the highest likelihood of encountering precontact archaeological remains within the project corridor.

8.2 Historical-period Archaeology

Historical-period archaeological sensitivity in an urban area is based on knowledge of the spatial organization of historic parcels, understanding the types of activities that result in the deposition of material artifacts, and identification of deposits that typically retain the data potential to address important research questions. Recognizing these variables results in specific expectations regarding the areas in which important archaeological data may occur within the project corridor. Within an individual parcel along the project corridor, for example, target areas could include the following:

- **Open spaces** – This defines those portions of a given parcel not devoted to structures that define the parcel (e.g., residential dwellings or commercial buildings)**.** Before organized refuse collection occurred, people typically discarded their refuse as sheet refuse, in burn piles, or in hollow-filled features (e.g., refuse pits, privies, closed wells, abandoned basements, and cisterns).
- **Outbuildings –** Additional buildings on a particular parcel that are set apart from structures that define the parcel (e.g., residential dwellings or commercial buildings). Outbuildings

might include one or more privies if the main structure was constructed before the development of the city sewer system or organized refuse collection.

- **Known/inferred activity areas –** Activity types can include gardening, blacksmithing, butchering, and refuse-burning locations.
- **Within building footprints** – Intact archaeological deposits are rarely identified within the footprint of former buildings. A sparse quantity of objects may be identified in the subfloor or in builder's trenches.

The area of potential effects primarily encompasses historic and modern transportation corridors, but also includes the former locations of several residential, commercial, and industrial areas. Residential lots have the potential to contain structural remains associated with the primary residence or outbuildings, infrastructure (including utilities), and associated refuse deposits and inter-occupational (intentional) fill. In addition to structural remains, commercial lots may also contain refuse deposits that reflect the function of the business that created them (Walker and Zeising 2002). Refuse deposits associated with hotels and retail stores may be similar in composition to the refuse deposits found on a residential lot because they are likely to contain a substantial quantity of domestic artifacts. Industrial sites may include features associated with industrial processes (e.g., blacksmithing, use of kilns, and hide or tallow processing) in addition to structural remains.

Another substantial characteristic of the project corridor is the strong presence of a transportation-related network that has served the city of Seattle for more than 100 years. Roads of all historical periods and of all construction methods (for example, dirt, plank, brick, concrete, and asphalt) are represented in a substantial component of the new light rail corridor and serve as a major research theme for the project. The use of trolleys, railroads, and other rail-drawn forms of transportation were incorporated in Seattle's transportation network and leave an archaeological signature.

8.3 Archaeological Expectations

Incorporating many of the factors discussed in Sections 8.1 and 8.2, research conducted in support of the Geotechnical Investigation Cultural Resources Assessment and Inadvertent Discovery Plan (Bumback et al. 2019) identified a number of locations within the area of potential effects with a greater potential of identifying archaeological materials. These areas, designated as "Archaeological Sensitivity Areas," were identified based on numerous geographical and historic sources. As the archaeological investigation progresses with the project, these Archaeological Sensitivity Areas will help focus the field identification efforts.

8.3.1 Archaeological Sensitivity Area Study

A study was undertaken using Geographic Information Systems data from numerous sources to develop a comprehensive archaeological understanding of the project corridor. Data was gathered identifying environmental features, known archaeological resources, data on the historic shorelines, and the patterns of precontact, ethnographic, and historic use of the area. An overlay of light detection and ranging (LiDAR) imagery was imported into Geographic Information Systems to display the cut and fill limits within this heavily urbanized project corridor. Areas of apparent severe disturbance were identified and classified as low-sensitivity areas and only those of moderate and high sensitivity areas are included in the archaeological sensitivity maps.

Data from the following sources were used to identify areas of archaeological sensitivity:

- The *Waterlines* project map, depicting waterbodies, freshwater resources, and waterbody confluences prior to historical modification, sourced from the Burke Museum of Natural History and Culture (2016)
- Ethnographic sources that discuss indigenous place names, especially the geographical data that T.T. Waterman prepared for the Puget Sound area in the 1920s (Hilbert et al. 2001, Waterman 1920)
- Relevant United States Coast Survey topographic (T Sheet) data focusing on the historic tide flat boundaries that was derived from previously digitized sources as a portion of the Puget Sound River History Project completed by the Quaternary Research Center, Geomorphological Research Group, and Department of Earth and Space Sciences at the University of Washington
- General Land Office plats and Sanborn Fire Insurance Maps that show historical land use
- LiDAR imagery
- Archaeological site locations as depicted in WISAARD
- Historical photographs and maps, including those on record with the University of Washington and public libraries
- Decommissioned landfill studies on file with King County, University of Washington, and the City of Seattle

Individual descriptions of the Archaeological Sensitivity Areas are presented in Sections 8.3.2, Precontact/Ethnographic Archaeological Sensitivity Areas, and 8.3.3, Historical-period Archaeological Sensitivity Areas. The archaeological sensitivity maps are presented in Attachment N.5D as an appendix to the 2020 Archaeological Survey and Inventory Plan.

8.3.2 Precontact/Ethnographic Archaeological Sensitivity Areas

Five Archaeological Sensitivity Areas exist within the project corridor. The original designations for Archaeological Sensitivity Areas were established when the West Seattle Link Extension and Ballard Link Extension projects were combined in one environmental review. Archaeological Sensitivity Areas A-HH and LL-PP are within the footprint of the Ballard Link Extension project and will be addressed in future Ballard Link Extension reports.

8.3.2.1 Archaeological Sensitivity Area II (Duwamish Segment)

Archaeological Sensitivity Area II is south of the West Seattle Bridge in the area of Duwamish Avenue South and represents the ethnographically identified location of *XwEq*^{3}, a name that translates to “slough” or “a cut,” describing the largest branch of the Duwamish Waterway from its mouth. The location of the ethnographic place name has since been filled in and now is home to industrial yards and roadways.

8.3.2.2 Archaeological Sensitivity Area JJ (Duwamish Segment)

Archaeological Sensitivity Area JJ is south of the West Seattle Bridge and west of the current channel of the Duwamish Waterway. Extending approximately 250 feet to the east and west of West Marginal Way Southwest, this Archaeological Sensitivity Area extends from the West Seattle Bridge to south of Southwest Idaho Street and represents the ethnographically identified location of *Tul*^{3}*a’lt*^{u}, translated as “Herring’s house” or “Herring house.” The name references

the location of a village that once existed at the bottom of a bluff on the west bank of the Duwamish Waterway. The village reportedly consisted of at least four longhouses, a potlatch house, and several waste deposit areas (middens). The area where the village once stood is now the home of large industrial buildings and parking lots. Despite the substantial development that has occurred in this area, archaeological deposits have been recorded along the west bank of the Duwamish Waterway within roadways and geotechnical boreholes. Archaeological Sensitivity Area JJ contains previously recorded archaeological sites 45KI52 and 45KI1353. This area has also been identified as an area with potential impacts of concern to Tribes because of traditional uses in this vicinity.

8.3.2.3 Archaeological Sensitivity Area KK (Duwamish Segment)

Archaeological Sensitivity Area KK is north of South Spokane Street in the area of the SODO Busway and represents the ethnographically identified location of *Teta'lks*. Translating to "a little strong point" or "little-bit-straight point," this ethnographic place name refers to a small promontory on a now buried island at the mouth of the Duwamish Waterway, reportedly used as a lookout, stockade, and/or defensive point by native people. Later documents reference the existence of three longhouses at the location (Thrush 2007). The location presented in Hilbert et al. (2001) differs from the location mapped under the Waterlines Project.

8.3.2.4 Archaeological Sensitivity Area QQ (Duwamish Segment)

Archaeological Sensitivity Area QQ is west of the Duwamish Waterway on an elevated promontory referred to as Pigeon Point. Prior to the channelization of the Duwamish River, the construction of Harbor Island and the industrialization of the Duwamish delta, this landform was high above the Duwamish delta and may have served as a lookout or habitation location. This location is considered high sensitivity for the presence of precontact archaeological resources. This area has also been identified as an area with potential impacts of concern to Tribes because of traditional uses in this vicinity.

8.3.2.5 Archaeological Sensitivity Area RR (Delridge Segment)

Archaeological Sensitivity Area RR identifies *T7a'Wee* – translating as "Smelt" – the Lushootseed word for waterway. To the west of Pigeon Point, Longfellow Creek runs approximately 3.4 miles from Roxhill Park north to the Duwamish Waterway. The stream was a traditional fishery dating back to the fourteenth century (Thrush 2007). This location is considered high sensitivity for the presence of precontact archaeological resources. This area has also been identified as an area with potential impacts of concern to Tribes because of traditional uses in this vicinity.

8.3.2.6 Avalon Retained Cut/Tunnel Entrance

Historically, the headwaters of a tributary of Longfellow creek was located in this area. This water source would likely have been important during use of the upland area. This area has also been identified as an area with potential impacts of concern to Tribes because of traditional uses in this vicinity.

8.3.3 Historical-period Archaeological Sensitivity Areas

No historical-period Archaeological Sensitivity Areas were identified for the project area of potential effects.

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9 FIELD INVESTIGATION RESULTS

This section presents the results of the archaeological and built environment investigation for the project to date. The archaeological field investigation will be phased to coordinate with property acquisition and project construction per the process outlined in the Archaeological Survey and Inventory Plan (Attachment N.5D). If additional historic properties are identified, FTA will evaluate the project's effects on National Register-eligible properties and resolve adverse effects as outlined in the programmatic agreement developed for the project in consultation with the State Historic Preservation Officer, Tribes, and other consulting parties.

Results of archaeological monitoring of boreholes are included below. The identification and evaluation of the archaeological resources presented in this section and subsequent sections are based predominantly on elements introduced in previous sections that serve to develop a detailed context of the area of potential effects for each extension.

As presented in Section 7, Archaeological Records Search, there are currently four previously identified archaeological sites (45KI529, 45KI530, 45KI688, and 45KI1353) known to exist within the project area of potential effects; all of these sites are within the Duwamish Segment. Three of those sites (45KI529, 45KI530, and 45KI688) have been archaeologically investigated and have been determined to be not eligible for listing in the National Register.

Over 800 resources were evaluated and documented as part of the historic built environment resource survey. A full list of surveyed resources is included in Attachment N.5A, Table of Surveyed Properties. A detailed historic context covering geographic and thematic patterns of development within the area of potential effects is presented in Attachment N.5C1.

Because of the large number of properties within the area of potential effects, copies of Historic Property Inventory forms are not included as an attachment to this report. Rather, readers are advised to review properties in the Washington State Department of Archaeology and Historic Preservation's WISAARD system, project number 2019-02-01457.[5] The website, along with instructions on how to use the database, is here: https://dahp.wa.gov/find-a-historic-place. WISAARD identification numbers for each property are provided in the overview tables in Sections 9 and 10.

All properties built in or before 1980 identified within the project area of potential effects have been evaluated for listing on the National Register of Historic Places. On November 9, 2021, FTA consulted on the determinations of National Register eligibility for 720 historic built environment resources within the project area of potential effects. Of these, 101 were determined eligible for listing in the National Register. The State Historic Preservation Officer concurred with the determinations on eligibility for 95 properties and in September 2023, additional information was requested on 6. Since then, 8 historic built environment resources within the area of potential effects have been demolished, including 1 National Register-eligible property.

In August 2023, FTA revised the project area of potential effects and identified an additional 99 historic built environment resources. In letters to Section 106 consulting parties and Tribes dated March 18, 2024, and a letter to the State Historic Preservation Officer dated March 22, 2024, FTA made determinations of National Register eligibility for those additional 99 resources. Of these, FTA has determined 15 properties eligible for listing in the National Register and

[5] Previous versions of this report provided a different WISAARD project number, 2018-08-06480. Please refer to the new project number, 2019-02-01457, for the most current project information.

revised the determinations on eligibility for the 5 previously inventoried historic properties evaluated in 2023. The State Historic Preservation Officer concurred with FTA's National Register eligibility determinations on April 16, 2024.

9.1 Archaeological Field Survey

The archaeological field survey has been limited to one investigation within the project area of potential effects. The remainder of the archaeological fieldwork to date has consisted of archaeological monitoring of geotechnical boring activities being conducted in support of project design.

9.1.1 Geoprobe Investigation

In January 2022, five geoprobes were advanced under the direction of an archaeologist along Southwest Marginal Place, west of the Duwamish Waterway (Figure 9-1). The intent of the geoprobe excavation was to better understand the relationship between potential project alternatives and archaeological resources known to exist in the immediate area. The geoprobe study consisted of a truck-mounted drill that would extend a 2-inch-diameter geoprobe tube at known intervals beneath the current street in an effort to observe soil stratigraphy associated with possible remnants of the reported archaeological site. Efforts were made to begin the geoprobe investigation outside of the recorded boundary of an archaeological site and continue towards the recorded resource without encroaching into the defined site boundary. Working within the confines of the asphalted Southwest Marginal Place, six geoprobes were expected to be excavated before encountering the archaeological site.

Due to complications with the drill rig and underground utilities, ultimately only five of the six proposed geoprobes were excavated (Figure 9-2). Depths of the geoprobes were between 18 feet and 28 feet below street surface, with an average depth of approximately 25 feet below surface. The sediments observed during the investigation were consistently modern roadway asphalt and subgrade emplaced over landslide debris or colluvium that had naturally buried glacial lake deposits. Of archaeological interest during the investigation was sediments found in the easternmost geoprobe, where (below the fill and colluvium) was a thin peat layer, perhaps a periphery of the former Duwamish River estuary. No archaeological materials or deposits were encountered during the geoprobes excavations. No evidence of the reported archaeological site was observed in any of the geoprobe samples.

Figure 9-1. Area of Geoprobe Investigation at Southwest Marginal Place, Looking North

Figure 9-2 – REDACTED

9.1.2 Shovel Test Probe Investigation

In September 2023, in coordination with archaeological monitoring of geotechnical borings DS2017, DS2019, and DS2020, archaeological excavation of shovel test probes was allowed at the location of the proposed boring prior to mechanical excavation. These borings are all at the north end of Pigeon Point, on the slope between the northernmost Pigeon Point residences and West Marginal Way Southwest.

A shovel test probe (designated as STP-01) was hand-excavated at the location of proposed boring DS2019 (Figure 9-3). A single, homogeneous layer of fine silty loam extended from the ground surface to a depth of 91 centimeters below surface, where a concentration of concrete chunks and cobbles restricted further excavation. Soils consisted of a fine sandy loam that were uniformly filled with modern debris, including concrete, plastics, nails, and modern glass fragments.

Figure 9-3. Location of Shovel Test Probe at DS2019, Prior to Excavation

A second shovel test probe, excavated in the proposed location of boring DS2017, was in a similar setting as and exhibited similarities to the shovel test probe associated with boring DS2019. Sediments observed from ground surface to a depth of 36 centimeters below surface mirrored soils identified in the first shovel test. These sediments were best described as a sandy loam with modern debris interspersed throughout. Beneath this sandy loam to the base of the shovel test probe at 94 centimeters below ground surface, sediments were considerably higher

in clay content and more consolidated. No cultural materials were identified in this portion of the shovel test probe.

The final shovel test probe excavated in the Pigeon Point area was at the proposed location of boring DS2020. In similar fashion to the other shovel test probes excavated in conjunction with drilling at DS 2017 and DS 2019, sediments observed from ground surface to a depth of approximately 30 centimeters below ground surface were described as a single, homogeneous layer of fine silty loam exhibiting modern debris consisting of recent trash, with concrete and wood fragments intermixed. Similar soils continued from 30 centimeters to the base of the shovel test probe at 101 centimeters below ground surface, although these deposits were devoid of modern debris. No archaeological materials greater than 50 years of age were identified in this shovel test probe.

Results of the archaeological investigation suggest that substantial modern dumping has occurred in this area. Consolidated soils identified in the DS2017 test probe that were absent cultural materials suggests that these sediments may represent older, more stable soils that predate human occupation of the area.

9.1.3 Archaeological Monitoring of Geotechnical Borings

Geotechnical borings to support the project design began in July 2018 and are ongoing to this day. Archaeological monitoring of select geotechnical boreholes have been conducted to identify potential buried cultural resources. The selection of individual boreholes for archaeological monitoring is based on proximal location to known Archaeologically Sensitivity Areas or where there are indicators of potential archaeological sensitivity based on vertical stratigraphy and existing landforms.

Of the 35 boreholes that have been completed for conceptual design in the project corridor, 15 were archaeologically monitored (Table 9-1). A map showing the location of the archaeologically monitored geotechnical boreholes is presented in Figure 9-4. No archaeological material was observed during monitoring of the boreholes completed prior to publication of the WSBLE Draft EIS in January 2022.

Archaeological monitoring of the geotechnical boreholes for the project have thus far generally confirmed assumptions of the subsurface geology. Historical-period refuse from past tidal “fill” events was limited to one piece of clear flat glass identified in one borehole (DS2004) at approximately 20 to 30 feet below surface. While the plate-glass fragment was chronologically undiagnostic, the absence of additional artifacts at that depth in borehole DS2004 suggests that this item was not *in situ* and may have been secondarily deposited during drilling. More common in the monitored boreholes has been shallow modern trash and construction debris. Several holes have exhibited dredge spoils, with depths generally not extending beyond 20 feet. Deeper than 20 feet throughout the area, soils representing tidal deposits associated with the Duwamish delta, and identifiable Osceola lahar sands, are ubiquitous.

Table 9-1. Geotechnical Borings Archaeologically Monitored in the Project Corridor

Boring Number	Segment	Archaeologically Sensitive Area	Archaeological Monitor	Archaeological materials present?
BH-09	Duwamish	N/A	P. Elliott	No
BH-12	Duwamish	N/A	E. Thomas	No
BH-17	Duwamish	N/A	M. Sterner	No
DS2001	Delridge	N/A	J. Wiegand	No
DS2004	Delridge	RR	E. Thomas/P. Elliott	No
DS2016	Duwamish	QQ	P. Elliott	No
DS2022	Duwamish	QQ	P. Elliott	No
DS2023	Duwamish	QQ	P. Elliott	No
DS2036	Duwamish	N/A	E. Thomas	No
DS2047	Duwamish	N/A	E. Thomas	No
DS2058	Duwamish	N/A	P. Elliott	No
DS2065	SODO	N/A	J. Wiegand	No
DS2089	Duwamish	N/A	P. Elliott	No
W2025	West Seattle Junction	N/A	E. Thomas	No
W2030	West Seattle Junction	N/A	E. Thomas	No

9.2 Archaeological Assessment of Alternatives

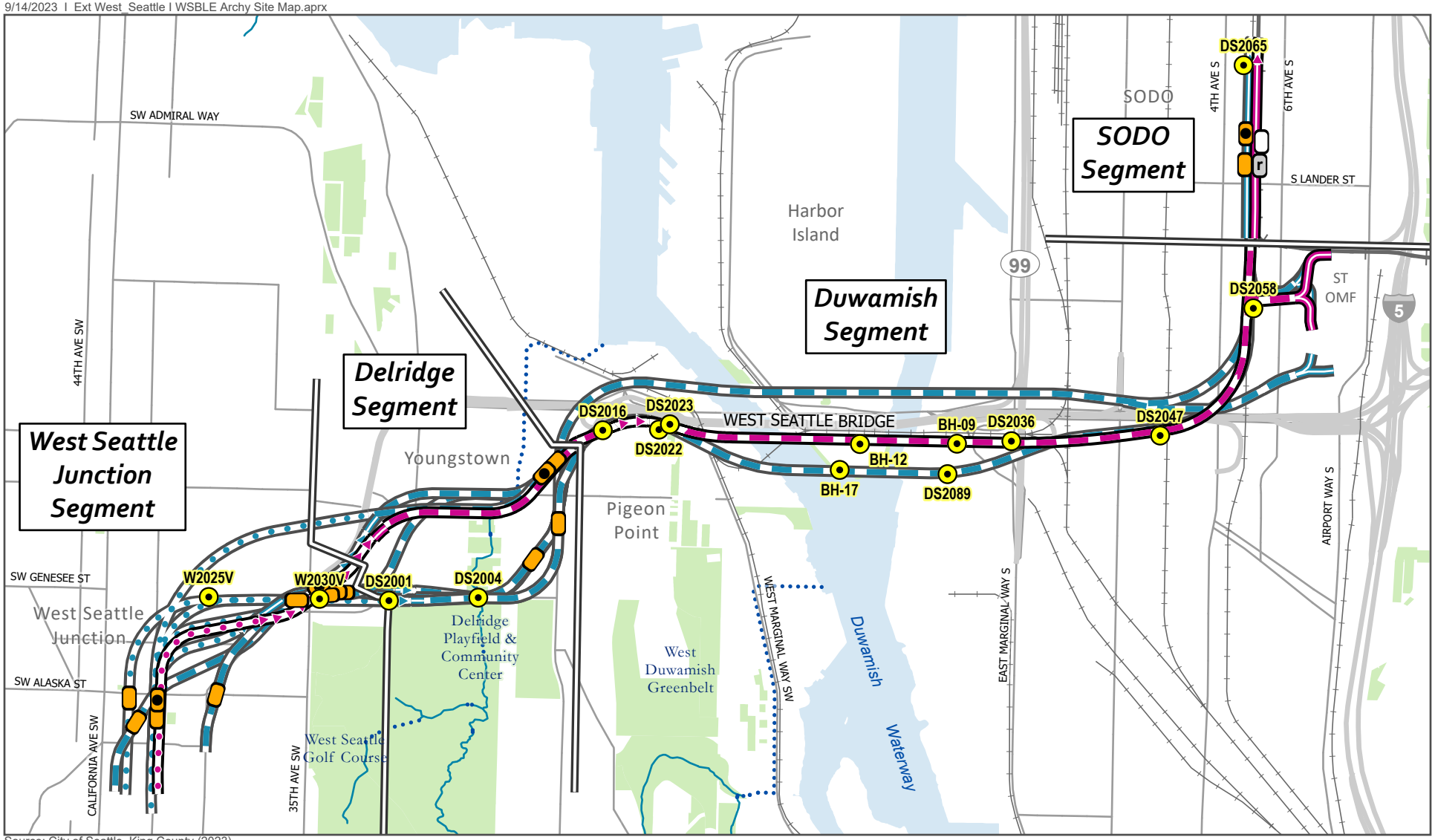
The following section is an assessment of archaeology for each segment and their respective alternatives for the project. The assessment includes results of recent archaeological investigations and archaeological monitoring.

9.2.1 SODO Segment

9.2.1.1 Archaeological Sites

Because there have been no previously identified archaeological sites within the SODO Segment, the following comments are germane to all of the alternatives within this segment equally. All of the SODO Segment alternatives fall within a zone defined by the WISAARD predictive model as “survey highly advised: very high risk” for archaeological resources. One geotechnical borehole (DS2065) was archaeologically monitored in the SODO Segment with no archaeological materials being identified.

Despite there being no previously recorded archaeological sites or evidence of archaeology in the geotechnical boreholes, the SODO Segment has a moderate to high probability of containing precontact archaeological deposits. This conclusion is based on the location being a former tidal flat and that was likely used for resource procurement at one time in the past. The likelihood of encountering historical-period archaeological remains is also considered high as much of the tidal flats were filled with historical refuse in the late nineteenth and early twentieth centuries.



Source: City of Seattle, King County (2023).

Preferred Alternative
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Other Alternatives
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station (● *Indicates Preferred Alternative*)
- New
- Relocated
- Existing

- Segment Line
- Existing Link Light Rail
- Railroad
- Stream
- Piped Stream
- Park
- Phase 2 Monitored Bores

0 2,000 4,000 Feet

N

FIGURE 9-4

Map Showing the Locations of Archaeologically Monitored Geotechnical Borings

West Seattle Link Extension

9.2.1.2 Archaeological Sensitivity Areas

There were no Archaeological Sensitivity Areas identified during the development of the project-specific archaeological sensitivity model (Bumback et al. 2019; Attachment D) that fall within this segment.

