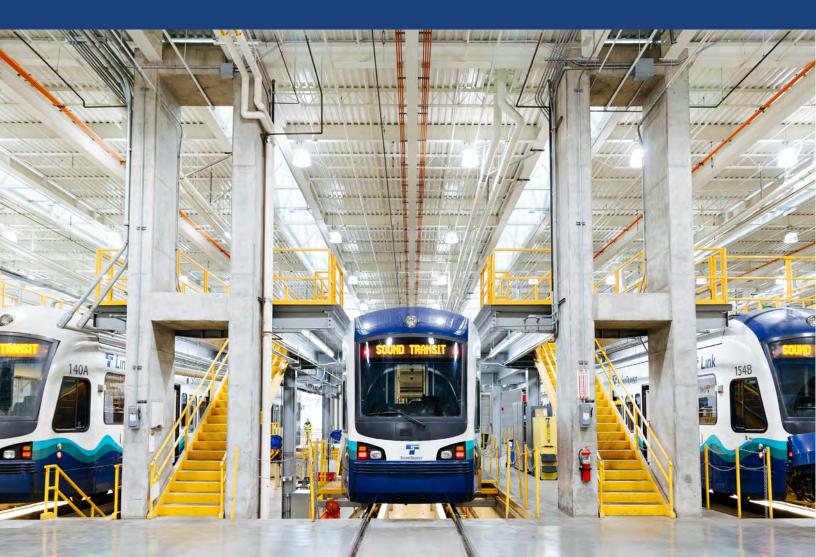


Final Environmental Impact Statement

Appendix A: Environmental Impact Statement Support Information



Federal Transit Administration



June 2024

Appendix A: Final Environmental Impact Statement Support Information

List of Preparers

Appendix A2 Distribution List

References

Appendix A3 Glossary

Appendix A4

Federal Transit Administration



Appendix A1 – List of Preparers

Sound Transit

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Appendix A2 – Distribution List

Federal Agencies

Bonneville Power Administration Federal Aviation Administration, Northwest Mountain Region

Federal Highway Administration, Washington State Division

National Oceanic and Atmospheric Administration, Fisheries (NOAA Fisheries)

U.S. Army Corps of Engineers

U.S. Bureau of Indian Affairs, Northwest Region

U.S. Fish and Wildlife Service

U.S. Environmental Protection Agency, Region 10

Tribes

Muckleshoot Indian Tribe Nisqually Indian Tribe The Puyallup Tribe of the Puyallup Reservation Snoqualmie Indian Tribe Squaxin Island Tribe of the Squaxin Island Reservation Suquamish Indian Tribe of the Port Madison Reservation The Confederated Tribes and Bands of the Yakama Nation

State Agencies

Washington State Department of Archaeology and Historic Preservation Washington State Department of Ecology Washington State Department of Fish and Wildlife Washington State Department of Natural Resources Washington State Department of Social and Health Services Washington State Department of Transportation Washington State Parks Washington State Patrol Washington State Recreation and Conservation Office

Regional Agencies

Puget Sound Regional Council Puget Sound Clean Air Agency South King Fire and Rescue

Copies provided for Public Reference

Kent City Hall

Kent Commons Community Center

Kent Library Federal Way City Hall Federal Way Community Center

Federal Way Library

Federal Way 320th Library

Counties

King County

Transit Agencies

King County Metro Transit Pierce Transit

Local Agencies

City of Des Moines City of Federal Way City of Kent

Utility Providers

Lumen City of Federal Way Public Works City of Kent Public Works Comcast Highline Water District Lakehaven Water and Sewer District MCImetro Access Transmission Services, LLC Midway Sewer District Puget Sound Energy Seattle Public Utilities Zayo Group, LLC

Appendix A3 – Glossary

Air pollutant. Smoke, dust, fumes, or odors in the ambient air that have the potential for harmful effects.

Alignment. Horizontal geometric elements, which define the location of the light rail track or roadway.

Aquatic resource. The physical elements of the aquatic environment, such as streams, rivers, lakes, and shorelands; as well as life forms such as aquatic plants and fish that live within the aquatic environment.

Aquifer. An underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, or silt) from which groundwater can be extracted using a water well.

Arterial. A major thoroughfare used mainly for through traffic rather than access to adjacent property. Arterials generally have greater traffic-carrying capacity than collector or local streets and are designed for continuously moving traffic.

At-grade. Term used to express that a feature, such as a rail track or crosswalk, and a roadway meet at the same elevation.

Attainment area. An attainment area is an area considered to have air quality as good as or better than the national ambient air quality standards for specific pollutants as defined in the Clean Air Act.

A-weighted sound level (dBA). To approximate the way humans interpret sound, a filter circuit with frequency characteristics similar to the human hearing system is built into sound measurement equipment. Measurements with this filter enacted are referred to as A-weighted sound levels, expressed in dBA (see Decibel).

Ballast. Gravel or coarse stone used to form the bed of a railroad track or road.

Best management practices (BMPs). Approved physical, structural, and/or managerial practices that, when used singularly or in combination, prevent or reduce pollutant discharges.

Buffer. An area adjacent a critical area (e.g., wetland or stream) that functions to avoid loss or decline in ecological functions and values. In addition to preserving the ecological functions of a wetland system, a buffer physically isolates a critical area from potential disturbance and harmful intrusion, and works to minimize risk to the public from loss of life, well-being, or property damage.

Capacity, vehicle. The maximum number of vehicles that can be accommodated in a given time by a transit or highway facility.

Capital costs. Nonrecurring costs required to construct transit systems, including costs of rightof- way, facilities, rolling stock, power distribution, and the associated administrative and design costs, as well as financing charges during construction.

Carbon monoxide (CO). A colorless, odorless, tasteless gas, and one of the U.S. Environmental Protection Agency's criteria air pollutants released from automobile exhaust.

Census tract. A census tract is a small subdivision of an urban area used by the U.S. Census Bureau to identify population and housing statistics. Census blocks are subdivisions of census tracts and are the smallest unit of census geography for which the Census Bureau collects data. The boundaries of census blocks are generally streets or other notable physical features and often correspond to a city block. A census block group is a combination of census blocks, typically encompassing two to four city blocks.

The U.S. Census collects some information at the block level, some at the block group level, and some at the tract level.

Concentration (also, level). A measure of the air pollutant in the ambient air, having the units of mass per volume.

Conformity (air quality). A process that ensures federal funding and approval goes to transportation activities consistent with federal air quality goals. The Federal Highway Administration and the Federal Transit Administration jointly determine that specific regions meet air quality standards.

Construction staging area. During construction, a site temporarily used for materials or equipment storage, assembly, or other temporary, construction-related activities.

Criteria air pollutants. Those air pollutants that have been recognized by the U.S. Environmental Protection Agency as potentially harmful and for which standards have been set to protect the public health and welfare. The criteria air pollutants are carbon monoxide, sulfur dioxide, particulates, nitrogen dioxide, ozone, hydrocarbons, and lead.

Day night sound level (Ldn). Ldn is a 24-hour equivalent continuous sound level (Leq), but with a 10-dB penalty assessed to noise events occurring at night. Nighttime is defined as 10 pm to 7 am. This strongly weights Ldn toward nighttime noise because most people are more easily annoyed by noise during the nighttime hours when background noise is lower and most people are sleeping.

dBA. The sound level obtained through the use of A-weighting characteristics specified by the American National Standards Institute (ANSI) Standard S1.4-1971. The unit of measure is the decibel (dB), commonly referred to as dBA when A-weighting is used. The "A" weighting scale closely resembles human response to noise.

Decibel. The unit used to measure the loudness of noise.

De minimis. De minimis is a Latin phrase meaning something of insignificance or negligible. De minimis impacts are defined as those elements that do not adversely affect the activities, features, and attributes of a Section 4(f) resource or property.

Dewatering. The temporary removal of ground or surface water from a construction area to allow construction to be done under dry conditions.

Displacement. A property acquisition that would require removing an existing use.

Elevated mainline. A mainline that is positioned above the normal activity level (e.g., elevated structure for light rail to cross over a street).

Emission. Particulate, gaseous, noise, or electromagnetic byproducts of the transit system or vehicle.

Endangered species. According to the Endangered Species Act of 1973, an endangered species is any species in danger of extinction throughout all or a significant portion of its range, other than an insect determined by the Secretary of the Interior to constitute a pest whose protection under the provisions of this act would present an overwhelming and overriding risk to man.

Equivalent level (Leq). Leq is a measure of sound energy over a period of time. It is referred to as the equivalent sound level because it is equivalent to the level of a steady sound which, over a referenced duration and location, has the same A-weighted sound (dBA) energy as the fluctuating sound.

Forest habitat. In the Puget Sound lowlands, a habitat type generally dominated by Douglas fir, western red cedar, and western hemlock, frequently with a hardwood understory. The ground cover is generally lush. Birds and small mammals abound, and larger mammals are common in large stands.

Full acquisition. The full parcel would be acquired, and the current use would be displaced. Full acquisitions include parcels that might not be fully needed for the project but would be affected to the extent that current uses would be substantially impaired (e.g., loss of parking or access).

Glacial till. This type of soil typically consists of a diverse mix of gravelly sand with scattered cobbles and boulders in a clay/silt matrix. It is very dense and is locally referred to as "hardpan." The predominant glacial till encountered in the project area is Vashon-age glacial till.

Grade separated. Parallel or crossing lines of traffic that are vertically or horizontally physically separated from each other and do not share a common intersection.

Greenhouse gas (GHG). Greenhouse gases include carbon dioxide (CO₂), methane (CH₄), ozone (O₃), water vapor, nitrous oxide (N₂O), hydrofluorocarbons (HFCs), and perfluorocarbons. (PFCs), and sulfur hexafluoride (SF6). These gas emissions are collectively leading to the greenhouse effect, trapping the sun's solar rays and leading to an increase in Earth temperature.

Groundborne noise. Noise that is transmitted through the ground, typically reported in decibels.

Groundborne vibration. A small but rapidly fluctuating motion transmitted through the ground, typically reported as velocity or acceleration.

Habitat function. Terrestrial plant communities, wetlands, and aquatic systems such as streams provide a variety of functions in the environment. For instance, depending on the condition and location of a wetland, wetland functions might include water quality improvement, groundwater recharge, nutrient and sediment filtering, and habitat for a variety of animals, as well as education and recreation opportunities for people—the habitat function is one of several functions potentially performed by wetlands. Similarly, terrestrial and aquatic systems each also may perform many functions. When they provide habitat for animals, they are said to be performing or providing a "habitat function."

Habitat value. The value of a plant community's function as determined by the habitat's ability to support the needs of biological species. High-value habitats are those that support or may support threatened, endangered, and/or sensitive species as determined by federal, state, and local jurisdictions.

Hazardous materials. Hazardous materials are materials, which, because of their chemical, physical, or biological nature, pose a potential risk to life, health, or property when released. Such materials include hazardous waste, dangerous waste, hazardous substances, and toxic substances.

Headway. The headway between vehicles in public transit systems is the amount of time (usually in minutes) that elapses between two vehicles passing the same point traveling in the same direction on a given route.

High-capacity transit. A system of public transportation services within an urbanized region operating principally on exclusive rights-of-way; examples include light rail transit or express buses on exclusive bus ways and their supporting services.

Hours of service. The number of hours during the day between the start and end of service on a transit route, also known as the service span.

Lead Track. A track connecting a railroad yard or facility with a mainline track.

Ldn. The day/night average noise level.

Leq. The equivalent steady-state sound level that, in a specified time period, would contain the same acoustic energy as the varying sound level during the same period; considers volume capacity, travel speeds, and delay.

Leq(h). The hourly value of Leq.

Level of service (LOS). A qualitative measure that represents the collective factors of travel under a particular volume condition. A measure of traffic congestion.

Light rail transit (also light rail). A mode of mass transportation comprising light rail vehicles, which travel on steel tracks and are powered by electricity from overhead wires. This mode is characterized by its ability to operate in at-grade and/or grade-separated environments.

Link. Sound Transit's light rail system.

Low income. A person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.

Low income population. Any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by the project.

Mainline. Track that is used for LRVs or is the principal artery of a system to which other components (such as operation and maintenance facilities) are connected (see Elevated Mainline).

Maintenance area. Maintenance areas are geographic areas with a history of nonattainment of National Ambient Air Quality Standards (NAAQS), but they now consistently meet NAAQS.

Megawatt (MW). 1,000,000 watts.

Minority. A person who is:

- Black A person having origins in any of the black racial groups of Africa;
- Hispanic or Latino A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- Asian A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
- American Indian or Alaskan Native A person having origins in any of the original people of North or South America, including Central America, and who maintains cultural identification through tribal affiliation or community recognition; or
- Native Hawaiian or Other Pacific Islander A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Minority population. Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by the project.

Mobility. The ease of continuous movement along the transportation system.

Mode. A particular form or method of travel, such as pedestrian, bicycle, automobile, bus, or light rail.

Model Toxics Control Act (MTCA). The Model Toxics Control Act Cleanup Regulation, WAC 173-340, implements the Model Toxics Control Act, RCW 70.105D, which addresses strict requirements for site discovery and reporting, site assessments, and site remediation. Most important, the regulation defines standard methods used to assess whether a site is contaminated or clean.

National Ambient Air Quality Standards (NAAQS). Federal limits on levels of atmospheric contamination necessary to protect the public from adverse effects on health (primary standards) and welfare (secondary standards).

National Historic Preservation Act of 1966 (NHRA). The Act that established the National Register of Historic Places and State Historic Preservation program and set forth guidelines and regulations for environmental review of projects involving federal funding.

National Register of Historic Places (NRHP). The official list of the nation's cultural resources determined to be worthy of preservation; the register is maintained by the National Park Service.

Network. A system of real or hypothetical interconnecting links that forms the configuration of transit routes and stops comprising the total system.

Nonattainment area. An area designated by the U.S. Environmental Protection Agency as currently violating the National Ambient Air Quality Standards, based on archival air quality data.

NO_X. Oxides of nitrogen (nitrogen oxide and nitrogen dioxide). The pollutants released during high-temperature combustion of fossil fuels such as diesel.

Off-peak. Those periods of the day when demand for transit service is not at a maximum.

Operating costs. Recurring costs incurred in operating transit systems, including wages and salaries, maintenance of facilities and equipment, fuel, supplies, employee benefits, insurance, taxes, and other administrative costs. Amortization of facilities and equipment is not included.

Ozone. A gas consisting of three oxygen atoms formed in reactions of nonmethane hydrocarbons and nitrogen oxides in the presence of sunlight. Ozone is one of the U.S. Environmental Protection Agency's criteria air pollutants.

Partial acquisition. Part of a parcel would be acquired, but the current use generally would not be displaced. In some instances, such as larger parcels that hold multiple uses, a business or residential unit on a parcel could be displaced, but most uses would remain.

Particulate matter. A mixture of extremely small particles and liquid droplets that is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. U.S. Environmental Protection Agency is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs.

Peak hour. The hour of the day in which the maximum demand for service is experienced, accommodating the largest number of automobile or transit patrons.

Peak period. A time period or periods when travel activity is at its heaviest.

Pollution-Generating Impervious Surface (PGIS). Impervious surfaces considered to be a significant source of pollutants in stormwater runoff. Such surfaces include those subject to vehicular use, industrial activities (as defined in Washington State Department of Ecology's Stormwater Management Manual), or storage of erodible or leachable materials, wastes, or chemicals, and which receive direct rainfall or the run-on or blow-in of rainfall.

Preferred alternative. Following publication of the Draft EIS, the Sound Transit Board identifies a preferred alternative, including route and station options. The Final EIS will further evaluate the preferred alternative as well as other alternatives. A preferred alternative is not an action or decision within the meaning of WAC 197-11-070.

Recessional outwash. Sediment deposited by meltwater streams flowing away from a retreating glacier during the last episode of glaciation.

Reliability. How often transit service is provided as promised; affects waiting time, consistency of passenger arrivals from day to day, total trip time, and loading levels.

Right-of-way. The corridor (horizontal and vertical space) owned by the transit agency for the transportation way.

Riparian habitat. A habitat type associated with stream or river margins and characterized by dense vegetation consisting primarily of willow, alder, and cottonwood species, supporting a wide variety of waterfowl, songbirds, amphibians, and small mammals.

Runoff. The rainwater that directly leaves an area in surface drainage, as opposed to the amount that seeps out as groundwater.

Section 106. Section 106 of the National Historic Preservation Act of 1966 established a procedure to review the potential effects on cultural resources by projects that involve a federal action.

Section 4(f). Section 4(f) of the U.S. Department of Transportation Act restricts the United States Department of Transportation's approval of projects affecting the following properties: publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge, or any land from a significant historic site.

Section 401. Section 401 of the Clean Water Act is a certification program administered by the Washington Department of Ecology under guidelines of the U.S. Environmental Protection Agency to ensure projects applying for a Section 404 permit comply with state water quality standards and other requirements of the state law.

Section 404. Section 404 of the Clean Water Act is a permit program administered by the U.S. Army Corps of Engineers under guidelines by the U.S. Environmental Protection Agency to protect the nation's waters from dredged and fill sources.

Section 6(f). Section 6(f) of the Land and Water Conservation Act of 1965 established restrictions on, and replacement requirements for, the use of land acquired with funds authorized under the Land and Water Conservation Fund Act.

Sensitive receptor (Auditory). A local area or site that supports activities easily disrupted by audio intrusions or distractions, such as a school, historic landmark, or residential neighborhood.

Sensitive view. A view that is identified by local jurisdictions as requiring protection.

Social interaction. Intra-neighborhood communication and circulation using street, sidewalk, and bikeway connections between residential areas and community facilities, retail businesses, and employment centers. Also includes verbal interaction and telecommunications facilities.

Sound Transit 2 (ST 2). A package of high-capacity transit investments in the regional transit system, adopted by the Sound Transit Board in July 2008, which included light rail as the mode choice for the project corridor. ST 2 includes a major expansion of the Link light rail system. ST 2 would extend light rail from North Seattle into Snohomish County, across Lake Washington into East King County, and south of SeaTac International Airport to Federal Way.

Sound Transit 3 (ST 3). Sound Transit 3, for which financing was approved by voters in 2016, includes the expansion of bus, bus rapid transit, commuter rail, and light rail service throughout the region. Under Sound Transit 3, the light rail system in central Puget Sound would grow to 116 miles with over 80 stations. Light rail would expand north to Everett, south to Federal Way and Tacoma, east to Redmond, south Kirkland, and Issaquah, and west to West Seattle and Ballard.

Staging area. Section of land near a construction site designated for equipment and truck storage, maintenance, and warm-up prior to engagement in construction activities.

Stormwater. Stormwater is rain and snow melt that runs off surfaces such as rooftops, paved streets, highways, and parking lots. As water runs off these surfaces, it can pick up pollution.

Stormwater detention. The temporary storage of stormwater runoff and subsequent release at a slower rate.

Stormwater treatment. Stormwater ponds and underground vaults are used to remove sediments and dissolved metals from stormwater. They collect sediments on the bottom of the pond or vault, where maintenance workers can clean them out on a regular basis.

Subduction zone. An area where one crustal plate is descending below another. The Puget Sound area is close to a subduction zone, which is formed by the Juan de Fuca plate descending below the North American plate. This action can cause significant seismic activity.

Threatened species. According to the Endangered Species Act of 1973, any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Till. A poorly sorted, gravel-like deposit of sediment that is left behind by a glacier, which does not show stratification. Till is sometimes called boulder clay because it is composed of clay, boulders of intermediate sizes, or a mixture of these.

Transit. A transportation system principally for moving people in an urban area and made available to the public usually through paying a fare.

Transit center. A station with shelters where a large number of transit vehicles and passengers can be brought together with safety and convenience.

Transit-oriented development. The Transportation Research Board provides several definitions of transit-oriented development that emphasize high-quality walking environments, mixed land uses, and high-density developments linked to transit. Generally, transit agencies agree that what constitutes a transit-oriented development is a pattern of dense, diverse, pedestrian-friendly land uses near transit nodes that, under the right conditions, translates into higher transit patronage.

Travel time (in vehicle). The time required to travel between two points, not including terminal or waiting time.

Trip. The one-way movement of one person between the origin and the destination, including transfers, and the walk distance to and from the means of transportation.

Unity. In visual analysis, the visual coherence and compositional harmony of the landscape.

Use of Section 4(f) land. According to regulations of the U.S. Department of Transportation, use of Section 4(f) land is defined as: (1) acquisition of title or easement to land, or (2) in unusual circumstances, serious indirect impacts, such as increase in noise, visual intrusion, or access obstruction.

Vehicle hours of travel (VHT). The total vehicle hours expended traveling on the roadway network in a specified area during a specified time period.

Vibration velocity. Vibration velocity is the basic measure of groundborne vibration. It is a measure of the rate at which particles in the ground are oscillating relative to the equilibrium point.

Vibration velocity level. It is generally accepted that, over the frequency range important for groundborne vibration from transit systems, human response to vibration is best correlated to the root mean square (rms) vibration velocity.

Viewer sensitivity. The extent of the viewer's concern for a particular view or viewshed. Viewer sensitivity to the viewed environment is classified as low, average, or high.

View. A scene observed from a given vantage point.

Viewshed. An area of land, water, or other environmental element that is visible to the human eye from a fixed vantage point.

Visual character. Refers to identifiable visual information, including visual elements and major environmental features.

Visual quality. Refers to the evaluation of the visual experience to the public and is described in terms of vividness, intactness, and unity. *Vividness* refers to the way landscape components combine in distinctive and memorable visual patterns. *Intactness* refers to whether the natural and human-built visual patterns form a consistent landscape, or whether highly contrasting features intrude into the view. *Unity* refers to the visual coherence and compositional harmony of the landscape considered as a whole. Visual quality is an assessment of the visual character and is categorized as low, medium, or high, as follows:

Low visual quality. Views that lack a dominant visual character in which there is a low level of fit between disparate elements. In some cases, these views appear disorganized with features that seem out of place, or are views with some compositional harmony but include eyesore elements that can dominate one's perception.

Medium visual quality. Views with a unity or compositional harmony between elements of the landscape that produce a pleasing overall impression in which encroaching elements are minor and do not substantially alter the perception of the landscape as a unit. These views lack vivid, memorable features and are generally characterized as common or ordinary.

High visual quality. Views with vivid, memorable, distinctive features in a landscape with compositional harmony or that fit between elements of the landscape that is free from encroaching elements.

Washington State Department of Ecology 303(d) List. The federal Clean Water Act (CWA), adopted in 1972, requires states to restore their waters to be "fishable and swimmable." The CWA established a process to identify and clean up polluted waters. Every 2 years, all states are required to prepare a list of water bodies that do not meet water quality standards. This list is called the 303(d) list because the process is described in Section 303(d) of the CWA.

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Fact Sheet

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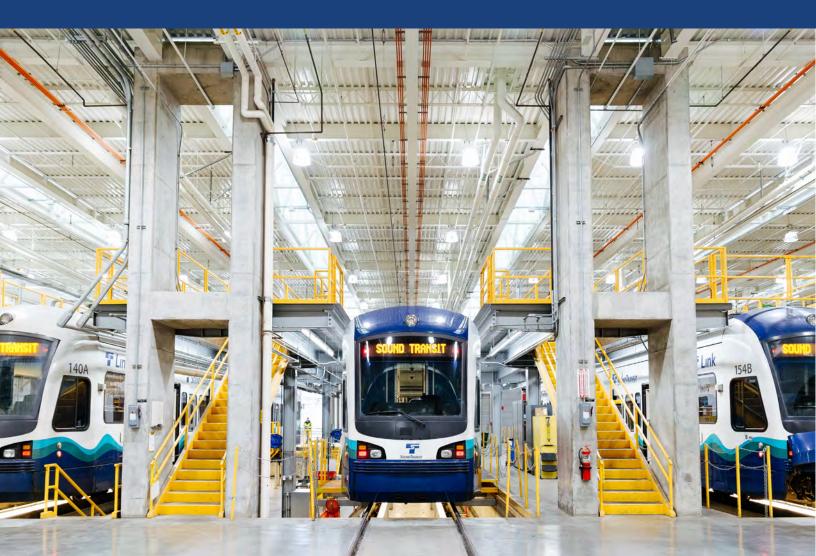
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Final Environmental Impact Statement

Appendix B: Public Involvement and Agency Coordination



Federal Transit Administration



June 2024

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Acronyms and Abbreviations

APE	Area of Potential Effect
Belmor	Belmor Mobile Home Park
BPA	Bonneville Power Administration
Corps	United States Army Corps of Engineers
DAHP	Washington State Department of Archaeology and Historic Preservation
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
ELG	Elected Leadership Group
EO	Executive Order
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
IAG	Interagency Group
NEPA	National Environmental Policy Act
OMF	operations and maintenance facility
Puyallup Tribe of Indians	Puyallup Tribe of the Puyallup Reservation
Q&A	questions and answers
SEPA	Washington State Environmental Policy Act
SPU	Seattle Public Utilities
TDLE	Tacoma Dome Link Extension
WDFW	Washington Department of Fish and Wildlife
WISAARD	Washington Information System for Architectural and Archaeological Records Data
WSDOT	Washington State Department of Transportation
"X"	company formerly known as Twitter

APPENDIX B PUBLIC INVOLVEMENT AND AGENCY COORDINATION

The National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA) emphasize the importance of public engagement and agency involvement as key factors in the environmental review process. Sound Transit is committed to engaging interested parties early and often during the development of Operations and Maintenance Facility (OMF) South. Sound Transit has engaged neighborhood and community stakeholders, Tribes, state and federal agencies, transit partners, and the general public leading into and during development of the 2021 SEPA Draft Environmental Impact Statement (EIS), the 2023 NEPA Draft/SEPA Supplemental Draft EIS, and the NEPA/SEPA Final EIS published in 2024.

This appendix summarizes Sound Transit's Tribal and agency coordination and public outreach activities to date through the environmental review process for the OMF South project. Sound Transit worked with federal, state, and local agencies, Tribes, and local jurisdictions to create an open and collaborative process that provided numerous opportunities to inform and involve the public.

1 OUTREACH GOALS AND OBJECTIVES

The OMF South is part of the mass transit system expansion by Sound Transit, funded by the Sound Transit 3 initiative approved by voters in 2016. Public participation and input played a critical role in identifying a variety of potential locations and narrowing those to the three alternatives for study in the EIS. To meet the project timeline and goals, Sound Transit engaged the public through an intensive public involvement process.

Throughout alternatives development and environmental review, Sound Transit commits to several goals to ensure successful engagement, including:

- **Proactively engaging audiences and communities** most affected by the project in conversations that would lead to identifying a project to be built.
- Transparent, meaningful, and inclusive communication that is clear and timely.
- Sharing information in a variety of ways to encourage awareness of project progress and its benefits.
- Clear communication of how feedback informed project decisions to ensure accountability.
- Accessible project information geared toward accessibility for all audiences, with easy-toread, understandable, and in-language materials.

Sound Transit focuses outreach toward five key audience groups:

- **Tribes, agencies, and local jurisdictions** through the establishment of an Elected Leadership Group (ELG) and an Interagency Group (IAG) that met regularly to provide input and receive project updates.
- **Neighborhood and community stakeholders**, including advocacy groups, businesses, communities of color, community-based organizations and cultural groups, current and future transit riders, immigrant and refugee populations, limited-English-speaking populations, low-income households, people with disabilities, local residents (renters and homeowners), and social service organizations.

- **Property owners**, including homeowners, condominium owners, apartment complex owners and their tenants and staff, small and minority-owned businesses, and commercial property owners and their tenants.
- **Public**, including people who live, work, and commute in, through, and around the Puget Sound region.
- Print, digital, and broadcast media, including community, local, and ethnic resources.

Sound Transit combines **in-person**, **online**, **and existing community engagement strategies** to continue to reach and engage as many members of the public as possible. English and translated materials have been available throughout the project.

2 CHARTERED GROUP ENGAGEMENT

2.1 Lead Agencies

The Federal Transit Administration (FTA) is acting as the NEPA lead agency with Sound Transit acting as the SEPA lead agency.

2.2 Cooperating Agencies

Cooperating agencies include:

- Federal Highway Administration (FHWA)
- U.S. Army Corps of Engineers (Corps)
- U.S. Environmental Protection Agency (EPA)
- Washington State Department of Transportation (WSDOT)
- City of Federal Way
- City of Kent

2.3 Tribal and Agency Coordination

Sound Transit has engaged with project partners, local jurisdictions, affected Tribes, elected officials, community partners, stakeholders, and partner agencies since the project's beginning. Coordination with agencies and other stakeholders has been primarily through regular meetings with the following two chartered groups.

The ELG was convened starting in February 2018 to provide feedback and recommendations on project alternatives for the Tacoma Dome Link Extension (TDLE) project. The group was composed of elected officials representing the Puyallup Tribe of the Puyallup Reservation (Puyallup Tribe of Indians); the mayors of Federal Way, Milton, Fife, and Tacoma; Sound Transit Board members; and WSDOT. Staff provided OMF South updates to the ELG to keep them informed on the project; however, they were not tasked with making official recommendations due to the technical nature of decisions to site the facility. After Sound Transit identified that OMF South would need to be in south King County to meet operational criteria, limiting the geographic scope north of Pierce County, the Kent mayor was invited to attend all ELG meetings where OMF South updates were discussed beginning in fall of 2018.

Initially, the ELG met approximately every other month and then received updates approximately quarterly during the initial engineering design work and preparation of the 2021 SEPA Draft EIS. A list of meetings is outlined below in Table B.2-1. After the ELG made its recommendations for TDLE in 2019, the group's purpose was achieved. On March 5, 2021, Sound Transit invited the elected officials that composed the ELG to a briefing to provide an overview of findings from the 2021 SEPA Draft EIS and a preview of engagement opportunities during the 45-day comment period. The project team will keep the members of the former ELG informed on major project milestones moving forward, but the group is no longer being convened. ELG meeting dates are listed in Table B.2-1.

ELG Meeting	Date
1	February 16, 2018
2	March 19, 2018
3	May 18, 2018
4	July 13, 2018
5	October 12, 2018
6	November 30, 2018
7	February 22, 2019
8	May 31, 2019
9	June 14, 2019

Table B.2-1	ELG Meeting Dates
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Sound Transit is working closely to coordinate with agencies and governments as this project moves forward at a technical level to ensure the project aligns with other city, agency, and Tribal plans and interests. The OMF South IAG is made up of representatives from the Puyallup Tribe of Indians, Muckleshoot Indian Tribe, cities of Federal Way, Kent, and Seattle; Seattle Public Utilities (SPU); Bonneville Power Administration (BPA); FHWA; WSDOT; EPA; Department of Ecology (Ecology); and King County.

The IAG reviewed and commented on the Methodology Memorandums prepared for each element of the environment included in the 2021 SEPA Draft EIS. A list of meetings is outlined below in Table B.2-2. The IAG was kept apprised of development of the site design and the study area used in the environmental analysis as well as the document status. In 2022, the meeting schedule was changed from monthly to quarterly.

IAG Meeting	Date			
1	July 22, 2019			
2	October 7, 2019			
3	November 12, 2019 (email update)			
4	February 11, 2020			
5	March 10, 2020			
6	April 14, 2020 (email update)			
7	June 9, 2020			
8	January 19, 2021			
9	February 16, 2021			
10	March 16, 2021			
11	September 21, 2021			
12	November 16, 2021			
13	December 21, 2021			
14	March 15, 2022			
15	June 21, 2022 (email update)			
16	September 20, 2022 (email update)			
17	November 16, 2022 (email update)			
18	March 24, 2023 (email update)			
19	May 11, 2023 (email update)			
20	June 15, 2023 (email update)			
21	September 19, 2023			
22	December 19, 2023			

Table B.2-2 IAG Meeting Dates

2.3.1 Specific Agency Input during Development of Environmental Impact Statement Alternatives

Sound Transit has weighed the input of other agencies during the development of the alternatives considered for study in the EIS. In addition, Sound Transit has initiated discussions on a number of specific issues related to the project. Table B.2-3 lists the coordination meetings that have taken place thus far.

Agency/Local Jurisdiction	Purpose	Dates
SPU, WSDOT, Federal Way, Kent,	Midway Landfill workshops	2019
Seattle		August 13
		October 3
SPU, Seattle	Midway Landfill site field work	August 17, 2018
	coordination	September 30, 2019
		2020
		January 16, 31
		February 12, 21
SPU, Seattle, Ecology, EPA	Midway Landfill Superfund site	2019
	considerations	October 29
		December 13
		2020
		February 13
		August 19
		March 10, 2021
EPA	EIS comment coordination	November 30, 2023
		March 12, 2024
USFWS, NMFS	Biological Assessment coordination	August 24, 2023
Federal Way	Local coordination	2018
		January 9
		June 6
		October 3
		November 16
		2019
		January 9
		February 9
		May 15
		October 1, 21
		November 21
		December 16
		2020
		January 14, 16
		February 20
		August 20
		2021
		January 21 (with Kent)
		March 10
		September 16
		October 21
		November 8 (with Kent and Seattle)
		November 29,

Table B.2-3 OMF South Agency and Local Jurisdiction Coordination Meetings

	(
Agency/Local Jurisdiction	Purpose	Dates
		December 10
		2022
		January 6, 20, 31
		February 3, 17
		March 3, 17, 24
		April 21, 28
		May 5, 13, 26
		June 2, 16
		July 13, 20, 28
		August 18,
		September 1, 22
		October 6
		October 13 (with WSDOT)
		November 3, 17
		December 15, 22
		2023
		January 19,
		February 2, 16, 23
		March 16
		April 6, 27
		May 4, 11, 18
		June 1, 22
		July 13, 20
		August 10, 24
		September 7, 21
		November 2, 11
		2024
		January 18, 25
		February 15, 22
		March 14, 21
Kent	Local coordination	2018
		July 3
		November 8
		September 24, 2019
		2020
		May 11
		August 10
		2021
		January 21 (with Federal Way)
		March 11
		September 13
		November 8 (with Federal Way and
		Seattle)
		December 14
		August 31, 2023
		, agast 01, 2020

Table B.2-3OMF South Agency and Local Jurisdiction Coordination Meetings
(continued)

Agency/Local Jurisdiction	Purpose	Dates
FHWA/WSDOT	NEPA Approach	December 20, 2018 2019 February 1 July 23 September 18, 27 October 16, 25 March 12, 2020 2022 April 20 September 19 October 19 October 25 December 12 January 4, 2023
WSDOT	ROW Coordination, Fieldwork Coordination, etc.	On-going meetings originally weekly now bi-weekly
BPA	Transmission Line Tower Modification Coordination	December 18, 2019 2021 July 21 August 26 October 28. 2022 January 11, 2023
Corps of Engineers, Puyallup Tribe of Indians, Muckleshoot Indian Tribe, WDFW, Ecology	Section 404 Preapplication Meetings	September 2, 2020 July 27, 2023
Corps of Engineers	Site Visit	December 7, 2023
WDFW	Site Visit/Discussion of culvert and stream design	May 12, 2022 August 25, 2023
Ecology	Site Visit	July 11, 2023
Puyallup Tribe of Indians	Ecosystem Impacts and Mitigation Opportunities	February 10, 2020 June 2, 2022 2023 April 18 August 18 2024 February 28
Puyallup Tribe of Indians	Preferred Alternative Culvert and Stream Design	August 30, 2023
Muckleshoot Indian Tribe	Ecosystem Impacts	January 23, 2020

Table B.2-3OMF South Agency and Local Jurisdiction Coordination Meetings
(continued)

2.3.1.1 Midway Landfill

Public interest in pursuing the Midway Landfill as a potential OMF South site was raised early in the scoping process. The property is a mostly vacant site in an appropriate location within the Link system (South Corridor and adjacent to mainline tracks that will be operational when the facility opens); it is publicly owned and operated by SPU; and it would provide an opportunity to put a cleanup site back into productive use.

During development of the 2021 SEPA Draft EIS, Sound Transit hosted two landfill settlement workshops. Attendees included SPU, WSDOT, Federal Way, Kent, Seattle, and their consultant teams. The workshops centered on analyzing and brainstorming settlement solutions for a potential OMF South on the Midway Landfill. The results of the workshop were then presented to the entire IAG at the meeting on February 11, 2020. Sound Transit also met specifically with representatives of Seattle and SPU to discuss the Midway Landfill and to coordinate investigative field work, particularly geotechnical borings.

Sound Transit also met with Seattle, SPU, Ecology, and EPA to gain further understanding of the constraints that would be faced when working on a Superfund site with an approved cleanup action plan and a regulatory path forward if the Midway Landfill were ultimately selected as the final site for the OMF South.

2.3.1.2 Local Jurisdiction Coordination

On an ongoing basis, Sound Transit has met with Kent and Federal Way to coordinate alternatives development to gain understanding of local land use, permitting and other perspectives. These meetings were approximately monthly.

Once the Preferred Alternative was identified, Federal Way and Sound Transit staff set regular meetings every first, third, and fourth week of the month to discuss the project. The regular meetings with Kent have since ended.

2.3.1.3 Coordination Regarding NEPA

During preparation of the 2021 SEPA Draft EIS, Sound Transit coordinated with FHWA and WSDOT to identify the approach for NEPA compliance in support of future federal approvals for the project. Each build alternative would require work within the interstate/federal right-of-way, which would require approvals from FHWA. Due to this federal nexus, NEPA documentation will be prepared.

After publication of the 2021 SEPA Draft EIS, Sound Transit identified federal funding opportunities with FTA. Due to this, FTA was identified as the lead federal agency, and they determined that an EIS under NEPA would also be required.

Sound Transit and FTA met with EPA in November 2023 and March 2024 to discuss EPA's comments on the Draft EIS related to environmental justice. EPA's Draft EIS comment letter identified concerns about the conclusions made in the Draft EIS regarding environmental justice impacts. In the meetings, EPA explained that their approach for assessing disproportionate impacts to environmental justice populations focuses on evaluation of project impacts to overburdened communities that may experience environmental harm due to cumulative impacts.

While FTA evaluates project impacts to environmental justice populations, they also consider offsetting benefits and mitigation when assessing disproportionate impacts. This is consistent with DOT Order 5610.C, U.S. Department of Transportation Actions to Address

Environmental Justice in Minority Populations and Low-Income Populations,¹ which states, "In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be implemented and all offsetting benefits to the affected minority and low-income populations may be taken into account, as well as the design, comparative impacts, and the relevant number of similar existing system elements in non-minority and non-low-income areas."

Consideration of offsetting benefits and mitigation is also consistent with FTA's policy guidance in Circular C-4703.1, Environmental Justice Policy Guidance for Federal Transit Administration Recipients, that states "Many public transportation projects involve both adverse effects such as short-term construction impacts, increases in bus traffic, etc., and positive benefits such as increased transportation options, improved connectivity, or overall improvement in air quality. Whether adverse effects will be disproportionately high is dependent on the net results after consideration of the totality of the circumstances."

In response to EPA's comments, FTA clarified the environmental justice assessment methodology; conducted additional direct impact analysis, including additional cumulative impact analysis using EPA's EJScreen tool; provided a more detailed description of the project benefits and mitigation; and provided additional documentation of meaningful engagement. In the March 2024 meeting, FTA presented the additional analysis and information to EPA, who acknowledged that the additional actions and updates met the general intent of their comments. However, due to differences between EPA's suggested approach for making a disproportionate and adverse effects determination and FTA's established methodology, the agencies were unable to reach agreement on the conclusions of the environmental justice assessment. Pursuant to 23 CFR 771.125(a)(2), every reasonable effort and consultation have been made to attempt to resolve the interagency disagreement with regards to the determination of disproportionate and adverse effects on the EJ population.

2.3.1.4 Coordination Regarding Modification to BPA lines

Sound Transit met with representatives of BPA to discuss the proposed modification to the BPA transmission lines, particularly in regard to BPA's environmental review process and potential Section 106 compliance. Sound Transit will continue to coordinate with BPA as the project progresses.

2.3.1.5 Coordination Regarding Possible Future Environmental Permits

Sound Transit met with representatives from the Corps, the Muckleshoot Indian Tribe, the Washington Department of Fish and Wildlife (WDFW), and Ecology for a preapplication meeting. The purpose of the meeting was to introduce the project, discuss the three alternative sites and the potential impacts of the Preferred Alternative, and discuss potential permitting under Section 404 of the Clean Water Act, should the Preferred Alternative be selected. The Puyallup Tribe of Indians was invited to the preapplication meeting but was unable to attend. A follow-up call with the Corps was held in May 2021 to discuss the NEPA process and federal requirements for the Section 404(b)(1) Alternative Analysis. A second preapplication meeting

¹ Executive Order (EO) 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All, was enacted on April 21, 2023. EO 14096 on environmental justice does not rescind EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which has been in effect since February 11, 1994, and is currently implemented through DOT Order 5610.2C. This implementation will continue until further guidance is provided regarding the implementation of the new EO 14096 on environmental justice.

with the Corps to provide an update on the three alternative sites and the potential impact of the Preferred Alternative occurred on July 27, 2023, with both the Muckleshoot Tribe and Puyallup Tribe of Indians in attendance. A site visit with the Corps was conducted in December 2023, and a follow-up meeting was held to discuss the federal requirements for the Section 404(b)(1) Alternative Analysis.

Sound Transit conducted a site visit with WDFW to the South 336th Street site to discuss design concepts and potential impacts to streams and wetlands for the Preferred Alternative. In addition, the requirements for permitting geotechnical borings were discussed. Washington Department of Ecology staff were contacted via email in December 2022 regarding stormwater ponds on the Preferred Alternative site. In July 2023, Sound Transit conducted a site visit with Ecology staff to confirm wetland ratings. Sound Transit also met with WDFW and Puyallup Tribe of Indians in August 2023 to discuss the design of fish-passable structures and stream relocations. In addition, Sound Transit discussed the requirements for permitting for geotechnical borings with WDFW in 2023.

2.3.1.6 Coordination Regarding Eligible Historic Resources

Sound Transit surveyed and inventoried a total of 86 historic-period, built-environment resources in the Area of Potential Effects (APE) in addition to five archaeological resources. The results were documented in historic property inventory forms in the Washington State Department of Archaeology and Historic Preservation (DAHP) Washington Information System for Architectural and Archaeological Records Data (WISAARD), as well as in a technical report (Appendix G4, Historic and Archaeological Resources Technical Report). Based on the survey results, in October 2023, FTA determined and DAHP concurred that none of the historic-period, built-environment resources surveyed for this project or the archaeological resources within the APE met criteria necessary for eligibility for the National Register of Historic Places (NRHP). Please see Appendix G4, Historic and Archaeological Resources Technical Report, for a copy of the correspondence with DAHP.

In separate consultations, both BPA and FTA determined that the proposed relocation and reconstruction of the NRHP-eligible towers for the Preferred and South 344th Street alternatives would not constitute an adverse effect. In letters dated August 19, 2021, and October 31, 2023, DAHP concurred with this finding.

2.4 Tribal Coordination

FTA and Sound Transit maintain a government-to-government relationship with the sovereign Tribes in the area. The OMF South build alternatives are not on Tribal lands; however, they are within the Usual and Accustomed Fishing Areas of the Muckleshoot Tribe, the Puyallup Tribe of Indians, the Confederated Tribes and Bands of the Yakama Nation, and the Nisqually Indian Tribe.

FTA and Sound Transit consults with the affected Tribes — in a process that is independent of the public involvement process — in areas that the Tribes will have particular interest, such as streams, fisheries, water quality, ecosystems, and cultural resources.

Sound Transit met with the Puyallup Tribe of Indians and the Muckleshoot Indian Tribe to review and discuss the potential ecosystem impacts, particularly to aquatic resources, including fish. On June 2, 2022, Sound Transit met with the Puyallup Tribe of Indians to discuss the Preferred Alternative and potential opportunities for ecosystem mitigation in the Hylebos watershed. Additional meetings with the Puyallup Tribe of Indians related to potential project

impacts and ecosystem mitigation were held on April 18, August 18, and August 30, 2023, and February 28, 2024.

FTA and Sound Transit have also coordinated with affected Tribes under the requirements of Section 106, requesting comments on the project's proposed APE and the Section 106 Eligibility and Effects Determination. Further information is found in Appendix G4, Historical and Archaeological Resources Technical Report.

3 OUTREACH ACTIVITIES AND TOOLS

Beginning in 2018, Sound Transit began agency and public outreach efforts for OMF South in coordination with the TDLE project. Outreach methods included online, in-person, existing community efforts, media, English and translated materials (in Spanish, Korean, Vietnamese, Khmer, and Russian) to ensure continual engagement and availability of information throughout Early Scoping, Scoping, 2021 SEPA Draft EIS publication, 2023 NEPA Draft/SEPA Supplemental Draft EIS publication, and additional outreach efforts. Sound Transit engaged with over 950 people in-person to share project information and gather feedback during these outreach efforts. Once TDLE and OMF South outreach events were no longer done together, materials were not translated in Vietnamese and Khmer because those languages are not as commonly spoken in the OMF South project area. However, translation is available in those languages, if requested.

To ensure widely available, accessible project information, Sound Transit used a variety of communication tools and methods, including email updates, a project website, open houses and drop-in sessions, public hearings, fact sheets and brochures, community events, notifications to potentially impacted properties, press releases, and targeted outreach to underrepresented groups.

Each of the outreach periods included online open houses to supplement in-person events. Print, online and media advertisements and project updates disseminated project information throughout each outreach period. A list of the number of mailings sent for each outreach period is outlined below in Table B.3-1.

Outreach Period	Number of Mailers Sent
Early scoping	More than 52,160
September 2018 outreach	More than 67,200
SEPA scoping	More than 74,500
November 2019 outreach	More than 43,000
2021 SEPA Draft EIS comment period	Nearly 9,000
2023 NEPA Draft/SEPA Supplemental Draft EIS comment period	More than 5,100

Table B.3-1 Outreach Mailings

3.1 GovDelivery Listserv

Individuals interested in receiving project information can sign up to receive periodic project updates through email. Sound Transit maintains a database of individuals who have requested to receive updates on project progress and opportunities for public input using a GovDelivery listserv. The listserv includes email addresses of open house attendees, drop-in session attendees, correspondents, commenters, and other interested individuals; for the 2023 Draft EIS, the listserv reached more than 4,800 subscribers.

3.1.1 Briefings

Sound Transit actively seeks opportunities to provide briefings to community and neighborhood groups, organizations, social service providers and businesses in the OMF South project area. Local community groups receive project information, learn about opportunities to provide project feedback and how to stay engaged, and ask questions at these briefings. Many briefings are one-on-one meetings with local stakeholders and community leaders. A full list of community briefings can be found in Section 5, Outreach Stakeholder Briefings, Interviews, and Tabling Events.

3.2 Open Houses and Drop-In Sessions

Sound Transit held open houses and informational drop-in sessions along the project corridor during Early Scoping, Scoping, the 2021 SEPA Draft EIS comment period, the 2023 NEPA Draft/SEPA Supplemental Draft EIS comment period, and additional outreach periods. During Early Scoping in April 2018, September outreach in September 2018, and Scoping in April 2019, Sound Transit held large open houses in three different locations during each outreach period. The project team shared information about alternatives development, project progress, and proposed route and station alternatives. Members of the public were encouraged to attend to speak with members of the project team, ask questions and provide comments and feedback. In November 2019, Sound Transit hosted a series of informal drop-in sessions along the project corridor to provide a project update and share information on alternatives development. In March 2021, Sound Transit hosted two online public meetings to provide information about the 2021 SEPA Draft EIS and offer attendees the opportunity to submit written questions for answers from a panel of Sound Transit staff who represented different disciplines on the project team, including engineering and design, environmental, and property acquisition and relocation. For the NEPA Draft/SEPA Supplemental Draft EIS comment period, Sound Transit hosted two public meetings in October 2023: one online and one in person. The online public meetings preceded formal public hearings for the comment period; see next section.

3.2.1 Public Hearings

Sound Transit has hosted public hearings at the appropriate points during the SEPA process. Specifically, hearings were held during Early Scoping, Scoping, and as part of the 2021 SEPA Draft EIS and the 2023 NEPA Draft/SEPA Supplemental Draft EIS comment period. The Early Scoping and Scoping hearings were held in person and started with an informational open house, with various stations describing different aspects of the project. Sound Transit and consultant team staff were available to answer questions and engage in discussion. The open house was followed by a presentation by Sound Transit staff. Afterward, members of the public were given the opportunity to make oral comments. There were also forms available for those who wanted to make their comments in writing.

Two hearings were held for both the 2021 and 2023 Draft EIS comment periods. Both 2021 meetings and one 2023 meeting were held virtually; the second meeting in 2023 was in person and was similar in format to the meetings described above. As much as possible, the online hearings kept the same format as the in-person hearings. The virtual public hearings included live-captioning, sign-language interpretation, and simultaneous interpretation in Spanish, Korean, and Russian. The virtual hearings were hosted on Zoom, with on-screen and spoken instructions informing people how to tune into the appropriate audio channel on the Zoom Interpretation feature at the bottom of their screen.

3.3 Fact Sheets and Brochures

Sound Transit distributed OMF South fact sheets and brochures to the public throughout the project lifetime. The fact sheets included general project information and timeline, status of alternatives development, information on preferred alternatives and alternatives to be studied in environmental analysis, project contact information, and the project website URL. The project team also developed a fact sheet focused on summarizing potential fieldwork activities and a folio for potentially impacted property owners along the project corridor that provided an overview of what to expect throughout the project lifecycle. Translated versions of these materials are available in Spanish, Korean, and Russian.

3.4 Community Events

The OMF South project team attends existing events held by community organizations in the project area to connect with audiences that may not receive project information otherwise. By attending these events, Sound Transit builds relationships and establishes an ongoing presence in communities in the project area, provides project information and answers questions, and offers ways to stay engaged through project email updates. The project team has focused on attending events in traditionally underserved communities and providing in-language project information. See Table B5.2 for a full list of community events.

3.5 Project Webpage

Sound Transit maintains a project webpage, <u>https://www.soundtransit.org/system-</u> <u>expansion/operations-maintenance-facility-south</u>, for the OMF South project. The webpage includes a project overview and project maps, information on project stakeholders and partners, news and updates, project timeline and milestones, and a document library of published materials. It is kept up to date and is always accessible to users. Project documents on the OMF South website include:

- OMF South Early Scoping Information Report
- OMF South Early Scoping Report and Appendices
- OMF South Scoping Information Report
- OMF South Scoping Summary Report and Appendices
- OMF South Community Engagement and Communications Plan
- OMF South Project Folio
- OMF South 2021 SEPA Draft EIS
- OMF South Title VI Facility Equity Analysis Report
- OMF South 2021 SEPA Draft EIS Comment Summary Report
- OMF South EIS Public Engagement Summary
- OMF South 2023 NEPA Draft/SEPA Supplemental Draft EIS
- OMF South 2023 NEPA Draft/SEPA Supplemental Draft EIS Comment Summary Report

Visitors can also sign up to receive project email updates on the website.

3.6 News Media

Sound Transit publishes notifications and press releases for project updates, events, outreach periods and board meetings in online and print local news publications along the project corridor. See Table B.3-2 at the end of this section for a full list of publications.

3.7 Notifications to Potentially Affected Properties

Beginning in 2018, the project team has met with potentially affected property owners interested in learning more information or members of the public who have requested a briefing throughout the lifetime of the project. Meetings with property owners have focused on providing an overview of the project, discussing potential impacts in further detail, and answering questions. In addition to these meetings, Sound Transit has conducted door-to-door field visits to provide information about the project and distribute project factsheets and brochures. In 2019, Sound Transit began reaching out to potentially affected residents and businesses to coordinate fieldwork efforts to inform design for site alternatives. The property-owner outreach team conducted field visits to key properties within each of the six initial sites during the 2019 Scoping period. In fall 2019, the project team called property owners, hand-distributed flyers, and conducted door-to-door knocking to notify potentially affected areas.

In January 2020, Sound Transit conducted door-to-door outreach to potentially affected properties and properties adjacent to each of the site alternatives. The goal of this outreach was to keep property owners informed and to encourage them to stay engaged with the project as the environmental review process continues.

In January 2021, Sound Transit mailed individual letters to approximately 150 potentially affected property owners identified in the 2021 SEPA Draft EIS for the alternatives being evaluated. The letters included details of the property's inclusion in the 2021 SEPA Draft EIS, and an offer to meet with the project team to discuss individual property impacts in person. Due to the large number of potentially affected properties and the potential for non-responsive property owners, the project team aimed to offer at least 50 percent of potentially impacted property owners the opportunity to engage in a two-way conversation with Sound Transit prior to the release of the 2021 SEPA Draft EIS.

In January 2022, Sound Transit mailed individual letters to potentially affected property owners identified in the 2021 SEPA Draft EIS. The letters informed property owners of Sound Transit Board's identification of the South 336th Street Alternative as the Preferred Alternative in December 2021 and next steps. The letter also invited them to schedule a briefing with the project team for more information. Letters were mailed to the following groups: those potentially affected by the Preferred Alternative (20), those potentially affected by the South 336th Street and Midway Landfill alternatives (125), and those potentially affected by the mainline tracks (11).

Sound Transit also invited mobile home tenants of the Belmor Mobile Home Park (Belmor) to schedule a briefing with the project team to learn about the OMF South project and relocation benefits available to mobile homeowners. The project team held large group briefings with Belmor tenants on March 8 and April 5, 2021, and August 22, August 30, and November 1, 2023, to provide information on potential effects to Belmor, project alternatives and design options, the property acquisition and relocation processes, and findings from the 2021 and 2023 Draft EISs. Sound Transit also sends periodic OMF South project updates to Belmor residents through their monthly newsletter to keep them informed of project progress.

Sound Transit will continue to communicate transparently with property owners about potential impacts to their property, create and maintain relationships with property owners, and answer questions to help clarify the property acquisition process.

3.8 Targeted Outreach

Sound Transit is committed to equitable engagement and inclusive outreach towards community groups, organizations, residents, businesses, and underrepresented populations who do not typically participate in traditional in-person and online open houses or engagement opportunities. The project team has conducted targeted outreach to populations with limited English proficiency, low incomes, and people of color to build long-term relationships and provide meaningful opportunities to engage in the project planning, design, and environmental review processes. The project team reached out to community organizations and social service providers, when possible, to learn more about individual community needs and events to attend.

Sound Transit conducted a preliminary demographic analysis to identify low-income, minority, and limited-English-proficiency populations in the project area. Based on the demographic analysis, Sound Transit provided project literature in Spanish, Korean, Vietnamese, Khmer, and Russian when outreach was coordinated with TDLE. Sound Transit has continued providing materials in Spanish, Korean, and Russian for the OMF South project.

Sound Transit engages with social service providers, community leaders and organizations and other representatives through targeted outreach efforts. Through these efforts, the project team can share project information, build relationships with the community, and how environmental justice populations may experience adverse impacts or benefits from the project. Sound Transit is using several types of targeted outreach, including:

- **Briefings**: Sound Transit met with representatives of individual communities or organizations to provide a project update, answer questions, and learn more about individual circumstances and better ways to engage with their community. Attention and care have been taken to meet people in locations where they may be more comfortable engaging with government agencies. Briefings were adapted to meet the needs of specific audiences, including presentation content, as well as interpretation/translation.
- **Open houses:** Sound Transit chose locations and times that were accessible for the audiences within the project corridor. At open houses, project outreach staff set up tables of materials and resources, answered questions and participated in facilitated conversations. Advertised availability for translation, ASL interpretation, and tactile interpretation was used by individuals who requested these services.
- Fair or festival booths: Project staff attended fairs, festivals, and community/cultural celebrations in the project area (Federal Way and Kent) to distribute project information and answer questions from the general public. Outreach staff have hosted a Sound Transit booth with project-specific materials and general South Puget Sound materials. Booths were open to the public and provided basic information, as well as a chance to discuss specific questions in detail.
- **Tabling and drop-in sessions:** Project outreach provided project information and updates and answered questions at community spaces, including transit centers, UW Tacoma, grocery stores, and community centers to reach a wider audience. These tabling sessions were held at multiple days and times (weekdays/weekends, daytime, and evening) to meet varying schedules of community members. Events were open to the public and provided basic information as well as a chance to discuss specific questions in detail.

- Stakeholder interviews: The project team conducted a series of interviews with social service organizations and community advocacy groups in the project area to understand their preferred methods of engagement, establish relationships, and introduce them to the OMF South project.
- **Property owner meetings:** Project staff met with property owners along the project corridor to discuss specific questions and concerns; some with language interpretation.
- Outreach toolkits: The project team distributed outreach toolkits to social service organizations along the project corridor to encourage sharing of information by trusted leaders with their audiences during outreach periods and to generate additional feedback. The toolkits included project emails, posters, factsheets, Facebook posts and tweets for organizations to post and share.
- **Door-to-door outreach:** Project staff distributed posters and fliers to share project information, advertise upcoming events, and solicit project feedback. This often included outreach to small businesses and property owners in the project areas, particularly those likely to be affected by future alignments or stations.

The targeted outreach efforts and engagement dedicated towards historically underrepresented groups and underserved populations through the strategies outlined above is vital to build connections and gather project related feedback from these communities. Sound Transit has been able to engage with various audiences and involve people representative of the project corridor through these efforts.

Table B.3-2 lists the print and online publications that have been used to advertise project information.

Publication	Media type	Scoping Run Dates	November 2019 Run Dates	2021 SEPA Draft EIS Run Dates	2023 NEPA Draft/SEPA Supplemental Draft EIS Run Dates
Sound Info (Federal Way Mirror and Kent Reporter)	Print and online	Print: March 8 and 15, 2019 Online: February 20 – April 1, 2019	Print: November 15, 22, and 29, 2019 Online: November 13 – December 6, 2019	Print: March 8, 15, 22, 29, April 5 and 15, 2021 Online: March 9 – April 19, 2021	Print: September 29, October 6, 13, and 20, 2023 Online: September 29 – November 6, 2023
Seattle Daily Journal of Commerce	Print	N/A	N/A	March 3, 10, and 17, 2021	September 22, 29, and October 6, 2023
El Siete Dias (available in Spanish)	Print and online	N/A	Print: November 17 and 21, 2019 Online: November 14, 21, and 28, 2019	Print: April 6, 2021, monthly issue Online: March 9 – April 19, 2021	Print: October 5, 2023, monthly issue Online: September 29 – November 6, 2023
International Examiner (Asian Pacific)	Print and online	N/A	Print: November 20 – December 3, 2019 Online: November 13 – December 6, 2019	Print: N/A Online: March 8 – April 19, 2021	Print: N/A Online: September 29 – November 6, 2023

Table B.3-2 Print and Online Publications

	Media	Scoping Run	November 2019	2021 SEPA Draft EIS	2023 NEPA Draft/SEPA Supplemental Draft
Publication	type	Dates	Run Dates	Run Dates	EIS Run Dates
Korea Daily (available in Korean)	Print and online	Print: March 11 and 18, 2019	Print: November 13 – December 2, 2019 Online: N/A	Print: N/A Online: N/A	Print: N/A Online: N/A
The Korea Times Seattle (available in Korean)	Print and online	N/A	Print: November 11, 18, and December 2, 2019 Online: November 18 – 24 and November 30 – December 6, 2019	Print: March 12, 19, 26, April 2 and 9, 2021 Online: March 8 – April 19, 2021	Print: October 3, 11, 17, 24, and 31, 2023 Online: September 29 – November 6, 2023
Northwest Vietnamese News (available in Vietnamese)	Print and online	N/A	Print: November 12, 22, and 29, 2019 Online: November 15 –December 6, 2019	Print: N/A Online: N/A	Print: N/A Online: N/A
Russian Town Seattle	Online	N/A	N/A	March 8 – April 19, 2021	September 29 – November 6, 2023
The Seattle Times	Print and online	Print: March 10 and 17, 2019 Online: February 20 – March 21, 2019	Online: November 13 – December 6, 2019 Print: N/A	Print: March 3, 10, and 17, 2021 Online: N/A	September 22, 29, and October 6, 2023
The Tacoma News Tribune	Print and online	Print: March 11 and 18, 2019 Online: March 1 – 22, 2019	Print: N/A Online: N/A	Print: March 3, 10, and 17, 2021 Online: N/A	September 22, 29, and October 6, 2023
Tu Decides Weekly Newsletter (available in Spanish)	Print and online	Online: March 8 and 15, 2019	Print: November 15, 22, 29, 2019 Online: November 15, 22, and 29, 2019	Print: March 5, 12, 19, 26, April 2, and 9, 2019 Online: March 5 – April 19, 2021	Print: N/A Online: N/A
iLoveKent	Online	Online: February 20 – March 21, 2019	N/A	N/A	N/A
Waterland Blog	Online	Online: February 20 – March 21, 2019	N/A	N/A	N/A
B-Town Blog	Online	Online: February 20 – March 21, 2019	N/A	N/A	N/A
Westside Seattle/ Highline Times	Online	Online: February 20 – April 1, 2019	N/A	N/A	N/A
Poster Giant	Print	N/A	November 13, 2019	N/A	N/A

 Table B.3-2
 Print and Online Publications (continued)

4 OUTREACH DURING ENVIRONMENTAL IMPACT STATEMENT PROCESS

4.1 Early Scoping

The early scoping process was conducted between April 2 and May 3, 2018. Early scoping was conducted concurrently with the TDLE project. More details about early scoping are included in the Tacoma Dome Link Extension and Operations and Maintenance Facility South Early Scoping Summary Report (June 2018) located on the TDLE project website (https://www.soundtransit.org/system-expansion/tacoma-dome-link-extension/documents).

The early scoping notice was published in the Ecology SEPA Register on March 28, 2018, with the comment period beginning on April 2, 2018. Sound Transit also mailed postcards to properties along the corridor, placed print and online advertisements, and posted notices to social media sites. An agency meeting and three community open houses were held during the comment period. Sound Transit asked members of the public to comment on the following:

- The route (alignment), stations, potential alternatives, benefits, and impacts for TDLE
- The potential location, benefits, and impacts for an OMF in the South Corridor (South King and Pierce counties)
- The purpose and need for the project

To support early scoping, Sound Transit held three public open houses in Tacoma, Federal Way, and Fife.

- Open House Tacoma Tuesday, April 17, 2018, 6 to 8 p.m.
 Best Western Plus Tacoma Dome Hotel, 2611 East E Street
- Open House Federal Way Wednesday, April 18, 2018, 6 to 8 p.m. Todd Beamer High School, 35999 16th Avenue S
- Open House Fife Tuesday, April 24, 2018, 6 to 8 p.m.
 Fife Community Center, 2111 54th Avenue E

More than 190 people attended the in-person open houses.

In addition, an online open house was available from April 2 to May 3, 2018, to inform the public about the project and provide an opportunity to comment on the project purpose and need, potential sites, and their benefits and impacts. All materials presented at the open house were available online.

Between April 2 and May 3, 2018, over 2,470 unique visitors accessed the online open house.

Over 560 written comments were gathered in person and from online comment forms. Public comments were accepted in various ways, including through email, the online open house, open house comment forms, and mail. In addition, an interactive map tool in the online open house allowed users to place notes at specific locations on a map, and users could indicate if they

liked or disliked other commenters' notes. Similarly, at the community open houses, attendees placed Post-it Notes with their input on large maps.

The most common themes in the public comments concerned the following:

- Alignment and station location suggestions
- Parking
- Potential for transit oriented development
- Multimodal connections
- General support and expediting construction
- Concern about taxes and project cost
- Light rail operations and future expansion
- Increased access to employment areas
- Environmental concerns such as air quality, wetlands, vegetation, hazardous materials, geologic hazards, and environmental justice

Outreach activities were advertised with the following methods:

- Mailer notifications sent to over 52,160 homes, apartments, and businesses
- Two news releases on April 2 and April 16, 2018
- Online and print ads in 12 local online and print publications
- Posters distributed to 150 different locations between Kent and Tacoma (included translated versions in Spanish, Korean, Vietnamese, Khmer, and Russian)
- Facebook and "X" (formerly Twitter) ads that reached 30,047 subscribers and 81,500 followers
- Five project updates sent to approximately 5,300 recipients on April 2, April 12, April 16, April 24, and May 2, 2018

4.2 September 2018 Outreach

Between early scoping and scoping outreach, Sound Transit focused on inclusive outreach through stakeholder interviews, briefings, tabling events, and fairs and festivals with community groups, organizations, residents, businesses, and underrepresented populations along the project corridor in mind (more information below). This included a project update during a series of three open houses and an online open house. Sound Transit offered shared project updates for the OMF South and TDLE and sought feedback on initial route and station concepts. Although OMF South was not the focus of this outreach and no feedback was sought for the project, staff was available to answer questions and provide updates about the project. A display was presented at the three open houses and the online open house and provided general updates on the OMF siting process since early scoping.

Outreach Activities:

- Open House Federal Way Tuesday, September 11, 2018, 6 to 8 p.m. Federal Way Performing Arts Center, 31510 Pete von Reichbauer Way S
- Open House Fife Wednesday, September 12, 2018, 6 to 8 p.m. Fife High School, 5616 20th Street E
- Open House Tacoma Wednesday, September 19, 2018, 6 to 8 p.m.
 Best Western Plus Tacoma Dome Hotel, 2611 East E Street

More than 175 people attended the three in-person open houses to provide comment and feedback on the route and station concepts for TDLE.

These activities were advertised as follows:

- Postcard notifications distributed to over 67,000 homes, apartments, and businesses in the project area
- Three project email updates sent to more than 6,200 recipients on the project listserv
- Posters distributed to over 150 locations throughout Federal Way, Fife, Milton, Tacoma, and Tribal areas
- Print and online display advertisements in 11 local publications
- Facebook posts on the Sound Transit page, reaching over 13,000 users and engaging over 600 people
- Sound Transit tweets, reaching over 18,000 "X" users and engaging 271 users with 16 retweets and 17 likes
- One news release on August 30, 2018
- Notification toolkits distributed to local community organizations

4.3 SEPA Scoping

When Sound Transit initiated the formal SEPA scoping process, the OMF South environmental review had been split from the TDLE process. Unlike early scoping, which addressed both projects, the SEPA scoping process described here solely addressed the OMF South project. This section also discusses how the scoping process influenced the development of alternatives.

During scoping, Sound Transit asked for comments on the proposed range of alternatives, the purpose and need for the project, the environmental effects and benefits to be analyzed, the probable significant adverse impacts, mitigation measures, and license or other approvals that may be required.

4.3.1 Public Comment Period and Scoping Meetings

Sound Transit published the Determination of Significance/Scoping Notice in the SEPA Register on February 19, 2019. The comment period for scoping was from February 19 to April 1, 2019. This period exceeded the 30 days required under SEPA regulations and allowed additional time for public, agency, and Tribal comment.

During this period, two open houses were held to inform and obtain input from the community (one in Federal Way and the other in Kent):

- Open House Federal Way Tuesday, March 12, 2019, 6 to 8 p.m. Federal Way Performing Arts and Events Center, 31510 Pete von Reichbauer Way S
- Open House Kent Wednesday, March 20, 2019, 6 to 8 p.m. Highline College, 2400 S 240th Street, Des Moines

In addition to the open houses, a meeting was held for Tribes, agencies, and cities on March 12, 2019.

 Agency Scoping Meeting Tuesday, March 12, 2019, 1 to 2:30 p.m.
 Federal Way Performing Arts and Events Center, 31510 Pete von Reichbauer Way S

Information on the purpose and need of the project, potential OMF South site locations with maps and technical details, details about the environmental review process, and the project timeline were presented at the open houses.

All public meeting locations were accessible to persons with disabilities. Alternative formats and translation services were available, including an accessible laptop with screen reader software. American Sign Language interpretation was requested and provided at the Federal Way open house. Visitors were able to comment on the site options with written comment forms, online comment forms on the online open house with laptops provided, or verbally to a court reporter who transcribed comments. More than 370 people attended the in-person public scoping meetings and 15 agency representatives attended the agency scoping meeting.

During the scoping process, an online open house was available from February 19 to April 1, 2019, and allowed the public to review and provide feedback on potential site locations. The online open house featured the project purpose and need, information about the scoping period and the EIS, and the advantages and disadvantages of each of the six potential OMF South sites. The website included all information that was presented at the in-person open houses. Users were asked to provide comments on the six potential site options.

Between February 19 and April 1, 2019, the online open house received more than 3,400 unique visitors who used a social share widget and shared over 25 times.

Commenters had several ways to comment during the scoping period in addition to the open houses and online open house. They could also comment via email, mail, or phone. Over 1,400 comments were received via in-person and online comment forms during the scoping period, as well as over 2,000 email comments leading up to scoping. Outreach activities and

opportunities and ways to provide comment during the scoping process were advertised as follows:

- Newsletters mailed to over 74,000 households and businesses
- Posters distributed to 301 locations throughout Federal Way, Fife, Milton, Tacoma, and Tribal areas
- Four project email updates sent to more than 6,200 recipients on the South Sound email list
- Notification toolkits sent to 13 local organizations to share with constituents and members
- Print and online display advertisements in 10 local publications
- Social media posts, reaching over 9,000 Facebook users and engaging over 250 "X" users

How Comments Were Used

After the end of the comment period on April 1, 2019, Sound Transit collected and considered the comments received and prepared a scoping report to summarize the comments. The report was publicly available on the project website.

The comments received during the scoping period were considered by Sound Transit Board to identify the alternatives to study in the 2021 SEPA EIS.

Scoping Comment Summary

The OMF South Scoping Summary Report (Sound Transit 2019) summarizes the comments received during scoping. Generally, public, agency, and Tribal comments focused on the following:

- Concern over potential site alternatives that commenters believed could preclude future transit oriented development opportunities, specifically the S 240th Street and SR 99 site, which includes Dick's Drive-In
- Concern about potential business displacements and other economic impacts
- For the alternatives in Federal Way, concerns about potential impacts to Hylebos Creek and its associated wetlands

Most commenters who expressed a site preference stated that one or either of the Midway Landfill sites were superior to the others.

4.4 Public Outreach during 2021 SEPA Draft Environmental Impact Statement Development

4.4.1 November 2019 Outreach Activities (November 13 to December 6, 2019)

In November and December of 2019, Sound Transit held a series of drop-in sessions to provide the public opportunities to learn more about both TDLE and OMF South. There was also an online open house available from November 13 through December 6, 2019. More than 250 people attended the drop-in sessions, and over 1,600 users participated in the online open house.

These were primarily opportunities for information sharing. Although it was not a formal comment period, Sound Transit received approximately 20 comments from in-person and online comment forms. Commenters primarily had questions about Sound Transit's property acquisition process and timeline and how the recent passage of I-976 could affect the project. Commenters who expressed a site preference generally encouraged Sound Transit to choose the Midway Landfill Alternative.