Historically, the area from the Duwamish River mouth to as far north as South Jackson Street, beyond South Spokane Street to the south, and as far east as the present alignment of Interstate 5, was a tidal area subject to daily exposure and inundation. While this type of landform was generally used by indigenous populations for resource procurement and may contain archaeological evidence of precontact activity, the types of activities performed in these settings generally left sparse and ephemeral archaeological remains. Due to the seasonality of tidal rise, predicting the location of precontact features (such as weirs, nets, and basketry) within this area is difficult.

This historic Duwamish tidal area that once occupied the present-day SODO Segment was filled and leveled off after the late nineteenth century. As was demonstrated in the discussion of archaeological site 45KI529 and 45KI530 (see Section 7.1.2), the “fill” used to transform these tidal areas often came in the form of historical-period refuse. The archaeological expectation for any alternative in the SODO Segment is that historical-period archaeological materials that were secondarily deposited as fill will likely be encountered.

9.2.2 Duwamish Segment

9.2.2.1 Archaeological Sites

Four known archaeological sites have been previously identified within the Duwamish Segment of the project. The easternmost archaeological site, 45KI688, represents a thick deposit of historical-period refuse identified as the Seattle Industrial District Dump (see Section 7.1.1). This archaeological site has been determined to be not eligible for listing in the National Register, so any impacts to the resource from the known alternatives within the known boundaries of the site would not constitute an effect to the resource.

Archaeological sites 45KI529 and 45KI530, although separated by more than 400 meters (approximately 1,200 feet), may represent a single, repeatedly utilized deposit of materials associated with both the Jackson Street Regrade as well as miscellaneous spoils from dredging projects along the Duwamish Waterway. Because the extents of both 45KI529 and 45KI530 have not been delineated, it is likely that additional historical-period materials would be identified during construction activities between and potentially in the vicinity of these archaeological sites. While both archaeological sites have been determined to be not eligible for listing in the National Register, it is likely that if similar materials are identified between and in proximity to these archaeological sites, they would likewise be considered not eligible for listing in the National Register. Because the resources are considered not eligible for listing, any impacts within the site boundaries from the known alternatives would not constitute an effect to the resource.

Archaeological site 45KI1353, to the west of the Duwamish Waterway, represents a potential precontact midden deposit first identified in 1985 (see Section 7.1.3). At present, the site has not been evaluated for its eligibility for listing in the National Register. Following practices recommended by the Department of Archaeology and Historic Preservation, unevaluated archaeological sites should be considered eligible for planning purposes until determined otherwise. An additional field investigation using geoprobes (see Section 9.1.1) was performed to the area north of the mapped site boundary to determine if the project construction footprint for one or more alternatives would encroach on this site. Thus far there has been no evidence of an archaeological site identified beyond the currently recorded boundary. With consideration of

the site as eligible for planning purposes, the project construction footprint for Option DUW-1b encroaches on the current 45KI1353 site boundary; however, this portion of the track location is considered “elevated” and, as such, potential effects to the resource may be avoided, depending on column locations. No encroachment of the site is presumed by the current project construction footprint of Preferred Alternative DUW-1a.

The entire Duwamish Segment has been characterized by the WISAARD predictive model as “survey highly advised: very high risk” for archaeological resources. There have been 10 geotechnical boreholes (BH-09, BH-12, BH-17, DS2016, DS2022, DS2023, DS2036, DS2047, DS2058, DS2089) that have been archaeologically monitored throughout the Duwamish Segment. Generally, sediment profiles observed in the geotechnical boreholes throughout this segment identified modern fill and dredge deposits overlying Duwamish tidal deposits. Tidal deposits included lahar muds from Mount Rainier eruptions deposited into the Duwamish delta beginning with the Osceola Mudflow approximately 5600 years ago. At the interface of lahar mud layers were Duwamish estuary or tidal flat deposits. No archaeological material was observed in any of the boreholes.

Based on previous investigations and factors influencing settlement, deposition, and disturbance of archaeological sites, the Duwamish Segment continues to have a high probability of containing precontact archaeological deposits. The likelihood of encountering historical-period archaeological remains is considered high, especially in the tidal flat locations, because much of this area was filled in with historical refuse.

9.2.2.2 Archaeological Sensitivity Areas

Archaeological Sensitivity Areas II, JJ, KK and QQ (see Section 8.3.2) all fall within the Duwamish Segment. Archaeological Sensitivity Area II (see Section 8.3.2.1) is on the east side of the Duwamish Waterway. No geotechnical boreholes have been drilled in the vicinity of Archaeological Sensitivity Area II. Archaeological Sensitivity Area JJ (see Section 8.3.2.2) on the west side of the Duwamish Waterway covers two identified, precontact archaeological sites (45KI1353 and 45KI52) and should be considered highly sensitive. Both of the geotechnical boreholes that fall within Archaeological Sensitivity Area JJ (DS2024 and DS2083) have not yet been excavated and may be drilled in a later project phase. Archaeological Sensitivity Area KK (see Section 8.3.2.3) is a known ethnographic location that could have been the location of a lookout, stockade, or defensive point during precontact or even ethnohistoric times. Archaeological Sensitivity Area QQ (see Section 8.3.2.4) represents the Pigeon Point promontory on the west side of the Duwamish River. While there are no archaeological sites identified on Pigeon Point, the area remains highly sensitive for archaeology based on its proximity to the historically resource rich open waters of Elliott Bay and the Duwamish Waterway. Moreover, the elevated nature of Pigeon Point may have provided an advantageous settlement location. There were two borings (DS2022 and DS2023) excavated in the vicinity of Archaeological Sensitivity Area QQ. There were no archaeological resources identified within any of the geotechnical borings excavated in the vicinity of any of the Archaeological Sensitivity Areas.

When evaluating landform considerations, like the SODO Segment, much of the Duwamish Segment can be characterized historically as tidelands until the late nineteenth century. Precontact use of the area would have been seasonal, based upon the resource, and evidence of that use ephemeral. The predictability for finding archaeological evidence of in situ precontact occupation or use is low. However, the likelihood of the presence of precontact archaeological remains increases closer to the historical Duwamish River channel. The presence of 45KI1353 is evidence of the high probability of the archaeological sensitivity of the Duwamish Waterway area.

Similar to the SODO Segment, by the turn of the twentieth century, much of the tidal basin had begun to be filled with dredge spoils and historical-period refuse (see description for 45KI529 and 45KI530) to create a more stable landform. This appears pervasive throughout most of the Duwamish Segment.

9.2.3 Delridge Segment

9.2.3.1 Archaeological Sites

Because there are no previously identified archaeological sites within the Delridge Segment, the following comments are germane to all of the alternatives within this segment equally. All of the Delridge Segment alternatives fall within a zone defined by the WISAARD predictive model as "survey highly advised: very high risk" for archaeological resources. It should be mentioned, however, that no cultural resources studies have been completed within the Delridge Segment.

Two geotechnical boreholes (DS2001 and DS2004) have been archaeologically monitored in the Delridge Segment with no archaeological materials being observed.

Based on this analysis and factors influencing settlement, deposition, and disturbance of archaeological sites, the Delridge Segment more likely has a low to moderate probability of containing precontact archaeological deposits. The likelihood of encountering historical-period archaeological remains is considered high.

9.2.3.2 Archaeological Sensitivity Areas

Archaeological Sensitivity Area RR (see Section 8.3.2.5) defines a drainage in the Delridge Segment of the project corridor, referred to now as Longfellow Creek, that was likely an important location and watercourse during precontact occupation of the area. Identified in the Lushootseed language as the word for "smelt," this creek likely provided food sources and freshwater for early inhabitants of the area. One geotechnical borehole (DS2004) excavated within Archaeological Sensitivity Area RR boundary was monitored by an archaeologist. There were no archaeological resources or culture-bearing sediments identified during the excavation.

9.2.4 West Seattle Junction Segment

9.2.4.1 Archaeological Sites

The West Seattle Junction Segment contains no previously identified archaeological sites and the following comments are germane to all of the alternatives within this segment. All of the West Seattle Junction Segment alternatives fall within zones defined by the WISAARD predictive model as "survey highly advised: very high risk" or "survey highly advised: high risk" for archaeological resources. It should be mentioned, however, that there are no cultural resources studies recorded within the West Seattle Junction Segment.

There were two geotechnical boreholes (W2025 and W2030) archaeologically monitored in the West Seattle Junction Segment. Neither of the boreholes contained any archaeological resources. There are no Archaeological Sensitivity Areas within the West Seattle Junction Segment.

The upland nature of the West Seattle Junction Segment, the high level of urban development, and the lack of previous cultural resources investigations or known archaeological sites in this area makes predicting the location of precontact archaeological remains very difficult. The likelihood of encountering historical-period archaeological remains should be considered high.

9.3 Historic Built Environment Resource Survey

To identify potential historic properties within the area of potential effects, a historic built environment resources field survey was conducted in between 2018 and 2023. Historic Property Inventory forms for each property meeting the age criteria (over 700) are available on WISAARD, project number 2019-02-01457.[6] The historic built environment resource survey identified over 100 resources within the project that have been determined eligible for listing in the National Register by FTA, with concurrence from the State Historic Preservation Officer.

Several historic built environment resources within the area of potential effects had been previously evaluated and determined eligible for or listed in the National Register, or are designated Seattle landmarks. These previously identified historic built environment resources are identified in this section and associated tables, maps, and photographs. There are no National Register-listed resources within the project area of potential effects.

For all segments, National Register-eligible properties and designated Seattle landmarks are summarized in tables within the following sections, and photographs of each property are included in Attachment N.5B, Photographs of Historic Properties.

National Register-eligible resources, including districts, are assumed to also meet Seattle landmark eligibility criteria. Resources within the project area of potential effects that do not meet the National Register age criteria may still qualify for eligibility as a Seattle Landmark under the Seattle's Landmark Ordinance criteria . Sound Transit would identify these resources during final design and coordinate with the City of Seattle.

9.3.1 Historic District Evaluation

Two National Register-eligible historic districts (the Spokane Street Manufacturing Historic District and the Pacific Coast Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District) were identified and recorded as a result of the built environment survey of the project area of potential effect. WISAARD does not have a historic property inventory form template specifically for districts; therefore, the eligible historic district descriptions for these two historic districts are provided in the following sections (both are located in the Duwamish Segment).

Resources associated with the Seattle City Light South Substation/South Service Center, a potential historic district, are located within the project area of potential effect. Though a district has not formally been evaluated as part of this project, these individual structures have been evaluated for listing on the National Register in the context of, and as contributing elements to, a potential Seattle City Light South Substation/South Service Center historic district.

9.3.2 Linear Resources

The project contains seven National Register-eligible linear resources. One linear resource, the Seattle and Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern resource, is within both the SODO and Duwamish segments. The Seattle and Walla Walla Railroad line is a 15-mile-long standard gauge track of several railroads that eventually became the Northern Pacific Railway Mainline from Tacoma and north to Sumas. It was determined eligible in 2017 for listing in the National Register under Criterion A, as shown

[6] Previous versions of this report provided a different WISAARD project number, 2018-08-06480. Please refer to the new project number, 2019-02-01457, for the most current project information.

in Table 9-2. Additionally, six National Register-eligible or contributing linear resources are located entirely within the Duwamish Segment; they are shown in Section 9.3.5.

Table 9-2. Linear Historic Properties in the Area of Potential Effects Spanning Multiple Segments

Photo Number	Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
WSLin-1	LIN-2	708606	Seattle and Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/Northern Pacific Railway Black River Junction to the Lake Washington Ship Canal	Railroad Right of Way from Black River Junction near Renton to Lake Washington Ship Canal in Interbay	1883	Eligible (Criterion A)	Eligible (Criterion A)

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms on WISAARD. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

[a] All National Register-eligible resources, including districts, would also meet Seattle landmark eligibility criteria. This column provides the likely Seattle Landmark eligibility criteria as described in Section 2.3.

9.3.3 Historic Utilities

As described in Section 4.15, Utilities, of the West Seattle Link Extension Final EIS, the area of potential effects includes several utilities, including water, sanitary sewer, storm sewer, electrical power, natural gas, telephone and communications infrastructure, and petroleum product pipelines. Many of these utilities were constructed in or before 1980. Because of the large number of these resources, which occur throughout the city, they have not been identified and documented as part of the Final EIS. However, prior to final design, after the Sound Transit Board selects the project to be built, utilities meeting the minimum age criteria within the area of potential effects will be identified, documented, and evaluated for potential adverse effects in consultation with the State Historic Preservation Officer and other consulting parties. If any additional historic properties are adversely affected, FTA would resolve the adverse effects in accordance with Section 106 procedures and as stipulated in the programmatic agreement in consultation with the State Historic Preservation Officer, Tribes, and other consulting parties.

9.3.4 SODO Segment

The SODO Segment includes the area between approximately South Massachusetts Street and South Forest Street in the SODO neighborhood. The built environment in this segment is generally characterized by low-rise industrial and commercial buildings and warehouses.

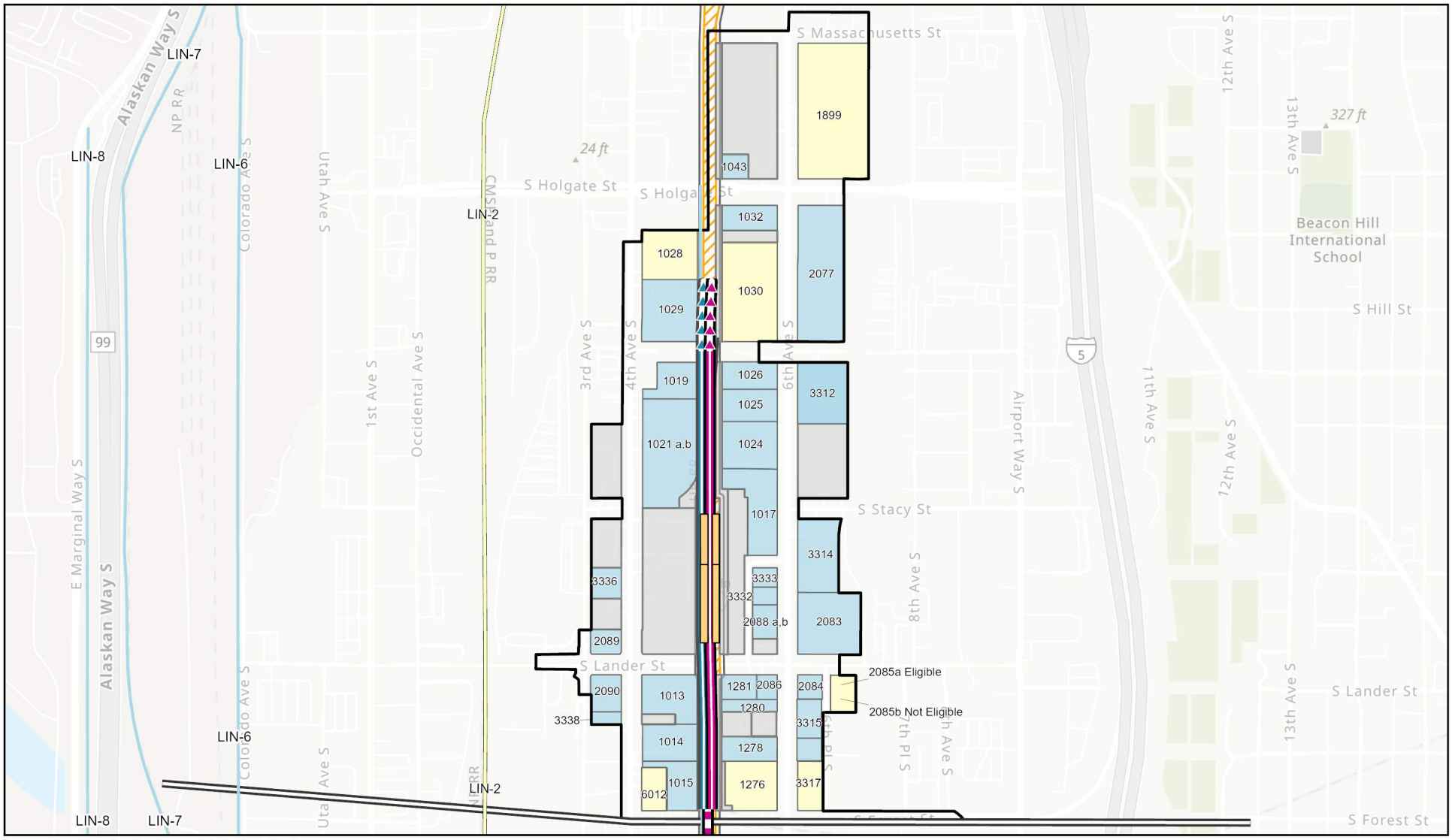
The SODO Segment does not contain any National Register-listed or designated Seattle landmark resources. Table 9-3 lists the seven resources that were determined eligible for listing in the National Register as a result of field investigations for this project. Figure 9-5 shows the location of the historic properties within this segment, and photographs of all historic properties in every segment are provided in Attachment N.5B.

Table 9-3. Historic Properties in the SODO Segment

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
1028	342325	Lincoln Moving & Storage, Alaska Orient Van Lines Building	1924 4th Avenue South	1966	Eligible (Criterion C)	Eligible (Criterion D)
1030	720609	Graybar Electric Company Building	1919 6th Avenue South	1960	Eligible (Criterion C)	Eligible (Criterion D)
1276	720594	Platt Electric Supply Co.	2757 6th Avenue South	1970	Eligible (Criterion C)	Eligible (Criterion D)
1899	342236	Holgate Terminals Incorporated	1762 6th Avenue South	1960	Eligible (Criterion C)	Eligible (Criterion D)
2085a	343198	Mill & Mine Supply Co. Building and Warehouse	625 South Lander Street	1953	Eligible (Criteria A and C)	Eligible (Criteria A and D)
3317	721855	Northwest Wire Works	2752 6th Avenue South	1947	Eligible (Criteria A and C)	Eligible (Criteria A and D)
6012	728870	Denny's	2742 4th Avenue South	1968	Eligible (Criteria A and C)	Eligible (Criteria A and D)

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms on WISAARD. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

[a] All National Register-eligible resources, including districts, would also meet Seattle landmark eligibility criteria. This column provides the likely Seattle Landmark eligibility criteria as described in Section 2.3.



Source: City of Seattle, King County (2019, 2020, 2021).

FIGURE 9-5
National Register Eligibility Status
SODO Segment

West Seattle Link Extension

Segment Line
Area of Potential Effects (APE)
Parcel
Park
SODO Busway
Station

National Register Eligibility Status
Eligible
Not Eligible
Constructed after 1980 or Vacant

Preferred Alternative
Elevated
Tunnel
At-Grade
Retained Cut

Other Alternatives
Elevated
Tunnel
At-Grade
Retained Cut

0 500 1,000 2,000 Feet

N

* Linear Resource refers to the Seattle and Walla Walla Railroad/ Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/North Pacific Railway Black River Junction to the Lake Washington Ship Canal

9.3.4.2 Potential for SODO Segment Historic Districts

Unlike any other neighborhood in the area of potential effects, the building stock in the SODO Segment is characterized by one- to three-story industrial and commercial buildings and warehouses. A small percentage of buildings within the area of potential effects boundaries in the SODO Segment were built between 1910 and 1930, but the majority were built after World War II. Despite this shared association, when examined as a neighborhood-wide potential district, the buildings lack a cohesive aesthetic or historical significance. Research did not reveal one unifying industry or company that dominated the neighborhood at any given period of time, nor did surveys reveal a unifying style or type of building throughout the larger neighborhood. Much of the building stock has also undergone alterations during recent years, and modern infill has replaced older buildings throughout the neighborhood.

After evaluating the historic built environment resources in the area of potential effects within the SODO Segment, no potential historic districts were identified in the SODO Segment.

9.3.5 Duwamish Segment

The Duwamish Segment includes the area between South Forest Street in the SODO neighborhood and the intersection of Southwest Charlestown Street and Delridge Way Southwest in the North Delridge neighborhood. In the SODO neighborhood portion of the segment, the built environment is characterized by one- to three-story industrial and commercial buildings and warehouses. On Harbor Island and along the Duwamish Waterway, the built environment includes a large waterfront industrial warehouses, railroad properties, and bridges, including the Northern Pacific Railway Bridge (LIN-12), a designated Seattle landmark, which is also eligible for listing in the National Register. The built environment in a small portion of the Delridge neighborhood portion of the segment is generally characterized by single-family residences, with some waterfront industrial properties along the west bank of the Duwamish Waterway.

The Duwamish Segment contains two designated Seattle landmarks (both of which are also determined National Register-eligible resources). The segment also contains two National Register-eligible historic districts, the Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District and the Spokane Street Manufacturing Historic District. The Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District contains five contributing resources, and the Spokane Street Manufacturing Historic District contains 17 contributing resources, three of which are also individually eligible for listing in the National Register.

In addition to the above resources, 34 resources within this segment were determined individually eligible for listing in the National Register as a result of field investigations for this project. See Table 9-4 for a full list of historic properties in this segment. Figures 9-6a to 9-6c show the location of the historic properties within this segment, and photos of all historic properties in every segment are provided in Attachment N.5B.

Since publication of the WSBLE Draft EIS, the following historic properties have been demolished by their respective property owners and are no longer considered in this evaluation:

- 3625 1st Avenue South (273a and 273b)
- 60 South Spokane Street (1089a and 1089b)

Table 9-4. Historic Properties in the Duwamish Segment

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
Not Applicable	Multiple	Spokane Street Manufacturing Historic District	Multiple	1908 to 1968	Eligible Historic District (Criterion A)	Eligible Historic District (Criteria A, F)
272	342293	Edwards Ice Machine Co./Eagle Metals Co.	3628 East Marginal Way South	1924	Contributes to Spokane Street Manufacturing Historic District (Criterion A)	Contributes to Spokane Street Manufacturing Historic District (Criteria A, F)
881	342274	Seattle Pacific Sales Company Warehouse	3800 1st Avenue South	1968	Eligible (Criterion C)	Eligible (Criterion D)
1005	45159	Link-Belt Company Property	3405 6th Avenue South	1946	Eligible (Criterion C)	Eligible (Criterion D)
1083	718431	Viking Automatic Sprinkler Co.	3434 1st Avenue South	1964	Eligible (Criteria A and C)	Eligible (Criteria A and D)
1090a	720509	Transportation Equipment Rentals Office Building	3443 1st Avenue South	1968	Eligible (Criterion C)	Eligible (Criterion D)
1090b	720510	Transportation Equipment Rentals Maintenance Warehouse	3443 1st Avenue South	1968	Eligible (Criterion C)	Eligible (Criterion D)
1091	344500	The Simmons Company Metal Beds, Springs & Mattress Warehouse	99 South Spokane Street	1929	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)
1093	720482	Nelson Iron Works Blacksmith & Machinist Shop	45 South Spokane Street	1918	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)
1094a	720511	Acme Tool Works	3626 East Marginal Way South	1941	Eligible (Criterion A), contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Eligible (Criterion A), contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
1094b	720513	Lindmark Machine Works	3626 East Marginal Way South	1947	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)
1095	340118	Lindmark Machine Works	49 South Spokane Street	1920	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)
1103a	38527	Air Reduction Company	3623 East Marginal Way South	1916	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)
1103b	720564	Air Reduction Company Carbide Storage Building	3621 East Marginal Way South	1951	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)
1103c	720563	Air Reduction Company Auto Repair Garage	3621 East Marginal Way South	1951	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)
1104a	38525	Puget Sound Sheet Metal Works	3651 East Marginal Way South	1942	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)
1104b	720542	Light Industrial Building	3633 East Marginal Way South	1968	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
Not Applicable	Multiple	Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory Historic District	3800 West Marginal Way Southwest	1917-1968	Eligible Historic District (Criteria A and C)	Eligible Historic District (Criteria A and F)
1122a	721620	Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory Office	3800 West Marginal Way Southwest	1968	Contributes to the Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory Historic District (Criteria A and C)	Contributes to the Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District (Criteria A, D, and F)
1122b	721624	Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory Pacific Coast Forge Building	3800 West Marginal Way Southwest	1917	Contributes to the Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory Historic District (Criteria A and C)	Contributes to the Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District (Criteria A, D, and F)
1122c	721625	Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory North Warehouse	3800 West Marginal Way Southwest	1968	Contributes to the Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory Historic District (Criteria A and C)	Contributes to the Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District (Criteria A, D, and F)
1122d	721628	Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory South Warehouse	3800 West Marginal Way Southwest	1948	Contributes to the Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory Historic District (Criteria A and C)	Contributes to the Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District (Criteria A, D, and F)

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
1122e	721629	Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory East Warehouse	3800 West Marginal Way Southwest	1968	Contributes to the Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory Historic District (Criteria A and C)	Contributes to the Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District (Criteria A, D, and F)
1138	45086	Fire Station 14	3224 4th Avenue South	1922	Eligible (Criteria A and C)	Designated Seattle landmark
1273	343706	Seattle Fire Station #36	3600 23rd Avenue Southwest	1972	Eligible (Criteria A and C)	Eligible (Criteria A and D)
1274	45085	Pacific Hoist and Warehouse Company	3200 4th Avenue South	1931	Eligible (Criterion C)	Eligible (Criterion D)
1275a	342730	Langendorf United Bakeries	2901 6th Avenue South	1952	Eligible (Criteria A and C)	Eligible (Criteria A and D)
1275b	720593	Langendorf United Bakeries Repair Garage	2901 6th Avenue South	1955	Eligible (Criteria A and C)	Eligible (Criteria A and D)
1388	38533	A.M. Castle and Company	3640-60 East Marginal Way South	1945	Eligible (Criteria A and C), contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Eligible (Criteria A and D), contributes to the Spokane Street Manufacturing Historic District (Criterion A)
1915	38532	Alaskan Copper Works/Eagle Brass Foundry Company	3600 East Marginal Way South	1918	Eligible (Criterion A), contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Eligible (Criterion A), contributes to the Spokane Street Manufacturing Historic District (Criterion A)
1941	342160	Pacific Reefer Fisheries	3480 West Marginal Way Southwest	1964	Eligible (Criteria A and C)	Eligible (Criteria A and D)
1943	48502	Alaskan Copper and Brass Company	3223 6th Avenue South	1953	Eligible (Criteria A and C)	Eligible (Criteria A and D)
3214	294616	Single-Family Residence	3842 23rd Avenue Southwest	1914	Eligible (Criterion C)	Eligible (Criterion D)

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
3320b	722008	NW Motor Parts Corporation Building	2930 6th Avenue South	1951	Eligible (Criterion C)	Eligible (Criterion D)
3321	721857	M.J.B Coffee Company Warehouse	2940 6th Avenue South	1954	Eligible (Criteria A and C)	Eligible (Criteria A and D)
3322a	342997	Alaskan Copper Company Employment Office	2958 6th Avenue South	1941	Eligible (Criterion C)	Eligible (Criterion D)
3322b	721997	Auto Repair Garage	2958 6th Avenue South	1948	Eligible (Criterion A)	Eligible (Criterion A)
3324	340010	Los Angeles-Seattle Motor Express Company	3200 6th Avenue South	1945	Eligible (Criteria A and C)	Eligible (Criteria A and D)
3327	342709	Scientific Supplies Company	600 South Spokane Street	1954	Eligible (Criterion C)	Eligible (Criterion D)
3329a	86871	Department of Highways District No. 1 Headquarters/ Maintenance Facility – Office/ Administrative Building	450 South Spokane Street	1931	Eligible (Criteria A and C)	Eligible (Criteria A and D)
3329b	722096	Department of Highways District No. 1 Headquarters/ Maintenance Facility – Maintenance Building	450 South Spokane Street	1931	Eligible (Criteria A and C)	Eligible (Criteria A and D)
3329c	722098	Department of Highways District No. 1 Headquarters/ Maintenance Facility – Storage Building	450 South Spokane Street	1931	Eligible (Criteria A and C)	Eligible (Criteria A and D)
3329d	722100	Department of Highways District No. 1 Headquarters/ Maintenance Facility – Car/Paint Building	450 South Spokane Street	1931	Eligible (Criteria A and C)	Eligible (Criteria A and D)

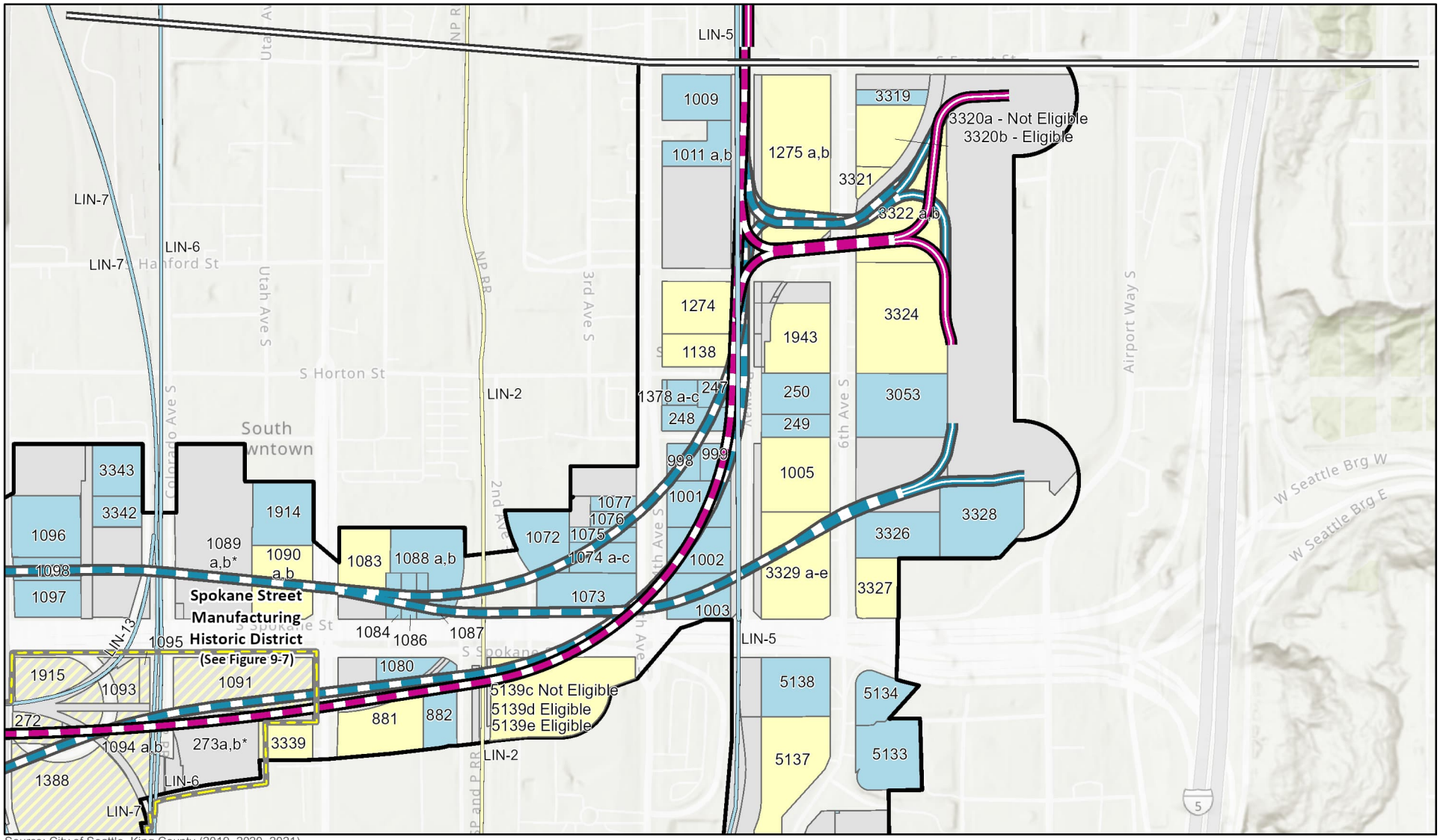
Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
3329e	722101	Department of Highways District No. 1 Headquarters/ Maintenance Facility – Maintenance Building	450 South Spokane Street	1959	Eligible (Criteria A and C)	Eligible (Criteria A and D)
3339	342259	Riches & Adams Co./Seattle Opportunities Industrialization Center, Inc.	3627 1st Avenue South	1954	Eligible (Criterion A)	Eligible (Criterion A)
3344	344061	General Construction Company Office	3840 West Marginal Way Southwest	1931	Eligible (Criteria A and C)	Eligible (Criteria A and D)
5136	725824	Air Mac, Inc.	3838 4th Avenue South	1953	Eligible (Criterion C)	Eligible (Criterion D)
5137	725825	Warehouse and Office Building	3623 6th Avenue South	1961	Eligible (Criterion C)	Eligible (Criterion D)
5139a	45089	Seattle City Light South Receiving Substation	3839 4th Avenue South	1938	Eligible [b] (Criteria A and C)	Eligible (Criteria A and D)
5139b	725921	Seattle City Light South Receiving Substation Switchyard	3839 4th Avenue South	1924	Eligible [b] (Criterion A)	Eligible (Criterion A)
5139d	730783	Seattle City Light Warehouse and Office Building	3613 4th Avenue South	1965	Eligible [b] (Criteria A and C)	Eligible (Criteria A and D)
5139e	730784	Seattle City Light South Rectifier Substation	3613 4th Avenue South	1952	Eligible [b] (Criteria A and C)	Eligible (Criteria A and D)
LIN-6	721225	Milwaukee Terminal Railway Company/ Chicago, Milwaukee, St. Paul & Pacific Railway-Argo to Stacey Street	Seattle, Washington	1908	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)
LIN-7	720982	Northern Pacific Railway-Argo to Seattle Waterfront	Seattle, Washington	1909	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
LIN-8	721010	Milwaukee Terminal Railway Company/ Chicago, Milwaukee, St. Paul & Pacific Railway-Argo to Waterfront Yard	Seattle, Washington	1909	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)
LIN-12	44440	Northern Pacific Railway Bridge over the West Waterway	South of Spokane St, near Klickitat Way Southwest	1911	Eligible (Criterion C)	Designated Seattle landmark
LIN-13	720983	Northern Pacific Railway West Seattle Line	Seattle, Washington	1909	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	Contributes to the Spokane Street Manufacturing Historic District (Criteria A and F)
LIN-17	730874	Spokane Street East and West Towers, Harbor Island-Delridge-West Seattle 230-kilovolt Transmission Line	West Marginal Way Southwest and Spokane Street Southwest	1922	Eligible (Criteria A and C)	Eligible (Criteria A and D)

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms on WISAARD. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

[a] All National Register-eligible resources, including districts, would also meet Seattle landmark eligibility criteria. This column provides the likely Seattle Landmark eligibility criteria as described in Section 2.3.

[b] Individual resources within the area of potential effects were evaluated and considered within the context of a historic district. This resource is associated with the Seattle City Light South Substation/South Service Center property at 400 South Spokane Street, and it appears to meet National Register historic district eligibility criteria as a contributing resource. However, only a portion of the Seattle City Light South Substation/South Service Center property is located within the area of potential effects, so the property is not counted as a historic district for this project.



Source: City of Seattle, King County (2019, 2020, 2021).

FIGURE 9-6a

National Register Eligibility Status
Duwamish Segment (East)

West Seattle Link Extension

Segment Line

Area of Potential Effects (APE)

Parcel

Park

SODO Busway

National Register Eligibility Status

Eligible

Not Eligible

Constructed after 1980 or Vacant

Eligible Historic District Boundary

Preferred Alternative

Elevated

Tunnel

At-Grade

Retained Cut

Other Alternatives

Elevated

Tunnel

At-Grade

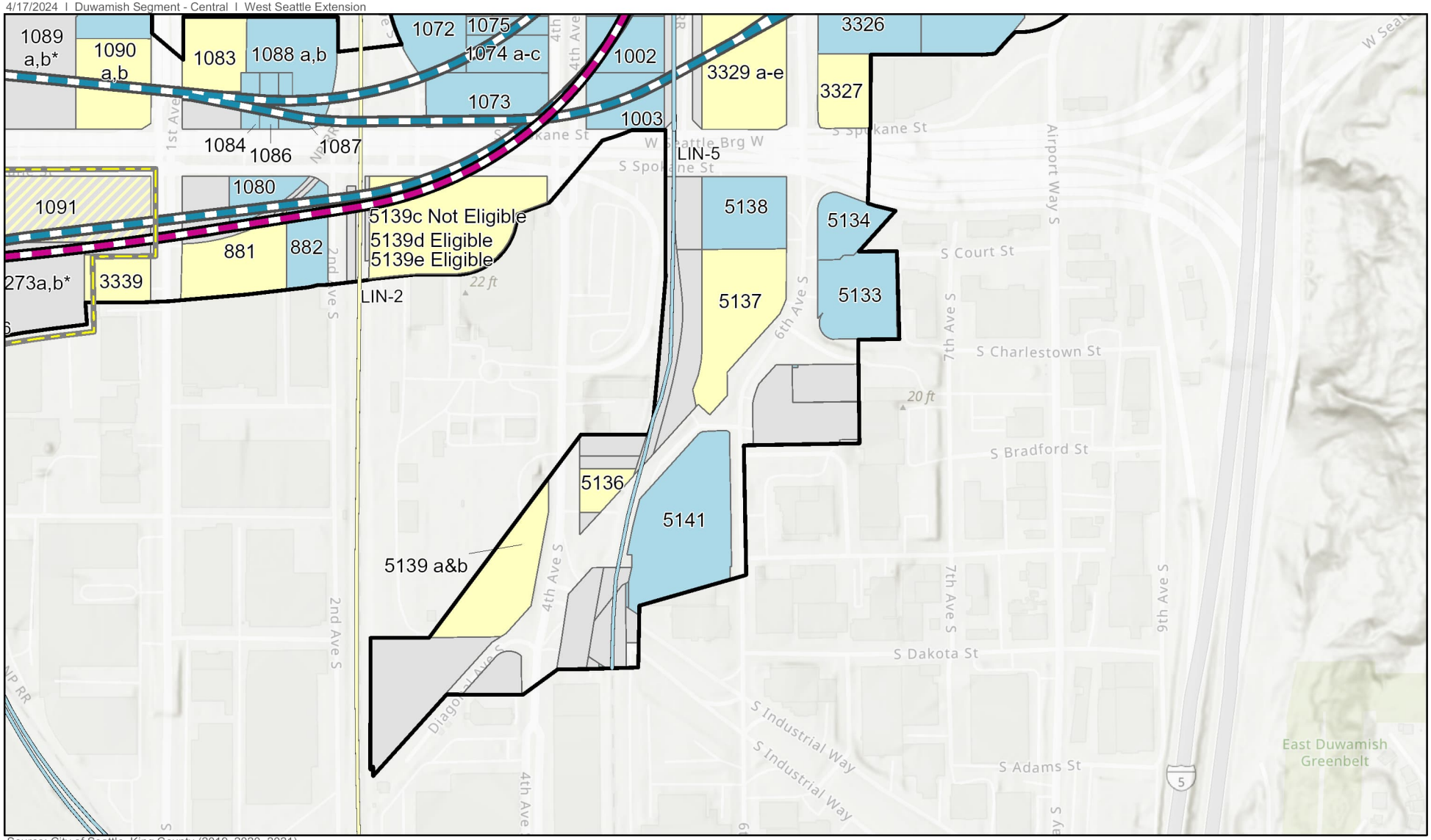
Retained Cut

* This property was demolished since publication of the DEIS

* Linear Resource refers to the Seattle and Walla Walla Railroad/ Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/North Pacific Railway Black River Junction to the Lake Washington Ship Canal

0 375 750 1,500 Feet

N



Source: City of Seattle, King County (2019, 2020, 2021).

FIGURE 9-6b
National Register Eligibility Status
Duwamish Segment (Central)

Area of Potential Effects (APE)
Parcel
Park
SODO Busway

National Register Eligibility Status
Eligible
Not Eligible
Constructed after 1980 or Vacant
Eligible Historic District Boundary

Preferred Alternative
Elevated
Tunnel
At-Grade
Retained Cut

Other Alternatives
Elevated
Tunnel
At-Grade
Retained Cut

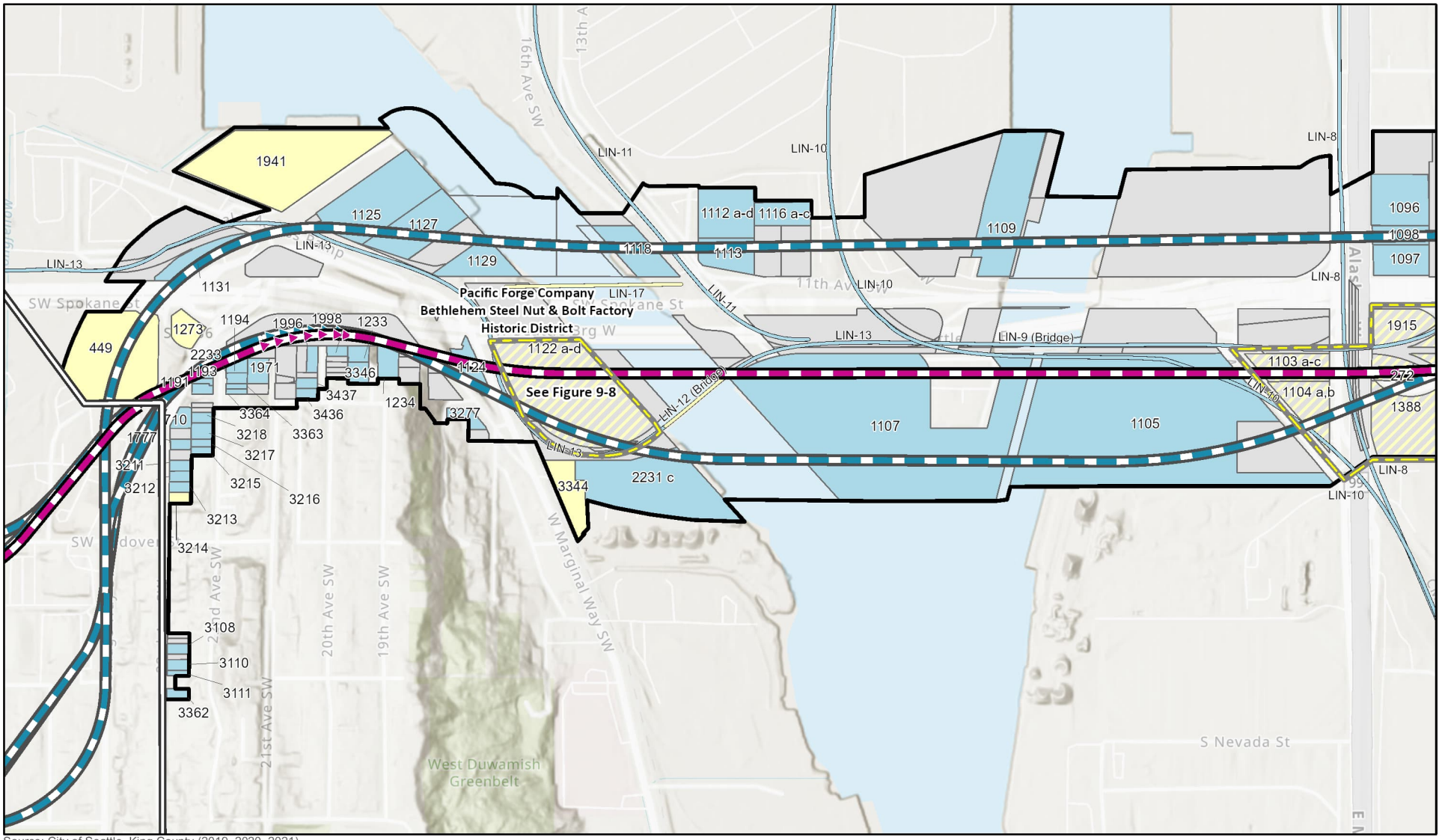
West Seattle Link Extension

* This property was demolished since publication of the DEIS

* Linear Resource refers to the Seattle and Walla Walla Railroad/ Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/North Pacific Railway Black River Junction to the Lake Washington Ship Canal

0 375 750 1,500 Feet

N



Source: City of Seattle, King County (2019, 2020, 2021).

- Segment Line
- Area of Potential Effects (APE)
- Parcel
- Park

National Register Eligibility Status

- Eligible
- Not Eligible
- Constructed after 1980 or Vacant
- Eligible Historic District Boundary

Preferred Alternative

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Other Alternatives

- Elevated
- At-Grade
- Tunnel
- Retained Cut

FIGURE 9-6c
National Register Eligibility Status
Duwamish Segment (West)

West Seattle Link Extension

0 375 750 1,500 Feet

N

* Linear Resource refers to the Seattle and Walla Walla Railroad/ Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/North Pacific Railway Black River Junction to the Lake Washington Ship Canal

9.3.5.1 Potential for Duwamish Segment Historic Districts

Similar to the SODO Segment, the building stock within the Duwamish Segment is characterized almost entirely as industrial. A small percentage of buildings within the area of potential effects boundaries in the Duwamish Segment were built between 1910 and 1930, but the majority were built after World War II. Despite this shared association, when examined as a neighborhood-wide potential district, the buildings lack a cohesive aesthetic or historical significance. Research did not reveal one unifying industry or company that dominated the neighborhood at any given period of time, nor did surveys reveal a unifying style or type of building throughout the larger neighborhood. Much of the building stock has also undergone alterations during recent years, and modern infill has replaced older buildings throughout the neighborhood.

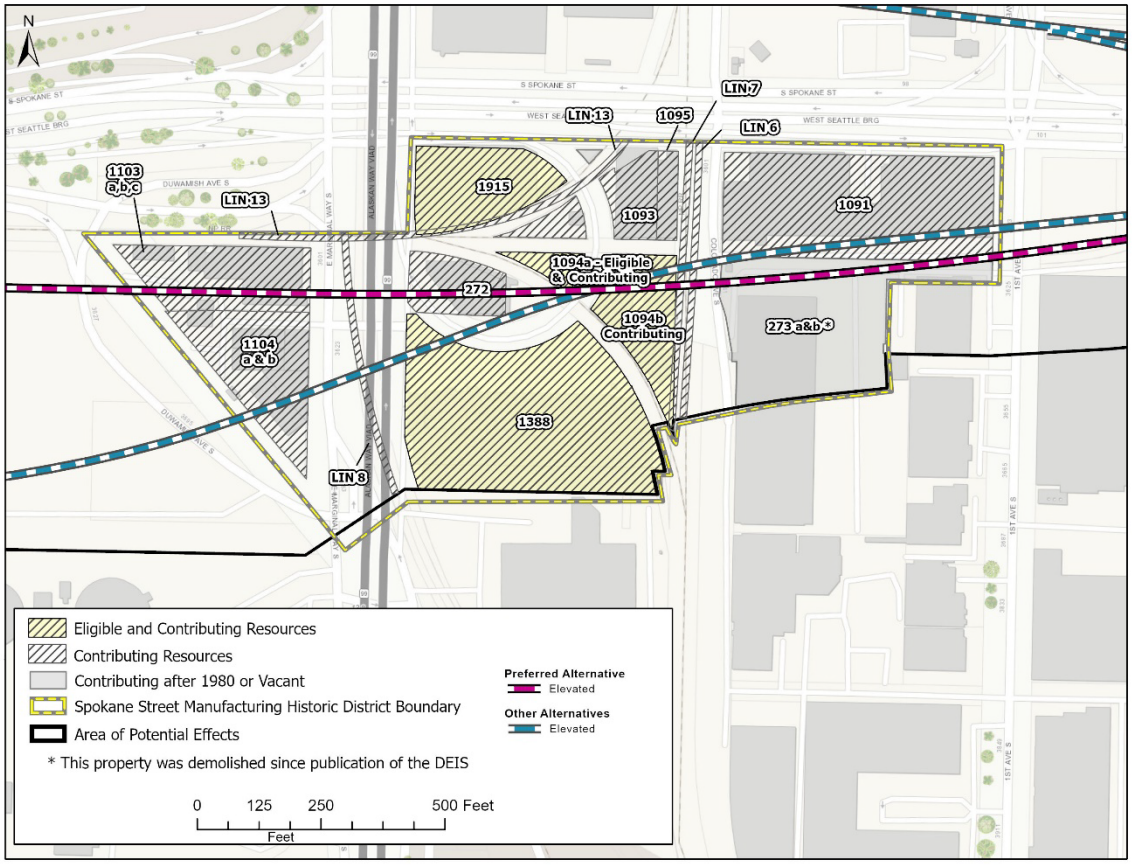
Within this segment are two National Register-eligible historic districts: the Spokane Street Manufacturing Historic District and the Pacific Coast Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District.