The drop-in sessions were conducted at the following locations:

- Federal Way Link Extension Open House Wednesday, November 13, 2019, 6 to 8 p.m. Highline College, 2400 S 240th Street, Des Moines
- Drop-in session Federal Way Saturday, November 16, 2019, 10 a.m. to noon Federal Way Library, 34200 1st Way S
- Drop-in session Kent Tuesday, November 19, 2019, 8 to 10 a.m. Fred Meyer, 25250 Pacific Highway S
- Federal Way Link Extension Open House Wednesday, November 20, 2019, 6 to 8 p.m.
 Federal Way Performing Arts Center, 31510 Pete von Reichbauer Way S
- Drop-in session Federal Way Wednesday, December 4, 2019, 5 to 7 p.m. Federal Way Community Center, 876 S 333rd Street

An online open house was available from November 13 to December 9, 2019. All materials from the drop-in sessions were available on the site. The site provided a project update on the three sites to be studied in environmental review and laid out the timeline for the project as well as the next opportunity for the public to provide comments and feedback.

The site had a landing page translated into Khmer, Korean, Russian, Spanish, and Vietnamese, with instruction on how to use Google Translate to navigate the site. The site also included inlanguage content for all aforementioned languages.

Between November 13 and December 9, 2019, the online open house had more than 1,600 unique visitors. These visitors used a social share widget on the site, sharing it 18 times. These activities were advertised with the following:

- Mailers and notifications sent to over 43,000 homes and businesses
- Social media posts reaching over 16,000 Facebook users and engaging over 5,000 "X" users
- Posters distributed to 105 different locations throughout SeaTac, Kent, Des Moines, and Federal Way
- Three project email updates sent to more than 6,200 recipients on South Sound email lists
- Notification toolkits sent to 12 local organizations to share with constituents and members
- Print and online display advertisements in eight local publications

4.5 2021 SEPA Draft Environmental Impact Statement Comment Period

Sound Transit published notification of the availability of the 2021 SEPA Draft EIS in the SEPA Register on March 5, 2021. The 45-day comment period was from March 5 to April 19, 2021. Public comments could be submitted through comment forms on the 2021 SEPA Draft EIS website (see online open house below), email, letter, voicemail, or as verbal comments during the public hearing portion of two online public meetings and hearings on March 24 and March 30. Sound Transit received more than 270 comments on the 2021 SEPA Draft EIS. See the 2021 SEPA Draft EIS public engagement summary for more details. It is posted online at www.soundtransit.org/sites/default/files/documents/operations-and-maintenance-facility-south-public-engagement-summary-20211110.pdf.

4.5.1 Public Comment Period, Online Open House, and Public Meetings and Hearings

Online Open House

The online open house launched on March 5, 2021, and concluded on April 19, 2021. Information presented on the online open house included project background and history, details about the environmental review process, analysis of the three OMF South build alternatives with maps and statistical comparisons, and the project timeline. The online open house was fully translated into Spanish, Korean, and Russian and included Google Translate so users could translate webpage text into additional languages. Users were able to submit comments on the 2021 SEPA Draft EIS findings via a comment form on the online open house. Over 2,400 users visited the online open house during the comment period.

Online Public Meetings and Hearings

During this period, Sound Transit hosted two online public meetings and hearings via Zoom Webinar to provide general information about the 2021 SEPA Draft EIS and offer attendees the opportunity to provide public comment. A live captioner provided simultaneous subtitles in English. Spanish, Korean, and Russian interpreters provided simultaneous interpretation in audio channels. Sound Transit staff communicated the language and accessibility features throughout the meetings and hearings to ensure attendees understood how to fully participate. More than 120 people attended the virtual public meetings and hearings.

- Online public meeting and hearing #1 Wednesday, March 24, 2021, 5:30 to 8:30 p.m. Zoom Webinar
- Online public meeting and hearing #2 Tuesday, March 30, 2021, 11 a.m. to 1 p.m. Zoom Webinar

The first hour of the meeting consisted of a prerecorded presentation and a live question-andanswer segment. The presentation provided an overview of the OMF South project and the 2021 SEPA Draft EIS comment period. The Q&A segment offered the public the opportunity to submit written questions for answers from a panel of Sound Transit staff who represented different disciplines on the project team, including engineering and design, environmental, and property acquisition and relocation. During the public hearing section of the virtual meeting, a representative of Sound Transit was present to listen to attendees who wanted to provide public comments. A court reporter documented the verbal public comments for incorporation into the 2021 SEPA Draft EIS. While all members of the public were invited to provide comments, in an effort to center on equity and provide access to people who have historically been excluded from public processes, Sound Transit invited attendees who identified as people of color, people with disabilities, and anyone working with an interpreter the opportunity to speak first before opening the floor to the rest of the attendees. Ten people submitted comments during the public hearing section of the virtual meeting.

The dates of the online open house and virtual public meetings and hearings were advertised as follows:

- Legal notices in The Seattle Times, The News Tribune, and Seattle Daily Journal of Commerce
- Several posts on Sound Transit's Facebook page (33,433 subscribers) and "X" account (88,700 followers)
- 8,962 mailers sent to homes, apartments, and businesses in Kent and Federal Way within 0.5 mile of the build alternatives. The mailer included translations in Korean, Russian, and Spanish
- One news release and three update notices to an email list with approximately 7,000 subscribers
- Display advertisements and online community calendar postings in seven local online and print publications and promoted posts on Facebook for zip codes in the project area

2021 SEPA Draft Environmental Impact Statement Comment Summary

The OMF South Comment Summary Report summarizes the comments received during the comment period. The Comment Summary Report was made available on Sound Transit's website on November 21, 2021. The Sound Transit Board considered the 2021 SEPA Draft EIS analysis and the comments received before identifying the Preferred Alternative for the project.

4.6 2023 NEPA Draft/SEPA Supplemental Draft Environmental Impact Statement Scoping

FTA and Sound Transit published a Notice of Intent in the Federal Register on July 19, 2023. The notice initiated a 30-day comment period where agencies, Tribes, and members of the public were invited to comment on the proposed scope of the EIS, particularly on changes made to the proposal since the 2021 SEPA Draft EIS.

4.7 2023 NEPA Draft/SEPA Supplemental Draft Environmental Impact Statement Public Comment Period

The Draft EIS was published on September 22, 2023. There was a 45-day comment period, during which Tribes, agencies, and members of the public were invited to comment. The comment period ended November 6, 2023.

4.7.1 Public Comment Period, Online Open House, and Public Meetings and Hearings

Public engagement for this comment period included:

Online Open House (omfsouth.participate.online)

An online open house was live for the duration of the comment period (September 22 to November 6, 2023). The public could visit the website to review what had changed since the 2021 SEPA Draft EIS and review a summary of the findings of the NEPA Draft/SEPA Supplemental Draft EIS and supporting materials, along with submitting comments via an online comment form. In addition to English, the website was also available in Korean, Russian, and Spanish. The website contained accessibility features, including screen-reader-friendly content and detailed alternative text. Digital factsheets and documents throughout the site were made into accessible PDFs. A total of 1,321 people visited the online open house including the following: 1,241 visitors to the English site, 72 visitors to the Spanish site, two visitors to the Korean site, and six visitors to the Russian site.

Public Meetings and Hearings

Sound Transit hosted one online public meeting and one in-person public meeting to provide general information about the Draft EIS and offer attendees the opportunity to provide public comment.

The online public meeting was held on Zoom on Thursday, October 19, from 11:30 a.m. to 1:30 p.m. More than 20 people attended the meeting. The first portion of the virtual meeting consisted of a presentation and a live question-and-answer (Q&A) segment. The presentation provided an overview of the OMF South project and the 2023 NEPA Draft/SEPA Supplemental Draft EIS comment period. The Q&A segment offered the public the opportunity to submit written questions for answers from a panel of Sound Transit staff who represented different disciplines on the project team, including engineering and design, environmental, and property acquisition and relocation. The second portion of the online meeting consisted of a public hearing with a representative of Sound Transit listening to attendees who wanted to provide a public comment. Public hearing comments were captured by a court reporter.

The in-person meeting was held at the Federal Way Performance Arts & Events Center on Tuesday, October 24, 2023, from 5:30 to 7:30 p.m. More than 25 people attended the meeting. The in-person meeting included an open house where members of the public could browse displays with information on the environmental review process and Draft EIS findings. Sound Transit subject-matter experts were available to answer questions from the public. The event also included an overview presentation on OMF South and the NEPA Draft/SEPA Supplemental Draft EIS comment period. Following the presentation, members of the public could return to the open house or participate in the public hearing, with a representative of Sound Transit listening to attendees who wanted to provide a public comment. Public hearing comments were captured by a court reporter and attendees were also able to fill out a written comment form at the meeting.

Both meetings utilized standard accessibility features. The online meeting featured live captioning (in English) and was screen-reader accessible. Sound Transit offered simultaneous interpretation in American Sign Language, Spanish, Korean, and Russian at the online and in-person meetings. The in-person meeting also included translated materials in Spanish, Korean, and Russian. Sound Transit staff communicated the language and accessibility features throughout the public meetings and hearings to ensure attendees understood how to

fully participate. Languages available for interpretation were based on the demographic data of the study area.

Mailers

The project team sent 5,170 mailers to residences and businesses within 0.5-mile of site alternatives. The mailer included translations in Korean, Russian, and Spanish. The content included information about the comment period, an overview of site locations, directions on how to comment, and resources about where recipients could find more information about the OMF South environmental review process and access the NEPA Draft/SEPA Supplemental Draft EIS.

Posters

To increase awareness of the comment period, the project team distributed posters to eight community gathering spaces and other areas where the public is likely to congregate in Kent and Federal Way. The poster included information on the online open house, public meeting and hearing dates, and how to submit a comment. The poster included translations in Korean, Russian, and Spanish.

Online and Print Display Ads for South Sound Publications

Sound Transit ran print display ads and online ad campaigns in six publications throughout the comment period. Ad placements included English, Spanish, Korean, and Russian publications to reach audiences in the project area and region. Online ads were geo-targeted, when possible, to focus on audiences in Kent and Federal Way. The ad messaging communicated learning more about the NEPA Draft/SEPA Supplemental Draft EIS and providing new comments on it. The project team placed ads in the following publications: Kent Reporter, Federal Way Mirror, International Examiner, El Siete Dias, Korean Times Seattle, Russian Town Seattle, and Facebook (geotargeted ads in English, Spanish, and Russian).

Legal Notices

Sound Transit ran a legal notice about the availability of the NEPA Draft/SEPA Supplemental Draft EIS for public comment in the Seattle Times, the Tacoma News Tribune, and the Daily Journal of Commerce. Legal notices were run on September 22, September 29, and October 6, 2023. The legal notice provided information on the project, availability of the SEPA Draft/NEPA Supplemental Draft EIS, public meeting times and locations, and how to comment.

Sound Transit Project Listserv Updates

The project team sent four email updates regarding the NEPA Draft/SEPA Supplemental Draft EIS comment period to over 4,800 subscribers of the OMF South project listserv. The purpose of these listserv updates was to announce publication of the document and the comment period, direct recipients on how to access the document and submit comments, and invite people to the online public meetings and hearings.

Social Media

Sound Transit promoted the OMF South 2023 Draft EIS comment period and online open house through content on Sound Transit's Facebook account. This included posts and events for the two public meetings and hearings on Facebook reaching 224 people.

Sharing Physical Materials

To increase accessibility for the community, project staff mailed physical copies of the NEPA Draft/SEPA Supplemental Draft EIS to frequently visited community hubs, including the Federal Way Library, Federal Way 320th Library, Federal Way Community Center, Federal Way City Hall, Kent Library, Kent Commons Community Center, and Kent City Hall, and to other locations by community request.

Outreach Toolkits

During the comment period, the project team distributed four outreach toolkits to local organizations and governments so they could amplify the EIS comment period and the opportunity to comment to their respective networks. The outreach toolkit included a digital flyer and social media posts.

5 OUTREACH STAKEHOLDER BRIEFINGS, INTERVIEWS, AND TABLING EVENTS

5.1 2021 SEPA Scoping

Table B.5-1 below lists events and dates associated with scoping.

Federal Way Chamber Roundtable	March 1, 2019
Federal Way Chamber Luncheon	March 6, 2019
Kent Cultural Communities Board	February 26, 2019
Korean Community Quarterly Meeting	March 21, 2019
North Lake Improvement Club of Federal Way	March 4, 2019
South King County Mobility Coalition	March 14, 2019

Table B.5-12021 SEPA Scoping Events and Dates

5.2 Other Activities (2018 to 2020)

Table B.5-2 below lists other outreach activities conducted during development of the 2021 SEPA Draft EIS.

Table B.5-2Outreach Activities and Dates Associated with the 2021 SEPADraft Environmental Impact Statement

Organization	Outreach Type	Date			
Briefings and Interviews					
West Hill Cambridge Neighborhood Council	Briefing	January 22, 2019			
Auburn Area Roundtable	Briefing	August 2, 2019			
Pacific Christian Academy School Board	Briefing	June 13, 2019 April 15, 2020			
Garage Town	Briefing	March 7, 2019 March 18, 2020			
Federal Way Black Collective	Briefing	October 1, 2020			
Federal Way – Councilmember Baruso	Briefing	April 3, 2020			
Federal Way – Councilmember Honda	Briefing	April 1, 2020			
Federal Way – Councilmember Kochmar	Briefing	April 8, 2020			
Federal Way – Mayor Jim Ferrell	Briefing	May 22, 2020			
Federal Way Staff	Briefing	August 20, 2020			
Federal Way Council Study Session	Briefing	February 19, 2019 October 1, 2019			
Kent – Mayor Dana Ralph	Briefing	June 25, 2020			
Kent Staff	Briefing	August 10, 2020			
Kent Mill Creek Neighborhood Association	Briefing	April 11, 2019			
Kent Council Workshop	Briefing	March 5, 2019			

Table B.5-2Outreach Activities and Dates Associated with the 2021 SEPA
Draft Environmental Impact Statement (continued)

Multi-Service Center	Briefing	January 15, 2019	
	Brieffing	October 24, 2019	
North Park Neighborhood Association	Briefing	June 13, 2019	
Rock Automotive and Sunset Motel	Briefing	July 19, 2019	
Neighbors of West Hill Council	Briefing	September 19, 2019	
Hopelink	Briefing	November 25, 2019	
U.S. Army Corps of Engineers	Briefing	September 2, 2020	
Belmor Park Leadership	Briefing	February 16, 2021	
Belmor Park Leadership	Briefing	March 8, 2021	
Federal Way – Mayor Jim Ferrell	Briefing	March 8, 2021	
Federal Way – Mayor Dana Ralph	Briefing	March 9, 2021	
SPU/EPA/Ecology	Briefing	March 10, 2021	
Federal Way Black Collective	Briefing	March 11, 2021	
City of Kent	Briefing	March 11, 2021	
City of Federal Way	Briefing	March 11, 2021	
Federal Way Chamber Government Affairs Committee	Briefing	March 11, 2021	
Federal Way City Council	Briefing	March 16, 2021	
Kent City Council	Briefing	March 16, 2021	
Federal Way Planning Commission	Briefing	March 17, 2021	
Federal Way Chamber of Commerce	Briefing	March 17, 2021	
Pacific Christian Academy	Briefing	March 31, 2021	
Christian Faith Center	Briefing	March 31, 2021	
Kent Chamber of Commerce	Briefing	April 1, 2021	
Belmor Park Residents	Briefing	April 5, 2021	
GarageTown	Briefing	April 12, 2021	
Multi-Service Center	Briefing	April 15, 2021	
Pacific Christian Academy Briefing	Briefing	January 26, 2022	
Pacific Christian Academy Science Class Fieldwork Lesson	Briefing	March 28, 2022	
Pacific Christian Academy Science Class Fieldwork Lesson	Briefing	March 30, 2022	
Tacoma Urban League	Briefing	May 11, 2022	
Fairs, Festivals, and Tabling			
		January 23, 2019	
Federal Way Library Office Hours	Tabling	January 30, 2019	
Ecology Midway Landfill Site Public Hearing	Hearing	February 11, 2019	
Auburn Food Bank Tabling	Tabling	March 8, 2019	
×	Tabling	July 27, 2019	
Federal Way Farmers Market		July 29, 2019	
	Tabling	February 28, 2019	
Federal Way State of the City		February 27, 2020	
		February 28, 2019	
Kent Field Visits (12)	Door-to-door	January 28 – 31, 2020	
		March 4, 2019	
Federal Way Field Visits (10)	Door-to-door	January 22 – 28, 2020	
Kent Farmers Market	Tabling	June 22, 2019	

5.3 2021 SEPA Draft Environmental Impact Statement Comment Period

Table B.5-3 lists outreach efforts associated with the public comment period of the 2021 SEPA Draft EIS.

Table B.5-3	Outreach Associated with Comment Period of 2021 SEPA		
	Draft Environmental Impact Statement		

Organization	Outreach Type	Date
Belmor Park Leadership	Briefing	March 8, 2021
Belmor Park Residents	Briefing	April 5, 2021
Federal Way – Mayor Jim Ferrell	Briefing	March 8, 2021
Kent – Mayor Dana Ralph	Briefing	March 9, 2021
SPU/EPA/Ecology	Briefing	March 10, 2021
Federal Way Black Collective	Briefing	March 11, 2021
City of Kent	Briefing	March 11, 2021
City of Federal Way	Briefing	March 11, 2021
Federal Way Chamber Government Affairs Committee	Briefing	March 11, 2021
Federal Way City Council	Briefing	March 16, 2021
Kent City Council	Briefing	March 16, 2021
Federal Way Planning Commission	Briefing	March 17, 2021
Federal Way Chamber of Commerce	Briefing	March 17, 2021
Pacific Christian Academy	Briefing	March 31, 2021
Christian Faith Center	Briefing	March 31, 2021
Kent Chamber of Commerce	Briefing	April 1, 2021
GarageTown	Briefing	April 12, 2021
Multi-Service Center	Briefing	April 15, 2021

5.4 NEPA Draft/SEPA Supplemental Draft Environmental Impact Statement Comment Period

Sound Transit sought briefings with agency partners to continue building relationships. Discussion topics included the EIS process, updated Draft EIS findings, and next steps for the OMF South project. Sound Transit met separately with the cities of Federal Way and Kent.

Property owners have had the opportunity to request briefings with members of the project through an online scheduling tool. Briefings with property owners included project updates and information on the property acquisition and relocation process.

Sound Transit met separately with GarageTown (2 attendees) and Belmor residents (59 attendees) during the comment period to speak about NEPA Draft/SEPA Supplemental Draft EIS findings, answer questions, and share how to comment on the Draft EIS.

6 **REFERENCES**

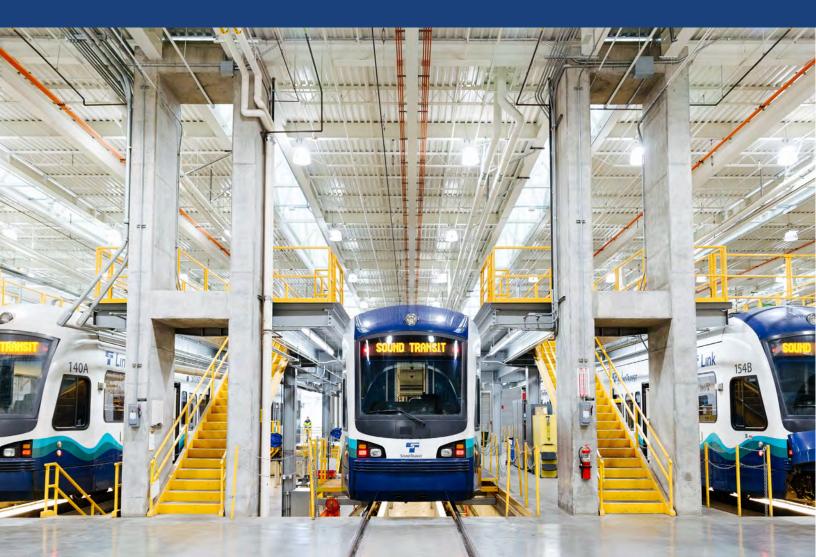
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Operations and Maintenance Facility South

Final Environmental Impact Statement

Appendix E: Environmental Justice Assessment





June 2024

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Acronyms and Abbreviations

ACS	American Community Survey
Belmor	Belmor Mobile Home Park
BMP	best management practice
DBE	Disadvantaged Business Enterprise
DOT	U. S. Department of Transportation
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FWLE	Federal Way Link Extension
I-5	Interstate 5
LRV	light rail vehicle
NEPA	National Environmental Policy Act
OMF	operations and maintenance facility
OMF South	Operations and Maintenance Facility South
OSPI	Washington State Office of Superintendent of Public Instruction
SEPA	State Environmental Policy Act
Sound Transit	Central Puget Sound Regional Transit Authority
Sound Transit 3	Sound Transit 3: The Regional Transit System Plan for Central Puget Sound
SR	State Route
TDLE	Tacoma Dome Link Extension
WSDOT	Washington State Department of Transportation

1 INTRODUCTION

The Central Puget Sound Regional Transit Authority (Sound Transit) proposes to construct an operations and maintenance facility (OMF) in the South Corridor to support Sound Transit's Link light rail system expansion. Sound Transit is evaluating three alternatives for the Operations and Maintenance Facility South (OMF South) Project in its South Corridor service area: two in Federal Way and one in Kent. Both cities are located in King County, Washington.

This appendix of the OMF South Final Environmental Impact Statement (EIS) documents the environmental justice analysis conducted for the No-Build and build alternatives for the OMF South project. The analysis defines and describes the minority and low-income populations present in the study area; describes the project effects on minority and low-income populations; identifies measures to avoid, minimize, or mitigate potential adverse effects; and makes a determination of whether the project has disproportionate and adverse effects on these populations. This appendix also summarizes the public outreach to minority and low-income populations within the project area.

1.1 Project Background

1.1.1 Sound Transit Mission

As stated in the 2020 Five-Year Agency Strategic Plan (Sound Transit 2020), Sound Transit's mission statement is:

Connecting more people to more places to make life better and create equitable opportunities for all.

1.1.2 Sound Transit System Planning

Sound Transit's system planning has served to develop transit improvements throughout the three-county Sound Transit service district. The service district consists of King, Pierce, and Snohomish counties. Sound Transit is currently implementing Sound Transit 3: The Regional Transit System Plan for Central Puget Sound (Sound Transit 3). Sound Transit 3 builds on the programs of Sound Move and Sound Transit 2 and seeks to expand the regional light rail system north to Everett; south to Federal Way and Tacoma; east to downtown Redmond, south Kirkland, and Issaquah; and west to Ballard and West Seattle, totaling 116 miles with over 80 stations. See Figure 1-1 for a map of Sound Transit's planned future expansion.



Figure E.1-1 Link System Future Expansion and OMF Site Locations

As shown in Figure E.1-1, the Sound Transit light rail system will serve four corridors: north, central, east, and south. Future improvements, including existing and planned maintenance facilities, for each of the corridors are outlined below.

- North Corridor: Sound Transit 3 would extend light rail north from the Lynnwood Transit Center that is under construction to downtown Everett via the Southwest Everett Industrial Center. The line includes six stations serving the areas of West Alderwood Mall: Ash Way, Mariner, Southwest Everett Industrial Center, State Route (SR) 526 near Evergreen Way, and the area at the existing Everett Station. A future light rail OMF would be located in the North Corridor, with similar programming functions to OMF South. The facility will maintain and store a portion of the light rail fleet for the future Everett to Alaska Junction and Mariner Way to Downtown Redmond services.
- Central Corridor: Sound Transit 3 would add two light rail extensions in Seattle. The first
 would extend light rail from downtown Seattle to West Seattle, with stations serving the
 sports stadiums; the SODO, Delridge, and Avalon districts/neighborhoods; and the Alaska
 Junction business district. In addition, light rail would extend to Ballard, with stations
 serving the International District/Chinatown, Midtown, Westlake, Denny, South Lake Union,
 Seattle Center, Smith Cove, Interbay, and Ballard districts/neighborhoods. Three infill
 stations would be added serving NE 130th Street, S Graham Street, and S Boeing Access
 Road near Interstate 5 (I-5). Connections to the existing OMF Central would be built to
 service vehicles operating in this corridor. The existing OMF Central would maintain and
 store a portion of the light rail fleet for multiple lines.
- East Corridor: Sound Transit 3 would extend light rail east of Seattle, connecting Redmond, Bellevue, south Kirkland, and Issaquah to each other and to the regional system. Eastside investments include two stations serving southeast Redmond and downtown Redmond that are currently under construction, along with a new light rail line from south Kirkland to Issaquah via Bellevue. Four stations would be included on the light rail extension, serving south Kirkland, the Richards Road area, Eastgate near Bellevue College, and central Issaquah. Maintenance needs in the east corridor would be served by the recently completed OMF East, which will maintain and store a portion of the light rail fleet for the Mariner Way to Downtown Redmond and South Kirkland to Issaquah services.
- South Corridor: Sound Transit 3 would extend light rail south from Kent/Des Moines to Federal Way, with stations serving South 272nd Street and the Federal Way Downtown Station. These are currently in construction. From there, light rail would continue south to Pierce County, with stations in south Federal Way, Fife, and Tacoma, where it would provide a multimodal connection to the existing Tacoma Link, the Sounder commuter rail, the Sound Transit Express Bus, and Amtrak. Sound Transit 3 also includes an expansion of Tacoma Link to Tacoma Community College, with six stations. OMF South (the proposed project) would be built in the South Corridor to maintain and store a portion of the future light rail fleet for FWLE (currently under construction) and the West Seattle/Ballard to Tacoma Dome service and to receive, test, commission, store, maintain, and deploy new light rail vehicles (LRVs) and materials for maintenance of the mainline track for the entire system.

1.1.3 OMF South Purpose and Need

The purpose of OMF South is to:

- Provide a facility with the capacity to receive, test, commission, store, maintain, and deploy vehicles to support the intended level of service for the system-wide light rail system expansion.
- Support efficient and reliable light rail service that minimizes system operating costs.

• Support and connect efficiently to the regional system and be technically and financially feasible to build, operate, and maintain, consistent with Sound Transit 3 and Sound Transit's Regional Transit Long-Range Plan.

The project is needed because:

- The current regional system lacks a facility with sufficient capacity and suitable location to support the efficient and reliable long-term operations for system-wide light rail expansion, including the next phase of expansion in King and Pierce counties.
- New light rail maintenance and storage capacity needs to be available with sufficient time to accept delivery of and commission new vehicles to meet the expansion needs outlined in Sound Transit 3 and to store existing vehicles while the new vehicles are tested and prepared.

The OMF South project is necessary to support the addition of approximately 144 LRVs as part of the Sound Transit 3 system expansion. The facility includes functions that support the entire Link light rail system, such as receiving, testing, and commissioning new LRVs. In addition, OMF South would include Maintenance of Way facilities and a Link System-Wide Storage building to receive and store vehicle, track, and station parts and components.

1.2 Regulatory Framework

The environmental justice analysis was performed in compliance with:

- Presidential Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994
- U.S. Department of Transportation (DOT) Order on Environmental Justice, Department of Transportation Order 5610.2C – Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, May 14, 2021
- Circular FTA C-4703.1, Environmental Justice Policy Guidance for Federal Transit Administration Recipients, August 15, 2012
- Executive Order 14096, Executive Order to Revitalize our Nation's Commitment to Environmental Justice for All, April 21, 2023

EO 12898 provides that ". . . each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands." The EO addresses the importance of public participation in the review process. EO 14096 – "Revitalizing Our Nation's Commitment to Environmental Justice for All" was enacted on April 21, 2023. EO 14096 requires agencies to "identify, analyze, and address disproportionate and adverse human health and environmental effects (including risks) and hazards of Federal activities, including those related to climate change and cumulative impacts of environmental and other burdens on communities with environmental justice concerns." EO 14096 on environmental justice does not rescind EO 12898, which has been in effect since February 11, 1994, and is currently implemented through the May 14, 2021 DOT Order 5610.2C. This implementation will continue until further guidance is provided regarding the implementation of the new EO 14096 on environmental justice.

The U.S. DOT issued DOT Order 5610.2(a), which established the procedures to use to comply with EO 12898, to avoid disproportionate and adverse effects on minority and low-income populations. The order has been superseded twice and is now U.S. DOT Order 5610.2C. The DOT order requires agencies to observe the following principles (DOT Order 5610.2C, § 6(b)):

- 1. Planning and programming activities for policies, programs, and activities that have the potential to have a disproportionately high and adverse effect on human health or the environment shall include explicit consideration of the effects on minority populations and low-income populations.
- 2. Steps shall be taken to provide the public, including members of minority populations and low-income populations, access to public information concerning the human health or environmental impacts of programs, policies, and activities, including information that will address the concerns of minority and low-income populations regarding the health and environmental impacts of the proposed action. This includes ensuring that information is made available in languages other than English and in accessible formats for persons with disabilities.

The DOT order further explains that "In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be implemented and all offsetting benefits to the affected minority and low-income populations may be taken into account, as well as the design, comparative impacts, and the relevant number of similar existing system elements in non-minority and non-low-income areas." (DOT Order 5610.2C, § 9(b)).¹ The following definitions are from the DOT order for disproportionate and adverse effects, minority persons, and low-income persons:

Disproportionate and adverse effect on minority and low-income populations means an adverse effect that is predominantly borne by a minority population and/or a low-income population or will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population (DOT Order 5610.2C, Appendix § 1(g)).

Minority person means a person who is:

- Black: a person having origins in any of the black racial groups of Africa.
- Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent.
- American Indian or Alaskan Native: a person having origins in any of the original people of North America and South America (including Central America) and who maintains cultural identification through tribal affiliation or community recognition).
- Native Hawaiian and Other Pacific Islander: a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands (DOT Order 5610.2C, Appendix § 1(c)).

¹ Under EO 14096, agencies will continue their efforts to advance environmental justice in ways that complement and deepen prior work. EO 14096 uses the term "disproportionate and adverse" as a simpler, modernized version of the phrase "disproportionately high and adverse" used in EO 12898. Those phrases have the same meaning but removing the word "high" eliminates potential misunderstanding that agencies should only be considering large disproportionate effects. <u>FACT SHEET: President Biden Signs Executive Order to Revitalize Our Nation's</u> Commitment to Environmental Justice for All | The White House.

Low-income person means a person whose median household income is at or below the Department of Health and Human Services poverty guidelines (DOT Order 5610.2C Appendix § 1(b)).

For the purposes of this assessment, a low-income person is defined as a person whose median household income is less than or equal to two times the Federal Poverty Level, which in 2018 was \$24,280 for an individual. This is consistent with the local threshold that Sound Transit and other regional transit agencies use in determining eligibility for reduced fare programs and reflects the increasingly high cost of living in the region. In this assessment, individuals considered low income will include persons living below this threshold.

In addition to the relevant regulations considered for all environmental analyses, the following list of federal, state, and local regulations; executive orders; and plans and/or policies that guide the assessment of environmental justice effects are considered as part of this analysis:

- Title 49 of the Code of Federal Regulations Part 21 (49 CFR 21), Nondiscrimination in Federally Assisted Programs of the Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964.
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Relocation Act, 42 U.S. Code 61). This act defines the federal regulations governing property acquisition and relocation for federally funded projects.
- Washington State Department of Transportation Environmental Manual, Chapter 458, Social and Community Effects, and Chapter 460, Environmental Justice (WSDOT 2023).

2 METHODS AND APPROACH

The purpose of this analysis is to identify, analyze, and address potential disproportionate and adverse effects on minority or low-income populations from the OMF South project. The regulatory framework and definitions of these populations is included in Section 1.2 above.

The OMF South environmental justice analysis follows FTA Circular C 4703.1 Chapter II, Conducting Environmental Justice Analysis, to determine whether the project would result in disproportionate and adverse effects. This includes:

- Creating a residential demographic profile through demographic data to help determine where environmental justice populations are located, including census data and supplemental data, such as elementary school statistics and information collected through community engagement.
- Implementing a targeted public engagement plan that encourages the meaningful engagement by all members of the affected communities to inform the environmental justice analysis.
- Identifying the potential for disproportionate burdens on environmental justice versus non-environmental justice populations by comparing the percentage of low-income and minority populations in the study area to the Sound Transit service district average. This is used to understand how the distribution and concentration of minority and low-income populations that could be affected by the project relate to the broader geographic area where Sound Transit provides services. The Sound Transit service district includes the area that would experience impacts and receive benefits of Sound Transit projects and consists of the urbanized areas of King, Pierce, and Snohomish counties that are within the Sound Transit taxing district.
- Identifying adverse effects of the project.
- Analyzing whether adverse effects are disproportionate. This includes wholistic consideration of the project impacts, mitigation, and benefits. The FTA Circular states that "Many public transportation projects involve both adverse effects such as short-term construction impacts, increases in bus traffic, etc., and positive benefits such as increased transportation options, improved connectivity, or overall improvement in air quality. Whether adverse effects will be disproportionately high is dependent on the net results after consideration of the totality of the circumstances."
- Determining whether the adverse effect would be borne by environmental justice populations by considering:
 - Whether the adverse effects on environmental justice populations exceed those borne by non-environmental justice populations.
 - Whether cumulative or indirect effects would adversely affect an environmental justice population.
 - Whether mitigation and enhancement measures will be taken for environmental justice and non-environmental justice populations.
 - Whether there are off-setting benefits to environmental justice populations as compared to non-environmental justice populations.

2.1 Study Area

The study area for the environmental justice analysis encompasses an approximately 0.5-mile radius from the project's potential construction limits for each of the build alternatives. This area is where direct and indirect project impacts could occur to adjacent populations based on the analysis in Chapter 3, Affected Environment, Environmental Impacts, and Mitigation Measures, of the OMF South Final EIS. A 0.5-mile study area also captures and reflects the demographic characteristics of the affected population more accurately than a larger study area. For example, for OMF South, a larger 1-mile study area would include populations that are unlikely to experience adverse effects and would also decrease the percentage of affected low-income and minority populations considered in the analysis. This could unintentionally mask or underestimate the project's potential adverse effects to environmental justice populations.

2.2 Data Sources

The environmental justice analysis is based on U.S. Census Bureau data reported at the census tract and block-group levels. A census tract is a small subdivision of an urban area used by the U.S. Census Bureau to identify population and housing statistics. Census blocks are subdivisions of census tracts and are the smallest geographical units for which the U.S. Census Bureau collects data. The boundaries of census blocks are generally streets or other notable physical features and often correspond to a city block. A census block group is a combination of census blocks, typically encompassing two to four city blocks, and is the smallest geographical unit for which yearly census data are published. This analysis uses demographic data at the block group level to provide a more accurate portrayal of environmental justice populations within the OMF South alternative study areas, given the localized nature of the project's potential impacts.

The analysis compares minority and low-income population data between the study area for each OMF South alternative, the cities of Federal Way and Kent, and the Sound Transit service district. The purpose of these comparisons is to understand how minority and low-income populations could be affected by the proposed project and how the distribution and concentration of those populations within the project study areas compare to the broader relevant geographic area where Sound Transit provides services.

Available datasets from the U.S. Environmental Protection Agency (EPA) EJScreen (Environmental Justice Screening and Mapping) and the Council on Environmental Quality's Climate and Economic Justice Screening tool were used to validate environmental justice characteristics in the study area (EPA 2022).

Elementary school data were used to enhance Sound Transit's understanding of the communities surrounding the project. Elementary school data were used primarily because they better represent the project study area they overlap since the attendance areas are geographically smaller than middle or high school attendance areas. The data source was the 2022–2023 school year Washington State Report Card published by the Washington State Office of Superintendent of Public Instruction (OSPI 2022).

Affordable housing was identified in the study areas by reviewing information from the U.S. Department of Housing and Urban Development and King County Housing Authority to identify properties and housing developments that provide subsidized housing or housing assistance for low-income and cost-burdened families.

3 AFFECTED ENVIRONMENT

The following section summarizes the population demographics and community facilities within the 0.5-mile study area for each OMF South build alternative. As a comparison, this section also summarizes the population demographics of the Sound Transit service district. This section largely relies on publicly available data for the basis of the analysis; sources are noted where additional information from in-person contacts, local knowledge, and other research was used.

3.1 Study Area Demographics

Demographic characteristics for minority and low-income populations within 0.5-mile of each build alternative were determined based on estimates from the U.S. Census Bureau's 2016–2020 5-year American Community Survey (ACS) data.

As noted above, in addition to U.S. Census data, available datasets from EJScreen were used to validate environmental justice characteristics in the study area. The EJScreen reports are included in Attachment A. Further analysis into elementary school demographics was conducted based on Washington State Report Card data published by OSPI.

Table E.3-1 summarizes the study area's demographic characteristics and compares them with those of the cities of Federal Way, Kent, and Des Moines, and the Sound Transit service district. Table E.3-2 summarizes race and ethnicity characteristics and compares them across the same study areas and jurisdictions.

In addition to Tables E.3-1 and E.3-2 below, geographic information system maps were developed to visually illustrate demographic characteristics within each study area. Figures E.3-1 through E.3-3 depict minority populations for each build alternative, and Figures E.3-4 through E.3-6 show low-income populations at the census block group level.

These data show that the study area for each build alternative has relatively similar concentrations of low-income and minority populations. Minority persons account for approximately 66 to 68 percent of the total population residing within 0.5 mile of each build alternative, and low-income individuals account for approximately 39 to 44 percent of the population in the same area. The study area for each build alternative has higher concentrations of low-income and minority persons than found within the surrounding jurisdictions (12 to 14 percent greater) or the Sound Transit service district as a whole (18 to 23 percent greater).

Given the overlap of potential construction limits of the Preferred and South 344th Street alternatives, demographic characteristics between these alternatives are nearly identical. The study areas represent between approximately 8,500 and 9,500 residents, and both have the same proportion of minority residents (66 percent) and relatively similar median household incomes, at approximately \$51,000. However, the Preferred Alternative has slightly higher proportions of low-income individuals than the South 344th Street Alternative.

	Preferred Alternative	South 344th Street Alternative	Midway Landfill Alternative	Sound Transit Service District	Federal Way	Kent	Des Moines
Total Population ¹	8,452	9,482	10,712	3,189,953	96,812	130,038	31,983
Minority Population ²	66%	66%	68%	42%	57%	58%	48%
Low-Income Persons ³	40%	39%	44%	21%	28%	30%	33%
Population under 5 years old	7%	7%	10%	6%	7%	7%	6%
Population over 64 years old	15%	15%	7%	13%	14%	11%	18%
Households with Limited English Proficiency ⁴	18%	18%	15%	6%	9%	10%	5%
Median Household Income	\$51,029	\$51,580	\$61,212	\$96,803	\$68,672	\$73,891	\$70,268

 Table E.3-1
 Comparison of Demographic Characteristics

Source: U.S. Census Bureau, American Community Survey (ACS) 2016–2020 5-Year Estimates Notes:

(1) Data represent the latest U.S. Census 5-year estimates based on 2016–2020 survey data. Survey data are not available at the census-block level; the data represent an estimate of minority and low-income persons in block groups within 0.5 mile of each project alternative.

(2) Minority is defined as all but Non-Hispanic White Alone.

(3) Low-income is defined as the percentage of a block group's population in households where the household income is less than or equal to twice the federal poverty level. This threshold is used by Sound Transit and other regional transit agencies to determine eligibility for reduced-fare programs and reflects the increasingly high cost of living in the region.

(4) Limited English proficiency refers to anyone above the age of 5 in households who reported speaking English less than "very well," as classified by the U.S. Census Bureau.

	Preferred Alternative	South 344th Street Alternative	Midway Landfill Alternative	Sound Transit Service District	Federal Way	Kent	Des Moines
Hispanic or Latino	21%	21%	30%	11%	17%	16%	20%
Black or African American	18%	18%	13%	7%	15%	12%	9%
Asian	18%	17%	14%	16%	14%	22%	16%
American Indian and Native Alaskan	<1%	<1%	<1%	1%	1%	<1%	3%
Native Hawaiian/ Pacific Islander	1%	2%	3%	1%	2%	2%	4%
Two or More Races and Other	7%	7%	8%	7%	7%	7%	7%

 Table E.3-2
 Comparison of Race and Ethnicity Characteristics

Source: U.S. Census Bureau, American Community Survey (ACS) 2016–2020 5-Year Estimates

The Midway Landfill Alternative in Kent has a higher proportion of low-income and minority residents compared to the two alternatives in Federal Way. The study area for the Midway Landfill Alternative represents approximately 10,700 residents. Of these residents, approximately 68 percent are reported as minorities, and 44 percent are reported as low-income. The Midway Landfill Alternative study area also reported the highest median household income of the three alternatives at approximately \$61,000.

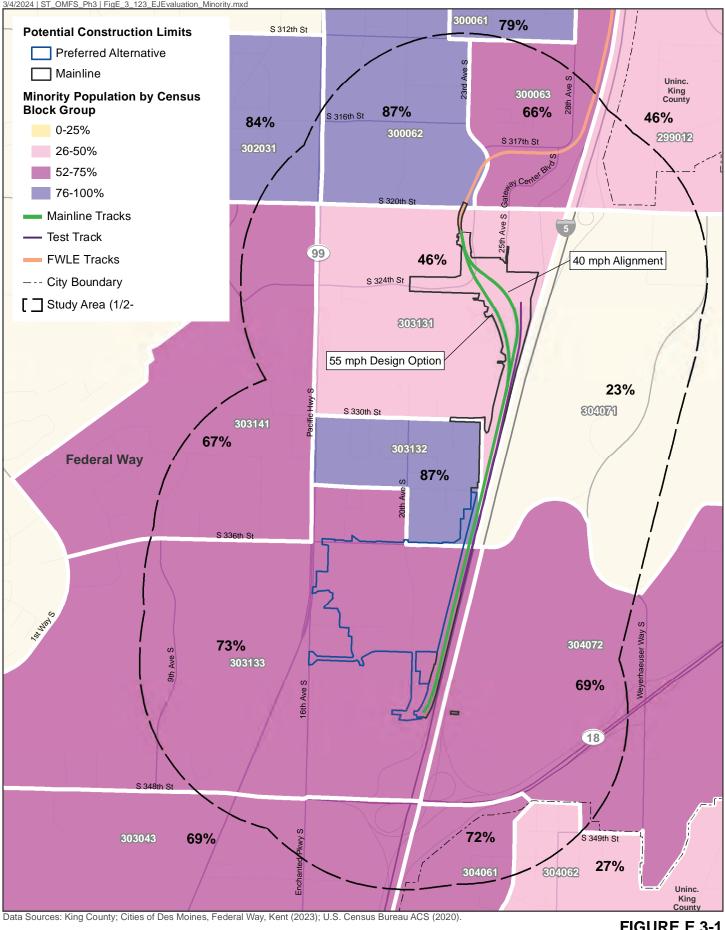
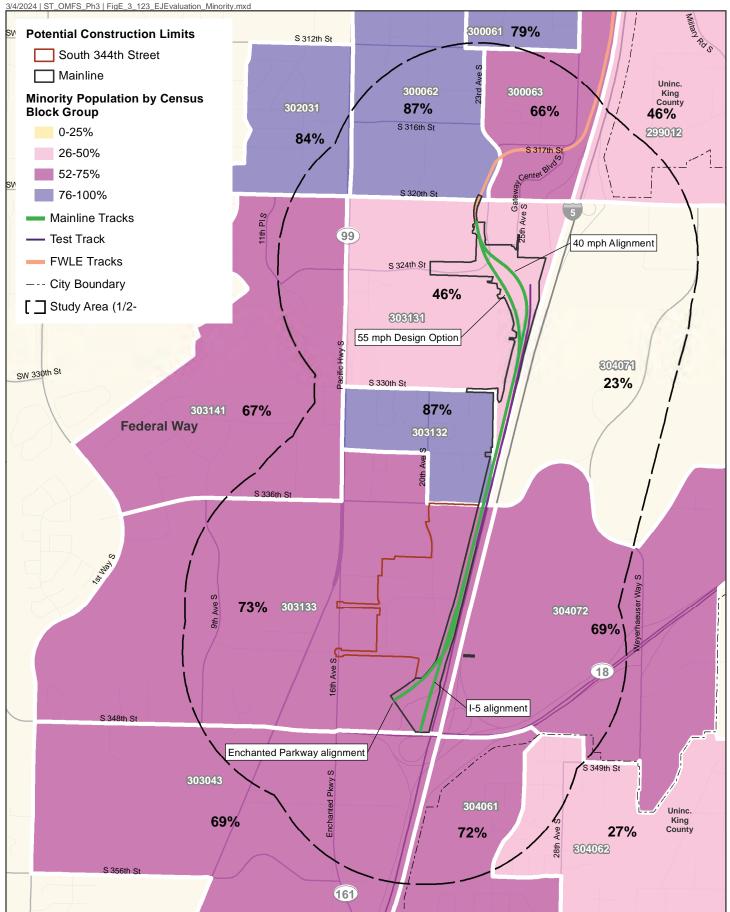


FIGURE E.3-1 Minority Populations Preferred Alternative



OMF South



Data Sources: King County; Cities of Des Moines, Federal Way, Kent (2023); U.S. Census Bureau ACS (2020).

FIGURE E.3-2 Minority Populations South 344th Street Alternative

N 0 0.25 0.5 Miles

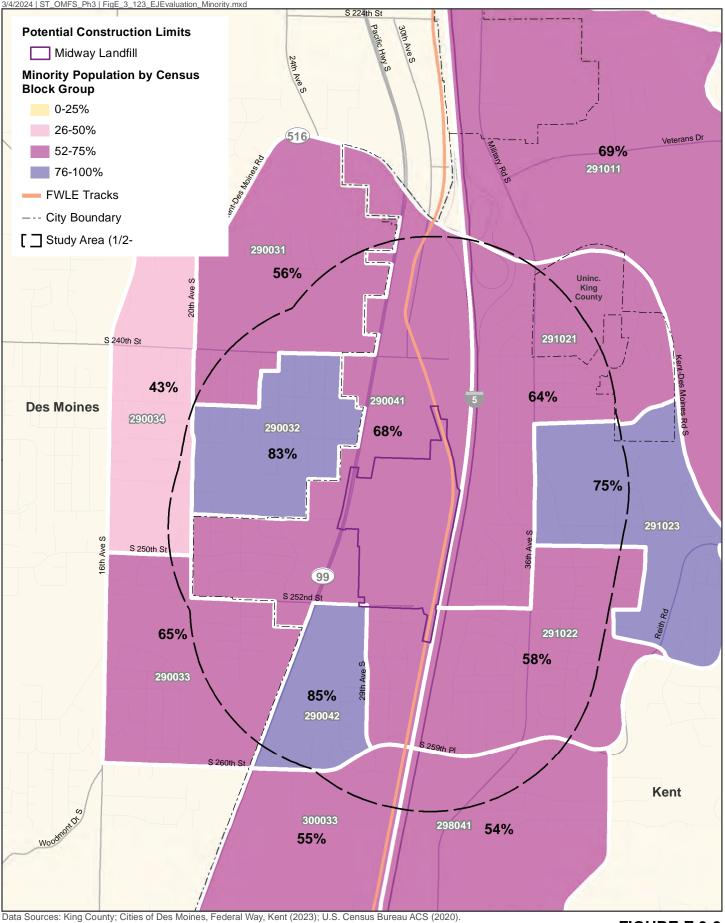


FIGURE E.3-3 Minority Populations Midway Landfill Alternative



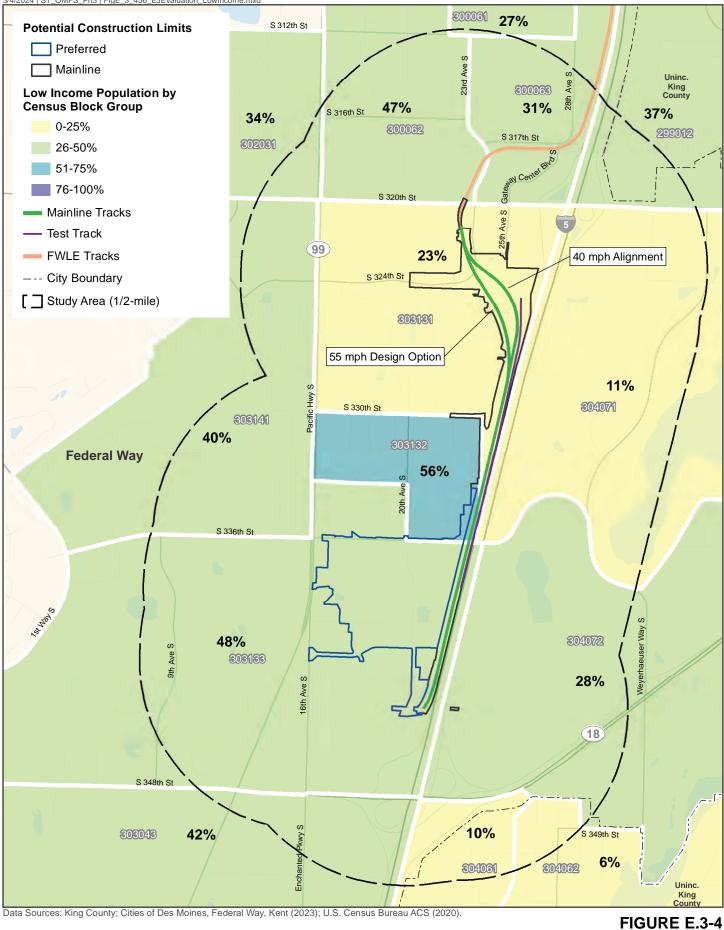
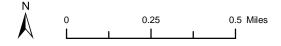
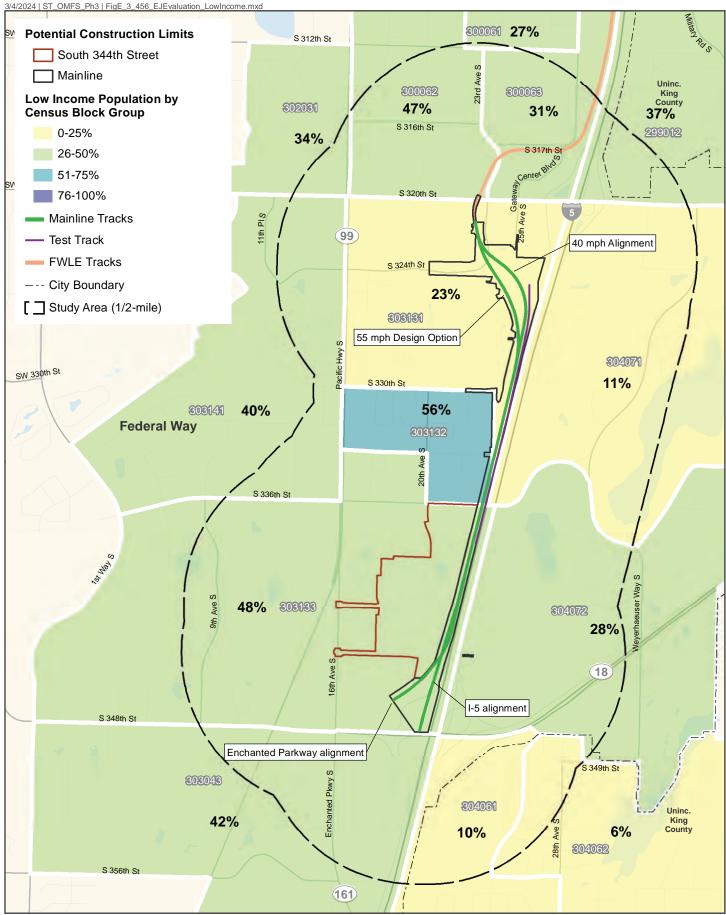


FIGURE E.3-4 Low-Income Populations Preferred Alternative

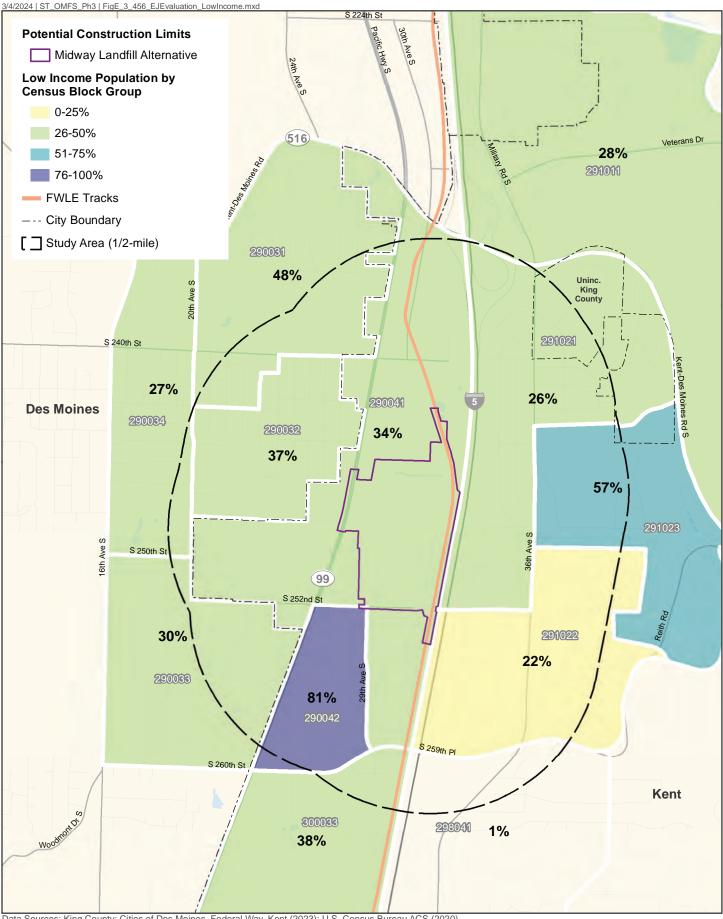




Data Sources: King County; Cities of Des Moines, Federal Way, Kent (2023); U.S. Census Bureau ACS (2020).

FIGURE E.3-5 Low-Income Populations South 344th Street Alternative

N 0 0.25 0.5 Miles



Data Sources: King County; Cities of Des Moines, Federal Way, Kent (2023); U.S. Census Bureau ACS (2020).

0.25 0.5 Miles

FIGURE E.3-6 Low-Income Populations Midway Landfill Alternative ACS data report a 5-year average for a small sample size, which potentially results in high margins of error. To supplement the ACS demographic data, additional demographic data from public elementary schools within the study area were reviewed. Demographic information from local public elementary schools is used because the attendance boundaries are smaller than public middle and high schools, and they tend to approximate the boundaries of the study area more precisely.

The study areas for the Preferred and South 344th Street alternatives is entirely within the Federal Way School District, while the study area for the Midway Landfill Alternative is split between the Federal Way and Highline school districts. This assessment focuses on minority and low-income populations within the three elementary schools (Internet Academy, Sunnycrest Elementary, and Parkside Elementary) located within the study areas. Table E.3-3 summarizes environmental justice characteristics for elementary schools within the study area for each build alternative.

School Name	School District	Study Area	Total Students	Minority Population	Low Income Population
Internet Academy	Federal Way School District	Preferred and South 344th Street Alternatives	895	633 (71%)	507 (57%)
Sunnycrest Elementary	Federal Way School District	Midway Landfill Alternative	505	434 (86%)	402 (80%)
Parkside Elementary	Highline School District	Midway Landfill Alternative	415	346 (83%)	310 (75%)
Total Students			1,815	1,413 (78%)	1,219 (67%)

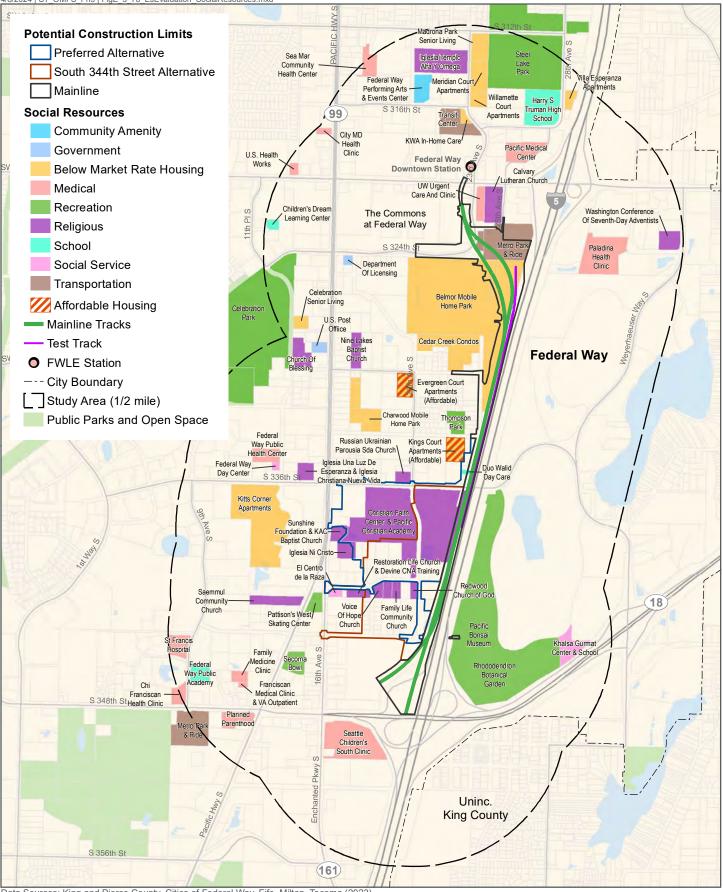
 Table E.3-3
 Public Schools within Build Alternative Study Areas

Source: Washington State Office of Superintendent of Public Instruction (OSPI), 2021-2022. Washington State Report Card.

The Internet Academy is a public virtual school that is part of Federal Way Public Schools and is located within the study areas for the Preferred and South 344th Street alternatives. The proportions of low-income and minority populations for the Internet Academy are higher than the populations present within the Preferred and South 344th Street alternatives study area based on ACS information (Table E.3-1). Parkside Elementary and Sunnycrest Elementary are located within the Midway Landfill Alternative study area. Similarly, the proportions of low-income and minority populations at both elementary schools are higher than the proportions of low-income and minority populations within the Midway Landfill Alternative study area based on ACS information (Table E.3-1). This suggests that low-income and minority populations may be more prevalent in these areas than indicated by ACS information.

3.2 Community Facilities

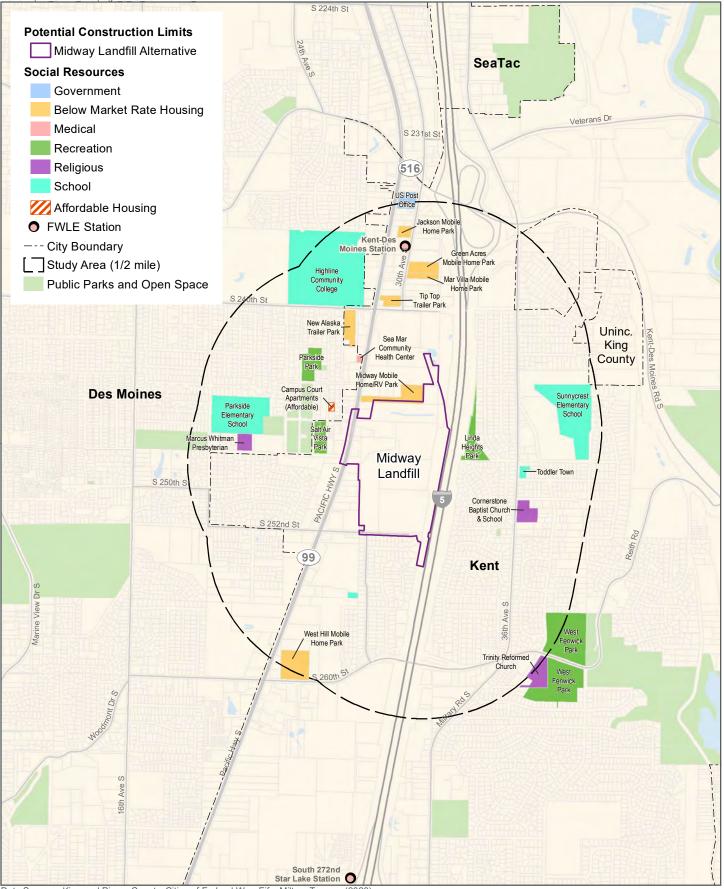
For the purpose of this environmental justice assessment, community facilities are defined as facilities that likely provide substantial services or assistance to minority and low-income populations. Examples include social and human health services, homeless shelters, affordable housing developments, schools, and places of worship. The specific community facilities identified within each study area for each OMF South project alternative are summarized in the Environmental Justice, Social Resources, Community Facilities, and Neighborhoods section of the Final EIS (Section 3.6). These resources are shown in Figures E.3-7 and E.3-8.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

N 0 0.25 0.5 Miles

FIGURE E.3-7 Social Resources Preferred and South 344th Street Alternatives OMF South



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).



FIGURE E.3-8 Social Resources Midway Landfill Alternative *OMF South* The Preferred and South 344th Street alternatives have substantially more community facilities within their study areas than the Midway Landfill Alternative study area. Places of worship account for the majority of these facilities, including those that serve environmental justice populations. Based on communication with schools and social/human service organizations, these community facilities within the Preferred and South 344th Street alternatives study areas also serve low-income and minority individuals.

Affordable housing was identified in the study areas by reviewing information from the U.S. Department of Housing and Urban Development and King County Housing Authority to identify properties and housing developments that provide subsidized housing or housing assistance for low-income and cost-burdened families. Affordable housing in the study areas for the Preferred and South 344th Street alternatives includes Kings Court and Evergreen Court Apartments (each with 30 two- to three-bedroom units open to families, seniors aged 55 and over, and disabled persons). Affordable housing in the study area for the Midway Landfill Alternative includes Campus Court Apartments (12 three-bedroom units open to families, seniors aged 55 and over, and over, and disabled persons) (King County 2024).

Additional nonsubsidized below-market-rate housing within the study area is available through private developments, such as apartment complexes, manufactured or mobile home developments, and RV parks. In the study areas of the Preferred and South 344th Street alternatives, these nonsubsidized below-market-rate housing developments include Meridian Court Apartments, Willamette Court Apartments, Villa Esperanza Apartments, Belmor Mobile Home Park (Belmor), Charwood Mobile Home Park, Celebration Senior Living, and Kitts Corner Apartments. In the study area for the Midway Landfill Alternative, these nonsubsidized belowmarket-rate housing developments include Green Acres Mobile Home Park, Mar Villa Mobile Home Park, Jackson Mobile Home Park, Tip Top Trailer Park, New Alaska Trailer Park, Midway Mobile Home/RV Park, and West Hill Mobile Home Park. These social resources are depicted in Figures E.3-7 and E.3-8 above.

4 OUTREACH TO MINORITY AND LOW-INCOME POPULATIONS

Sound Transit conducted public outreach during the OMF South early scoping period and throughout the State Environmental Policy Act (SEPA) and National Environmental Policy Act (NEPA) EIS processes and will continue to perform targeted outreach throughout the project development process.

Sound Transit is required to provide meaningful opportunities for minority, low-income, and limited-English-proficiency groups to engage in the planning process by (1) the agency's community engagement procedures, (2) EO 12898 and EO 14096, (3) U.S. DOT Order 5610.2C, and (4) FTA Circular C 4703.1. Title VI of the Civil Rights Act of 1964 prohibits discrimination based on race, color, or national origin. These directives make environmental justice a part of the decision-making process by identifying and addressing disproportionate and adverse human health and environmental effects of Sound Transit's programs, policies, and activities on minority and low-income populations.

Sound Transit conducted a preliminary demographic analysis to identify low-income, minority, and limited-English-proficiency populations. Based on this analysis, Sound Transit used the following strategies to engage these populations during the early scoping and scoping periods described below:

- Provided translated text on posters in Spanish, Korean, and Russian.
- Provided translated meeting handouts in Spanish, Korean, and Russian.
- Publicized events online and in print with language-specific media publications.
- Provided translated text on the online open house web pages as well as the embedded Google Translate tool, which can translate text into over 100 languages.

The following sections describe in more detail Sound Transit's outreach efforts to engage minority and low-income populations. The text also summarizes what Sound Transit heard from the community in response to the proposed project. All of the in-person outreach efforts described below offered opportunities for the public to engage with Sound Transit project staff to ask questions and offer ideas and comments. As the project moves forward, Sound Transit will continue to engage community leaders, jurisdictions, and social service providers to seek input, assess outreach methods, and identify additional ways to reach low-income, minority, and limited-English-proficiency populations. A summary of all public outreach efforts is documented in Appendix B, Public Involvement and Agency Coordination.

4.1 Scoping Outreach

4.1.1 Early Scoping

In March 2018, Sound Transit published the Tacoma Dome Link Extension and Operations and Maintenance Facility South Early Scoping Information Report (Sound Transit 2018). Early scoping was intended to initiate the public conversation before the start of environmental studies and was conducted for both projects concurrently. The public comment period for early scoping was from April 2 to May 3, 2018.

To support early scoping, Sound Transit held three community open houses in Tacoma, Federal Way, and Fife to ask for public, tribal, and agency input on the project's Purpose and Need statement, the Tacoma Dome Link Extension (TDLE) "representative project alignment" and other

alternative alignments, and alternative locations for an OMF in the south corridor. All public meeting locations were accessible to persons with disabilities. Alternative formats and translation services were available. In addition, an online open house was available during the early scoping period to share information and receive feedback about the project using social media tools. All materials presented at the community open house were posted on the online open house.

Sound Transit advertised the community open houses through a variety of methods, including:

- Postcards to over 52,160 households and businesses, including both owners and renters
- Online and print advertisements in 12 publications, including RussianTownSeattle.com and KoreaTimes.com
- Posters at 150 locations in the corridor, including translated versions in Spanish, Korean, Vietnamese, Khmer, and Russian
- Two news releases and five email update notices to members of the public who signed up for updates on the project website
- Social media posts on Sound Transit's Facebook account
- Project website

To reach minority populations, advertisements were published in El Siete Dias, Korea Daily, Korean Times Seattle, Northwest Vietnamese News, and Tu Decides.

In September 2018, Sound Transit conducted a series of stakeholder interviews, briefings, and tabling events around initial route and station concepts for TDLE. Although the OMF South project was not the focus of this outreach, Sound Transit presented information about OMF South, and staff were available to answer questions and provide updates about the project.

During the outreach associated with early scoping, Sound Transit received approximately 2,160 email comments between late January and early February 2019, prior to the start of the scoping period. Major themes for pre-scoping comments included opposition to the S 240th Street and SR 99 site, support for the Midway Landfill site, and concerns about business displacements and community impacts.

4.1.2 SEPA Scoping

Sound Transit initiated formal SEPA scoping for OMF South in early 2019. Unlike early scoping, which invited input on the OMF South and TDLE projects, the SEPA scoping process described here solely addressed the OMF South project.

During scoping, Sound Transit asked for comments on the proposed range of alternatives, the purpose and need for the project, environmental effects and benefits to be analyzed, probable significant adverse environmental impacts, potential mitigation measures, and permits, licenses, or other approvals that may be required. The comment period for scoping was from February 19 to April 1, 2019. This period exceeded the 30 days required under SEPA regulations and allowed additional time for public, agency, and Tribal comment.

During this period, two public scoping meetings were held to inform and obtain input from the community (one each in Federal Way and Kent). All public meeting locations were accessible to persons with disabilities. Alternative formats and translation services were available. Staff were present to share information, answer questions, and receive input, and written comment forms and computers were available to access the online comment form at the public scoping

meetings, along with a court reporter who took verbal comments. In addition to the online open house, comments could be submitted through emails to the project scoping inbox (OMFsouthscoping@soundtransit.org), regular mail, and leaving voicemails on a transcription line. Buell Realtime Reporting is the professional service used to transcribe the voicemails.

Sound Transit advertised the in-person scoping meetings and online open house through a variety of methods, including:

- Newsletters to over 74,000 households and businesses, including both owners and renters
- Online and print advertisements in 10 publications, including Korea Daily and Tu Decides to reach minority populations
- Posters at over 300 locations in the corridor
- Two news releases and four email update notices
- Social media posts
- Project website

During the outreach associated with SEPA scoping phase, Sound Transit asked for comments on:

- Site options and locations
- Social, economic, environmental, and transportation impacts
- The draft Purpose and Need statement

Sound Transit received approximately 730 emails, 480 online open house communications, 180 in-person communications, 50 voicemail messages, and 20 letters. Within these communications, approximately 2,500 comment statements were made. The scoping summary report contains a full record of these comments. The report is available at https://www.soundtransit.org/get-to-know-us/documents-reports/operations-maintenance-facility-south-scoping-summary-report.

Comments related to low-income or minority populations included the following:

- The Federal Way Public Schools District asked that Sound Transit build the OMF South on one of the Midway Landfill sites to lessen community impacts, including those to residents, businesses, and faith-based organizations. The District noted that its students draw from a diverse community, with 60 percent qualifying for a free or reduced fee lunch and 20 percent who are learning English as a second language. The District asked Sound Transit to consider the impacts to these families in its analysis.
- About 185 comments mentioned employment, business, or economic-related impacts. Several comments expressed concern about business and job displacements, the relative cost of OMF site alternatives, and impacts to planned economic growth in the South Sound.
- About 40 comments were concerned with potential impacts to low-income populations and displacement of affordable housing by the OMF sites. Additionally, some potentially impacted businesses submitted comments concerning financial hardships that might occur if they were relocated.
- South 240th Street and SR 99 site: Commenters were concerned about impacts to nearby small businesses and affordable housing, including the Midway Mobile Home Park, and how their removal would affect low-income populations. About 150 comments concerned impacts to Highline College and its students, and about 20 comments involved the

displacement of the mobile home park. This site alternative was not carried forward for further consideration.

• South 316th Street and Military Road site: Many commenters were concerned about residential displacements and neighborhood impacts. Comments mentioned zoning inconsistencies and noise concerns in a residential area, in addition to displacement of low-income or minority populations. This site alternative was not carried forward for further consideration.

In the fall of 2020, Sound Transit conducted several stakeholder interviews with representatives of social service agencies and community groups to solicit input on how to best communicate with them in the future. These agencies and community groups included the Federal Way Black Collective, the Voice of Hope Church, the KAC Baptist Church, and the Multi-Service Center in Federal Way.

Sound Transit conducted focused OMF South outreach in November and December 2019, which included a series of drop-in presentations and engagement sessions to provide the public with opportunities to learn more about the OMF South project and offer suggestions on how public engagement could be improved. Sound Transit also launched an online open house and survey for the project, which was available from November 13 through December 6, 2019. The online open house site included a landing page translated into Khmer, Korean, Russian, Spanish, and Vietnamese, with instruction on how to use Google Translate to navigate the site. The site also included content in each of these languages.