Spokane Street Manufacturing Historic District

The Spokane Street Manufacturing Historic District is composed of four railroad segments and a grouping of industrial buildings south of South Spokane Street, roughly between Fourth Avenue South to the east, South Andover Street to the south, and East Marginal Way South to the west (Figure 9-7). The historic district is National Register-eligible under Criterion A for its association with Seattle's industrial manufacturing history, and specifically as representing Seattle's metal manufacturing industry from World War I through and post-World War II. The potential historic district consists of four rail segments constructed between 1908 and 1909 as well as both light and heavy industrial warehouses dating from 1918 to 1968 that together represent a significant and distinguishable entity that retains sufficient integrity to convey its direct and important association with the metal manufacturing industry in Seattle from World War I through the period following World War II.

This National Register-eligible historic district retains integrity of location. While some contributing properties have shifted orientation slightly to accommodate new infrastructure, all contributing properties remain generally in their original locations. Similarly for railroad segments, while overall alignments of railroads that pass through the historic district have shifted over time, the segments of track located within the historic district remain generally in their original locations enough to convey the significance they held for the historic district. Integrity of setting, feeling, and association is maintained because the area remains an industrial neighborhood adjacent to the Duwamish Waterway. While some modifications of the individual buildings took place over the years, these improvements were necessary to keep the buildings operational as manufacturing and general industrial buildings, and the collection of buildings retains sufficient integrity of material, design, and workmanship when considered as a district. Therefore, the district retains sufficient overall integrity to convey its significance under Criterion A.

Figure 9-7. Spokane Street Manufacturing Historic District

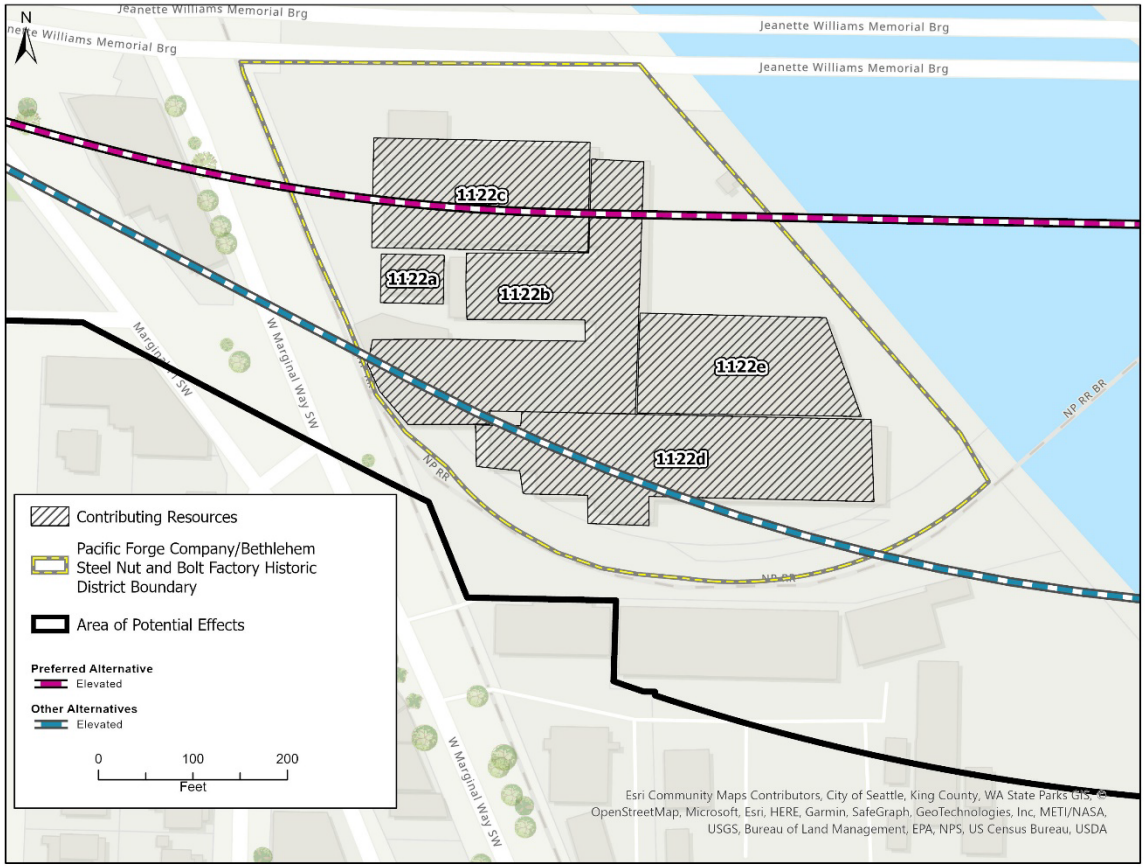


Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District

The 6-acre former Pacific Coast Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District (Figure 9-8) occupies a waterfront site west of the West Waterway and east of West Marginal Way Southwest. The historic district is identified by five contributing resource buildings: the Bethlehem Steel Nut and Bolt Factory office building, the original Pacific Forge Company forge building and warehouses, and Bethlehem Steel Warehouses 1, 2, and 3. The Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory complex was evaluated in 2011 and recommended as individually eligible for the National Register as well as contributing to a historic district, although reasons for eligibility were not defined. Upon re-evaluation for this project, the former Pacific Coast Forge Company/Bethlehem Steel Nut and Bolt Factory was determined National Register-eligible under Criterion A for its association with Seattle's steel industry.[7] Specifically, it represents the critical World War II trend of adapting to crucial conflict and supply needs such as providing fasteners for naval and other military applications. It also includes the post-war transition to supply homeland civilian and domestic markets. It also meets Criterion C because architecturally, the site consists of utilitarian functional examples of industrial buildings and features that combined represent a significant and distinguishable entity that was the steel industry in Seattle from World War I through the period following World War II.

[7] Sound Transit was not granted access to this property for this evaluation. The analysis was based on previous documentation, views from adjacent properties, archival data, and aerial photographs and maps.

Figure 9-8. Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District



The property retains integrity of location because it has not been moved. It also retains integrity of design, materials, and workmanship because the resource's buildings and site have undergone minimal changes. Integrity of setting, association, and feeling is maintained because it remains in an industrial area adjacent to West Seattle and the West Seattle Bridge. While the internal forge components have been removed, the exterior of the facility remains similar to its appearance in 1968 when the last of the Bethlehem Steel improvements took place. While some modifications of the individual resource buildings took place over the years, these improvements were necessary to keep the facility operational as a nut and bolt factory, and the collection of resource buildings retains sufficient integrity, when considered as a district, for the district to convey its significance under Criteria A and C.

In summary, two National Register-eligible historic districts were identified in the Duwamish Segment as a result of this survey.

9.3.6 Delridge Segment

The Delridge Segment includes the area between Southwest Charlestown Street and 31st Avenue Southwest. While the built environment in this segment is generally characterized by a mixture of residential buildings (both single- and multi-family) and neighborhood commercial buildings, the segment also contains the former Seattle Steel Company/Bethlehem Pacific Coast Steel Corporation (now Nucor Steel) site, as well as the National Register-eligible West Seattle Golf Course.

While the Delridge Segment does not contain any National Register-listed resources, it does contain one designated Seattle landmark resource. Table 9-5 lists all historic properties in this segment, including 14 resources that were determined eligible for listing in the National Register as a result of field investigations for this project. Figure 9-9 shows the location of the historic properties within this segment, and photos of all historic properties in every segment are provided in Attachment N.5B.

Table 9-5. Historic Properties in the Delridge Segment

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
242	717063	West Seattle Golf Course	4600 35th Avenue Southwest	1936	Eligible (Criteria A and C)	Eligible (Criteria A and D)
443	344641	Bethlehem Pacific Coast Steel Company Office Building	4045 Delridge Way Southwest	1960	Eligible (Criteria A and C)	Eligible (Criteria A and D)
444	721070	Residence	4030 Delridge Way Southwest	1906	Eligible (Criteria A and C)	Eligible (Criteria A and D)
449	38466	Seattle Steel Company/ Bethlehem Pacific Coast Steel Corporation	2424 Southwest Andover Street	1966	Eligible (Criterion A)	Eligible (Criterion A)
453	47869	Mrachke & Son	3860 to 3864 Delridge Way Southwest	1930	Eligible (Criteria A and C)	Eligible (Criteria A and D)
1166	376099	Single-Family Craftsman Residence	4108 25th Avenue Southwest	1907	Eligible (Criteria A and C)	Eligible (Criteria A and D)
1787	721178	Single-Family Residence	4139 25th Avenue Southwest	1909	Eligible (Criterion C)	Eligible (Criterion D)
1977	418305	Contemporary Ranch House	4150 32nd Avenue Southwest	1959	Eligible (Criterion C)	Eligible (Criterion D)
2254	335189	Kirlow Four-Plex	3074 Southwest Avalon Way	1967	Eligible (Criterion C)	Eligible (Criterion D)
3345	287692	Residence	4017 23rd Avenue Southwest	1907	Eligible (Criteria A and C)	Eligible (Criteria A and D)
3391	300990	Residence	4044 32nd Avenue Southwest	1925	Eligible (Criterion C)	Eligible (Criterion D)
3396	721984	Cettolin House	4022 32nd Avenue Southwest	1928	Eligible (Criterion C)	Designated Seattle landmark

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
7063	730028	Single-Family Residence	4019 Fauntleroy Way Southwest	1931	Eligible (Criterion C)	Eligible (Criterion D)
7075	730040	Single-Family Residence	4032 35th Avenue Southwest	1932	Eligible (Criterion C)	Eligible (Criterion D)

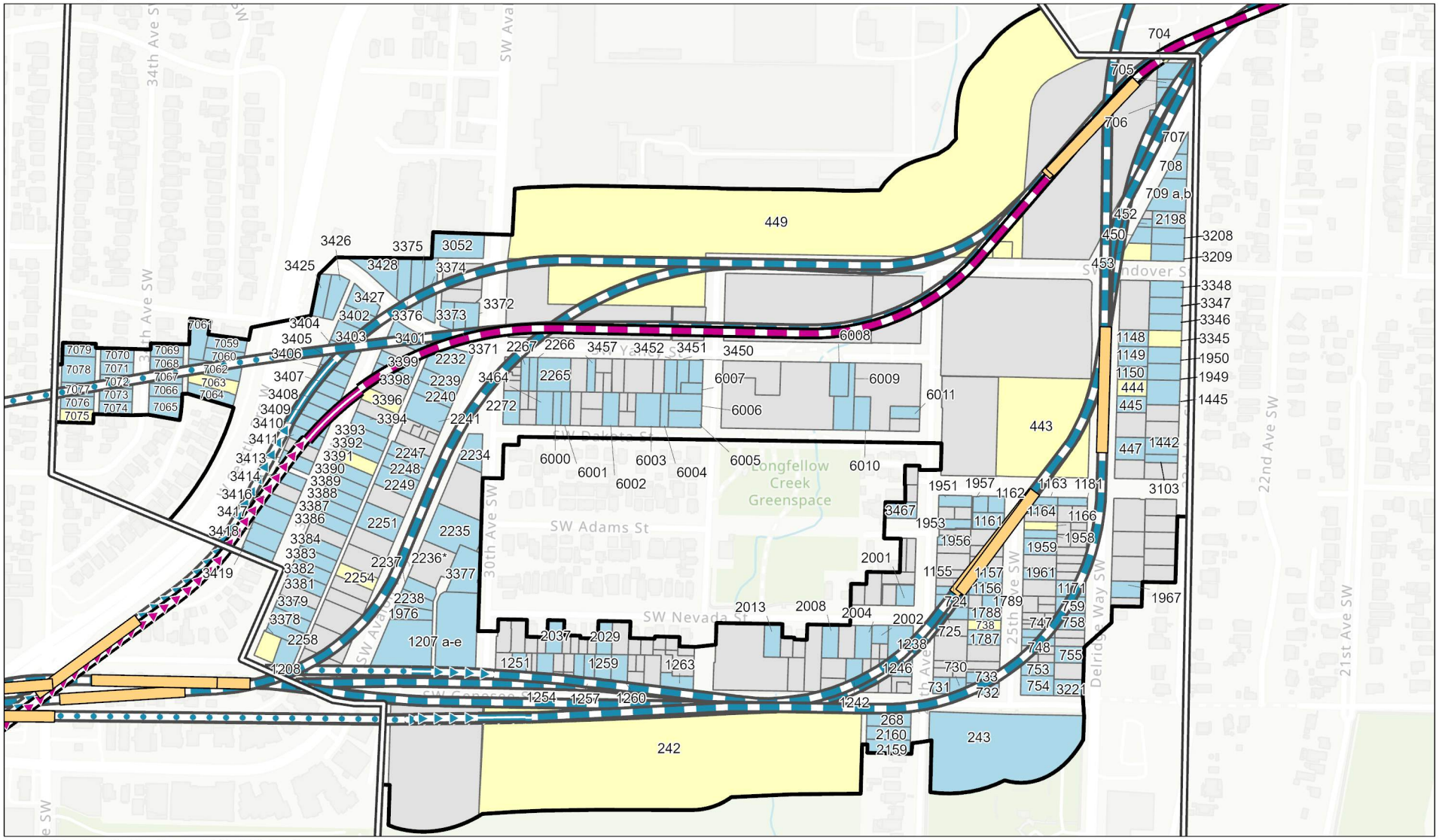
Note: Property names correspond with the resource names documented on the Historic Property Inventory forms on WISAARD. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

[a] All National Register-eligible resources, including districts, would also meet Seattle landmark eligibility criteria. This column provides the likely Seattle Landmark eligibility criteria as described in Section 2.3.

9.3.6.1 Potential for Delridge Segment Historic Districts

During the evaluation of resources in the area of potential effects within the Delridge Segment, additional research was warranted in the following areas to determine the potential for an eligible historic district:

- Bethlehem Pacific Coast Steel Corporation: The project contains several properties whose history is associated with the Bethlehem Pacific Coast Steel Corporation (now Nucor Steel). Within the Delridge Segment are the former Bethlehem Pacific Coast Steel Mill itself, built circa 1905 (449); the Bethlehem Pacific Coast Steel Corporation Office Building, built circa 1960 (443); the Pacific Coast Forge Company/Bethlehem Steel Nut and Bolt Factory eligible historic district, built circa 1917 to 1968 (1122); and the Puget Sound Sheet Metal Works building, built circa 1942 (1104a). These properties were considered as part of a potential discontiguous district. A discontiguous district is defined as “two or more definable significant areas separated by nonsignificant areas” (National Park Service 1997). While these properties share an association with the former Bethlehem Pacific Coast Steel Corporation, which is significant for its important place in Seattle’s early twentieth century industrial development, these resources were all built in different periods of the company’s history and were associated with the company for varying periods of time. Ultimately, it was determined that the resources lacked a cohesive significance necessary for a discontiguous historic district.
- West Seattle Golf Course: The West Seattle Golf Course (including the clubhouse and shop), Camp Long, and the West Seattle Stadium would likely comprise a National Register-eligible historic district under Criterion A. The district would be significant as a collection of recreation-focused Works Progress Administration-era public works. Although said district has not been formally defined, the subject properties have been identified and recorded individually, and future consideration as a district is recommended.



Source: City of Seattle, King County (2019, 2020, 2021).

FIGURE 9-9

National Register Eligibility Status

Delridge Segment

Segment Line

Area of Potential Effects (APE)

Parcel

Park

Station

National Register Eligibility Status

Eligible

Not Eligible

Constructed after 1980 or Vacant

Preferred Alternative

Elevated

Tunnel

At-Grade

Retained Cut

Other Alternatives

Elevated

Tunnel

At-Grade

Retained Cut

* This property was demolished since publication of the DEIS

West Seattle Link Extension

0 250 500 1,000 Feet

N

- Residential areas: As in all of the segments throughout the area of potential effect, residential areas were considered for their potential as historic districts. The following residential areas warranted additional research:
  - Single-family residences built circa 1907: There are 19 single-family residences built circa 1907 within the area of potential effects in the Delridge Segment. These have potential significance in association with the development of a streetcar system in West Seattle. The Seattle Electric Railway system operated from Youngstown through the West Seattle Junction, and when completed in 1907, was responsible for a boom in residential development along its route. Of these 19 residences, 10 are on 25th Avenue Southwest. While this street has the potential for an eligible historic district for its association with the residential development that occurred because of the streetcar system, nearly all of these homes have been significantly altered and can no longer convey their historic significance. As each individual resource has lost integrity, the potential district too does not retain enough integrity to convey its historic significance.
  - 32nd Avenue Southwest between Southwest Genesee Street and Southwest Yancy Street: This area is characterized by small single-family homes, many of which were built in the late 1910s and into the 1920s. Similarly, 25th Avenue Southwest between Southwest Genesee Street and Southwest Dakota Street is characterized by a handful of single-family homes built circa 1910. While both streets have the potential significance for a concentration of buildings united aesthetically, most of these homes have been significantly altered with modern additions and replacement features. As many of the individual resources have lost integrity, the potential district too does not retain sufficient integrity to convey its historic significance.

In summary, the West Seattle Golf Course and associated Works Progress Administration-era resources is the only potential historic district identified within the Delridge Segment.

9.3.7 West Seattle Junction Segment

The West Seattle Junction Segment includes the area generally west of 31st Avenue Southwest, between Southwest Charleston Street, and Southwest Hudson Street. The built environment in this segment is generally characterized by a mixture of residential buildings (single- and multi-family) as well as low-rise neighborhood commercial buildings, particularly near the intersection of Southwest Alaska Street and California Avenue Southwest.

While the West Seattle Junction Segment does not contain any National Register-listed properties, it does contain one designated Seattle landmark. Table 9-6 lists all historic properties in this segment, including 33 resources that were determined eligible for listing in the National Register as a result of field investigations for this project. Figures 9-10a and 9-10b show the location of the historic properties within this segment, and photos of all historic properties in every segment are provided in Attachment N.5B.

Since publication of the WSBLE Draft EIS, one property, 4406 37th Avenue Southwest (89), has been demolished by its owner and is no longer considered in this evaluation.

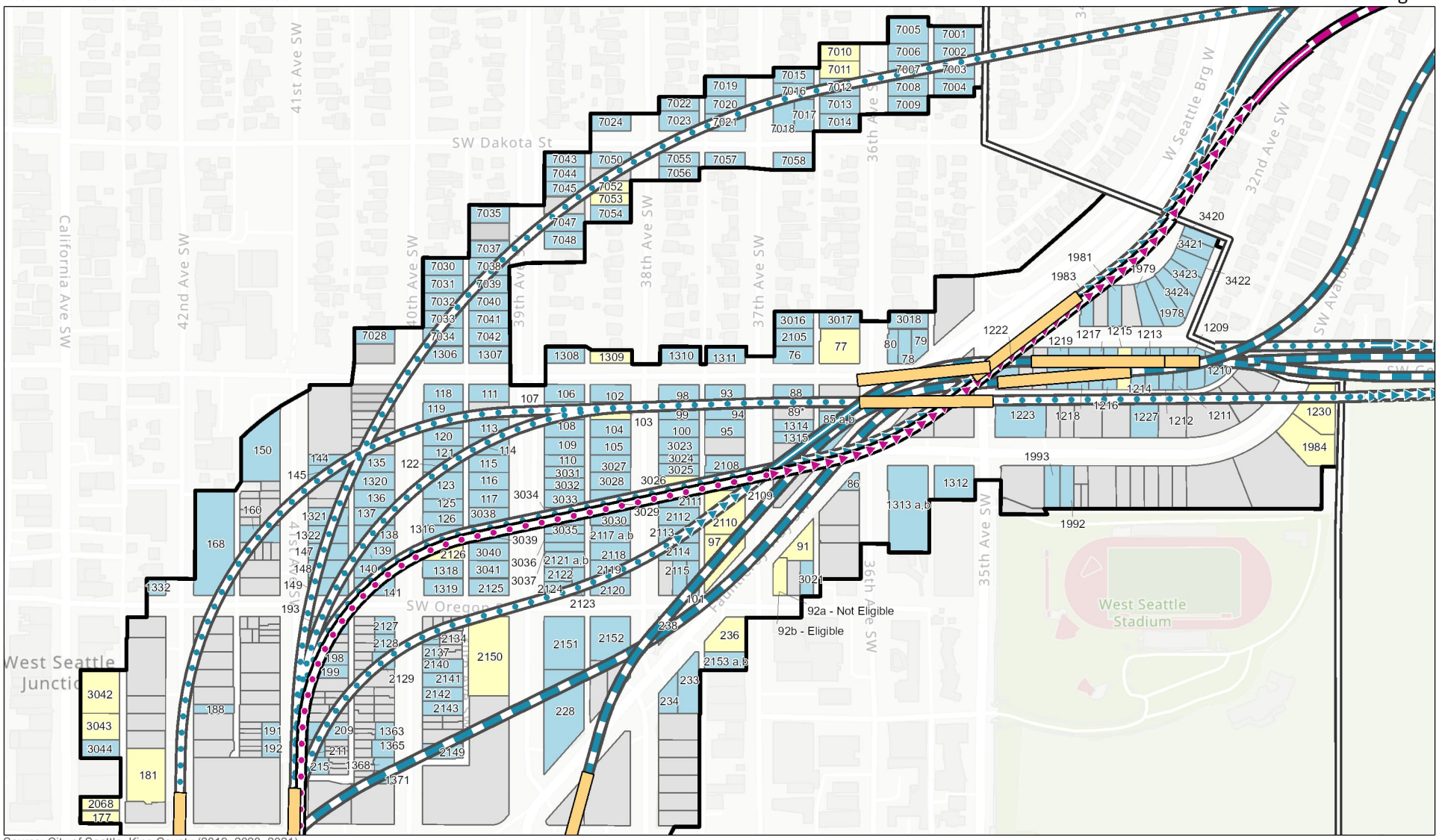
Table 9-6. Historic Properties in the West Seattle Junction Segment