4.2 2021 SEPA Draft EIS Outreach

In conjunction with the release of the 2021 SEPA Draft EIS, Sound Transit hosted an online open house between March 5 and April 19, 2021. Information presented on the online open house website included project background and history, details about the environmental review process, analysis of the three OMF South build alternatives with maps and statistical comparisons, and the project timeline. The online open house was fully translated into Spanish, Korean, and Russian and included the Google Translate function so users could translate webpage text into additional languages. Users were able to submit a comment on the 2021 SEPA Draft EIS findings via a comment from on the online open house.

In addition to the online open house, Sound Transit hosted two online public hearings during the 45-day comment period. The hearings provided attendees the opportunity to engage with Sound Transit staff, submit written questions for answers from a panel of Sound Transit staff, or provide verbal public comments on the 2021 SEPA Draft EIS. While all members of the public were invited to provide comments, in an effort to center equity and provide access to people who have historically been excluded from public processes, Sound Transit invited attendees who identified as people of color, people with disabilities, and anyone working with an interpreter the opportunity to speak first before opening the floor to the rest of the attendees.

Sound Transit received, in total, approximately 280 communications during the 2021 SEPA Draft EIS comment period. A majority of these communications were from the general public, and the remainder were from government sources, such as Tribes, agencies, jurisdictions, and elected officials, and from affected businesses and community groups.

Most of the communications from the public expressed a preference for or against a specific alternative site. In general, most comments supported the Midway Landfill Alternative and/or opposed the South 344th Street Alternative. The most common general themes in the public

comments, outside of statements for or against a particular alternative, concerned impacts to the community or neighborhood due to displacements of residents, businesses, and employees as well as impacts to natural resources such as streams, wetlands, and habitat.

After the end of the comment period, Sound Transit collected and considered the comments received and prepared a Comment Summary Report (Sound Transit 2021). After considering the potential impacts disclosed in the 2021 SEPA Draft EIS and the comments received from Tribes, agencies, and the public, including the Environmental Justice Analysis, the Sound Transit Board of Directors identified the South 336th Street Alternative as the Preferred Alternative (Motion M2021-81, December 2021).

4.3 NEPA Scoping

FTA and Sound Transit published a NEPA Notice of Intent in the Federal Register on July 19, 2023. The notice initiated a 30-day comment period where agencies, Tribes, and members of the public were invited to comment on the proposed scope of the NEPA EIS, particularly on changes made to the proposal since the 2021 SEPA Draft EIS.

The only substantive comment related to low-income and minority populations received during scoping was from EPA, which concerned guidance on the methods and tools used to produce the environmental justice assessment. Specifically, EPA encouraged the use of EJScreen, which is EPA's environmental justice screening and mapping tool. EPA also provided recommendations specific to the Comprehensive Environmental Response, Compensation, and Liability Act, climate change, air and water quality, and water resource impacts.

4.4 2023 NEPA Draft/SEPA Supplemental Draft EIS Outreach

The NEPA Draft/SEPA Supplemental Draft EIS was published on September 22, 2023. There was a 45-day comment period, during which Tribes, agencies, and members of the public were invited to comment. The comment period ended November 6, 2023. Comments are summarized in Chapter 5, Comment Summary, of the Final EIS, and the full text of the comments received and the responses are in Appendix L, Comments and Responses, of the Final EIS.

Public engagement for the comment period included an online open house that lasted the duration of the comment period. The public could visit the website to review what had changed since the 2021 SEPA Draft EIS, review a summary of the findings of the NEPA Draft/SEPA Supplemental Draft EIS and supporting materials, along with submitting comments via an online comment form. In addition to English, the website was also available in Korean, Russian, and Spanish. The website contained accessibility features including screen reader-friendly content and detailed alternative text. Digital factsheets and documents throughout the site were made into accessible PDFs. A total of 1,321 people visited the online open house including:

- 1,241 visitors to the English site
- 72 visitors to the Spanish site
- Two visitors to the Korean site
- Six visitors to the Russian site

Additionally, there were two public meetings: one in-person and one online. The first portion of the meetings included a presentation from Sound Transit staff followed by a live question-and-answer segment. In addition, the in-person meeting began with an open-house format for

attendees to engage with Sound Transit staff. The second portion was a public hearing that allowed participants to formally provide comments on the Draft EIS. The comments were captured by a court reporter. Both meetings used standard accessibility features. The online meeting featured live captioning (in English) and was screen-reader accessible. Sound Transit offered simultaneous interpretation in American Sign Language, Spanish, Korean, and Russian at the online and in-person meetings. The in-person meeting also included translated materials in Spanish, Korean, and Russian. Sound Transit staff communicated the language and accessibility features throughout the public meetings and hearings to ensure attendees understood how to fully participate. Languages available for interpretation were based on the demographic data of the study area.

FTA and Sound Transit received a total of 58 communications during the comment period. As before, most commenters were members of the general public. The most common general themes in the public comments, outside of statements for or against a particular alternative, concerned impacts to the community or neighborhood due to displacements of residents, businesses, and employees as well as impacts to natural resources, such as streams, wetlands, and habitat.

4.5 Additional Targeted Outreach and Community Feedback

As part of the environmental review process, Sound Transit prioritized and targeted outreach to populations that have been historically underrepresented in previous public engagement processes. In 2021 and 2023, Sound Transit partnered with community-based organizations to distribute information regarding the Draft EISs and request quality control for translated content.

Organizations that Sound Transit has partnered with include El Centro de la Raza, Voice of Hope Church, Federal Way Black Collective, Korean Women's Association, the Multi-Service Center, KAC Baptist Church, and Centro Rendu. Project materials, including the online open house, the guide to the Draft EIS, and comment forms, were fully translated into Spanish, Korean, and Russian to ensure language access. Interpretation in Spanish, Korean, and Russian was provided for the online public meetings and hearing.

The OMF South project team attends events held by community organizations in the project area to connect with audiences that may not receive project information otherwise. By attending these events, Sound Transit builds relationships and establishes an ongoing presence in communities in the project area, provides project information and answers questions, and offers ways to stay engaged through project email updates. The project team has focused on attending events in traditionally underserved communities and providing in-language project information. Examples include the Kent Farmers Market and the Federal Way Farmers Market.

Outreach and engagement with property owners has occurred throughout the environmental review process. In 2019 and 2020, Sound Transit distributed fliers to businesses and residential homes neighboring the proposed OMF South site alternatives to provide them with information about the OMF South project. In early January 2021, Sound Transit mailed a letter to potentially affected property owners. The letter notified each property owner of potential effects to their property and offered to meet with them. Information provided at a briefing for property owners included an overview of the project background, environmental review process, and property acquisition and relocation process. The project team called potentially affected businesses to offer briefings to learn more about the project, the property acquisition and relocation process, and how to comment on the 2021 SEPA Draft EIS.

Sound Transit has continued to meet with potentially affected and neighboring property owners to answer questions regarding current designs and continues to offer briefings upon request. Project representatives also met with the following property owner groups to provide project updates and answer questions:

- Belmor leadership and residents
- Pacific Christian Academy
- Christian Faith Center
- KAC Baptist Church
- GarageTown

The primary topics heard through these outreach efforts were around the opportunity for living-wage jobs and concerns over impacts to businesses, employees, and residents. Other comment themes included concerns about noise and vibration impacts along the proposed mainline guideway, effects on social and community cohesion, and concerns about construction duration and extent of impacts.

Sound Transit has and continues to meet regularly with residents of Belmor, which is a residential mobile home community potentially impacted by the OMF South project. The community engagement team has provided four separate briefings to residents and sent multiple mailers during formal comment periods, including mailings to advertise resident briefings, a frequently asked questions flyer to respond to common concerns around the project process and relocation, and notifications regarding potential early acquisition of a portion of the mobile home park.

In these meetings, the residents have been provided information on the OMF South project, potential site selection, the EIS, and the acquisition and relocation process. As some mobile homes would be acquired by Sound Transit as real property, these briefings have primarily centered on the acquisition and relocation process, including how displaced residents would have a fully dedicated assigned agent working with them throughout the process. In addition to the scheduled briefings, many more individuals have contacted Sound Transit's Community Outreach Team via email and letters to inquire about the project and potential impacts to their community.

Feedback heard during engagement with the Belmor community included:

- Questions on why Sound Transit identified a route that will impact so many senior citizens on fixed incomes
- Questions about which units would be displaced
- Concern about losing access to the golf course and other Belmor amenities
- Changes to OMF South project schedule, which makes people feel more in limbo and "trapped"
- Concerns about where residents would be able to afford to move
- Concerns from some residents about having mortgages and new mobile homes
- Concerns that some of the older mobile home units (built in the 1970s or earlier) are either not eligible or feasible to be moved
- Concerns about the park ownership (Hynes Group) not communicating with the residents

5 PROJECT IMPACTS, BENEFITS, AND MITIGATION

Section 5.1 summarizes the potential for adverse effects on minority or low-income populations for the project alternatives along with potential avoidance, minimization, and mitigation measures specific to those impacts. Sections 5.2 through 5.4 describe indirect impacts, cumulative impacts, and project benefits, respectively.

5.1 Direct Impacts and Mitigation Measures

5.1.1 No-Build Alternative

Under the No-Build Alternative, no impacts from the project to environmental justice populations are expected and benefits to environmental justice populations would not occur. For the purposes of the Final EIS, the No-Build Alternative assumes that by the design year 2042, FWLE and all planned Sound Transit 3 projects, including TDLE, are built along with the other public and private projects planned within the study area. If TDLE is constructed as proposed, the mainline track associated with the Preferred and South 344th Street alternatives would be built later in time.

Under the No-Build Alternative, Sound Transit would not have the capacity to receive, test, commission, store, maintain, and deploy the expanded fleet of LRVs needed to support existing and planned future expansions of the Link light rail system at planned service levels under Sound Transit 3. As a result, light rail operations would be less efficient than they would otherwise be with the facility, and Sound Transit would not be able to meet the expected ridership demand.

Reduced service levels would limit benefits to environmental justice populations who use the system. Based on 2018–2019 survey data, approximately 43 percent of Sound Transit ridership across all modes (Link light rail, Regional Express bus, and Sounder) are minorities, many of whom use transit for more than commuting purposes. Approximately 22 percent of minority riders and 13 percent of non-minority riders made less than \$33,000 annually, indicating the importance of transit availability to lower income riders.

5.1.2 Build Alternatives

For the project alternatives analyzed in the Final EIS, Table E.5-1 summarizes impacts, mitigation measures, and where project impacts and benefits would affect minority and low-income populations. As shown in Table E.5-1, the project would not adversely impact many elements of the environment. These elements are not further analyzed. For elements of the environment where the project potentially causes adverse effects to minority and low-income populations, a more detailed discussion of the potential impacts and avoidance, minimization, and mitigation measures for these resources is provided in sections below the table (Section 5.1.2.1, Transportation; Section 5.1.2.2, Acquisitions, Displacements, and Relocations; Section 5.1.2.3, Economics; Section 5.1.2.4, Visual and Aesthetic Resources; and Section 5.1.2.5, Social Resources, Community Facilities, and Neighborhoods). All identified project impacts have proposed in-kind mitigation measures. Further information can be found in Chapter 3 of the Final EIS (Affected Environment, Environmental Impacts, and Mitigation Measures).

Type of Impact		Impact Summary for Build Alternatives	Mitigation Summary		Impacts on Minority and Low Income Populations		enefit(s) to Minority and w Income Populations
Transportation ¹	•	No long-term impacts on freight, transit, parking, or nonmotorized facilities are anticipated. The alignment of the mainline tracks for the Preferred and South 344th Street alternatives would be constructed immediately adjacent to the southbound I-5 clear zone within the I-5 right-of-way. While portions of the mainline alignment would maintain clear zone standards, there may be locations where the minimum widths cannot be met. All the build alternatives would require demolition activities and earthwork that would generate truck trips during the construction effort. Depending on the subsurface construction design option chosen, the Midway Landfill Alternative could require up to 564 round trip truck trips per day during the most intense periods of site preparation activities.	There would be avoidance and minimization measures to address potential traffic congestion during construction, such as developing a traffic management plan and avoiding traffic disruptions during peak travel times. In locations where the mainline tracks for the Preferred and South 344th Street alternatives reduce the available clear zone below standards, Sound Transit would reestablish a clear zone by regrading or installing guardrails, barriers or impact attenuators. These measures would not adversely affect transportation safety in the study area.	•	There are no adverse transportation impacts expected for the Preferred and South 344th Street alternatives. Construction truck trips would be substantially greater for the Midway Landfill Alternative, which has a high percentage of environmental justice populations within its study area. While I-5 and the arterials surrounding the Midway Landfill Alternative have the capacity to accommodate the additional truck traffic, the large number of daily truck trips over several years necessary for site preparation could exacerbate existing traffic congestion along some roadway segments and be perceived by the community as an adverse impact. Construction traffic could cause noise and visual impacts to residents adjacent to the project site and haul routes. See the Visual and Aesthetics Resources and Noise and Vibration sections of this table for more detail.	•	OMF South would support the system- wide expansion of light rail as called for in the Sound Transit 3 plan, including expansion into the south corridor from Federal Way to Tacoma. As a result, improved regional connectivity and mobility would accrue to a larger extent for minority and low-income residents as a primary and affordable means of transportation. The Preferred Alternative would replace 20th Avenue S with an extension of 18th Place S, which would include a multi- use path for pedestrians and bicyclists.

Table E.5-1 Summary of Potential Impacts and Mitigation

Notes:

(1) See Section 5.1.2.1 for more detail on transportation impacts and mitigation.

Type of Impact	Impact Summary for Build Alternatives	Mitigation Summary	Impacts on Minority and Low Income Populations	Benefit(s) to Minority and Low Income Populations
Acquisitions, Displacements, and Relocations ²	 OMF South would acquire public and private property for the mainline track and OMF site. As a result of these acquisitions, some residences, businesses, and public uses would be displaced. Preferred Alternative with 40 mph Alignment displacements: 86 residences, 11 businesses, and 1 religious facility. Preferred Alternative with 55 mph Design Option displacements: 92 residences, 11 businesses, and 1 religious facility. South 344th Street Alternative with 40 mph Alignment displacements: 91 residences, 17 businesses, and 4 religious facilities. South 344th Street Alternative with 55 mph Design Option displacements: 91 residences, 17 businesses, and 4 religious facilities. South 344th Street Alternative with 55 mph Design Option displacements: 97 residences, 17 businesses, and 4 religious facilities. Midway Landfill Alternative displacements: 4 businesses, 0 residences, and 0 religious facilities; the least impacts of all alternatives. Most of the residential displacements for the Preferred and South 344th Street alternatives would be mobile homes at Belmor. 	 2011). There may be opportunities for relocation of some residents, social resources, and businesses in the project vicinity, including limited relocation opportunities within Belmor for residents of the potentially impacted mobile home park. For residential relocations, Sound Transit relocation opportunities would 		• None.

Table E.5-1 Summary of Potential Impacts and Mitigation (continued)

Notes:

(2) See Section 5.1.2.2 for more detail on acquisitions impacts and mitigation.

Type of Impact	Impact Summary for Build Alternatives	Mitigation Summary	Impacts on Minority and Low Income Populations	Benefit(s) to Minority and Low Income Populations
Land Use	 All alternatives would require acquisitions and conversion of existing land uses (commercial, single-/multi-family residential, public/institutional, vacant) to a transportation-related land use. Construction activities would not affect land use patterns in the study area. 	 No mitigation would be required. 	No impacts.	• None.
Economics ³	 Direct economic impacts include business and employee displacements, associated potential tax impacts, and changes in development patterns and regional freight mobility. The Preferred Alternative would result in 12 business (including religious facilities) displacements and 126 employee displacements⁴. The South 344th Street Alternative would result in 21 business displacements (including religious facilities) and 212 employee displacements. The Midway Landfill Alternative would result in 4 business displacements and 43 employee displacements. Construction activity may disrupt current economic activity by increasing traffic delays and may result in other negative impacts, such as increased noise adjacent to the construction site. Construction would bring revenue into the economy with the jobs that it produces, and the money spent by the construction employees in the surrounding community. 	 Long-term operation of OMF South is not anticipated to result in adverse economic effects that would require mitigation. Relocation assistance for business displacements is discussed in Final EIS Section 3.3, Acquisitions, Displacements, and Relocations. Construction mitigation plans would be developed to address the needs of businesses that may be affected during construction. 	Based on the demographic characteristics of the study areas, some displaced businesses are likely minority owned and include minority and/or low-income employees.	 By supporting the development of light rail service, OMF South indirectly provides improved access to employment centers and expanded employment opportunities for minority and low-income persons residing in the project corridor and the Puget Sound region. Project would result in the creation of approximately 610 permanent living-wage jobs at the OMF site and would include classroom space to be compatible with future apprentice programs. Construction could generate \$3.2 billion to \$6.8 billion in economic output and support hundreds of jobs throughout the region. Sound Transit includes project labor agreements and has a DBE program to support hiring persons of color, with a goal to eliminate barriers, create opportunities, and build capacity for underrepresented and women-own businesses.

Notes:

(3) See Section 5.1.2.3 for more detail on economic impacts and mitigation.

(4) The number of displaced employees is based on the business building size (King County Department of Assessment data) and the type of business activity using square-foot-peremployee factors from the U.S. Department of Energy and the Institute for Transportation Engineers and not on an actual survey of businesses. The analysis for estimating employees assumes that the businesses are not abandoned or vacant.

Type of Impact	Impact Summary for Build Alternatives	Mitigation Summary	Impacts on Minority and Low Income Populations	Benefit(s) to Minority and Low Income Populations
Social Resources, Community Facilities, and Neighborhoods ⁵	 All OMF South build alternatives include residential and commercial property acquisitions and land use conversions. The Preferred Alternative would displace residential units within Belmor, disrupting social cohesion. It would also adversely affect social resources, including displacement of the Christian Faith Center, which includes a child-care center and the Pacific Christian Academy school, and 11 businesses, including a home-based daycare. The South 344th Street Alternative would have the most impacts on social resources of the build alternatives. It would have the same impacts as the Preferred Alternative on Belmor and would also displace 4 religious facilities and 17 businesses. The Preferred Alternative with the 40 mph Alignment would relocate one golf hole and shorten the associated fairway at the northeast corner of the Belmor private golf course. The 55 mph Design Option would affect an additional hole and associated fairway. Both mainline design options would also alter the golf course path. The Midway Landfill Alternative would displace 4 businesses. Community resources and neighborhoods in proximity to construction activities would be impacted by increased truck traffic, localized impacts to air and visual quality, and increased noise and vibration. 	 Specific design features, BMPs, and mitigation measures would be used to minimize adverse impacts to social resources, community facilities, and neighborhoods. Generally, Sound Transit identified that there is a sufficient supply of housing in the study area and adequate space to relocate religious facilities, childcare centers, and other businesses that serve environmental justice populations. Access to community facilities would be maintained during construction to the extent practicable. Sound Transit would relocate the golf hole(s) and golf course path. Avoidance, minimization, and mitigation measures for long-term operational and short-term construction impacts, including transportation, visual, air, and noise impacts, are described under elements of the environment in in this table. 	 Based on the demographic characteristics of the corridor, all build alternatives would displace businesses that serve or employ minority or low-income populations. The Preferred and South 344th Street alternatives would displace social resources, including religious institutions that serve low-income and minority populations in the study area. The Preferred Alternative would displace the Christian Faith Center and an associated school and childcare center, which would be challenging to relocate due to its size. The Preferred Alternative would displace a home-based daycare that offers subsidized childcare and dual language programs. 	 Public space on the north side of the Preferred Alternative along S 336th Street to be developed in coordination with the city of Federal Way would include amenities such as multi-use path, seating, landscaping, artwork, and educational signage. A multi-use path along the extension of 18th Place S for the Preferred Alternative would allow for community connectivity and two-way travel by people walking, rolling, and biking that would be separated from the road by a curb and planting strip.

Table E.5-1 Summary of Potential Impacts and Mitigation (continued)

Notes:

(5) See Section 5.1.2.5 for more detail on social resource impacts and mitigation.

Type of Impact	Impact Summary for Build Alternatives	Mitigation Summary	Impacts on Minority and Low Income Populations	Benefit(s) to Minority and Low Income Populations
Visual and Aesthetic Resources ⁶	 All the build alternatives would change visual conditions by removing existing landscape features and constructing new buildings, retaining walls, and elevated structures. Preferred and South 344th Street alternatives: Belmor residents near the mainline would experience adverse visual impacts. Preferred and South 344th Street alternatives: residents along 24th Avenue S would experience adverse visual impacts The South 344th Street Alternative tail tracks would impact WSDOT Resource Conservation Areas adjacent to the I-5 right-of-way. Midway Landfill Alternative: residents north and south of the site could experience adverse visual impacts. Construction could result in a temporary decrease in visual quality. 	 Preferred and South 344th Street alternatives: planting of trees and shrubs and architectural treatment of walls would soften visual impacts of the mainline through Belmor and along 24th Avenue S. Sound Transit would consult with WSDOT and FHWA to develop site- specific measures for impacts to WSDOT Resource Conservation Areas along I-5 through replacement property or other measures. Midway Alternative: existing fencing and vegetation along with new landscaping would screen views of OMF South for nearby residents. 	 There is a high percentage of low-income (56 percent) and minority populations (87 percent) in the block group encompassing the residents along 24th Avenue S. The residents would experience high visual impacts from the Preferred and South 344th Street alternatives from the removal of trees and vegetation and the addition of large-scale project features There is a high percentage of low-income (34 percent) and minority populations (68 percent) in the block group encompassing the residents north and south of the Midway Landfill Alternative. These residents would experience moderate visual impacts from the Midway Landfill Alternative site. Construction activities, including truck traffic, could result in temporary decreases in visual quality. 	• None.
Air Quality and Greenhouse Gases	 Long-term emissions associated with employee commutes, material deliveries, and on-site vehicle maintenance are not anticipated to exceed air quality standards. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and other activities. 	Sound Transit would implement construction BMPs to minimize the impact of construction- related emissions and nuisance dust on existing residential and recreational uses.	No adverse impacts.	• None.

Table E.5-1 Summary of Potential Impacts and Mitigation (continued)

(6) See Section 5.1.2.4 for more detail on visual and aesthetic resource impacts and mitigation.

Type of Impact	Impact Summary for Build Alternatives	Mitigation Summary	Impacts on Minority and Low Income Populations	Benefit(s) to Minority and Low Income Populations
Noise and Vibration	 There are no FTA noise impacts or WAC exceedances associated with operation of any of the OMF sites. Preferred and South 344th Street alternatives: both mainline alignments would result in vehicle traffic noise impacts from removal of the berm along I-5 for about one to three residences. Preferred and South 344th Street alternatives: The mainline 55 mph Design Option would result in noise impacts to four single-family residences in Belmor for both the Preferred and South 344th Street alternatives. There are no vibration impacts associated with operation of any of the build alternatives. Construction may result in temporary noise and vibration impacts for all build alternatives. Residences at Belmor may experience temporary vibration impacts depending on construction methods used for the Preferred and South 344th Street alternatives. 	 In accordance with the Sound Transit Link Noise Mitigation Policy, the project would mitigate all noise and vibration impacts with noise walls or other measures. Based on the current design, noise impacts along the mainline through Belmor would be mitigated with a noise wall. A construction management plan would be developed during the design phase of the project detailing BMPs to minimize impacts on local businesses and residents, including noise and vibration impacts. 	 After mitigation, there would be no operational noise impacts from the project. Minority and low-income people within close proximity to construction activities would experience temporary noise and vibration impacts during construction. 	• None.
Ecosystem Resources	 All build alternatives would have direct long-term impacts on ecosystem resources where permanent features, such as project facilities, overlap ecosystem components, such as wetlands, wetland buffers, streams, stream buffers, or native forest. Temporary construction-related impacts would occur where wetlands, wetland buffers, streams, stream buffers, or native forest are affected by clearing and ground-disturbing work and would be revegetated following construction. 	 For unavoidable long-term impacts on wetlands, streams, and their buffers, Sound Transit would develop compensatory mitigation during the permitting phase in accordance with applicable federal, state, and local requirements and guidelines. That could include onsite restoration, replacement sites, and the use of the King County In-Lieu Fee Program or other approved mitigation banks. 	No adverse impacts.	• None.

Table E.5-1 Summary of Potential Impacts and Mitigation (continued)

Type of Impact		Impact Summary for Build Alternatives		Mitigation Summary		Impacts on Minority and Low Income Populations		enefit(s) to Minority and ow Income Populations
Water Resources	•	All build alternatives would add both pollution-generating impervious surfaces and non- pollution-generating impervious surfaces in the study areas for all project alternatives and would require stormwater management BMPs, such as flow control or treatment. Construction of all build alternatives could affect surface and groundwater quality by increasing flooding or erosion or cause potential degradation of water quality when runoff is generated in construction areas.	•	With the application of required stormwater BMPs, such as flow control or treatment facilities, no temporary or long-term adverse impacts on water resources are expected and no mitigation would be required. Stormwater pollution prevention and sediment and erosion control plans would be developed that would specify BMPs for managing water runoff, protecting water quality, and preventing erosion	•	No adverse impacts.	•	None.
Geology and Soils	•	The project would be designed to meet current seismic standards and to address any concerns over slope stability, minor settlement, and corrosive soils to prevent long- term impacts. Construction impacts could include erosion of soils within the construction area and potential impacts on shallow groundwater quality from construction activities that would be addressed with standard BMPs.	•	No mitigation would be required.	•	No adverse impacts.	•	None.

Table E.5-1 Summary of Potential Impacts and Mitigation (continued)

Type of Impact		Impact Summary for Build Alternatives		Mitigation Summary		Impacts on Minority and Low Income Populations		nefit(s) to Minority and w Income Populations
Hazardous Materials	•	For all build alternatives, operation of the project could cause long- term impacts on the environment if an accidental release of hazardous materials occurs, such as a fuel spill. Construction impacts of the Midway Landfill Alternative could include the potential release of contaminated air, soil, and groundwater due to its characterization as a high-risk hazardous materials site.	•	Mitigation would be required for construction of the Midway Landfill Alternative, which would include replacement of the landfill cap and other measures.	•	Minority and low-income residents adjacent to the construction of the Midway Landfill Alternative could be exposed to the release of contaminated air, soil, and groundwater, due to the landfill's characterization as a high-risk hazardous materials site. Census data indicate that there is a higher percentage of low-income (34 percent) and minority (68 percent) population immediately adjacent to the site than the Sound Transit service district average.	•	None.
Public Services	•	OMF South is not anticipated to result in adverse impacts to public services.	•	No mitigation would be required.	•	No adverse impacts.	•	None.
Utilities, Energy, and Electromagnetic Fields	•	OMF South operation would not result in any long-term adverse impacts to existing utilities in the project corridor. Construction could result in temporary impacts such as service disruptions due to utility relocations. There are no potential or adverse electromagnetic field impacts in the study area. No adverse impacts on energy are anticipated.	•	Temporary utility impacts would be avoided or minimized by maintaining required access to utilities and through communication with customers to inform them of planned or potential service disruptions. No mitigation would be required.	•	OMF South would not result in any long-term adverse impacts to existing utilities. Minority and low-income residents within the vicinity of the project could experience temporary service disruptions due to utility relocations.	•	None.
Historic and Archaeological Resources	•	None of the build alternatives are anticipated to have impacts on historic or archeological resources.	•	No mitigation would be required.	•	No adverse impacts.	•	None.

 Table E.5-1
 Summary of Potential Impacts and Mitigation (continued)

Type of Impact	Impact Summary for Build Alternatives	Mitigation Summary	Impacts on Minority and Low Income Populations	Benefit(s) to Minority and Low Income Populations
Parks and Recreational Resources	 None of the build alternatives would have long-term impacts on public parks or other public recreation facilities within the study area. There would not be any direct construction impacts to parks or recreational facilities, but construction of the mainline tracks for the Preferred and South 344th Street Alternatives could cause temporary light, noise, and dust impacts to Cedar Grove Park. 	 Construction impacts would be addressed through public outreach and other BMPs to maintain access and minimize light, noise, and dust impacts. No mitigation would be required. 	 There would be no long-term adverse impacts on public parks or other public recreational facilities within the study area. Construction of the mainline tracks for the Preferred and South 344th Street Alternatives could cause temporary light, noise, and dust impacts to Cedar Grove Park, or affect access due to temporary detours, lane closures, or other traffic impacts. 	• None.
Section 4(f) and 6(f) Resources	 None of the alternatives would acquire land from or result in the use of any recreational 4(f) or 6(f) resources. FTA determined that the mainline for the Preferred or South 344th Street alternative would have a <i>de minimis</i> impact to the BPA powerlines, which have been determined eligible for the National Register of Historic Places. 	 No mitigation would be required. 	No adverse impacts.	• None.

Table E.5-1 Summary of Potential Impacts and Mitigation (continued)

Notes:

BMP = best management practice; BPA = Bonneville Power Administration; DBE = Disadvantaged Business Enterprise; FHWA = Federal Highway Administration; FTA = Federal Transit Administration; I-5 = Interstate 5; OMF = operations and maintenance facility; WSDOT = Washington State Department of Transportation

The following sections focus on the five elements of the environment that would potentially impact environmental justice populations that are identified in Table E.5-1: Transportation; Acquisitions, Displacements, and Relocations; Economics; Visual and Aesthetic Resources; and Social Resources, Community Facilities, and Neighborhoods.

To better understand the demographics of the populations that would be impacted by the project, Sound Transit identified the block groups in which quantifiable impacts would occur. Tables E.5-2 through E.5-4 list the block groups in the study area for each alternative, the percent of minority and low-income populations within each block group, and the potential displacements and visual impacts in each block group. Figures E.3-1 through E.3-3 show the block groups in the study area for each alternative.

Displacements and visual impacts for the Preferred and South 344th Street alternatives occur in three block groups: 530330303131, 530330303132, and 530330303133. As all block groups in this analysis start with the same six digits (530330), the text will herein refer to the block groups without the repeating digits for readability.

The majority of residential displacements (about 83 percent) for the Preferred and South 344th Street alternatives occur in Block Group 303131, within which the proportion of minority and low-income population is similar to the Sound Transit service district average. The remaining residential replacements are within Block Groups 303132 and 303133, which have a higher proportion of minority and low-income populations relative to the Sound Transit service district average. All business and community facility displacements occur in block groups with a higher proportion of low-income and minority populations than the Sound Transit service district average. Most of the businesses displaced by the Preferred and South 344th Street alternatives serve an area larger than the study area, such as the greater Federal Way or Puget Sound area, and some have multiple locations, as described further in Section 5.1.2.3, Economics.

High visual impacts from the Preferred and South 344th Street alternatives would occur along 24th Avenue S in Block Group 303132, which has a higher percentage of low-income and minority populations than the Sound Transit service district. Other high visual impacts would occur in Block Group 303131, which has similar low-income and minority populations as the Sound Transit service district average.

Displacements for the Midway Landfill Alternative are all within Block Group 290041. This block group has a higher percentage of minority and low-income population than the Sound Transit service district average. There are no high visual impacts associated with this alternative. Moderate visual impacts would occur north and south of the site, where there is a higher percentage of low-income and minority populations. Construction traffic impacts from the Midway Landfill Alternative are not shown in the table due to the dispersed nature of the impact; these impacts are described further in Section 5.1.2.1, Transportation.

ID	Percent Minority	Percent Low Income	Residential Displacements	Business Displacements	Visual Impacts (High)	Visual Impacts (Medium)
ST District	42%	21%	NA	NA	NA	NA
299012	46%	37%	0	0	No	No
300033	55%	38%	0	0	No	No
300061	79%	27%	0	0	No	No
300062	87%	47%	0	0	No	No
300063	66%	31%	0	0	No	No
302031	84%	34%	0	0	No	No
303043	69%	42%	0	0	No	No
303131	46%	23%	71 – 77	0	Yes	No
303132	87%	56%	10	0	Yes	Yes
303133	73%	48%	5	11	No	Yes
303141	67%	40%	0	0	No	No
304061	72%	10%	0	0	No	No
304062	27%	6%	0	0	No	No
304071	23%	11%	0	0	No	No
304072	69%	28%	0	0	No	No

 Table E.5-2
 Preferred Alternative Impacts by Block Group

 Table E.5-3
 South 344th Street Alternative Impacts by Block Group

ID	Percent Minority	Percent Low Income	Residential Displacements	Business Displacements	Visual Impacts (High)	Visual Impacts (Medium)
ST District	42%	21%	NA	NA	NA	NA
299012	46%	37%	0	0	No	No
300033	55%	38%	0	0	No	No
300061	79%	27%	0	0	No	No
300062	87%	47%	0	0	No	No
300063	66%	31%	0	0	No	No
302031	84%	34%	0	0	No	No
303043	69%	42%	0	0	No	No
303131	46%	23%	71 – 77	0	Yes	No
303132	87%	56%	0	0	Yes	No
303133	73%	48%	20	17	No	Yes
303141	67%	40%	0	0	No	No
304061	72%	10%	0	0	No	No
304062	27%	6%	0	0	No	No
304071	23%	11%	0	0	No	No
304072	69%	28%	0	0	No	No

ID	Percent Minority	Percent Low Income	Residential Displacements	Business Displacements	Visual Impacts (High)	Visual Impacts (Medium)
ST District	42%	21%	NA	NA	NA	NA
290031	56%	48%	0	0	No	No
290032	83%	37%	0	0	No	No
290033	65%	30%	0	0	No	No
290034	43%	27%	0	0	No	No
290041	68%	34%	0	4	No	Yes
290042	85%	81%	0	0	No	No
291011	69%	28%	0	0	No	No
291021	64%	26%	0	0	No	No
291022	58%	22%	0	0	No	No
291023	75%	57%	0	0	No	No
298041	54%	1%	0	0	No	No

Table E.5-4 Midway Landfill Alternative Impacts by Block Group

5.1.2.1 Transportation

Long-term transportation impacts are relatively similar for all three build alternatives; however, construction impacts would differ. During construction, each build alternative would require some preparatory demolition and earthwork that would generate truck trips in addition to material delivery and general construction vehicle activity throughout the duration of construction. Most construction-period traffic would occur during import and export of material to and from the site during site preparation. The Preferred and South 344th Street alternatives would require similar peak daily truck trips during construction. However, the Midway Landfill Alternative would require up to nearly three times the number of truck trips, depending on the subsurface construction design option.

Additionally, construction duration varies between the Preferred and South 344th Street alternatives and the Midway Landfill Alternative. For the Preferred and South 344th Street alternatives, site preparation would take approximately 1 year and 6 months, assuming 12-hour workdays, 6 days per week. For the Midway Landfill Alternative, site preparation could take up to 5 years and 7 months, using the same assumptions.

The extensive site preparation work required for the Midway Landfill Alternative subsurface construction design options would expose the residents within the study area, which has a higher concentration of environmental justice populations than the surrounding community, to construction impacts over a longer period of time. In particular, it would result in higher volumes of construction traffic for exporting and importing the vast quantities of fill material. While I-5 and the arterials surrounding the Midway Landfill Alternative should accommodate the additional truck traffic, the substantial number of daily truck trips necessary for those subsurface construction design options could exacerbate existing congestion in some locations and be perceived as an adverse impact.

Avoidance, Minimization, and Mitigation

OMF South is not anticipated to result in long-term or construction impacts to freight, transit, nonmotorized transportation, or parking. Therefore, no mitigation for those transportation elements is proposed. However, there would be avoidance and minimization measures to address potential traffic congestion during construction, such as developing a traffic management plan and avoiding traffic disruptions during peak travel times.

For all build alternatives, a construction transportation management plan would be developed to address potential traffic and transportation impacts to the community, including minority and low-income populations. The plan would address site access, traffic control, hauling routes, impacts to transit, construction employee parking, impacts to local businesses, and pedestrian and bicycle control in the area. It would be prepared per city of Federal Way or city of Kent requirements and in coordination with WSDOT and FHWA, as applicable. Sound Transit would strive to maintain access to all properties as needed. However, if temporary driveway closures are required, access to these properties would be maintained to the extent practical through alternative routes. If access to a business could not be maintained during construction, the specific construction activity would be reviewed to determine whether it could occur during non-business hours or whether the parking and users of this access could be accommodated at an alternative location.

Depending on the subsurface construction design option, construction of the Midway Landfill Alternative could require ingress and egress by a substantially greater number of large trucks, over a much longer duration, than for the Preferred or South 344th Street alternatives. To avoid potential traffic impacts on SR 99 from the number of additional trucks, short acceleration and deceleration lanes could be added to the construction entrance to the landfill site to allow outbound trucks to get up to speed and allow inbound trucks to slow down outside of the general-purpose lanes.

5.1.2.2 Acquisitions, Displacements, and Relocations

During the environmental review process, Sound Transit developed preliminary estimates for acquisitions and relocations using conceptual designs for the OMF South build alternatives. As the project continues to progress, these estimates will continue to be refined. This section focuses on residential displacements. Business displacements are detailed in Section 5.1.2.3, Economics, and displacement of social resources is discussed in Section 5.1.2.5, Social Resources, Community Facilities, and Neighborhoods.

The South 344th Street Alternative would have the most residential and business displacements, and the Midway Landfill Alternative would have the least. For both the Preferred and South 344th Street alternatives, most residential displacements would occur within Belmor from the addition of the mainline tracks. Belmor is a manufactured/mobile home community for people aged 55 and older and is comprised of one large parcel (approximately 63 acres) with capacity for over 300 mobile homes and several resident amenities, including a golf course, club house, and pool. Each resident rents the land on which the mobile homes sit, and some of the mobile homes are owned by residents, while others are rented.

Belmor makes up almost one quarter of the area of Census Block Group 303131; more than half of the remaining area is devoted to commercial land uses. Additionally, the population within Belmor likely represents more than half of the total population of the block group. That means that the demographics within the census block group are likely a good representation for the demographics within Belmor. The population in this particular block group is 46 percent minority and 23 percent low income, which are both lower than the average minority and low-income populations in the study areas for the Preferred and South 344th Street alternatives and Federal Way as a whole (Table E.3-1) and similar to the Sound Transit service district average of 42 percent minority and 21 percent low income.

The census data are largely confirmed by information gathered by Sound Transit during targeted outreach with Belmor residents (discussed in Section 4.5 above). Through this outreach, Sound Transit learned that many Belmor residents are retired and living on fixed incomes — though they are not necessarily considered low-income — and that the population is largely English speaking.

In addition to displacements in Belmor from the mainline tracks, the Preferred and South 344th Street alternatives would displace between 15 and 20 additional residences, respectively, associated with the OMF site. For the Preferred Alternative, displaced residences north of S 336th Street include five single-family homes and one four-unit multi-family building. These residences are in a relatively small census block group (303132) that is 87 percent minority and 56 percent low-income, which are above the averages for the Sound Transit service district, the Preferred Alternative study area, and Federal Way (Table E.3-1).

Both the Preferred and South 344th Street alternatives would displace residents along S 340th Street. Displaced residences along S 340th Street are all single-family homes and are in a much larger census block group (303133), so it is more difficult to accurately assign representative demographics. The population in this block group is 73 percent minority and 48 percent low income, both of which are above the averages for the Sound Transit service district, the Preferred, and South 344th Street study areas, and Federal Way (Table E.3-1).

The South 344th Street Alternative includes displacement of residents along 18th Place S in the same census block group (303133) as described above. As noted, these displacements occur in census block groups with a higher percentage of low-income and minority populations than the Sound Transit service district average and Federal Way.

After the Sound Transit Board selects the project to be built and the real estate process moves forward, a detailed residential occupancy survey will be completed for all potentially affected property owners and tenants. The purpose of this survey is to determine specific needs of those being relocated, and it includes questions about income, ethnicity, family size, and replacement preferences.

Avoidance, Minimization, and Mitigation

When developing the OMF South alternatives, Sound Transit used several measures to avoid and minimize potential acquisition impacts. The prospective OMF South sites were analyzed for potential property impacts, and the build alternatives evaluated in this Final EIS were ultimately identified, in part, to avoid or minimize impacts to residents and businesses. During design, the OMF South sites were configured to meet programming requirements while minimizing, to the extent feasible, acquisitions, displacements, and relocations. The mainline tracks have been located near or within public rights-of-way to reduce the number of private property impacts.

For all residential relocations, a qualified relocation agent is assigned to work with each resident through the process of relocation and transition to replacement housing. The goal of the relocation agents is to facilitate a smooth transition to replacement housing. A relocation agent would

OMF South

contact each resident personally to explain relocation assistance, eligibility, and entitlements. For all relocations, a Sound Transit relocation agent would interview the affected individuals to:

- Determine any special needs and requirements.
- Explain the relocation process, entitlements, and payments.
- Offer relocation advisory assistance.
- Offer transportation, if necessary.
- Offer language translation services, as necessary.
- Ensure the availability of at least one comparable property in advance of displacement.
- Provide referral to comparable properties.
- Provide the amount of the maximum replacement housing entitlement and the basis for the determination in writing 90 days or more before the required vacate date.
- Inspect replacement properties to ensure they meet the Uniform Relocation Act's standards for decency, safety, and sanitary acceptability.
- Supply information on other federal, state, and local programs that offer assistance to displaced persons.
- Minimize hardship to persons adjusting to relocation by providing reimbursement for counseling services and advice on other sources of assistance that may be available.
- Recommend obtaining and provide reimbursement for a professional home inspection when purchasing a replacement dwelling.

Sound Transit's property acquisition and relocation handbooks for residential and nonresidential properties detail the agency's compensation and acquisition procedures (Sound Transit 2014a, 2014b). Sound Transit would pay normal expenses of sale, including escrow fees, title insurance, prepayment penalties, mortgage release fees, recording fees, and typical costs incurred as part of conveying title. In addition to compensating owners for property rights, other forms of compensation could include moving expenses, replacement housing payments, nonresidential reestablishment, and other eligible expenses. The relocation agent would also explain and provide the displaced person with information about the process for filing an appeal, should they disagree with any entitlement or decision made regarding their relocation.

Residents who own their home may be eligible for a purchase price differential in addition to the acquisition price paid for their property if the available comparable housing is more than the value of their current property. Additionally, they may be eligible to receive a mortgage interest differential payment if the interest rate on their new mortgage exceeds their present mortgage rate.

Residents who rent their home are eligible for a rent supplement if the rent plus utilities of the selected comparable is higher than their current rent plus utilities. A rent supplement is designed to enable a resident to rent a comparable replacement dwelling for a 3.5-year period (42 months). The resident could elect to receive the full value of the rent supplement at once in order to use it as a down payment to purchase a home and to pay certain incidental expenses to purchase a replacement dwelling. This creates a potential opportunity for someone who is currently renting their home to purchase a home if they are interested.

Additional considerations are given for residents who rent their home and are determined to be low-income based on the Uniform Relocation Act income limits (generally, low income for Uniform Act purposes is income that does not exceed 80 percent of the median family income for the applicable area, as determined by the U.S. Department of Housing and Urban Development). The basis for the calculated entitlement for those residents who rent their homes and are determined to be low income is their rent plus utilities, or 30 percent of their income, whichever is less. This would result in the same or better rental assistance payment as someone who is not determined to be low income. In most cases, 30 percent of their income is less than the current rent plus utilities. This can result in a larger rental assistance payment.

A person would not be required to move unless at least one comparable replacement dwelling is made available. Although property uses may change before construction of OMF South, research indicates that there would be available locations for displaced residents to be relocated within the same general area.

There are several different types of relocation options potentially available for displaced Belmor residents:

- Relocate within Belmor.
- Relocate to another 55-plus park, renting or purchasing a mobile home within that park, or moving their current mobile home to that park.
- Relocate to a family park, renting or purchasing a mobile home within that park, or moving their existing mobile home to that park.
- Rent or purchase a vacant lot and relocate their existing mobile home to the site.
- Relocate to a purchased or rented single-family residence, condominium, or apartment.

Other options could include senior living, retirement community housing, or assisted living facilities.

Relocation of mobile home residents could be challenging because there is little availability in mobile home communities within Pierce or King counties. However, the owners of Belmor own and lease 24 single-wide mobile home units within the project area and have indicated they plan to relocate those impacted units to other areas within Belmor and continue to rent to the tenants who wish to remain.

5.1.2.3 Economics

For all build alternatives, long-term economic impacts are mainly associated with business displacements and employment changes. Religious facilities (e.g., churches) were included in total business displacements for the purpose of analysis in the EIS but impacts to these facilities are detailed in Section 5.1.2.5, Social Resources, Community Facilities, and Neighborhoods.

The South 344th Street Alternative would displace the most businesses and employees, all of which are associated with the OMF site. The Preferred Alternative would displace roughly half as many businesses, and the Midway Landfill Alternative would displace even fewer. As shown in Tables E.5-2 through E.5-4, displacements for all alternatives are within block groups with a higher percentage of low-income and minority populations than the Sound Transit service district. For the Preferred and South 344th Street alternatives, a majority of the business displacements in Federal Way are related to automotive or equipment industries that serve an area that is greater than the study area. Additionally, the Preferred Alternative would displace an in-home childcare center (see Section 5.1.2.5, Social Resources, Community Facilities, and

Neighborhoods below), and the South 344th Street Alternative would displace two specialized facilities — Ellenos Yogurt and GarageTown. The Midway Landfill Alternative would displace an insurance firm, a vison care center, and a paint sales and recycling center.

The effects of potential business displacements are complex. Substantial displacement of local businesses can affect residents and businesses alike. Often the direct impacts for displaced businesses are financial, but there can be other consequences as well. Firm size and community importance may determine the level of impact on employment and to the community. For example, small and minority-owned businesses that rely on a localized customer base may have more difficulty finding substitute locations. Businesses that use machinery or hazardous substances may require large parcels or have additional challenges that may make relocation difficult. Further, a business may have a suitable place to relocate, but the new location could limit access to its existing labor pool.

Similar to residential relocations, a detailed business survey will be completed after the Sound Transit Board selects the project to be built and the real estate process moves forward. The purpose of a business survey is to collect general information that can help determine if businesses are owned, employed, or frequented by environmental justice populations. With the exception of the in-home childcare center (see Section 5.1.2.5, Social Resources, Community Facilities, and Neighborhoods), based on outreach and community input to date, businesses displaced by the project alternatives are not key resources, employers, or gathering places for environmental justice populations. There are similar retail businesses in the area that would be accessible to the community.

Avoidance, Minimization, and Mitigation

For business relocations, adequate commercial and industrial spaces may be available in the market to relocate building owners and tenants displaced as part of the project. Industrial users requiring specific lot sizes and utilities may be more difficult to relocate, including properties such as GarageTown and Ellenos Yogurt that have specific needs, like storage facilities or specialized machinery.

Businesses and nonprofit organizations displaced by the project would be offered relocation assistance, advisory services, and monetary benefits. Qualified relocation agents are assigned to work with displaced business throughout the process of locating a replacement property and making the transition to the new location. The goal of the relocation agent is to assist the displaced business or nonprofit organization in locating a replacement site and successfully completing their move.

A relocation agent would personally visit each displaced business to explain the following:

- Explain relocation services and payments available, eligibility requirements, and procedures for obtaining assistance.
- Determine the relocation needs and preference for the operation by completing an occupancy survey form.
- Offer language translation services, as necessary.
- Provide advice on other sources of assistance and technical help.
- Explain substitute personal property and actual direct loss of tangible personal property so that the business owner can make informed decisions regarding the relocation.

The level of advisory services may be different for each displaced business depending on the complexity of the business operation. Sound Transit would provide information on the availability, purchase price, and rental costs of suitable commercial properties and locations and/or refer the displaced business to real property specialists in the area. The relocation agent would assist a business to become established in a replacement location. Businesses are eligible to receive relocation benefits including moving expenses, reestablishment expenses, or a fixed moving payment. Reestablishment expenses of up to a maximum of \$50,000 may include, but are not limited to:

- Repairs or improvements to the replacement real property as required by federal, state, local law, codes, or ordinances.
- Modifications to the replacement property to accommodate the business operation or make replacement structure suitable for conducting the business.
- Construction and installation costs, for exterior signing to advertise the business.
- Redecoration or replacement of soiled or worn surfaces (e.g., carpeting, paneling, or painting).
- Advertising of replacement location.
- Estimated increased costs for 2 years at the replacement site for such items as lease or rental charges, personal or real property taxes, insurance premiums, and utility charges (excluding impact fees).

Additionally, if they prefer, businesses may be eligible for a fixed payment in lieu of moving, site search, and reestablishment expenses. The fixed payment is based on the average net earnings of the business for 2 taxable years immediately preceding the taxable year in which it would be displaced. The fixed payment entitlement is a minimum of \$1,000 and a maximum of \$40,000.

5.1.2.4 Visual and Aesthetics Resources

The Preferred and South 344th Street alternatives would cause visual impacts along the mainline track to adjacent residences. Visual impacts would occur from the removal of trees and vegetation and introduction of the large-scale light rail mainline track. As shown in Tables E.5-2 through E.5-4, visual impacts would occur in two block groups, one with similar percentages of low-income and minority populations to the Sound Transit service district and one with higher percentages. Figures E.5-1 and E.5-2 show visual simulations from these areas.

The Midway Landfill Alternative would have low to moderate visual impacts to residences north and south of the site from prominent buildings, retaining walls, and the lead track. As shown in Table E.5-4, visual impacts would occur in a block group with higher concentrations of minority and low-income populations than the Sound Transit service district.



Existing Condition





Simulation of Mainline with 40 mph Alignment



Simulation of Mainline with 55 mph Design Option

Figure E.5-1 Mainline Tracks Looking East from Belmor



Existing Condition



Simulation of Proposed Conditions approximately 10 years after planting

Figure E.5-2 Mainline Tracks Looking North from 24th Ave S

Avoidance, Minimization, and Mitigation

As described in Final EIS Section 3.7, Visual and Aesthetic Resources, when developing the OMF South build alternatives, Sound Transit worked to minimize the height of structures to avoid and minimize potential visual impacts. As the design advances, Sound Transit would consider site context, adhere to landscape guidelines in the Sound Transit Design Criteria Manual, and include context-sensitive design measures with input from affected communities and jurisdictions.

In addition to the avoidance and minimization measures, Sound Transit would implement mitigation measures in areas near residences to reduce sensitive impacts. These measures would include the following:

- 1. In areas adjacent to residences, where there is adequate space, add on-site landscaping adjacent to residential areas to help screen views of project components while ensuring safety and security.
- 2. In areas adjacent to residences, where not enough room exists for landscaping to screen views of retaining or noise walls, Sound Transit would treat the walls with visually interesting elements, such as design treatments that incorporate textures, patterns, color, or climbing vines.

While these mitigation measures would help soften the view of project elements, visual impacts from the Preferred and South 344th Street alternatives would not be fully mitigated at Belmor or along 24th Avenue S due to the large-scale nature of the mainline track and limited opportunities for screening.

5.1.2.5 Social Resources, Community Facilities, and Neighborhoods

Impacts to social resources are primarily related to displacement of religious facilities, which could affect community cohesion in neighborhoods surrounding the OMF South build alternatives. Section 5.1.2.3, Economics, provides additional information about Sound Transit's property acquisition and relocation policies and procedures that would be applied to all displaced social resources and community facilities.

The Preferred Alternative would displace one religious facility, the Christian Faith Center church, which includes an associated day care center (CF Kidz) and separate religiously affiliated school (Pacific Christian Academy). The Christian Faith Center is a large-capacity church; therefore, it could be challenging to relocate a religious facility of this size and displacing it would impact the members of the service population from within and beyond the 0.5-mile study area. Based on outreach with the Christian Faith Center, they serve minority and low-income populations and serve a broad geographic area. In addition to CF Kidz at the Christian Faith Center, the Preferred Alternative would displace an in-home childcare center for children ages 2 to 13. This childcare center offers programs in English and Somali and accepts subsidized payments.

Both the 40 mph Alignment and the 55 mph Design Option would permanently impact the private Belmor golf course. The 40 mph Alignment would modify the northeast corner of the course by relocating one golf hole and shortening its associated fairway. The golf course path in that area would also be altered but would serve the same function. The 55 mph Design Option would permanently affect a second hole and its associated fairway and further alter the cart path. However, its function would be maintained.

The South 344th Street Alternative would displace four religious facilities: Family Life Community Church, Voice of Hope Church, and Redwood Church of God and Tabernacle Temple of Praise, which share a building. Based on project engagement and other research, these churches offer services in multiple languages and serve minority populations. For example, the Family Life Community Church offers services in English and Spanish, and the Voice of Hope Church offers services in Russian. The displacement of religious facilities could affect community cohesion if relocation of these facilities is not able to be accommodated in proximity to the study area; however, because these churches are currently located in commercial or industrial buildings, it is likely that they could be relocated to comparable properties nearby.

During construction, the Preferred and South 344th Street alternatives could also temporarily impact surrounding social resources and religious facilities, such as El Centro de la Raza, the Iglesia Ni Cristo Church, the KAC Baptist Church, and the Russian-Ukrainian Seventh Day Adventist Church. Each of these religious facilities provide church services in languages other than English and their congregations are likely largely made up of minority populations. The mainline design options would also affect the private golf course as described above for the Preferred Alternative.

There would be no long-term or construction impacts to social resources or community facilities within the Midway Landfill Alternative study area. The Midway Landfill Alternative would have the fewest impacts to social resources and community cohesion compared to other build alternatives.

Avoidance, Minimization, and Mitigation

Relocations of social resources, like religious facilities and childcare centers, would be treated similarly to business relocations described in Section 5.1.2.3, Economics. With the exception of the Christian Faith Center, displaced religious facilities may be less complex to relocate due to their smaller size and location in commercial buildings. The Christian Faith Center and Pacific Christian Academy may be challenging to relocate because of their large size.

As discussed in the impact section above, the Preferred Alternative would displace two childcare centers — one at the Christian Faith Center and one in-home facility. At the time of writing, there is one other childcare facility within the 0.5-mile study area. Within an expanded 1-mile buffer, there are five additional childcare facilities, all of which accept subsidized payments. Based on outreach to these facilities, there is available capacity for new children to attend at this time.

As part of the OMF South project, specific design features, BMPs, and mitigation measures would eliminate or minimize impacts to social resources, community facilities, and neighborhoods. These measures are summarized below.

- There would be avoidance and minimization measures to address potential traffic congestion during construction, such as developing a traffic management plan and avoiding traffic disruptions during peak travel times.
- Sound Transit's policies and procedures comply with federal, state, and local property acquisition and relocation policies and, in some cases, provide advisory services to property owners above the minimum requirements of federal and state law.
- In areas adjacent to residents, where there is adequate space, add on-site landscaping adjacent to residential areas to help screen views of project components while ensuring safety and security. In areas adjacent to residences where not enough room exists for

landscaping to screen views of retaining or noise walls, Sound Transit would treat the walls with visually interesting elements, such as design treatments that incorporate textures, patterns, color, or trellises with climbing vines.

• For the Preferred and South 344th Street alternatives, noise barriers are proposed for mitigation along the 55 mph Design Option elevated mainline tracks.

5.2 Indirect Impacts

OMF South is anticipated to result in minimal adverse indirect impacts. As described in more detail in Section 5.4, Project Benefits, OMF South would support system-wide Link light rail expansion for the approved Sound Transit 3 program. With the system-wide expansion, it may be reasonably expected to increase the potential for future private commercial and/or residential development activity near Link stations, which could increase property values near stations and augment tax revenues. However, this activity may also affect the availability of low-income housing opportunities and may result in the loss of affordable housing and/or displacement of low-income people. Housing goals and policies of local jurisdictions will influence future affordable housing options near Link stations. Sound Transit's Equitable Transit Oriented Development Policy encourages affordable housing development on any potential surplus property near future Link stations, which could help mitigate cumulative impacts (Sound Transit 2018).

5.3 Cumulative Impacts

To help inform the cumulative impact analysis, Sound Transit used EPA's EJScreen tool. EJScreen is a mapping tool that combines environmental and demographic socioeconomic indicators. It assesses the following 13 environmental indicators: particulate matter 2.5, ozone, diesel particulate matter, air toxics cancer risk, air toxics respiratory hazard index, toxic release to air, traffic proximity, lead paint, risk management plan facility proximity, hazardous waste proximity, superfund proximity, underground storage tanks, and wastewater discharge. It also includes supplemental indexes to offer a perspective on the community-level vulnerability based on income, employment, limited English speaking, education, and life expectancy.

The EJScreen tool identified that the OMF South study area is in the 80th and 90th percentiles for many of the indexes when compared to national and state data. This indicates that the study area has been historically overburdened and there is a high potential for future projects to have cumulative impacts. Note that the census block results presented by EJScreen are actually census tract values distributed homogeneously across all census blocks within a census tract. As described in Section 3.2 above, this environmental justice analysis uses demographic data at the block group level to provide a more accurate portrayal of environmental justice populations within the project study area, given the localized nature of the project's potential impacts.

Sound Transit analyzed potential direct and cumulative impacts of the OMF South project related to the EJ indicators. These impacts included air quality, traffic, hazardous materials, and wastewater. They are discussed in the Final EIS in Chapter 3, Affected Environment, Environmental Impacts, and Mitigation Measures, and in Chapter 4, Cumulative Effects Analysis. Based on this analysis, with implementation of best management practices, OMF South would not contribute cumulative impacts to the EJScreen environmental indicators

The OMF South project, in addition to the TDLE and FWLE projects and other investments in regional transportation infrastructure, would enable more frequent Link service and improve overall mobility within the region, in addition to improving local connections to economic

opportunity, goods, and services. Improved transit service and mobility and access to opportunity would be considered a benefit to low-income and minority populations in the study area and the region as a whole.

If OMF South were constructed at similar times as other large infrastructure projects, residents and businesses could experience increased short-term construction impacts due to cumulative increases in congestion, noise, and access limitations. This would include impacts to communities that have greater a percentage of low-income and minority populations than the Sound Transit service district. However, after mitigation and implementation of avoidance and minimization measures, adverse impacts would be reduced.

As part of the City Center Access project in Federal Way, transportation improvements and stream culvert work would displace Belmor residents in the vicinity of the OMF South mainline tracks for the Preferred and South 344th Street alternatives. Some of these mobile home displacements may overlap with OMF South displacements, or there may be additional displacements. Because the City Center Access project does not have construction funding, it is likely that OMF South would begin the acquisition and relocation process before Federal Way begins project construction. Therefore, the two projects are unlikely to have overlapping construction impacts, but may have cumulative impacts within Belmor, depending on the OMF South mainline track option and the final design for the City Center Access project.

5.4 Project Benefits

Under DOT Order 5610.2C, the benefits of a proposed transportation project may be considered when determining whether any disproportionate and adverse effects on minority and low-income populations would occur. The OMF South project would have indirect and direct benefits.

5.4.1 Indirect Benefits

OMF South would support the system-wide expansion of light rail as called for in Sound Transit 3, including expansion of the Link light rail system north to Everett; south to Tacoma; east to downtown Redmond, south Kirkland, and Issaquah; and west to Ballard and West Seattle, totaling 116 miles with over 80 stations. It would support reliability of the Sound Transit 3 system expansion by providing capacity to meet projected ridership demands. This would, in turn, improve regional connectivity and mobility and provide a reliable means of transportation for populations reliant on public transit, including low-income and minority populations. This would include improved access to jobs, social services, and medical care. Conversely, if OMF South were not built, maintenance of the LRV fleet would be reduced, which could lead to less system reliability and a poor rider experience, which may discourage ridership.

While all populations within the Sound Transit service area would realize these benefits to the same extent, they could accrue to a higher degree for minority and low-income residents as a primary and affordable means of transportation. As described in Section 5.1.1, 2018–2019 survey data identified that approximately 43 percent of Sound Transit ridership across all modes (Link light rail, Regional Express bus, and Sounder) are minority, many of whom use transit for more than commuting purposes, and approximately 22 percent of minority riders and 13 percent of non-minority riders made less than \$33,000 annually. Additionally, data from the American Public Transportation Association (2008) indicate that in 2007, approximately 60 percent of all transit passengers in the United States were minorities. Data from a 2006 report (Center for Housing Policy 2006) illustrated that families with annual household incomes between \$20,000 and \$50,000 have transportation costs as high as or higher than housing.

5.4.2 Direct Benefits

5.4.2.1 Economic and Employment Benefits

Benefits to all populations, including environmental justice populations, would accrue through the addition of new jobs to build and operate the project. Sound Transit would require project labor agreements that include:

- Commitment to labor stability and a local workforce
- Apprenticeship and employment goals for people of color and women
- Non-discrimination and fairness in employment
- Requirement that 21 percent of all hours be set aside for persons of color (actual Sound Transit practices have resulted in 32 percent of all hours being held by persons of color)

Additionally, Sound Transit would implement its Disadvantage Business Enterprise (DBE) program that:

- Requires that 18.2 percent of all construction and architecture/engineering consultant dollars be set aside for DBE contracts (i.e., contracts with small businesses that are at least 51 percent owned by individuals who are socially and economically disadvantaged).
- Strives to eliminate barriers, create opportunities, and build capacity for underrepresented and women-owned businesses.

Additionally, as described in Final EIS Section 3.5, Economics, the increased purchase and sale of goods and services within the community to facilitate construction and the positive economic effects of construction workers' purchases in food and retail within the community would benefit businesses that are owned by environmental justice populations in the surrounding area.

The OMF South project would also generate about 610 living-wage jobs to operate the facility. The facility would include classroom space so that it is forward-compatible with future apprentice programs.

5.4.2.2 Community Cohesion

The design of the OMF South Preferred Alternative includes elements to support community cohesion within the surrounding neighborhood, which includes a higher percentage of low-income and minority populations than the Sound Transit service district. The Preferred Alternative would include a public space on the northern side of the site along South 336th Street to activate the area. Improvements would be coordinated with Federal Way and the community to help determine the most beneficial and desired uses and could include a multi-use pathway and other amenities, such as seating, landscaping, artwork, and educational signage.

Additionally, the Preferred Alternative would include a multi-use path, separated from the road by a curb and planting strip, along the extension of 18th Place S to allow for two-way travel by people walking, rolling, and biking. This would provide enhanced north-south access adjacent to the site to the communities in the study area to replace the current in-road designated greenway along 20th Avenue S.²

² A greenway is a bicycle facility that consists of shared-lane markings and guide signs along mostly residential or other low-speed or low-volume roads.

6 CONCLUSION

FTA and Sound Transit conducted this environmental justice analysis to identify, analyze and address potential disproportionate and adverse human health and environmental effects of the OMF South project on environmental justice communities. FTA will make the final environmental justice determination for the project following selection by the Sound Transit Board of a project site to be built. As described in Section 2, Methods and Approach, FTA's determination considers who may be affected; whether the net results will be disproportionately high after consideration of the totality of the circumstances, including project impacts, mitigation, and benefits; and whether adverse impacts would be predominantly borne by environmental justice populations. The determination also includes whether there would be a denial of, reduction in, or significant delay in the receipt of benefits by minority or low-income populations. To determine whether adverse impacts would be predominantly borne by environmental justice populations, FTA considers:

- Whether the adverse effects on environmental justice populations exceed those borne by non-environmental justice populations.
- Whether cumulative or indirect effects would adversely affect an environmental justice population.
- Whether mitigation and enhancement measures will be taken for environmental justice and non-environmental justice populations.
- Whether there are off-setting benefits to environmental justice populations as compared to non-environmental justice populations.

This environmental impact analysis for environmental justice populations concludes:

- Sound Transit conducted a robust, meaningful community engagement program that included a demographic analysis to identify low-income and minority populations. The study area includes block groups with concentrations of minority and low-income populations that are higher than the Sound Transit service district average.
- All alternatives would have limited cumulative and indirect impacts, as described in sections 5.2, Indirect Impacts, and 5.3, Cumulative Impacts.
- All build alternatives would result in potential direct impacts, as described in Table E.5-1. Direct impacts would be in areas with both similar and higher percentages of low-income and minority populations than the Sound Transit service district:
 - For the Preferred and South 344th Street alternatives, the majority of residential displacements occur in a block group that has low-income and minority populations similar to the Sound Transit service district. The Midway Landfill Alternative avoids residential displacements.
 - For all alternatives, business displacements occur in block groups that have higher percentages of low-income and minority populations than the Sound Transit service district. The same is true for displacement of social resources associated with the Preferred and South 344th Street alternatives.
 - For the Preferred and South 344th Street alternatives, high visual impacts occur in block groups that have both similar and higher percentages of low-income and minority populations than the Sound Transit service district. The Midway Landfill Alternative has moderate visual impacts in a block group with higher percentage of low-income and minority populations.

- Sound Transit would mitigate impacts for all populations through the application of measures presented in Chapter 3 of the Final EIS and summarized above in Table E.5-1 and Section 5, Project Impacts, Benefits, and Mitigation. Mitigation and enhancement measures would be applied equally between environmental justice and non-environmental justice populations. The design measures, best management practices, and other mitigation measures would address and reduce the project impacts; however, the visual impacts from the Preferred and South 344th Street alternatives would not be fully mitigated because of the scale of the mainline track.
- The project is anticipated to have direct and indirect benefits. Direct benefits include (1) enhanced community connectivity for the Preferred Alternative through public space and a multi-use trail integrated into the site design that would benefit the community the project is within, (2) construction jobs with project labor agreements and a DBE program to support hiring of minority populations, and (3) creation of new jobs to operate the facility that could benefit both environmental justice and non-environmental justice populations. Indirect benefits include supporting the Sound Transit 3 system expansion by providing capacity to ensure transit reliability, access, connectivity, frequency, and improved rider experience. There would be no denial of, reduction in, or significant delay in the receipt of benefits by minority or low-income populations.
- After consideration of the totality of the circumstances, including mitigation, offsetting direct and indirect benefits, and impacts, the net results of the project would not have disproportionate and adverse effects on minority and low-income populations as described under EO 12898, EO 14096, and DOT Order 5610.2C.

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ATTACHMENT A

EJScreen Reports





EJScreen Community Report

This report provides environmental and socioeconomic information for user defined areas, and combines that data into environmental justice and supplemental indexes.

Federal Way, WA



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	56%
Spanish	18%
French, Haitian, or Cajun	1%
Russian, Polish, or Other Slavic	4%
Other Indo-European	4%
Korean	4%
Chinese (including Mandarin, Cantonese)	1%
Vietnamese	3%
Tagalog (including Filipino)	1%
Other Asian and Paci c Island	2%
Other and Unspeci ed	6%
Total Non-English	44%

the User Specified Area Population: 8,283 Area in square miles: 3.50

COMMUNITY INFORMATION



LIMITED ENGLISH SPEAKING BREAKDOWN

From Ages 18 and up

From Ages 65 and up

Speak Spanish	18%
Speak Other Indo-European Languages	28%
Speak Asian-Paci c Island Languages	25%
Speak Other Languages	29%

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

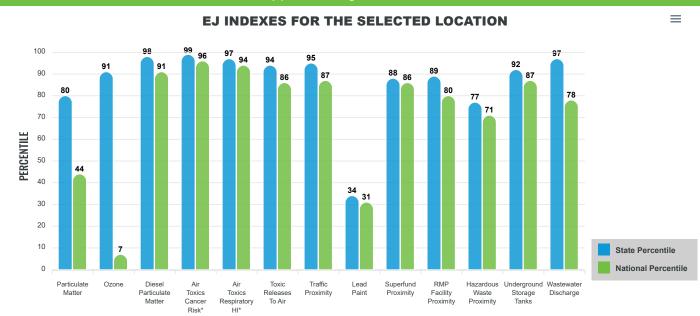
75%

15%

Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen re ecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the <u>EJScreen website</u>.

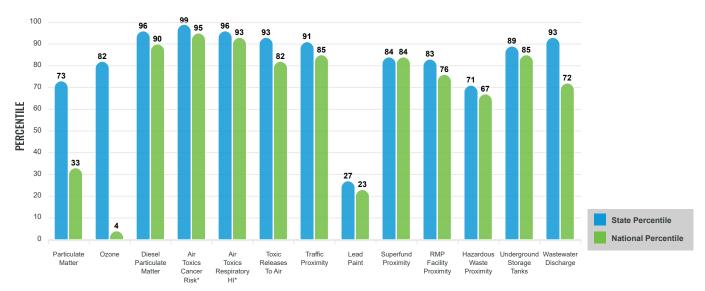
EJ INDEXES



The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community level vulnerability. They combine data on percent low income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.



SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION

These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for the User Specified Area

 \equiv

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE Average	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m ³)	6.9	7.02	43	8.08	18
Ozone (ppb)	50.7	49.8	60	61.6	2
Diesel Particulate Matter (μ g/m ³)	0.65	0.355	93	0.261	95
Air Toxics Cancer Risk* (lifetime risk per million)	38	27	37	25	52
Air Toxics Respiratory HI*	0.52	0.39	74	0.31	92
Toxic Releases to Air	1,500	1,800	71	4,600	67
Tra c Proximity (daily tra c count/distance to road)	350	190	87	210	86
Lead Paint (% Pre-1960 Housing)	0.021	0.23	20	0.3	19
Superfund Proximity (site count/km distance)	0.13	0.18	60	0.13	74
RMP Facility Proximity (facility count/km distance)	0.29	0.4	66	0.43	66
Hazardous Waste Proximity (facility count/km distance)	0.47	1.6	44	1.9	48
Underground Storage Tanks (count/km ²)	8.7	6.3	78	3.9	87
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0022	0.024	91	22	55
SOCIOECONOMIC INDICATORS					
Demographic Index	54%	28%	92	35%	78
Supplemental Demographic Index	18%	12%	85	14%	73
People of Color	71%	32%	93	39%	78
Low Income	38%	24%	78	31%	66
Unemployment Rate	5%	5%	58	6%	56
Limited English Speaking Households	17%	4%	95	5%	91
Less Than High School Education	11%	8%	73	12%	59
Under Age 5	7%	6%	67	6%	67
Over Age 64	15%	16%	51	17%	48
Low Life Expectancy	21%	18%	77	20%	61

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data to greate are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

Sites reporting to EPA within defined area:	
Superfund	_
	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
	32
Air Pollution	
Brown elds	
,	0
Toxic Release Inventory	
	0

Other community features within defined area:

Schools
Hospitals O
Places of Worship

Other environmental data:

Air Non-attainment	. No	D
Impaired Waters		
	Yes	s

Selected location contains American Indian Reservation Lands* No
Selected location contains a "Justice40 (CEJST)" disadvantaged community
Selected location contains an EPA IRA disadvantaged community

Report for the User Specified Area

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	21%	18%	77	20%	61
Heart Disease	6.1	5.3	72	6.1	52
Asthma	10.4	10.5	43	10	66
Cancer	6.6	6.3	59	6.1	59
Persons with Disabilities	11.6%	13.1%	43	13.4%	44

		CLIMATE	INDICATORS		
INDICATOR HEALTH VALUE		STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	6%	11%	55	12%	50
Wild re Risk	0%	12%	0	14%	0

CRITICAL SERVICE GAPS						
INDICATOR HEALTH VALUE STATE AVERAGE STATE PERCENTILE US AVERAGE US PERCENT						
Broadband Internet	13%	9%	75	14%	56	
Lack of Health Insurance	13%	6%	91	9%	78	
Housing Burden	Yes	N/A	N/A	N/A	N/A	
Transportation Access	Yes	N/A	N/A	N/A	N/A	
Food Desert	No	N/A	N/A	N/A	N/A	

Footnotes

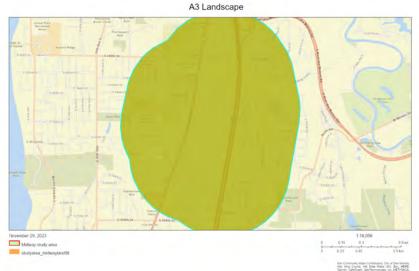
Report for the User Specified Area

www.epa.gov/ejscreen

EJScreen Community Report

This report provides environmental and socioeconomic information for user defined areas, and combines that data into environmental justice and supplemental indexes.

Kent, WA

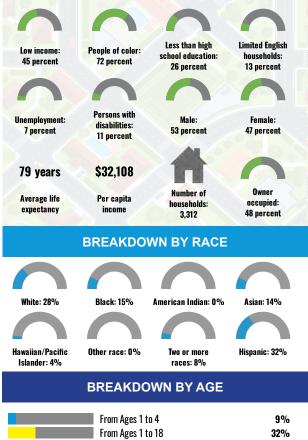


LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	41%
Spanish	29%
Other Indo-European	12%
Chinese (including Mandarin, Cantonese)	1%
Vietnamese	3%
Tagalog (including Filipino)	3%
Other Asian and Paci c Island	2%
Arabic	1%
Other and Unspeci ed	6%
Total Non-English	59%

the User Specified Area Population: 11,261 Area in square miles: 1.80

COMMUNITY INFORMATION



LIMITED ENGLISH SPEAKING BREAKDOWN

From Ages 18 and up

From Ages 65 and up

Speak Spanish	68%
Speak Other Indo-European Languages	17%
Speak Asian-Paci c Island Languages	6%
Speak Other Languages	8%

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

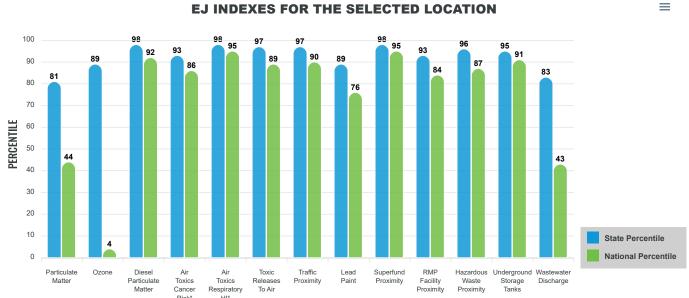
68%

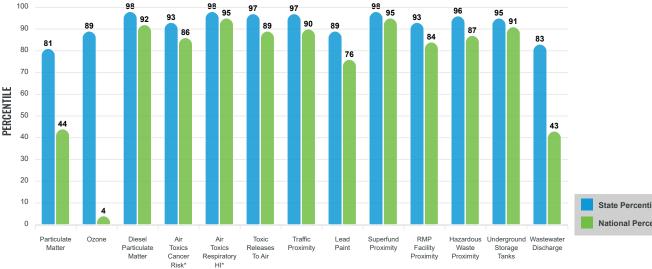
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Environmental Justice & Supplemental Indexes

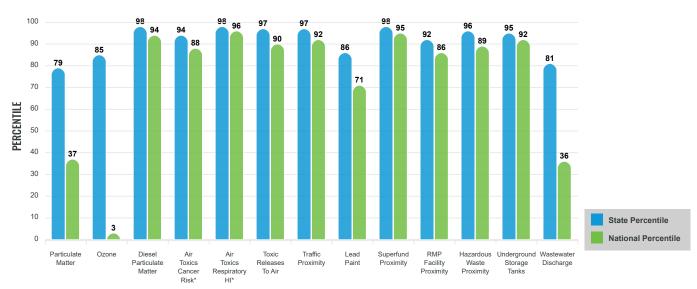
The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EI indexes and supplemental indexes in EIScreen re ecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the EJScreen website.

EJ INDEXES





SUPPLEMENTAL INDEXES



SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION

These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for the User Specified Area

 \equiv

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE Average	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m³)	6.85	7.02	41	8.08	17
Ozone (ppb)	49.6	49.8	51	61.6	1
Diesel Particulate Matter (µg/m ³)	0.565	0.355	88	0.261	93
Air Toxics Cancer Risk* (lifetime risk per million)	30	27	37	25	52
Air Toxics Respiratory HI*	0.52	0.39	74	0.31	92
Toxic Releases to Air	2,200	1,800	80	4,600	74
Tra c Proximity (daily tra c count/distance to road)	470	190	91	210	89
Lead Paint (% Pre-1960 Housing)	0.21	0.23	60	0.3	49
Superfund Proximity (site count/km distance)	1.7	0.18	99	0.13	99
RMP Facility Proximity (facility count/km distance)	0.33	0.4	69	0.43	69
Hazardous Waste Proximity (facility count/km distance)	2.6	1.6	81	1.9	78
Underground Storage Tanks (count/km ²)	10	6.3	81	3.9	88
Wastewater Discharge (toxicity-weighted concentration/m distance)	1.3E-05	0.024	51	22	18
SOCIOECONOMIC INDICATORS					
Demographic Index	59%	28%	94	35%	82
Supplemental Demographic Index	23%	12%	93	14%	85
People of Color	72%	32%	94	39%	79
Low Income	45%	24%	87	31%	75
Unemployment Rate	7%	5%	73	6%	70
Limited English Speaking Households	13%	4%	91	5%	88
Less Than High School Education	26%	8%	94	12%	88
Under Age 5	9%	6%	82	6%	82
Over Age 64	6%	16%	14	17%	13
Low Life Expectancy	19%	18%	66	20%	50

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

Sites reporting to EPA within defined area:				
Superfund				
Water Dischargers	13			
Air Pollution Brown elds	2			
Toxic Release Inventory	1			
	2			

Selected location contains American Indian Reservation Lands* No Selected location contains a "Justice40 (CEJST)" disadvantaged community Yes Selected location contains an EPA IRA disadvantaged community Yes

Report for the User Specified Area

Other community features within defined area:

Schools
Hospitals
Places of Worship

Other environmental data:

Air Non-attainment	No	
Impaired Waters		
	No	

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR HEALTH VALUE STATE AVERAGE STATE PERCENTILE US AVE					US PERCENTILE
Low Life Expectancy	19%	18%	66	20%	50
Heart Disease	4.9	5.3	39	6.1	26
Asthma	11.1	10.5	71	10	81
Cancer	4.7	6.3	14	6.1	21
Persons with Disabilities	10.8%	13.1%	37	13.4%	37

CLIMATE INDICATORS						
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE	
Flood Risk	1%	11%	22	12%	17	
Wild re Risk	0%	12%	0	14%	0	

CRITICAL SERVICE GAPS						
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE	
Broadband Internet	7%	9%	52	14%	34	
Lack of Health Insurance	15%	6%	95	9%	85	
Housing Burden	Yes	N/A	N/A	N/A	N/A	
Transportation Access	Yes	N/A	N/A	N/A	N/A	
Food Desert	Yes	N/A	N/A	N/A	N/A	

Footnotes

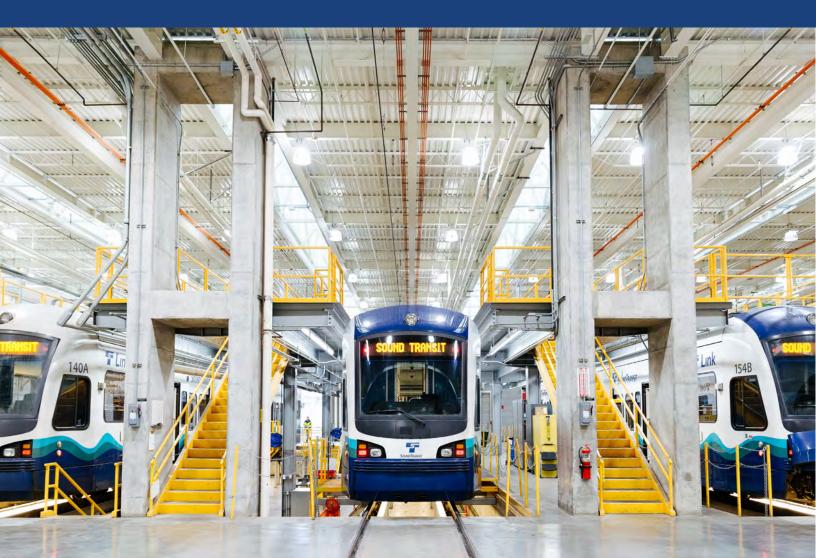
Report for the User Specified Area

www.epa.gov/ejscreen



Operations and Maintenance Facility South

Final Environmental Impact Statement Appendix F: Section 4(f) and Section 6(f) Assessment



Federal Transit Administration



June 2024

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Public Parks and Recreational Properties Reviewed for Section 4(f)

Table F.4-2

Acronyms and Abbreviations

APE	area of potential effect
BPA	Bonneville Power Administration
CFR	Code of Federal Regulations
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
FTA	Federal Transportation Administration
LRV	light rail vehicle
NHPA	National Historic Preservation Act of 1966
NRHP	National Register of Historic Places
OMF South	Operations and Maintenance Facility South
RCO	Washington State Recreation and Conservation Office
SHPO	State Historic Preservation Officer
Sound Transit	Central Puget Sound Regional Transit Authority
U.S.C.	U.S. Code

1 INTRODUCTION AND REGULATORY FRAMEWORK

The regulations at Title 23 of the Code of Federal Regulations (CFR), part 774 implement Title 23 of the U.S. Code (U.S.C.) section 138 and Title 49 of the U.S. Code section 303, which were originally enacted as Section 4(f) of the Department of Transportation Act of 1966 and are still commonly referred to as Section 4(f). Under these laws, the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) are generally prohibited from approving projects that would use land from:

...a significant publicly-owned park, recreation area or wildlife and waterfowl refuge or any significant historic site, unless there is no feasible and prudent alternative to the use of land from the property and the action includes all possible planning to minimize harm to the property resulting from the use.

A use is generally defined as a transportation activity that permanently or temporarily acquires land from a Section 4(f) property or that substantially impairs the important activities, features, or attributes that qualify the property as a Section 4(f) resource.

Section 4(f) applies to publicly owned parks and recreation areas that are open to the public; publicly owned wildlife and waterfowl refuges; and historic sites of national, state, or local significance. The Department of Transportation regulations for Section 4(f) define historic properties sites as those properties listed in or eligible for the National Register of Historic Places (NRHP).

This evaluation identifies potential Section 4(f) resources that may be used by the Operations and Maintenance Facility (OMF) South and any associated impacts to those resources. Other disciplines considered in this analysis include Transportation, Acquisitions, Displacements, and Relocations; Land Use; Visual and Aesthetic Resources; Noise and Vibration; Historic and Archaeological Resources; and Parks and Recreational Resources. A discussion of the affected environment, adverse impacts, and potential mitigation measures for each of these is found in Chapter 3 of the OMF South Final Environmental Impact Statement (EIS).

This appendix also considers any impacts under Section 6(f) of the 1965 Land and Water Conservation Fund Act of 1965 (54 U.S.C. section 2003), which prohibits the conversion of properties developed with funding from the Land and Water Conservation Fund to a nonrecreational purpose without approval of the U.S. Department of the Interior's National Park Service. Similar to Section 6(f), documentation and consultation are also required to approve any changes to or conversion of properties directly funded by the Washington State Recreation and Conservation Office (RCO; Title 79A Revised Code of Washington).

1.1 Study Area

The study area for this analysis is the same as the Parks and Recreational Resources analysis used in the Final EIS (Section 3.17), which encompasses the area of potential effect (APE) used for the Historic and Archaeological Resources analysis (Section 3.16).

The Parks and Recreational Resources study area includes existing parks, trails, recreation sites, dedicated open space areas, and adjacent public rights-of-way used for access to these facilities within 0.25 mile of each OMF South site. The study area is of a sufficient size to capture potential impacts from the construction and operation of the OMF South build alternatives (for example, visual effects or noise impacts) that could affect uses of 4(f) resources.

No 6(f) resources or designated wildlife and waterfowl refuges of national, state, or local significance have been identified in the study area. As a result, these resources are not discussed further.

The APE extends from the project elements (mainline, OMF sites, and construction staging areas) to the nearest tax parcel, or a maximum of 200 feet where large tax parcels are adjacent to project elements.

1.2 Section 4(f) "Uses"

Under Section 4(f), a use can be permanent, temporary, or constructive. **Permanent use** would acquire or incorporate all or part of a Section 4(f) property as part of the transportation facility.

Temporary use occurs when the project temporarily occupies any portion of the resource (typically during construction) and substantially impairs the resources. If all the conditions listed below are met, a temporary occupancy of land is not considered to constitute a use under Section 4(f):

- The project would occupy the property less than the time needed for the construction of the project and there will be no change in ownership;
- There are minimal changes to the Section 4(f) resource;
- There are no permanent adverse physical changes or interference with protected activities, features, or attributes of the resource;
- The land is restored to the same or better condition; and
- The federal, state, or local officials with jurisdiction over the resource and the authority over the land agree in writing that the use is not adverse.

Constructive use can occur when the project is near a Section 4(f) resource and has effects that substantially impair the protected activities, features, or attributes of the property. For example, a park property that is primarily a scenic viewpoint could have a constructive use if a transportation project blocks its views.

1.3 Approval of Projects That Use Section 4(f) Property

Although the use of Section 4(f) property is generally prohibited, a transportation use of a Section 4(f) property can be approved if:

 The use of the property meets the requirements for a regulatory exception established under Section 4(f). For instance, a temporary use can be allowed if it meets the temporary occupancy requirements described above,

Or:

• The use will have a *de minimis* impact on the property

Or:

• There is no feasible and prudent avoidance alternative to using the property

And:

• The program or project includes all possible planning to minimize harm to the property resulting from the use.

De minimis impacts are those that do not "adversely affect the activities, features, and attributes" of a Section 4(f) resource. A *de minimis* impact finding can consider any mitigation or enhancement measures that would be implemented, including design measures to avoid or reduce impacts. Before FTA can make this finding, it must send a written notice to the official with jurisdiction over the resource and there must be an opportunity for public notice and comment.

For public parks or recreation properties, a *de minimis* impact finding requires written concurrence from the official with jurisdiction over the property, such as a city or county parks department. There must also be an opportunity for public notice and comment.

For historic and archaeological sites eligible under National Register of Historic Places criteria A, B, or C, a *de minimis* impact finding is allowed if FTA has made a "no adverse effect" ¹ finding in compliance with Section 106 of the National Historic Preservation Act of 1966 (see Section 3.16 of the Final EIS, Historic and Archaeological Resources.). Before making a *de minimis* finding, FTA must send a written notice to the State Historic Preservation Office. If the State Historic Preservation Office concurs or does not object, FTA may proceed with its finding. When FTA has made a *de minimis* determination, the project is not required to analyze avoidance alternatives for that Section 4(f) property.

1.4 Avoidance Alternatives and Least Harm Analysis

If a project's Section 4(f) use is greater than *de minimis*, FTA is required to consider whether there are feasible and prudent alternatives that would avoid the use. Section 4(f) defines a feasible alternative as an alternative that could be built as a matter of sound engineering judgment. An alternative is prudent if:

- It meets the project purpose and need;
- It would not compromise the project to a degree that makes it unreasonable to proceed in light of its stated purpose and need;
- It would not cause extraordinary operational or safety problems;
- It would not cause any other unique problems or severe economic or environmental impacts;
- It would not cause extraordinary community disruption;
- The construction costs would not be of an extraordinary magnitude; and
- There are no other factors that collectively have adverse impacts that present unique problems or reach extraordinary magnitudes.

If the FTA finds that an alternative causes a Section 4(f) use and there is another alternative that is feasible and prudent, then the alternative that causes a Section 4(f) use must be removed from consideration. But if there are no prudent and feasible alternatives that can avoid all Section 4(f) resources, then FTA must choose the alternative that will have the least overall harm in light of the statute's preservation purpose. This is called the Least Harm Analysis.

¹ An adverse effect to an archaeological site eligible for the National Register of Historic Places only under criterion D is not considered a use under Section 4(f) evaluation.

2 PROPOSED ACTION

The Central Puget Sound Regional Transit Authority (Sound Transit) proposes to construct and operate OMF South to meet agency needs for an expanded fleet of light rail vehicles (LRVs) identified in Sound Transit 3: The Regional Transit System Plan for Central Puget Sound (Sound Transit 3). The OMF South project would be used to store, maintain, and deploy approximately 144 LRVs for daily service. It would provide facilities for vehicle storage, inspections, maintenance and repair, interior vehicle cleaning, and exterior vehicle washing. Additionally, the facility would receive, test, and commission new LRVs for the entire system.

OMF South would also be used to accommodate administrative and operational functions, such as serving as a report base for LRV operators. Included is a Maintenance of Way building for maintenance and storage of spare parts for tracks, vehicle propulsion equipment, train signals, and other infrastructure, in addition to storage facilities for the entire Link system. Other facility elements would include employee and visitor parking, operations staff offices, maintenance staff offices, dispatcher work stations, an employee report room, and areas with lockers, showers, and restrooms for both operators and maintenance personnel.

OMF South would need to have tracks connecting to a light rail line that will be operating when the facility is planned to open, which is the Federal Way Link Extension. The length and location of these connecting tracks varies by alternative.

Three site alternatives for the proposed project are evaluated in the Final EIS: two in Federal Way and one in Kent. These alternatives are named the Preferred Alternative, South 344th Street Alternative, and Midway Landfill Alternative, respectively.

3 SECTION 4(F) RESOURCES

This Section 4(f) assessment identified and considered potential impacts to publicly owned parks and recreation areas within 0.25 mile of each OMF South build alternative. NRHP-eligible historic properties in the area of impact were also evaluated.

Sound Transit's Section 4(f) evaluation is also informed by the research and coordination for Section 106 of the National Historic Preservation Act of 1966 (NHPA), as described in Section 3.16 of the Final EIS, and the Parks and Recreational Resources analysis (Section 3.17), which identify important features, qualities, and characteristics of potential Section 4(f) resources.

Parks and recreational resources within the study area that potentially qualify as Section 4(f) resources are shown on Figures F.3-1 and F.3-2 and listed in Tables F.4-1 and F.4-2 below. With the exception of the Bonneville Power Association's (BPA's) Tacoma-Covington No. 2, 3, and 4 and Tacoma-Raver No. 1 transmission lines, no previously identified historic period built environmental resources have been listed or found eligible for listing in the Washington Heritage Register and NRHP.

3.1 Public Parks and Recreation Areas

3.1.1 Preferred and South 344th Street Alternatives

Sound Transit identified two parks within the Parks and Recreational Resources study area for the Preferred and the South 344th Street alternatives that qualify as Section 4(f) properties: Cedar Grove Park and Town Square Park. The Pacific Rim Bonsai Museum and Rhododendron Species Foundation and Botanical Garden, located within the study area of the Preferred and the South 344th Street alternatives, would not qualify as a Section 4(f) property because it is owned by a nonprofit organization. In any case, there would be no impacts from the project on this property.

3.1.1.1 Cedar Grove Park, Federal Way

Cedar Grove Park is a 2.7-acre neighborhood park managed by the Federal Way Parks Department. It includes a playground, picnic facilities, grassy open space, paved trails, and a half-court basketball court. It is primarily surrounded by single-family residential homes, buffered by large trees and vegetation, and is accessible via S 333rd Street and various paths through the adjacent neighborhood.

3.1.1.2 Town Square Park, Federal Way

Town Square Park is a 4.1-acre community park constructed in 2014 in the Federal Way City Center and managed by the Federal Way Parks Department. This property is bounded by S 316th Street to the north, 20th Avenue S to the west, 21st Avenue S to the east, and a private parcel to the south. Federal Way improved the park in 2016 to make some features more permanent and add other features requested by the public. The park includes a track zip ride, children's play area, basketball court, parking, picnic area, restrooms, and a seasonal splash park. Federal Way considers Town Square Park to be a recreational resource of local significance, and therefore the park is being considered a Section 4(f) property.

3.1.2 Midway Alternative

In the Parks and Recreational Resources study area for the Midway Landfill Alternative, Sound Transit identified four developed parks and one public open space that qualify as Section 4(f) properties.

3.1.2.1 Parkside Park, Des Moines

Parkside Park is a 4.4-acre neighborhood park managed by Des Moines Parks and Recreation. The park features a paved trail system that is accessible per the American with Disabilities Act, providing access to all portions of the park. It also has a multiuse paved sport court, fitness equipment, picnic tables, and benches. Mature trees frame the central open lawn and active recreation areas. The park is located at 2518 S 244th Street in Des Moines.

3.1.2.2 Parkside Wetlands, Des Moines

Parkside Wetlands is a 14-acre natural area managed by Des Moines Parks and Recreation. The park includes trails that are interspersed within a dense mix of deciduous and coniferous forest and wetlands. This park is adjacent to Parkside Park on 26th Avenue S in Des Moines.

3.1.2.3 Salt Air Vista Park, Kent

This 2-acre neighborhood park is bordered by the Parkside wetlands on the west and is managed by Kent Parks. It features play equipment, a picnic area, open space, and trails. The park is located at 24615 26th Place S in Kent. It is two blocks west of SR-99. The park was recently renovated and reopened in May 2023.

3.1.2.4 Linda Heights Park, Kent

Linda Heights Park is a 4.2-acre park managed by Kent Parks. It features a half-court basketball, picnic table, play equipment, and public art. The park is adjacent to and east of I-5 and is buffered from the freeway by a wide stand of mature mixed forest. It is an RCO-funded park.

3.1.2.5 West Hill Park, Kent

West Hills Park is a 13-acre site owned by the city of Kent. It is undeveloped with no facilities. The park is adjacent to the Kent Armory and is composed of a grassy field and dense vegetation near the headwaters of Midway Creek.

All existing and designated parks and recreational properties that were reviewed for potential Section 4(f) eligibility are listed in Tables F.4-1 and F.4-2 in Section 4.1 below and shown on Figures F.3-1 and F.3-2.

3.2 Wildlife and Waterfowl Refuges

No designated wildlife and waterfowl refuges of national, state, or local significance exist in the study area.



N

0

1,000

2,000 Feet

FIGURE F.3-1 Parks and Recreational Resources Preferred and South 344th Street Alternatives



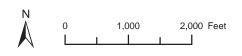


FIGURE F.3-2 Parks and Recreational Resources Midway Landfill Alternative

OMF South

3.3 Historic Sites

Evaluation of historic sites under Section 4(f) relates directly to evaluation of resources and impacts through the NHPA Section 106 process, the method by which a cultural resource's significance is determined for a federal undertaking. The results of the Section 106 analysis are a critical part of determining the applicability and outcome of the Section 4(f) use determination. Historic sites protected under Section 4(f) include "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places."

Section 3.16 of the Final EIS, Historic and Archaeological Resources, provides information on historic properties in the OMF South build alternatives APE. A total of 86 historic-period, builtenvironment resources were surveyed in the APE, of which 58 resources were old enough to meet minimum age criteria for NRHP eligibility consideration. Based on the survey results, FTA determined that there are two resources (Tacoma-Covington Nos. 2, 3, and 4 and Tacoma-Raver No. 1 transmission lines) that are eligible for listing in the NRHP in the APE. See Appendix G4, Historic and Archaeological Resources Technical Report, of the Final EIS for the correspondence from FTA and DAHP.

In 2020, BPA conducted its own Section 106 consultation with the State Historic Preservation Officer (SHPO) for the relocation of electrical transmission towers within the OMF South APE that would be impacted by the project. These towers included those along the Tacoma-Covington Nos. 2, 3, and 4 and Tacoma-Raver No. 1 transmission lines. BPA also determined that the transmission lines were eligible for listing in the NRHP, a finding with which SHPO concurred with in a letter dated August 19, 2021 (See Appendix G4).

4 PROJECT IMPACTS AND POTENTIAL MITIGATION

This section summarizes the potential impacts to Section 4(f) properties in the study areas for the OMF South project alternatives. Impacts include acquisition and conversion of properties to a transportation use, changes to access to a Section 4(f) property, and proximity impacts that could impair use of the property (which federal regulations refer to as a "constructive use"). Where this evaluation concludes there will be no Section 4(f) use, it means the project alternatives would not adversely affect Section 4(f) resources.

4.1 Impacts

The following analyses from the Final EIS were reviewed to determine whether project alternatives would result in a Section 4(f) use: Transportation (Section 3.2), Acquisitions, Displacements and Relocations (Section 3.3), Visual and Aesthetics (Section 3.7), Noise and Vibration (Section 3.9), Historic and Archaeological Resources (Section 3.16), and Parks and Recreational Resources (Section 3.17).

The mainline for the Preferred and South 344th Street alternatives would require the relocation of BPA powerlines. FTA and BPA determined, and SHPO concurred, that raising the transmission lines to accommodate the OMF South project would have no adverse effect on historic properties under Section 106. Due to this, FTA has determined that the Preferred and South 344th Street alternatives would have a *de minimis* impact under Section 4(f).

All other Section 4(f) resources are far enough away (300 feet or more) from the OMF South site alternatives and mainline that they would not experience any proximity-related impacts from the operation of OMF South. While LRVs travelling along the mainline could cause moderate noise impacts to some adjacent residents, those impacts would be mitigated, and would not affect 4(f) resources farther away.

The following minor, temporary effects to potential Section 4(f) resources in the study area may occur:

- Construction of the mainline tracks for the Preferred and South 344th Street alternatives could impact sensitive receptors within 250 feet of daytime pile driving activities, which may be necessary for construction of the elevated mainline. The project would require some utility locations on S 333rd Street, which borders Cedar Grove Park to the south. During construction, S 333rd Street could be affected by detour or lane closures east of the park, but the park would still be accessible from the west or north.
- For the Midway Landfill Alternative, there would be an increase in the number of construction truck trips along SR 99 and I-5, which border the site on the west and east, respectively, and are located between the site and the parks. The number of truck trips would vary depending on the subsurface design option, but it is expected that park properties would experience limited construction effects due to the existing traffic, noise, vibration, and visual effects from the normal operation of those roadways.
- It is possible some parks in the study area could be exposed to construction vehicle emissions, airborne dust, and noise impacts during construction. However, these effects are expected to be minor and temporary since the project would be held to comply with construction best management practices and permit conditions to minimize and control dust and vehicle emissions and to comply with local noise ordinances.
- Cedar Grove Park within the Preferred and South 344th Street alternative study area would be within the closest proximity to construction activities, at approximately 300 feet from

mainline construction, just beyond the range of noise impacts from pile driving activities, which may be necessary for construction of the elevated mainline. While construction noise and activities would be perceptible from the park, the impacts would be temporary and transitory in nature, and would not prevent use of the playground, basketball court, or other amenities that make the park an eligible 4(f) resource. The other parks, as mentioned above, would be outside the range of impacts described in the Final EIS or separated from the site by SR-99 and I-5, which would provide effective buffers from construction activities.

Based on review of these analyses in the Final EIS, none of the alternatives would require any land from any of the park properties for either construction or operation of OMF South, and no construction activities or operational activities of the project would rise to the level of a permanent, temporary, or constructive use under Section 4(f).

Because no wildlife or waterfowl refuges are in the study area, no such resources would be impacted.

Tables F.4-1 and F.4-2 list the park properties within the study area of the build alternatives, including the preliminary Section 4(f) determination.

Table F.4-1 Public Parks and Recreational Properties Reviewed for Section 4(f) Eligibility: Preferred and South 344th Street Alternatives

Park/Resource and Ownership	Size (acres)	Type or Function	Facilities	Potential Section 4(f) Resource	Section 4(f) Determination
Cedar Grove Park, City of Federal Way	2.6	Developed park	Trail walking, nature viewing, picnic area, play area	Yes	No use
Town Square Park, City of Federal Way	3.9	Developed park	Play areas, basketball, picnic area, splash park	Yes	No use
Pacific Rim Bonsai Museum and Rhododendron Botanical (privately owned)	22	Developed park	Walking, scenic viewing	No	Privately owned; Section 4(f) does not apply

Table F.4-2Public Parks and Recreational Properties Reviewed for Section 4(f)Eligibility: Midway Landfill Alternative

Park/Resource and Ownership	Size (acres)	Type or Function	Facilities	Potential Section 4(f) Resource	Section 4(f) Determination
Parkside Park, City of Des Moines	4.4	Developed park	Trail walking, multiuse sport court, fitness equipment, picnic tables and benches	Yes	No use
Parkside Wetlands, City of Des Moines	14	Developed park	Trail walking, nature viewing	Yes	No use
Salt Air Vista Park, City of Kent	2	Developed park	Trail walking, play equipment, picnic area, open space	Yes	No use
Linda Heights Park, City of Kent	4.2	Developed park	1/2 court basketball, picnic table, play equipment, open space	Yes	No use
West Hill Park, City of Kent	13	Undeveloped	Grassy field, no facilities	Yes	No use

4.2 Mitigation

As no impacts to Section 4(f) properties have been identified, no mitigation measures are anticipated.

5 RECORD OF COORDINATION

In letters to SHPO and BPA dated October 27, 2023, FTA determined that there would be no adverse effect to the BPA power lines, and disclosed that FTA was considering a *de minimis* impact finding under Section 4(f). SHPO concurred with FTA's no adverse effect determination and acknowledged FTA's Section 4(f) *de minimis* impact determination in a letter dated October 31, 2023. These correspondences are in Appendix G4, Historic and Archaeological Resources Technical Report, of the Final EIS. No other Section 4(f) properties would be affected. Due to this, no other formal consultation between FTA, Sound Transit, and agencies with jurisdiction over the Section 4(f) properties in the study area has occurred.

6 CONCLUSION

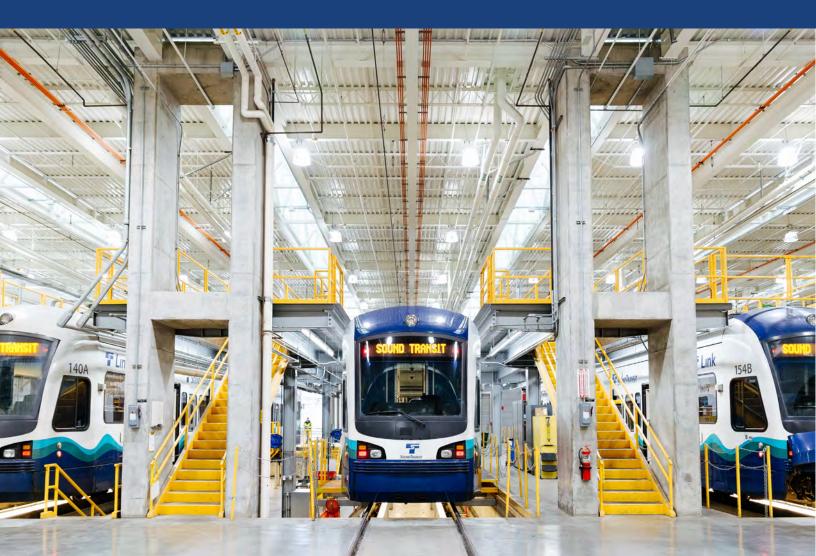
Section 4(f): Based on the analysis in the Final EIS, there would be a *de minimis* impact to the BPA powerlines with the Preferred and South 344th Street alternatives. None of the alternatives would require any land from any other Section 4(f) properties for either construction or operation of OMF South, and no other impacts would rise to the level of a Section 4(f) use. Because none of the alternatives would have more than a *de minimis* use on Section 4(f) properties, no mitigation for these individual properties is proposed.

Section 6(f): No 6(f) resources or designated wildlife and waterfowl refuges of national, state, or local significance have been identified in the study area. As a result, no mitigation for these resources is proposed.



Final Environmental Impact Statement

Appendix H: Supporting Information for Other Technical Analyses



Federal Transit Administration



June 2024

Appendix H: Supporting Information for Other Technical Analyses

Appendix H1	Potentially Affected Parcels
Appendix H2	Land Use Technical Appendix
Appendix H3	Visual and Aesthetic Resources Technical Appendix
Appendix H4	Air Quality and Greenhouse Gas Emissions Technical Appendix
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Appendix H1: Potentially Affected Parcels





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APPENDIX H1: POTENTIALLY AFFECTED PARCELS

The Operations and Maintenance Facility (OMF) South project would require property acquisitions, displacements, and relocations of existing uses. This appendix lists potentially affected parcels associated with each build alternative based on current conceptual designs and the existing conditions at the time the analysis was conducted. The properties listed and mapped in this appendix are intended to be used for comparison across alternatives and should not be interpreted as the final determination regarding property acquisitions because the list will be updated as the project design is refined. Accordingly, the number and type of displacements could vary between what is disclosed in this Draft Environmental Impact Statement and what is ultimately required.

For the purposes of this analysis, potentially affected parcels are presented as a combined number that considers two types of property acquisitions — partial and full acquisitions — described below:

- **Partial acquisitions**, which would acquire part of a parcel but not displace the current use. In some instances, businesses or residential units on a parcel would be displaced. Partial acquisitions also include permanent guideway and maintenance easements.
- **Full acquisitions**, which would acquire the full parcel and displace the current use. Full acquisitions include parcels that might not be fully needed for the project but would be affected to the extent that existing uses would be substantially impaired, such as by loss of parking or access. This includes parcels that would be acquired for construction activities, although in some cases all or part of the parcel would be available for other use or for redevelopment after construction is complete.

In addition to the potential property acquisitions, the project would also require temporary construction easements (TCEs) and use of public right-of-way, which are not listed in this appendix. TCEs would be needed for roadway improvements, culvert replacements, staging areas, construction access, and other temporary construction activities. When construction is complete, these properties would be restored to their previous conditions or better. The temporary construction activities would not substantially disrupt or permanently displace existing uses.

Property impacts were determined using King County Assessor's information and aerial imagery. Table H1-1 presents the potentially affected parcels for each of the OMF South build alternatives. The parcels listed in Table H1-1 are also shown in Figures H1-1 through H1-4, according to the alternative. Parcels are identified in the figures using Map ID numbers which were created uniquely for this project. These Map ID numbers correlate with the King County parcel ID numbers listed in Table H1-1, along with other parcel information including address and generalized land use.

Map ID	Parcel ID	Address	Generalized Land Use	Preferred Alternative	South 344th Street Alternative	Midway Landfill Alternative
OMF001	2222049113	XXX S 240TH ST	Vacant			Х
OMF001.1	2222049228	XXX S 240TH ST	Vacant			Х
OMF002	5514000060	XXX PACIFIC HWY S	Public			Х
OMF004	5514000030	XXX PACIFIC HWY S	Vacant			Х
OMF005	2122049046	24300 PACIFIC HWY S	Commercial			Х
OMF006	2122049068	24481 32ND AVE S	Vacant			Х
OMF008	2222049168	XXX S 240TH ST	Public			Х
OMF009	2122049021	24650 PACIFIC HWY S	Public			Х
OMF011	3602400186	24453 PACIFIC HWY S	Commercial			Х
OMF012	3601800160	24615 PACIFIC HWY S	Commercial			Х
OMF015	3601800165	24619 PACIFIC HWY S	Commercial			Х
OMF016	3601800170	24635 PACIFIC HWY S	Vacant			Х
OMF017	3601800320	24635 PACIFIC HWY S	Vacant			Х
OMF018	3601800295	24645 PACIFIC HWY S	Church			Х
OMF024	2122049025	3100 S 248TH ST	Public			Х
OMF025	2122049006	24602 PACIFIC HWY S	Commercial			Х
OMF026	2122049170	24620 PACIFIC HWY S	Commercial			Х
OMF027	3601800076	24620 PACIFIC HWY S	Commercial			Х
OMF028	2122049026	24800 PACIFIC HWY S	Public			Х
OMF029	3601800101	24800 PACIFIC HWY S	Commercial			Х
OMF030	3601800115	XXX PACIFIC HWY S	Public			Х
OMF031	3601800145	24799 28TH AVE S	Public			Х
OMF032	2122049033	3000 S 248TH ST	Public			Х
OMF033	2122049014	2900 S 252ND ST	Public			Х
OMF034	2122049055	24800 PACIFIC HWY S	Public			Х
OMF035	2122049156	24805 PACIFIC HWY S	Commercial			Х
OMF037	2122049117	24820 PACIFIC HWY S	Public			Х
OMF043	2122049137	2926 S 252ND ST	Public			Х
OMF050	1950900125	3025 S 252ND ST	Residential - Single-Family			Х
OMF050.1	1950900123	XXX S 252ND ST	Vacant			Х
OMF051	1950900130	3019 S 252ND ST	Residential - Single-Family			Х
OMF052	1950900135	3011 S 252ND ST	Residential - Single-Family			х
OMF053	1950900140	3005 S 252ND ST	Residential - Single-Family			Х
OMF054	1950900085	2947 S 252ND ST	Residential - Single-Family			Х
OMF055	1950900080	2939 S 252ND ST	Residential - Single-Family			Х
OMF056	1950900075	2933 S 252ND ST	Residential - Single-Family			Х

Table H1-1 Potentially Affected Parcels by Alternative

Table H1-1	Potentially Affected Parcels by Alternative (continued)
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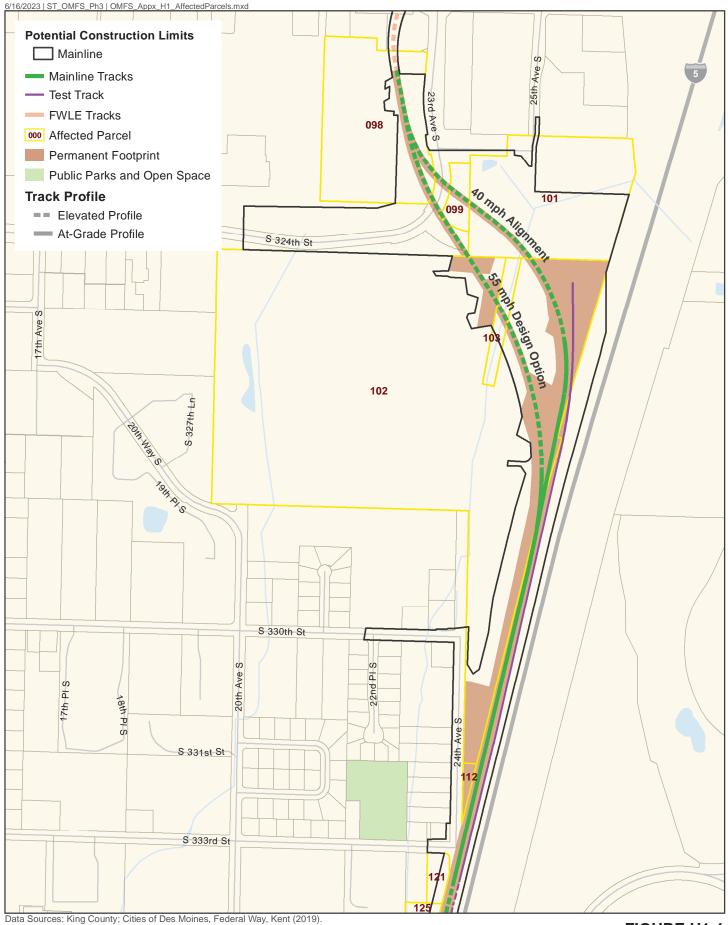
Map ID	Parcel ID	Address	Generalized Land Use	Preferred Alternative	South 344th Street Alternative	Midway Landfill Alternative
OMF057	1950900070	2925 S 252ND ST	Residential - Single-Family			Х
OMF058	1950900065	2919 S 252ND ST	Residential - Single-Family			Х
OMF059	1950900060	2911 S 252ND ST	Residential - Single-Family			Х
OMF060	1950900055	2905 S 252ND ST	Residential - Single-Family			Х
OMF061	1950900005	25205 29TH AVE S	Residential - Single-Family			Х
OMF078	1951500015	3018 S 253RD ST	Residential - Single-Family			Х
OMF078.1	1951500017	XXX S 252ND ST	Vacant			Х
OMF079	1951500020	3022 S 253RD ST	Residential - Single-Family			Х
OMF098	7622400019	2201 S COMMONS	Commercial	Х	Х	
OMF099	7622400020	32320 23RD AVE S	Vacant	Х	Х	
OMF101	7978200526	2500 S 320TH ST	Public	Х	Х	
OMF102	1621049037	2101 S 324TH ST	Residential - Multi-Family	Х	x	
OMF112	7978200260	33201 24TH AVE S	Vacant	Х	Х	
OMF121	7978200180	2245 S 333RD ST	Residential - Single-Family	Х	х	
OMF125	7978200186	2253 S 333RD ST	Residential - Multi-Family	Х	x	
OMF126	7978200210	2230 S 336TH ST	Residential - Single-Family	Х	x	
OMF127	7978200215	2234 S 336TH ST	Residential - Single-Family	Х	x	
OMF128	7978200220	2246 S 336TH ST	Residential - Single-Family	Х	x	
OMF129	7978200225	2250 S 336TH ST	Residential - Single-Family	Х	x	
OMF138	7978200070	1812 S 336TH ST	Commercial	Х		
OMF150	2121049003	33652 20TH AVE S	Church	Х	X	
OMF151	2121049004	33645 20TH AVE S	Church	Х	X	
OMF152	2121049069	1641 S 336TH ST	Vacant	Х		
OMF154	2121049037	33608 PACIFIC HWY S	Vacant	Х		
OMF156	2121049026	33832 PACIFIC HWY S	Vacant	Х		
OMF164	2121049024	1700 S 340TH ST	Church	Х		
OMF165	2121049041	1724 S 340TH ST	Residential - Single-Family	Х		
OMF166	2121049042	1800 S 340TH ST	Residential - Single-Family	Х	x	
OMF167	2121049040	1816 S 340TH ST	Residential - Single-Family	Х	x	
OMF168	2121049039	1828 S 340TH ST	Residential - Single-Family	Х	x	
OMF169	2121049047	1920 S 340TH ST	Residential - Single-Family	Х	Х	
OMF171	3903800110	1626 S 341ST PL	Commercial	Х		
OMF172	3903800140	1620 S 341ST PL	Commercial		X	

Table H1-1	Potentially Affected Parcels by Alternative (continued)
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Map ID	Parcel ID	Address	Generalized Land Use	Preferred Alternative	South 344th Street Alternative	Midway Landfill Alternative
OMF173	3903800130	1710 S 341ST PL	Commercial		Х	
OMF174	3903800120	1720 S 341ST PL	Commercial		Х	
OMF175	3903800100	34008 18TH PL S	Commercial	Х	Х	
OMF176	3903800090	1800 S 341ST PL	Commercial	Х	Х	
OMF177	3903800080	1820 S 341ST PL	Commercial	Х	Х	
OMF178	3903800070	1908 S 341ST PL	Commercial	Х	Х	
OMF179	3903800060	1916 S 341ST PL	Vacant	Х	Х	
OMF180	2121049082	1924 S 341ST PL	Commercial	Х	Х	
OMF181	2121049061	2102 S 341ST PL	Commercial	Х	Х	
OMF182	2121049085	2110 S 341ST PL	Commercial	Х	Х	
OMF183	2121049033	34114 21ST AVE S	Commercial	Х	Х	
OMF185	2121049048	2025 S 341ST PL	Commercial		Х	
OMF186	2121049060	2011 S 341ST PL	Commercial		Х	
OMF187	3903800050	1925 S 341ST PL	Church		Х	
OMF188	3903800040	1909 S 341ST PL	Church		Х	
OMF189	3903800030	1909 S 341ST PL	Vacant		Х	
OMF190	3903800020	1707 S 341ST PL	Commercial		Х	
OMF191	2693300000	2010 S 344TH ST	Commercial	Х	Х	
OMF192	2121049072	1936 S 344TH ST	Vacant		Х	
OMF193	2121049007	1934 S 344TH ST	Vacant		Х	
OMF194	2121049045	1928 S 344TH ST	Commercial		Х	
OMF195	2121049044	1910 S 344TH ST	Commercial		Х	
OMF196	2121049056	1916 S 344TH ST	Residential - Single-Family		x	
OMF197	4129600005	34204 18TH PL S	Residential - Single-Family		x	
OMF198	4129600010	34212 18TH PL S	Residential - Single-Family		x	
OMF199	4129600015	34220 18TH PL S	Residential - Single-Family		x	
OMF200	4129600020	34228 18TH PL S	Residential - Single-Family		x	
OMF201	4129600025	34234 18TH PL S	Residential - Single-Family Residential -		X	
OMF202	4129600030	34242 18TH PL S	Single-Family Residential -		X	
OMF203	4129600035	34250 18TH PL S	Single-Family Residential -		X	
OMF204	4129600040	1824 S 344TH ST	Single-Family Residential -		X	
OMF205	4129600080	34205 18TH PL S	Single-Family Residential -		X	
OMF206	4129600075	34213 18TH PL S	Single-Family		X	
OMF207	4129600070	34221 18TH PL S	Residential - Single-Family		Х	
OMF208	4129600065	34229 18TH PL S	Residential - Single-Family		Х	

Map ID	Parcel ID	Address	Generalized Land Use	Preferred Alternative	South 344th Street Alternative	Midway Landfill Alternative
OMF209	4129600060	34235 18TH PL S	Residential - Single-Family		x	
OMF210	4129600055	34243 18TH PL S	Residential - Single-Family		х	
OMF211	4129600050	34251 18TH PL S	Residential - Single-Family		х	
OMF212	4129600045	34259 18TH PL S	Residential - Single-Family		х	
OMF216	2121049088	1820 S 347TH PL	Vacant	Х	X	
OMF217	2121049010	34520 16TH AVE S	Commercial		Х	
OMF270	3602400178	24441 PACIFIC HWY S	Commercial			Х
OMF271	3602400182	24443 PACIFIC HWY S	Commercial			Х
OMF597	2500900030	34404 16TH AVE S	Commercial		Х	
OMF598	2500900040	34410 16TH AVE S	Commercial		Х	
OMF606	3903800010	1607 S 341ST PL	Commercial	Х	Х	
OMF607	3903800015	1625 S 341ST PL	Commercial		Х	
OMF608	3903800150	1610 S 341ST PL	Commercial	Х	Х	
OMF669	3601800210	24641 PACIFIC HWY S	Vacant			Х

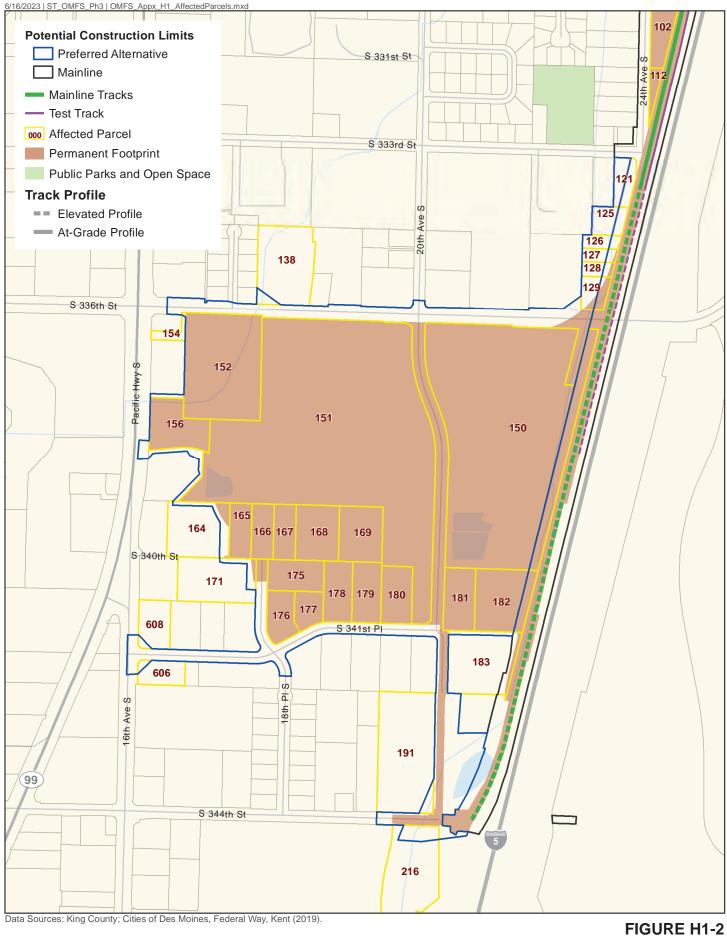
Table H1-1 Potentially Affected Parcels by Alternative (continued)



N 0 500 1,000 Feet

FIGURE H1-1 Potentially Affected Parcels Mainline Track Options

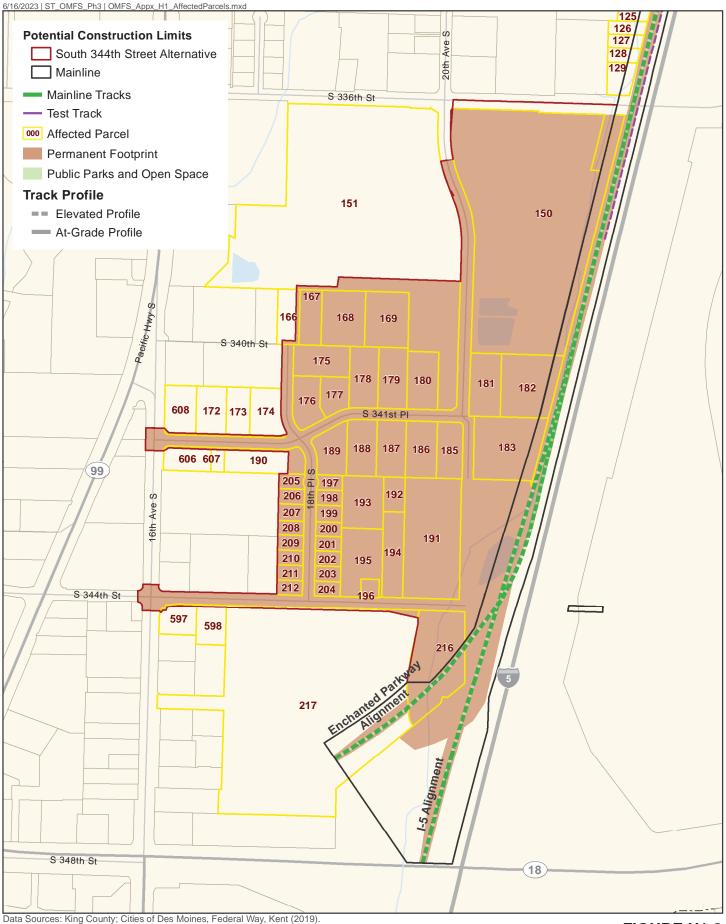
OMF South



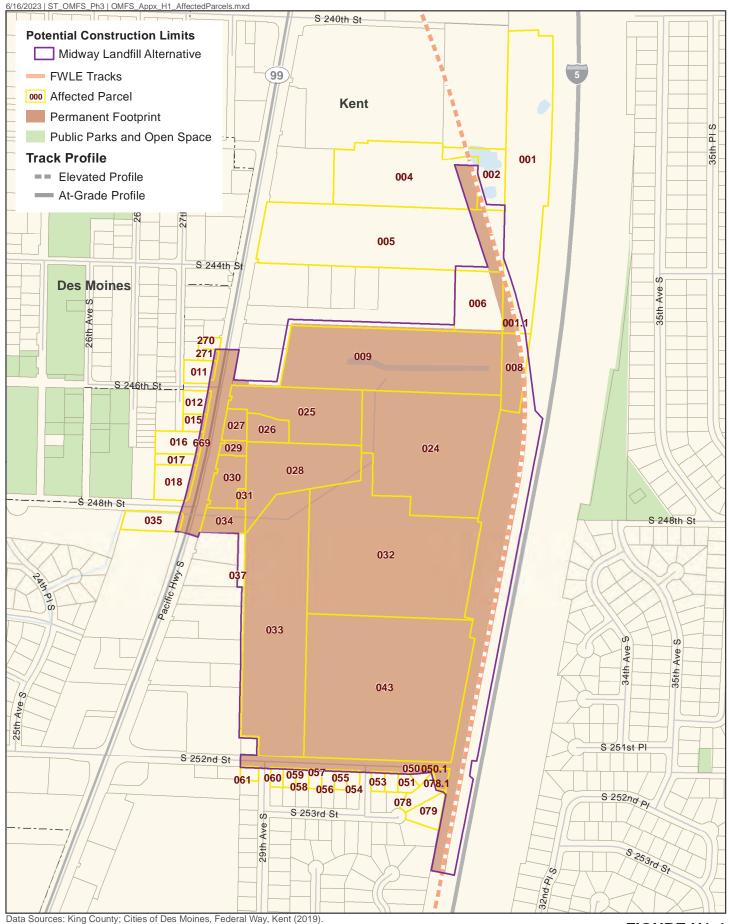
N 0 500 1,000 Feet

FIGURE H1-2 Potentially Affected Parcels Preferred Alternative

OMF South



N 0 500 1,000 Feet FIGURE H1-3 Potentially Affected Parcels South 344th Street Alternative



500

1,000 Feet

FIGURE H1-4 Potentially Affected Parcels Midway Landfill Alternative

OMF South



Appendix H2: Land Use Technical Appendix





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APPENDIX H2: LAND USE TECHNICAL APPENDIX

1.1 Methods

Environmental impacts associated with land use were assessed by examining data collected from local jurisdictions and local and regional land use plans and policies. Local plans, policies, and zoning were reviewed to determine the proposed project's consistency with local regulations. Geographic information system (GIS) data, aerial photographs, and verification techniques were used to assess land use compatibility. Because comprehensive plan land use and zoning code designations vary in definition depending on the jurisdiction (i.e., the cities of Kent, Federal Way, and Des Moines, as well as King County), land uses were generalized into dominant land use categories to compare them consistently. The generalized land use categories include single-family residential, multi-family residential, commercial/industrial, public/institutional, and vacant. These categories were also used to classify the existing land use for potentially affected parcels for each of the build alternatives.

1.1.1 Data Sources

- City of Federal Way Comprehensive Plan maps and GIS data (land use designations, zones, subarea plan boundaries) (City of Federal Way 2023a)
- City of Kent Comprehensive Plan maps and GIS data (land use designations, zones, subarea plan boundaries) (City of Kent 2011, 2019b, 2022)
- City of Des Moines Comprehensive Plan maps and GIS data (land use designations, zones, subarea plan boundaries) (City of Des Moines 2020)
- King County Department of Assessments parcel GIS data and present land uses (King County 2019)
- Puget Sound Regional Council (PSRC) Demographics and Land Use Vision data and GIS data (PSRC 2017, 2019)

1.2 Resources and Regulatory Requirements

Development of the proposed Operations and Maintenance Facility (OMF) South project would result in direct land use conversions within the footprint of the OMF site for each of the build alternatives. The OMF project could also indirectly influence land use conversions or change land use patterns in surrounding areas. The policies, plans, and documents governing land use in the study area for the proposed project are listed below:

1.2.1 State and Regional

- Washington State Growth Management Act (GMA), originally adopted in 1990, and primarily codified under the Revised Code of Washington (RCW) Chapter 36.70A (Growth Management – Planning by Selected Counties and Cities) and Essential Public Facility under RCW 36.70A.200
- PSRC Vision 2050, adopted 2020 (PSRC 2020)
- PSRC, The Growing Transit Communities Strategy A Transit Corridor Action Agenda for the Central Puget Sound Region (2013)
- PSRC, Regional Transportation Plan, adopted in May 2018. This plan is an update of Transportation 2040, which was adopted in 2010

- Sound Transit Regional Transit Long-Range Plan, adopted in December 2014 (Sound Transit 2014)
- Sound Transit Equitable Transit Oriented Development (TOD) Policy (Board Resolution No. R2018-10) addresses how the agency should consider potential for TOD development near transit facilities being planned and studied and reflects the requirements of Sound Transit 3 and the RCW 81.112.350, the agency's enabling legislation (Sound Transit 2018)
- Sound Transit Real Property Excess, Surplus and Disposition Policy (Board Resolution No. R2013-30) (Sound Transit 2013)

1.2.2 Local

- The city of Des Moines Municipal Code is current through Ordinance 1784, passed November 2023
- The city of Kent Midway Subarea Plan was adopted in December 2011
- Kent City Code was most recently amended in December 2023. Title 15 Zoning within the KCC was most recently amended in August 2023 (adopted in May 1983), and Chapter 15.15, High Capacity Transit Facilities, is under Title 15 zoning
- The Federal Way Revised Code Zoning is current through Ordinance 22-942 which was passed in December 2023 (annual updates are expected)
- The King County Zoning Code was last updated in November 2023 and is expected to have annual updates (originally the code was adopted through Ordinance 11621, Section 1 (part) and Ordinance 10870, Section 2, 1993)
- The 2015 Comprehensive Plan for the city of Federal Way, last amended in 2023
- The 2015 Comprehensive Plan for the city of Kent, last amended in 2022
- The 2015 Comprehensive Plan for the city of Des Moines, referred to as Des Moines 2035, last amended in 2020
- The King County 2016 Comprehensive Plan, last amended in 2022
- City of Kent Change of Use or Occupancy Classification (2016)
- The city of Federal Way Shoreline Master Program, last updated in 2019
- The city of Kent Shoreline Master Program, last updated in 2019
- Highline College Master Plan (adopted 2016)

1.3 Affected Environment

Each OMF South build alternative will be developed within the context of the Washington State GMA. The GMA is a series of state statutes originally adopted in 1990, and the GMA Chapter, Growth Management - Planning by Selected Counties and Cities (codified under RCW Chapter 36.70A) describes the development context. Essentially, the GMA requires higher-growth local governments (cities and counties) to develop comprehensive plans to manage growth through several measures and a series of goals. These measures include the identification and protection of critical areas and natural resource land, designation of urban growth areas, and preparation and implementation of comprehensive plans through capital investments and development goals. The proposed project is within the urban growth boundaries of the cities of Kent and Federal Way.

The GMA also ensures that zoning is consistent with comprehensive plans, and it prohibits local governments from precluding the siting of essential public facilities either through comprehensive plans or zoning (RCW 36.70A.200, section 5). As a "regional transit authority facility," the proposed project is considered an essential public facility by the GMA (RCW 36.70A.200). Therefore, local jurisdictions would be required to avoid preclusion of the project and would need to accommodate it in their comprehensive plans, land use goals and policies, and development regulations once Sound Transit selects the alternative to be built.

1.3.1 Preferred and South 344th Street Alternatives

The Preferred and South 344th Street alternatives are located in the city of Federal Way. While these alternatives are not located in a subarea plan, they are still covered under the Federal Way Comprehensive Plan.

The Land Use chapter of the comprehensive plan includes policies supporting transit under various comprehensive plan land use designations. These land use designations provide the purposes and goals for different zoning districts (City of Federal Way 2023a). The multi-family land use designation encourages street patterns and amenities that increase transit use. In addition, commercial land uses promote commercial development along street edges. Community business land uses encourage the transformation of the Pacific Highway community business corridors into mixed-use areas including commercial and office and high-quality midrise developments (three to seven stories). These areas will be designed to integrate auto, pedestrian, and transit circulation to support traffic flow and safety and ensure quality site and building design and functional and aesthetic compatibility between uses.

The Preferred and South 344th Street alternatives are primarily within the Multi-Family Residential (RM) land use designation, in addition to smaller areas within Commercial Enterprise (CE), City Center Core (CC-C), and Commercial Business (CB) designations (City of Federal Way 2023a). The Federal Way Comprehensive Plan also promotes "creating a city center as an area of concentrated employment and housing served by high capacity transit, public facilities, parks, and open space" (City of Federal Way 2023a). Federal Way has a Regional Growth/Urban Center identified as the "City Center," which is situated in the same area as the CC-C mixed-use zone.

Federal Way has been designated as a Regional Growth Center by the PSRC (2020), generally due to its potential for urban growth in the region. The mainline tracks extending from the Federal Way Transit Center to the Preferred and South 344th Street alternatives would be located in this CC-C zone. In addition, Federal Way was designated a Countywide Growth Center Candidate by the King County Growth Management Planning Council, making Federal Way eligible to receive PSRC transportation grants (City of Federal Way 2024). The Countywide

Growth Center designation requires Federal Way to prepare a subarea plan that will be adopted as part of its 2024 update to its comprehensive plan. The South Station Subarea Plan is a small geographic long-range plan that is envisioned to serve as a policy guide for future development around the future Federal Way Downtown station (City of Federal Way 2024).

1.3.2 Midway Landfill Alternative

The Midway Landfill Alternative is within the city of Kent's Midway Subarea as identified in their comprehensive plan. This subarea is located in the western portion of Kent along a north-south ridgeline situated between the Duwamish/Green River Valley and the Puget Sound. The subarea shares a boundary with the cities of Des Moines, SeaTac, and Federal Way, as well as unincorporated King County. The Midway Subarea is bound to the north by State Route (SR) 516 and to the south by S 272nd Street. It is less than 5 miles south of the Seattle-Tacoma International Airport, with direct access to Interstate 5 via SR 516 and is approximately 2 miles from the Kent North Valley Industrial Area.

The Midway Subarea Plan was inspired by the prospect of a high-capacity light rail transit system. The overall goal of the plan is to "create a dense, pedestrian-friendly, sustainable community [...] around nodes of high-capacity mass transit while maintaining auto-oriented uses between the transit-oriented nodes" (City of Kent 2011). The intent for the area is to transition it from low-density residential and commercial uses to higher-density development within transit station nodes, including a mixture of services, office, and residential uses. The Midway Subarea Plan identifies policies to ensure new development in the Midway Subarea will have transit-supported features; the city is expected to work with Sound Transit during all phases of light rail extension planning to ensure Kent's preferred rail alignment and station location are realized. The plan also outlines policies for pedestrian-friendly development design features by establishing a multimodal circulation network within areas designated Transit Oriented Community. Specific goals within the plan are as follows:

- 1) Provide a mix of land uses in the hopes of increasing revenues, job opportunities, and housing choices.
- 2) Reconcile development standards along the border between Kent and Des Moines for consistency.
- 3) Provide for public transportation in the development of land use policies, development regulations, and implementation strategies.
- 4) Provide appropriate land uses and regulations that support bus rapid transit within the Pacific Highway corridor.
- 5) Identify preferred alignments for the light rail and accompanying station and stop locations within Kent and Des Moines.
- 6) Ensure design that provides a safe and inviting pedestrian environment.

The Federal Way Link Extension (FWLE) light rail alignment and future Kent/Des Moines Station (between S 236th Street and S 234th Street) are located within the Midway Subarea Plan, and the proposed OMF South project would be located within the Pacific Highway South commercial transportation corridor portion of the Midway Subarea Plan. The Pacific Highway South commercial area of the Midway Subarea plan is intended for auto-oriented commercial and light industrial uses. The proposed use (maintenance facility buildings) would be similar in scale and development intensity as light industrial uses and would be consistent with the urban character intended for this area.

1.4 Land Use Tables

The following tables (Table H2-1 through Table H2-10) concern OMF South's consistency with the primary dimensional standards of zoning codes, land use regulations, and comprehensive plan policies for Kent and Federal Way that would pertain to the project. Tables H2-1 and H2-2 address the Preferred, South 344th Street, and Midway Landfill alternatives' consistency with the description and intent of the zoning types located within their project footprints. Table H2-3 lists the permitted and conditional uses within the various land use types under each zoning category for the Preferred and South 344th Street alternatives in the city of Federal Way. Table H2-4 lists the permitted and non-permitted uses within the various land use types under each zoning category for the Midway Landfill Alternative in the city of Kent. Tables H2-5 through H2-7 discuss the consistency of the OMF South project with each alternative's city comprehensive and subarea plans. Lastly, Tables H2-8 and H2-9 list the acreage of each zone within the project alternative study areas, and Table H2-10 displays the acreage of zoning type that would be acquired by each alternative.

1.4.1 Study Area Zoning

City of Federal Way Zone	Purpose, Select Development Standards	Consistency with Applicable Policies
CC-C: City Center Core	The purpose and intent of establishing a City Center Core is to create a higher density, mixed use designation where office, retail, government uses, and residential uses are concentrated. Other uses such as culture/civic facilities and community services are highly encouraged. Select Development Standards: Height limitation is 75 feet for a light rail or commuter rail transit facility. There is no minimum lot size for light rail or commuter transit facilities, except for 20 feet along single-family residential zones.	Both alternatives would convert approximately 17 acres of CC-C zoned property adjacent to I-5 to construct the mainline tracks. The CC-C zone is in a Regional Growth Center (PSRC 2020) where future land uses encourage concentrated mixed-use development. The addition of the mainline tracks could restrict future development immediately adjacent to the proposed site, but, overall, the small, elongated footprint of the mainline tracks would not preclude development of the CC-C zone as envisioned. This zone lists light rail or commuter rail transit facilities as a permitted land use, which could encompass the use of transportation operation and maintenance facilities. The mainline tracks could possibly provide additional light rail access to this center through the addition of the proposed Tacoma Dome Link Extension light rail service. Light rail facilities would require a Process IV review.
RM-2400 and RM-3600: Multi- Family	The purpose and intent of the multi-family residential land use designation is to provide a range of housing types to accommodate anticipated residential growth. Select Development Standards: The light rail or commuter rail transit facility use is not recognized in the RM zone. The Washington State Growth Management Act prohibits local governments from precluding the siting of essential public facilities through zoning. OMF South is a "regional transit authority facility" and is, therefore, explicitly recognized as an essential public facility in the Growth Management Act (RCW 36.70A.200).	The mainline tracks and a portion of the maintenance and operations facility would occupy approximately 72 acres of multi-family zoning for the Preferred Alternative and approximately 43 acres of multi-family zoning for the South 344th Street Alternative. These multi-family zones are intended to be used to accommodate housing growth and meet a range of housing needs. There are no development standards specified for essential public facilities. However, OMF South would enter into a Development Agreement with the City of Federal Way to ensure consistency with the Comprehensive Plan.

Table H2-1 Preferred and South 344th Street Alternatives Zones Description and Consistency

Table H2-1Preferred and 344th Street Alternative Zones Description and
Consistency (continued)

City of Federal Way Zone	Purpose, Select Development Standards	Consistency with Applicable Policies
BC: Community Business	The purpose and intent of the Community Business designation is to support a broad mix of uses. This designation envisions mid-rise, high-quality developments containing a vibrant and compatible mix of well-integrated and designed pedestrian- oriented and auto-oriented uses.	The Preferred Alternative would occupy approximately 2 acres of the BC zone adjacent to SR 99 around the guard house entrance. The broad mix of uses planned for this area could incorporate the OMF South project if the area is focused on a mix of commercial and office uses targeted for this zone. The BC zone is urban in character, with no maximum lot coverage.
	Select Development Standards: The light rail or commuter rail transit facility use is not recognized in the BC zone. The Washington State Growth Management Act prohibits local governments from precluding the siting of essential public facilities through zoning. OMF South is a "regional transit authority facility" and is, therefore, explicitly recognized as an essential public facility in the Growth Management Act (RCW 36.70A.200).	There are no development standards specified for essential public facilities. However, OMF South would enter into a Development Agreement with the City of Federal Way to ensure consistency with the Comprehensive Plan.
CE: Commercial Enterprise	The purpose and intent of the Commercial Enterprise zone is to capture the demand for a diverse mix of industrial, office, and retail sales and services, arrayed in well-integrated, high quality developments. Development Standards: For a light rail or commuter rail transit facility, the height limitation is 50 feet above average building elevation. There is no minimum lot size for light rail or commuter transit facilities, except for 20 feet along single-family residential zones.	The South 344th Street Alternative site and mainline tracks would occupy approximately 36 acres of the CE zone. The southeast corner yards, training track, and stormwater detention facility of the Preferred Alternative would occupy approximately 11 acres of the CE zone. The Preferred and South 344th Street alternatives would be consistent with the commercial uses because the maintenance facility buildings are similar in scale and development intensity as office buildings and warehouses. This zone lists light rail or commuter rail transit facility as a permitted land use, which could encompass the use of transportation operation and maintenance facilities. The highest proposed building is the OMF office building, estimated at 36 feet (this could change as the design progresses). The CE zone is urban in character, with no maximum lot coverage. Light rail facilities would require a Process IV review.

Source: Federal Way Municipal Code (City of Federal Way 2023b)

Note: Acreages were calculated using GIS, overlaying the project boundary on Federal Way zoning GIS data. Additional site development standards detail such as setbacks, landscaping, and parking space requirements are not provided.