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
77	719318	Limcrest Apartments	3600 Southwest Genesee Street	1956	Eligible (Criterion C)	Eligible (Criterion D)
91	720871	Carlsen & Winquist Auto	4480 Fauntleroy Way Southwest	1946	Eligible (Criteria A and C)	Eligible (Criteria A and D)
92b	720875	West Seattle Brake Service	4464 37th Avenue Southwest	1948	Eligible (Criteria A and C)	Eligible (Criteria A and D)
97	720988	Jim's Shell Service	4457 Fauntleroy Way Southwest	1965	Eligible (Criterion A)	Eligible (Criterion A)
103	420560	Residence	4407 38th Avenue Southwest	1924	Eligible (Criterion C)	Eligible (Criterion D)
177	721552	Campbell Building	4554 California Avenue Southwest	1918	Eligible (Criteria A and C)	Designated Seattle landmark
181	721486	Alaska House	4545 42nd Avenue Southwest	1979	Eligible (Criterion C)	Eligible (Criterion D)
236	343799	Wardrobe Cleaners	4500 Fauntleroy Way Southwest	1949	Eligible (Criterion C)	Eligible (Criterion D)
239	365276	Craftsman Bungalow	4015 Southwest Hudson Street	1906	Eligible (Criteria A and C)	Eligible (Criteria A and D)
1215	442141	Contemporary Ranch House	3221 Southwest Genesee Street	1959	Eligible (Criterion C)	Eligible (Criterion D)
1230	338613	Golden Tee Apartments	3201 Southwest Avalon Way	1967	Eligible (Criterion C)	Eligible (Criterion D)
1309	303008	Single-Family Residence	4157 38th Avenue Southwest	1956	Eligible (Criterion C)	Eligible (Criterion D)
1984	338612	Golden Tee Apartments	3211 Southwest Avalon Way	1967	Eligible (Criterion C)	Eligible (Criterion D)
2068	679043	Bartell Drugs	4548 California Avenue Southwest	1929	Eligible (Criteria A and C)	Eligible (Criteria A and D)
2110	334059	Chinook Apartments	4431 37th Avenue Southwest	1959	Eligible (Criterion C)	Eligible (Criterion D)
2126	365104	Residence	4446 40th Avenue Southwest	1908	Eligible (Criterion A)	Eligible (Criterion A)
2150	343495	West Seattle Bowl	4505 39th Avenue Southwest	1948	Eligible (Criterion A)	Eligible (Criterion A)
2217	343979	Venable & Wing Law Office	4826 California Avenue Southwest	1963	Eligible (Criterion C)	Eligible (Criterion D)
2224	721512	Residence	5011 41st Avenue Southwest	1925	Eligible (Criterion C)	Eligible (Criterion D)
2228	278849	Residence	4115 Southwest Hudson Street	1913	Eligible (Criterion C)	Eligible (Criterion D)
3026	654505	Residence	4426 38th Avenue Southwest	1932	Eligible (Criterion C)	Eligible (Criterion D)

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Seattle Landmark Eligibility Status [a]
3042	721838	J.C. Penney/ Russell Building	4520 California Avenue Southwest	1926	Eligible (Criteria A and C)	Eligible (Criteria A and D)
3043	721839	Marier Foto Studio	4528 California Avenue Southwest	1928	Eligible (Criteria A and C)	Eligible (Criteria A and D)
3243	722760	Single-Family Residence	4714 38th Avenue Southwest	1939	Eligible (Criterion C)	Eligible (Criterion D)
3250	722762	Single-Family Residence	4755 38th Avenue Southwest	1957	Eligible (Criterion C)	Eligible (Criterion D)
3251a	723076	Apartment Complex	4821 Fauntleroy Way Southwest	1957	Eligible (Criterion C)	Eligible (Criterion D)
3251b	723077	Apartment Complex	4821 Fauntleroy Way Southwest	1957	Eligible (Criterion C)	Eligible (Criterion D)
7010	729979	Single Family Residence	4039 36th Avenue Southwest	1953	Eligible (Criterion C)	Eligible (Criterion D)
7011	729980	Single Family Residence	4045 36th Avenue Southwest	1948	Eligible (Criterion C)	Eligible (Criterion D)
7052	730016	Single Family Residence	4109 38th Avenue Southwest	1919	Eligible (Criterion C)	Eligible (Criterion D)
7053	730017	Single Family Residence	4111 38th Avenue Southwest	1919	Eligible (Criterion C)	Eligible (Criterion D)

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms on WISAARD. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

[a] All National Register-eligible resources, including districts, would also meet Seattle landmark eligibility criteria. This column provides the likely Seattle Landmark eligibility criteria as described in Section 2.3.



Source: City of Seattle, King County (2019, 2020, 2021).

Segment Line

Area of Potential Effects (APE)

Parcel

Park

Station

National Register Eligibility Status

Eligible

Not Eligible

Constructed after 1980 or Vacant

* This property was demolished since publication of the DEIS

Preferred Alternative

Elevated

Tunnel

At-Grade

Retained Cut

Other Alternatives

Elevated

Tunnel

At-Grade

Retained Cut

FIGURE 9-10a

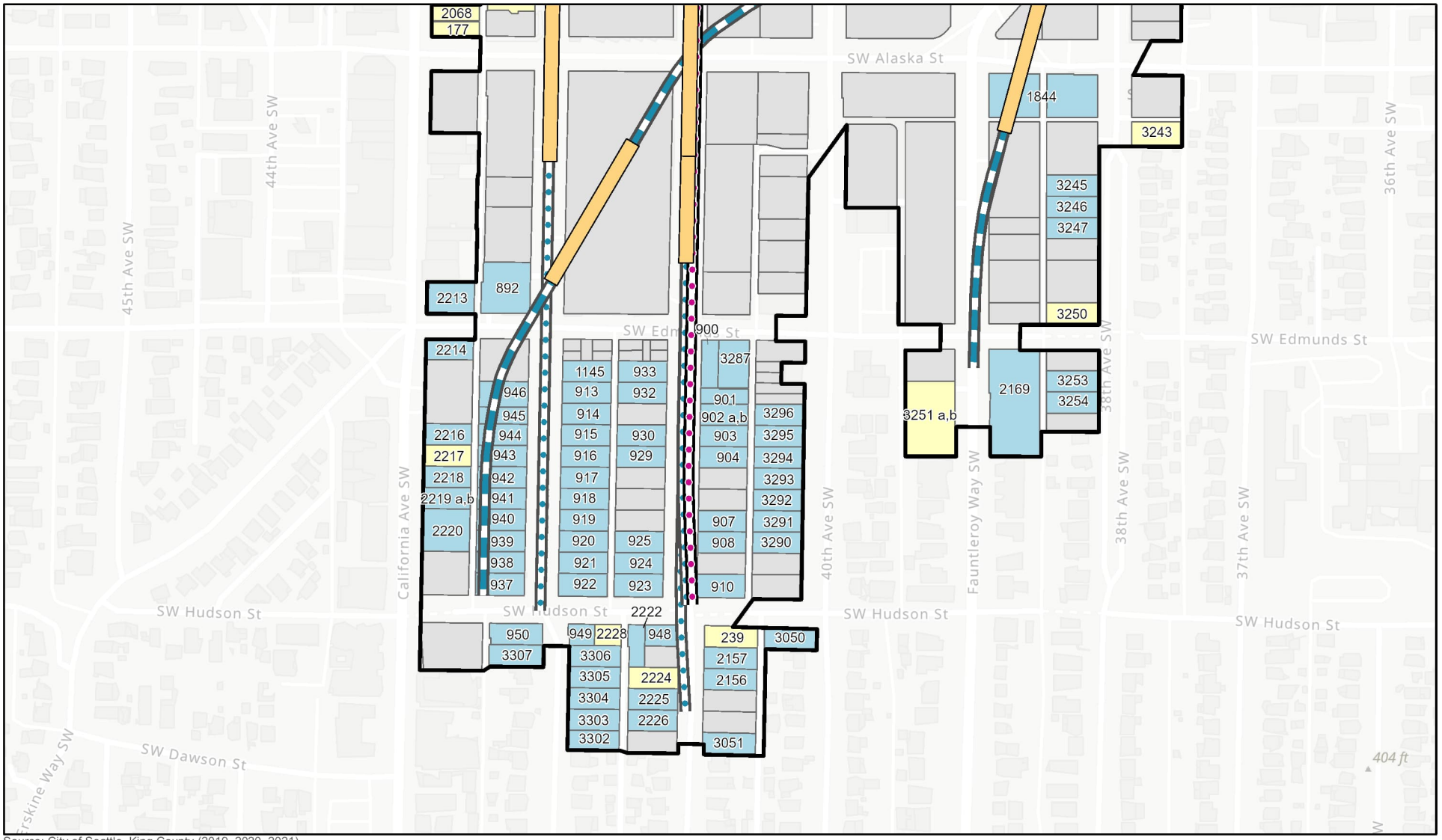
National Register Eligibility Status

West Seattle Junction Segment (North)

West Seattle Link Extension

0 250 500 1,000 Feet

N



Source: City of Seattle, King County (2019, 2020, 2021).

Area of Potential Effects (APE)

Parcel

Park

Station

National Register Eligibility Status

Eligible

Not Eligible

Constructed after 1980 or Vacant

Preferred Alternative

Elevated

Tunnel

At-Grade

Retained Cut

Other Alternatives

Elevated

Tunnel

At-Grade

Retained Cut

FIGURE 9-10b

National Register Eligibility Status

West Seattle Junction Segment (South)

West Seattle Link Extension

0 250 500 1,000 Feet

N

9.3.7.1 Potential for West Seattle Junction Segment Historic Districts

During the evaluation of resources in the area of potential effects within the West Seattle Junction Segment, additional research was warranted in the following areas to determine the potential for an eligible historic district:

- Residential areas: As in all of the segments throughout the area of potential effects, residential areas were considered for their potential as historic districts. Research did not reveal any residential street or plat to have a significant association with community planning or development aside from the general development that every residential area experiences. The residential streets in this segment have experienced a lot of recent infill and development, and many older homes have been demolished. Many houses of historic-age in this segment have been so altered that any potential district significance for a unified aesthetic no longer retains sufficient integrity to convey architectural significance.
- Commercial areas: There are two primary commercial areas within this segment, both located at the edges of the area of potential effects – one is along Fauntleroy Way Southwest, and the other is at the intersection of Southwest Alaska Street and California Avenue Southwest (known as the Alaska Junction or West Seattle Junction). Commercial properties of historic-age along Fauntleroy Way Southwest were built during various periods and have undergone many alterations, and many older resources have been recently demolished and replaced with modern infill. Ultimately, this area was found to lack a significant association with historical or architectural values that would unify them as a potential district, regardless of integrity. The West Seattle Junction area at Southwest Alaska Street and California Avenue Southwest was surveyed in 2016 as part of the West Seattle Junction Historic Resources Survey, sponsored by the West Seattle Junction Historical Survey Group. While some resources were found to retain integrity and significance, most have been altered, and a historic district was not proposed in this area.

In summary, no potential historic districts were identified within the West Seattle Junction Segment due to a lack of integrity.

10 APPLICATION OF CRITERIA OF ADVERSE EFFECT

As an undertaking, the project would adversely affect historic properties (both archaeological resources and historic/built environment resources); this section discusses effects to historic properties within the area of potential effects as a result of this undertaking. In cases where historic resources or districts exceed the one-parcel or 200-foot boundary, effects to historic properties are still considered on the entire resource or district.

Under Section 106 and Code of Federal Regulations Title 36, Part 800.5, an undertaking would have an adverse effect if it would alter, directly or indirectly, any of the characteristics of a historic property that qualify it for inclusion in the National Register. These characteristics include the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. All qualifying characteristics of a historic property shall be considered, including those that may have been identified after the original evaluation of the property's National Register eligibility. Adverse effects on historic properties may include, but are not limited to, the following:

- Physical destruction of or damage to all or part of a property
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (Code of Federal Regulations Title 36, Part 68) and applicable guidelines
- Removal of a property from its historic location
- Change of the character of a property's use or of physical features within the property's setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of a property's significant historic features
- Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an indigenous Tribe or Native Hawaiian organization
- Transfer, lease, or sale of a property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance

To determine the effects on historic properties within the area of potential effects, the following information was considered:

- The location of project elements and proximity to historic properties
- Potential partial or complete acquisition and/or demolition of historic properties
- Construction methods and location
- Potential for vibration (short- or long-term) that could damage historic properties
- Potential for settlement that could damage historic properties
- Potential changes to the visual setting that could adversely affect a property's use or character.

Technical reports prepared by Sound Transit as part of the Environment Impact Statement documentation informed these analyses. These studies include, but are not limited to, the Noise and Vibration Technical Report (Appendix N.3), the Visual and Aesthetics Technical Report (Appendix N.2), Transportation Technical Report (Appendix N.1), and Chapter 2, Alternatives Considered, of the Final EIS. All provide detail about anticipated noise, vibration, and visual

impacts from both construction and operation of the project. Sound Transit evaluates light rail noise and vibration impacts for transit projects according to the FTA's *Transit Noise and Vibration Impact Assessment Manual* (2018).

Potential cumulative long-term effects of the project in conjunction with past, present, and reasonably foreseeable future actions are addressed in Chapter 5, Cumulative Impacts, of the Final EIS.

In a letter to Tribes and other consulting parties dated March 18, 2024, and to the State Historic Preservation Officer dated March 22, 2024, FTA determined adverse effects to individual historic properties. The State Historic Preservation Officer concurred with these determinations on April 16, 2024. As described in Section 11, in accordance with Code of Federal Regulations Title 36, Part 800.6 and in consultation with the State Historic Preservation Officer, Tribes, and other consulting parties, FTA and Sound Transit are developing a programmatic agreement to resolve adverse effects to historic properties.

10.1 Overview of Potential Permanent (Operational) Effects

Potential permanent operational effects to archaeological and historic built environment resources can include, but are not limited to:

- Partial and full demolition of existing resources.
- Clearing and vegetational removal, excavating, grading, and other project-relevant ground disturbances.
- The introduction of physical structures that would diminish the setting or accessibility of historic built environment properties, such as:
  - Elevated guideways
  - Stations
  - Tunnels
  - Overhead catenary systems
  - Traction power substations
  - Hi-rail access and maintenance roads
  - Tunnel vents
  - Stormwater facilities
  - Utilities relocation
  - Construction of staging, stockpiling, and storage areas
- Other impacts, including train noise, lighting and glare from passing trains and stations, or vibration from passing trains if those impacts compromise the physical integrity or accessibility of existing structures.

Appendix N.2, Visual and Aesthetics Technical Report, describes the type and extent of visual impacts associated with the project elements. It includes visual simulations from key viewpoints, which are provided in Attachment N.2A, Key Observation Point Analysis, of Appendix N.2. Table 10-1 provides an overview of visual characteristics of the project components.

Table 10-1. Visual Characteristics of Project Components

Project Component	Visual Characteristics and Notes
Elevated Guideways or Structures (guideway columns, straddle bents) [a]	These are often the most visible project elements. The bottom parts of elevated guideways and hi-rail access would range between approximately 20 feet and 170 feet in height with the project. Noise barriers near sensitive receivers could add several additional feet to the height of the elevated guideways. Elevated hi-rail access ramps would be required to reach and maintain elevated guideways. In some locations, elevated guideways (and their associated overhead catenary system) could intrude on views of features such the Cascade and Olympic mountains, Mount Rainier, Elliott Bay, and the Puget Sound., Elevated stations (and guideways to a lesser extent) could create shadows that could have impacts. However, stations and associated structures such as elevators, escalators, and walkways, as well as underground stations egress/vent structures, would be designed to be attractive architectural elements or features and would add visual interest to the nearby area.
Bridges	The bridge over the Duwamish Waterway would be the most visible structure as seen from a distance associated with the project. High-level fixed bridge structure types could include balanced cantilever segmental box girder, extradosed, cable-stayed, or steel truss superstructure. Preferred Alternative DUW-1a would be constructed as either truss or cable-stayed).
Stations	Depending on size, bulk, and whether they would be elevated, retained cut, or at-grade, stations could block or intrude on views of features such the Cascade mountains, Mount Rainier, Elliott Bay, Puget Sound, and the Downtown Seattle skyline; cast shadows; or add built elements to the landscape. Elevated stations would be more visible than stations in retained cuts or tunnels and would contain features such as escalators, elevators, and stairs. The only at-grade station would be in SODO.
Overhead Catenary System	The overhead catenary system can be a very visible component from close viewing distances. Overhead catenary system elements (wires and poles) become less visible as viewing distances increase. The structures could intrude on views but would not block views because of their thin, cable-like profile and appearance.
Lighting and Glare Associated with Stations	Project-related lighting at stations could create light impacts, increase the level of ambient light nearby, and increase skyglow, which can impact nighttime views of the stars. Design-related measures such as shielding and altering light direction in stations would be used where appropriate to reduce potential impacts. Glare impacts from the project Build Alternatives would be unlikely. “Glare” is defined by the online Merriam-Webster Dictionary as “a harsh uncomfortably bright light” (Merriam-Webster 2020); given this definition, potential reflection from stations might be seen under certain conditions and at certain times of the day but would not be likely to produce harsh, uncomfortable bright light that would be a safety issue to vehicle drivers.
Lighting Associated with Trains	Lights from the interior of project light rail trains and train headlights would be seen at night in some locations as the light rail passes viewers, although some noise barriers on elevated structures near sensitive viewers would block views of interior train lights and/or train headlights, particularly when looking upward at trains traveling above viewers on elevated guideways. Briefly seeing light associated with passing light rail trains would not be expected to create visual disturbances, given the existing level of traffic on streets at night on most streets near the Build Alternatives. Some sensitive viewers living in residences that would be adjacent to elevated structures might find passing nighttime light rail visually disturbing.
Building Removal	Removal of existing buildings can improve or detract from visual settings, depending on building condition, style, scale, and color. Areas where buildings would be removed would contain project elements and/or be revegetated to better blend in with nearby areas.
Vegetation Removal	Removal of vegetation can open up views that are nonexistent or, conversely, expose other unsightly views, such as industrial areas below sensitive viewers that are currently blocked by vegetation. When possible, Sound Transit would preserve existing vegetation as practical, replant vegetation, replace trees, and screen to minimize effects of vegetation removal.

Project Component	Visual Characteristics and Notes
Retaining Walls	Retaining walls often replace vegetated hillsides with hard materials such as concrete that might require surface design treatments to reduce impacts. Where appropriate, retaining walls would be treated with surface design enhancements.
Sound Walls	Sound walls or noise barriers could be installed near sensitive noise receivers. They are built of solid materials and placed adjacent to or attached to the light rail guideway. When these measures are not effective, sound walls might be constructed along property lines, sometimes replacing existing fences. The proposed locations of sound walls are shown in Appendix N.3, Noise and Vibration Technical Report, and were considered in the visual impact analysis.
Retained Cut	Retained cut for light rail would only be visible from nearby areas. Fencing and/or walls along the top of the retained cut would be the most visible elements of this feature and would be appropriately designed to fit in with the adjacent properties.
Traction Power Substations	The traction power substations would be in enclosed buildings, about 20 feet by 60 feet in size, with an additional 10 feet to 20 feet required around each unit. Where appropriate, they would be screened from public view with a wall or fence. The exterior walls or fences would be landscaped in accordance with the landscape regulations of the jurisdictions where the facilities would be located.
Tunnel Egress and Vent Shaft Structure	The tunnel egress and vent shaft structure would provide access from tunnels to the surface and provide a way for the vent shaft to vent above the surface. The structure would be a building approximately 30 feet by 30 feet and 25 feet in height above-grade.

[a] Straddle bents are supports made of two columns that support a beam on which the guideway sits.

10.2 Overview of Temporary Construction-Related Effects

Archaeological sites are generally not affected by temporary, construction-related effects. However, temporary construction-related effects to historic built environment resources can be caused by several factors, including, but not limited to, restricted access, increased truck traffic along haul routes, glare, noise, vibration, and temporary visual impacts and changes to setting. Together, these factors can lead to reduced commercial activity, and reduced investment in historic resources. Typically, these effects would not be considered adverse unless they result in the diminishment of characteristics that contribute to a historic property's National Register eligibility.

Section 2.7, Construction Approach, in the Final EIS, provides an overview of potential construction activities and timing. The project would have extended multiple year construction periods, with the greatest potential for construction impacts occurring during civil construction.

The following major civil construction activities could result in a potential adverse effect, depending on proximity to the resource and how the resource is accessed.

- Partial and full demolition of existing resources (buildings, pavement) and debris removal
- Remediation of existing contamination at construction sites
- Building temporary vehicular, bicycle, and pedestrian detour routes
- Protective works (such as underpinning) for buildings that would not be demolished
- Clearing and vegetation removal
- Fill and excavation
- Utility extensions, relocations, or disruptions

- Drainage system relocations and new connections, including stormwater vaults
- Construction staging area use
- Guideway structure construction
- Tunnel construction, particularly at the tunnel portals and vent shafts
- Tunnel cross passage construction, including ground treatment near the cross passages
- Delivery of materials and equipment
- Removal and hauling of excavation spoils and other construction debris
- Station construction, including elevated stations and tunnel stations under street rights-of-way
- Crossover track, tail track, and other special trackwork construction, including at-grade, elevated, and underground trackwork structures
- Bridge construction
- Slope stabilization (such as retaining wall) construction
- Ground treatment and improvement (such as stone columns, jet grouting, and ground freezing)
- Pile-driving and shaft drilling
- Roadway reconstruction

10.2.1 Potential Vibration-Related Effects

Construction-related vibration would potentially affect built environment historic properties. As described in Appendix N.3, Noise and Vibration Technical Report, the primary concern from vibration as a result of construction activities is the potential for damage to buildings, particularly historic properties. Because the details of the construction means and methods for this project are not available at this time and there are several alternatives, the construction vibration analysis focused on determining the distance beyond which the damage risk criteria and annoyance criteria would not be exceeded.

There are no state, county, or municipal vibration regulations; therefore, the FTA's recommended criteria on vibration levels is applied to identify potential vibration effects during construction. The construction vibration criteria were developed to avoid potential damage risk to buildings, including historic resource buildings, which might be particularly susceptible to construction damage, depending on their structural design and siding.

As discussed in the Noise and Vibration Technical Report, vibration associated with tunneling is not anticipated to exceed FTA criteria.

The highest vibration-generating construction activity that could occur would be pile-driving where bridge construction is planned. Sound Transit would develop a construction vibration control plan to address locations where historic resources would be located within the minimum distance threshold, and to outline measures to avoid and minimize impacts. Section 11.2.2.2, Minimization of Noise and Vibration Effects, in this report provides more detail on the construction vibration control plan.

10.2.2 Haul Routes and Traffic

To construct the West Seattle Link Extension, Sound Transit would primarily use the City of Seattle's Major Truck Streets (see Sections 9.2.1 and 9.3.1 of Appendix N.1, Transportation Technical Report, for the City's Major Truck Streets) and WSDOT's Interstate and State Route facilities, including Interstates 5 and 90 and State Routes 99, 509, 519, 599, and 520. These routes would be used for construction vehicle access to and from the construction and construction staging areas. Some oversized construction vehicles may need to use designated alternative routes.

Certain construction areas would not be served by these state and City major truck routes, so additional streets would be required to access construction areas. These streets would be limited to arterials or larger whenever possible but would sometimes need to include local streets to access construction areas not adjacent to the arterial street system.

Project construction areas where local streets could be necessary for access include the following:

- Pigeon Point construction staging area for Preferred Alternative DUW-1a and Option DUW-1b in the Duwamish Segment
- Delridge tunnel portals for Alternative DEL-2a, Option DEL-2b, Alternative DEL-4, and Alternative DEL-7 in the Delridge Segment
- Portals for the West Seattle Junction Segment tunnel alternatives (Preferred Option WSJ-5b, Alternative WSJ-4, and Alternative WSJ-5a), and the station areas for all alternatives, including the elevated alternatives

As more information on specific haul routes within NRHP-eligible or listed historic districts are identified, FTA and Sound Transit will continue consultation with the State Historic Preservation Officer and other consulting parties. If any additional historic properties are adversely affected, FTA would resolve the adverse effects in accordance with Section 106 procedures and as stipulated in the programmatic agreement in consultation with the State Historic Preservation Officer, Tribes, and other consulting parties.

10.2.3 SODO Segment

Consistent with City of Seattle regulations, construction and construction traffic management plans, including haul routes, would be prepared in consultation with the City during the project's final design and construction phases.

Over the duration of the construction period, the major construction activities for the Build Alternatives would be associated with the station construction, tunneling, and constructing the elevated guideway or bridges. These activities would require between 10 and 35 trucks per hour; with bridge construction and tunnel excavation generating the highest truck activity (20 to 35 trucks per hour) within that range.

10.3 No Build Alternative

The No Build Alternative would have no effect on historic properties in the area. Archaeological resources may be identified through other construction activities as the area continues to expand and develop. Similarly, the number of historic built environment resources could decrease with increased development and through neglect.

10.4 Build Alternatives

This section discusses the potential effects under Section 106 of project construction and operation on archaeological sites and historic built environment resources associated with the project. Measures to reduce noise, vibration, and/or visual effects are discussed in Section 11, Summary and Recommendations.

Section 1.2, Project Description, provides an overview of project elements within this extension; Chapter 2 of the Final EIS provides a more extensive description. Effects associated with this extension are described in the following sections.

10.4.1 Effects to Archaeological Resources

In the following sections, the discussion will focus solely on those resources or areas that have the potential to be adversely affected by the project. For archaeological resources discussed in previous sections, those sites that have been determined “not eligible” for listing in the National Register will not be discussed further. Archaeological sites that have not yet been evaluated for eligibility for listing in the National Register or those locations along the new corridors with a high archaeological probability will be the focus of the following discussion.

For all segments, if any additional historic properties are adversely affected, FTA would resolve the adverse effects in accordance with Section 106 procedures in consultation with the State Historic Preservation Officer, Tribes, and other consulting parties. Protocol to address how additional consultation and archaeological research will be conducted to complete the process of identifying, evaluating, and assessing effects to historic properties in consultation with the State Historic Preservation Officer and Native American Tribes will be included in the project programmatic agreement and archaeological treatment plan (see Section 11).

10.4.1.1 SODO Segment

There have been no archaeological resources previously or thus far identified within the SODO Segment of the project. However, prior to Euroamerican migration into the area, nearly the entirety of this segment was tidal and likely used by local inhabitants for resource procurement. While archaeological remnants of the types of activities associated with these areas are ephemeral and rare, probability remains high of their existence beneath the historic fill that was imported and deposited to develop a more stable landform during historic times. There is a continued effort of archaeological monitoring during geotechnical investigations within the SODO Segment.

All alternatives should be presumed to be equal in the likelihood of identifying possible precontact remains that may exist throughout this segment. Because the evidence of efforts to develop the tidelands during historic times has clearly been documented in similar areas (for example 45KI765, 45KI529, and 45KI530), deposits of historic debris and fill may be encountered throughout this segment.

10.4.1.2 Duwamish Segment

All of the Duwamish Segment alternatives should expect to encounter historical-period refuse in the form of tidelands stabilization fill. Whether to the north or the south of the West Seattle Bridge, historical-period refuse associated with regrade material, industrial refuse, and dredge spoils would be pervasive throughout this segment. These types of unconsolidated materials rarely rise to the level of being considered eligible for listing in the National Register (exemplified

by 45KI529, 45KI530, and 45KI688, for example), but this cannot be definitively determined until they are uncovered and examined. Although all three alternatives (Preferred Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2) overlap the present boundaries of archaeological site 45KI688, the site was determined to be not eligible for listing in the National Register.

Presently, there is only a single previously identified archaeological resource that could be affected by the project (see Sections 7.1, WISAARD Records, and 9.3.2, Linear Resources) within the project corridor. Archaeological site 45KI1353, on the west side of the Duwamish Waterway, was identified during very limited geotechnical boring work in 1985 and preliminarily identified as a precontact shell midden. To date, minimal archaeological testing in the area has not increased the boundaries of the archaeological site.

Two alternatives, Preferred Alternative DUW-1a and Option DUW-1b, are both elevated over this site and may or may not directly impact the site, depending on support pier location. If columns supporting an elevated track could be designed to avoid impacts to the site, direct effects under Section 106 could be avoided.

Archaeological Sensitivity Area KK, a known ethnographic location that could have been the location of a lookout, stockade, or defensive point during precontact or even ethnohistoric times, falls in the immediate alignment of Alternative DUW-2 and, if intact features remain, would be directly affected by construction. Archaeological Sensitivity Area II (see Section 8.3.2.1), on the east side of the Duwamish Waterway, falls directly within Preferred Alternative DUW-1a. The single geotechnical borehole that falls within the boundary of Archaeological Sensitivity Area II (DS2034) has not yet been excavated. Archaeological Sensitivity Area KK (see Section 8.3.2.3), on the west side of the Duwamish Waterway, covers two identified archaeological sites (45KI1353 and 45KI52). Preferred Alternative DUW-1a and Option DUW-1b would be within Archaeological Sensitivity Area KK.

Both Preferred Alternative DUW-1a and Option DUW-1b should be considered very sensitive for the presence of precontact archaeological remains. The ethnographic and archaeological data suggest that precontact archaeological remains exist in the Duwamish River area. It should be mentioned that human skeletal remains have been identified at 45KI52.

Similarly, the high promontory above the Duwamish Waterway to the west, now referred to as Pigeon Point, would have been an attractive landform during precontact times. While little is known about this landform archaeologically, it shares geographic features that would have made it very attractive to precontact inhabitants. Most notably among these features would be the elevation above flood zone, proximity to water and desirable resources, defensibility, and line of sight. This area would be affected by both Preferred Alternative DUW-1a and Option DUW-1b.

10.4.1.3 Delridge Segment

In addition to there being no recorded archaeological sites within the Delridge Segment at this time, there is also no record of cultural resources survey having been conducted within the area. The WISAARD predictive model suggests that this area is “very high risk” for the presence of precontact archaeological remains, and precontact archaeological remains could be identified during construction of any of the project alternatives. Additionally, the identification of Archaeological Sensitivity Area RR suggests that significant precontact resources may remain in the segment and should be considered.

Similarly, for historical-period resources, all project alternatives could encounter historical-period archaeological resources within the Delridge Segment. Whether residential, transportation, or industrial in nature, much of this segment has seen development more than 50 years old.

10.4.1.4 West Seattle Junction Segment

There are currently no recorded archaeological sites and no cultural resources survey has been completed within the West Seattle Junction Segment boundaries. Categorized primarily as "high to very high risk" in the WISAARD predictive model, this area was likely used during precontact times. The construction of the project alternatives could discover archaeological remains associated with those early inhabitants.

This area has a history of Euroamerican development, and it is possible that all the project alternatives would have the potential to expose and affect historical-period resources.

10.4.2 Effects to Historic Built Environment Resources

The following sections describe the project effects to the built environment historic properties identified in Section 9 of this report. The properties are described by name and address, and the survey number is included in parentheses. In addition, Tables 10-2 through 10-5 provide an overview of project components that would adversely affect built environment historic properties in each segment. For this project, property-specific adverse effects are characterized as follows:

- Property demolition – property would be acquired and demolished.
- Partial property acquisition – part of the property acquired for the project would not necessitate demolition of the historic property but would diminish one or more aspects of the property's integrity. Not all partial property acquisitions would result in an adverse effect, particularly when a partial acquisition would only take a small, undeveloped portion of the parcel, or a small portion of surface parking, and would not compromise access or use, or diminish the resource's integrity.
- Permanent proximity effects – proximity to the project and/or visual intrusion would cause permanent diminishment of setting, feeling, and/or other aspects of integrity. These effects are more likely to be adverse when they occur in neighborhoods with a cohesive building type, such as residential neighborhoods. They are less likely to be adverse in industrial or transportation-dominant areas because the introduction of a new transportation feature would be unlikely to diminish the integrity of setting.
- Construction disruption – a property in direct proximity (typically within one parcel) would be affected by reduced access, extensive noise, and/or vibration over an extended duration, diminishing one or more aspect of integrity. Construction in proximity of a historic property would not necessarily diminish integrity or result in an adverse effect.

Detailed descriptions for each alternative are provided in Section 1 of this report. For additional information, please see Chapter 2, Alternatives Considered, and Appendix J, Conceptual Design Drawings, of the Final EIS. The preferred alternative is presented first in each segment discussion.

As noted earlier in this section, the State Historic Preservation Officer has concurred with FTA's determination that the project will adversely affect historic properties.

Designated Seattle landmarks and districts that would be directly modified would be subject to review and issuance of a certificate of approval from the Landmarks Board and/or District Review Boards.

10.4.2.1 Linear Resource Spanning Multiple Segments

A segment of Seattle and Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/Northern Pacific Railway Black River Junction to the Lake Washington Ship Canal (LIN-2) is contained within both the SODO and Duwamish segments. However, it would be avoided in its entirety and would not be adversely affected by any project alternatives. Its integrity would not be altered or diminished by the project.

10.4.2.2 SODO Segment

As summarized in Table 10-2, all of the alternatives would adversely affect one built environment historic property: the Graybar Electric Company Building at 1919 6th Avenue South (1030).

Potential effects to other historic properties would be associated with proximity to the new alignments, but those effects are not anticipated to be adverse.

Common to all Build Alternatives in this segment would be the relocation of a 230-kilovolt power line along 6th Avenue South and Diagonal Avenue, south of South Spokane Street, leading to the Seattle City Light Substation. The 230-kilovolt power line also extends into the Duwamish Segment. This project element would not directly or indirectly alter or diminish any aspect of integrity of adjacent historic properties, and the line itself was not constructed in or before 1980 and is therefore not considered historic.

There are no National Register-eligible historic districts in this segment. There are no designated Seattle landmarks within this segment. All resources that have been determined National Register-eligible are assumed to be eligible for Seattle Landmark designation. The nature of effects to historic properties are identical to anticipated effects to eligible Seattle Landmarks.

Preferred At-Grade Lander Access Station Option (SODO-1c)

The Graybar Electric Company Building at 1919 6th Avenue South (1030) would need to be demolished to construct this alternative.

The remaining historic properties in the area of potential effects for Preferred Option SODO-1c would not be adversely affected as a result of the project. The historic properties are sufficiently far from construction and operation of the project that it would not alter or diminish any aspect of integrity: location, design, materials, workmanship, setting, feeling, or association.

At-Grade Alternative (SODO-1a)

The Graybar Electric Company Building at 1919 6th Avenue South (1030) would need to be demolished to construct this alternative.

The remaining historic properties in the area of potential effects for Alternative SODO-1a would not be adversely affected as a result of the project. They are sufficiently far from construction and operation of the project that it would not alter or diminish any aspect of integrity: location, design, materials, workmanship, setting, feeling or association.

At-Grade South Station Option (SODO-1b)

The Graybar Electric Company Building at 1919 6th Avenue South (1030) would need to be demolished to construct this alternative.

The remaining historic properties in the area of potential effects for Option SODO-1b would not be adversely affected as a result of the project. They are sufficiently far from construction and operation of the project that it would not alter or diminish any aspect of integrity: location, design, materials, workmanship, setting, feeling or association.

Mixed Profile Alternative (SODO-2)

The Graybar Electric Company Building at 1919 6th Avenue South (1030) would need to be demolished to construct this alternative.

The remaining historic properties in the area of potential effects for Alternative SODO-2 would not be adversely affected as a result of the project. They are sufficiently far from construction and operation of the project that it would not alter or diminish any aspect of integrity: location, design, materials, workmanship, setting, feeling or association.

10.4.2.3 Duwamish Segment

As summarized in Table 10-3, all three Duwamish alternatives would cause an adverse effect to built environment historic properties.

There are no previously identified historic districts within the Duwamish Segment. Two new National Register-eligible historic districts were identified within this segment: the Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District (1122) and the Spokane Street Manufacturing Historic District (multiple identification numbers). None of the individual resources within the Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District are individually eligible for listing in the National Register; therefore, each contributing building is not listed in Table 10-3. The Spokane Street Manufacturing Historic District contains five resources that are individually eligible for listing in the National Register, and each is listed in Table 10-3.

There is one designated Seattle landmark (Fire Station 14) within this segment. All resources that have been determined National Register-eligible are assumed to be eligible for Seattle landmark designation. The nature of effects to historic properties are identical to anticipated effects to eligible and designated Seattle landmarks.

Table 10-2. Effects to Built Environment Historic Properties: Area of Potential Effects – SODO Segment

Survey Number	WISAARD Number	Property Name	Address	Date Built	National Register Eligibility Status	Preferred At-Grade Lander Access Station Option (SODO-1c)	At-Grade Alternative (SODO-1a)	At-Grade South Station Option (SODO-1b)	Mixed Profile Alternative (SODO-2)
1028	342325	Lincoln Moving & Storage, Alaska Orient Van Lines Building	1924 4th Avenue South	1966	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1030	720609	Graybar Electric Company Building	1919 6th Avenue South	1960	Eligible (Criterion C)	**Adversely Affected**	**Adversely Affected**	**Adversely Affected**	**Adversely Affected**
1276	720594	Platt Electric Supply Co.	2757 6th Avenue South	1970	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1899	342236	Holgate Terminals Incorporated	1762 6th Avenue South	1960	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
2085a	343198	Mill & Mine Supply Co. Building and Warehouse	625 South Lander Street	1953	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3317	721855	Northwest Wire Works	2752 6th Avenue South	1947	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
6012	728870	Denny's	2742 4th Avenue South	1968	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
Total Number of Adversely Affected Historic Properties and Designated Historic Landmarks	**Not Applicable**	**Not Applicable**	**Not Applicable**	**Not Applicable**	**Not Applicable**	**1**	**1**	**1**	**1**

Table 10-3. Effects to Built Environment Historic Properties: Area of Potential Effects – Duwamish Segment

Survey Number	WISAARD Number	Property Name	Address	Built Date	National Register Eligibility Status	Preferred South Crossing Alternative (DUW-1a)	South Crossing South Edge Crossing Alignment Option (DUW-1b)	North Crossing Alternative (DUW-2)
Not Applicable	Multiple	Spokane Street Manufacturing Historic District	Multiple	1908-1968	Eligible Historic District (Criterion A)	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected
881	342274	Seattle Pacific Sales Company Warehouse	3800 1st Avenue South	1968	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1005	45159	Link-Belt Company Property	3405 6th Avenue South	1946	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1083	718431	Viking Automatic Sprinkler Company	3434 1st Avenue South	1964	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*
1090a	720509	Transportation Equipment Rentals Office Building	3443 1st Avenue South	1968	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*
1090b	720510	Transportation Equipment Rentals Maintenance Warehouse	3443 1st Avenue South	1968	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*
1094a	720511	Acme Tool Works	3626 East Marginal Way South	1941	Eligible (Criterion A), contributes to Spokane Street Manufacturing Historic District (Criterion A)	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected

Survey Number	WISAARD Number	Property Name	Address	Built Date	National Register Eligibility Status	Preferred South Crossing Alternative (DUW-1a)	South Crossing South Edge Crossing Alignment Option (DUW-1b)	North Crossing Alternative (DUW-2)
1122a through 1122e	721620, 721624, 721625, 721628, 721629	Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory Historic District	3800 West Marginal Way Southwest	1917 to 1968	Eligible Pacific Forge Company/ Bethlehem Steel Nut and Bolt Factory Historic District (Criteria A and C)	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected
1138	45086	Fire Station 14	3224 4th Avenue South	1922	Eligible (Criterion C), Designated Seattle Landmark	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1274	45085	Pacific Hoist and Warehouse Company	3200 4th Avenue South	1931	Eligible (Criterion C)	Not Adversely Affected [a]	Not Adversely Affected	Not Adversely Affected
1275a	342730	Langendorf United Bakeries	2901 6th Avenue South	1952	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1275b	720593	Langendorf United Bakeries Repair Garage	2901 6th Avenue South	1955	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1388	38533	A.M. Castle and Company	3640-60 East Marginal Way South	1945	Eligible (Criteria A and C), contributes to Spokane Street Manufacturing Historic District (Criterion A)	**Adversely Affected:** *Permanent Proximity Effect*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected
1915	38532	Alaskan Copper Works/Eagle Brass Foundry Company	3600 East Marginal Way South	1918	Eligible (Criterion A), contributes to Spokane Street Manufacturing Historic District (Criterion A)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected

Survey Number	WISAARD Number	Property Name	Address	Built Date	National Register Eligibility Status	Preferred South Crossing Alternative (DUW-1a)	South Crossing South Edge Crossing Alignment Option (DUW-1b)	North Crossing Alternative (DUW-2)
1941	342160	Pacific Reefer Fisheries	3480 West Marginal Way Southwest	1964	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1943	48502	Alaskan Copper and Brass Company	3223 6th Avenue South	1953	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3214	294616	Single-Family Residence	3842 23rd Avenue Southwest	1914	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3320b	722008	NW Motor Parts Corporation Building	2930 6th Avenue South	1951	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3321	721857	M.J.B Coffee Company Warehouse	2940 6th Avenue South	1954	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3322a	342997	Alaskan Copper Company Employment Office	2958 6th Avenue South	1941	Eligible (Criterion C)	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*
3322b	721997	Auto Repair Garage	2958 6th Avenue South	1948	Eligible (Criterion A)	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected
3324	340010	Los Angeles-Seattle Motor Express Company	3200 6th Avenue South	1945	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3327	342709	Scientific Supplies Company	600 South Spokane Street	1954	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected

Survey Number	WISAARD Number	Property Name	Address	Built Date	National Register Eligibility Status	Preferred South Crossing Alternative (DUW-1a)	South Crossing South Edge Crossing Alignment Option (DUW-1b)	North Crossing Alternative (DUW-2)
3329a	86871	Department of Highways District No. 1 Headquarters/ Maintenance Facility – Office/ Administrative Building	450 South Spokane Street	1931	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Partial Property Acquisition*
3329b	722096	Department of Highways District No. 1 Headquarters/ Maintenance Facility – Maintenance Building	450 South Spokane Street	1931	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Partial Property Acquisition*
3329c	722098	Department of Highways District No. 1 Headquarters/ Maintenance Facility – Storage Building	450 South Spokane Street	1931	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Partial Property Acquisition*
3329d	722100	Department of Highways District No. 1 Headquarters/ Maintenance Facility – Car/Paint Building	450 South Spokane Street	1931	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*
3329e	722101	Department of Highways District No. 1 Headquarters/ Maintenance Facility – Maintenance/Garage Building	450 South Spokane Street	1959	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*
3339	342259	Riches & Adams Co./Seattle Opportunities Industrialization Center, Inc.	3627 1st Avenue South	1954	Eligible (Criterion A)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected

Survey Number	WISAARD Number	Property Name	Address	Built Date	National Register Eligibility Status	Preferred South Crossing Alternative (DUW-1a)	South Crossing South Edge Crossing Alignment Option (DUW-1b)	North Crossing Alternative (DUW-2)
3344	344061	General Construction Company Office	3840 West Marginal Way Southwest	1931	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
5136	725824	Air Mac, Inc.	3838 4th Avenue South	1953	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
5137	725825	Warehouse and Office Building	3623 6th Avenue South	1961	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
5139a	45089	Seattle City Light South Receiving Substation	3839 4th Avenue South	1938	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
5139b	725921	Seattle City Light South Receiving Substation Switchyard	3839 4th Avenue South	1924	Eligible (Criterion A)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
5139d	730783	Seattle City Light Warehouse and Office Building	3613 4th Avenue South	1965	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
5139e	730784	Seattle City Light South Rectifier Substation	3613 4th Avenue South	1952	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
LIN-12	44440	Northern Pacific Railway Bridge Over the West Waterway	South of Spokane Street, near Klickitat Way Southwest	1911	Eligible (Criterion C), designated Seattle landmark	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected

Survey Number	WISAARD Number	Property Name	Address	Built Date	National Register Eligibility Status	Preferred South Crossing Alternative (DUW-1a)	South Crossing South Edge Crossing Alignment Option (DUW-1b)	North Crossing Alternative (DUW-2)
LIN-17	730874	Spokane Street East and West Towers, Harbor Island-Delridge-West Seattle 230-kilovolt Transmission Line	West Marginal Way Southwest and Spokane Street Southwest	1922	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
Total Number of Adversely Affected Historic Properties and Designated Historic Landmarks	**Not Applicable**	**Not Applicable**	**Not Applicable**	**Not Applicable**	**Not Applicable**	**6**	**6**	**9**

[a] A portion of this property—but not the building or access to the facility—would be acquired only if it this alternative connects to Alternatives DEL-3 and DEL4. Although this would result in alteration of setting, the effect would not be adverse, and no other aspects of integrity would be altered or diminish. No portion of the property would be acquired when connecting to any of the other Delridge Segment Build Alternatives.

Preferred South Crossing Alternative (DUW-1a)

Preferred Alternative DUW-1a would require demolition of the following resources, resulting in adverse effects:

- The National Register-eligible Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District, 3800 West Marginal Way Southwest (1122)[8]
- The Alaskan Copper Company Employment Office and Auto Repair Garage at 2958 6th Avenue South (3322a and 3322b)

In addition, Preferred Alternative DUW-1a would demolish several resources listed below within the National Register-eligible Spokane Street Manufacturing Historic District, resulting in an adverse effect to the district. Acme Tool Works at 3626 East Marginal Way South (1094a), which is both individually eligible for the National Register and also contributes to the eligible district, would be demolished. This would result in an adverse effect to the individual property in as well as a contributing factor to the overall adverse effect to the district.

The following several resources within the National-Register-eligible Spokane Street Manufacturing Historic District contribute to the district but are not individually eligible, and are not listed in Table 10-3:

- Edwards Ice Machine Co./Eagle Metals Co. at 3628 East Marginal Way South (272)
- Simmons Company Metal Beds, Springs, & Mattress Warehouse at 99 South Spokane Street (1091)
- Lindmark Machine Works at 3626 East Marginal Way South (1094b)
- Air Reduction Company at 3623 East Marginal Way South (1103a)
- Air Reduction Company Carbide Storage Building at 3621 East Marginal Way South (1103b)
- Air Reduction Company Auto Repair Garage at 3621 East Marginal Way South (1103c)
- Light Industrial Building at 3633 East Marginal Way South (1104b)

A.M. Castle and Company at 3640-60 East Marginal Way South (1388), which is individually National-register eligible and also contributes to the Spokane Street Manufacturing Historic District, will not be demolished, but would experience a diminishment of setting, feeling, and association due to the demolition of the above-referenced buildings within the district. This would result in an adverse effect to this building.

In order to connect the proposed light rail line to the existing Operations and Maintenance Base Facility, this alternative would also require partial property acquisition of the parcel that contains the Langendorf United (now Franz) Bakeries (1275a) and Repair Garage (1275b) at 2901 6th Avenue South. However, neither building would be adversely affected. Access to or operation of the bakery and garage would not be modified or interrupted during construction or operation, and the undertaking would not alter or diminish the resource's integrity of location, design, materials, workmanship, setting, feeling, or association; therefore, the resources would not be adversely affected by this alternative.

A small portion of parking behind Fire Station 14 at 3224 4th Avenue South (1138) would be acquired for the project, where the guideway would be approximately 50 feet high. However,

[8] Due to a lack of property access during the environmental analysis, impacts to specific resources within the district were not fully defined. Therefore, full acquisition of the property is assumed for this evaluation.

preliminary coordination with the Seattle Fire Department suggests that this acquisition would not change the operations of the station.

Fire Station 14 is significant under Criterion C as a representative example of the Mission Revival style, particularly as it relates to public buildings. It would not be directly altered. The introduction of the elevated guideway at the rear (east) portion of the property would alter integrity of setting; however, the setting had already been altered over the last century of development in the immediate vicinity. Integrity of location, design, materials, workmanship, feeling, and association would not be altered or diminished. Therefore, this effect would not be adverse.