Table H2-2 Midway Landfill Alternative Zones Description and Consistency

City of Kent		
Zone	Purpose, Select Development Standards	Consistency
MCR: Midway Commercial Residential	The purpose and intent of the MCR zoning district is to encourage the location of dense and varied retail, office, or residential activities in support of rapid light rail and mass transit options, enhance a pedestrian-oriented character, and implement the goals and policies of the Midway Subarea Plan. Select Development Standards: Height limitation is 16 stories or 200 feet, minimum lot area is 7,500 square feet, and maximum site coverage is 80 percent (site coverage is defined as including the portion of a lot covered by buildings or structures).	A portion of the lead tracks linking the OMF South to the mainline tracks are proposed for location in the MCR zone (less than 5 acres). Although transportation and utility uses are listed as conditional uses, transit OMFs are listed as prohibited, inconsistent uses. The tracks use would not be considered a mixture of retail, office, or residential uses intended for this zone; however, the proposed use would support the goal to encourage urban development in support of rapid light rail. Development of light rail tracks would be subject to a city of Kent Conditional Use Permit since transportation and utility uses are conditionally allowed. High-capacity transit facilities and their tracks are subject to Kent City Code (KCC) Chapter 15.15, a chapter which primarily outlines design regulations for high-capacity transit facilities. The proposed development would be consistent with the 80 percent maximum site coverage standard since the design would result in less than 3 percent of the site covered by buildings and structures.
CM: Commercial Manufacturing	The purpose and intent of the Commercial Manufacturing district is to provide locations for those types of developments which combine some characteristics of both retail establishments and small-scale, light industrial operations, heavy commercial and wholesale uses, and specialty manufacturing. All transit-related uses are conditional uses.	Most of the project footprint (66 acres) is proposed for location on CM zoning and would not conflict with targeted CM uses since the OMF would be similar in scale and development intensity to light industrial operations intended for the CM Zone. Transit operations and maintenance facilities are listed as a conditional use for this zone. Development of the OMF facility would be subject to a city of Kent Conditional Use Permit since transportation and

Table H2-2	Midway Landfill Alternative Zones Description and Consistency	
	(continued)	

City of Kent Zone	Purpose, Select Development Standards	Consistency
	Select Development Standards: Height limitation is two stories or 35 feet, and maximum site coverage is 50 percent (defined as including the portion of a lot covered by buildings or structures). KCC Section 15.04.195 Commercial and industrial land use development standard conditions, includes a variance provision authorizing the economic and community development director to grant one additional story in height, if during development plan review it is found that this additional story would not detract from the continuity of the area. More than one additional story may be granted by the land use and planning board.	utility uses are conditionally allowed. The highest building height, located at the OMF office building, proposed in draft plans (See Appendix C) is estimated at 36 feet (this could change as the design progresses). This proposed building height could necessitate divergence from the code standard due to the 35 feet height limitation for the CM Zone. In addition, the proposed development in total could result in approximately 11 percent of the site being covered, which is below the 50 percent maximum site coverage standard for this zone.
SR-6: Single- Family Residential	The purpose and intent of the single-family residential districts is to stabilize and preserve single-family residential neighborhoods, as designated in the comprehensive plan. It is further the purpose to provide a range of densities and minimum lot sizes in order to promote diversity and recognize a variety of residential environments. Select Development Standards: maximum site coverage is 50 percent, maximum impervious surface is 70 percent, height limitation is 2.5 stories or 35 feet.	The OMF would occupy a small portion of the SR-6 zone (0.4 acres) in the south end of the project site, along the edge of a single-family residential area and I-5. Much of the eastern part of the affected SR-6 zone area would be used to provide a track connection to the mainline tracks. This zone lists transit operations and maintenance facilities as a prohibited use. The work within this zone would consist of roadway improvements and would not include elements of the facility itself. Thus, it is not expected that the OMF Site would conflict with the SR-6 zone purpose of stabilizing and preserving single-family residential neighborhoods. Disruptions from the OMF project could be minimized through building setbacks and landscaped buffers.

Source: Kent City Code (City of Kent 2023)

Note: Acreages were calculated using GIS, overlaying the project boundary on Federal Way zoning GIS data. Additional site development standards detail such as setbacks, landscaping, and parking space requirements are not provided.

1.4.2 City of Federal Way and City of Kent Zoning and Permitted Land Use

Table H2-3 City of Federal Way Relevant Zoning and Associated Permitted and Prohibited Land Uses

	City of Federal Way Zoning and Associated Permitted and Prohibited Land Uses Relevant to OMF South	
City Center Core (CC-C) Zone		
Land Use Categories Detailed Permitted Land Uses		
Parking Garages	Above-grade structured parking facilities	
Government Facility, Public Parks, Public Transit Shelter	Government facility	
Parks, Public Transit Sheiter	Public parks	
Public Transportation Facilities	Public transit shelter	
	Light rail or commuter rail transit facility	
Public Utility	Public utility	
Personal Wireless Service Facility	Personal wireless service facility	
	Multi-Family (including RM 1800, RM 2400 and RM 3600)	
Land Use Categories	Detailed Permitted Land Uses	
Public Transit Shelter	Public transit shelter	
Public Utility	Public utility	
Government Facility	Government facility	
Public Parks	Public parks	
Personal Wireless Service Facility	Personal Wireless Service Facility (new freestanding facilities are not allowed). Note: Personal Wireless Service Facility shall be allowed only on existing towers, on publicly used structures not located in public rights-of-way, on existing structures located in the BPA Trail, and on existing structures in appropriate public rights-of-way.	
	Commercial Enterprise Zoning	
Land Use Categories	Detailed Permitted Land Uses	
Manufacturing and Production, General	Manufacturing, fabrication, or assembly of office equipment, machines, furniture, and fixtures; electrical, electronic, communications, and lighting products; appliances, bicycles, automobiles, boats, aircraft, and their component parts; heating equipment; photographic and clock instruments; toys; jewelry; musical instruments; scientific equipment; hand tools; signs; advertising displays; and similar items	
	Fabrication of clay, glass, ceramic, stone, china, or metal products; metal plating and coating; engraving and stone cutting	
	 Preparation of food products; leather products; textile, fabric, or apparel For manufacturing and production, limited, see FWRC 19.240.070 	
	 Any manufacturing, fabrication, and assembly uses other than listed herein 	
Warehouse, Distribution, Storage	Warehouse and wholesale distribution facilities	
Facilities, Truck Stops,	 Contractor's yards for storage of commercial equipment, vehicles, bulk building materials, and similar items 	
Automotive Emissions Testing Facilities	Parking lots for storage of recreational vehicles and other oversized vehicles	
	Commercial vehicle facilities and service yards such as truck stops	
	Automotive emissions testing facilities	

	City of Federal Way Zoning and Associated Permitted and Prohibited Land Uses Relevant to OMF South
Vehicle, Boat, Equipment, and Outdoor Storage Container Sales, Rental, Service, Repair, Self-Service Storage, Tow and Taxi Lots	 Sales, rental, or leasing facilities for vehicles, trucks, boats, trailers, motorcycles, equipment, outdoor storage containers, and portable moving containers Mechanical repair, body repair, painting, or related services for vehicles, trucks, boats, trailers, motorcycles, and equipment Vehicle service station or car wash Self-service storage facilities Tow and taxi lots
Public Utility	Public utility
Government and Public	Government facility, public parks, public transit shelter
Public Transit Facilities	Light rail or commuter transit facility
Personal Wireless Services	Personal Wireless Services Facilities
	Community Business Zoning
Land Use Type	Permitted and Conditional
Vehicle and Equipment Sales, Service, Repair, Rental: Self- Service Storage Facilities	 Vehicle service station or car wash Retail establishment providing vehicle, boat, or tire sales, service, repair, rental, and/or painting, passenger vehicle rental including moving trucks Merchandise and equipment rental facilities, excluding heavy equipment rental Tow or taxi lots Self-service storage facilities; storage of recreational vehicles
Government Facility, Public Parks, Public Transit Shelter	Government facility, public parks, public transit shelter
Public Utility	Public utility
Personal Wireless Service Facility	Personal wireless service facility

Table H2-3 City of Federal Way Relevant Zoning and Associated Permitted and Prohibited Land Uses (continued)

Source: City of Federal Way Title 19 Zoning and Development Code (City of Federal Way 2023b)

Notes:

(1) The city of Federal Way Zoning and Development Code does not specify Permissible, Conditional, Accessory, or Special Uses. Additionally, the zoning regulation does not distinguish between different types of multi-family zoning labels, such as RM 1800 and RM 3600.

(2) OMF South is considered an Essential Public Facility and would be reviewed under FWRC 19.105.020.

Table H2-4	Midway Landfill Alternative Zoning, City of Kent Permitted and Prohibited Uses
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	Commercial Manufacturing (CM) Zoning				
Transportation, Publi	c, and Utilities Land Use				
Principally Permitted	 Wireless telecommunications facility (WTF) by administrative approval (For WTF towers 90 feet or less for a single user and up to 120 feet for two or more users. All WTFs are subject to applicable portions of KCC 15.08.035.) 				
Conditional Accessory	 Transportation and transit facilities, including high-capacity transit facilities Transit operations and maintenance facilities Utility and transportation facilities: electrical substations, pumping or regulating devices for the transmission of water, gas, steam, petroleum, etc. Public facilities: firehouses, police stations, libraries, and administrative offices of governmental agencies, primary and secondary schools, vocational schools, and colleges WTF by minor conditional use permit (A conditional use permit for a WTF is required if it is greater than 90 feet for a single user or 120 feet for two or more users. All WTFs are subject to applicable portions of KCC 15.08.035.) Accessory uses and structures customarily appurtenant to a permitted use (Includes incidental storage facilities and loading/unloading areas.) Electric vehicle (EV) charging station (Level 1 and 2 charging only) 				
Not Permitted	 Rapid charging station Commercial parking lots or structures Railway and bus depots, taxi stands 				
Special Use	None				
	Midway Commercial Residential (MCR) Zoning				
Transportation, Publi	c and Utilities Land Use				
Principally Permitted	 WTF by administrative approval (For WTF towers 90 feet or less for a single user and up to 120 feet for two or more users. All WTFs are subject to applicable portions of KCC 15.08.035.) 				
Conditional	 Commercial parking lots or structures Transportation and transit facilities, including high-capacity transit facilities (High-capacity transit facilities shall be consistent with Chapter 15.15 KCC.) Railway bus depots, taxi stands Utility and transportation facilities: electrical substations, pumping or regulating devices for the transmission of water, gas, steam, petroleum, etc. Public facilities: firehouses, police stations, libraries, and administrative offices of governmental agencies, primary and secondary schools, vocational schools, and colleges WTF (A conditional use permit for a WTF is required if it is greater than 90 feet for a single user or 120 feet for two or more users. All WTFs are subject to applicable portions of KCC 15.08.035.) 				
Accessory	 Accessory uses and structures customarily appurtenant to a permitted use EV charging station (Level 1 and 2 charging only) Rapid charging station 				
Not Permitted	Transit operations and maintenance facilities				
Special Use	None				

Table H2-4 Midway Landfill Alternative Zoning, City of Kent Permitted and Prohibited Uses (continued)

	Single Family Residential (SR 6) Zoning				
Transportation, Public	c and Utilities Land Use				
Principally Permitted	None				
Conditional	 Transportation and transit facilities, including high-capacity transit facilities (High-capacity transit facilities shall be consistent with Chapter 15.15 KCC.) Utility and transportation facilities: electrical substations, pumping or regulating devices for the transmission of water, gas, steam, petroleum, etc. Public facilities: firehouses, police stations, libraries, and administrative offices of governmental agencies, primary and secondary schools, vocational schools, and colleges WTF (If on property owned, leased, or otherwise controlled by the city or other government entity subject to KCC 15.08.035(I) 				
Accessory	 Accessory uses and structures customarily appurtenant to a permitted use (Accessory structures composed of at least two walls and a roof, not including accessory uses or structures customarily appurtenant to agricultural uses, are subject to the provisions of KCC 15.08.160.) EV charging station (Level 1 and 2 charging only) Rapid charging station (Only as part of a general conditional use identified in KCC 15.08.030.) 				
Not Permitted	 Commercial parking lots or structures Transit operations and maintenance facilities Railway and bus depots, taxi stands 				
Special Use	None				

Source: Kent City Code (City of Kent 2023)

1.4.3 Comprehensive Plan Policy Consistency

Table H2-5	Policy Consistency with City of Federal Way Comprehensive Plan
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Торіс	Goals	Policies	Consistency with Applicable Policies
2.6 Citywide Policies	No goals listed for these policies. This section includes an introduction stating that citywide policies apply to all Federal Way Comprehensive Plan designations. These general policies are intended to maintain the quality of the living and working environment and ensure that the interests, economy, and welfare of the community are considered.	 LUP 8: Designate and zone land to provide for Federal Way's share of regionally adopted demand forecasts for residential, commercial, and industrial uses for the next 20 years. LUP 10: Support the continuation of a strong residential community. 	Policy LUP 8: The addition of OMF South in commercial-oriented and multi-family residential zones would moderately reduce the amount of land available for these uses and if not replaced with additional zones, this could decrease the ability of Federal Way to meet future demand. The mainline tracks and a portion of the maintenance and operations facility of the Preferred Alternative would occupy approximately 54 acres of multi-family zoning. The mainline tracks and a portion of the operations and maintenance facility for the South 344th Street Alternative would occupy approximately 43 acres of multi-family zoning. Policy LUP 10: The Preferred and South 344th Street alternatives would occupy portions of a multi-family residential area (primarily including a mobile home park) which could affect a small portion of the existing residential community. However, the proposed uses would be similar in scale and use to a government facility or public utility, which are permitted in the area. The project areas adjacent to residential areas would include landscaped buffers, building setbacks, and other context- sensitive design features to help blend in with the residential areas.

Topic	Goals	Policies	Consistency with Applicable Policies
2.7 Land Use Designations (Single-Family)	Goal LUG3: Preserve and protect Federal Way's single-family neighborhoods. Goal LUG3.1: Provide a wide range of housing densities and types in the single-family designated areas.	 LUP14: Protect residential areas from impacts of adjacent non-residential uses. LUP16: Encourage the development of transportation routes and facilities to serve single-family neighborhoods. Special attention should be given to pedestrian circulation. 	Policy LUP14: The mainline tracks of the Preferred and South 344th Street alternatives would be located within a small portion of this zone and next to multi-family residential land uses. Sound Transit would take steps necessary to reduce its impact on adjacent parcels through building setbacks, landscaped buffers, and other building design features to support aesthetic compatibility between uses. Policy LUP16: The proposed project would support the expansion of light rail service and operations which supports the development of public transportation routes. The proposed light rail service provided by the Federal Way Link Extension (FWLE) includes a nearby station just north of the project alternatives and this station is expected to serve single-family neighborhoods surrounding the Federal Way alternatives.
2.7 Land Use Designations (Multi-Family)	Goal LUG4: Provide a wide range of housing types and densities. Commensurate with market demand, adopted housing targets, and the community's needs and preferences.	 LUP21: Support multi-family development with transportation and capital facilities improvements. LUP23: Encourage the establishment of street patterns and amenities that encourage walking, bicycling, and transit use. 	Policy LUP21: The OMF site will provide essential facilities for the maintenance of the light rail system which complements planned Transportation Capital Improvements Projects identified in Federal Way (such as the City Center Access Project). In addition, this project helps broaden transit options for multi-family households in the Federal Way area. Policy LUP23: The proposed conceptual design for the Preferred and South 344th Street alternatives would include the vacation of 20th Avenue S between S 336th Street and S 341st Street, which would prevent the planned, but unfunded, shared bicycle lane markings on 20th Avenue S from S 336th Street to S 341st Street from being developed. Alternative facilities could be developed to replicate the connectivity and function of the eliminated north-south connection.
2.7 Commercial Designations (General policies for Commercial, Office, and Commercial Enterprise)	None.	 LUP24: Provide employment and business opportunities by allocating adequate land for commercial, office, and industrial development. LUP25: Encourage development of regional uses in the City Center. 	Policies LUP24 and LUP25: The mainline tracks for the proposed project would require the conversion of a small area of the City Center Core zone (approximately 17 acres) and Commercial Enterprise zone (a range of 5 to 10 acres) to transportation uses. This could moderately reduce the amount of land available for employment and business opportunities, particularly if they are not replaced with additional commercial zones. However, the proposed project is expected to provide employment for up to approximately 610 total staff members. More detail is provided in <i>Chapter 3.5 Economics</i> . The proposed project also would support light rail service and operations (particularly by supporting the Tacoma Dome Link Extension and FWLE) which supports the development of regional public transportation routes and is expected to generally support development in the region.

Table H2-5 Policy Consistency with City of Federal Way Comprehensive Plan (continued)

Торіс	Goals	Policies	Consistency with Applicable Policies
2.7 Commercial Designations (Commercial Enterprise)	Goal LUG5: Develop a quality commercial enterprise environment characterized by a viable, vibrant, and attractive mix of commercial, retail, office, industrial, and supportive uses and utilize locational and design criteria to ensure compatibility between uses.	 LUP35: Allow a broad range of commercial, retail, office, industrial, and supportive uses to meet the needs of workers and consumers, in well-integrated, well-functioning, high-quality developments. LUP36: Require development to be compatible and well-integrated into its surroundings and adjacent zones through site and building design and development standards that reduce or eliminate land use conflicts and nuisance impacts; ensure project aesthetics; promote sharing of public facilities and services; and improve vehicular and pedestrian traffic flow and safety, including access control and off-street interconnectivity between adjoining properties where feasible. LUP38: Do not allow heavy industrial uses on properties that adjoin residential zones. 	 Policy LUP35: The Preferred Alternative would consist of 12 acres of commercial zoned land, which is 1 percent of commercial zoned land within the city of Federal Way. The South 344th Alternative would consist of 41.6 acres of commercial zoned land, which is 3 percent of commercial zoned land in the city of Federal Way. As such, the proposed project is too small in size to impede the city from accommodating a broad range of commercial, retail, office, and industrial uses. Policy LUP36: While OMF South is expected to produce short-term construction-related impacts on adjacent parcels via noise, visual, etc.; long-term impacts are not expected, as the identified visual, noise, and air quality impacts for the project alternatives would not be severe enough to result in alteration of existing or potential future land uses. Sound Transit will strive to minimize any short-term impacts of constructing OMF South. The OMF project would likely contribute to improved vehicular and pedestrian traffic flow since it supports mode shifts from personal vehicles to transit services. Policy LUP38: OMF South would consist of maintenance facility buildings that are similar in scale and development intensity to light industrial uses. The city of Federal Way has not defined what a heavy industrial use is within the Federal Way Comprehensive Plan or in the city of Federal Way Revised Code (FWRC). The city of Federal Way has defined Industrial uses. Industrial uses allowed within the Commercial Enterprise zone (cited within FVRC 19.240.010 through 19.240.040) include manufacturing and production uses, warehouse, distribution, storage facility, truck stop, and automotive emissions testing facility uses, and commercial photography, communications, product testing, and industrial laundry facility uses. These uses are allowed so long as operations do not cause "inherent and recurring generated noise or vibration perceptible without instruments at any point alorg a property line, except transportation and deliver

Table H2-5 Policy Consistency with City of Federal Way Comprehensive Plan (continued)

Торіс	Goals	Policies	Consistency with Applicable Policies
2.7 Commercial Designations (Community Business)	Goal LUG6: Transform Community Business areas into vital, attractive, areas with a mix of uses that appeal to pedestrians, motorists, and residents, and enhance the community's image.	 LUP39: Encourage transformation of the Pacific Highway (SR-99) Community Business corridors into quality retail/commercial mixed-use areas designed to integrate auto, pedestrian, and transit circulation, and to improve traffic flow and safety, including access control and off-street interconnectivity between adjoining properties where feasible. Continue to utilize Community Design Guidelines to ensure quality site and building design and functional and aesthetic compatibility between uses. Integration of pedestrian amenities and open space into retail and office development should also be encouraged. 	
2.10 Phasing	None.	 LUP60: Establish priority areas for public facility and service improvements, especially for transportation based on an adopted Capital Facilities Plan and Transportation Improvement Program. Priority areas should be located where public facility and service improvements are installed and an acceptable level of service is attained. 	Policy LUP60: The OMF site will provide essential facilities for the maintenance of the light rail system. The light rail service will be developed to complement existing public transportation services.

Table H2-5 Policy Consistency with City of Federal Way Comprehensive Plan (continued)

Торіс	Goals	Policies	Consistency with Applicable Policies
Urban Growth	Goal LU-2: Kent will locate public facilities and services with sensitivity to community needs and environmental conditions.	 Policy LU-2.1: Work with regional and state entities when public capital facilities are considered for location in or near the city to ensure that impacts and benefits are equitably dispersed. Policy LU-2.2: Promote and support public transit, bicycle, and pedestrian circulation within compact urban settings. 	Policy LU-2.1: The proposed OMF project is a publicly funded capital facility supporting light rail in the region. Sound Transit is committed to working with the city of Kent to ensure that impacts are reduced, and benefits of this public capital facility are as equitable as possible.
			Policy LU-2.2: OMF South would support the expansion and operation of public light rail transit, including FWLE, that will serve urban areas between Seattle and Tacoma, including the cities of Kent and Des Moines.
Commercial	Goal LU-10: Kent will examine the City's commercial districts based on the regional, community and neighborhood needs to support economic vitality and livability.	 Policy LU-11.2: Revise Kent Design and Construction Standards to ensure the public streetscape associated with commercial and mixed-use development is attractive, safe and supports transit, pedestrians, and cyclists. 	Policy LU-11.2: The Midway Landfill parcel is located primarily on commercial land at the site of a former landfill.
Natural Resources	Goal LU-17: Kent will recognize the significant role the natural environment plays in shaping a sustainable community by contributing to human health, environmental justice, and economic vitality.	 Policy LU-17.2: Conserve energy resources, improve air and water quality and support healthy lifestyles by establishing well-designed, compact mixed-use land use patterns that provide convenient opportunities for travel by transit, foot, and bicycle. 	Policy LU-17.2: The OMF project supports transit- friendly development patterns and would improve light rail service that is anticipated to provide a convenient way to travel for people located near the light rail corridors and stations.
Essential Public Facilities	Goal LU-20: The city shall participate in a cooperative inter-jurisdictional process to determine siting of essential public facilities of a county- wide, regional, or state-wide nature.	 Policy LU-20.1: Proposals for siting essential public facilities within the city of Kent or within the city's growth boundary shall be reviewed for consistency with the city's Comprehensive Plan during the initial stages of the proposal process. Policy LU-20.2: When warranted by the special character of the essential facility, the city shall apply the regulations and criteria of Kent Zoning Code Section 15.04.150, Special Use Combining District, to applications for siting such facilities to ensure adequate review, including public participation. Conditions of approval, including design conditions, shall be imposed upon such uses in the interest of the welfare of the city and the protection of the environment. Policy LU-20.3: In the principally permitted or conditional use sections of the zoning code, the city shall establish, as appropriate, locations and development standards for essential public facilities that do not warrant consideration through the Special Use Combining District regulations. Such facilities shall include but not be limited to small inpatient facilities and group homes. 	Policies LUP-20.1 to LUP-20.3: OMF South is considered an Essential Public Facility. Most of the Midway Landfill Alternative is proposed for location on Commercial Manufacturing II zoning. The OMF site would be consistent with a recently passed Transit Operations and Maintenance Facilities Interim Zoning Ordinance conditionally allowing OMFs within the Commercial Manufacturing II zone (KCC 15.04.060); consequently, rezoning to the Special Use Combining District likely would be unwarranted. Sound Transit would work with the city to ensure consistency with city policies and plans.

Table H2-6Policy Consistency with City of Kent Comprehensive Plan

Table H2-7Policy Consistency with Midway Subarea Plan, City of Kent

Торіс	Goals	Policies	Consistency with Applicable Policies
Land Use	Goal MLU-2: Promote a mix of land uses that support local and regional needs in an auto- oriented commercial and light industrial area along the Pacific Highway South commercial transportation corridor not designated Transit Oriented Community.	 Policy MLU-2.1: Allow a mix of retail, light industrial or live/work uses. 	OMF South would consist of maintenance facility buildings that are similar in scale and development intensity as light industrial uses and would be consistent with the character intended for this area.
Transportation	Goal MT-3: Integrate high capacity light rail transit service and associated station locations into the urban design and functionality of the street systems.	 Policy MT-3.1: Work with Sound transit during all phases of planning for the extension of light rail into Midway to ensure Kent's preferred rail alignment and station location are realized. Policy MT-3.6: Ensure proposed development is compatible with future light rail improvements by identifying and preserving rights-of-way necessary for future transportation projects. 	OMF South is consistent with policies MT-3.1 and MT- 3.6 since the policies are in support of light rail expansion and improvements. The OMF South project is being built to directly support the Sound Transit light rail operations and services in the city of Kent and in the surrounding region. OMF South is being designed to accommodate future light rail improvements.
Inter- jurisdictional Coordination	Goal MIC-2: Continue coordination with regional and state transportation agencies on matters of transportation investments planning and construction.	 Policy MIC-2.1: Coordinate with Sound Transit, King County, METRO, Washington State Department of Transportation, and Puget Sound Regional Council to ensure facilities and services are provided over time. 	OMF South is consistent with policy MIC-2.1 since it will ensure coordination between Sound Transit and the city on OMF South planning and construction.

Table H2-8	Zones within Half-Mile Study Area: Preferred and South 344th Street
	Alternatives

Zone	General Zoning Description	Full Zone Name	Jurisdiction	Total Area (Acres)
BC	Commercial	Commercial Business	Federal Way	140
CE	Commercial	Commercial Enterprise	Federal Way	336
CP-1	Commercial	Corporate Park	Federal Way	364
OP	Commercial	Office Park	Federal Way	233
OP-1	Commercial	Office Park I	Federal Way	92
СВ	Commercial	Commercial Business	King County	19
CB-P	Commercial	Commercial Business	King County	4
O-P	Commercial	Office	King County	3
CC-C	Mixed-Use	City Center Core	Federal Way	174
CC-F	Mixed-Use	City Center Frame	Federal Way	150
RM1800 Multi-Family		Multi-Family (1 DU/1,800 sf)	Federal Way	10
RM2400	Multi-Family	Multi-Family (1 DU/2,400 sf)	Federal Way	72
RM3600	Multi-Family	Multi-Family (1 DU/3,600 sf)	Federal Way	197
R-24	Multi-Family	Residential (24 DU/acre)	King County	10
RS7.2	Single-Family	Single-Family (1 DU/7,200 sf)	Federal Way	64
RS9.6	Single-Family	Single-Family (1 DU/9,600 sf)	Federal Way	9
R-4	Single-Family	Residential (4 DU/acre)	King County	70
Total				1,975

Sources: The cities of Kent, Federal Way, and Des Moines and King County GIS data.

Notes: The half-mile study area is based on the potential construction limits for each build alternative. The acreage is approximate, calculated using GIS tools. The areas within the project alternative footprint are not included in the information.

Zone	General Zoning Description	Full Zone Name	Jurisdiction	Total Area (Acres)
W-C	Commercial	Woodmont Commercial	Des Moines	18
CM	Commercial	Commercial Manufacturing	Kent	129
I-P	Commercial	Industrial (with conditions)	King County	4
NB	Commercial	Neighborhood Business	King County	0
T-C	Mixed-Use	Transit Community	Des Moines	12
CC	Mixed-Use	Community Commercial	Kent	10
MCR	Mixed-Use	Midway Commercial Residential	Kent	46
MTC-1	Mixed-Use	Midway Transit Community I	Kent	23
MTC-2	Mixed-Use	Midway Transit Community II	Kent	28
IC	Public/Institutional	Institutional Campus Zone	Des Moines	77
RA-3600	Multi-Family	Residential: Attached Townhouse & Duplex	Des Moines	0
RM-2400	Multi-Family	Multi-Family Residential (1 DU/2,400 sf)	Des Moines	13
MHP	Multi-Family	Mobile Home Park	Kent	11
MR-H	Multi-Family	High Density Multi-Family Residential	Kent	4
MR-M	Multi-Family	Medium Density Multi-Family Residential	Kent	40
R-1	Multi-Family	Urban Residential (1 DU/acre)	King County	1
R-12	Multi-Family	Urban Residential (12 DU/acre)	King County	0
R-4	Multi-Family	Urban Residential (4 DU/acre)	King County	16
R-6	Multi-Family	Urban Residential (6 DU/acre)	King County	2
RS-7200	Single-Family	Single-Family Residential (1 DU/7,200 sf)	Des Moines	143
R-SE	Single-Family	Residential Suburban Estates	Des Moines	26
SR-6	Single-Family	Single-Family Residential (6 DU/acre)	Kent	370
Total				978

Table H2-9 Zones within Half-Mile Study Area: Midway Landfill Alternative

Sources: The cities of Kent, Federal Way, and Des Moines and King County GIS data.

Notes: The half-mile study area is based on the potential construction limits for each build alternative. The acreage is approximate, calculated using GIS tools. The areas within the project alternative footprint are not included in the information.

Alternative	Impact Type	Jurisdiction	Zoning Type	Zoning Category	Total Area (Acres)
Preferred	Mainline ¹	Federal Way	CE	Commercial	3
		Federal Way	RM3600	Residential	62
	OMF Site	Federal Way	BC	Commercial	3
		Federal Way	CE	Commercial	14
		Federal Way	RM2400	Residential	1
		Federal Way	RM3600	Residential	55
South 344th Street	Mainline ¹	Federal Way	CE	Commercial	25
		Federal Way	RM2400	Residential	1
		Federal Way	RM3600	Residential	64
	OMF Site	Federal Way	BC	Commercial	1
		Federal Way	CE	Commercial	36
		Federal Way	RM3600	Residential	48
Midway Landfill	OMF Site	Kent	СМ	Commercial	69
		Kent	MCR	Mixed Use	25
		Kent	SR-6	Residential	3

 Table H2-10
 Estimated Acres of Zoning Type to be Acquired

Sources: The cities of Kent, Federal Way, and Des Moines and King County GIS data.

Note: The acreage is approximate, calculated using GIS tools, and conservatively assumes full acquisition of all affected parcels.

(1) The mainline tracks would be constructed regardless of which alternative is selected to be built. Under the Midway Landfill Alternative, the tracks would be constructed later, as part of the Tacoma Dome Link Extension project.



Appendix H3: Visual and Aesthetic Resources Technical Appendix





APPENDIX H3: VISUAL AND AESTHETIC RESOURCES TECHNICAL APPENDIX

The visual analysis assesses the existing visual quality and character of the landscape and then considers how typical viewers may respond to what they see around them. Sound Transit adapted guidelines from the Federal Highway Administration (FHWA) and Washington State Department of Transportation (WSDOT) for this analysis. The FHWA guidelines provide a generally accepted methodology for preparing visual assessments for transportation projects and are appropriate for use on this project. Generally, assessment methods include defining viewsheds from where a build alternative can potentially be seen, characterizing the visual quality in landscape units within the viewshed, and selecting key observation points of the affected areas.

Visual and aesthetic impacts are defined by the extent to which the proposed project would change the environment in terms of visual quality and viewer sensitivity. According to guidance found in the Visual Impact Assessment for Highway Projects (FHWA 1988), the key terms for a visual impact analysis are defined as follows:

Visual quality refers to the evaluation of the visual experience of the public and is described in terms of vividness, intactness, and unity. *Vividness* refers to the way landscape components combine in distinctive and memorable visual patterns. *Intactness* refers to whether the natural and human-built visual patterns form a consistent landscape or whether highly contrasting features intrude into the view. *Unity* refers to the visual coherence and compositional harmony of the landscape considered as a whole. Visual character also informs visual quality; it refers to identifiable visual information, including visual elements and major environmental features.

Based on the considerations listed above, different levels of visual quality have been assigned to describe the viewsheds surrounding the project alternatives:

- **High Visual Quality** describes views with vivid, memorable, distinctive features in a landscape with compositional harmony, or where elements of the landscape fit together in a visual pattern that is free from encroaching visual elements that look out of place.
- **Medium Visual Quality** describes views with some unity or compositional harmony between elements of the landscape, where out-of-place visual elements do not substantially alter the perception of the landscape as a unit. These views lack vivid, memorable features and are generally characterized as common or ordinary.
- Low Visual Quality describes views that lack a dominant visual character, where views appear disorganized with features that seem out of place or views have some compositional harmony but include eyesore elements that can dominate one's perception.

Viewer sensitivity refers to how viewers perceive the environment and what they find important. Viewer sensitivity can be affected by what the viewer is doing; the visual context; and the values, expectations, and interests of the viewer. Viewer exposure, which considers the number of viewers, where viewers are, and how long they are typically in a place, is also important to viewer sensitivity. For example, highway users driving by a site would have less exposure than surrounding neighbors.

For each potential viewer group within the study areas, viewer sensitivity is rated as high, medium, or low. High-sensitivity groups include viewers who highly value a particular view, and low-sensitivity groups include viewers who do not regard the visual setting as important to their activities. For example, residential viewers are typically in high-sensitivity groups, as well as

persons driving for pleasure, tourists visiting an area to enjoy scenic features, and individuals engaged in recreation activities in parks or on trails. These viewers have a high awareness and sensitivity to their surroundings. People sightseeing on highways or driving through their neighborhood are considered to have medium to high viewer sensitivity. Commuters and other drivers primarily passing through an area are considered to have lower viewer sensitivity because they often become accustomed (and indifferent) to the views along their travel routes because of repetition and short viewing duration.

A medium sensitivity rating reflects the experience of people who view the visual context as a secondary feature of other activities. These could be people at work or shopping who may value a pleasant environment but are not at a location for the specific purpose of enjoying the scenery. Low viewer sensitivity generally describes the experience of persons engaged in activities that render the quality of their surroundings irrelevant or incidental. For example, drivers and vehicle occupants passing through an area are less sensitive to the visual context because they are focusing on features other than the surrounding landscape and generally have an average to low sensitivity.

Landscape units are geographic units in which visual quality impacts to viewers are assessed. Landscape units are defined both by viewshed area and landscape type and are generally visually homogenous (i.e., one viewshed and one landscape type). The landscape units encompassing the three Operations and Maintenance Facility (OMF) South build alternatives are defined by changes in topography, neighborhoods, streets, building types, and tree cover. The viewsheds within the landscape units range in width from half a block to 0.5 mile from the build alternatives.

Key observation points were selected within each landscape unit to illustrate views that are typical of the build alternatives, locations from where project features are particularly prominent, or views from sensitive viewpoints that would have views of the operating build alternative. At each key observation point, views of existing conditions are compared with simulated views of the build alternatives.

In addition, potential impacts to Resource Conservation Areas (formerly called "Beautification Areas") along the Interstate 5 right-of-way were reviewed. These areas were originally acquired under the Highway Beautification Act of 1965 by FHWA and WSDOT for the "restoration, preservation and enhancement of scenic beauty adjacent to the highway."



Appendix H4: Air Quality and Greenhouse Gas Technical Appendix





APPENDIX H4: AIR QUALITY AND GREENHOUSE GAS EMISSIONS TECHNICAL APPENDIX

1.1 Air Quality

Regional impacts on air quality would be caused by criteria air pollutants that would be emitted directly or indirectly as a result of the proposed project. "Criteria air pollutants" are six common air pollutants that can harm health and the environment, cause property damage, and are subject to certain federal air quality standards. Three agencies have jurisdiction over the ambient air quality in the Operations and Maintenance Facility (OMF) South study area: the U.S. Environmental Protection Agency (EPA), the Washington State Department of Ecology (Ecology), and the Puget Sound Clean Air Agency.

1.1.1 Federal Clean Air Act

The Federal Clean Air Act, as amended, is the primary federal law that governs air quality. These laws and related regulations by EPA set standards for the concentration of pollutants in the air, known as the National Ambient Air Quality Standards. National Ambient Air Quality Standards have been established for the six criteria pollutants, which include carbon monoxide; nitrogen dioxide; ozone; particulate matter (PM), which is broken down for regulatory purposes into particles of 10 micrometers and smaller (PM₁₀) and particles of 2.5 micrometers and smaller (PM_{2.5}); and sulfur dioxide. In addition, national standards exist for lead and air toxics.

The National Ambient Air Quality Standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. Washington State adopts current federal National Ambient Air Quality Standards in state regulations, administered by Ecology. Applicable state and federal ambient air quality standards are shown in Table H4-1.

Based on monitoring information for criteria air pollutants collected over a period of years, Ecology and EPA designate regions as being attainment or nonattainment areas for the criteria pollutants. Once a nonattainment area achieves compliance with the National Ambient Air Quality Standards, the area is considered an air quality maintenance area. Although portions of the Puget Sound region are in maintenance areas for $PM_{2.5}$ and PM_{10} , none of the build alternative sites are located within the $PM_{2.5}$ or PM_{10} maintenance areas.

1.1.2 Washington Clean Air Act

The Washington Clean Air Act, Revised Code of Washington (RCW 70.94), sets forth the state law regarding outdoor air pollution and establishes a system of regional air pollution control authorities to implement federal and state air pollution control regulations. Air pollution control regulations cover the emission of air contaminants that are injurious to health or that unreasonably interfere with the enjoyment of life and property. In general, cities and towns cannot develop their own air pollution regulations. However, they can enact local nuisance provisions and performance standards so long as they are not less stringent than those of the regional authority. Many local governments have enacted general nuisance ordinances, which typically contain provisions aimed at such problems as illegal burning, dust, and noxious odors.

Pollutant ¹	National (Primary)	National (Secondary)	Washington State
Carbon Monoxide			
8-Hour Average	9 ppm	NS	9 ppm
1-Hour Average	35 ppm	NS	35 ppm
Ozone			
8-Hour Average	0.07 ppm	0.07 ppm	0.07 ppm
Lead			
Rolling 3-Month Average	0.15 µg/m³	0.15 µg/m³	0.15 µg/m³
Nitrogen Dioxide			
Annual Arithmetic Mean	0.053 ppm	0.053 ppm	53 ppb
1-Hour Average ²	100 ppb	NS	100 ppb
Particulate Matter (PM10)			
24-Hour Average ³	150 µg/m³	150 µg/m³	150 μg/m³
Particulate Matter (PM _{2.5})			
Annual Arithmetic Mean	9 µg/m³	15 μg/m³	12 µg/m³
24-Hour Average	35 µg/m³	35 μg/m³	35 μg/m³
Sulfur Dioxide (SO ₂)			
Annual Arithmetic Mean	NS	NS	0.02 ppm
24-hour	NS	NS	0.14 ppm
3-hour	NS	0.5 ppm	0.5 ppm
1-hour ⁴	75 ppb	NS	75 ppb

Table H4-1 Ambient Air Quality Standards

Notes:

NS = No standard established

 $\mu g/m^3 = micrograms per cubic meter$

ppm = parts per million

ppb = parts per billion

(1) Annual standards never to be exceeded; short-term standards not to be exceeded more than once a year unless noted.

(2) The 3-year average of the annual 98th percentile of daily maximum 1-hour averages is not to be above this level.

(3) Not to be above this level on more than 3 days over 3 years with daily sampling.

(4) The 3-year average of the annual 99th percentile of daily maximum 1-hour averages is not to be above this level.

1.2 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels, such as coal, oil, and natural gas.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity.

In the U.S., the main source of GHG emissions is transportation, followed by electricity generation. The dominant GHG emitted is carbon dioxide, mostly from fossil fuel combustion. There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing passenger vehicle travel activity, 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively.

1.2.1 Washington State Greenhouse Gas Reduction Goals

In 2020, Washington State adopted House Bill 2331 (HB 2331), which revised the state's GHG reduction goals. Under HB 2331, Washington must limit emission of GHGs to achieve the following reductions for the state:

- By 2020, reduce overall emissions of GHGs in the state to 1990 levels.
- By 2030, reduce GHG emissions to 45 percent below 1990 levels.
- By 2040, reduce overall emissions of GHGs in the state to 70 percent below 1990 levels.
- By 2050, reduce overall emissions of GHGs in the state to 95 percent below 1990 levels, and achieve net zero GHG emissions.

In addition, Sound Transit's Sustainability Plan, most recently updated in 2019, commits Sound Transit to integrating efficient operating practices at existing and new facilities, using energy-saving equipment to reduce energy demand, and maximizing intermodal transit connections to reduce automobile travel (Sound Transit 2019). The 2019 update includes goals focused on sustainable building and infrastructure and opportunities for transit-oriented development.

1.2.2 Climate Conditions and Local Air Quality

Washington is located on a windward coast in the mid-latitudes, producing a predominantly marine-type climate west of the Cascade Mountains. East of the Cascades, the climate possesses both continental and marine characteristics. The Puget Sound region's climate is mild, with wet and cloudy winters and cool and comparatively dry summers. In the interior valleys, measurable rainfall is recorded on 150 days each year; in the mountains and along the coast, there is rain 190 days each year.

Prevailing winds are typically from the south or southwest during the winter and from the north or northeast during the summer. Wind speeds are generally sufficient to disperse air pollutants released into the atmosphere. Air pollution is most noticeable in the late fall and winter under conditions of clear skies and light winds.

Typical air pollution sources near the study area include vehicular traffic, commercial and retail businesses, light industry, and residential wood-burning devices. While many types of pollutant sources are present, the largest contributors of criteria pollutant emissions are on-road vehicles, which contribute the majority of the carbon monoxide and ozone precursors. Secondary sources of emissions are commercial and industrial land uses.



Appendix H5: Water Resources Technical Appendix





APPENDIX H5: WATER RESOURCES TECHNICAL APPENDIX

Listed below are the federal, state, and local regulations that govern the protection or use of water resources in the study area that are applicable to the activities of the Operations and Maintenance Facility South project. Local plans and/or policies that guide the use of water resources in the study area are also included. If a regulation, plan, or policy is updated to a newer version than what is listed below, the most recent version that is legally applicable to the project is used in the environmental analysis.

1.1 Federal

- Clean Water Act:
 - Section 401 (33 United States Code [USC] § 1341) Water Quality Certification (delegated authority to the Environmental Protection Agency [EPA], Tribe, and/or state)
 - Section 402 (33 USC § 1342) National Pollutant Discharge Elimination System (NPDES)
 - Section 404 (33 USC § 1344) Permits for Dredge or Fill
- Coastal Zone Management Act, 16 USC 1451 et seq.
- National Flood Insurance Act of 1968 and Flood Disaster Protection Act of 1973, 42 USC 4001 et seq.
- Floodplain Management Presidential Executive Order 11988 of May 24, 1977, and its subsequent updates (Executive Orders 13690 and 14030)
- Endangered Species Act Biological Opinion for the Implementation of the National Flood Insurance Program in the State of Washington (National Marine Fisheries Service 2008)
- Safe Drinking Water Act, 42 USC 300f et seq., Chapter 6A
- FTA Region 10 Standard Operating Procedures No. 22 Water Resources

1.2 State

- Water Quality Standards for Surface Waters, Washington Administrative Code (WAC) 173-201A
- Water Quality Standards for Groundwater, WAC 173-200
- Water Pollution Control Act, Revised Code of Washington (RCW) 90.48
- Washington State Hydraulic Code, WAC 220-660
- Flood Control Management Act, RCW 86
- Shoreline Management Act, RCW 90.58, WAC 173-18 and WAC 173-26
- NPDES Western Washington Phase I and Phase II Municipal Stormwater General Permits (Ecology 2019a)
- NPDES Construction Stormwater General Permit (Ecology 2021)
- Stormwater Management Manual for Western Washington (Ecology Manual) (Ecology 2019b)
- Washington State Department of Transportation (WSDOT) Highway Runoff Manual (WSDOT 2019)
- WSDOT Hydraulics Manual (WSDOT 2023)

1.3 Regional

- Sound Transit Link Design Criteria Manual, Revision 5 (Sound Transit 2021)
- Low Impact Development Technical Guidance Manual for Puget Sound (Puget Sound Partnership 2012)

1.4 Local

1.4.1 City of Federal Way

- Shoreline Management, Federal Way Revised Code (FWRC) 15.05
- Critical Areas, FWRC 15.10
- Surface Water Management, Title 16 FWRC
- Zoning and Development Environmentally Critical Areas, FWRC 19.145
- King County Surface Water Design Manual (King County 2021a)
- Federal Way Addendum to the King County Surface Water Design Manual (City of Federal Way 2017)
- King County Stormwater Pollution Prevention Manual (King County 2021b)

1.4.2 City of Kent

- Surface Water and Drainage Code, Kent City Code (KCC) 7.07
- Shoreline Master Program, KCC 11.04
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- Surface Water Design Manual (City of Kent 2022)

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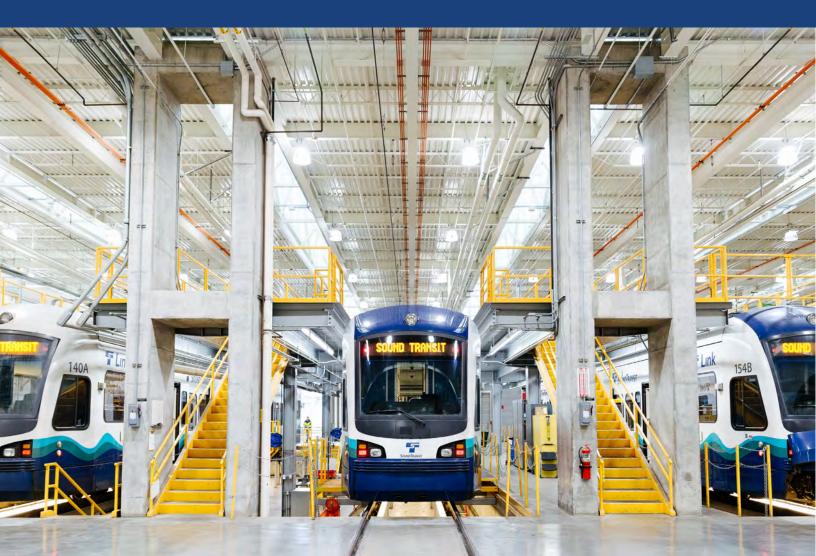
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Operations and Maintenance Facility South

Final Environmental Impact Statement

Appendix I: Biological Assessment



Federal Transit Administration June 2024

Executive Summary

The Central Puget Sound Regional Transit Authority (Sound Transit) proposes to construct a new regional operations and maintenance facility (OMF) to serve its systemwide light rail expansions, including those into South King County and Pierce County. The Federal Transit Administration (FTA) and Sound Transit are currently conducting environmental review for the proposed OMF South project. FTA and Sound Transit are studying three alternatives. The Sound Transit Board identified the S 336th Street alternative as the Preferred Alternative in December 2021. The facility will require an expansion of the regional light rail system south from the terminus of the Federal Way Link Extension (FWLE) at the Federal Way Downtown Station to the location of the Preferred Alternative OMF facility site between S 336th Street and S 341st Place in the city of Federal Way, Washington. This Preferred Alternative is the proposed action described in this document as the OMF South project.

In addition to guideway construction and construction of the OMF South facility, the project will include new roadway construction, roadway frontage improvements, culvert removal/replacements, stream realignment, stormwater facilities, and mitigation for wetland, stream and associated buffer impacts.

Major project elements will include the following:

- Construction and operation of the OMF South facility, including the following:
 - Runaround tracks
 - Storage tracks sized for approximately 144 light rail vehicles (LRVs)
 - Maintenance building with service lanes for vehicle maintenance, repair, carwash, cleaning, painting, spare parts storage, operations, and administration
 - Yard area for outside storage
 - Maintenance of Way (MOW) building for indoor maintenance and storage of spare parts for tracks, vehicle propulsion equipment, train signals, and other infrastructure
 - Training track that includes all the track installation configurations found in the Link system
 - Link System-Wide Storage (LSWS) building for receiving and indoor storing all parts of the Link light rail system, including LRV parts and components, MOW track and components, and Facilities Station parts and components
 - A traction power substation (TPSS) to boost the power to the overhead catenary system that powers the LRVs
 - Offices, locker rooms, lunchrooms, and other spaces for employees
 - Auto/truck access points
 - Employee, Sound Transit vehicle (nonrevenue vehicle), and visitor parking
 - Construction and operation of lead track connecting the OMF South facility with mainline and test tracks. The lead tracks will be on an elevated guideway. Elevated lead tracks would leave the northeast corner of the site and be approximately 600 feet long. Similarly, a pair of approximately 1,030-foot-long, elevated lead tracks would leave the southeast corner of the site to access the mainline tail tracks.
- Construction and operation of 1.4 miles of mainline track extending from the Federal Way Downtown Station to its end point at S 344th Street. In the future, this track would continue

south as part of the planned Tacoma Dome Link Extension (TDLE) project. The mainline track (guideway) will include at-grade, elevated, retained fill, and retained cut segments.

- Construction of 0.9 mile of test track running parallel and east of the mainline track (along I-5) from S 324th Street to just south of S 336th Street. The test track (guideway) will include at-grade, elevated, retained fill, and retained cut segments. Approximately 0.5 mile of access road will be constructed parallel with and on the west side of the test track.
- Construction of permanent treatment and flow control BMPs, as appropriate, for all new and replaced impervious surfaces
- Roadway improvements including replacements of culverts with fish-passable structures
- Stream relocation and daylighting activities

The project will create in-air noise, and it may increase suspended sediment loads during construction, as well as resulting in removal of forested wetland and riparian habitats. During operation, the project will discharge stormwater into municipal separate stormwater systems and receiving waters and streams in the Hylebos Creek watershed. The project will add 1.27 acres of pollution generating impervious surface (PGIS) area to the Hylebos Creek watershed but will provide water quality treatment for all new and replaced of PGIS, as well as a substantial amount of non-pollution generating impervious surface (NPGIS) in the project area.

The project includes up to three culvert replacements and one culvert removal (stream daylighting) as described below:

- Replacement of two culverts (WDFW Site ID numbers 933224 and 935274) will occur on a headwater tributary to East Fork Hylebos Creek (East Fork Hylebos Creek Tributary 0016A) at the current S 336th Street and S 344th Street stream crossings.
- Replacement of one culvert (WDFW Site ID number 935060) will occur on a headwater tributary to West Fork Hylebos Creek (West Fork Hylebos Creek Tributary 0014C) at the current S 336th Street stream crossing.
- Removal of one culvert (WDFW Site ID number 935271) will occur on East Fork Hylebos Creek Tributary 0016A and adjacent to a Washington State Department of Transportation (WSDOT) stormwater facility north of S 344th Street and within the WSDOT right of way (ROW).

One of these culverts identified above (935271) is currently on the list of WSDOT culverts that must be replaced under a 2013 federal court injunction requiring the correction of state-owned culverts in western Washington that block habitat for salmon and steelhead. The project design includes the removal of this culvert and daylighting the stream channel, plus the replacement of the three City of Federal Way-owned culverts (933224, 935274, and 935060).

The replacement crossing structures will be sized and configured to prevent them from becoming barriers in the future. The structures will be designed using the design criteria from WDFW's 2013 Water Crossing Design Guidelines. The design of the structures will be determined through hydraulic, geotechnical, and structural engineering evaluations.

The project will remove/replace approximately 890- feet of culverted stream with approximately 520 feet of fish-passable culverts, and it will daylight approximately 570 linear feet of channel. Removing all four barriers will improve access to approximately 3.3 miles of stream habitat.

The project will avoid or minimize potential effects on Endangered Species Act-listed (ESAlisted) species and their habitats. No suitable habitat for ESA-listed terrestrial species is present in the terrestrial zone of effect within the action area, and stream reaches within 1.5 miles of the project limits are largely inaccessible to fish due to humanmade barriers downstream. No critical habitat for any ESA-listed species is present within 1 mile of the project limits. As such, the project is expected to have no direct effects on ESA-listed species or critical habitat. However, contaminants in stormwater runoff discharged to the municipal separate stormwater system and streams in and near the project limits may degrade water quality in downstream waters where ESA-listed fish and critical habitat are present. The proposed treatment strategy will reduce the frequency and intensity of exposure of ESA-listed fish to contaminants that may remain in treated stormwater compared to existing conditions. The aquatic zone of effect within the action area will therefore include East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C extending from the project limits downstream to where the mainstem Hylebos Creek enters the marine waters of the Hylebos Waterway as well as the upstream extents of both streams as a result of improving access to that habitat via removal of fish passage barriers.

The project may contribute to the long-term recovery of ESA-listed fish species by correcting barriers to fish migration in headwater reaches of East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C. After downstream barriers are corrected, these improvements will increase the amount of habitat accessible to anadromous salmonids.

Table ES-1 identifies the species and critical habitat addressed in this biological assessment (BA), and it summarizes the effect determinations. Table ES-2 summarizes project effects on essential fish habitat (EFH) for Pacific salmon, groundfish, and coastal pelagic species. The EFH assessment is included as Appendix A.

Species ⁽¹⁾	Federal Jurisdiction	ESA Listing Status	Species Effect Determination	Critical Habitat Status	Critical Habitat Effect Determination
Streaked horned lark (<i>Eremophila alpestris strigata</i>)	USFWS	Threatened	No Effect	Designated; none in action area	No Effect
Yellow-billed cuckoo, Western U.S. Distinct Population Segment (DPS) (<i>Coccyzus americanus</i>)	USFWS	Threatened	No Effect	Designated; none in action area	No Effect
Marbled murrelet (Brachyramphus marmoratus)	USFWS	Threatened	No Effect	Designated; none in action area	No Effect
Taylor's checkerspot (<i>Euphydryas editha taylori</i>)	USFWS	Endangered	No Effect	Designated; none in action area	No Effect
Gray wolf (<i>Canis lupus</i>)	USFWS	Endangered	No Effect	None Designated	Not Applicable
North American wolverine (<i>Gulo gulo luscus</i>)	USFWS	Threatened	No Effect	None Proposed	Not Applicable
Bull trout (<i>Salvelinus confluentus</i>)	USFWS	Threatened	Not Likely to Adversely Affect	Designated; none in action area	No Effect
Chinook salmon, Puget Sound Evolutionarily Significant Unit (ESU) (Oncorhynchus tshawytscha)	NMFS	Threatened	Likely to Adversely Affect	Designated within the action area	Likely to Adversely Affect

Table ES-1ESA-Listed Species, Critical Habitats, and RecommendedDeterminations

Table ES-1 ESA-Listed Species, Critical Habitats, and Recommended Determinations (continued)

Species ⁽¹⁾	Federal Jurisdiction	ESA Listing Status	Species Effect Determination	Critical Habitat Status	Critical Habitat Effect Determination
Steelhead, Puget Sound DPS (Oncorhynchus mykiss)	NMFS	Threatened	Likely to Adversely Affect	Designated within the action area	Likely to Adversely Affect
Bocaccio, Puget Sound/ Georgia Basin DPS (<i>Sebastes paucispinis</i>)	NMFS	Endangered	Not Likely to Adversely Affect	Designated; none in action area	No Effect
Yelloweye rockfish Puget Sound/Georgia Basin DPS	NMFS	Threatened	Not Likely to Adversely Affect	Designated; none in action area	No Effect
Killer whale, Southern Resident DPS (<i>Orcinus orca</i>)	NMFS	Endangered	Not Likely to Adversely Affect	Designated; none in action area	Not Likely to Adversely Affect

Notes:

(1) ESU = evolutionarily significant unit; DPS = distinct population segment

Table ES-2 Effect Determinations for Essential Fish Habitat

Fishery	Effect Determination
Pacific Salmon	May Adversely Affect
Groundfish	May Adversely Affect
Coastal pelagic species	No Adverse Effect

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- Appendix A Essential Fish Habitat Assessment
- Appendix B Pre-BA Meeting Notes
- Appendix C Typical Light Rail Guideway Profiles
- Appendix D Preliminary Stream and Culvert Design Drawings
- Appendix E USFWS Official Species List
- Appendix F Project Area Photographs

Acronyms and Abbreviations

BA	biological assessment
BMP	best management practice
BPA	Bonneville Power Administration
Corps	U.S. Army Corps of Engineers
CSTW/DP	Combined stormwater treatment wetland/detention pond
dBA	Decibels (A-weighted scale)
DPS	distinct population segment
Ecology	Washington Department of Ecology
EFH	essential fish habitat
ESA	Endangered Species Act
ESU	evolutionarily significant unit
FHWA	Federal Highway Administration
FR	Federal Register
FTA	Federal Transit Administration
FWLE	Federal Way Link Extension
HUC	hydrologic unit code
I-5	Interstate 5
Leq	equivalent continuous sound level
LRV	light rail vehicle
LSWS	Link system wide storage
MOW	maintenance of way
NCEI	National Centers for Environmental Information
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPDES	National Pollution Discharge Elimination System
NPGIS	non-pollution generating impervious surface area
NWIFC	Northwest Indian Fisheries Commission
OHWL	ordinary high water line
OMF	operations and maintenance facility
OMF South	Operations and Maintenance Facility South
PBF	physical and biological feature
PGIS	pollution-generating impervious surface
Project	proposed action

RC	retained cut
RF	retained fill
Sound Transit	Central Puget Sound Regional Transit Authority
SR	State Route
SRKW	Southern Resident Killer Whale
SWIFD	Statewide Washington Integrated Fish Distribution
SWM	stormwater management
SWPPP	stormwater pollution prevention plan
TDA	threshold discharge area
TDLE	Tacoma Dome Link Extension
TESC	temporary erosion and sediment control
TPSS	Traction Power Sub Station
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation

1 INTRODUCTION AND PROJECT DESCRIPTION

The Central Puget Sound Regional Transit Authority (Sound Transit) proposes to construct a new regional operations and maintenance facility (OMF) to serve its planned systemwide light rail expansions, including those into South King County and Pierce County. The proposed action is known as the Operations and Maintenance Facility South (OMF South) project (Figure 1-1). The Federal Transit Administration (FTA) and Sound Transit are currently conducting environmental review for the OMF South project. FTA and Sound Transit are studying three alternatives. The Sound Transit Board identified the S 336th Street alternative as the Preferred Alternative in December 2021. For the purposes of this BA, the Preferred Alternative is the proposed action that is under consideration and is herein after referred to as the OMF South project. The OMF South project will require an expansion of the regional light rail system south from the terminus of the Federal Way Link Extension (FWLE) at the Federal Way Downtown Station to the OMF South facility site between S 336th Street and S 341st Place in the city of Federal Way, Washington. The proposed action (project) is part of the Sound Transit 3 Plan, which voters approved funding for in 2016.

The OMF South project supports Sound Transit's Link light rail system expansion and the related increase in its light rail vehicle fleet and daily operations. The project includes measures to preserve and promote a healthy and sustainable environment by minimizing adverse impacts to people and the natural and built environments. The purpose of the OMF South is as follows:

- Provide a facility with the capacity to receive, test, commission, store, maintain, and deploy vehicles to support the intended level of service for the system-wide Link light rail system expansion.
- Support efficient and reliable Link light rail service that minimizes system operating costs.
- Support and connect efficiently to the regional system and be technically and financially feasible to build, operate, and maintain, consistent with the Sound Transit 3 Plan and Sound Transit's Regional Transit Long-Range Plan.

The project is needed for the following reasons:

- The current regional system lacks a facility with enough capacity and a suitable location to support the efficient and reliable long-term operations for system-wide light rail expansion, including the next phase of expansion in King and Pierce Counties.
- New light rail maintenance and storage capacity has to be available with enough time to accept delivery of and commission new vehicles to both meet fleet expansion needs and store existing vehicles while the new vehicles are tested and prepared.

The purpose of this biological assessment (BA) is to evaluate the potential effects of the proposed action on federally listed and proposed species and designated critical habitat in accord with the provisions of Section 7 of the Endangered Species Act (ESA) of 1973, as amended (ESA; 16 United States Code [USC] §§1531-1543). Section 7(a)(2) of the ESA specifies that each federal agency shall, in consultation with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS), ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of critical habitat. This BA also analyzes effects on essential fish habitat (EFH) under the provisions of the Magnuson-Stevens Fishery Conservation and Management Act (see Appendix A).



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Sound Transit has prepared this BA to facilitate consultation between the FTA, NMFS, and USFWS under Section 7 of the ESA. The primary federal nexus for this project is federal aid funding provided by FTA. In addition, the proposed action will also require a permit from the U.S. Army Corps of Engineers (Corps) and approval from the Federal Highway Administration (FHWA) for use of the limited access right-of-way along I-5. In addition, the proposed action will result in the relocation of a Bonneville Power Administration (BPA) electric power transmission tower and transmission lines. BPA will consult on this action separately. This BA supports the ESA Section 7 compliance requirements for all federal agencies.

1.1 Background and Consultation History

A Pre-BA meeting was held on August 24, 2023, and included representatives from USFWS, NMFS, FTA, and Sound Transit. Notes from the pre-BA meetings are included in Appendix B. Topics covered during the meeting included stormwater management, injunction culverts, known fish use and existing barriers, and the effects of N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine-quinone (6PPD-quinone) on ESA-listed fish.

The meeting included a brief discussion of the OMF South purpose and need followed by a description of the project and schedule; action area; species addressed; existing habitat conditions; direct and indirect effects; and provisional effect determinations for listed species, critical habitat, and EFH. Overall, there was preliminary agreement on the effects determinations provided except for bocaccio and yelloweye rockfish. The provisional effect determination for both species was identified as "no effect." However, because of the potential presence of larval rockfish within the lower tidally influenced portion of Hylebos Creek and the potential for exposure to stormwater related contaminants, NMFS staff indicated that a "may affect, not likely to adversely affect" was warranted. The USFWS indicated that if project related mitigation were to include any in-water work, then the effect determination for bull trout, would likely need to be elevated. Currently the effect determination for bull trout is "may affect,"

1.2 Project Location

The project is located entirely within the city of Federal Way, Washington (NW1/4 Section 21, Township 21N, Range 04 East: NW and SW ¹/₄ Section 16, Township 21 North, Range 04 East). The project is contained within Water Resource Inventory Area (WRIA) 10, the Puyallup White Watershed (6th Field Hydrologic Unit Code (HUC) 17110019025 – Hylebos Creek -Frontal Commencement Bay).

The proposed OMF South project is located between S 336th Street and S 341st Place and between Interstate-5 (I-5) and State Route 99 (SR 99). The OMF South project includes connections to the terminus of the Federal Way Link Extension (FWLE) at the Federal Way Downtown Station by a guideway that will extend from the Federal Way Downtown Station to S 344th Street. Figure 1-1 shows the location of the OMF South facility and the associated mainline, lead, and test tracks.

1.3 Project Description

OMF sites are necessary throughout Sound Transit's light rail network to clean, store, maintain, and deploy light rail vehicles (LRVs) (Figure 1-2). The OMF South would also require construction of mainline track to connect with the terminus of FWLE at the Federal Way

Downtown Station (opening in 2026) to the north and the planned future Tacoma Dome Link Extension (TDLE) to the south.



Figure 1-2 Example Light Rail Vehicle

Major project elements will include the following:

- Construction and operation of the OMF South facility, including the following:
 - Runaround tracks
 - Storage tracks sized for a minimum of 144 light rail vehicles (LRVs)
 - Maintenance building with service lanes for vehicle maintenance, repair, carwash, cleaning, painting, spare parts storage, operations, and administration
 - Yard area for outside storage
 - Maintenance of Way (MOW) building for indoor maintenance and storage of spare parts for tracks, vehicle propulsion equipment, train signals, and other infrastructure
 - Training track that includes all the track installation configurations found in the Link system
 - Link System-Wide Storage (LSWS) building for receiving and indoor storing all parts of the Link light rail system, including LRV parts and components, MOW track and components, and Facilities Station parts and components
 - A traction power substation (TPSS) to boost the power to the overhead catenary system that powers the LRVs
 - Offices, locker rooms, lunchrooms, and other spaces for employees
 - Auto/truck access points
 - Employee, Sound Transit vehicle (nonrevenue vehicle), and visitor parking
 - Construction and operation of lead track connecting the OMF South facility with mainline and test tracks. The lead tracks will be on an elevated guideway. Elevated lead tracks would leave the northeast corner of the site and be approximately 600 feet long. Similarly, a pair of approximately 1,030-foot-long, elevated lead tracks would leave the southeast corner of the site to access the mainline tail tracks.
- Construction and operation of 1.4 miles of mainline track extending from the Federal Way Downtown Station to its end point at S 344th Street. In the future, this track would continue south as part of the planned Tacoma Dome Link Extension (TDLE project). The mainline track (guideway) will include at-grade, elevated, retained fill, and retained cut segments.
- Construction of 0.9 mile of test track running parallel and east of the mainline track (along I-5) from S 324th Street to just south of S 336th Street. The test track (guideway) will include at-grade, elevated, retained fill, and retained cut segments. Approximately 0.5 mile of access road will be constructed parallel with and on the west side of the test track.

- Construction of permanent treatment and flow control BMPs, as appropriate, for all new and replaced impervious surfaces
- Roadway improvements including replacing culverts with fish passable structures
- Stream relocation and daylighting activities
- Mitigation for wetland and stream impacts

Project elements are shown in Figure 1-3 and Figure 1-4 except for mitigation. Potential mitigation sites are still being selected but for the purpose of this document, all on-site and off-site mitigation opportunities will be located in the Hylebos Creek watershed. More detailed descriptions of major project elements are included in the following sections.

1.3.1 OMF South Site

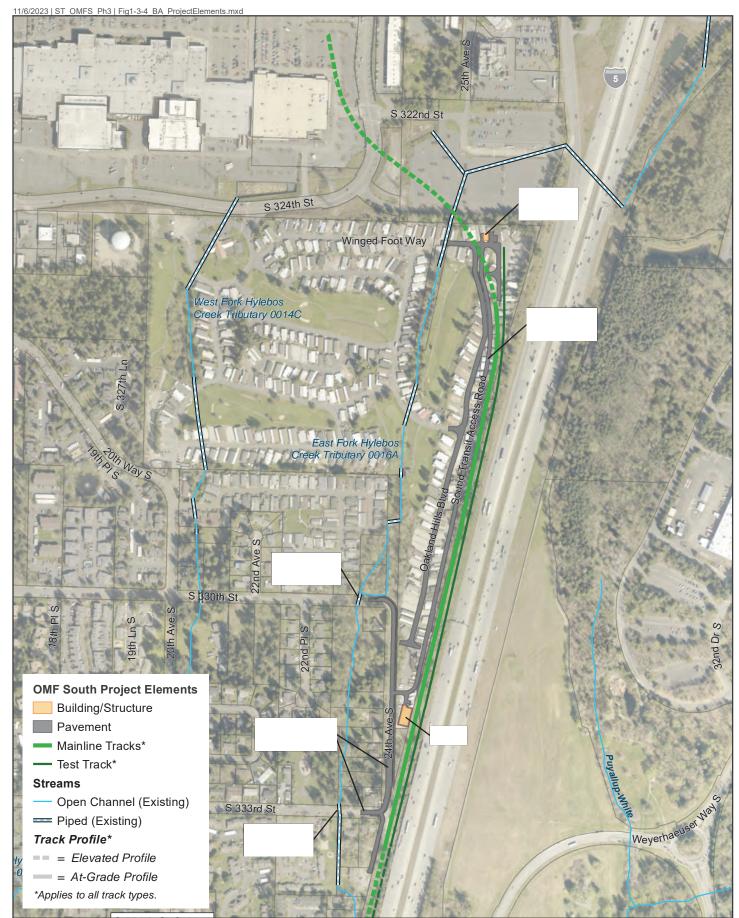
The OMF South facility site is approximately 66 acres. It will include the maintenance building, the MOW building, the Link System-Wide Storage Building, storage tracks, parking, training tracks, lead tracks, and yard areas. There will be approximately 480 parking spaces, including spaces for employees, visitors, accessible parking, and nonrevenue Sound Transit vehicles. The yard area will be approximately 5.7 acres. Figure 1-5 provides more detail on location of specific OMF South facilities.

The project will also require lead tracks for LRVs to access the mainline tracks. Two elevated lead tracks will extend from the northeast corner of the site to the mainline tracks, and they will each be approximately 600 feet long. Similarly, two elevated tracks, each approximately 1,000 feet long, will extend from the southeast corner of the site connecting to the tail tracks.

Construction of the project will require modifications to local roadway systems, including replacing 20th Avenue S along the east side of the site with an extension of 18th Place S from 336th Street to 340th Street along the west side of the site. Additionally, 21st Avenue South will be extended southward to a new intersection with S 344th Street. Transportation related project elements are discussed further in Section 1.3.4.

1.3.2 Light Rail Guideway and Associated Tracks

The light rail guideway width will vary. In areas with two tracks, the width will be from 30 to 40 feet wide. In areas with three to four parallel tracks, the width will be from 50 to 60 feet wide. The transit right-of-way will include room for poles and the overhead catenary system needed to power the trains. Some sections of the right-of-way will be wider to accommodate TPSSs, signal bungalows, maintenance driveways, and emergency access points, with walls or barriers to restrict other access. The test track constructed along I-5 will require construction of a new limited access road. Elevated structures will require support columns or other bridging support structures. For at-grade guideway in areas with slopes, retaining walls might be needed where the alignment will cut into an adjacent hillside, or to support fill material below the guideway. In some places, sound walls will be added to the guideway or to retaining walls to reduce noise impacts. Table 1-1 identifies the approximate length for the different track profile types. The structure types are described below, and cross-sectional views of the guideway profiles can be found in Appendix C.