The following resources on the Seattle City Light property at 3613 4th Avenue South would partially be acquired, with the new guideway immediately adjacent and/or above the resources. However, these properties are industrial and utilitarian, introduction of a guideway directly adjacent would not alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. Therefore, they would not be adversely affected:

- Seattle City Light Warehouse and Office Building, 3613 4th Avenue South (5139d)
- Seattle City Light Warehouse and Office Building, 3613 4th Avenue South (5139e)

The following additional properties would also partially be acquired; however, due to the limited amount of area that would be acquired and the industrial nature of the area with extensive transportation infrastructure, no aspect of integrity would be altered or diminished, and they would not be adversely affected:

- Seattle Pacific Sales Company Warehouse at 3800 1st Avenue South (881)
- Los Angeles-Seattle Motor Express Company at 3200 6th Avenue South (3324)

No other historic properties would be adversely affected as a result of this alternative. The elevated guideway would add another large-scale elevated transportation element (in addition to the West Seattle Bridge) to views along the Duwamish Waterway but would not change the overall setting, feeling, or association of historic properties along the guideway. According to Appendix N.2, light and glare produced by trains would be a very minor change from present conditions and would not adversely affect historic properties in this segment.

The remaining historic properties are sufficiently far from construction and operation of the project that it would not alter or diminish any aspect of integrity: location, design, materials, workmanship, setting, feeling or association. This includes properties that are adjacent to the proposed relocation of a 230-kilovolt power line along 6th Avenue South and connect to the Seattle City Light Substation south of South Spokane Street via Diagonal Avenue South or cross the Department of Highways District No. 1 property to connect to the 5th Avenue South right-of-way that leads to the substation. The adjacent Seattle City Light and nearby Spokane Street East and West Towers, Harbor Island-Delridge-West Seattle 230-kilovolt Transmission Line would not be physically or indirectly altered or diminished. This project element would not directly or indirectly alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association of these adjacent historic properties.

South Crossing South Edge Crossing Alignment Option (DUW-1b)

Effects associated with Option DUW-1b would be the same as those described for Preferred Alternative DUW-1a, with the following exceptions:

- The A.M. Castle and Company Building at 3640-60 East Marginal Way (1388) would be demolished as a result of this alternative, resulting in an adverse effect.
- In addition to the resources listed for Preferred Alternative DUW-1a, Puget Sound Sheet Metal Works at 3651 East Marginal Way South (1104a), which is not individually eligible but

contributes to the National Register-eligible Spokane Street Manufacturing Historic District, would also be demolished as a result of this alternative. The adverse effect to the district was noted in the Preferred Alternative DUW-1a discussion.

- The Lindmark Machine Works building at 49 South Spokane Street (1095) would not be demolished, but a small portion of the property's paved area would be acquired for the project, and the guideway would be constructed in the vicinity of the building. However, because this district is located in an industrial area with extensive transportation infrastructure, this change would not diminish integrity of setting or any other aspects of integrity. Therefore, the effect would not be adverse.

The remaining historic properties are sufficiently far from construction and operation of the project that it would not alter or diminish any aspect of integrity: location, design, materials, workmanship, setting, feeling, or association. This includes properties that are adjacent to the proposed relocation of a 230-kilovolt power line along 6th Avenue South as described under Preferred Alternative DUW-1a. The adjacent Seattle City Light and nearby Spokane Street East and West Towers, Harbor Island-Delridge-West Seattle 230-kilovolt Transmission Line would not be physically or indirectly altered or diminished. This project element would not directly or indirectly alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association of these adjacent historic properties.

North Crossing Alternative (DUW-2)

Alternative DUW-2 would demolish the following historic properties, resulting in an adverse effect:

- Viking Automatic Sprinkler Company at 3434 1st Avenue South (1083)
- Transportation Equipment Rentals Office Building at 3443 1st Avenue South (1090a)
- Transportation Equipment Rentals Maintenance Warehouse at 3443 1st Avenue South (1090b)
- The Alaskan Copper Company Employment Office at 2958 6th Avenue South (3322a)

Although this alternative would demolish the Alaskan Copper Company Employment Office, this would not adversely affect the auto repair garage on the same property (3322b). Demolition of the office would not diminish integrity of the repair garage's location, design, materials, workmanship, or feeling. Integrity of association and setting would be altered, but this change would not be considered adverse.

The Department of Highways District No. 1 property at 450 South Spokane Street, which includes five National Register-eligible resources (3329a through e), would be adversely affected by this alternative. The alternative would require demolition of two of the maintenance buildings: the Car/Paint Building (3329d) and the Maintenance/Garage Building (3329e). Demolition of two of the five resources on this property would result in a loss of integrity to the overall property; therefore, the entire property and all the resources therein would be adversely affected by this alternative.

This alternative would require partial property acquisitions for the following resources:

- A small portion of parking behind Fire Station 14 at 3224 4th Avenue South (1138) would be acquired for the project, where the guideway would be approximately 50 feet high. However, preliminary coordination with the Seattle Fire Department suggests that this acquisition would not change the operations of the station.

  The building is significant under Criterion C, as a representative example of the Mission Revival style, particularly as it relates to public buildings. It would not be directly altered. The introduction of the elevated guideway at the rear (east) portion of the property would alter integrity of setting; however, the setting had already been altered over the last century of development in the immediate vicinity. Integrity of location, design, materials, workmanship, feeling, and association would not be altered or diminished. Therefore, this effect would not be adverse.

- Partial property acquisition of the Pacific Hoist and Warehouse Company at 3200 4th Avenue South (1274) would be required. However, only a small portion of the property would be acquired for construction. The building itself would not be modified in any way, and neither access nor use would be compromised. The undertaking would not alter or diminish the resource's integrity of location, design, materials, workmanship, setting, feeling, or association; therefore, it would not be adversely affected by this alternative.

In order to connect the proposed light rail line to the existing Operations and Maintenance Base Facility, this alternative would require partial property acquisition of the parcel that contains the Langendorf United (now Franz) Bakeries (1275a) and Repair Garage (1275b) at 2901 6th Avenue South. However, neither building would be adversely affected. Access or operation of the bakery or garage would not be modified or interrupted during construction or operation, The undertaking would not alter or diminish the resource's integrity of location, design, materials, workmanship, setting, feeling, or association; therefore, they would not be adversely affected by this alternative.

No other historic properties would be adversely affected as a result of this alternative. The elevated guideway would add another large-scale elevated transportation element (in addition to the West Seattle Bridge) to views along the Duwamish Waterway and would not change the overall setting, feeling, or association of historic properties along the guideway. Light and glare produced by trains would be a very minor change from present conditions and would not adversely affect historic properties in this segment.

The remaining historic properties are sufficiently far from construction and operation of the project that it would not alter or diminish any aspect of integrity: location, design, materials, workmanship, setting, feeling, or association. This includes properties that are adjacent to the proposed relocation of a 230-kilovolt power line along 6th Avenue South as described under Preferred Alternative DUW-1a. The adjacent Seattle City Light and nearby Spokane Street East and West Towers, Harbor Island-Delridge-West Seattle 230-kilovolt Transmission Line would not be physically or indirectly altered or diminished. This project element would not directly or indirectly alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association of these adjacent historic properties.

10.4.2.4 Delridge Segment

An overview of adverse effects caused by all alternatives in this segment is provided in Table 10-4. Alternative DEL-6a would cause no adverse effects to historic properties. All other alternatives would adversely affect one or more historic properties.

There is one designated Seattle landmark (Cettolin House at 4022 32nd Avenue Southwest) within this segment. As described below, it would be adversely affected by Preferred Andover Street Station Lower Height South Alignment Option (DEL-6b). All resources that have been determined National Register-eligible are assumed to be eligible for Seattle landmark designation. The nature of effects to historic properties are identical to anticipated effects to eligible and designated Seattle landmarks.

There are no previously or newly identified historic districts in this segment.

Preferred Andover Street Station Lower Height South Alignment Option (DEL-6b)

One historic property and designated Seattle landmark, the Cettolin House at 4022 32nd Avenue Southwest (3396), would be adversely affected by Preferred Option DEL-6b. Although the property would not be directly affected (no portion of the parcel would be acquired by the project), the immediate vicinity of the property would be converted to a transportation project. This would diminish integrity of setting, feeling, and association; integrity of location, design, materials, and workmanship would not be altered or diminished. The result of the three diminished aspects of integrity would be an adverse effect.

This option would result in the acquisition of the southeast corner of the Seattle Steel Company/Bethlehem Pacific Coast Steel Corporation (Nucor Steel) property at 2424 Southwest Andover Street (449). Approximately 0.6 acre (about 1.4 percent) of the 43.6-acre property would be acquired. A new access driveway would be constructed on the east end of the property; however, it would be placed on a portion of the property that currently serves as surface parking and would only improve access to the facility. This would not alter or diminish integrity of location, design, setting, materials, workmanship, feeling, or association. In addition, a portion of the elevated guideway would be on this portion of the property that currently serves as surface parking. However, this property is a large industrial complex, and no building or structure on the property would be changed. Therefore, no aspect of its integrity (location, design, setting, materials, workmanship, feeling, or association) would be altered or diminished by this option, and it would not result in an adverse effect.

The remaining historic properties within the Delridge Segment would not be adversely affected by this option. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. According to Appendix N.2, the Visual and Aesthetics Technical Report, with Preferred Option DEL-6b, lights from passing trains on the elevated guideway would be seen by residents from the multi-story residential buildings that line this part of 32nd Avenue Southwest. The lights from the trains would add to the at-grade lights from vehicles traveling on 32nd Avenue Southwest. The tree removal next to the West Seattle Bridge on-ramp would eliminate the screening value of the trees for screening lights from vehicles traveling on the on-ramp. However, the introduction of lights from passing trains would not affect these properties.

Dakota Street Station Alternative (DEL-1a)

Alternative DEL-1a would adversely affect several historic properties within this segment's area of potential effects.

This alternative would result in the demolition of the following historic properties, resulting in adverse effects to these properties:

- Bethlehem Pacific Coast Steel Company Office Building at 4045 Delridge Way Southwest (443)
- Single-Family Residence at 4030 Delridge Way Southwest (444)
- Mrachke & Son building at 3860 Delridge Way Southwest (453)
- Single-Family Craftsman Residence at 4108 25th Avenue Southwest (1166)
- Single-Family Craftsman Residence at 4139 25th Avenue Southwest (1787)

This alternative would require 0.5 acre of aerial and underground easements at the north end of the West Seattle Golf Course (242) for the construction of the elevated guideway. Further, the introduction of a new elevated guideway blocking views from the golf course to Downtown Seattle would diminish the design, setting, and feeling of the property's integrity, resulting in an adverse effect.

The remaining historic properties within the segment would not be adversely affected by this alternative. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. According to Appendix N.2, with Alternative DEL-1a, lights and, to a much lesser degree, glare from passing trains on the elevated guideway as well as the elevated station lights would be seen from nearby properties in the Delridge Segment. However, the introduction of lights and glare from passing trains and the elevated station would not adversely affect these properties.

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Table 10-4. Effects to Built Environment Historic Properties: Area of Potential Effects – Delridge Segment

Survey Number	WISAARD Number	Historic Property	Address	Construction Date	National Register Eligibility Status	Preferred Andover Street Station Lower Height South Alignment Option (DEL-6b)	Dakota Street Station Alternative (DEL-1a)	Dakota Street Station North Alignment Option (DEL-1b)	Dakota Street Station Lower Height Alternative (DEL-2a)	Dakota Street Station Lower Height North Alignment Option (DEL-2b)	Delridge Way Station Alternative (DEL-3)	Delridge Way Station Lower Height Alternative (DEL-4)	Andover Street Station Alternative (DEL-5)	Andover Street Station Lower Height Alternative (DEL-6a)	Andover Street Station Lower Height No Avalon Station Tunnel Connection Alternative (DEL-7)
242	717063	West Seattle Golf Course	4600 35th Avenue Southwest	1936	Eligible (Criteria A and C)	Not Adversely Affected	**Adversely Affected:** *Permanent Proximity Effects*	**Adversely Affected:** *Permanent Proximity Effects*	**Adversely Affected:** *Partial Property Acquisition; Permanent Proximity Effects*	**Adversely Affected:** *Permanent Proximity Effects*	**Adversely Affected:** *Permanent Proximity Effects*	**Adversely Affected:** *Partial Property Acquisition; Permanent Proximity Effects*	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
443	344641	Bethlehem Pacific Coast Steel Company Office Building	4045 Delridge Way Southwest	1960	Eligible (Criteria A and C)	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
444	721070	Residence	4030 Delridge Way Southwest	1906	Eligible (Criteria A and C)	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
449	38466	Seattle Steel Company/ Bethlehem Pacific Coast Steel Corporation	2424 Southwest Andover Street	1966	Eligible (Criterion A)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
453	47869	Mrachke & Son	3860 – 3864 Delridge Way Southwest	1930	Eligible (Criteria A and C)	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1166	376099	Single-Family Craftsman Residence	4108 25th Avenue Southwest	1907	Eligible (Criteria A and C)	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1787	721178	Single-Family Residence	4139 25th Avenue Southwest	1909	Eligible (Criterion C)	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1977	418305	Contemporary Ranch House	4150 32nd Avenue Southwest	1959	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected
2254	335189	Kirlow Four-Plex	3074 Southwest Avalon Way	1967	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected
3345	287692	Residence	4017 23rd Avenue Southwest	1907	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3391	300990	Residence	4044 32nd Avenue Southwest	1925	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected

Survey Number	WISAARD Number	Historic Property	Address	Construction Date	National Register Eligibility Status	Preferred Andover Street Station Lower Height South Alignment Option (DEL-6b)	Dakota Street Station Alternative (DEL-1a)	Dakota Street Station North Alignment Option (DEL-1b)	Dakota Street Station Lower Height Alternative (DEL-2a)	Dakota Street Station Lower Height North Alignment Option (DEL-2b)	Delridge Way Station Alternative (DEL-3)	Delridge Way Station Lower Height Alternative (DEL-4)	Andover Street Station Alternative (DEL-5)	Andover Street Station Lower Height Alternative (DEL-6a)	Andover Street Station Lower Height No Avalon Station Tunnel Connection Alternative (DEL-7)
3396	721984	Cettolin House	4022 32nd Avenue Southwest	1928	Eligible (Criterion C) and designated Seattle landmark	**Adversely Affected:** *Permanent Proximity Effect*	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Construction Permanent Proximity Effect*
7063	730028	Single-Family Residence	4019 Fauntleroy Way Southwest	1931	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
7075	730040	Single-Family Residence	4032 35th Avenue Southwest	1932	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
Total Number of Adversely Affected Historic Properties and Designated Historic Landmarks	**Not Applicable**	**Not Applicable**	**Not Applicable**	**Not Applicable**	**Not Applicable**	**1**	**6**	**7**	**6**	**6**	**4**	**4**	**2**	**0**	**1**

Dakota Street Station North Alignment Option (DEL-1b)

The application of criteria of adverse effect to historic properties described above for Alternative DEL-1a would be the same for Option DEL-1b, with two exceptions:

- The Contemporary Ranch House at 4150 32nd Avenue South (1977) would be demolished for construction staging as a result of this alternative, resulting in an adverse effect.
- Less than 0.1 acre of the West Seattle Golf Course (242) would be acquired for Option DEL-1b, which would construct an elevated guideway with straddle bents at the northeast end of the golf course before crossing to the north side of the street. Acquisition would be limited to aerial and underground easements. However, Option DEL-1b would still introduce a new elevated guideway blocking views from the golf course to Downtown Seattle, and would diminish the design, setting, and feeling of the property's integrity, resulting in an adverse effect.

Dakota Street Station Lower Height Alternative (DEL-2a)

Alternative DEL-2a would result in the demolition of the following historic properties, resulting in adverse effects:

- Bethlehem Pacific Coast Steel Company Office Building at 4045 Delridge Way Southwest (443)
- Single-family residence at 4030 Delridge Way Southwest (444)
- Mrachke & Son at 3860 Delridge Way Southwest (453)
- Single-family craftsman residence at 4108 25th Avenue Southwest (1166)
- Single-family craftsman residence at 4139 25th Avenue Southwest (1787)

This alternative would require acquisition of 1.6 acres at the north end of the West Seattle Golf Course (242) for the construction of the elevated guideway and tunnel portal. This alternative would transition from an elevated guideway to a tunnel at the northwest end of the golf course and permanently alter at least five holes and require shortening or reconfiguring of these holes. Changes to these holes could potentially affect the United States Golf Association Handicap System rating of the West Seattle Golf Course, which could make this course less desirable to play. This change would diminish the design, setting, association, and feeling of the property's integrity, resulting in an adverse effect.

The remaining historic properties within the segment would not be adversely affected by this alternative. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. According to the Visual and Aesthetics Technical Report (Appendix N.2), the impact of Alternative DEL-2a on light, glare, and shadows would be similar to that described for Alternative DEL-1a, although passing trains and the station would be lower in height in many areas, particularly at the elevated Delridge Station. However, the introduction of lights and, to a much lesser degree, glare from passing trains and the elevated station would not affect these properties.

Dakota Street Station Lower Height North Alignment Option (DEL-2b)

The application of criteria of adverse effect to historic properties described for Alternative DEL-2a would be the same under Option DEL-2b, with one exception. Less than 0.1 acre of the West Seattle Golf Course (242) would be acquired for Option DEL-2b for aerial and underground easements. This alternative would construct an elevated guideway with straddle bents at the northeast end of the golf course before crossing to the north side of the street. The introduction of a new elevated guideway blocking views from the golf course to Downtown Seattle, and would diminish the design, setting, and feeling of the property's integrity, resulting in an adverse effect.

Delridge Way Station Alternative (DEL-3)

Alternative DEL-3 would result in the demolition of the following historic properties, resulting in adverse effects:

- Bethlehem Pacific Coast Steel Company Office Building at 4045 Delridge Way Southwest (443)
- Single-family residence at 4030 Delridge Way Southwest (444)
- Mrachke & Son at 3860 Delridge Way Southwest (453)

This alternative would require 0.6 acre of aerial and underground easements at the north end of the West Seattle Golf Course (242) for the construction of the elevated guideway. The introduction of a new elevated guideway blocking views from the golf course to Downtown Seattle, and would diminish the design, setting, and feeling of the property's integrity, resulting in an adverse effect.

The remaining historic properties within the Delridge Segment would not be adversely affected by this alternative. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. According to the Visual and Aesthetics Technical Report, with Alternative DEL-3, lights and, to a much lesser degree, glare from passing trains on the elevated guideway and the elevated station lights would be seen from nearby. However, the introduction of lights and, to a much lesser degree, glare from passing trains and the elevated station would not affect these properties.

Delridge Way Station Lower Height Alternative (DEL-4)

The application of criteria of adverse effect to historic properties described in Alternative DEL-3 would be the same for Alternative DEL-4, with one exception:

- This alternative would require acquisition of 1.6 acres at the north end of the West Seattle Golf Course (242) for the construction of the elevated guideway and tunnel portal. This alternative would transition from an elevated guideway to a tunnel at the northwest end of the golf course and permanently alter at least five holes and require shortening or reconfiguring of these holes. Changes to these holes could potentially affect the United States Golf Association Handicap System rating of the West Seattle Golf Course, which could make this course less desirable to play. This change would diminish the design, setting, association, and feeling of the property's integrity, resulting in an adverse effect.

Andover Street Station Alternative (DEL-5)

Alternative DEL-5 would result in the demolition of the following historic properties, resulting in adverse effects:

- Contemporary Ranch House at 4150 32nd Avenue Southwest (1977)
- Kirlow Four-Plex at 3074 Southwest Avalon Way (2254)

This alternative would result in the acquisition of the southeast corner of the Seattle Steel Company/Bethlehem Pacific Coast Steel Corporation (Nucor Steel) property at 2424 Southwest Andover Street (449). Approximately 1.2 acre (about 2.8 percent) of the 43.6-acre property would be acquired. The elevated guideway would be on this portion of the property which currently serves as surface parking. However, this property is a large industrial complex, and no building or structure on the property would be changed. Therefore, no aspect of its integrity would be altered or diminished by this alternative, and it would not result in an adverse effect.

The remaining historic properties within the segment would not be adversely affected by this alternative. They are far enough away from the construction and operation of the project that

there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. According to the Visual and Aesthetics Technical Report, with Alternative DEL-5, lights from passing trains on the elevated guideway would be seen by residents from the multi-story residential buildings that line this part of Southwest Andover Street. The lights from the trains would add to the at-grade lights from vehicles traveling on Southwest Andover Street. However, the introduction of lights from passing trains would not affect these properties.

Andover Street Station Lower Height Alternative (DEL-6a)

No historic properties would be adversely affected by Alternative DEL-6a. This alternative would result in the acquisition of the southeast corner of the Seattle Steel Company/Bethlehem Pacific Coast Steel Corporation (Nucor Steel) property at 2424 Southwest Andover Street (449). Approximately 1.6 acre (about 3.6 percent) of the 43.6 acre property would be acquired. A portion of the elevated guideway would be on this portion of the property which currently serves as surface parking. However, this property is a large industrial complex, and no building or structure on the property would be changed. Therefore, no aspect of its integrity would be altered or diminished by this alternative, and it would not result in an adverse effect.

The remaining historic properties within the Delridge Segment would not be adversely affected by this alternative. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. According to the Visual and Aesthetics Technical Report, with Alternative DEL-6a, lights from passing trains on the elevated guideway would be seen by residents from the multi-story residential buildings that line this part of 32nd Avenue Southwest. The lights from the trains would add to the at-grade lights from vehicles traveling on 32nd Avenue Southwest. The tree removal next to the West Seattle Bridge on-ramp would eliminate the screening value of the trees for screening lights from vehicles traveling on the on-ramp. However, the introduction of lights from passing trains would not affect these properties.

Andover Street Station Lower Height No Avalon Station Tunnel Connection Alternative (DEL-7)

One historic property and designated Seattle landmark, the Cettolin House at 4022 32nd Avenue Southwest (3396), would be adversely affected by Alternative DEL-7, although the property would not be directly affected (no portion of the parcel would be acquired by the project). Properties immediately adjacent to this building, as well as adjacent public right-of-way, would be used for construction staging for the tunnel portal. This would diminish integrity of setting, feeling, and association; integrity of location, design, materials, and workmanship would not be altered or diminished. The result of the three diminished aspects of integrity would be an adverse effect.

Alternative DEL-7 would result in the acquisition of the southeast corner of the Seattle Steel Company/Bethlehem Pacific Coast Steel Corporation (Nucor Steel) property at 2424 Southwest Andover Street (449). Approximately 0.6 acre (about 1.4 percent) of the 43.6-acre property would be acquired. A new access driveway would be constructed on the east end of the property; however, it would be placed on a portion of the property that currently serves as surface parking and would only improve access to the facility. This would not alter or diminish integrity of location, design, setting, materials, workmanship, feeling, or association. In addition, a portion of the elevated guideway would be on this portion of the property that currently serves as surface parking. However, this property is a large industrial complex, and no building or structure on the property would be changed. Therefore, no aspect of its integrity (location,

design, setting, materials, workmanship, feeling, or association) would be altered or diminished by this alternative, and it would not result in an adverse effect.

The remaining historic properties within the Delridge Segment would not be adversely affected by Alternative DEL-7. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. According to the Visual and Aesthetics Technical Report, with Alternative DEL-7, lights from passing trains on the elevated guideway would be seen by residents from the multi-story residential buildings that line this part of 32nd Avenue Southwest. The lights from the trains would add to the at-grade lights from vehicles traveling on 32nd Avenue Southwest. The tree removal next to the West Seattle Bridge on-ramp would eliminate the screening value of the trees for screening lights from vehicles traveling on the on-ramp. However, the introduction of lights from passing trains would not affect these properties.