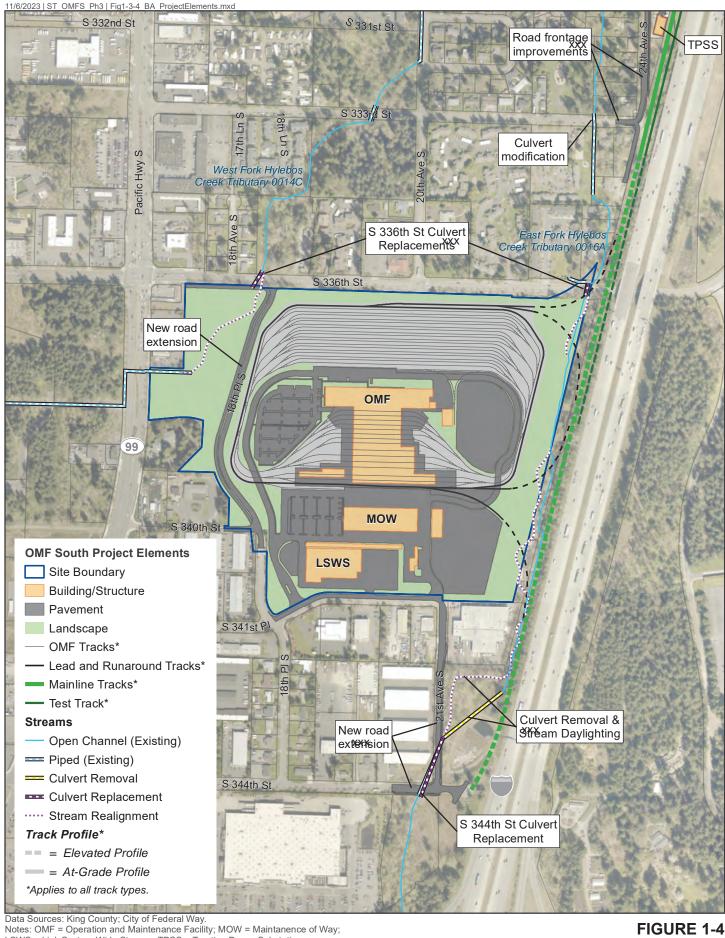
Data Sources: King County; City of Federal Way, Notes: OMF = Operation and Maintenance Facility; MOW = Maintanence of Way;

LSWS = Link System-Wide Storage; TPSS = Traction Power Substation



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FIGURE 1-3 Project Elements: Mainline Biological Assessment



Notes: OMF = Operation and Maintenance Facility; MOW = Maintanence of Way; LSWS = Link System-Wide Storage; TPSS = Traction Power Substation

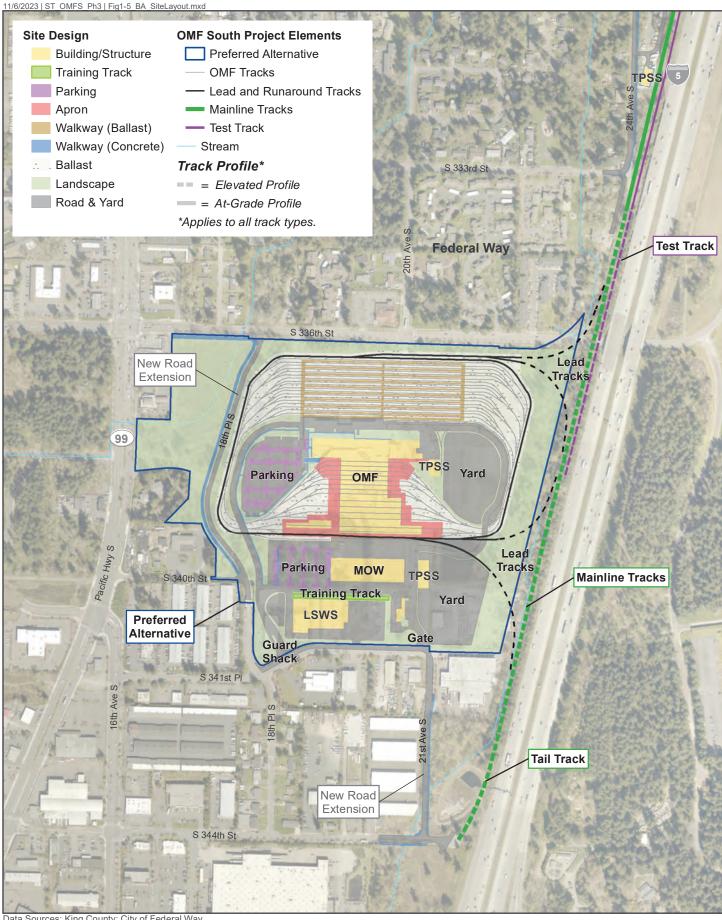
1,000 Feet 500

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OMF South

Project Elements: OMF Site

Biological Assessment



Data Sources: King County; City of Federal Way. Notes: OMF = Operation and Maintenance Facility; MOW = Maintanence of Way; LSWS = Link System-Wide Storage; TPSS = Traction Power Substation

N 0 500 1,000 Feet

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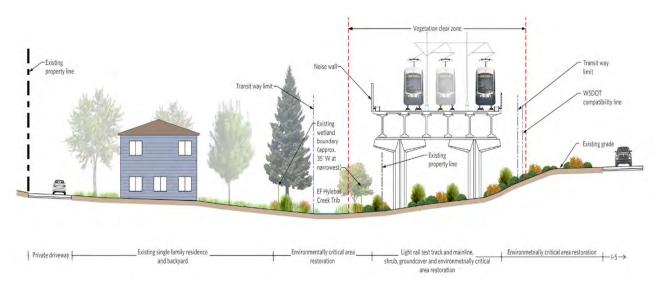
FIGURE 1-5 OMF South Conceptual Site Layout Biological Assessment

OMF South

Light Rail Guideway Profile Type	Length (ft)				
Elevated Guideway					
Elevated Mainline Guideway	3,500				
Elevated Triple Track (Mainline and Test Track)	680				
Elevated Four Track (Mainline, Test, and Lead Track)	840				
At-Grade Guideway					
At-grade Triple Track	400				
At Grade Independent Test Track	190				
At-grade Mainline and Independent Test Track	1,060				
Retained Cut/Retained Fill Guideway					
Triple Track Mainline – Mainline on retained fill (RF) and Test Track on Retained Cut (RC)	370				
RF Triple Track	1,020				
RF Independent Test Track	100				

Table 1-1Light Rail Guideway Types and Length

Safety considerations require that vegetation be cleared near all guideways, necessitating a tree-clear zone within 20 feet of the structure at the time of construction. After construction, low growing vegetation such as native shrubs can be planted within the permanent tree-clear zone in critical areas and stream buffers, which will typically extend approximately 15 feet on either side of the guideway tracks (Figure 1-6).





The total width of the guideway (elevated or at grade) will vary between 30 and 60 feet wide; adding the clear zone to this width will result in an approximately 60- to 90-foot-wide area in which vegetation will be restricted to no vegetation or low-growing species. Vegetation within the footprint of at-grade guideway will be permanently removed. Regulations also require at least 5 feet of vertical clearance between the tops of mature plants and the bottom of any elevated structures. Vegetation outside the guideway will be pruned back to a clear zone

between the edge of the guideway and the edge of the tree canopy. Where tree heights will reach above the height of the safety railing, a larger clear zone must be provided that will extend from the edge of the guideway to the edge of the tree canopy. In general, vegetation growth beneath elevated guideway, outside of sensitive or critical areas and associated buffers, is limited to allow for access and minimize long-term maintenance.

1.3.2.1 Elevated Guideway

An elevated guideway must have at least 16.5 feet of vertical clearance over roadways, but existing topography and other considerations can result in a profile as high as 50 feet or more. Pier supports holding up the guideway are typically about 10 feet in diameter at the ground; the underground support structure may consist of four 10-foot columns with a concrete foundation as large as 50 feet by 50 feet on top of the piles. An elevated guideway can travel, along the side of the roadway, or in off-street corridors. Approximately one-half of the guideway through the OMF South corridor is elevated. Figure 1-7 provides an example of an elevated profile under construction. Elevated guideway profiles along the alignment will include both double-, triple-, and four-track profiles with the double-track profile consisting of a mainline tracks and test track, and the four-track profile will include the mainline tracks, test track and the lead track. Examples of elevated guideway profiles along the alignment can be found in Appendix C.



Figure 1-7 Construction of an Elevated Guideway

Construction of an elevated guideway will involve demolition of structures, clearing, grading, relocating utilities, preparing necessary construction access, and building the guideway structure. A temporary construction road will typically be built for constructing elevated guideways in undeveloped areas or where access is not available from existing roads. Constructing an elevated guideway within existing street rights of way may require temporary closure of some traffic lanes and detours.

Elevated guideways, similar to structures such as highway bridges, are generally reinforced concrete, steel, or combinations of both. Construction will begin with preparation work to build foundations, which may consist of shallow spread footings, deep-driven or augured piles, or drilled shafts. Once foundations are in place, concrete columns will be constructed. The elevated superstructure could be steel, cast-in-place concrete, precast concrete, or segmental concrete. If steel and cast-in-place concrete are used, temporary support structures referred to as false-work could be required to support the superstructure while the concrete is poured and while the cast concrete gains enough strength during curing to support itself, or while the steel beams are joined through welding or bolting (Figure 1-8).



Figure 1-8 Falsework Columns Under Construction

If the elevated guideway is close to or within a roadway, the false work will require temporary lane closures and traffic detours until enough of the elevated structure is complete. Precast girder construction is expected to be the primary method of construction for the elevated guideway and can typically be built without false work between the columns. Some short-term partial or full street closures may be required to accommodate placing girders and other construction activities. The use of falsework will be most likely to occur at the S 336th Street crossing of the guideway for this project.

1.3.2.2 At-Grade Guideway

At-grade light rail is most appropriate for long, relatively flat sections where exclusive right-ofway is available. This project will have an at-grade profile for short sections in Belmor Mobile Home Park extending to just north of S 336th Street within the Washington State Department of Transportation (WSDOT) right-of-way. Typical at-grade profiles for this project include a triple track profile that includes mainline track in both the north and south direction with an adjacent test track, and a double track profile that includes mainline track in both the north and south directions with an adjacent independent at-grade test track that is separated from mainline track. Appendix C provides examples of cross sections of the at grade guideway.

Construction methods and impacts for at-grade guideways will be similar to typical road construction. Existing structures in the project footprint will be demolished, and conflicting utilities will be relocated before construction begins. Shallow, near-surface excavations will be required to construct the subgrade, track, and station platform slabs for at-grade segments. In areas where access is not available from existing roads, a temporary construction road will be built. During the grading phase, the contractors will install culverts or other permanent drainage structures and below-grade light rail infrastructure.

1.3.2.3 Retained Cut/Fill Guideway

With the retained-cut profile, the guideway will be cut into the ground with a retaining wall on one or both sides. Portions of the guideway and test track will include retained-cut profiles due to topography. Where the guideway and test track will transition between at-grade and elevated, or due to topography, there will often be retained fill sections. Retained fill sections will be slightly higher than ground level, and they will be supported by retaining walls (Appendix C).

Construction of retained-cut and retained fill guideway sections will be similar to construction of the at-grade guideway, but they may be more intensive and of longer duration due to the need to construct retaining walls. Retained-cut or retained fill sections will be needed in areas where creating a level surface for the track ballast will be necessary. Such sections could include retaining walls, where necessary. Construction of cuts and fills may include demolition of existing structures, clearing and grading, excavation, utility relocation, construction of temporary access roads between 15 and 30 feet wide, and temporary traffic detours and lane closures. Depending on the depth of the cut and groundwater conditions, dewatering may be necessary during construction.

Fill material for retained fill construction will be delivered to the site by truck. Retained fill structures may require ground improvement, depending on the ability of existing soils to support the increased loads. Reconstruction of streets, sidewalks, and other existing facilities may also be necessary, depending on the final alignment and profile of the retained fill.

1.3.3 Other Facilities and Structures

Equipment buildings used for operation of light rail will be required along the alignment. The buildings are generally beneath the guideway, but they can be separate from the facility. This includes buildings for TPSSs that boost power to the overhead catenary system and signal bungalows that house signal systems. In addition, a test track support building and associated employee parking will be constructed at the north terminus of the test track.

General maintenance roads will sometimes be needed to allow for maintenance of other elements of the project (such as elevated guideway and retaining walls). A small number of parking spaces could also be associated with signal bungalows for service vehicles.

1.3.4 Transportation Improvements/Modifications

The following sections describe transportation improvements necessary to accommodate the OMF South site and associated guideway. These improvements include roadway extensions, road frontage improvements, new guideway access roads, and culvert removal/replacement/modifications.

1.3.4.1 Light Rail and Test Track Access Roadways

Permanent roadway will be constructed to provide access to both the test track and the mainline guideway extending from Winged Foot Way at the north end of the project to its connection point with 24th Avenue S. The roadway is anticipated to be approximately 30 feet wide. Two short access roads will also be constructed off the access roadway just before the connection point with 24th Avenue S. These roadways will allow access to a proposed TPSS south of the access roadway and a stormwater facility north of the access roadway. These access roads will be approximately 16 feet wide. Intersection improvements will be necessary at the access roadways intersection with Winged Foot Way and 24th Avenue S.

1.3.4.2 18th Place S Extension

The proposed project will require the permanent closure of 20th Avenue S from S 336th Street to S 341st Place. A new north-south road connection is required by city code as part of the vacation of 20th Avenue S. The 18th Place S extension will provide an additional connection to S 341st Place on the west side of the proposed OMF South site, and it will also provide access to proposed entry points to the new facility from S 341st Street. The current northern terminus of 18th Place S is S 340th Street. The proposed 18th Place S extension will terminate at S 336th Street. Intersection improvements will be required at both S 336th Street and S 340th Street. The proposed extension will include two 12-foot-wide travel lanes, 3-foot-wide utility corridors on either side of the roadway, a 12-foot-wide multi-use trail, and planter strips on both sides of the roadway, varying from 4 to 6.5 feet wide. The overall roadway will be 52.5 feet wide.

1.3.4.3 21st Avenue S Extension

Because of other modifications to the existing street network as part of the proposed action, 21st Avenue S will also be extended south from S 341st Place to S 344th Street to satisfy city code requirements. The proposed roadway will include two 12-foot-wide travel lanes, a six-foot wide sidewalk, 4-foot-wide planter strips on either side of the roadway, and 3-foot-wide utility strips on either side of the roadway for an overall roadway width of 44 feet.

1.3.4.4 Roadway and Roadway Frontage Improvements

Because of modifications to the local roadway system, improvements will be made to several roadways, including full roadway improvements along 24th Avenue S between S 330th Street and S 333rd Street. This may include minor roadway widening, addition of planter strips, streetside parking, and sidewalks. Half-street improvements are proposed along Oakland Hills Boulevard, S 336th Street, S 341st Street, and S 344th Street.

1.3.5 Culvert Removal/Replacements

The OMF South project will require the removal and replacement of up to three culverts, as well as the complete removal and daylighting of one culvert. Table 1-2, below, summarizes work activities that involve culvert removals or replacements, and more detail on individual culvert replacement is provided in Sections 1.3.5.1 through 1.3.5.4). Figure 1-4 and Figure 1-5 identify where each culvert removal, replacement, or modification will occur.

One culvert identified in the table may be associated with a roadway (WDFW ID #: 935271), and conveys East Fork Hylebos Creek around an existing WSDOT stormwater facility located just north of S 344th Street. This culvert was initially planned to be removed as part of WSDOT's Triangle Project because it was on the list of culverts to be replaced under a 2013 federal court injunction requiring the removal of state-owned culverts in western Washington. However, because WSDOT's project will not be constructed until after the OMF South project has been initiated, this culvert removal is being included as part of the proposed Sound Transit project.

Culvert Location	Stream Affected	WDFW ID#	Fish Passage Barrier Status	Action
S 336th Street	East Fork Hylebos Creek Tributary 0016A	935274	Partial Barrier	Remove/Replace – Potential Mitigation Action
S 336th Street	West Fork Hylebos Creek Tributary 0016A	933224	Partial Barrier	Remove/Replace
S 344th Street	East Fork Hylebos Creek Tributary 0016A	935060	Passable	Remove/Replace
Between S 336th and S 344th Streets	East Fork Hylebos Creek Tributary 0016A	935271	Partial Barrier	Remove/Daylight Channel

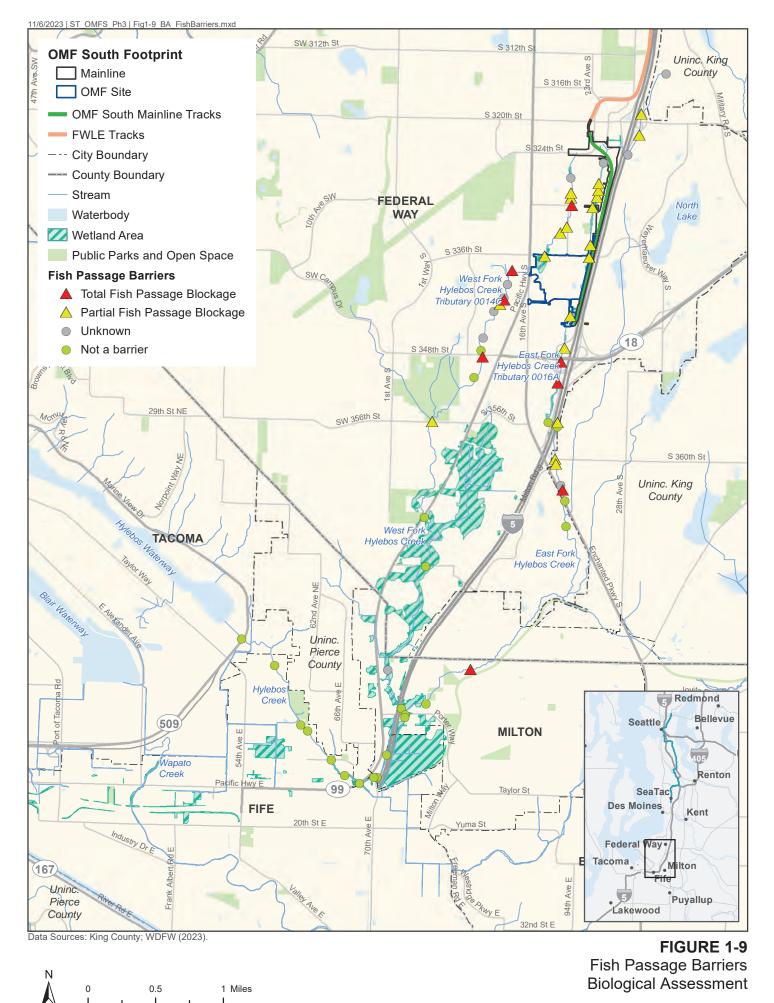
 Table 1-2
 Culvert Removal/Replacement Summary

Source: WDFW 2023a, WDFW 2020a, WDFW 2015, WDFW 2020b, WDFW 2020c

The replacement crossing structures will be sized and configured to prevent them from becoming barriers in the future. The structures will be designed using the design criteria from the Washington Department of Fish and Wildlife's (WDFW's) 2013 Water Crossing Design Guidelines (Barnard et al. 2013). The design of the structures will be determined through hydraulic, geotechnical, and structural engineering evaluations. Appendix D contains preliminary design information for the proposed replacement culverts.

According to the WDFW Habitat Survey Summary Report for the lowermost fish passage barrier (WDFW ID: 935271), removal of all three barriers on the East Fork Hylebos Creek with fish passable structures may improve access to approximately 2.5 linear miles of stream habitat (WDFW 2020c). Barriers located both upstream and downstream currently obstruct fish from accessing the proposed habitat gains; however, WSDOT plans to correct many of these barriers along the I-5 corridor both upstream and downstream of the project footprint in the future. A summary of fish barriers downstream of the site is provided in Section 2 and Figure 1-9 illustrates the overall breadth of fish passage concerns in the Hylebos Creek drainage basin.

The WDFW Level A Culvert Assessment Report for WDFW Site ID 933224 (WDFW 2015) on West Fork Hylebos Creek Tributary 0014C does not document potential upstream habitat gain as WDFW has not surveyed this stream reach; however, removal of this barrier has the potential to facilitate access to approximately 3,800 linear feet of stream channel. Similar to the East Fork Hylebos Creek Tributary 0016A, access to this habitat will be possible only after multiple downstream and upstream barriers to fish passage are removed.



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OMF South

1.3.5.1 South 336th Street Culvert Replacement - East Fork Hylebos Creek Tributary 0016A

The proposed action will include replacing the existing S 336th Street culvert crossing of East Fork Hylebos Creek Tributary 0016A. Although the current design does not affect this culvert, Sound Transit anticipates that the replacement of this culvert may be required as mitigation for the project. The existing crossing includes two culverts, a round, 27-inch-diameter, 65-foot-long precast concrete culvert, and a round, 18-inch-diameter, 65-foot-long precast concrete culvert. The existing crossing has been identified as a partial fish passage barrier due to inadequate depth through the culverts (WDFW 2023a). Sound Transit will replace the existing culverts with a 19-foot-wide, 53-foot-long structure that will meet current fish passage design standards. Limited in-stream grading will be required upstream and downstream of the crossing to tie into existing grades.

1.3.5.2 South 336th Street Culvert Replacement – West Fork Hylebos Creek Tributary 0014C

The proposed action will include replacing the existing S 336th Street crossing of West Fork Hylebos Creek Tributary 0014C. This culvert replacement is required due to the widening of South 336th Street and frontage improvements required by the city. The existing crossing includes two culverts, a round, 42-inch-diameter, 86-foot-long precast concrete culvert and a round, 42-inch-diameter, 92-foot-long precast concrete culvert. The existing crossing has been identified as partial fish passage barriers due to excessive slope through (WDFW 2023a). Sound Transit will replace the existing crossing with a 19-foot-wide, 89-foot-long structure that will meet current design standards for fish passage. Limited in-stream grading will be required upstream and downstream of the crossing to tie into existing grades.

1.3.5.3 South 344th Street Culvert Replacement - East Fork Hylebos Creek Tributary 0016A

The proposed action will include replacing the existing S 344th Street culvert crossing of East Fork Hylebos Creek Tributary 0016A. This culvert replacement is required due to culvert relocation as part of the extension of 21st Avenue S to South 344th Street. The existing crossing is a 4-foot-diameter, 315-foot-long corrugated steel culvert. The existing crossing is considered fish passable (WDFW 2023a). Sound Transit will replace the existing crossing with a 32-footwide, 382-foot-long structure that will meet current design standards for fish passage. Limited in-stream grading will be required upstream and downstream of the crossing to tie into existing grades.

1.3.5.4 East Fork Hylebos Creek Tributary 0016A Modifications and Daylighting

There are several locations where guideway supports for the mainline and lead tracks overlap with the existing channel location of East Fork Hylebos Creek Tributary 0016A. To avoid these areas of conflict, approximately 1,800 linear feet of channel will be relocated from just upstream of S 336th Street to the inlet for the existing culvert (WDFW Site ID 935271).

The proposed action will also include the removal of the existing culvert (WDFW Site ID 935721). Instead of replacing this culvert, the proposed action will include the creation of (daylighting of) approximately 600 linear feet of stream channel that will tie into the channel relocation discussed above and grading for the new culvert being proposed for the S 344th Street crossing.

Overall, there will be approximately 2,400 lineal feet of channel relocation and associated grading between S 336th Street and S 344th Street. Appendix D contains preliminary design drawings associated with channel relocation and stream daylighting.

1.3.6 Culvert Modifications

1.3.6.1 South 330th and South 333rd Street Culvert Modifications - East Fork Hylebos Creek Tributary 0016A

The proposed action will require the installation of a manhole within the existing roadway prism at both stream crossings identified. The project will require a stormwater connection to the existing culverts at these locations through the manhole, which will serve as both treated construction stormwater discharge points and permanent treated stormwater discharge points. Table 1-3,

Culvert Location	Stream Affected	WDFW ID#	Fish Passage Barrier Status	Action
S 330th Street	East Fork Hylebos Creek Tributary 0016A	935276	Partial Barrier	Install Manhole Cover and Stormwater Piping
S 333rd Street	East Fork Hylebos Creek Tributary 0016A	935275	Partial Barrier	Install Manhole Cover and Stormwater Piping

Table 1-3 Culvert Modification Summary

Source: WDFW 2023a, WDFW 2020d, WDFW 2020e

1.3.7 Mitigation

Although Sound Transit is working to avoid and minimize impacts during design, the construction and operation of the OMF South project will result in unavoidable impacts to wetlands, streams, and their buffers. Pursuant to federal, state, and local regulations, mitigation will be required to compensate for these impacts. At this time, selection of appropriate mitigation and potential mitigation sites is still under development but is likely to include a combination of on-site restoration/mitigation, off-site mitigation (but still within the Hylebos Creek watershed), and use of mitigation banks/in lieu fee programs to purchase credits. Off-site mitigation areas will be designed to compensate for permanent project impacts to wetlands and buffers and could include wetland creation, rehabilitation, and/or enhancement.

1.3.8 General Construction Activities and Equipment

The construction methods discussed above are based on the current preliminary level of engineering design. Specific construction methods will vary depending on site conditions and final design of the structures proposed. Typical construction activities will include the following:

- Demolition (buildings, pavement)
- Clearing and vegetation removal
- Temporary stream diversion (including temporary piping)
- Fill and excavation

- Installation of drainage systems, electrical systems, and communication systems
- Elevated structure construction
- At-grade track construction
- Retained cut construction
- Cut-and-cover trench construction
- Roadway construction and landscaping
- Utility relocation
- Retaining wall construction
- Pile-driving or augering piles
- Deep shaft drilling
- Truck hauling and delivery of materials and equipment
- Dewatering
- Culvert replacements to fish passable structures
- Use of concrete batch plant
- Remediating any unexpected hazardous material areas
- Planting and revegetation

Typical construction equipment used to complete the project includes:

- Trucks (e.g., haul, service, delivery, and tractor trailers)
- Cranes
- Backhoes, loaders, compactors, and excavators
- Grading and paving equipment
- Vibratory equipment
- Drilling rigs and pile-driving equipment
- Forklifts and manlifts
- Jackhammers
- Pumps (e.g., concrete, dewatering)
- Compressors, generators, and welding equipment
- Demolition equipment

1.3.9 Stormwater Management

The OMF South project will largely be a redevelopment of existing developed areas through conversion of areas currently occupied by residential and commercial development to the proposed use. In general, pollution generating impervious surfaces under existing and proposed conditions include local roadways, buildings, and parking areas. Because local roadways and parking lots are subject to substantially lower traffic volumes than any of the adjacent high-

volume roadways (SR-99 and I-5), the contribution of contaminants from these surfaces is anticipated to be of less concern than those of highly traveled roadways.

Sound Transit applied the Western Washington Hydrology Model, Version 3.0, to analyze project hydrology and to determine sizing of the stormwater facilities. The conceptual design for stormwater facilities provides best management practices (BMPs) for all new post-project impervious surfaces. New impervious areas resulting from OMF South will include buildings, parking areas, roads, and sidewalks.

Currently, light rail guideways are considered to be non-pollution-generating impervious surfaces¹. The preliminary design will include stormwater treatment facilities large enough to accommodate treatment for all post-project impervious surfaces. Proposed facilities will include detention ponds, detention vaults, and guideway dispersion. Water quality will be treated to enhanced treatment standards (intended to provide a higher rate of removal of dissolved metals than basic treatment).

Detention facilities have been designed to achieve post-project stormwater flows equivalent to forested conditions, as required by Ecology.

Most treated and retained stormwater is expected to be discharged to existing city drainage facilities that discharge to water bodies from existing municipal separate storm sewer discharge locations. New discharge locations will be added where existing connections do not exist. There will be new outfalls to the East Fork Hylebos Creek Tributary 0016A and the West Fork Hylebos Creek Tributary 0014C.

A project-specific Stormwater Pollution Prevention Plan (SWPPP) and a Temporary Erosion and Sediment Control (TESC) Plan will be prepared and implemented before beginning earthwork. The sediment and flow-control best management practices (BMPs) described in the TESC and SWPPP will minimize the potential for water quality impacts to wetland and stream resources in the project area.

1.3.9.1 Impervious Surfaces

Existing impervious area includes roadways, sidewalks, buildings, and parking lots. Currently, there are large surface parking areas (approximately 11 acres) surrounding the proposed OMF South facility site.

New impervious areas resulting from OMF South will include guideways, buildings, parking areas, roads, ballasted track areas, and sidewalks. To support the design of new or modified stormwater facilities, stormwater engineers delineated 24 threshold discharge areas (TDAs) in the action area, based on downstream flow paths. Table 1-4 summarizes the current and anticipated post-construction acreage of impervious areas' PGISs and areas of runoff to stormwater management facilities in each TDA. Figure 1-10 and Figure 1-11 identify where each TDA is relative to the mainline track and the OMF South Site.

¹ Sound Transit and the Washington State Department of Ecology (Ecology) entered into a Memorandum of Understanding dated December 9, 2019, in which Sound Transit agreed to conduct a study to characterize the quality of the stormwater discharged from light rail guideways. The data and analysis from the study will be used to inform the design of light rail projects that are scheduled in the Sound Transit 3 Plan to be completed between 2030 and 2041, and Sound Transit will identify all known, available, and reasonable methods of prevention, control, and treatment to define best management practices specific to light rail.

TDA	Existing	Proposed	Change			
East Fork Hylebos Creek Tributary 0016A Drainage Basin						
21st Avenue	0.12	0.49	+0.38			
24th 2A	0.21	0.30	+0.08			
24th 2B	0.21	0.56	+0.35			
24th Access Road	0.04	0.15	+0.11			
S 336th Street	0.30	0.30	0.00			
S 341st East	0.48	0.39	-0.09			
S 344th	0.21	0.22	0.00			
TDA 1	0.18	0.23	+0.05			
TDA 2A North	0.63	0.83	+0.19			
TDA 2A South	0.89	2.80	+1.91			
TDA 2B North	0.40	1.68	+1.28			
TDA East	13.5	21.92	+8.41			
Track TDA 3	0.08	2.65	+2.58			
Track TDA 4	0.17	1.10	+0.93			
Winged Foot North	0.23	0.35	+0.11			
Winged Foot Oakland	0.05	0.07	+0.02			
Total	17.70	33.06	+16.36			
West For	k Hylebos Creek T	ributary 0014C Drainage E	Basin			
18th Place A/B/C	0.19	0.81	+0.62			
18th Place D	0.43	0.09	-0.33			
S 336th West-East	0.39	0.39	0			
S 336th West-West	0.27	0.27	0			
S 341st West	0.23	0.12	-0.11			
TDA 1A	0.44	0.56	+0.12			
TDA West 1	8.06	10.19	+2.13			
TDA West 2	7.00	11.55	+4.54			
Total	17.01	23.98	+6.97			
Grand Total	34.71	57.04	+22.33			

 Table 1-4
 Existing and Proposed Impervious Area (Acres)

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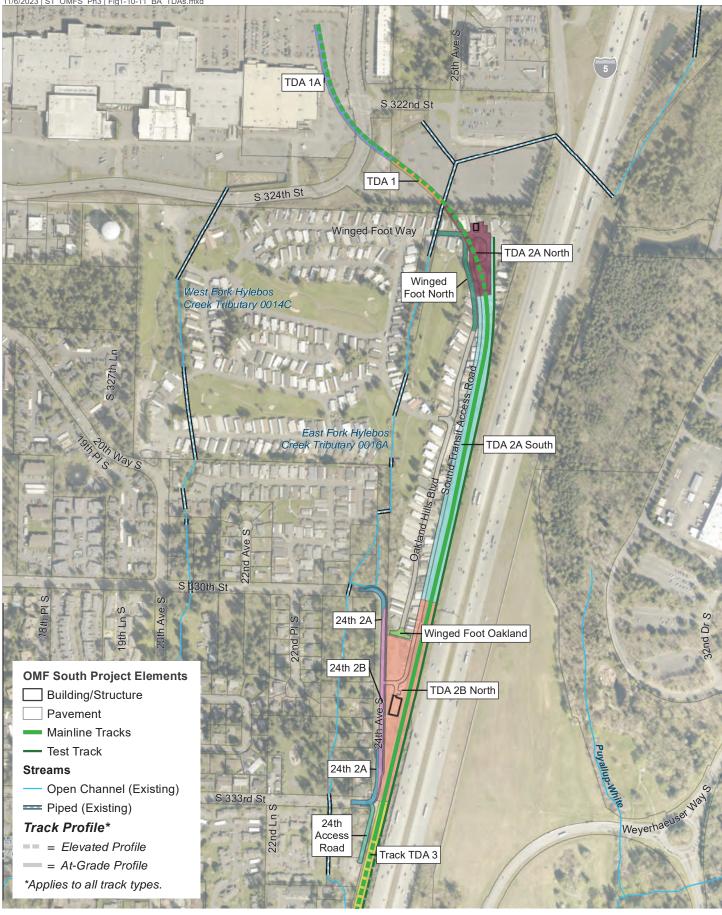


FIGURE 1-10 Project Elements and TDAs: Mainline **Biological Assessment**

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1,000 Feet

500

OMF South

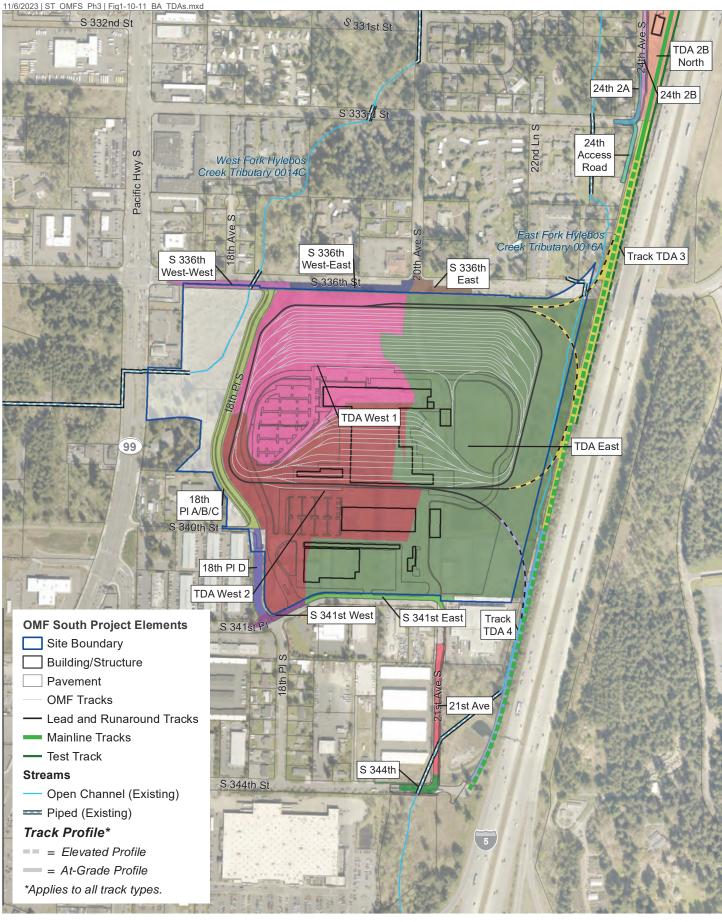


FIGURE 1-11 Project Elements and TDAs: Mainline **Biological Assessment**

DRAFT: For internal discussion only. Not reviewed or approved on behalf of any party.

1,000 Feet

500

OMF South

New and relocated roads to accommodate OMF South were counted as project-associated impervious areas because the new and replaced pavement will require stormwater treatment and detention. In areas where elevated guideways will be built over roadways, the underlying impervious area of the road was not included in the impervious area numbers to avoid double-counting. For this analysis, ballasted track sections were counted as impervious areas, although they do not typically express direct stormwater runoff. The project will increase the amount of impervious surface in the action area by 22.3 acres (approximately 67 percent), mostly as a result of the new guideway covering existing forested and grassy right-of-way areas and conversion of grassy areas to impervious surface at the OMF South site. This will include a 16.36-acre increase in impervious surface area in the East Fork Hylebos Creek Tributary 0016A drainage basin and a 6.97-acre increase in impervious area in the West Fork Hylebos Creek Tributary 0014C drainage basin.

1.3.9.2 Pollution Generating Impervious Surface Area

Existing PGISs include roadways, buildings, and parking lots covering 24.20 acres. The proposed action will largely be redeveloping the area, and project-related PGISs will include 25.47 acres that will be redeveloped primarily for new roadway extensions, access roads, frontage road improvements, and surface parking areas. Overall, there will be a 1.27-acre increase in PGIS within the project action area. This will include a 1.53 acre increase in PGIS in the East Fork Hylebos Creek Tributary 0016A drainage basin and a 0.26-acre reduction in PGIS in the West Fork Hylebos Creek Tributary 0014C drainage basin. Table 1-5 identifies all existing and proposed PGIS, changes in impervious surface area, what types of treatment will be provided, and where in each drainage basin the stormwater will ultimately be discharged (Figure 1-12 and Figure 1-13).

TDA	Existing	Proposed	Change	Proposed Treatment	Post Treatment Discharge
	E	East Fork Hylebos C	reek Tributary 0016	A Drainage Basin	
21st Avenue	0.10	0.40	+0.30	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to stream
24th 2A	0.21	0.25	+0.04	Vault with presettling plus sand filter	New conveyance system with ultimate connection to culvert
24th 2B	0.21	0.42	+0.21	Vault with presettling plus sand filter	Proposed system with ultimate connection to culvert
24th Access Road	0.04	0.15	+0.11	Vault with presettling plus sand filter	New conveyance system with ultimate connection to culvert
S 336th Street East	0.25	0.25	0.00	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to stream

Table 1-5 Existing and Proposed PGISs (Acres), Treatment, and Discharge

Table 1-5Existing and Proposed PGISs (Acres), Treatment, and Discharge
(continued)

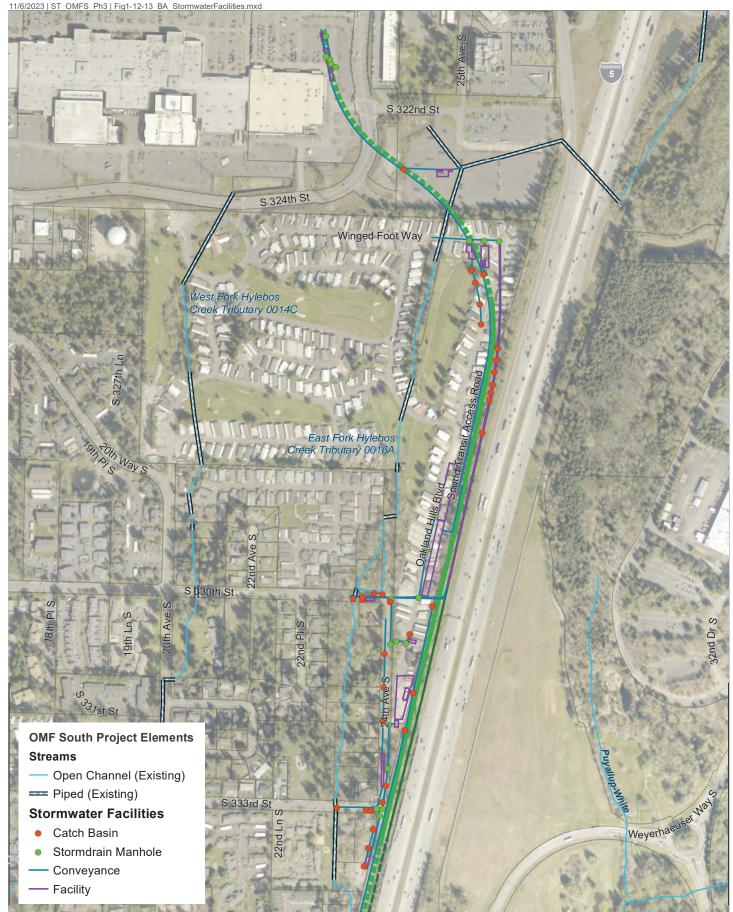
TDA	Existing	Proposed	Change	Proposed Treatment	Post Treatment Discharge
S 341st East	0.38	0.38	0.00	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to stream
S 344th	0.15	0.21	+0.06	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to stream
TDA 1	0.18	0.18	0.00	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to stream
TDA 2A North	0.28	048	+0.20	CSTW/DP1	Connect to existing conveyance system with ultimate discharge to stream
TDA 2A South	0.22	0.85	+0.63	CSTW/DP1	New conveyance system with ultimate connection to culvert
TDA 2B North	0.27	0.29	+0.02	Vault with presettling plus sand filter	New conveyance system with ultimate connection to culvert
TDA East	10.77	10.51	-0.26	CSTW/DP1	New conveyance system with ultimate connection to culvert
Track TDA 3	0.08	0.08	0.00	Vault with presettling plus sand filter	Surface discharge
Track TDA 4	0.07	0.07	0.00	Vault with presettling plus sand filter	Surface discharge with Site TDA East
Winged Foot North	0.16	0.34	+0.18	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to stream
Winged Foot Oakland	0.03	0.07	+0.04	Vault with presettling plus sand filter	New conveyance system with ultimate connection to culvert
Total	13.40	14.93	+1.53		

Table 1-5Existing and Proposed PGISs (Acres), Treatment, and Discharge
(continued)

TDA	Existing	Proposed	Change	Proposed Treatment	Post Treatment Discharge		
	West Fork Hylebos Creek Tributary 0014C Drainage Basin						
18th Place A/B/C	0.12	0.81	+0.69	CSTW/DP	Connect to existing conveyance system with ultimate discharge to stream		
18th Place D	0.37	0.09	-0.28	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to stream		
S 336th West- East	0.28	0.28	0.00	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to existing regional facility		
S 336th West- West	0.15	0.15	0.00	Vault with presettling plus sand filter	Surface discharge into existing regional facility.		
S 341st West	0.19	0.12	-0.07	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to stream		
TDA 1A	0.40	0.40	0.00	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to stream		
TDA West 1	5.35	3.17	-2.18	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to stream		
TDA West 2	3.94	5.52	+1.58	Vault with presettling plus sand filter	Connect to existing conveyance system with ultimate discharge to stream		
Total	10.80	10.54	-0.26				
Grand Total	24.20	25.47	+1.27				

Notes:

(1) CSTW/DP = Combined Stormwater Wetland/Detention Pond



Data Sources: King County; City of Federal Way.

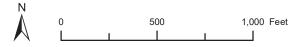
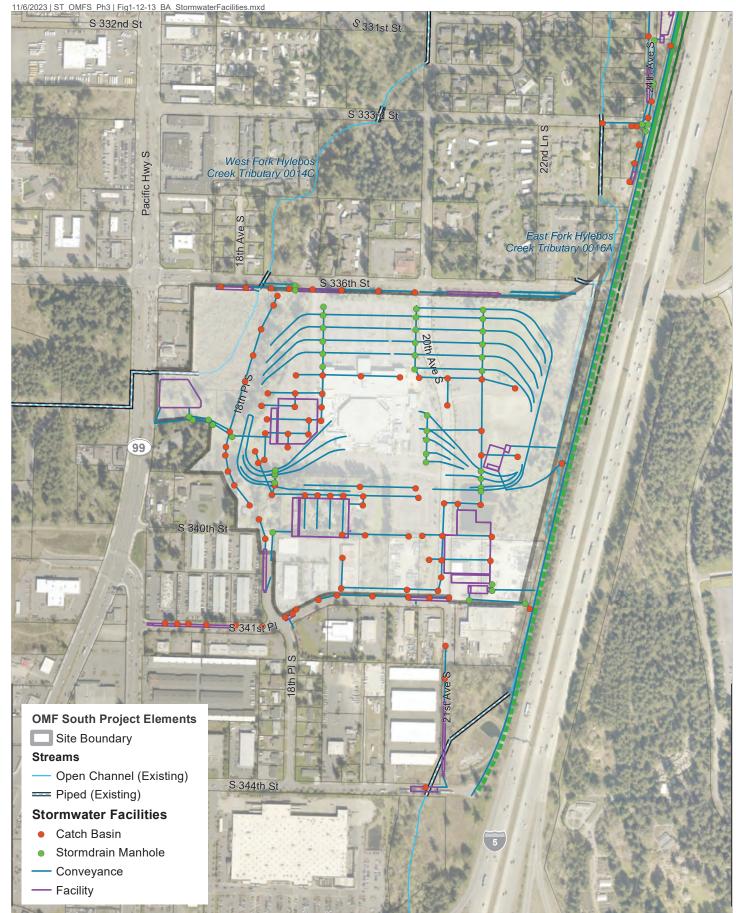


FIGURE 1-12 Stormwater Facilities: OMF Site Biological Assessment

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OMF South



Data Sources: King County; City of Federal Way.

N 0 500 1,000 Feet

FIGURE 1-13 Stormwater Facilities: OMF Site Biological Assessment

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1.3.9.3 Stormwater Flow Control and Treatment

The OMF South project will comply with the following local design manuals:

 City of Federal Way: King County Surface Water Design Manual (King County 2021) and the City of Federal Way Addendum to the King County Surface Water Design Manual (Federal Way 2017)

Stormwater management (SWM) facilities have been designed to provide enhanced treatment. Enhanced treatment facilities for the project will include CSTW/DPs and vaults with pre-settling basins and sand filters. The type of facility varies depending on location and ownership. CSTW/DP facilities are public-domain, non-proprietary SWM facilities. Vaults with pre-settling basins and sand filters are also public-domain, non-proprietary SWM facilities that meet the requirements of the King County Surface Water Design Manual (King County 2021). SWM facilities that discharge to East Fork Hylebos Creek Tributary 0016A, West Fork Hylebos Creek Tributary 0014C, and associated wetlands have been designed to provide enhanced treatment using a CSTW/DP, plus a large sand filter downslope or vaults with pre-settling basins and sand filters. This approach meets the requirements of the 2021 King County Surface Water Design Manual. These proposed types of best management plans (BMPs) have also been considered to have "medium" potential to reduce loading of 6PPD and 6PPD-guinone into surface water (Ecology 2022). As design proceeds, alternative treatment BMPs (public-domain or proprietary) may be implemented to reduce facility footprints and/or address maintenance concerns of the owning agencies. Stormwater BMPs will implement technologies that have been shown to achieve Ecology's performance goals for enhanced treatment. All runoff is considered to be PGIS, except for runoff from light-rail-only impervious surface (such as at grade or elevated guideways), sidewalks, and roofs, which is consistent with the design manuals mentioned above. All PGIS will receive on-site water quality and flow control treatment before being discharged into separate municipal storm sewer systems.

Where practical, non-PGIS runoff will be conveyed separately from PGIS runoff because it will not require water quality treatment. Non-PGIS runoff from elevated guideways will be dispersed over established forested areas or installed permanent vegetation where infiltration could occur. In areas that require installation of permanent vegetation the underlying soils will meet the criteria of post-construction soil quality and depth and topped with jute matting. This will help to reduce the volume of runoff to be detained, thereby reducing the size of the detention facilities. Dispersion will be practical in areas where permeable surfaces exist below the guideway, and there will be little human activity (because water dripping from the guideway above will be bothersome to people below). Where non-PGIS and PGIS runoff will be conveyed jointly, the stormwater management facility will be designed to detain the joint flow and to provide required treatment for the PGIS flow in accord with Ecology standards.

The following provides a brief overview of the receiving waterbodies, contributing TDAs, and existing and proposed conveyance networks.

East Fork Hylebos Creek Tributary 0016A

Sixteen TDAs are in the East Fork Hylebos Creek Tributary 0016A watershed within the action area (Tables 1-3 and 1-4; Figures 1-10 and 1-11). Overall, there will be a 1.53 acre increase in PGIS within contributing area above baseline conditions. The proposed action will provide enhanced treatment for all new and existing PGIS (14.93 acres) within the contributing basin of East Fork Hylebos Creek Tributary 0016A. Most of the treatment BMPs consist of vaults with pre-settling basins and an additional sand filter. From treatment facilities, treated stormwater either enters existing stormwater conveyance facilities or new conveyance facilities that

ultimately drain/discharge to East Fork Hylebos Creek Tributary 0016A at eight locations along the alignment (Figures 1-12 and 1-13). In general, the discharge locations will be made at existing culvert/road crossings via existing conveyance facilities, new culvert tie in locations (e.g., S 330th and South 333rd Street), or new outfalls with dispersion and overland flow to the stream. New outfalls will be stabilized to prevent scour/erosion at the outlet.

East Fork Hylebos Creek Tributary 0016A

Eight TDAs are in the West Fork Hylebos Creek Tributary 0014C watershed within the project action area (Tables 1-3 and 1-4; Figures 1-10 and 1-11). Overall, there will be a 0.26 acre decrease in PGIS within contributing area above baseline conditions. The proposed action will provide enhanced treatment for all new and existing PGIS (10.54 acres) within the contributing basin of West Fork Hylebos Creek Tributary 0014C. Stormwater treatment BMPs consist of vaults with pre-settling basins with an additional sand filter and a combined stormwater wetland detention facility. From the treatment facilities, stormwater is either conveyed via existing or new stormwater conveyance facilities to discharge in West Fork Hylebos Creek at 336th Street or will tie into the existing flow control structure at the outlet of the regional stormwater treatment these stormwater facilities that discharge at S 336th Street will receive additional water quality/quantity treatment (polishing) within the regional stormwater detention/treatment facility.

1.3.10 Construction Schedule

Mobilization is anticipated to begin in late April 2025 with construction not beginning until November 2025. Construction is anticipated to be completed by June 2032. ST is pursuing measures to advance the opening earlier (potentially 2030). Work may occur along any section of the alignment over the 43-month project duration. Typical construction will occur on a 5- to 6-day workweek schedule and will occur primarily between the hours of 7 a.m. and 10 p.m. In some locations (such as when street detours are involved and/or daytime construction periods have to be abbreviated to reduce impacts), additional shifts, all week, nighttime, or 24-hour construction activities could be necessary.

1.3.11 Interrelated and Interdependent Activities

An interrelated activity is part of the proposed action, and it depends on the proposed action for its justification (50 CFR 402.02). An interdependent activity has no independent utility apart from the action under consultation. The OMF South is a stand-alone project. It is justified by the separate components of the Sound Transit regional transit plan; however, these components are not contingent on the OMF South, and these individual components have been and/or would be subject to separate Section 7 consultation. Interrelated and interdependent activities associated with the OMF South project will include traffic detours and mitigation for impacts to sensitive areas.

When work occurs adjacent to or over a roadway, closure of lanes or the full roadway may be needed. Where construction will partially or fully close streets, through traffic will be detoured while maintaining access to existing businesses and residences. Road closures and detours will require approval by the local jurisdiction, as well as coordination with local residents and businesses. A maintenance of traffic plan will be prepared to address road closures, detours, access, and other traffic modifications needed for construction activities. Traffic modifications during construction will be unlikely to result in effects on listed species based on species' use of the action area and the general lack of suitable habitat (see Section 2).

Activities associated with compensatory mitigation for impacts to streams, wetlands, and wetland buffers can be considered interrelated and interdependent actions for this project. Mitigation for such impacts is still under development. Any potential impacts will be mitigated first by avoiding and minimizing impacts through design and by rectifying temporary impacts and, finally, by providing compensatory mitigation for unavoidable permanent impacts in compliance with applicable federal, state, and local requirements. Compensatory mitigation will be required and may include options such as on-site restoration, enhancement, use of mitigation banks or fee-in-lieu programs, and identification of a suitable site for in-kind mitigation nearby.

1.4 Performance Standards and Impact Avoidance, Minimization, and Mitigation Measures

To avoid and/or minimize potential impacts from construction and operation of the OMF South project, Sound Transit contracts will require implementing the conservation measures presented below.

1.4.1 Water Quality Protection During Construction

- The construction contractor will develop and implement a temporary erosion and sediment control (TESC) plan for all aspects of project construction requiring clearing, vegetation removal, grading, ditching, filling, embankment compaction, demolition, and/or excavation. BMPs defined in the plan will be used to control sediments from all vegetation removal or ground-disturbing activities.
- The construction contractor will develop a spill prevention control and countermeasures (SPCC) plan before beginning construction. The SPCC plan will identify the appropriate spill containment measures that will be used throughout project construction.
- The construction contractor will adhere to water quality standards as stated in the 401 Water Quality Certificate and National Pollution Discharge Elimination System (NPDES) permit issued for the project as applicable.
- BMPs included in the TESC and SPCC plans and NPDES permit conditions will include, but will not be limited to, the following:
 - Erosion control devices (e.g., silt fences) will be installed, as needed, to protect surface waters and other critical areas.
 - Erosion control blankets, or an equally effective BMP will be installed, as needed, on steep slopes that are susceptible to erosion and where ground-disturbing activities have occurred. This will prevent erosion and will assist with establishment of native vegetation.
 - Material that may be temporarily stored for use in project activities will be covered with plastic or other impervious material during rain events to prevent sediments from being washed from the storage area to surface waters.
 - All temporary and permanent erosion and sedimentation control measures will be inspected on a regular basis, maintained, and repaired to ensure continued performance of their intended function.
 - Silt fences will be inspected after each rainfall and at least daily during prolonged rainfall.

- Turbid water will be prevented from discharging to streams and wetlands. Turbid wastewater may be routed to temporary or permanent detention facilities, or to upland areas that will provide adequate infiltration.
- All equipment to be used for construction activities will be cleaned and inspected before arriving at the project site to ensure that no potentially hazardous materials are exposed, no leaks are present, and the equipment is functioning properly.
- Construction equipment and vehicles will be maintained to prevent them from leaking fuel or lubricants.
- Uncured concrete and/or concrete byproducts will be prevented from coming in contact with streams or water conveyed directly to streams during construction.
- A concrete truck chute cleanout area or equally effective BMP will be established to properly contain wet concrete.

1.4.2 General Best Management Practices for Construction Near Sensitive Areas

- Sound Transit will ensure compliance with all local, state, and federal permits received for the project.
- The construction contractor will delineate the boundaries of ground disturbance to prevent unintended effects on riparian vegetation, wetlands, woodlands, and other sensitive sites, both inside and outside of the construction limits. The construction limits will be clearly marked with high-visibility construction fencing before any ground-disturbing or construction-related activities, and no work in sensitive areas will occur outside of the construction limits.
- The construction contractor will implement measures to prevent erosion from soil or rock stockpiles, excavated materials, and excess soil materials into sensitive habitats, including water channels, wetlands, and riparian areas outside of the construction limits as a result of stormwater runoff.

1.4.3 Mitigation for Impacts to Sensitive Areas

Sound Transit is coordinating with resource agencies local jurisdictions and Tribes to identify compensatory mitigation sites for stream, wetland, and wetland/stream buffer impacts in association with the construction and operation of the OMF South. The mitigation will be approved by the appropriate permitting agencies and jurisdictions prior to construction. Wetlands and buffers that are temporarily disturbed during construction will be restored and replanted on site. The compensatory mitigation plan will include a combination of purchasing credits from the King County In-lieu Fee Program or approved mitigation bank, plus development of a mitigation area within the Hylebos Creek basin downstream of the project.

1.4.4 Design and Operational Best Management Practices

- The proposed action will include permanent stormwater runoff treatment and flow control facilities, meeting the requirements of the current King County Surface Water Design Manual (King County 2021).
- Sound Transit will incorporate stormwater conveyance and management facilities that promote infiltration in the facility design where practicable and permittable.

- Sound Transit will use runoff treatment BMPs that are best suited to the site conditions and best able to achieve the required levels of treatment. These may include natural or engineered dispersion BMPs; biofiltration BMPs such as vegetated filter strips, rain gardens, biofiltration swales, or media filters; wet-pool BMPs; and infiltration BMPs.
- Existing drainage configurations will not be rerouted to the extent that stormwater from one subbasin is conveyed and discharged to another.
- Sound Transit will use the following design and operational measures to prevent pollution resulting from mechanical lubricants used in the LRVs:
 - Sealed housing roller bearings for all axle bearings
 - Enclosed and sealed motor bearings
 - Enclosed truck bearings designed to exclude dirt
 - Sealed door mechanisms
 - Enclosed, sealed electrical conduits
 - On-board batteries contained within sealed enclosures
 - Air conditioners with refrigerant enclosed in sealed system and motors with sealed bearings

1.4.5 Regulatory Controls

- The project will be constructed in accord with regulatory permits, including the Hydraulic Project Approval issued by WDFW.
- In-water work will occur only during the authorized in-water work window, as determined by agencies with regulatory authority. The only streams in which in-water work will occur are the East Fork Hylebos Creek Tributary 0016A and the West Fork Hylebos Creek Tributary 0014C. Both tributaries flow intermittently, and they are typically dry during summer and early autumn (see Section 3.2.2). The tributaries flow to Hylebos Creek, which discharges to Commencement Bay. Neither WDFW nor the Corps specifies a standard window for work within tributaries to Commencement Bay. The in-water work window for the HPA WDFW issued for 2023 geotechnical borings on the preferred alternative was July 15 through September 30.
- Project construction will be performed in compliance with Washington State water quality rules (Washington Administrative Code [WAC] 173 201A 200), including requirements for work stoppage if turbidity levels or other relevant parameters exceed allowable levels outside the mixing zone.
- Before work below the ordinary high water line (OHWL) of any stream begins, the work site
 will be isolated from upstream and downstream waters to facilitate working in a dry channel
 and minimizing turbidity and erosion potential. If any fish are present within the work area,
 they will be relocated. While listed fish are not expected to be present within the project
 area, other resident species may be considered sensitive by the state or constitute the prey
 base for salmonids downstream.
- If water is present in stream channels where ground-disturbing work occurs, fish exclusion will follow the guidance outlined within the Recommended Fish Exclusion, Capture, Handling, and Electroshocking Protocols and Standards document (USFWS 2012) and WSDOT's Fish Exclusion Protocols and Standards document (WSDOT 2023a).

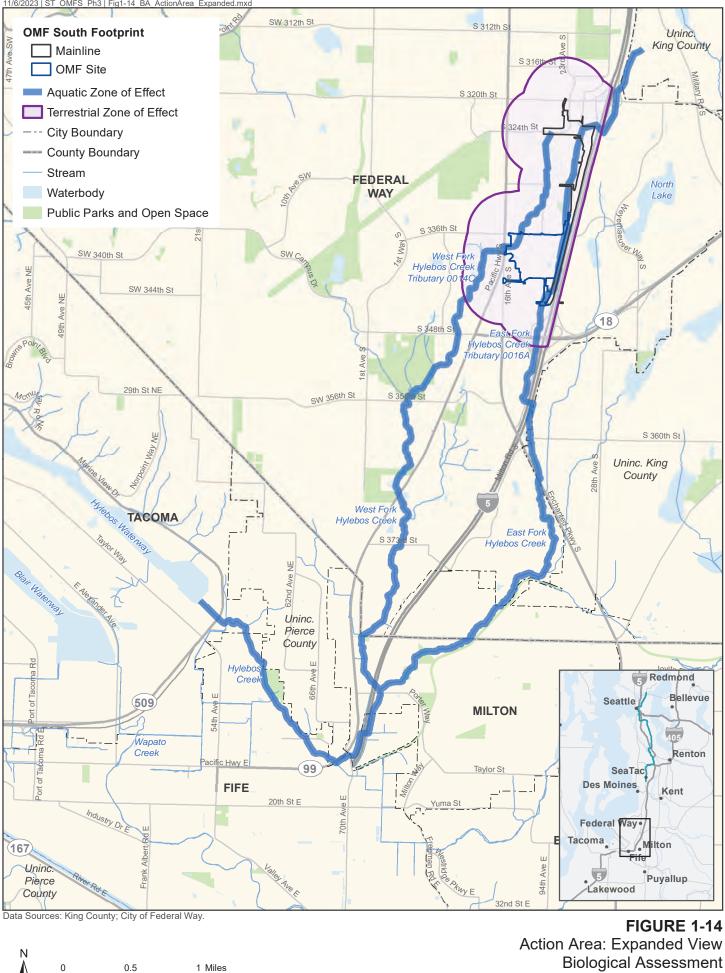
- Flow will be gradually introduced to the new channel to minimize sediment delivery in downstream reaches.
- Areas disturbed during construction will be restored with suitable vegetation, consistent with approved revegetation plans and critical area reports. Critical areas and riparian zones will be restored with native woody species adapted to those conditions.
- Unavoidable impacts on wetlands and streams and associated buffers will be mitigated by using guidance in Federal Way City Code (FWCC) 19.145.430. Ongoing restoration projects in the Hylebos watershed, the King County in-lieu fee program, and the development of a project-specific mitigation site are possible opportunities for mitigation that will comply with all federal, state, and local requirements.

1.5 Project Action Area

The project action area is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 Code of Federal Regulations [CFR] 402.02). The action area encompasses all areas where the project will have physical, biological, and chemical effects on the environment. This includes all areas within the project construction footprint, all areas influenced by the direct effects or delayed consequences of project construction and operation, and all areas affected by interrelated or interdependent actions.

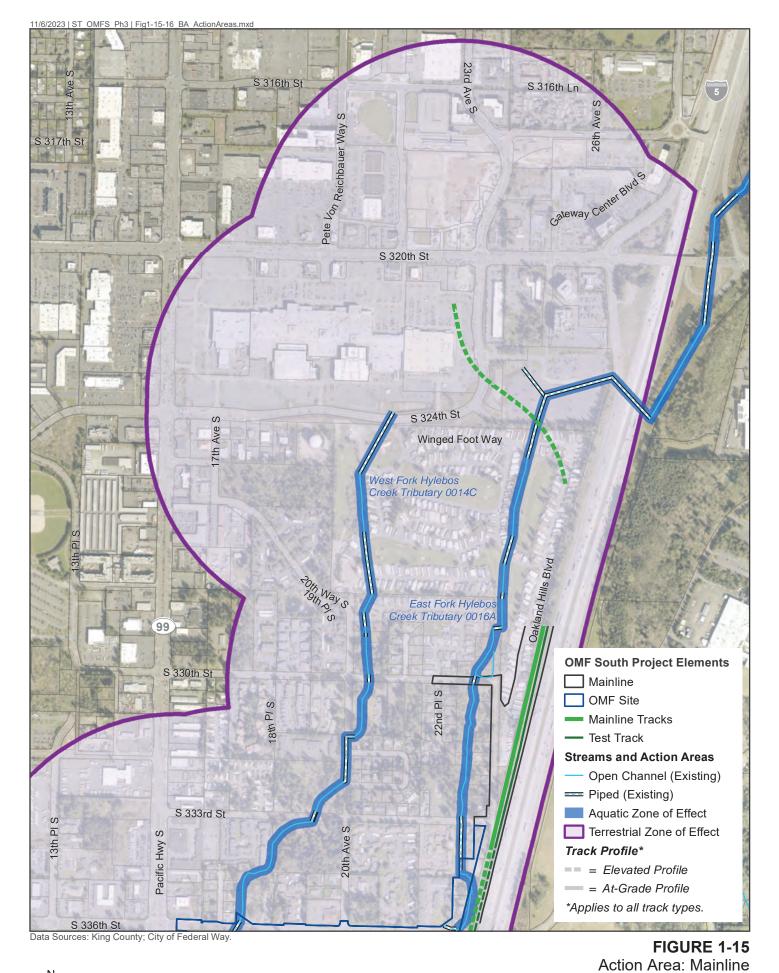
The project action area consists of two components: terrestrial and aquatic. The extents of these two components of the action area are described in Sections 1.5.1 and 1.5.2, respectively, and they are illustrated in Figure 1-14, Figure 1-15, and Figure 1-16.

In this document, the term "project action area" (or "action area") has a specific meaning, as defined above. The term "project site" encompasses the limits of construction, and it is also referred to as the project footprint. The project area is a more general term for the vicinity of the project site.



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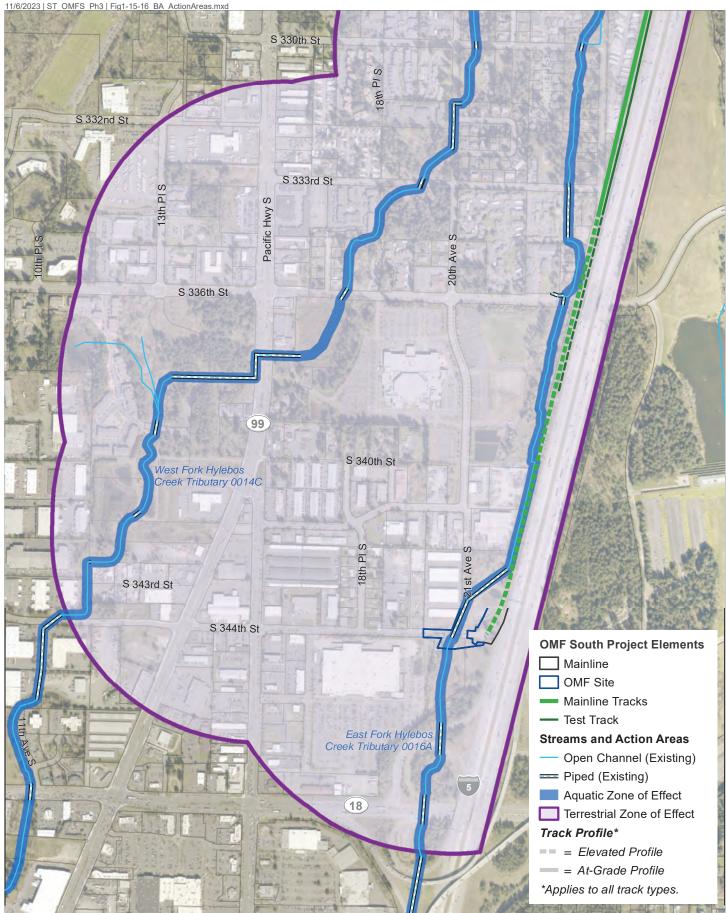
OMF South



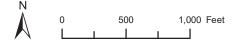
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Biological Assessment OMF South



Data Sources: King County; City of Federal Way.



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Action Area: OMF Site Biological Assessment

FIGURE 1-16

1.5.1 Terrestrial Component of the Action Area

The terrestrial component of the action area includes the project footprint and terrestrial areas where construction noise will be audible. These areas are described below.

Project footprint: The approximate construction footprint includes areas for road improvement, new roadways and guideways, intersections, culvert replacements for fish passage barrier removal, and stormwater facilities. These activities are primarily bounded by I-5 to the east, SR-99 to the west, S 320th Street to the north, and S 344th Street to the west. Additional wetland off-site mitigation may be required for the project, but the mitigation strategy has not yet been identified. If mitigation for project-related impacts may result in impacts on ESA-listed species and habitats not considered in this analysis, those impacts will be addressed through future consultation.

Noise: The distance at which airborne construction noise will be audible is based on the distance at which construction noise will attenuate to background levels. For this project, there are two different background noise levels. Noise levels in the project area and west of I-5 were measured over a 24-hour period at two locations, one adjacent to the proposed guideway at the north end of the project and another close to the location for the proposed OMF South Site. Both sites resulted in an average background noise level of 70 dBA (a-weighted decibels). Noise levels to the east of the project area are better characterized by the traffic noise associated with I-5. I-5 in the project area has a posted speed limit of 60 miles per hour (mph) with an average annual daily traffic (AADT) volume of 174,000 vehicles (WSDOT 2023b). To convert AADT to an hourly traffic volume, WSDOT recommends taking 10 percent of the AADT, which in this case is roughly equivalent to 17,400 vehicles per hour (v/h) (WSDOT 2023c). A roadway with an hourly traffic volume of 6,000 vehicles per hour and a posted speed limit of 60 mph has an associated noise level of 79.8 dBA. For traffic volumes exceeding 6,000 per hour, add 1 dB for every 1,000 v/h increase at a particular speed. Applying this to our traffic volume of 17,400 vehicles per hour, we would add 11.4 dBA to the 79.8 dBA for a noise level of approximately 91 dBA (WSDOT 2023b).

WSDOT's terrestrial noise calculator was used to determine the extent of construction related noise. Data input included the background noise levels identified above and the three loudest pieces of equipment anticipated to be used during construction, including a jackhammer (95 dBA), an impact hammer (105 dBA), and a vibratory hammer (105 dBA).

Based on this information, the terrestrial zone of effect related to noise is anticipated to extend 1,600 feet from the project footprint on the west side of I-5 in all directions except to the east. Because the noisy I-5 corridor is immediately east of the project footprint, construction-related noise is expected to attenuate to background within 241 feet from the east edge of the project footprint Figure 1-14.

1.5.2 Aquatic Component of the Action Area

The aquatic portion of the action area includes watercourses that will be affected by the following:

- Construction-related impacts during culvert removal and replacement, stream daylighting, and channel realignment activities
- Changes in the amount of PGIS
- Future expansion of fish-accessible habitat by removal of fish passage barriers

Construction-related impacts: Fish passage culvert replacements and planned stream realignments may result in temporarily elevated turbidity in the East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek due to disturbance of the stream bed and bank. Portions of these streams may be temporarily piped to protect water quality during construction. Work near and within both streams will be performed during the period when stream flows are lowest and when anticipated stream flow is less than 10 cubic feet per second. Stream flow is intermittent in the project area, and the channel is typically dry during summer and early autumn (i.e., during the anticipated in-water work window). Project construction will be performed in compliance with Washington State water quality rules (WAC 173-201A-200). If water is present in the stream at the time of construction, any potential exceedance of the turbidity criteria established in WAC 173 201A 200 will not be expected to extend more than 100 feet downstream and 50 feet upstream of the project footprint. This distance represents the maximum extent of the aquatic portion of the action area as defined by the effects associated with construction-related turbidity.

PGIS-related impacts: New or reconfigured SWM facilities will discharge to the two tributaries: West Fork Hylebos Creek Tributary 0014C and East Fork Hylebos Creek Tributary 0016A. These streams ultimately drain to the mainstem Hylebos Creek, which discharges to the Hylebos Waterway. The Hylebos Waterway is a dredged channel maintained by the Port of Tacoma that connects to Commencement Bay.

Based on habitat conditions, intermittent flows, and the presence of total barriers to fish passage, ESA-listed fish are not expected to be present in any stream reaches within 1.5 miles of the project footprint, including the discharge points of proposed stormwater facilities.

However, emerging research related to urban runoff mortality syndrome indicates that adult and juvenile coho salmon (Oncorhynchus kisutch) are particularly vulnerable to lethal and sublethal effects of exposure to 6PPD-quinone, a ubiquitous chemical in tires that is introduced into streams via road runoff (Tian et al. 2021). Additional research has shown that both juvenile steelhead (Oncorhynchus mykiss) and juvenile Chinook salmon (Oncorhynchus tshawytscha) are also vulnerable to untreated stormwater containing 6PPD-quinone; however, the effects are not as immediate and instead of mortality occurring within a few hours of exposure (up to 4 hours for coho salmon), it can take one or two days for steelhead and Chinook salmon to display mortality (Fresh et al., 2022). A recent study looked at the sensitivity of early life stage (~ three weeks post swim-up [newly feeding] coho salmon and Chinook salmon) and found that juvenile coho salmon are three orders of magnitude more sensitive to 6PPD-quinone than Chinook salmon (Lo et al., 2023). This study found only 7.1% survival for coho salmon exposed to the lowest concentration treatment group, while Chinook salmon showed 61.4% survival in the highest concentration treatment group (Lo et al. 2023). While not showing the degree of sensitivity to stormwater runoff containing 6PPD-quinone as coho salmon, juvenile steelhead and Chinook do appear to exhibit direct mortality, although at higher concentrations and longer response times (Tien et al. 2021, Fresh et al. 2022, Lo et al. 2023, and Brinkman et al 2022). Other contaminants, such as metals and polycyclic aromatic hydrocarbons, are also associated with adverse effects on ESA listed salmonids and their prev. FHWA and WSDOT are closely tracking efforts to gather critical additional information on this topic, such as the fate and transport of 6PPD guinone and other contaminants in the environment, concentration thresholds for acute and sublethal toxicity, potential effects on species other than coho salmon, and the effectiveness of stormwater treatment facilities in reducing the concentration of contaminants in stormwater runoff.

For this analysis, it is assumed that (1) 6PPD quinone and other contaminants in stormwater are toxic to ESA-listed salmonids and potentially toxic to other listed species including bocaccio and yelloweye rockfish, (2) contaminants may be present in toxic concentrations in streams that receive discharges from SWM facilities, and (3) such concentrations may persist as far downstream as the streams' discharge points to marine waters. As such, the aquatic component of the action area extends downstream to the mouth of Hylebos Creek, where it drains into the Hylebos Waterway in Commencement Bay (Figure 1-14).

Habitat expansion: The action area in East Fork Hylebos Creek Tributary 0016A will extend approximately 2.5 miles upstream and east of I-5 due to the removal of a current partial fish passage barrier (Site ID 935271), located immediately upstream of S 344th Street. The existing 417-foot culvert will be removed, and the stream will be daylighted in this general location. Accessibility to the aquatic habitats will depend on removal of several barriers upstream and downstream of the project area. WSDOT is developing plans for the removal of several barriers to fish passage (two total barriers and four partial barriers) on East Fork Hylebos Creek Tributary 0016A downstream of the project area. It is assumed for this analysis that those barriers will not have been removed before construction begins. Even if those barriers are removed before starting construction, several barriers (including one total barrier) will impede access to the habitat rendered accessible by this project. The total barrier (WDFW Site ID 932945) is on a crossing of S 363rd Place approximately 1.3 miles downstream of S 344th Street.

Similarly, the action area in the West Fork Hylebos Creek Tributary 0014C will extend approximately 0.8 mile upstream of S 336th Street to the stream's end point in Belmor Park Golf and Country Club due to the removal of the current fish passage barrier beneath S 336th Street (Site ID 933224) and replacement with a fish passable culvert. Accessibility to the aquatic habitats will depend on removal of several barriers upstream and downstream of the project area. Currently there are three complete barriers downstream, one complete barrier upstream, and numerous partial fish passage barriers upstream and downstream of the S. 336th Street crossing (Figure 1-14).

2 STATUS AND PRESENCE OF LISTED SPECIES AND DESIGNATED CRITICAL HABITAT IN THE PROJECT ACTION AREA

The following resources were consulted to develop and refine the list of species that might be affected by construction and operation of the OMF South project:

- The USFWS Information for Planning and Consultation Program (see Appendix E)
- WDFW Priority Habitats and Species data (WDFW 2023b)
- Maps depicting the freshwater range of ESA-listed Pacific salmon and steelhead under the jurisdiction of NMFS (NMFS 2023)
- Statewide Integrated Fish Distribution (SWIFD) Web Map from the Northwest Indian Fisheries Commission (NWIFC 2023)
- USFWS critical habitat online mapper (USFWS 2023)
- Bird species maps and sighting data (eBird 2023)
- Washington Department of Natural Resources (WDNR) Washington Natural Heritage Program data (WDNR 2023a and 2023b)
- City of Federal Way critical areas maps (City of Federal Way 2016)
- Communications with Puyallup Tribe of Indians Fisheries (Ladley, personal Communications 2021a and 2021b)
- Annual salmon, steelhead, and bull trout report: Puyallup/White River Watershed Water Resource Inventory Area 10 (Marks et. al 2018 and 2021)

2.1 Species and Critical Habitat Lists and Listing Status

The USFWS and NMFS lists of ESA-listed species and critical habitats were accessed on their websites on September 8, 2023 (Appendix E). Based on information provided at those websites and tribal coordination on salmon presence, ESA-listed species that could occur within the action area are identified in Table 2-1. No species proposed for listing are known or expected to currently use habitats in the action area, and no areas proposed for designation as critical habitat are present.

The list provided by USFWS does not identify the gray wolf as an ESA-listed species potentially present in the action area. This may be a product of the rule issued by USFWS on November 3, 2020 (85 Federal Register [FR] 69778), removing gray wolves from the list of species protected under ESA. However, on February 10, 2022, the U.S. District Court for the Northern District of California vacated and remanded USFWS' delisting rule. The court's decision effectively reinstated the listing status the species had before USFWS issued the delisting rule. As a result, gray wolves in western Washington have a listing status of endangered. Gray wolf critical habitat is not present in the action area.

Species or Critical Habitat ⁽¹⁾	Listing Status	Federal Jurisdiction	Critical Habitat in Action Area
Streaked horned lark (<i>Eremophila alpestris strigata</i>)	Threatened	USFWS	No
Yellow-billed cuckoo, Western U.S. distinct population segment (DPS) (<i>Coccyzus americanus</i>)	Threatened	USFWS	No
Marbled murrelet (Brachyramphus marmoratus)	Threatened	USFWS	No
Taylor's checkerspot (<i>Euphydryas editha taylori</i>)	Endangered	USFWS	No
Gray wolf (<i>Canis lupus</i>)	Endangered	USFWS	No
North American wolverine (<i>Gulo gulo luscus</i>)	Threatened	USFWS	No
Bull trout (Salvelinus confluentus)	Threatened	USFWS	No*
Chinook salmon, Puget Sound ESU (Oncorhynchus tshawytscha)	Threatened	NMFS	Yes
Steelhead, Puget Sound DPS (Oncorhynchus mykiss)	Threatened	NMFS	Yes
Bocaccio, Puget Sound/Georgia Basin DPS (Sebastes paucispinis)	Endangered	NMFS	No
Yelloweye rockfish Puget Sound/Georgia Basin DPS (<i>Sebastes ruberrimus</i>)	Threatened	NMFS	No
Killer whale, Southern Resident DPS (Orcinus orca)	Endangered	NMFS	No

Table 2-1 ESA-Listed Species and Critical Habitats

Sources: * 75 FR 63898;

Notes:

(1) ESU = evolutionarily significant unit; DPS = distinct population segment

Six of the species identified in Table 2-1 are not expected to occur in the action area for the reasons detailed in the sections below. An additional species, the northwestern pond turtle (*Actinemys marmorata*), was recently proposed for listing as a threatened species; however, due to its restricted distribution, it is not anticipated to occur within the action area. A brief description of the northwestern pond turtle and current distribution is provided below.

Streaked Horned Lark

Streaked horned larks are not expected to use habitats in the action area. This species requires large areas of open grassland habitat with clear sightlines, and it is known to occur in portions of southern Puget Sound, along the Washington Coast, and at lower Columbia River islands (78 FR 61451, October 3, 2013). Breeding habitat for streaked horned larks in Washington consists of grasslands and sparsely vegetated areas at airports, sandy islands, and coastal spits. No such habitat is present in the action area. Grassland habitat is present on the Weyerhaeuser property located immediately east of the proposed action and on the east side of I-5. This grassland habitat is visible in Figure 1-15 and Figure 1-16. The total size of the habitat patch is less than 60 acres; the smallest site with evidence of streaked horned lark use in the Puget Trough region is 90 acres (Anderson and Pearson 2015). In addition, the fields on the Weyerhaeuser property are dominated by densely growing, sod-forming grasses. Streaked horned larks typically select habitat patches with low, sparse vegetation and a relatively high percent cover of bare ground, avoiding areas dominated by shrubs or sod-forming grasses

(Anderson and Pearson 2015). The closest known breeding area is at Tacoma Narrows Airport, more than 10 miles from the action area. The closest location where critical habitat has been designated for the streaked horned lark is more than 80 miles from the action area. For these reasons, the project will have **no effect** on streaked horned larks.

Yellow-billed Cuckoo

Yellow-billed cuckoo nest almost exclusively in low- to mid-elevation riparian woodlands that cover 50 acres or more within arid to semiarid landscapes (Hughes 1999). Most breeding sites have been found in patches larger than 200 acres. Historical records indicate that breeding habitat for yellow-billed cuckoos in Washington consisted primarily of cottonwood and willow bottoms along the lower Columbia River and in the Puget Sound lowlands. The last confirmed breeding records of yellow-billed cuckoos in Washington are from the 1930s. Currently, the species no longer breeds in western Canada and the northwestern continental United States (Washington, Oregon, and Montana) (79 FR 59991, October 3, 2014). No observations of this species have been documented within 10 miles of the action area (WDFW 2023b; eBird 2023). No blocks of suitable forested riparian habitat larger than 5 acres are present in the action area. For these reasons, the project will have **no effect** on yellow-billed cuckoos.

Marbled Murrelet

Marbled murrelets require old-growth forest for nesting and marine habitats for foraging. No suitable nesting or foraging habitat is present within 2 miles of the terrestrial portion of the action area, and there have been no documented observations of nesting marbled murrelets within 10 miles. Occasional observations of marbled murrelets have been documented in Commencement Bay outside of the industrial waterways (eBird 2023); however, given the noise and industrialized nature of these marine foraging areas, marbled murrelet use of these areas is anticipated to be extremely low. No designated critical habitat for marbled murrelets is present within 10 miles of the action area. The potential for marbled murrelet nesting in the action area is minimized by the following:

- All forested areas in the action area have been logged multiple times in the past century and a half; young forests and small patches of conifers lack the complexity preferred by murrelets. Murrelets typically nest in large coniferous trees in areas containing characteristics of older forests (McShane et al. 2004).
- The project site is immediately adjacent to I-5 and the urban landscape of Federal Way, where high levels of noise and activity likely discourage use by nesting marbled murrelets. Raphael et al. (2016) found that nesting habitat correlated strongly with areas of low human disturbance.
- Construction related noise is not anticipated to affect marbled murrelets flying between foraging habitat in Puget Sound and inland nesting sites due to the existing high levels of noise along the I-5 corridor and adjacent urban development.
- The closest sites where potential nesting behavior has been observed are more than 30 miles away.
- Marbled murrelets have been found to demonstrate a fairly high degree of fidelity to forest stands used for nesting (Plissner et al. 2015). If murrelets historically nested near the project site, any nest trees were removed when the area was cleared at the time of initial settlement by Euro-Americans and on multiple occasions thereafter. Descendants of any murrelets that nested near the project site had to find suitable breeding habitat farther inland, on the western slopes of the Cascades. Birds in those lineages are likely to return to the stands that have been used more recently for nesting. Flying through forested areas near the

project site in search of trees with suitable nest platforms would require an excessive expenditure of energy and exposure to predation risk. As such, the probability of any murrelets finding platforms in the project area and selecting them as nest sites is negligible.

For the reasons specified above, the project will have **no effect** on marbled murrelets.

Taylor's Checkerspot

Taylor's checkerspot butterflies require grassland dominated by fescue or other short-stature grass species, with a diversity of larval host plants and spring nectar sources (Stinson 2005). The closest known population is more than 15 miles from the project area. Populations in the Puget Sound region are primarily associated with shallow soil balds and grasses within a forested landscape. In Washington and Oregon, Taylor's checkerspot butterfly larvae feed primarily on native paintbrush and closely related species (e.g., Castilleja hispida, C. levisecta, Triphysaria spp.), and on plantain species such as non-native Plantago lanceolata and native Plantago maritima (61938 FR 77, October 11, 2012). Other annuals documented as larval host foods include several species of speedwell (Veronica spp.), blue-eyed Mary (Collinsia grandiflora and C. parviflora), and sea blush (Plectritus congesta). Plantago lanceolata and Plantago maritima could be present in grassy habitat throughout the project corridor. Other larval host species have not been observed, and they are unlikely to be present. Grosboll (Grosboll 2011) found that, within areas of broadly suitable grassland vegetation structure, Taylor's checkerspot butterfly adults lay their eggs in areas with very high densities of host plants. Of 31 oviposition locations studied, the volume of host plants in all but one exceeded 10,000 cubic centimeters per square meter. No areas with such high densities of paintbrush or plantain species have been observed in the project action area. For the reasons specified above, the project will have no effect on Taylor's checkerspot.

Gray Wolf

Gray wolves require areas with abundant prey and low levels of human disturbance. The current range of gray wolves is not known to extend into the Puget lowlands, and there have been no documented den or rendezvous sites within the action area. The closest pack is the Napeequa Pack (nonbreeding pack) over 70 miles away from the action area, followed by the Shady Pass pack (breeding pack) approximately 90 miles away from the action area, and the Teanaway single wolf territory over 60 miles away from the action area (WDFW 2023c). All packs and territories are located on the other side of the Cascade crest. Based on the location of the project area in a lowland urban setting with high levels of human activity and no nearby roadless areas, no suitable habitat for this species is present in the action area. Critical habitat for gray wolves in Washington has not been designated. For the reasons specified above, the project will have **no effect** on the gray wolf.

North American Wolverine

North American wolverines strongly prefer cold areas with a deep snowpack that persists through the spring. Because of this preference, wolverines are typically found at high elevations at the latitude of the project site. Suitable habitat and sufficient prey resources for wolverines do not exist within the action area. For the reasons specified above, the project will have **no effect** on North American wolverine.

Northwestern Pond Turtle

The northwestern pond turtle was proposed for listing as a threatened species in October 2023 (88 FR 68370). No critical habitat has been proposed or designated for the species at this time.

Historical records suggest a limited distribution of northwestern pond turtle in Washington, being restricted to central and southern Puget Sound from Snohomish County to Thurston County, and Skamania and Klickitat counties in the Columbia Gorge (Hays et al. 1999). Currently, the species occurs at six locations in the state, including three sites in Skamania County, and one each in Klickitat, Mason and Pierce counties (Hallock et al. 2017). In Washington, they are found associated with ponds, small lakes and wetlands at elevations below 300 m (985 ft.) (Hays et al. 1999). They also require the availability of adjoining open upland habitats. In Washington, northwestern pond turtles are considered conservation reliant because of the small number of occupied sites, low abundance, non-native predation, and reliance on headstarting to maintain populations (88 FR 68370-68399). Headstarting is the process of removing eggs from the wild and raising through the most vulnerable life stages and then releasing back to the wild.

Currently, the closest population is located approximately 10 miles southwest of the proposed action. Given the distance from the existing population in Pierce County and the project area, the dense road network system between the existing population and the project area, and the developed nature of the project area, the potential for the species to occupy habitats in the project action area is extremely unlikely without human intervention.

2.2 Presence of Federally Listed and Proposed Species in the Project Action Area

Parametrix biologists conducted field investigations in the action area on several occasions between 2019 and 2022. The results of the investigations are summarized below. Before conducting fieldwork, the biologists reviewed maps and materials on the soils, hydrology, topography, land use, floodplains, wetlands, streams, and wildlife habitat in the action area. In addition, information from the WDNR Natural Heritage database indicates that no threatened or endangered plants are known to occur within 5 miles of the project site (WDNR 2023a and 2023b).

Discussions in this subsection describe the known and expected use of habitats in the action area by the species identified in Table 2-1. Based on the presence of downstream barriers to fish passage, combined with intermittent flows and a lack of potentially suitable habitat, ESA-listed fish are not expected to be present in any streams within 1 mile of the project site. The following discussions are intended primarily to support evaluations of the potential for exposure of fish in downstream waters. These species might be exposed to contaminants in stormwater runoff from impervious surfaces created or replaced by project construction. Discussions of species presence and habitat use include those with the potential to occur in the Hylebos Creek watershed (HUC 17110019).

2.2.1 Bull Trout

USFWS listed bull trout as threatened under ESA on November 1, 1999 (64 FR 58910). The Statewide Integrated Fish Distribution (SWIFD) database does not indicate the presence/distribution of bull trout in any streams within the Hylebos Creek drainage basin (NWIFC 2023). According to the SWIFD database, the closest documented presence of bull trout is in the Puyallup River (NWIFC 2023).

Despite the general absence of bull trout-preferred habitat conditions (as described below) within the Hylebos Creek basin (see below), there was one report of a single sub-adult bull trout or Dolly Varden captured near the S 373rd Street crossing of West Fork Hylebos Creek in August 2018, approximately 3.9 miles downstream of the project footprint (Heltzel 2018 pers. comm.). Genetic analysis was not performed to verify whether the fish was a bull trout or a Dolly

Varden. This single observation should be considered in the context of decades of fish monitoring studies in the Hylebos Creek watershed conducted by Puyallup Tribal Fisheries. These studies have not encountered bull trout in the watershed (Marks et al. 2021). This individual bull trout or Dolly Varden likely strayed. For the purposes of this analysis, we are assuming that there is an extremely low probability for bull trout to be present within the Hylebos Creek drainage basin at any time of year and that if they were to occur, their distribution in the system would be transitory and in extremely low numbers.

Bull trout are strongly associated with snowmelt-dominated streams that maintain cold water temperatures in headwater tributaries year-round. Streams supporting bull trout have clean gravel substrates and cold water temperatures (less than 9°C/48°F) (63 FR 31693, June 10, 1998). Hylebos Creek is a rainfall-dominated stream that does not provide this type of habitat. and stream temperatures are regularly higher than the temperatures this species reguires. Stream substrates in the Hylebos Creek watershed are dominated by fines, particularly near the project footprint. Water temperatures often exceed those preferred by bull trout. A 2001 water quality study of East Fork Hylebos Creek (east of I-5) indicated that temperatures frequently exceeded 14°C in summer months at one of the stations (King County 2002). Such temperatures are likely to limit the presence of bull trout. West Fork Hylebos Creek and portions of its tributaries are included on the 303(d) list of impaired waters, based on temperatures exceeding 17°C (Ecology 2023). Other 303(d) water quality impairments identified in the watershed include dissolved oxygen, heavy metals, copper, and bacteria, which may also limit the potential presence of bull trout (Ecology 2023). The Hylebos Waterway has 303(d) listings for chlorinated pesticides, DDT and metabolites, high molecular weight polycyclic aromatic hydrocarbons, and polychlorinated biphenyls, all of which detrimentally affect various life history stages of fish.

2.2.2 Puget Sound Chinook Salmon

Chinook salmon in the Puget Sound ESU are listed as threatened under ESA (64 FR 14308, March 24, 1999). The ESU includes naturally spawned Chinook salmon originating from rivers flowing into Puget Sound, along with Chinook salmon from 26 artificial propagation programs. Primary factors contributing to declines in Chinook salmon in the Puget Sound ESU include habitat blockages, genetic modification of wild fish through interbreeding with hatchery fish, urbanization, logging, hydropower development, harvests, and flood control and flood effects (NMFS 1998).

Chinook salmon have been documented in the Hylebos Creek watershed. Chinook salmon typically spawn in the mainstem channels of rivers and large tributaries, in riffles, and in pool tail outs where clean, gravel-dominated substrates are available. Compared to other Pacific salmon, spawning Chinook salmon require larger and deeper streams and pools (at least 3 feet deep), as well as larger gravel (up to 5.5 inches diameter). Such habitats are not available in the low-energy, intermittently flowing headwater tributaries present in the project area.

Chinook salmon are neither known nor expected to be present in the headwater tributaries to which treated stormwater from the project will be discharged. According to the SWIFD database, the closest watercourses where Chinook salmon have been documented, are presumed present, or could potentially be present are at least 1.5 miles downstream from any discharge points of stormwater facilities that will be built or reconfigured for this project (NWIFC 2023). Numerous human-made fish passage barriers, combined with small stream sizes and intermittent flow regimes, likely limits the movement of Chinook salmon into stream reaches in the project area (Ladley 2021a, pers. comm.).

Chinook salmon have been documented in Hylebos Creek and the lower reaches of West Fork Hylebos Creek (downstream of barriers), and they are presumed to be present in the lower 700 feet of East Fork Hylebos Creek (NWIFC 2023). Fisheries biologists from the Puyallup Tribe of Indians have documented Chinook salmon in West Fork Hylebos Creek as far upstream as S 356th Street, approximately 1.4 miles upstream of the upstream extent of the documented distribution of Chinook salmon in that stream, as mapped by NWIFC (NWIFC 2023).

Downstream human-made barriers to fish migration currently obstruct Chinook salmon from entering stream reaches in the project area. Table 2-2 provides an overview of the downstream distances to reaches where Chinook salmon have been documented or where their presence is not precluded by stream channel gradients (<= 16% stream gradient). The latter would become more accessible to Chinook salmon in the future, if all human-made downstream impediments to fish passage are removed. The table also identifies the number of human-made fish passage barriers between the project area and reaches where Chinook salmon have been documented. For each stream, the downstream distance is measured as the distance between the farthest downstream discharge point of a stormwater facility and the upstream extent of documented, presumed, or potential presence. The downstream distance to the documented presence of Chinook salmon in the West Fork Hylebos Creek subbasin is based on information provided by the Puyallup Tribe of Indians. The downstream distance to the documented presence of Chinook salmon in the East Fork Hylebos Creek subbasin is based on information from NWIFC (NWIFC 2023).

Table 2-2	Distribution and Impediments to Chinook Salmon Presence in the
	Project Area

Chinook Distribution and Human Made Barriers	West Fork Hylebos Creek Tributary 0014C	East Fork Hylebos Creek Tributary 0016A
Distance to the closest gradient-accessible reach ⁽¹⁾	1.3 miles	1.1 miles
Distance to the closest reach with presumed presence	1.5 miles	3.7 miles
Distance to the closest reach with documented presence	1.5 miles	3.9 miles
Number of total barriers	4	4 ⁽²⁾
Number of partial barriers	7	11 ⁽²⁾
Number of human-made features unassessed for fish passage	4	2

Sources: NWIFC 2023; WDFW 2019, WDFW 2023b

Notes:

(1) Gradient-accessible reaches are those to which access is not precluded by stream channel gradients that pose a barrier to upstream migration (<= 16% stream gradient for Chinook). Please note that this is modeled data and is not meant to be a definitive statement about the distribution of a species or imply there are natural barriers due to stream gradient.</p>

(2) Values in this table are based on barrier inventory data as of May 2023. WSDOT is developing plans for the correction of two total barriers and four partial barriers to fish passage on East Fork Hylebos Creek Tributary 0016A downstream of the project area. Installation of new, fish-passable structures at these sites will reduce barriers, but this will not provide access to stream reaches in the project footprint. Based on the presence of human-made downstream barriers to fish passage, combined with intermittent flows and a lack of potentially suitable habitat, Chinook salmon are assumed to be absent from the Hylebos Creek tributaries near the project area. The remainder of this discussion describes Chinook salmon use of Hylebos Creek, West Fork Hylebos Creek, and the Hylebos Waterway.

Chinook salmon in the Hylebos Creek watershed are classified as fall-run. According to HDR Engineering, Inc. (HDR 2014), adults typically return to freshwater habitats in the Hylebos Creek watershed in August and September, with spawning occurring from mid-September through October. EarthCorps (2016) reported that Chinook salmon typically enter and spawn in Hylebos Creek and accessible tributaries between October and December of each year. Based on these characterizations, it is assumed for this analysis that adult Chinook salmon may be present in accessible streams in the Hylebos Creek watershed from August through December.

Fry emerge from spawning gravels in March and April, and they rear in the system between 2 to 12 months before migrating to Puget Sound (HDR 2014). Some juveniles migrate to salt water as subyearlings (i.e., a few weeks or months after hatching), while others rear in fresh water for a full year (Wydoski and Whitney 2003). Because juveniles may spend as much as a year in freshwater habitats in the Hylebos Creek watershed, it is assumed that they may be present in accessible streams in the action area at any time of year for this analysis.

The Puyallup Tribal Fisheries Department has documented Chinook salmon spawning in West Fork Hylebos Creek, primarily in the reach extending approximately 0.5 mile upstream from the confluence of West Fork Hylebos Creek and East Fork Hylebos Creek (Marks et al. 2021). Sediments in this reach of West Fork Hylebos Creek are dominated by sand and silt, but some small and isolated patches of suitable spawning habitat are available. Reaches of Hylebos Creek and West Fork Hylebos Creek in the action area also provide rearing habitat for juveniles, as well as serving as a migration corridor for Chinook salmon that may spawn in upstream reaches. Chinook salmon have been documented in West Fork Hylebos Creek as far upstream as S 356th Street (Ladley 2021b pers. comm.).

NMFS and USFWS (2009) determined that juvenile Chinook salmon typically are present in the estuarine waters of the Hylebos Waterway from March and early July, with peak numbers in late May or early June. Subyearling juvenile Chinook salmon have also been captured in Commencement Bay as early as January, during beach seining surveys (Ladley pers. comm., as cited in NMFS and USFWS 2009). Juveniles are generally observed more frequently near the mouths of the waterways than near the heads (Kerwin 1999), and observations are most frequent in the waterways closest to the Puyallup River (NMFS 2001).

As part of ongoing fish and habitat restoration efforts, the Puyallup Tribe has released approximately 10,000 to 20,000 juvenile fall-run Chinook salmon into West Fork Hylebos Creek annually, during the spring (Marks et al. 2021). These fish are produced by the Clarks Creek Hatchery Program, and they are included in the Puget Sound ESU (79 FR 20802, April 14, 2014). Hatchery fish have been identified on spawning grounds in West Fork Hylebos Creek (Marks et al. 2021).

2.2.3 Puget Sound Steelhead

The Puget Sound steelhead DPS is listed as a threatened species under the ESA (72 FR 26722, May 11, 2007). The DPS includes all naturally spawned anadromous winter-run and summer-run steelhead populations, in streams within the river basins of the Strait of Juan de Fuca, Puget Sound, and Hood Canal, Washington. The DPS also includes steelhead from artificial propagation programs in the Green River.

Steelhead have been documented in the Hylebos Creek watershed, and they may be present in some tributaries to Hylebos Creek in the action area. Detailed information about habitat use and the timing of steelhead presence is available for the Puyallup River, but not for streams in the Hylebos Creek watershed. Except where stated otherwise, descriptions of patterns of steelhead presence in the Hylebos Creek watershed are based on information from the Puyallup River watershed.

Steelhead have been documented in Hylebos Creek and the lower reaches of West Fork Hylebos Creek and East Fork Hylebos Creek (NWIFC 2023). The nearest watercourses where steelhead have been documented are at least 1.9 miles downstream from any discharge points of stormwater facilities that will be built or reconfigured for this project. Of the two headwater tributaries to which treated stormwater from the project will be discharged, steelhead have been documented only in the lowest reaches of East Fork Hylebos Creek Tributary 0016A, approximately 1.9 miles downstream from the project area. Approximately 1.3 miles of East Fork Hylebos Creek Tributary 0016A flows through or immediately adjacent to the project footprint and all but the upper 0.2 miles (800 feet) of that distance are considered gradient accessible to steelhead (<= 20% stream grade). The discharge point of TDA 13A (the furthest downstream discharge point from a project-related SWM to this stream) is in a reach characterized as gradient-accessible for steelhead—that is, access is not precluded by stream channel gradients that pose a barrier to upstream migration (access is, however, currently limited by the presence of anthropogenic barriers).

Numerous fish passage barriers, combined with small stream sizes and intermittent flow regimes, limits the movement of steelhead into stream reaches in the project area (Ladley 2021a, pers. comm.).

Table 2-3 provides an overview of the downstream distances to reaches where steelhead have been documented or where their presence is not precluded by stream channel gradients. The latter could become accessible to steelhead in the future if all downstream impediments to fish passage were removed. The table also identifies the number of fish passage barriers between the project area and reaches where steelhead have been documented. For each stream, the downstream distance is measured as the distance between the farthest downstream discharge point of a stormwater facility and the upstream extent of documented, presumed, or potential presence, based on information from NWIFC (2023).

Based on the presence of human-made downstream barriers to fish passage, combined with intermittent flows and a lack of potentially suitable habitat, steelhead are assumed to be currently absent from the Hylebos Creek tributaries near the project area. The remainder of this discussion describes steelhead use of Hylebos Creek, its major tributaries, and the Hylebos Waterway.

Table 2-3Distribution and Impediments to Steelhead Presence in the
Project Area

Steelhead Distribution and Human Made Barriers	West Fork Hylebos Creek Tributary 0014C	East Fork Hylebos Creek Tributary 0016A
Distance to nearest gradient-accessible reach ⁽¹⁾	1.3 miles	Gradient Accessible
Distance to nearest reach with presumed presence	N/A	N/A
Distance to nearest reach with documented presence	2.7 miles	1.9 miles
Number of total barriers	4	4 ⁽²⁾
Number of partial barriers	7	13 ⁽²⁾
Number of human-made features unassessed for fish passage	4	2

Sources: NWIFC 2023; WDFW 2019; WDFW 2023a

Notes:

(1) Gradient-accessible reaches are those to which access is not precluded by stream channel gradients that pose a barrier to upstream migration (<=20 stream gradient for steelhead). Please note that this is modeled data and is not meant to be a definitive statement about the distribution of a species or imply there are natural barriers due to stream gradient.

(2) Values in this table are based on barrier inventory data as of May 2023. WSDOT is developing plans for the correction of 2 total barriers and 4 partial barriers to fish passage on East Fork Hylebos Creek Tributary 0016A downstream of the project area. Installation of new, fish-passable structures at these sites will reduce barriers but will not provide access to stream reaches in the project footprint.

Steelhead in the Hylebos Creek watershed are predominantly a winter-run population. The principal spawning stock of steelhead in the Puyallup River system generally enters the river system from January through June, with peak migration occurring in mid- to late April and early May (Marks et al. 2021). In addition, a few individuals, likely strays from summer-run populations in the Green or Skykomish Rivers, are caught in the lower Puyallup River each year during August and September (Marks et al. 2021). WDFW does not recognize a summer run population of steelhead in the Puyallup River system, and only the winter run populations are included in the ESA-listed Puget Sound DPS (NMFS and USFWS 2009).

Juvenile steelhead typically rear in freshwater habitats for 2 years (range: 1 to 4) before migrating to marine waters (Marks et al. 2021). Juvenile out-migration takes place primarily in April and May, although a few individuals have been observed out-migrating as late as late-July (NMFS and USFWS 2009).

Information on recent observations of steelhead in the Hylebos Creek watershed is limited. No juvenile or adult steelhead were observed during habitat surveys and electrofishing surveys in several reaches of East Fork Hylebos Creek and West Fork Hylebos Creek in 2014 (HDR 2014). NWIFC (2023) does not classify any stream reaches in the Hylebos Creek watershed as documented spawning habitat. Marks et al. (2021) characterized the spawning frequency for this species in Hylebos Creek as low and inconsistent. NMFS and USFWS (2009) reported that steelhead spawn in the Hylebos Creek watershed occasionally, primarily in West Fork Hylebos Creek between S 373rd Street and SR 99, approximately 2.5 miles downstream from the project area.

Based on these observations, it is assumed for this analysis that steelhead may spawn in the Hylebos Creek watershed, albeit in low numbers and probably not every year. The nearest spawning areas are approximately 2.5 miles downstream from the downstream-most discharge point from a stormwater treatment facility in West Fork Hylebos Creek Tributary 0014C. Adults may be present in accessible streams from January through June, with the highest probability of presence occurring during the peak migration period (April and May).

Juveniles could be present at any time of year, albeit in low numbers and with low probability. The quality of rearing habitat in the action area is limited by the lack of suitable substrates and by elevated water temperatures during summer. Juvenile steelhead in the Hylebos Creek watershed are most likely to rear in lower reaches.

2.2.4 Puget Sound/Georgia Basin Bocaccio

The Puget Sound/Georgia Basin DPS of bocaccio was listed as "endangered" under the ESA on April 28, 2010 (75 CFR 22276). The DPS includes all bocaccio found in the waters of Puget Sound, the Strait of Georgia, and the Strait of Juan de Fuca east of Victoria Sill. Population declines for bocaccio, like all rockfish species in Puget Sound, were historically attributed to overfishing (Palsson et al. 2009; Drake et al. 2010; Williams et al. 2010); however, today there is some uncertainty about the relative impact of some fisheries and of other additional threats, including degraded water quality and habitat, contaminants, and derelict fishing gear, among others on population declines (Palsson et al. 2009, WDFW 2013).

Subadults and adult bocaccio typically occupy waters deeper than 120 feet (Love et al. 2002) and are therefore not expected to be present in the lower tidally influenced portions of Hylebos Creek. If any bocaccio were to enter the action area, they would likely do so as larvae; rockfish at that life stage are pelagic drifters, carried by the currents. Juveniles settle onto rocky or cobble substrates in shallow nearshore water at 3 to 6 months of age, moving to progressively deeper waters as they grow (Love et al. 2002). Juvenile bocaccio may also recruit to sandy zones with eelgrass or drift algae (Love et al. 2002). This habitat is not available within lower Hylebos Creek. Overall, the potential for use of the action area by bocaccio is by the larval life history form and likely only on incoming tidal conditions.

2.2.5 Puget Sound/Georgia Basin Yelloweye Rockfish

The Puget Sound/Georgia Basin DPS of yelloweye rockfish was listed as "threatened" under the ESA on April 28, 2010 (75 CFR 22276). This DPS includes all yelloweye rockfish found in the waters of Puget Sound, the Strait of Georgia, and the Strait of Juan de Fuca east of Victoria Sill. are not expected to occupy nearshore waters at any life stage and are therefore very unlikely to be in the action area when project activities are underway. Recent research has found evidence for two populations of yelloweye rockfish within the DPS—one in Hood Canal and one within the rest of the Puget Sound/Georgia Basin (NMFS 2017). Threats to yelloweye rockfish are similar to that identified above for bocaccio.

Similar to bocaccio, adult yelloweye rockfish are found in deep water habitats ranging from 90 to 1,394 feet (30-425 m) in depth (Orr et al. 2000; Love et al. 2002) and have a strong affinity to substrate. Juvenile yelloweye rockfish are not typically found in intertidal waters (Love et al. 1991; Studebaker et al. 2009). In British Columbia, juvenile yelloweye rockfish have been observed at a mean depth of 239 feet (73 m), with a minimum depth of 98 feet (30 m) (Yamanaka et al. 2006). Neither of these habitats are present within the project action area. Larval yelloweye rockfish are often associated with free-floating algae, seagrass, and detached kelp (Love et al. 2002; Shaffer et al. 1995) and can be found anywhere in the water column (Weis 2004). As larval yelloweye rockfish are subject to currents and tidal action, it is possible for larval rockfish to be present, albeit in low numbers, within the lower tidally influenced portion of Hylebos Creek during incoming tides. Larval fish would likely be flushed out of lower Hylebos Creek on an outgoing tide.

2.2.6 Southern Resident Killer Whale

The southern resident DPS of killer whales was listed as endangered on February 16, 2006 (70 FR 69903), and a recovery plan was completed in 2008. In 2021, NMFS completed a 5-year review and concluded that southern resident killer whales (SRKWs) should remain listed as endangered (NMFS 2021). The recovery plan identified several factors that may be limiting SRKW recovery, including quantity and quality of prey, toxic chemicals that accumulate in top predators, and disturbance from sound and vessels (NMFS 2008). Oil spills are also a risk factor. It is likely that multiple threats are acting together to impact the whales. Although it is not clear which threat or threats are having the largest impact on the survival and recovery of SRKWs, all the threats identified are potential limiting factors in the population dynamics of the DPS (NMFS 2008).

The action area does not include any areas of marine habitat where SRKWs are likely to be present. The aquatic component of the action area extends to the points at which Hylebos Creek enters the Hylebos Waterway. SRKWs are unlikely to enter in the shallow waters of Commencement Bay, and they are even less likely to enter the narrow confines of the Hylebos Waterway. Based on the above, the project has no potential to directly affect SRKWs or their habitat. However, based on the potential for adverse impacts on Chinook salmon, analyses in this BA consider potential indirect impacts on this species. Chinook salmon make up a large proportion of SRKW diets: it is estimated that Chinook salmon are approximately 70 percent of SRKW diet during winter and spring and more than 90 percent during summer and fall (NMFS 2021).

2.3 Presence of Federally designated or Proposed Critical Habitat in the Project Action Area

Designated or proposed critical habitat for bull trout, streaked horned lark, yellow-billed cuckoo, marbled murrelet, bocaccio, or yelloweye rockfish is not present in or near the Action Area.

- The nearest designated critical habitat for streaked horned larks is more than 80 miles from the project area.
- No critical habitat for the yellow-billed cuckoo has been designated in Washington.
- The nearest designated critical habitat for marbled murrelet is more than 30 miles from the project area.
- Designated critical habitat for bocaccio and yelloweye rockfish does not include Hylebos Creek or any of its tributaries.
- Designated critical habitat for bull trout does not include Hylebos Creek or any of its tributaries.

Based on the above, the project will have **no effect** on critical habitat for these species.

2.3.1 Puget Sound Chinook Salmon Critical Habitat

The final rule designating critical habitat for Puget Sound Chinook salmon included the main stem of Hylebos Creek and the West Fork Hylebos Creek downstream of S 373rd Street (west of I-5), (70 FR 52630, September 2, 2005). No Critical habitat for Chinook has been designated in the East Fork Hylebos Creek or any of its tributaries.

Specific Physical and Biologic Features (PBFs) for Chinook salmon in freshwater and nearshore marine/estuarine areas, as defined by NMFS, include the following:

- 1. Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation, and larval development
- 2. Freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility; water quality and forage supporting juvenile development; and natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks
- 3. Freshwater migration corridors free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival
- 4. Estuarine areas free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between freshwater and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation
- 5. Nearshore marine areas free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes supporting growth and maturation, and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels

Freshwater habitats in Hylebos Creek and West Fork Hylebos Creek in the action area likely support PBFs 2 and 3. Estuarine areas in the lower reaches of Hylebos Creek likely support PBF 4. PBF 1 is present only in the reaches of West Fork Hylebos Creek where Chinook salmon spawn. The action area does not include nearshore marine habitats; therefore, PBF 5 is not pertinent to this analysis.

2.3.2 Puget Sound Steelhead Critical Habitat

The lower reaches of West Fork Hylebos Creek and East Fork Hylebos Creek, approximately 1.3 to 1.9 miles downstream from the project footprint, respectively, are included in the designated critical habitat for Puget Sound steelhead under 81 FR 9251 (February 24, 2016). Critical habitat for Puget Sound steelhead is defined by the same PBFs as those identified above for Chinook salmon. Freshwater habitats in East Fork Hylebos Creek, West Fork Hylebos Creek, in the action area likely support PBFs 2 and 3. Estuarine areas in the lower reaches of Hylebos Creek likely support PBF 4. PBF 1 is present only in the reaches of West Fork Hylebos Creek where steelhead are known or expected to spawn occasionally and infrequently. The action area does not include nearshore marine habitats; therefore, PBF 5 is not pertinent to this analysis.

2.3.3 Southern Resident Killer Whale

The critical habitat of SRKW has been designated to include all marine waters of Puget Sound where depths are greater than 20 feet (86 FR 41668). Three habitat features essential to the conservation of the DPS include: 1) water quality to support growth and development; 2) prey species of sufficient quantity, quality, and availability to support individual growth, reproduction,

and development, as well as overall population growth; and 3) passage conditions to allow for migration, resting, and foraging. While the geographic definition of SRKW critical habitat does not overlap with the project action area, the second PBF, prey species, may be affected via trophic web interactions.

The potential for the project to have adverse impacts on Chinook salmon leads to the possibility of indirect effects to the quantity, quality, and availability of prey for killer whales.

3 ENVIRONMENTAL SETTING

Before describing the potential effects of the project action, it is important to define the environmental baseline.

"The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early Section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline." (50 CFR 402.02)

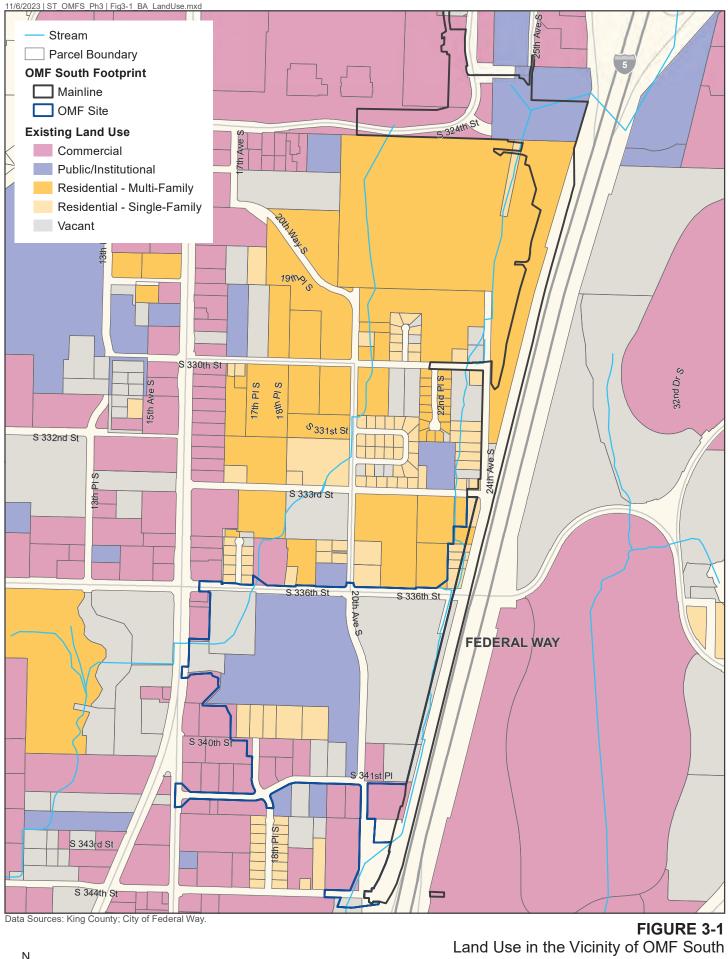
The OMF South mainline guideway will begin at the southern terminus of the FWLE in the Commons at Federal Way mall development area located between S 320th Street and South 324th Street and then turn southeast to travel down WSDOT's southbound I-5 right-of-way to the guideway's southern terminus at S 344th Street. The I-5 corridor is located immediately to the east of the guideway and land use to the west is a mixture of multi-and single-family residential, commercial, and institutional (Christian Faith Center) land uses with some vacant land. Land that is currently vacant is typically encumbered by sensitive habitats including wetlands, streams, forested buffers, and regional stormwater detention facilities. The OMF South site is largely occupied by institutional and commercial land uses with vacant land positioned between the OMF facility and guideway to the east. Overall, the project area is located within a highly developed urban/ suburban environment Figure 3-1.

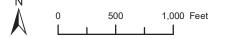
Eighteen wetlands and two streams were identified in the immediate project area (Parametrix 2023). Wetland and streams affected by the proposed action are discussed in more detail in Section 3.2 below.

Project biologists Steve Krueger, Anna Hoenig, Mike Hall, and Josh Wozniak characterized riparian, wetland, and upland habitat in the Action Area during several site visits ranging from Fall 2019 to Spring 2023. Project area photographs are presented in Appendix F.

3.1 Terrestrial Species and Habitats

Mature forested habitat in the action area is largely restricted to riparian buffer habitats in undeveloped parcels. Mature forested buffers are dominated by Douglas-fir, western red cedar, black cottonwood, and red alder. Forested wetlands areas in the study area are dominated by Pacific willow, red alder, Oregon ash, and black cottonwood, with an understory of Douglas' spiraea, salmonberry, Himalayan blackberry, slough sedge, and reed canarygrass. Scrub-shrub wetland areas in the study area are dominated by Scouler's willow, Pacific willow, salmonberry, Himalayan blackberry, red-twig dogwood, and Douglas' spiraea. Because there are no listed terrestrial species within the project Action Area, the focus of this assessment will be on species associated with aquatic habitats.





Biological Assessment

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3.2 Aquatic Species and Habitats

The project area contains two streams that will be affected by project construction or that include discharge points from project SWM facilities. Both streams are headwater tributaries in the Hylebos Creek watershed (West Fork Hylebos Creek Tributary 0014C and East Fork Hylebos Creek Tributary 0016A).

West Fork Hylebos Creek Tributary 0014C and East Fork Hylebos Creek Tributary 0016A are both west of I-5 in the project area and have been heavily modified to accommodate urban development. Downstream of the project limits, the streams pass through many culverts, most of which are complete or partial barriers to fish passage (WDFW 2023a). Impediments to fish passage include water velocity, surface water drops, and steep slopes. Furthermore, several of the pipes are long and have bends. While long and irregularly shaped culverts are not defined as barriers, such structures are known to inhibit the progress of fish upstream. Within the project area, both streams are intermittent, and flow is often tied to precipitation and seasonally high groundwater. Streambeds in the project vicinity are typically dry during summer and early fall. These tributaries flow into East Fork Hylebos Creek and West Fork Hylebos Creek, which converge to form Hylebos Creek south of the project area near Fife. Hylebos Creek then flows west and north, emptying to marine waters in Commencement Bay at the Hylebos Waterway.

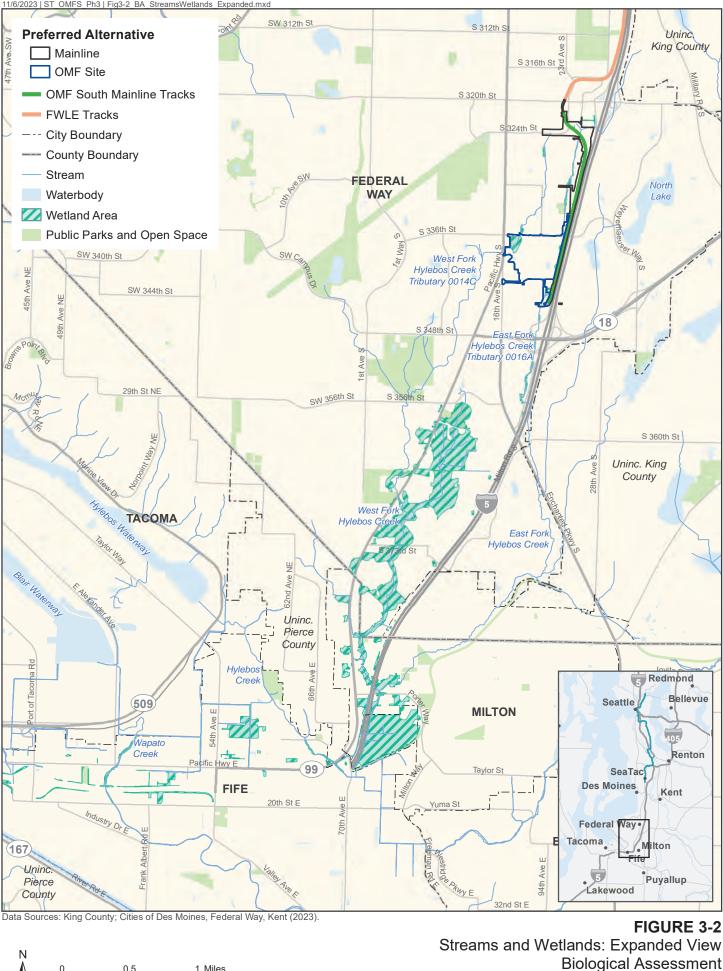
These waterbodies are described in the sections below and shown in Figure 3-2, Figure 3-3, and Figure 3-4. Discussions of the use of these waterbodies by ESA-listed fish are included in Section 2.2.

3.2.1 West Fork Hylebos Creek Tributary 0014C

The entirety of West Fork Hylebos Creek Tributary 0014C is within the aquatic component of the action area because SWM facilities built or modified for the project will discharge to the stream and the proposed action will also replace one culvert on this stream.

West Fork Hylebos Creek Tributary 0014C first daylights west of I-5 within the Belmor Park manufactured home community and country club. The stream flows south through residential developments before entering a series of stormwater detention ponds near S 336th Street (Appendix F; Photos 1-3). The stream then crosses SR 99 through a long, jointed pipe. Approximately 1.5 miles downstream from the project limits, in Hylebos Creek Wetlands Park, West Fork Hylebos Creek Tributary 0014C joins other tributaries to form West Fork Hylebos Creek. The upstream reaches of West Fork Hylebos Creek Tributary 0014C, including the immediate project area, flow only intermittently. Numerous barriers to fish passage exist downstream of the project limits (see Table 2-2 and Table 2-3 and Figure 1-8).

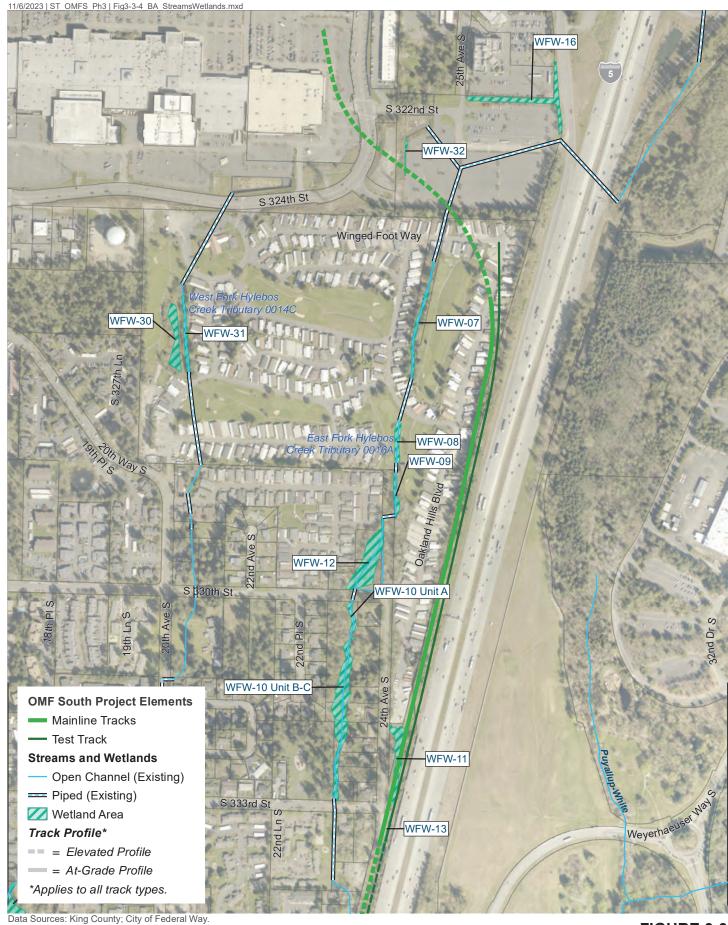
Urbanization in the stream basin has contributed to altered peak and base flows in West Fork Hylebos Creek Tributary 0014C (King County 1990). As a result, the City of Federal Way has initiated and completed numerous flood control projects, including large SWM facilities, throughout the basin. The portion of West Fork Hylebos Creek Tributary 0014C within the project footprint is contained wholly within two consecutive combined wetland and in-line regional stormwater detention facilities with the first located immediately north of S 336th Street and the other situated between South 336th Street to the north and State Route (SR) 99 to the southwest (Appendix F: Photos 1-3). These in-line detention facilities are also considered wetlands and were delineated as such as part of the proposed action. More detail on these



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1 Miles

0.5



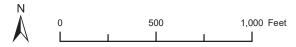
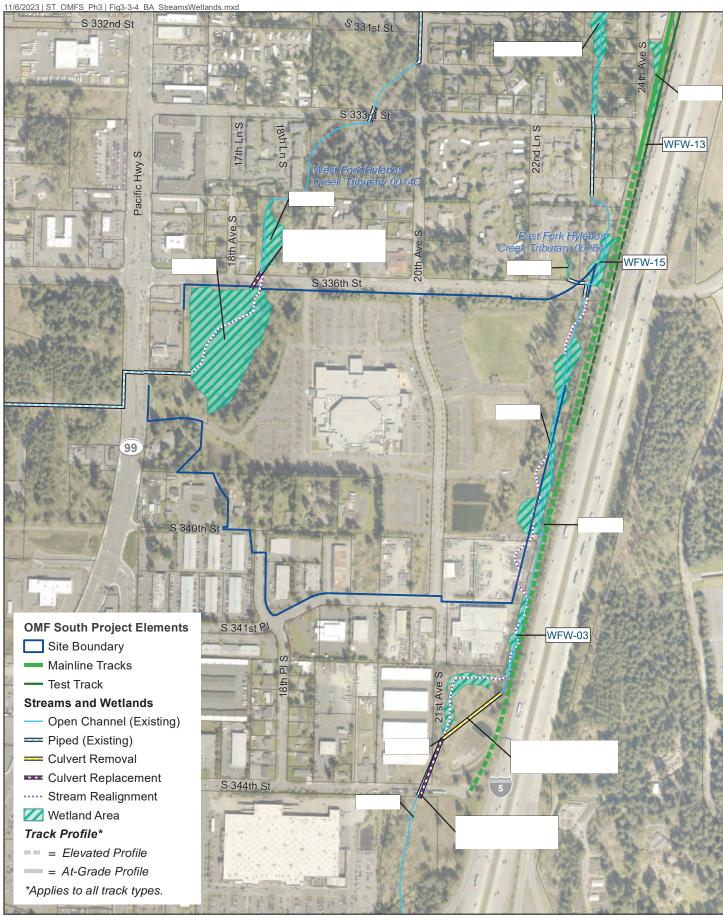


FIGURE 3-3 Streams and Wetlands in Project Area: Mainline **Biological Assessment**

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Data Sources: King County; City of Federal Way.

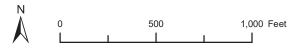


FIGURE 3-4 Streams and Wetlands in Project Area: OMF Site Biological Assessment

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wetlands (WFW-02 and WFW-33) can be found in Section 3.2.7 below. The stream enters the wetland/detention facility from the north at South 336th Street. Sediment accumulation within the detention facility has filled any prior defined channel that may have existed prior to creation of the detention facility. West Fork Hylebos Creek Tributary 0014C exits the detention facility via a water control structure, where it is piped west across SR 99. The stormwater detention facility was historically a wetland that was modified by the City of Federal Way as part of a flood mitigation program, which resulted in construction of 4- to 6-foot-high earthen berms along the western and southern boundaries to allow the wetland to provide for greater stormwater storage. Although modified, the area remains a Category II palustrine forested (PFO) wetland. Dominant vegetation in the wetland consists primarily of Pacific willow (*Salix lucida*) and black cottonwood (*Populus trichocarpa*). Understory species include red-twig dogwood (*Cornus alba*), salmonberry (*Rubus spectabilis*), and hardhack (*Spiraea douglasii*).

The segment of West Fork Hylebos Creek within the action area is on the 303(d) list of impaired waters, based on violations of state standards for copper, lead, zinc, dibenzo(a,h)anthracene, and benzo(a)pyrene (Ecology 2023). Other 303(d)-listed reaches have been identified downstream in the West Fork Hylebos Creek for temperature, dissolved oxygen, fecal coliform bacteria, and benthic macroinvertebrate bioassessment and in the mainstem Hylebos Creek for bacteria. Large amounts of impervious surface area in the upper watershed have likely contributed to elevated levels of pollutants associated with vehicle use, including metals such as copper, lead, and zinc. No fish use has been documented within this reach of West Fork Hylebos Creek (NWIFC 2023; WDFW 2023b).

3.2.2 East Fork Hylebos Creek Tributary 0016A

The entirety of East Fork Hylebos Creek Tributary 0016A is within the aquatic component of the action area because the stream will receive effluent from SWM facilities and because the project will replace two culverts and remove one culvert in its entirety (see Section 1.3.2).

The headwaters of East Fork Hylebos Creek Tributary 0016A are in a wetland complex northeast of I-5 and S 320th Street. After passing under I-5, the S 320th Street Park & Ride, and Winged Foot Way, the stream daylights within the golf course of the Belmor Park manufactured home community where the northern extent of this project is located. The stream then flows southward through a series of piped and open-channel segments for approximately 2.1 miles, confined by I-5 to the east and light industrial, commercial, and residential development to the west. Near S 356th Street, the stream turns east, crosses under I-5, and joins East Fork Hylebos Creek after converging with other tributaries.

West (downstream) of I-5, habitat conditions in East Fork Hylebos Creek Tributary 0016A are similar to those in West Fork Hylebos Creek Tributary 0014C. Much of the stream in this area is confined within a straight, ditch-like channel profile, and fish habitat is poor (Appendix F: Photos 4-6). The stream gradient is low, and accumulations of fine sediments have resulted in the shallowing and widening of the streambed. Supported by intermittent flow, dense patches of reed canarygrass grow in low-energy areas, exacerbating deposition of fine sediments. While the overall habitat quality is poor, the streams does flow through areas dominated by riparian wetlands and native forest. Forested riparian areas are dominated by red alder (*Alnus rubra*), black cottonwood, and Oregon ash (*Fraxinus latifolia*), with an understory consisting of salmonberry and vine maple (*Acer circinatum*). Farther downstream, well outside the project limits, the stream passes through areas dominated by wetlands and native forest and provides moderate-quality habitat.

East Fork Hylebos Creek Tributary 0016A flows intermittently in and near the project limits. The streambed in this area is typically dry during summer and early fall. The stream channel was completely dry during a reconnaissance survey in a reach immediately east of the proposed maintenance on October 9, 2019, and a soil pit excavated to a depth of 20 inches below the ground surface elevation in the stream failed to reach the groundwater table (Appendix F: Photo 4). Rainfall had been above normal during the preceding month (3.32 inches, compared to a normal of 1.61 inches) as well as the preceding 3 months (5.67 inches, compared to normal of 3.18 inches). Two weeks later (October 22, 2019), after several days of consistent rainfall, flows were re-established in the stream channel. East Fork Hylebos Creek Tributary 0016A is not on the 303(d) list of impaired waters (Ecology 2023).

There is no documented or presumed fish use in the upper reaches of East Fork Hylebos Creek Tributary 0016A (i.e., in areas where project construction will entail ground-disturbing work in or near the stream channel). Under current conditions, human-created barriers to fish passage obstruct anadromous salmonids from entering stream reaches in the project area (NWIFC 2023; see Tables 2-2 and 2-3 and Figure 1-8). The presence of resident fish is unlikely, given the intermittent flow of the stream and the presence of barriers between the study area and potential population sources downstream. However, the basin size, channel width, and gradient of the stream indicate the potential to support fish in the future. Furthermore, other projects are currently planned to remove several of the downstream barriers (for example, the I-5/SR 161/SR 18 Triangle Interchange project). If access is restored, the upper reaches of East Fork Hylebos Creek Tributary 0016A in and near the project limits have the potential to provide rearing habitat for juvenile salmonids.

3.2.3 West Fork Hylebos Creek

Reaches of West Fork Hylebos Creek, downstream of the West Fork Hylebos Creek Tributary 0014C confluence, are within the aquatic component of the action area. The only potential project-related impacts on this stream are associated with water quality; treated stormwater from SWM facilities that discharge to West Fork Hylebos Creek Tributary 0014C have the potential to affect water quality in West Fork Hylebos Creek. Therefore, this discussion focuses on water quality and use of this stream by fish.

West Fork Hylebos Creek is a perennial stream. A segment of the stream near S 373rd Street is included on the 303(d) list of impaired waters, based on elevated temperatures, low levels of dissolved oxygen, and elevated levels of fecal coliform bacteria (Ecology 2023).

Like the tributary streams described above, the West Fork Hylebos Creek basin has been affected by extensive urban development. In contrast to the smaller tributaries, large riparian wetland complexes in the West Fork Hylebos Creek basin help maintain base flow conditions and attenuate peak flows. Hydrologic conditions are still not optimal, however, and flood storage is still an issue.

Chinook salmon, coho salmon, steelhead, chum salmon (*Oncorhynchus keta*), and cutthroat trout (*O. clarkii clarkii*) have been documented in West Fork Hylebos Creek (NWIFC 2023; WDFW 2023b). The Puyallup Tribal Fisheries Department has documented Chinook salmon, chum salmon, coho salmon, pink salmon, and steelhead spawning in West Fork Hylebos Creek between SR-99 and the confluence with the East Fork Hylebos Creek (Marks et al. 2018). West Fork Hylebos Creek is a migratory corridor for all these species and provides rearing habitat for juvenile cutthroat trout, coho salmon, Chinook salmon, and steelhead. Salmonid distribution within West Fork Hylebos Creek is not anticipated to extend into West Fork Hylebos Creek Tributary 0014C within the project area.

3.2.4 East Fork Hylebos Creek

Reaches of East Fork Hylebos Creek, downstream of the East Fork Hylebos Creek Tributary 0016A confluence, are within the aquatic component of the action area. The only potential project-related impacts on this stream are associated with water quality; treated stormwater from SWM facilities that discharge to East Fork Hylebos Creek Tributaries 0016A and 0016B has the potential to affect water quality in East Fork Hylebos Creek. Therefore, this discussion focuses on water quality and use of this stream by fish.

East Fork Hylebos Creek is a perennial stream. The stream segment in the action area is included on the 303(d) list of impaired waters, based on elevated levels of fecal coliform bacteria (Ecology 2023b).

Chum salmon, coho salmon, and steelhead have been documented in East Fork Hylebos Creek, and reaches of the stream in the action area provide spawning habitat for coho salmon (NWIFC 2023; WDFW 2023b). Neither Chinook salmon nor pink salmon have been documented, but the stream is classified as gradient-accessible for both species (NWIFC 2023). Salmonid distribution within East Fork Hylebos Creek is not anticipated to extend into East Fork Hylebos Creek Tributary 0016A within the project area.

3.2.5 Hylebos Creek (Mainstem)

The entirety of mainstem Hylebos Creek is within the aquatic component of the action area. The only potential project-related impacts on this stream are associated with water quality; treated stormwater from SWM facilities that discharge to headwater tributaries has the potential to affect downstream water quality in Hylebos Creek. Therefore, this discussion focuses on water quality and use of this stream by fish.

Hylebos Creek originates at the confluence of West Fork Hylebos Creek and East Fork Hylebos Creek, east of I-5. The stream flows south before crossing under the freeway, then veers northwest to the Hylebos Waterway. Hylebos Creek is tidally influenced to approximately 0.5 mile upstream from the Hylebos Waterway.

Hylebos Creek is currently identified on 303(d) list of impaired waters for exceeding water quality standards for bacteria (Ecology 2023). Additional water quality impairments have been identified in several upstream tributaries, including East Fork Hylebos Creek, West Fork Hylebos Creek, and the Hylebos Waterway.

Currently, there are no barriers to fish passage downstream on the mainstem Hylebos Creek (WDFW 2023a). Steelhead and Chinook salmon presence has been documented within Hylebos Creek mainstem (NWIFC 2023).

Hylebos Creek in the action area flows through low-gradient floodplain habitat with some slight sinuosity. Habitats are dominated by deep mid-channel and lateral scour pool habitats. Large woody material is present in small quantities within the reach. The potential for future recruitment is limited by the lack of large, mature stands of trees in this reach, combined with the limited ability of upstream areas to transport large woody material to the area. The lack of instream and canopy cover reduces the quality of pool habitats. Sediments are dominated by fine materials, including sand and silt. While there is an overall lack of in-stream cover, pool depth is likely sufficient to provide important rearing habitat for juvenile salmonids. While there is some access to floodplain habitats from the main stem, there is a lack of off-channel and side channel habitats that could provide additional rearing habitat for juvenile salmonids.

3.2.6 Hylebos Waterway

The aquatic component of the action area ends where Hylebos Creek enters the Hylebos Waterway, which is a narrow, excavated extension of Commencement Bay. Modification of the historical estuary created a highly developed, industrial upland area surrounding the waterway. Due to pollution from industrial activities, the waterway was declared part of the Commencement Bay/Near Shore/Tideflats Superfund Site in 1983. The Hylebos Waterway has 303(d) listings for chlorinated pesticides, DDT and metabolites, high molecular weight polycyclic aromatic hydrocarbons, and polychlorinated biphenyls (Ecology 2023). Cleanup in the Hylebos Waterway involved sediment removal in the head (from 2004 to 2006) and mouth (from 2004 to 2006) of the Hylebos Waterway, and cleanup is ongoing for some sections of the waterway (EPA 2022; Port of Tacoma 2022). Source control efforts include monitoring groundwater for contaminants (EPA 2022). Water temperatures in the adjacent Sitcum Waterway are likely similar to the Hylebos Waterway and range from 47° F/8° C to 58° F/14° C (as recorded in 2021) (National Centers for Environmental Information [NCEI] 2022).

Based on poor water quality, the lack of complex habitat features, and high levels of boat traffic and other sources of disturbance, anadromous salmonids (including ESA-listed species) that pass through the Hylebos Waterway on their way to habitats in the Hylebos Creek system are unlikely to remain in the waterway for extended periods.

3.2.7 Wetlands

Freshwater forested/shrub and riverine wetlands are mapped within the study area (USFWS 2023, WDFW 2023b, WDNR 2023b, City of Federal Way 2023). These wetlands are typically riverine and associated with the two identified streams. Resident fish use is unlikely due to intermittent flows and multiple migration barriers (Parametrix 2021), but the wetlands could provide limited habitat functions if barriers were removed. Generally, wetland and buffer habitats lack connectivity to larger corridors, as the surrounding areas are limited by development and roads. However, wetland and buffers are forested and do provide water quality, screening, and shade functions. In addition to previously mapped wetlands, Parametrix and HDR delineated 18 wetlands in the portion of the study area where property access was granted. These wetlands include those wetlands previously identified by other sources; however, many unidentified wetlands were also added. Table 3-1 below includes a summary of wetlands delineated in the project study area. Figure 3-3 and Figure 3-4 show the location of wetlands in relation to the project footprint.

Table 3-1Summary Characteristics of Wetlands in the Project Area by
Drainage Basin

Wetland Name	HGM Classification ¹	USFWS Classification ²	Approximate Wetland Acreage in Study Area (Acres)	Wetland Rating (Ecology) ³		
West Fork Hylebos Creek Tributary 0014C Drainage Basin						
WFW-02	Depressional, Riverine	PFO	4.15	II		
WFW-33	Depressional, Riverine	PFO	2.23	II		
	East Fork Hy	lebos Creek Tributa	ry 0016A Drainage Bas	in		
WFW-01	Depressional, Riverine	PFO	1.48	II		
WFW-03	Riverine	PFO	0.32	II		
WFW-04	Depressional	PFO	0.52	III		
WFW-06	Slope	PSS	0.02	III		
WFW-07	Riverine	PEM, PSS	0.26	III		
WFW-08	Riverine	PEM, PSS	0.12	IV		
WFW-09	Riverine	PSS	0.10	III		
WFW-10	Riverine	PFO	1.04			
WFW-11	Depressional	PEM, PFO	0.49	III		
WFW-12	Riverine	PEM, PSS, PFO	0.66			
WFW-13	Slope	PSS	0.04	IV		
WFW-14	Depressional	PEM	0.02	IV		
WFW-15	Riverine	PSS, PFO	0.27			
WFW-16	Depressional	PEM, PSS	0.40	III		
WFW-18	Riverine	PSS	<0.01	III		
WFW-32	Depressional, Riverine	PEM, PSS	0.03	IV		

4 EFFECTS OF THE ACTION

The following subsections describe potential effects on ESA-listed species and critical habitat. Direct effects include all immediate impacts from project-related actions, such as habitat loss, disturbance due to construction noise and activity, and work in or near waters where ESA-listed fish may be present. Indirect effects, also known as delayed consequences, include effects that are reasonably certain to occur as a result of the proposed action, but later in time (generally after construction is complete). The term "insignificant" indicates that the impact of an action never reaches the level where take occurs or where adverse modification of critical habitat occurs. The term "discountable" indicates that it is extremely unlikely that impacts will occur.

Because there are no listed terrestrial species or their critical habitat within the project Action Area, the focus of this assessment is on the effects of the action on listed aquatic species.

4.1 Direct Effects

Ground-disturbing work in and near East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C's channels will have the potential to introduce sediment and contaminants into the water. If water is present in the stream channel where ground-disturbing work occurs, elevated turbidity could extend up to 100 feet downstream from the project footprint. As discussed in Section 2.2, numerous downstream barriers to human-made fish passage limit access by ESA-listed fish to both streams within 1 mile of the project footprint. As such, construction-related turbidity has no potential to affect ESA-listed fish. In addition, the potential for construction-related impacts on water quality will be avoided through implementation of conservation measures and BMPs specified in the SWPPP and TESC plan that will be prepared and implemented before project construction begins. Moreover, the measures specified in Section 1.4 will be implemented, and they will reduce or eliminate the potential for water quality impacts during construction.

Based on the above, construction activities in and near streams (including fish exclusion) have no potential to affect ESA-listed fish. Finally, no critical habitat for any ESA-listed species is present in or near the project footprint. For these reasons, the project will have no direct effects on ESA-listed species or critical habitat. The remainder of this section analyzes potential indirect effects, effects of interrelated and interdependent activities, and cumulative impacts.

4.2 Indirect Effects

Indirect effects may result from the operation of the project (e.g., long-term impacts on water quality) or from future activities related to the project (e.g., induced land use change or growth). Indirect effects can also include beneficial effects resulting from habitat enhancement. Analyses in this section address effects resulting from changes in the amount of impervious surface in the action area, potential changes in land use, potential changes in prey abundance, impacts to riparian habitat enhancement (i.e., daylighting, fish passage barrier removal).

Although ESA-listed fish currently do not have access to stream reaches near any of the riverine wetlands in the project area (see Table 3-1 for a list of riverine wetlands in the project Action Area), the riverine wetlands provide some level of ecological functions for downstream watersheds. Impacts to these forested wetlands could contribute to degradation of habitat quality in waters currently accessible to ESA-listed fish—or to waters that are rendered accessible by future barrier correction projects.

4.2.1 Stormwater

The proposed action will result in a net increase in PGIS within the action area. Runoff from new and replaced PGIS and non-pollution generating impervious surfaces will be directed to CSTW/DP facilities (some with sand filters) or to vaults with pre-settling basins and sand filters to provide enhanced treatment and flow control.

As discussed below, contaminant levels in treated stormwater runoff entering those streams will be further reduced through infiltration and adsorption to organic material in stream channels, ditches, incidental infiltration and adsorption to organic material as water flows overland, and regional SWM facilities before entering stream reaches where ESA-listed fish may be present. For the foreseeable future, the potential for ESA-listed fish to be exposed to contaminants that may remain in treated or untreated stormwater will be reduced by the distance between the project area and stream reaches that are accessible to these species. Under future conditions and if all downstream barriers that impede fish access are removed, the potential exists for fish to access habitats in the action area and be exposed to project generated stormwater.

Runoff from PGIS that is created or replaced by the project will be treated in accordance with the guidelines found in King County's most recent Surface Water Design Manual, which represents the best available science for stormwater treatment and flow control. Implementation of these practices is expected to minimize the frequency and intensity of exposure of ESA-listed fish to elevated concentrations of pollutants (including dissolved metals and other chemical contaminants) in runoff from impervious surfaces created or replaced by the project.

Nevertheless, according to scientific research, residual contaminants in stormwater runoff from PGIS can harm ESA-listed fish, even after the water has been treated to reduce pollutant loads. ESA-listed fish in receiving waters may be exposed to contaminants in stormwater that is discharged to the receiving waters, or they may be exposed by consuming contaminated prey. Effects of exposure may range from avoidance of affected areas, to reduced growth, altered immune function, or mortality. The intensity of effects depends largely on the pollutant, its concentration, and/or the duration of exposure (Brette et al. 2014; Feist et al. 2011; Gobel et al. 2007; Incardona et al. 2004, 2005; McIntyre et al. 2012; Meador et al. 2006; Sandahl et al. 2007; Spromberg et al. 2016). Repeated exposure, even at very low concentrations, may also result in adverse effects (Feist et al. 2011; Spromberg and Meador 2006; Spromberg and Scholz 2011).

Examples of stormwater contaminants that may harm ESA-listed fish include polycyclic aromatic hydrocarbons, which have been found to cause reduced growth, increased susceptibility to infection, and increased mortality in salmonids (Meador et al. 2006; Varanasi et al. 1993). Another common component of stormwater runoff is copper, which can impair the olfactory system of salmonids and hinder their predator avoidance behavior (Sandahl et al. 2007).