10.4.2.5 West Seattle Junction Segment

As summarized in Table 10-5, three West Seattle Junction Segment alternatives, Preferred Option WSJ-5b, Alternative WSJ-5a, and Alternative WSJ-6, would not adversely affect historic properties. The remaining alternatives would cause adverse effects to one or more built environment historic properties. There are no previously identified or newly identified historic districts within the West Seattle Junction Segment.

There is one designated Seattle landmark—the Campbell Building at 4554 California Avenue Southwest—within this segment. All resources that have been determined National Register-eligible are assumed to be eligible for Seattle landmark designation. The nature of effects to historic properties are identical to anticipated effects to eligible and designated Seattle Landmarks.

There are no previously or newly identified historic districts in this segment.

Preferred Medium Tunnel 41st Avenue Station West Entrance Station Option (WSJ-5b)

No historic properties would be adversely affected by Preferred Option WSJ-5b. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. Lights from light rail trains would not affect historic properties in the Preferred Option WSJ-5b area of potential effects.

Elevated 41st/42nd Avenue Station Alternative (WSJ-1)

Alternative WSJ-1 would require the demolition of several historic properties, resulting in adverse effects:

- Carlsen & Winquist Auto at 4480 Fauntleroy Way Southwest (91)
- Jim's Shell Service at 4457 Fauntleroy Way Southwest (97)
- Contemporary ranch house at 3221 Southwest Genesee Street (1215)

Golden Tee Apartment Building at 3201 Southwest Avalon Way (1230) would be partially acquired if this alternative connects to Alternative DEL-1a or Alternative DEL-3. While the building itself would not be physically altered, the setting, feeling, and association would be permanently diminished because this building was specifically designed as a residential complex associated with the golf course. The remaining aspects of integrity—location, design, materials, and workmanship—would not be altered or diminished. However, the diminishment of three aspects of integrity would constitute an adverse effect.

Table 10-5. Effects to Built Environment Historic Properties: Area of Potential Effects – West Seattle Junction Segment

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Preferred Medium Tunnel 41st Avenue Station West Entrance Station Option (WSJ-5b)	Elevated 41st/42nd Avenue Station Alternative (WSJ-1)	Elevated Fauntleroy Way Station Alternative (WSJ-2)	Tunnel 41st Avenue Station Alternative (WSJ-3a)	Tunnel 42nd Avenue Station Option (WSJ-3b)	Short Tunnel 41st Avenue Station Alternative (WSJ-4)	Medium Tunnel 41st Avenue Station Alternative (WSJ-5a)	No Avalon Station Tunnel Alternative (WSJ-6)
77	719318	Limcrest Apartments	3600 Southwest Genesee Street	1956	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition* [a]	**Adversely Affected:** *Property Demolition* [b]	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
91	720871	Carlsen & Winquist Auto	4480 Fauntleroy Way Southwest	1946	Eligible (Criteria A and C)	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
92b	720875	West Seattle Brake Service	4464 37th Avenue Southwest	1948	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
97	720988	Jim's Shell Service	4457 Fauntleroy Way Southwest	1965	Eligible (Criterion A)	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected
103	420560	Residence	4407 38th Avenue Southwest	1924	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
177	721552	Campbell Building	4554 California Avenue Southwest	1918	Eligible (Criteria A and C), designated Seattle landmark	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
181	721486	Alaska House	4545 42nd Avenue Southwest	1979	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
236	343799	Wardrobe Cleaners	4500 Fauntleroy Way Southwest	1949	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
239	365276	Craftsman Bungalow	4015 Southwest Hudson Street	1906	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1215	442141	Contemporary Ranch House	3221 Southwest Genesee Street	1959	Eligible (Criterion C)	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected
1230	338613	Golden Tee Apartments	3201 Southwest Avalon Way	1967	Eligible (Criterion C)	Not Adversely Affected	**Adversely Affected**: *Partial Property Acquisition*	**Adversely Affected**: *Partial Property Acquisition*	**Adversely Affected:** *Property Demolition* [c]	**Adversely Affected:** *Property Demolition* [c]	**Adversely Affected:** *Property Demolition* [d]	Not Adversely Affected	Not Adversely Affected
1309	303008	Single-Family Residence	4157 38th Avenue Southwest	1956	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
1984	338612	Golden Tee Apartments	3211 Southwest Avalon Way	1967	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Permanent Proximity Effects*	**Adversely Affected:** *Permanent Proximity Effects*	**Adversely Affected:** *Permanent Proximity Effects*	Not Adversely Affected	Not Adversely Affected
2068	679043	Bartell Drugs	4548 California Avenue Southwest	1929	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
2110	334059	Chinook Apartments	4431 37th Avenue Southwest	1959	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected
2126	365104	Residence	4446 40th Avenue Southwest	1908	Eligible (Criterion A)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
2150	343495	West Seattle Bowl	4505 39th Avenue Southwest	1948	Eligible (Criterion A)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
2217	343979	Venable and Wing Law Office	4826 California Avenue Southwest	1963	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected

Survey Number	WISAARD Property Number	Property Name	Address	Construction Date	National Register Eligibility Status	Preferred Medium Tunnel 41st Avenue Station West Entrance Station Option (WSJ-5b)	Elevated 41st/42nd Avenue Station Alternative (WSJ-1)	Elevated Fauntleroy Way Station Alternative (WSJ-2)	Tunnel 41st Avenue Station Alternative (WSJ-3a)	Tunnel 42nd Avenue Station Option (WSJ-3b)	Short Tunnel 41st Avenue Station Alternative (WSJ-4)	Medium Tunnel 41st Avenue Station Alternative (WSJ-5a)	No Avalon Station Tunnel Alternative (WSJ-6)
2224	721512	Residence	5011 41st Avenue Southwest	1925	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected
2228	278849	Residence	4115 Southwest Hudson Street	1913	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3026	654505	Residence	4426 38th Avenue Southwest	1932	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	**Adversely Affected:** *Property Demolition*	Not Adversely Affected	Not Adversely Affected
3042	721838	J.C. Penney/Russell Building	4520 California Avenue Southwest	1926	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3043	721839	Marier Foto Studio	4528 California Avenue Southwest	1928	Eligible (Criteria A and C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3243	722760	Single-Family Residence	4714 38th Avenue Southwest	1939	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3250	722762	Single-Family Residence	4755 38th Avenue Southwest	1957	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3251a	723076	Apartment Complex	4821 Fauntleroy Way Southwest	1957	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
3251b	723077	Apartment Complex	4821 Fauntleroy Way Southwest	1957	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
7010	729979	Single Family Residence	4039 36th Avenue Southwest	1953	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
7011	729980	Single Family Residence	4045 36th Avenue Southwest	1948	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
7052	730016	Single Family Residence	4109 38th Avenue Southwest	1919	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
7053	730017	Single Family Residence	4111 38th Avenue Southwest	1919	Eligible (Criterion C)	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected	Not Adversely Affected
Total Number of Adversely Affected Properties	**Not Applicable**	**Not Applicable**	**Not Applicable**	**Not Applicable**	**Not Applicable**	**0**	**4**	**4**	**3**	**3**	**7**	**0**	**0**

[a] This property would be demolished as a result of Alternative WSJ-3a only if it this alternative connects to Option DEL-2b. The property would not be acquired or affected if the alternative connects to Alternative DEL-2a.

[b] This property would be demolished as a result of Option WSJ-3b only if it this option connects to Option DEL-2b. The property would not be acquired or affected if the option connects to Alternative DEL-2a.

[c] This property would be demolished only if it this alternative connects to Alternative DEL-2a or Alternative DEL-4.

[d] This property would be demolished only if it this alternative connects to Alternative DEL-1a or Alternative DEL-3.

A portion of the property containing the West Seattle Brake Service at 4464 37th Avenue Southwest (92b) would be acquired for this project, and a separate unrelated building on the parcel would be demolished. However, this change would not diminish the resource's integrity of location, design, setting, materials, workmanship, feeling, or association. Integrity of setting would be altered, but setting is not a character-defining feature of this resource, and the effect would not be adverse.

The remaining historic properties in this segment would not be adversely affected as a result of the project. They are sufficiently far from construction and operation of the project, or are in a commercial area in a high-volume transportation corridor, and the project would not alter or diminish any aspect of integrity. According to the Visual and Aesthetics Technical Report, the elevated stations would have lights that would be seen from nearby locations in this segment. The tail track and hi-rail vehicle access would also have lighting that would be seen from nearby residential areas. The introduction of lights from elevated stations, passing trains, and the tail track and hi-rail vehicle access would not affect these properties.

Elevated Fauntleroy Way Station Alternative (WSJ-2)

Alternative WSJ-2 would require the demolition of several historic properties, resulting in adverse effects:

- Jim's Shell Service at 4457 Fauntleroy Way Southwest (97)
- A contemporary ranch house at 3221 Southwest Genesee Street (1215)
- Chinook Apartments at 4431 37th Avenue Southwest (2110)

Golden Tee Apartment Building at 3201 Southwest Avalon Way (1230) would experience partial property acquisition if Alternative WSJ-2 connects to Alternative DEL-1a or Alternative DEL-3. While the building itself would not be physically altered, the setting, feeling, and association would be permanently diminished, as this building was specifically designed as a residential complex associated with the golf course. The remaining aspects of integrity—location, design, materials, and workmanship—would not be altered or diminished. However, the diminishment of three aspects of integrity would constitute an adverse effect.

The remaining historic properties within the segment would not be adversely affected by this alternative. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. According to the Visual and Aesthetics Technical Report, the elevated stations would have lights that would be seen from nearby locations in this segment. The tail track and hi-rail vehicle access would also have lighting that would be seen from nearby residential areas. The introduction of lights from elevated stations, passing trains and the tail track and hi-rail vehicle access would not affect these properties.

Tunnel 41st Avenue Station Alternative (WSJ-3a)

Alternative WSJ-3a would require the demolition of the following historic properties, resulting in adverse effects:

- Limcrest Apartments at 3600 Southwest Genesee Street (77) when it connects to Option DEL-2b
- Golden Tee Apartment Building at 3201 Southwest Avalon Way (1230) when this alternative connects to Alternative DEL-2a or Alternative DEL-4

The following property would be adversely affected by Alternative WSJ-3a because of permanent proximity effects:

- Golden Tee Apartment Building at 3211 Southwest Avalon Way (1984). This resource is identical to the adjacent Golden Tee Apartment Building at 3201 Southwest Avalon Way, which would be demolished as a result of this alternative if it connects to Alternative DEL-2a or Alternative DEL-4. The two resource's buildings were built as one overall complex, and removal of one of the resource buildings would result in a diminishment of integrity of setting, design (of the overall property), feeling, and setting of the other. Therefore, the effect to 3211 Southwest Avalon Way would be adverse.

The remaining historic properties within the West Seattle Junction Segment would not be adversely affected by Alternative WSJ-3a. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. The removal of residences on 41st Avenue Southwest between Southwest Edmonds Street and Southwest Hudson Street and the introduction of the aboveground egress and vent shaft structure would not affect historic properties in the Alternative WSJ-3a area of potential effects.

Tunnel 42nd Avenue Station Option (WSJ-3b)

The application of criteria of adverse effect to historic properties for Option WSJ-3b would be the same as described for Alternative WSJ-3a.

The remaining historic properties within the West Seattle Junction Segment would not be adversely affected by Alternative WSJ-3b. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. The removal of residences on 42nd Avenue Southwest between Southwest Edmonds Street and Southwest Hudson Street and the introduction of the aboveground egress and vent shaft structure would not affect historic properties in the Option WSJ-3b area of potential effects.

Short Tunnel 41st Avenue Station Alternative (WSJ-4)

Alternative WSJ-4 would require the demolition of several historic properties, resulting in adverse effects:

- Jim's Shell Service at 4457 Fauntleroy Way Southwest (97)
- A contemporary ranch house at 3221 Southwest Genesee Street (1215)
- Golden Tee Apartment Building at 3201 Southwest Avalon Way (1230) when this alternative connects to Alternative DEL-1a or Alternative DEL-3
- Chinook Apartments at 4431 37th Avenue Southwest (2110)
- A residence at 5011 41st Avenue Southwest (2224)
- A residence at 4426 38th Avenue Southwest (3026)

The following property would be adversely affected by this alternative because of permanent proximity effects:

- Golden Tee Apartment Building at 3211 Southwest Avalon Way (1984). This building is identical to the adjacent Golden Tee Apartment Building at 3201 Southwest Avalon Way, which would be demolished as a result of this alternative when it connects to Alternative DEL-1a or Alternative DEL-3. The two resource's buildings were built as one overall

complex, and removal of one of the resource buildings would result in a diminishment of integrity of setting, design (of the overall property), feeling, and setting of the other. Therefore, the effect to this property would be adverse.

The remaining historic properties within the West Seattle Junction Segment would not be adversely affected by Alternative WSJ-4. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. According to the Visual and Aesthetics Technical Report, lights at the elevated Avalon Station would be seen from nearby properties. Lights from the elevated guideway and station would be similar to those described for Alternative WSJ-1 but along a shorter alignment. The introduction of lights from elevated stations, passing trains, and the tail track and hi-rail vehicle access would not affect these properties.

Medium Tunnel 41st Avenue Station Alternative (WSJ-5a)

No historic properties would be adversely affected by Alternative WSJ-5a. They are far enough away from the construction and operation of the project that there would not be an effect, direct or indirect, that would alter or diminish integrity of location, design, materials, setting, workmanship, feeling, or association. Lights from light rail trains would not affect historic properties in the Alternative WSJ-5a area of potential effects.

No Avalon Station Tunnel Alternative (WSJ-6)

Alternative WSJ-6 would have no potential to adversely affect historic properties, as this alternative would largely be within a tunnel. There would not be an Avalon Station, and the Alaska Junction Station would be same as the station described for Alternative WSJ-5a.

10.4.2.6 Potential Indirect or Cumulative Effects

All project Build Alternatives would have the potential to affect historic or archaeological resources within the study area. The settings surrounding these resources have been altered by older development, recent redevelopment, and general changes in uses surrounding them. The reasonably foreseeable future actions in the project vicinity may also have direct impacts on historic or archaeological resources in the project study area. Incrementally, new infrastructure and development patterns have changed and will continue to change the historic setting of resources as a result of past and ongoing urbanization.

Construction of the project could encourage population growth and transit-oriented development in the station areas. Potential effects could include demolition or substantial alteration of historic properties for redevelopment. Future redevelopment in station areas would be consistent with adopted zoning and the City of Seattle's Comprehensive Plan (2022), which currently allows greater density in the station areas than exists today. The City's Landmark ordinance, which would apply to the demolition or substantial alteration of historic structures that meet the City of Seattle's Landmark criteria, would help to reduce loss of historic resources. Furthermore, any changes in zoning by the City could result in redevelopment of historic properties and long-term alteration to the scale and character of neighborhoods, which could have indirect impacts on historic properties. Redevelopment also has the potential to disturb archaeological resources. Incrementally, the project could contribute to a cumulative impact on historic and archaeological resources.

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11 SUMMARY AND RECOMMENDATIONS

11.1 Summary

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. The agency must consult with the State Historic Preservation Officer, affected Tribes, and other consulting parties to seek ways to avoid, minimize, or mitigate adverse effects. Historic properties are defined as any district, site, building, structure, or object, listed in or eligible for inclusion in the National Register.

As demonstrated in this report, the project traverses some of Seattle's oldest and densest neighborhoods. Regardless of the alternative, the project would result in adverse effects to historic properties. In accordance with Code of Federal Regulations Title 36, Part 800.5, FTA determined the Preferred Alternative would adversely affect historic properties in a letter to the State Historic Preservation Officer on March 22, 2024. The State Historic Preservation Officer concurred with this determination on April 16, 2024.

Archaeological resources might be encountered during construction of all alternatives for the project. The SODO and Duwamish segments, where archaeological materials deposited during the nineteenth century to transform the tidelands into habitable property are abundant and ubiquitous, have the highest probability to encounter archaeological resources. The greatest area of archaeological sensitivity, however, surrounds the area of the Duwamish Waterway. Although this river corridor has been heavily modified, intact archaeological resources have been identified and could be encountered by alternatives to the south of the West Seattle Bridge. The Delridge and West Seattle Junction segments might encounter historical-period archaeological materials, with a lower possibility of encountering intact precontact archaeological materials.

11.2 Resolution of Adverse Effects

Adverse effects to historic properties would be avoided where possible through project planning, design, and the application of required best management practices during construction. However, not all adverse effects to National Register-eligible or -listed resources can be avoided. To resolve adverse effects to historic properties, in accordance with Code of Federal Regulations Title 36, Part 800.6, FTA and Sound Transit, in consultation with the State Historic Preservation Officer, Tribes, and other consulting parties, are developing a programmatic agreement (Attachment N.5G). This consultation will continue prior to the Record of Decision, and a final Programmatic Agreement will be included with that document.

As noted in Section 6.3, the Advisory Council declined to participate in the consultation to resolve adverse effects.

Additionally, Sound Transit anticipates the need to address impacts on previously undocumented archaeological resources. Such resources may be identified through pre-construction inventory work, which will occur in coordination with Tribes and the State Historic Preservation Officer. This pre-construction inventory work is anticipated to be addressed in the Section 106 programmatic agreement.

11.2.1 Mitigation of Adverse Effects

Typical mitigation measures that could be included in a Section 106 agreement are listed below; additional options can also be found through the Washington State Department of Archaeology and Historic Preservation (2020):

- Modifying the undertaking through redesign, reorientation, or other similar changes to avoid, minimize, or mitigate impacts
- Documenting historic properties or resources that would be impacted
- Installing interpretive/educational signage, or other options that provide a public benefit (e.g., exhibits, HistoryLink essays, documentaries, or historic property nominations)
- Implementing data recovery of archaeological or architectural information and materials
- Preparing a National Register nomination for an archaeological site
- Preparing City of Seattle landmark nominations for potentially eligible buildings, structures, objects, and/or sites
- Preparing an ethnographic study, historic essays, documentaries, or formal documentation
- Developing museum exhibits
- Offering lecture series, trainings, or workshops
- Additional consultation to ensure compatible replacement buildings or structures
- Supporting preservation non-profit organizations

Sound Transit will develop a detailed monitoring and inadvertent discovery plan for review by the State Historic Preservation Officer and Tribes. The plan outlines protocols to ensure the proper treatment of archaeological resources that may be identified during construction.

11.2.2 Minimization of Adverse Effects

The following minimization measures would be incorporated into the project to avoid potential adverse effects, when appropriate, consistent with Code of Federal Regulations Title 36, Part 800.5(b). General minimization efforts to be incorporated into the project that could further minimize effects on historic properties would include the following:

- Seismically or structurally upgrade buildings that might be subject to structural impacts.
- Take precautions that historic properties are protected from vibrations, excavations, and damage from heavy equipment.
- Protect facades of affected historic buildings from an accumulation of excessive dirt and dust during construction, and/or clean them in an appropriate manner at the conclusion of construction. Sound Transit would consult with the State Historic Preservation Officer before implementing any protection or cleaning methods.
- Control fugitive dust using measures listed in Appendix L4.6D, Air Quality Best Management Practices, of the West Seattle Link Extension Final EIS.
- Maintain access to historic properties to the extent possible.
- Restrict construction haul routes to existing, heavily used public rights-of-way and avoid historic districts when practicable.

11.2.2.1 Minimization of Visual Effects

Specific measures to minimize visual effects during construction include the implementation of design guidelines. The following describes the design guidelines that would be incorporated where practical:

- In addition to meeting City of Seattle regulatory requirements and the design and mitigation measures described in Section 4.5, Visual and Aesthetic Resources, of the Final EIS, Sound Transit has developed mitigation measures for areas with visual impacts. Design and mitigation measures would be further refined if necessary in coordination with the City of Seattle as the project design advances.
- Sound Transit would coordinate with the City of Seattle and adjacent communities through design review to promote visual unity in station areas.
- Sound Transit would surplus the remainder of the parcels, not needed after construction, which could potentially be redeveloped consistent with Sound Transit's Transit Oriented Development Policies and City of Seattle plans.
- When possible, Sound Transit would preserve existing vegetation.
- Sound Transit would plant appropriate vegetation within and adjoining the project right-of-way to replace existing street trees and other visually important vegetation removed for the project, or to provide screening for sensitive visual environments and/or sensitive viewers. New plantings would be consistent with Sound Transit operations and maintenance requirements.
- Sound Transit would design exterior lighting at stations, tail tracks, and hi-rail access to minimize height and use source shielding to avoid lighting bulbs that would be directly visible from residential areas, streets, and highways. Shielding would also limit spillover light and glare in residential areas.
- During construction, Sound Transit would provide visual screening along some areas where construction activities would be seen by nearby sensitive viewers. Visual screening would include construction of a barrier to screen ground-level views into construction areas where practical. Nighttime construction lighting would be shielded and directed downward to avoid light spillover onto adjacent sensitive uses.

11.2.2.2 Minimization of Noise and Vibration Effects

Section 7, Noise and Vibration Mitigation Measures, of the Noise and Vibration Technical Report (Appendix N.3) provides a description of means to reduce and monitor potential noise and vibration effects during tunnel construction. The entire content of the report is not reiterated in this report, but key noise and vibration minimization strategies are summarized in the following sections.

11.2.2.2.1 Noise

Although noise-related adverse effects to historic properties are not anticipated, for locations where Sound Transit has identified potential noise impacts, mitigation measures would be considered and reviewed using Sound Transit's light rail Link Noise Mitigation Policy. Under this policy, potential mitigation measures would be considered for all noise impacts.

Sound Transit's noise mitigation policy is to mitigate both moderate and severe impacts beginning with source treatment, followed by treatments in the noise path. If source and path

treatments are not sufficient to mitigate the impact, Sound Transit would evaluate and implement sound insulation at affected properties where the existing building does not already achieve sufficient exterior-to-interior reduction of noise levels.

For most identified noise impacts, sound walls were the selected method of reducing noise levels, consistent with Sound Transit's Link Noise Mitigation Policy (Sound Transit 2004). Sound walls are effective at eliminating most predicted noise impacts in the West Seattle Link Extension.

All construction activities would be required to comply with codified sound limits. Nighttime construction would require a noise variance from the City of Seattle. Noise mitigation would likely be required for construction activities to comply with Seattle Municipal Code or variance sound level limits.

11.2.2.2.2 Vibration

The primary means of mitigating vibration from construction activities is to require the contractor to prepare a detailed construction vibration control plan. A noise and vibration control engineer or acoustician would work with the contractor to prepare the plan in conjunction with the contractor's specific equipment and methods of construction. Key elements of a plan include:

- Contractor's specific equipment types
- Schedule and methods of construction
- Identification of all Category 1 and special buildings near construction sites
- Methods for projecting construction vibration levels
- Construction vibration limits
- Specific vibration control measures where predicted levels exceed the limits
- Methods for responding to community complaints

Construction would be carried out in compliance with Sound Transit specifications and all applicable local regulations. Specific construction vibration mitigation measures would be developed during the design phase when more detailed construction means and methods information is available. The following mitigation measures would be applied as needed to minimize construction vibration impacts:

- **Pre-construction and post-construction survey.** Prior to the start of construction and at project completion, a survey of buildings including inspection and photographs of building foundations would be completed near construction areas.
- **Construction timing.** Avoiding nighttime construction in residential neighborhoods and arrange with businesses to avoid interfering with sensitive daytime activities. Local ordinances would be followed unless variances are obtained.
- **Equipment location.** Locating stationary construction equipment as far as possible from vibration-sensitive sites.
- **Continuous vibration monitoring.** Monitoring can be implemented at particularly sensitive receivers if needed.
- **Alternative construction methods.** Using alternative construction methods to minimize the use of impact and vibratory equipment (e.g., pile-drivers and compactors).

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