In addition, recent research has found 6PPD-guinone, a contaminant found in runoff from roadways, to be a major contributor to pre-spawning mortality in coho salmon (Tian et al. 2021). The effects of this contaminant on ESA-listed Chinook salmon, steelhead, and bull trout are still being studied, but some of the early studies indicate that first flush storm events are lethal to juvenile coho, steelhead, and Chinook salmon (French et al. 2022). However, the concentration at which 6PPD-quinone in stormater may have toxic effects on those species is still being evaluated. Research has shown that in addition to juvenile coho, both juvenile steelhead (Oncorhynchus mykiss) and juvenile Chinook salmon (Oncorhynchus tshawytscha) are also vulnerable to untreated stormwater containing 6PPD-quinone; however, the effects are not as immediate and instead of mortality occurring within a few hours of exposure (up to 4 hours for coho salmon), it can take one or two days for steelhead and Chinook salmon to display mortality (Fresh et al., 2022). A recent study looked at the sensitivity of early life stage (~ three weeks post swim-up [newly feeding] coho salmon and Chinook salmon) and found that juvenile coho salmon are three orders of magnitude more sensitive to 6PPD-quinone than Chinook salmon (Lo et al., 2023). This study found only 7.1% survival for coho salmon exposed to the lowest concentration treatment group, while Chinook salmon showed 61.4% survival in the highest concentration treatment group (Lo et al. 2023). While not showing the degree of sensitivity to stormwater runoff containing 6PPD-guinone as coho salmon, juvenile steelhead and Chinook do appear to exhibit direct mortality, although at higher concentrations and with longer response times (Tien et al. 2021, Fresh et al. 2022, Lo et al. 2023, and Brinkman et al 2022). The use of bioretention facilities, such as the CSTW/DP facilities proposed for this project, has been found to prevent the acute lethal effects of stormwater on salmonids (Spromberg et al. 2015). Other recent studies have found compost-amended bioswales to be effective at removing a variety of contaminants from runoff, including PAHs and heavy metals (Fardel et al. 2020; McIntyre et al. 2015). Similar to compost-amended bioswales, the CSTW/DP facilities proposed for this project include large amounts of organic matter that can bind or otherwise remove contaminants from the stormwater. As such, CSTW/DP facilities are likely to have a similar degree of effectiveness.

The concentrations of contaminants that remain in stormwater discharged to receiving waters are unknown, and they are expected to be highly variable. Similarly, the distance from the outfall to the point where the contaminants dilute to levels too low to cause detectable effects is also unknown and expected to be highly variable. Runoff volumes vary and depend on the timing, intensity, and duration of individual storm events. Contaminant concentrations are likely to be greatest during first-flush events, after contaminants have accumulated on roadways during long periods of dry weather. Such events are most common in early and mid-autumn.

Another factor is the system that conveys the stormwater to receiving waters. Where water is conveyed in open, vegetated ditches, contaminant concentrations are reduced through infiltration and adsorption to organic matter. Fewer opportunities for such reductions occur in conveyance systems that consist primarily of pipes.

The following subsections evaluate potential project-related changes in contaminant levels in each of the two receiving waters (East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C)). As discussed in Section 2.2, under current conditions, ESA-listed fish are neither known nor expected to be present within 1.5 miles of any discharge points from project SWM facilities, and no critical habitat is present in any of those streams. The potential for ESA-listed species and critical habitat farther downstream to be exposed to elevated contaminant levels is addressed in the subsection that follows discussions of impacts on the two streams.

4.2.1.1 East Fork Hylebos Creek Tributary 0016A

Water from all 16 TDAs in this basin will receive treatment and flow control. In seven TDAs, treated water from SWM facilities will discharge to the stream, in seven TDAs treated stormwater from will enter pipes that discharge to the stream channel, in one TDA treated stormwater will have a surface discharge and then enter the stream, and in one TDA, treated stormwater will have a surface discharge only. Overall, treatment is expected to reduce the loading of contaminants in stormwater that is discharged from the project site to East Hylebos Creek Tributary 0016A, compared to current conditions.

The project will add 1.53 acres of PGIS in the East Fork Hylebos Creek Tributary 0016A watershed (Table 4-2). All treated stormwater that enters East Fork Hylebos Creek Tributary 0016A will undergo substantial mixing, dilution, infiltration, and adsorption in the approximately 1.9 miles of stream channel between the project area and waters where ESA-listed fish are known or expected to be present.

4.2.1.2 West Fork Hylebos Creek Tributary 0014C

Water from all 8 TDAs in this basin will receive enhanced treatment and flow control. All treated stormwater will be conveyed via existing or new conveyance facilities to discharge points at the S 336th Street crossing of West Fork Hylebos Creek Tributary 0014C or to the outlet (flow control structure) of the regional stormwater detention/treatment facility located between S 336th Street and SR-99, which is an inline impoundment of West Fork Hylebos Creek Tributary 0014C. Overall, treatment is expected to reduce the loading of contaminants in stormwater that is discharged from the project site to West Hylebos Creek Tributary 0014C, compared to current conditions. In addition to the treatment already provided, stormwater discharged at S 336th Street will receive additional polishing as it passes through the regional stormwater detention/treatment facility.

Overall, there will be a 0.26 acre reduction in PGIS in the West Fork Hylebos Creek Tributary 0014C watershed. Water that leaves the project area will pass through several large wetland complexes and ponded areas before entering any streams where ESA-listed fish are known or expected to be present. Treated water discharged from existing and new SWM facilities (See Figure 1-13) in this watershed will receive additional treatment, detention, and possibly infiltration as it passes through these areas downstream of the project area.

It should be noted that approximately 1.8 acres of the regional stormwater detention/treatment facility mentioned above will be filled to accommodate the proposed extension of 18th Place S. This facility, along with other regional facilities along West Fork Hylebos Creek Tributary 0014C, when combined, are part of a larger effort to reduce downstream flooding. Overall, this facility (also a regulated Category II forested wetland) provides some limited flow control and what water quality treatment provided is incidental, but nevertheless important to maintain or improve water quality conditions in the Hylebos watershed. Compensatory wetland mitigation is anticipated to offset the incidental water quality benefits provided by the facility, and redundant flow control capacity provided throughout the system, in addition to flow control and water quality treatment provided by large natural wetland systems farther downstream, are anticipated to minimize potential adverse impacts to water quality and quantity downstream.

4.2.1.3 Potential for ESA Listed Fish to be Exposed to Contaminants

In the Hylebos Creek basin, the potential for ESA-listed fish to be exposed to harmful levels of contaminants in stormwater runoff will be minimized through the provision of the described stormwater BMPs. In many TDAs, contaminant levels will be further reduced during flow overland and/or through wetlands or other large waterbodies. Given the approximate 6.5 mile distance between the project area stormwater discharges and the Hylebos Waterway, any residual contaminants in runoff from project related PGIS will be diluted to levels too low to detectably degrade water quality.

The following are evaluations of the exposure potential for the various life stages of ESA-listed fish that may be present in streams in the Hylebos Creek watershed.

- Bull trout are not expected to spawn in the Hylebos Creek system. Exposure to runoff from
 project related PGIS would occur only if individual bull adults or subadults from other
 systems were to venture or stray into Hylebos Creek. The probability of bull trout presence is
 anticipated to be extremely low and coupled with extremely small numbers and lack of
 supporting habitat within the Hylebos Creek drainage basin, the potential for bull trout
 presence to occur simultaneously with a storm event that discharges large amounts of
 contaminants to the stream is discountable. In addition, the impacts of any such exposure
 would likely be insignificant because the visit would be brief and transitory.
- Adult Chinook salmon may be present in the lower watershed in accessible streams from August through December. Accessible stream reaches are more than 2 miles downstream from the discharge points of proposed stormwater treatment facilities. Spawning has been documented in West Fork Hylebos Creek approximately 1.5 miles downstream from the discharge point of the nearest TDA.
- Chinook juveniles may spend up to a year in freshwater habitats of the Hylebos Creek watershed with most juvenile use anticipated in the lower portion of the watershed.
- Adult steelhead may be present in the lower watershed in accessible stream reaches from January through June, with the highest probability of presence occurring during the peak migration period (April and May). Accessible stream reaches are more than 1.8 miles downstream from the discharge points of proposed stormwater treatment facilities. Steelhead may spawn in the Hylebos Creek watershed, albeit in low numbers and probably not every year. Stream reaches most likely to provide spawning habitat are in West Fork Hylebos Creek approximately 2.5 miles downstream from the discharge point of the nearest TDA.
- Juvenile steelhead could be present at any time of year, albeit in low numbers and with low probability. Juvenile steelhead are most likely to rear in lower reaches of the Hylebos Creek watershed.
- Larval bocaccio and yelloweye rockfish could be swept into the lower tidally influenced portion of Hylebos Creek on incoming tides; however, their brief residence time within the tidally influenced portion of the stream limits the potential for exposure to stormwater related contaminants.
- In the future, when access is restored to the tributaries near the project area, they are unlikely to provide suitable spawning habitat for bull trout, Chinook salmon, or steelhead due to unsuitable habitat conditions, such as intermittent flows and a high proportion of fine sediments. These upper tributary streams could support some limited rearing by steelhead following barrier corrections in the watershed.

4.2.2 Changes in Land Use

The OMF South is not likely to affect land use patterns outside of the project site boundary. This conclusion is based on Sound Transit's determination that the major components of the regional light rail system are not likely to induce land use changes that would not otherwise occur. Light rail transit may influence specific aspects of transit-oriented development, but it is not expected to result in development that would not otherwise occur in the context of existing transit- and density-oriented development plans (Sound Transit 2011).

The OMF South would support the operations of FWLE, future planned light rail extensions to the south (TDLE) and other major components of the Link light rail system but would not alter them in any way that is likely to induce land use change. OMF South operations would be discernable from nearby properties but are unlikely to materially affect the nature or timing of land use changes outside of the project site. Therefore, the proposed action is not likely to result in indirect effects, to listed or proposed species or designated or proposed critical habitat, related to changes in land use.

4.2.3 Changes in Prey Species Abundance

Chinook salmon (a primary prey species for SRKW) and coho salmon (a primary prey species for bull trout) could be adversely affected by residual contaminants in stormwater that is discharged from treatment facilities. As discussed above, the potential for substantial adverse effects will be minimal, for the following reasons:

- Runoff from new and replaced PGIS will undergo water quality treatment in accordance with applicable requirements.
- The project will result in a net increase in PGIS within the Hylebos Creek watershed; however, the increase in PGIS can be largely attributed to parking lots and roadways that have low average daily traffic volumes. In addition, the overarching goal of the light rail project is to reduce vehicle use on local roadways by providing efficient and cost effective means of non-vehicular travel. This reduction in roadway traffic, while not quantified, is anticipated to have beneficial effects on pollutant loadings within the Puget Sound region.
- Stream reaches that will receive discharge from stormwater facilities are currently inaccessible to Chinook and coho salmon.
- If all public and private crossing structures that currently impede fish access are removed, the small, fine-substrate-dominated, headwater tributaries in the project area are not expected to provide suitable spawning habitat for Chinook salmon, and they are far enough upstream from suitable spawning areas to be unlikely to provide rearing habitat for Chinook salmon juveniles.
- Substantial infiltration, dilution, and adsorption will occur over the distance between stormwater facility discharge points and waters where critical habitat has been designated, further reducing contaminant levels in treated water that leaves the facilities.

Even if residual contaminants, including 6PPD quinone, in stormwater were to measurably reduce the number of Chinook or coho salmon in the Hylebos Creek system, that number represents a small proportion of the overall populations of these species in Puget Sound. Any such effects would not translate into population-level effects that would measurably reduce the availability of prey species for SRKWs or bull trout. Based on the above, the potential for adverse impacts on the availability of food resources for SRKWs or bull trout is discountable, and the outcome of any such impacts would be insignificant.

If water is present in stream channels where ground-disturbing work occurs, in-water work would have the potential to displace prey species for both Chinook salmon and steelhead. The effects of any such displacement would be localized and temporary, and prey species would be expected to return following construction. Moreover, the stream reaches where in-water work will take place are inaccessible to Chinook salmon and steelhead. Given the availability of prey in adjacent habitats, the proposed action is anticipated to have an insignificant effect on the availability of prey for Chinook salmon and steelhead.

4.2.4 Riparian and Wetland Habitat Impacts

Listed species do not currently occupy instream habitats adjacent to riparian and/or wetland habitats in the project area; therefore, removal of vegetation/alteration of streambed material will have no direct effect on listed species. The only potential is related to the time it takes for vegetation to regrow and the timing of barrier replacements that would allow listed fish access to the project area. Over the long-term, there would be a permanent loss of forested wetlands and forested riparian corridor and the inability of these habitats to become established because of the vegetation clear zone established on either side of the guideway. Vegetation will be reestablished along the stream corridor; however, vegetation will be restricted to low-growing tree and shrub species. This change in vegetative structure around the affected portion of streams will likely result in degraded habitat conditions if salmonid access were to be restored. This includes a loss of LWD recruitment to the channel, which will result in reduced channel complexity; loss of organic input into the stream, which can result in reduced food-web interactions, loss of thermal cover, and reduced hyporheic exchange, which can degrade water quality within the project area as well as areas downstream.

Table 4-1 below includes a summary of stream and stream buffer impacts. Overall, there will be approximately 3,050 linear feet of permanent impact to streams in the project area because of stream channel modifications and culvert replacement activities. Where the stream channel conflicts with guideway supports, the stream will be relocated around footings. Approximately 7.2 acres of riparian vegetation will be permanently impacted by guideway construction and conversion of forested riparian habitat to scrub/shrub dominated vegetation.

Project Element	Stream ¹	Permanent Impact (linear feet) ²	Temporary Impact ³ (linear feet)	Permanent Stream Buffer Impact ⁴ (acres)	Temporary Stream Buffer Impact (acres) ⁴
OMF South Site	East Fork Hylebos Creek Tributary 0016A	900	250	2.8	1.4
	West Fork Hylebos Creek Tributary 0014C ⁵	600	50	0.5	2.9
Mainline Track	East Fork Hylebos Creek Tributary 0016A	1,550	250	3.9	2.2
<u>Total</u>		3,050	550	7.2	6.5

 Table 4-1
 Summary of Potential Stream and Stream Buffer Impacts

Notes:

(1) Both affected streams are Type F, per WAC 22216030.

(2) Includes the total length of surface-flowing stream within the permanent impact footprint defined for this analysis.

(3) Includes the total length of surface-flowing stream within the construction-related impact footprint defined for this analysis.

(4) Impact numbers presented in this table represent all affected areas inside functional stream buffers, including areas that overlap with wetland buffers.

(5) The portion of this stream in the study area lacks a defined bed and bank where it flows through Wetland WFW-02. For this reason, stream impacts are based on the approximate centerline of the mapped stream, and buffer impacts are based on the affected area of Wetland WFW02. See text for further discussion.

Table 4-2 below includes a summary of wetland and wetland buffer impacts. Overall, there will be 4.3 acres of permanent wetland impact and approximately 3.2 acres of temporary wetland impact. These impacts are primarily associated with riverine wetlands. Similar to the stream impacts discussed above, these impacts will contribute to reduced habitat complexity, reduced flood storage, and reduced hyporheic exchange in the affected watersheds. This can ultimately result in altered peak/base flows, degraded water quality, and altered vegetative communities.

Project Element	Wetland Rating ¹	Permanent Wetland Impact	Temporary Wetland Impact	Permanent Wetland Buffer Impact ²	Temporary Buffer Impact ²
OMF South Site	Category II	1.8	2.7	7.8	1.7
	Category III	0.90	0.3		
	Category IV	0.00	<0.05		
Mainline Track	Category III	1.6	<0.05	4.7	3.5
	Category IV	<0.10	<0.05	4.7	
<u>Total</u>		4.3	3.0-3.1	12.5	5.2

 Table 4-2
 Summary of Wetland and Wetland Buffer Impacts (Acres)

Notes:

(1) Wetland ratings (Hruby 2014) are preliminary and subject to review by permitting authorities.

(2) Impact numbers presented in this table represent all affected areas inside functional wetland buffers, including areas that overlap with stream buffers; therefore, this table likely overestimates the extent of buffer impact areas. Stream areas, defined by the OHWL, are excluded from wetland buffer areas.

Sound Transit is currently developing mitigation strategies to compensate for the loss of wetland, stream, and their associated buffers. This will likely include a combination of on-site mitigation, off-site mitigation, and use of fee in lieu programs established in the watershed.

4.2.5 Stream Habitat Enhancement

The culvert replacements described in Section 1.3.2 will facilitate fish access to headwater habitats in East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C upstream of the project area. According to the WDFW fish passage site report for culvert 935271 on East Fork Hylebos Creek Tributary 0016A, removal of this barrier has the potential to facilitate access to approximately 2.5 miles of stream channel, including approximately 4,600 square feet of potential spawning habitat and approximately 164,000 square feet of potential rearing habitat. Access to this habitat will be possible only after multiple downstream and upstream barriers to fish passage are removed, however. The WDFW fish passage site report for culvert 933224 on West Fork Hylebos Creek does not identify any habitat gain; however, removal of this barrier has the potential to facilitate access to approximately 0016A, access to this habitat will be possible only after multiple downstream channel. Similar to the East Fork Hylebos Creek Tributary 0016A, access to this habitat will be possible only after multiple downstream channel.

The project will remove/replace approximately 890 feet of culverted stream with approximately 520 feet of fish-passable culverts and daylighting of approximately 570 linear feet of channel. By daylighting the stream channel, the project will allow increased interaction between the stream and associated riparian vegetation, restoring natural processes such as organic input and flow attenuation. Even if access to the reaches in and upstream of the project limits is not fully restored, the benefits of these restoration activities will likely translate into improvements in ecological functions in downstream reaches.

4.3 Effects on the Physical and Biological Features of Critical Habitat

The project includes no work in or near any waters that have been designated as critical habitat for any ESA listed species. As such, the project will have no direct effects on the physical or biological components of critical habitat for ESA-listed fish. Analyses in this section address the potential for residual contaminants in stormwater runoff to degrade water quality in waters where critical habitat has been designated for ESA-listed fish.

4.3.1 PBFs for Puget Sound ESU Chinook Salmon and Puget Sound DPS Steelhead

PBFs essential to the conservation of the Puget Sound ESU Chinook salmon and Puget Sound DPS steelhead in freshwater and estuarine habitats are present in the action area, as identified in Section 2.3.2 and Section 2.3.3. Potential project-related effects on each of those PBFs are discussed below. The project will not affect riparian habitat or physical in-stream habitat in or near any waters where critical habitat has been designated for either of these species. As such, the project will have no direct effects on the physical or biological components of freshwater habitats; the discussions below address potential impacts on water quality.

PBF 1 (freshwater spawning sites)

Designated critical habitat in the lower reaches of West Fork Hylebos Creek provides freshwater spawning sites for Chinook salmon and (infrequently) steelhead. Contaminants in runoff from PGIS may degrade water quality for spawning adults and for incubating eggs and fry of both species.

PBF 2 (freshwater rearing sites)

Designated critical habitat in Hylebos Creek, the lower reaches of West Fork Hylebos Creek and East Fork Hylebos Creek provides potential freshwater rearing sites for Chinook salmon. Designated critical habitat in the lower reaches of West Fork Hylebos Creek and East Fork Hylebos Creek provides potential freshwater rearing sites for steelhead. Contaminants in runoff from PGIS may degrade water quality for rearing juveniles of both species in these streams.

PBF 3 (freshwater migration corridors)

Designated critical habitat in Hylebos Creek, the lower reaches of West Fork Hylebos Creek and East Fork Hylebos Creek provides freshwater migration corridors for Chinook salmon. Designated critical habitat in the lower reaches of West Fork Hylebos Creek and East Fork Hylebos Creek provides freshwater migration corridors for steelhead. Contaminants in runoff from PGIS may degrade water quality for adults that migrate through these areas to spawning areas upstream, as well as for outmigrating juveniles.

PBF 4 (estuarine habitats)

The project will have no direct effects on physical or biological components of estuarine habitats that have been designated as critical habitat for Chinook salmon and/or steelhead. As discussed in Section 4.2.1, any residual contaminants in runoff from project-related impervious surfaces will be diluted to levels too low to detectably degrade water quality almost immediately upon entering estuarine or marine waters.

4.4 Effects of Interrelated and Interdependent Actions

Traffic detours and compensatory mitigation activities required for compliance with local critical areas rules are considered interrelated and interdependent actions for this project. None of the detours described in Section 1.3.2 will result in substantial increases in traffic volumes on the affected roads. Noise impacts from detours will not exceed those expected under normal conditions. As such, the detours are not expected to result in impacts that have not already been addressed in this analysis.

Compensatory mitigation actions will not contribute to the noise impacts above the planned project impacts, nor will they expand or degrade the aquatic action area. Therefore, interrelated and interdependent actions will not contribute to project impacts on listed species.

4.5 Cumulative Impacts

Consistent with the requirements specified in 50 CFR 402.02, the analysis of cumulative effects is based on future actions that are (1) reasonably certain to occur in the action area, and (2) not expected to include a federal nexus that would trigger ESA Section 7 compliance requirements.

In the action area, the only reasonably foreseeable future actions that have no federal nexus and that could contribute to increased pollutant loading in waters that support ESA-listed fish consist of urban development projects on private lands. One such project includes a planned 94-unit attached single-family development (Creekside Commons) located on two undeveloped parcels, one immediately north of S 333rd Street and one immediately south of S 333rd Street along West Fork Hylebos Creek Tributary 0014C's riparian corridor. A mitigation plan has been prepared for the project's impacts to the buffers of two adjacent riparian wetlands and the project would also be required to meet current City of Federal stormwater regulations.

The Creekside Commons and any future projects will have to comply with state and local regulations that protect wetlands, streams, and other critical areas. Such reviews will trigger the implementation of mitigation measures and practices aimed at avoiding or minimizing the potential for adverse effects on wetlands, aquatic species and habitat, and other natural resources such as fish and wildlife habitat conservation areas. Compliance with those requirements will ensure that any future development projects in the action area will be unlikely to result in adverse impacts on water quality in waterbodies that support ESA-listed fish.

Based on the above, this project is not expected to contribute to adverse cumulative effects on ESA-listed species when considered in conjunction with other reasonably foreseeable future projects.

5 CONCLUSIONS AND EFFECT DETERMINATIONS

The following subsections present effect determinations and rationales for the ESA-listed species and designated critical habitat. Table 5-1 provides a summary of effect determinations.

 Table 5-1
 Summary of Effect Determinations for the OMF South Project

Species or Critical Habitat	Effect Determinations
Bull Trout	Not Likely to Adversely Affect
Puget Sound Chinook Salmon	Likely to Adversely Affect
Puget Sound Chinook Salmon Critical Habitat	Likely to Adversely Affect
Puget Sound Steelhead	Likely to Adversely Affect
Puget Sound Steelhead Critical Habitat	Likely to Adversely Affect
Puget Sound/Georgia Strait Bocaccio	Not Likely to Adversely Affect
Puget Sound/Georgia Strait Yelloweye Rockfish	Not Likely to Adversely Affect
Southern Resident Killer Whale	Not Likely to Adversely Affect
Southern Resident Killer Whale Critical Habitat	Not Likely to Adversely Affect

5.1 Bull Trout

The project may affect bull trout for the following reasons:

- A single subadult bull trout or Dolly Varden was observed in West Fork Hylebos Creek.
- The project will increase the area of PGIS in areas that drain the headwaters of tributaries to Hylebos Creek.
- The project will remove crossing structures on East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C that impede fish passage, improving access to upstream habitat.
- The project will result in the permanent conversion of forested riparian habitat to scrub/shrub dominated habitat.

The project is **not likely to adversely affect** bull trout for the following reasons:

- Stream reaches that will directly receive discharge from stormwater facilities are currently inaccessible to bull trout.
- If all public and private crossing structures that currently impede fish access are removed, the small, fine-substrate-dominated, headwater tributaries in the project area are not expected to provide suitable habitat for bull trout.
- Runoff from new and replaced PGIS will undergo water quality treatment in accordance with applicable requirements.
- Substantial infiltration, dilution, and adsorption will occur over the distance between stormwater facility discharge points and waters where this species might be present, further reducing contaminant levels in treated water that leaves the facilities.

- Bull trout are not expected to spawn in the Hylebos Creek system due to the lack of suitable spawning habitat. Exposure to runoff from project related PGIS would occur only if bull trout adults or subadults from other systems were to venture into these waters. The potential for such a visit to correspond with a storm event that discharges large amounts of contaminants to the stream is discountable. In addition, the impacts of any such exposure would likely be insignificant because the visit would be brief and transitory.
- The potential for delivery of sediment or contaminants during culvert replacement and stream channel construction in East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C will be minimized through implementation of the measures specified in Section 1.4.
- The overarching goal of the light rail program is to reduce vehicle use on local roadways by
 providing efficient and cost effective means of travel for daily commuters and the public. This
 reduction in roadway traffic cannot be directly attributed to the OMF South project; however,
 the OMF South project is an integral part of the overall program and is anticipated to have
 some level of indirect beneficial effects on vehicle related pollutant loadings within the Puget
 Sound region.

5.2 Puget Sound Chinook Salmon

The project may affect Puget Sound Chinook salmon for the following reasons:

- Chinook salmon are present in the Hylebos Creek watershed.
- The proposed action will result in a net increase in PGIS in the Hylebos Creek watershed and will discharge treated stormwater in the headwaters of tributaries to Hylebos Creek.
- Chinook salmon spawn in West Fork Hylebos Creek approximately 1.5 miles downstream of the discharge point from the nearest TDA.
- The project will remove crossing structures on East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C that impede fish passage, improving access to upstream habitat.

The project is **likely to adversely affect** Puget Sound Chinook salmon for the following reasons:

• Water discharged from detention and treatment facilities may contain residual concentrations of contaminants that may affect Chinook salmon.

The project will not likely appreciably reduce the survival and recovery of Puget Sound Chinook salmon for the following reasons:

- Stream reaches that will receive direct discharge from stormwater facilities are currently inaccessible to Chinook salmon and any work below the OHWL would occur during the inwater work window when salmon are least likely to occur.
- If all public and private crossing structures that currently impede fish access are removed, the small, fine-substrate-dominated, headwater tributaries in the project area are not expected to provide suitable spawning habitat for Chinook salmon, and they are far enough upstream from suitable spawning areas to be unlikely to provide rearing habitat for juveniles.
- Runoff from new and replaced PGIS will undergo water quality treatment in accordance with applicable requirements.

- Substantial infiltration, dilution, and adsorption will occur over the distance between stormwater facility discharge points and waters where Chinook are currently distributed, further reducing contaminant levels in treated water that leaves the facilities.
- The potential for delivery of sediment or contaminants during construction in East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C will be minimized through implementation of the measures specified in Section 1.4.
- The overarching goal of the light rail program is to reduce vehicle use on local roadways by providing efficient and cost effective means of travel for daily commuters and the public. This reduction in roadway traffic cannot be directly attributed to the OMF South project; however, the OMF South project is an integral part of the overall program and is anticipated to have some level of indirect beneficial effects on vehicle related pollutant loadings within the Puget Sound region.

5.3 Puget Sound Chinook Salmon Critical Habitat

The project **may affect** critical habitat for Puget Sound ESU Chinook salmon for the following reasons:

- Designated critical habitat for Puget Sound Chinook salmon is present in the action area.
- The project will discharge treated stormwater to waters designated as critical habitat.

The project is **likely to adversely affect critical** habitat for Puget Sound Chinook salmon for the following reasons:

• Contaminants in runoff from PGIS may degrade water quality in waters that are designated as critical habitat and that support the spawning, rearing, and migration PBFs of critical habitat for Puget Sound Chinook salmon.

5.4 Puget Sound Steelhead

The project may affect Puget Sound steelhead for the following reasons:

- Steelhead are present in the Hylebos Creek watershed.
- Steelhead occasionally spawn in West Fork Hylebos Creek approximately 2.5 miles downstream of the discharge point from the nearest TDA.
- The project will result in a net increase in PGIS in the Hylebos Creek watershed and will discharge treated stormwater to headwater tributaries to Hylebos Creek.
- The project will remove crossing structures on East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C that impede fish passage, improving access to upstream habitat.

The project is **likely to adversely affect** Puget Sound steelhead for the following reasons:

• Water discharged from detention and treatment facilities may contain residual concentrations of contaminants that may affect steelhead.

The project will not likely appreciably reduce the survival and recovery of Puget Sound steelhead for the following reasons:

- Stream reaches that will receive direct discharge from stormwater facilities are currently inaccessible to steelhead.
- If all public and private crossing structures that currently impede fish access are removed, the small, fine-substrate-dominated, headwater tributaries in the project area are not expected to provide suitable spawning habitat for steelhead. However, this habitat may be used by juvenile steelhead, albeit in low numbers.
- Runoff from new and replaced PGIS will undergo water quality treatment in accordance with applicable requirements.
- Substantial infiltration, dilution, and adsorption will occur over the distance between stormwater facility discharge points and waters where critical habitat has been designated, further reducing contaminant levels in treated water that leaves the facilities.
- The potential for delivery of sediment or contaminants during construction in East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C will be minimized through implementation of the measures specified in Section 1.4.
- The overarching goal of the light rail program is to reduce vehicle use on local roadways by
 providing efficient and cost effective means of travel for daily commuters and the public. This
 reduction in roadway traffic cannot be directly attributed to the OMF South project; however,
 the OMF South project is an integral part of the overall program and is anticipated to have
 some level of indirect beneficial effects on vehicle related pollutant loadings within the Puget
 Sound region.

5.5 Puget Sound Steelhead Critical Habitat

The project may affect critical habitat for Puget Sound steelhead for the following reasons:

- Designated critical habitat for Puget Sound steelhead is present in the action area.
- The project will discharge treated stormwater in areas that ultimately drain to waters designated as critical habitat.

The project is **likely to adversely affect** critical habitat for Puget Sound steelhead for the following reasons:

• Contaminants in runoff from PGIS may degrade water quality in waters that are designated as critical habitat and that support the spawning, rearing, and migration PBFs of critical habitat for Puget Sound steelhead.

5.6 Bocaccio

The project may affect Bocaccio for the following reasons:

- Current-borne larvae of bocaccio could be present in the lower tidally influenced portion of Hylebos Creek.
- The project will discharge treated stormwater to headwater tributaries to Hylebos Creek.

The project is not likely to adversely affect bocaccio for the following reasons:

- Sub-adults and adults of this species typically occupy waters deeper than 120 feet and are therefore not expected to be present in the lower, tidally influenced reach of Hylebos Creek.
- The project area is located 3 to 5 miles upstream of the lower tidally influenced portion of Hylebos Creek. Given the distance and potential for additional treatment via wetlands and infiltration into groundwater, the effects of stormwater on bocaccio is considered insignificant.
- Larval rockfish are dispersed by currents, making the concentration or probability of the presence of larvae in any one location extremely small. Similarly, the limited number of adult ESA-listed rockfish in Puget Sound further reduces the probability of larval presence and exposure to project activities.
- The overarching goal of the light rail program is to reduce vehicle use on local roadways by
 providing efficient and cost effective means of travel for daily commuters and the public. This
 reduction in roadway traffic cannot be directly attributed to the OMF South project; however,
 the OMF South project is an integral part of the overall program and is anticipated to have
 some level of indirect beneficial effects on vehicle related pollutant loadings within the Puget
 Sound region.

5.7 Yelloweye Rockfish

The project may affect yelloweye rockfish for the following reasons:

- Larval yelloweye rockfish could be present in the lower tidally influenced portion of Hylebos Creek.
- The project will discharge treated stormwater to headwater tributaries to Hylebos Creek.

The project is **not likely to adversely** affect yelloweye rockfish for the following reasons:

- Sub-adults and adults of this species typically occupy waters deeper than 120 feet and are therefore not expected to be present in the lower, tidally influenced reach of Hylebos Creek.
- The project area is located 3 to 5 miles upstream of the lower tidally influenced portion of Hylebos Creek. Given the distance and potential for additional treatment via wetlands and infiltration into groundwater, the effects of stormwater on yelloweye rockfish is considered insignificant.
- Larval rockfish are dispersed by currents, making the concentration or probability of the presence of larvae in any one location extremely small. Similarly, the limited number of adult ESA-listed rockfish in Puget Sound further reduces the probability of larval presence and exposure to project activities.
- The overarching goal of the light rail program is to reduce vehicle use on local roadways by
 providing efficient and cost effective means of travel for daily commuters and the public. This
 reduction in roadway traffic cannot be directly attributed to the OMF South project; however,
 the OMF South project is an integral part of the overall program and is anticipated to have
 some level of indirect beneficial effects on vehicle related pollutant loadings within the Puget
 Sound region.

5.8 Southern Resident Killer Whale

The project **may affect** southern resident killer whales for the following reason:

• The project may adversely affect Chinook salmon, a primary prey source for this species.

The project is **not likely to adversely affect** southern resident killer whales for the following reasons:

- The project will not appreciably reduce the survival and recovery of Chinook salmon and will not, therefore, result in any population-scale reductions in the availability of this prey resource for southern resident killer whales.
- Southern resident killer whales are not known or expected to use habitats in the action area and will not be exposed to any other potential project-related impacts.

5.9 Southern Resident Killer Whale Critical Habitat

The project **may affect** critical habitat for southern resident killer whale for the following reasons:

- Availability of sufficient prey resources is an important PBF of critical habitat for this species.
- The project will discharge treated stormwater in an area that drains to waters that support Chinook salmon—the preferred prey of southern resident killer whales.
- Project-generated pollutants may further degrade water quality, leading to adverse effects on a small number of individual Chinook salmon.

The project is **not likely to adversely affect** critical habitat for southern resident killer whale for the following reason:

• The project will not appreciably reduce the survival and recovery of Chinook salmon and will not, therefore, result in any population-scale reductions in the availability of this prey resource for southern resident killer whales.

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APPENDIX A

ESSENTIAL FISH HABITAT ASSESSMENT



AE 0030-17 | Final Biological Assessment

Essential Fish Habitat Background

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), includes a mandate that NMFS must identify essential fish habitat (EFH) for federally managed commercially harvestable fish, and federal agencies must consult with NMFS on all activities, or proposed activities, authorized, funded, or undertaken by the agency that may adversely affect EFH. The Pacific Fishery Management Council has designated EFH for the Pacific Coast salmon fishery, the Pacific Coast groundfish fishery, and the coastal pelagic species fishery.

The objective of this assessment is to determine whether the proposed action may adversely affect designated EFH in the project action area. This assessment also describes conservation measures proposed to avoid, minimize, or otherwise offset potential adverse effects on designated EFH resulting from the proposed action.

The EFH designation for the Pacific Coast salmon fishery includes all streams, lakes, ponds, wetlands, and other water bodies currently or historically accessible to salmon in Washington, Oregon, Idaho, and California, except above the impassable barriers identified by the Pacific Fishery Management Council (PFMC 1999). In estuarine and marine environments, proposed designated EFH extends from near-shore and tidal submerged environments within state territorial waters to the full extent of the exclusive economic zone offshore of Washington, Oregon, and California north of Point Conception (PFMC 1999).

The Pacific Coast salmon management unit includes Chinook, coho, and pink salmon. All three species are known or expected to use habitats in the action area, as summarized below.

Chinook salmon (see Section 2.2.2 of this BA for additional details):

- Documented spawning in the lower reaches of West Fork Hylebos Creek
- Documented presence in Hylebos Creek
- Potential presence (i.e., stream reaches are classified as gradient-accessible) in lower reaches of East Fork Hylebos Creek Tributary 0016A).

Coho salmon:

- Documented spawning in West Fork Hylebos Creek and East Fork Hylebos Creek
- Documented presence in Hylebos Creek and the lower reaches of East Fork Hylebos Creek.
- Potential presence (i.e., stream reaches are classified as gradient-accessible) in West Fork Hylebos Creek Tributary 0014C and East Fork Hylebos Creek Tributary 0016A.

Pink salmon:

- Presumed presence in Hylebos Creek and lower reaches of West Fork Hylebos Creek
- Potential presence (i.e., stream reaches are classified as gradient-accessible) in West Fork Hylebos Creek Tributary 0014C and East Fork Hylebos Creek Tributary 0016A.

In estuarine and marine areas, EFH for all three Pacific Coast salmon fishery species extends from the extreme high tide line in nearshore and tidal submerged environments out to the full extent of the Exclusive Economic Zone offshore. The project action area does not extend into the Hylebos Waterway.

Pacific Coast groundfish EFH is generally defined as the aquatic habitat from the mean higher high water line, plus the upriver extent of saltwater intrusion in river mouths seaward (Casillas et al. 1998). In the action area, this includes lower Hylebos Creek. Pacific Coast groundfish that may potentially occur within the action area during some life history phases include spiny dogfish, California skate, ratfish, lingcod cabezon, kelp greenling, Pacific cod, Pacific whiting (hake), sablefish, bocaccio, brown rockfish, copper rockfish, quillback rockfish, English sole Pacific sanddab, rex sole, and starry flounder.

The Coastal Pelagic Species Fishery Management Plan describes the habitat requirements of five pelagic species: northern anchovy, Pacific sardine, Pacific (chub) mackerel, jack mackerel, and market squid (PFMC 1998). These four finfish and market squid are treated as a single species complex because of similarities in their life histories and habitat requirements. EFH for coastal pelagic species is generally defined as all marine and estuarine waters from the shoreline offshore above the thermocline. EFH for coastal pelagic species does not occur in the project action area.

Description of the Proposed Action

The proposed project is described in detail in Section 1.3 of this BA.

Potential Effects of the Proposed Project

Potential impacts of the proposed action to ESA-listed fish species and habitats are discussed in Section 4 of this BA and are expected to be similar for all federally managed fish species that occur in the action area.

Effects on Essential Fish Habitat for Pacific Coast Salmon

If water is present in East Fork Hylebos Creek Tributary 0016A or West Fork Hylebos Creek Tributary 0014C when project construction is underway, ground-disturbing work in and near the stream channel has the potential to introduce sediment to stream reaches in and immediately downstream (i.e., within 100 feet) of the project limits. In addition, the proposed action includes clearing of riparian vegetation and long term change to cover types as a result of the need to maintain lower growing vegetation where the guideway is in proximity to the stream channel and associated riparian zone. Both the temporary and permanent removal of vegetation can have short- and long-term impacts on water temperatures, large woody debris recruitment to the channel and associated loss of channel complexity and instream cover. Such impacts may adversely affect Pacific salmon EFH and its ability to support spawning and rearing life stages of Pacific salmon. Sedimentation may also negatively impact the prey base of benthic invertebrates. However, project impacts are expected to be very minor for the following reasons:

- Construction-related disturbance of sediments will be minimized by adherence to a TESC plan and installation and monitoring of appropriate erosion control BMPs during construction, limiting earthwork to only those areas necessary to complete that phase of construction, stabilization of disturbed soils shortly after work is completed, and adhering to approved in-water work windows. These effects are anticipated to be short in duration and are not expected to persist following construction.
- Reaches of East Fork Hylebos Creek Tributary 0016A and West Fork Hylebos Creek Tributary 0014C in and within 1 mile of the project limits are currently inaccessible to all anadromous salmonids. As such, temporary increases in sedimentation or turbidity have no potential to affect Chinook, coho, or pink salmon. Restoration of access to these stream

reaches is not expected to be accomplished for many years, long after temporary, construction-related increases in sedimentation or turbidity have disappeared.

As discussed in Section 4.1.1 of this BA, contaminants in stormwater runoff discharged to streams in and near the project limits may degrade water quality in streams that provide EFH for Pacific salmon. Contaminants in stormwater runoff that enters streams in and near the project limits may persist at levels capable of degrading water quality until it is fully diluted in marine waters. If the contaminants are present at levels that have toxic effects on these species, this will constitute an adverse effect on EFH. Potential adverse effects associated with contaminants in stormwater runoff to treatment facilities.

In addition to meeting any Washington State and Federal mitigation requirements, unavoidable impacts to streams and associated buffers will be mitigated by using guidance in Federal Way City Code (FWCC) 19.145.430. Ongoing restoration projects in the Hylebos watershed, the King County in-lieu fee program, and the development of a project-specific mitigation site are possible opportunities for mitigation that will comply with all federal, state, and local requirements.

Beneficial effects on Pacific Salmon EFH will be achieved by restoring access to potential stream habitat. The project will remove/replace approximately 890 feet of culverted stream with approximately 520 feet of fish-passable culverts and daylight approximately 570 linear feet of channel. By daylighting almost 570 linear feet of stream channel, the project will allow increased interaction between the stream and associated riparian vegetation, restoring natural processes such as organic input and flow attenuation. Even if access to the reaches in and upstream of the project limits is not fully restored, the benefits of these restoration activities will likely translate into improvements in ecological functions in downstream reaches. According to the WDFW fish passage database, removal of these barriers has the potential to facilitate access to approximately 2.5 miles of stream channel, including approximately 4,600 square feet of potential spawning habitat and approximately 163,850 square feet of potential rearing habitat.

Effects on Essential Fish Habitat for Groundfish

Contaminants in stormwater runoff that enters streams in and near the project limits may persist at levels capable of degrading water quality in lower Hylebos Creek. If the contaminants are present at levels that have toxic effects on groundfish species, this will constitute an adverse effect.

Effects on Essential Fish Habitat for Coastal Pelagic Species

EFH for coastal pelagic species does not extend into the action area. Any potential adverse effects on coastal pelagic species' EFH due to degraded water quality from the project area are assumed to be negligible by the time runoff reaches marine and estuarine waters.

Essential Fish Habitat Conservation Measures

Conservation measures and BMPs are included for project activities and are described in Section 1.4 (Performance Standards and Impact Avoidance and Minimization Measures) of this BA. In addition, the project includes habitat access improvement measures that will have beneficial effects on EFH for Pacific Coast salmon in freshwater habitats once downstream fishpassage barriers have been corrected.

Conclusions

EFH for Pacific Coast salmon is present in the action area. Contaminants in effluent from stormwater facilities that discharge to streams in and near the project limits may pose adverse effects on EFH for this species group.

Based on the anticipated presence of contaminants in stormwater runoff discharged to receiving waters, combined with the possibility that those contaminants may persist at levels capable of degrading water quality as far downstream as the mouth of Hylebos Creek, the proposed action **may adversely affect** EFH for Pacific Coast salmon and Pacific Coast groundfish. The project **will not adversely affect** EFH for coastal pelagic species.

Literature Cited

Casillas, E., L. Crockett, Y. deReynier, J. Glock, M. Helvey, B. Meyer, C. Schmitt, M. Yoklavich, A. Bailey, B. Chao, B. Johnson, and T. Pepperell. 1998. Essential Fish Habitat, West Coast Groundfish—Appendix. National Marine Fisheries Service. 778 pp

PFMC (Pacific Fisheries Management Council). 1998. The Coastal Pelagic Species Fishery Management Plan: Amendment 8.

PFMC (Pacific Fisheries Management Council). 1999. Amendment 14 to the Pacific Coast Salmon Plan, Appendix A, Identification and Description of Essential Fish Habitat, Adverse Impacts, and Recommended Conservation Measures for Salmon.



APPENDIX B

PRE-BA MEETING NOTES



AE 0030-17 | Final Biological Assessment

OMF South – Pre-BA Meeting Summary - DRAFT

August 24, 2023, 2:30 to 4 pm Teams

Meeting objective(s):

Sound Transit will provide an overview of the proposed Operations and Maintenance Facility (OMF) South project, describe potential impacts for the Preferred Alternative to Endangered Species Act-listed species, and receive preliminary feedback on approach to Biological Assessment (BA)

Participants

Phyllis Meyers, NMFS	Curvie Hawkins, Sound Transit
Bonnie Shorin, NMFS	Erin Green, Sound Transit
Joshua Emery, USFWS	Teresa Vanderburg, Sound Transit
Justin Zweifel, FTA	Becki Kniveton, Sound Transit
Chris Moelter, FTA/Anchor	Brooke O'Neill, Sound Transit
	Steve Krueger, Parametrix
	Pablo Lopez-Hilfiker, HDR Engineers

Meeting Summary

Introductions: see participants above.

Project Overview

- Currently the Operations and Maintenance Facility (OMF) South project is in the environmental review process. FTA is the lead federal agency.
- FTA and Sound Transit are studying three alternatives in the Environmental Impact Statement (EIS): South 336th Street (Preferred) Alternative, South 344th Street Alternative, and Midway Landfill Alternative.
- The Preferred and the South 344th Street alternatives would require about a mile and half of track to connect to the existing light rail system.
- The Preferred Alternative and the South 344th Street alternatives are in the upper part of the Hylebos basin. The Midway Landfill Alternative is in the McSorley Creek Basin that drains to the Puget Sound.

Preferred Alternative Overview

- The Preferred Alternative site includes three primary buildings: an OMF building, maintenance of way building, and Link system wide storage building. The site includes storage tracks on the north side for storage of about 144 light rail vehicles.
- The Preferred Alternative includes about 1.4 miles of mainline track (northbound and southbound) that connect the OMF South site to the rest of the system. A third track (test track) runs parallel to the mainline extension that will be used for testing and commissioning light rail vehicles.
- The mainline track runs on an elevated guideway with heights between 12-30 feet above the ground. Phyllis asked if there would be an opportunity to replant shrubs and shorter trees in areas under the guideway. Depending on the guideway height and location, short stature trees and lower growing shrubs/ground cover can be planted below the guideway in critical areas and buffers. The area around columns needs to remain clear for inspection.
- The project includes culvert replacements on the northwest, northeast, and southern portion of the project site. The culvert replacements will be upgraded to fish passable structures. The OMF South project is currently designed to manage stormwater from all of the impervious surfaces.

• Project will include off site wetland mitigation. The location has not been solidified but will be somewhere in the Hylebos basin.

Environmental Review and Project Schedule

- FTA (the lead federal agency) and Sound Transit are currently planning to publish a NEPA Draft / SEPA Supplemental Draft EIS in September. The Final EIS is anticipated to be published in mid-2024 followed by the Sound Transit's Board action to select the project to build and FTA's Record of Decision.
- The project will be constructed under a design build contract. Operation of the facility is anticipated in 2032 for the Preferred or South 344th Street Alternatives. However, Sound Transit is identifying measures to open the facility as early as 2029. The Midway Landfill alternative would open later due to the complexities of constructing on the landfill.

Affects Analysis and Preliminary Effects Determination for Preferred Alternative

- Steve noted that there is no suitable habitat for federally listed terrestrial species in the project area.
- The project is in the Hylebos watershed, WRIA 10. There are two headwater tributaries: West Fork Hylebos Creek Tributary 0014C and East Fork of Hylebos Creek Tributary 0016A. Both are intermittent, seasonal streams.
- The entirety of West Fork Hylebos Creek Tributary 0014C in the project area flows through a regional water detention facility (in-line detention facility) that is also a wetland. There is no defined channel within the detention facility/wetland. The stream exits the detention facility/wetland via a flow control structure (standpipe) where it continues off-site (piped) beneath SR-99 for approximately 960 feet. T The entire reach within the study area has been modified for flood control.
- The terrestrial action area includes the construction footprint and extent of project related noise.
- The aquatic portion of the action area includes the upstream extent of East and West Fork Tributaries to account for the proposed culvert replacement/removals and resulting improved access to upstream habitat. The aquatic portion of the action area also extends downstream to where Hylebos Creek enters the Hylebos Waterway. These areas may be subject to degraded water quality because of construction and operation of the OMF South project.
- Overall, there is a net reduction in PGIS. All new/replaced PGIS will receive enhanced treatment. The
 analysis assumes that the light rail guideway as NPGIS per the 2019 Memorandum of Understanding
 with Ecology. Becki noted that the guideway is used by electric vehicles with non-petroleum lubricants.
 Ecology recently published its Draft 2024 Stormwater Management Manual for Western Washington
 that has identified light rail as pollution generating. Sound Transit is in the middle of a water quality
 characterization study in cooperation with Ecology about stormwater runoff. The study is anticipated in
 early 2024. At this time, Sound Transit continues to consider the guideway non-pollution generating as
 they await results from the characterization study.
- Steve provided a fish use summary (see slides 20-21). Documented steelhead is 1.5 miles downstream of the project footprint in the West Fork and 1.9 miles downstream of the project footprint for the East Fork. Chinook distribution is similar in the West Fork and in the East Fork Chinook distribution is approximately 2.7 miles downstream of the project footprint. There are multiple "complete" barriers downstream of the project consisting of long culverts with excessive water surface drops and slopes.
- Steve summarized the effects recommendations (see slides 25-26).
- Bonnie made an observation that when considering downstream effects from stormwater, you might want to change the effect determination for Bocaccio and yelloweye rockfish from No Effect to May Affect, Not Likely to Adversely Affect. This is because the measure of take is at the scale of the individual. If there is potential to affect any individual or any features of critical habitat, even if it is insignificant or discountable, that should be a May Affect determination. Steve described that an outcome of the pre-BA meeting for the adjacent City Center Access was a No Effect for these species. Bonnie stated that No Effect determinations should not be submitted to the Services because the metric for a consultation is a May Affect determination.

- Josh noted that if any fish handling is proposed in the lower reaches of Hylebos Creek for the mitigation site, then USFWS may not support the proposed May Affect, Not Likely to Adversely Affect determination for bull trout. Steve explained that the off-site mitigation area has not been selected at this time. Teresa clarified that Sound Transit is coordinating with the Corps to define mitigation and that it will be primarily wetland mitigation. Permanent stream impacts are for realignment and no linear foot reduction in streams is anticipated. The mitigation is to satisfy city and Corps requirements for permanent wetland impacts. The mitigation will likely have beneficial effects for listed species.
- Justin asked if the Services need to concur with the species list. Josh stated that it is up to the action agency to disclose effects to listed species; however, if during formal consultation the Services determine that there is an adverse effect to species that have not been consulted on then that will tie things up. At this time, the Services don't see anything missing in ST's pre-biological assessment shown on the PowerPoint, or other species that should have been addressed.
- Bonnie stated that, in the context of stormwater, it is not out of the ordinary for NMFS to review a
 project's stormwater analysis and come out with a May Affect determination on Southern Resident
 Killer Whale (SRKW) Critical Habitat. NMFS may conclude that SRKW Critical Habitat is affected if
 Chinook, SRKW preferred prey, may be affected over the anticipated life of a project since sufficient
 quantity, quality and availability of prey species is a primary constituent element for SRKW.
- The group did not identify concerns with the essential fish habitat recommendation.

Discussion

- FTA will be the lead federal agency. FTA/ST are planning to submit/begin consultation in December with completion of consultation in May 2024.
- Bonnie described that if the Services conduct consultation with FTA, the Corps will rely on that consultation for its permits based on the concept of late arriving action agency. There is an informal understanding that if an agency has funding involved then they lead for consultation. The BA should include text that would identify the Corps as the Section 404 permitting agency.
- The Corps project manager is Colin Greenan. ST just completed a second pre-app meeting in July.
- Teresa discussed project schedule, noting submittal of the BA later in 2023. Joshua indicated that even 10 months for consultation would be challenging.
- ST and NMFS have a staffing agreement where ST is funding Phyllis's position at NMFS to prioritize consultation on ST projects. Bonnie indicated that NMFS consultation will be more in line with the statutory review time of 145 days due to this agreement. Bonnie noted that NMFS has an interagency agreement between NMFS and USFWS that allows NMFS staff to be loaned to USFWS to work on ESA consultations. It would be ideal if Phyllis could cover consultation for both NMFS and USFWS. Joshua will follow up within USFWS on how this will be administrated.

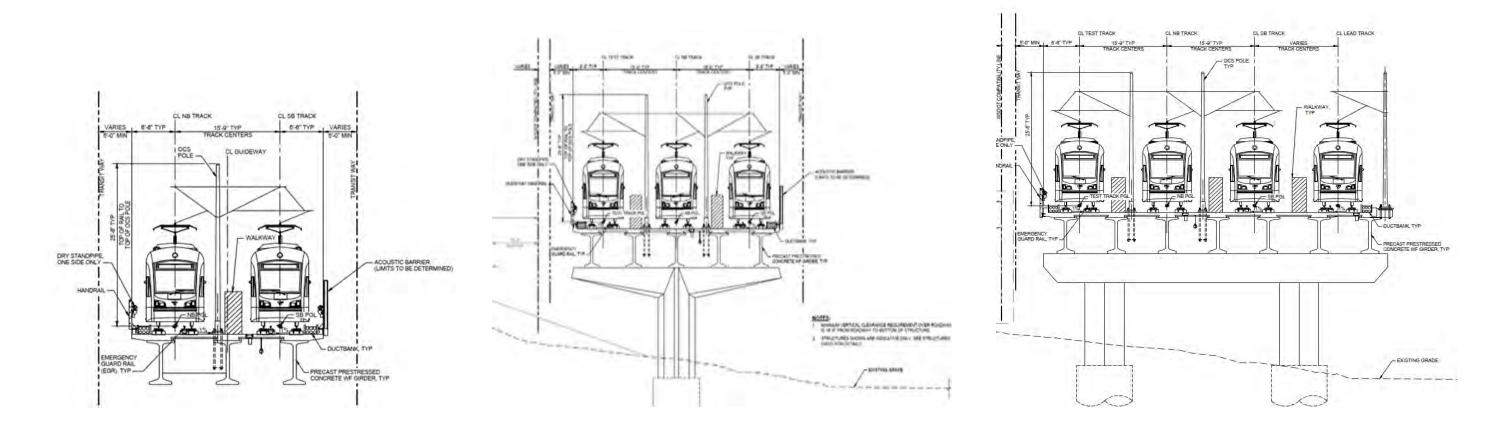


APPENDIX C

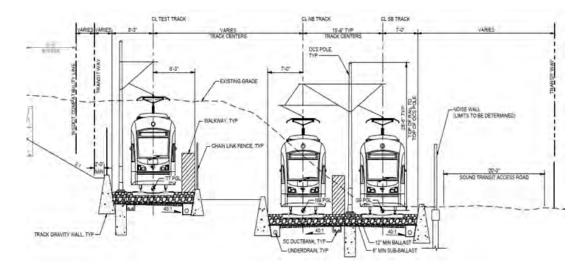
TYPICAL LIGHT RAIL GUIDEWAY CROSS SECTIONS



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ELEVATED MAINLINE GUIDEWAY DOUBLE, TRIPLE AND FOUR TRACK PROFILES



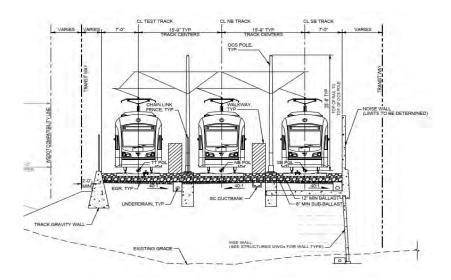
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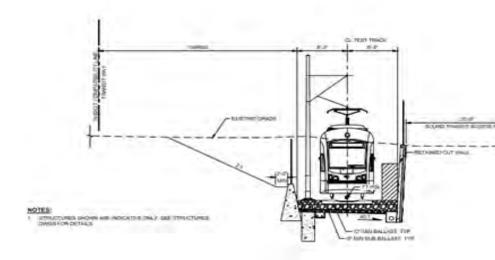
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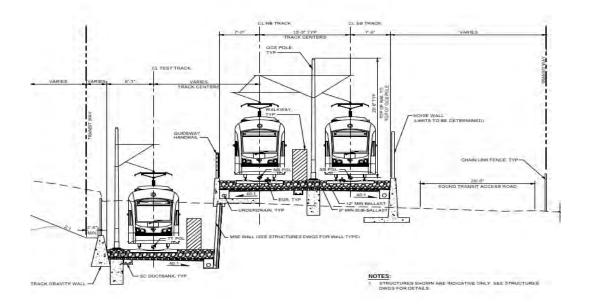
OMF South



December 2023







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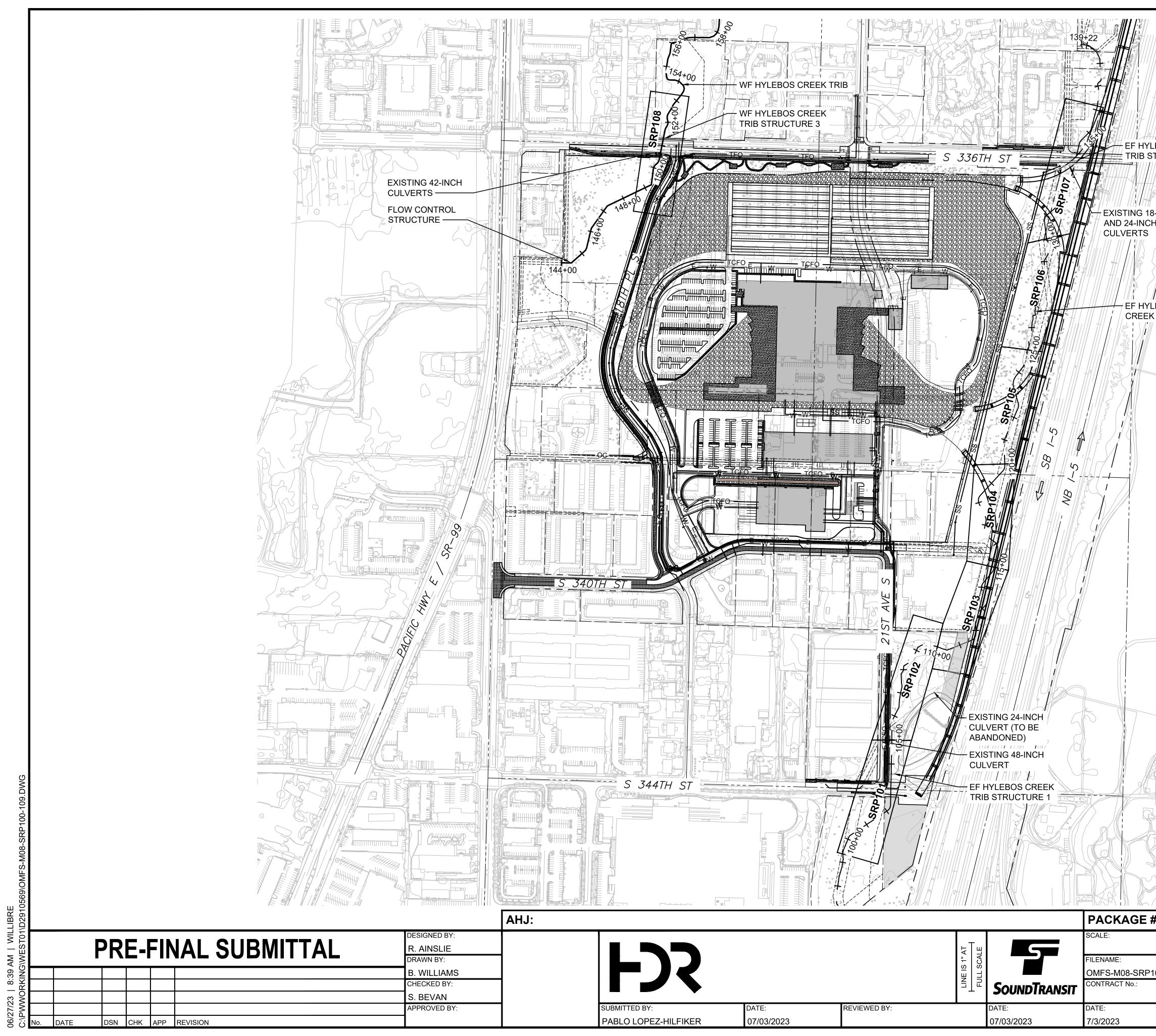


APPENDIX D

PRELIMINARY STREAM AND CULVERT DESIGN

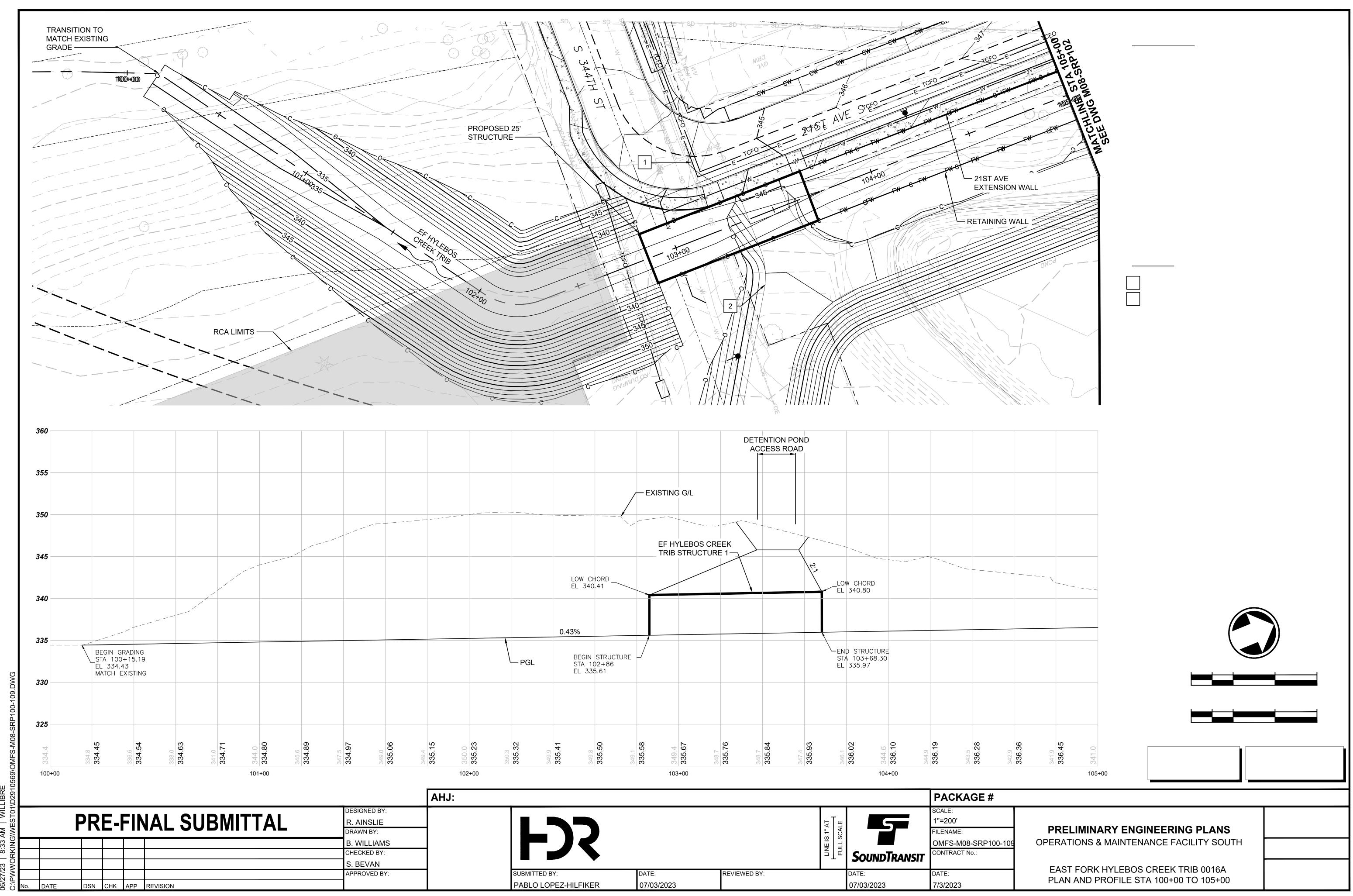


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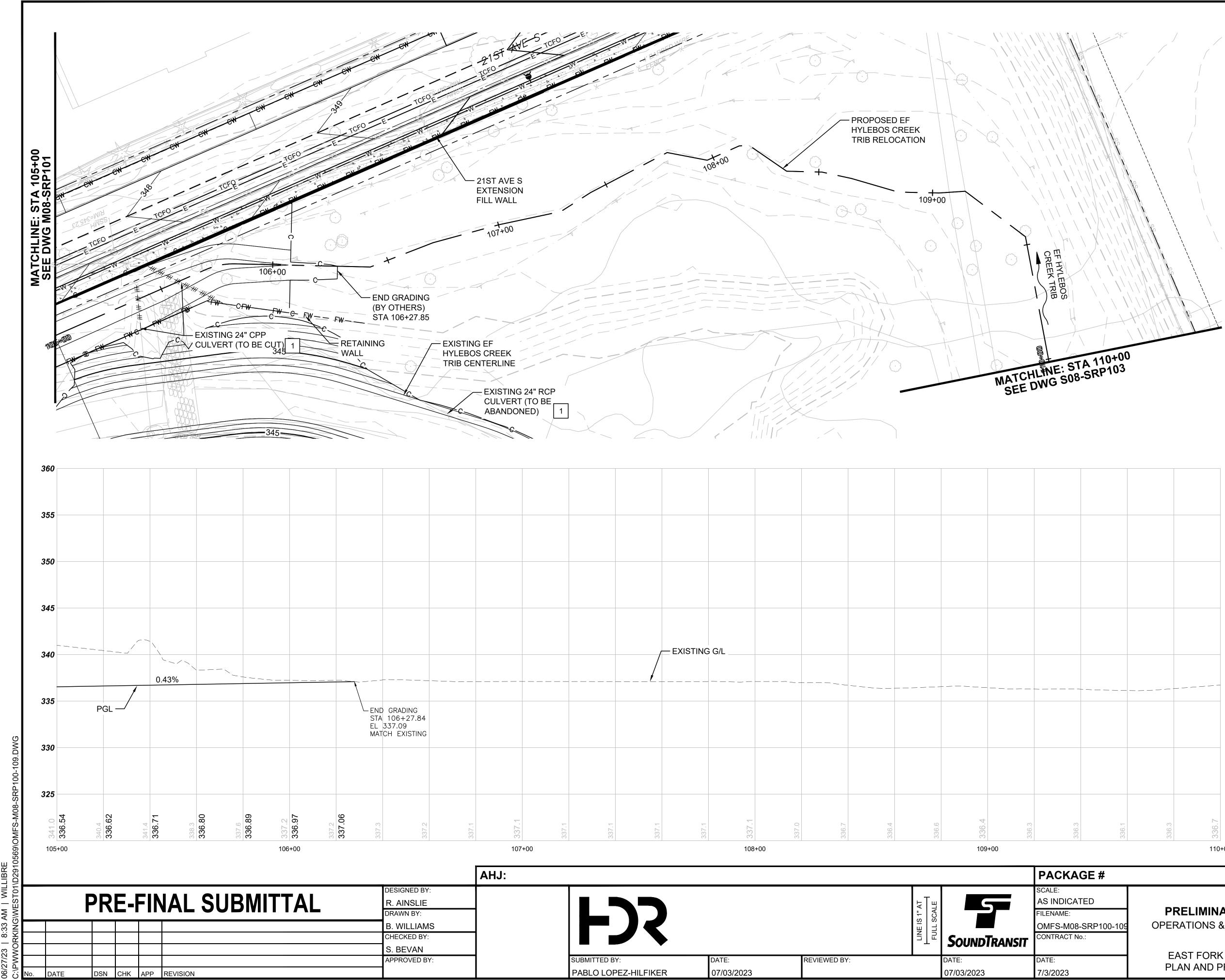
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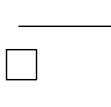
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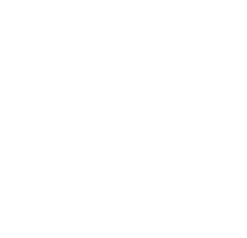
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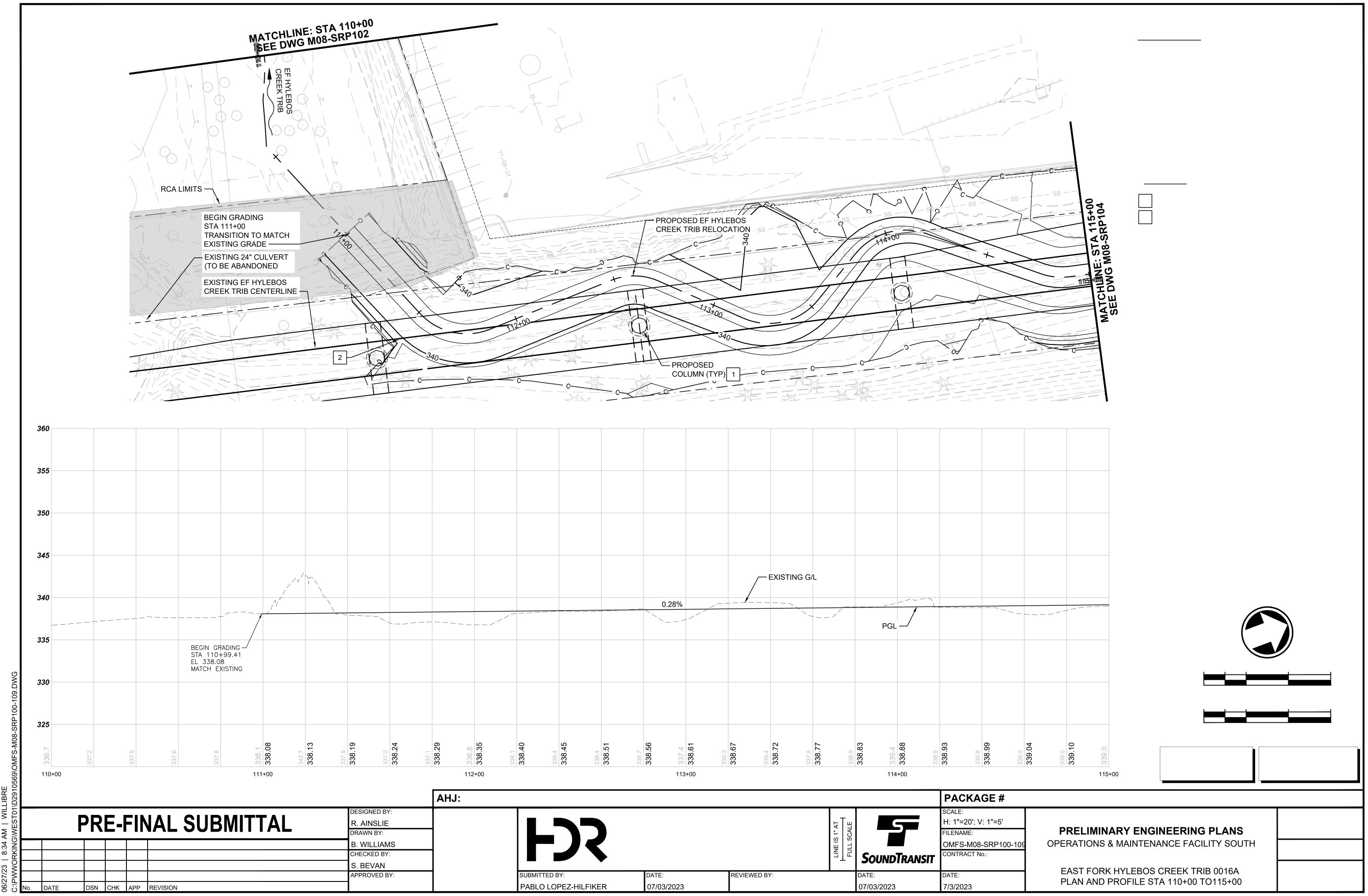




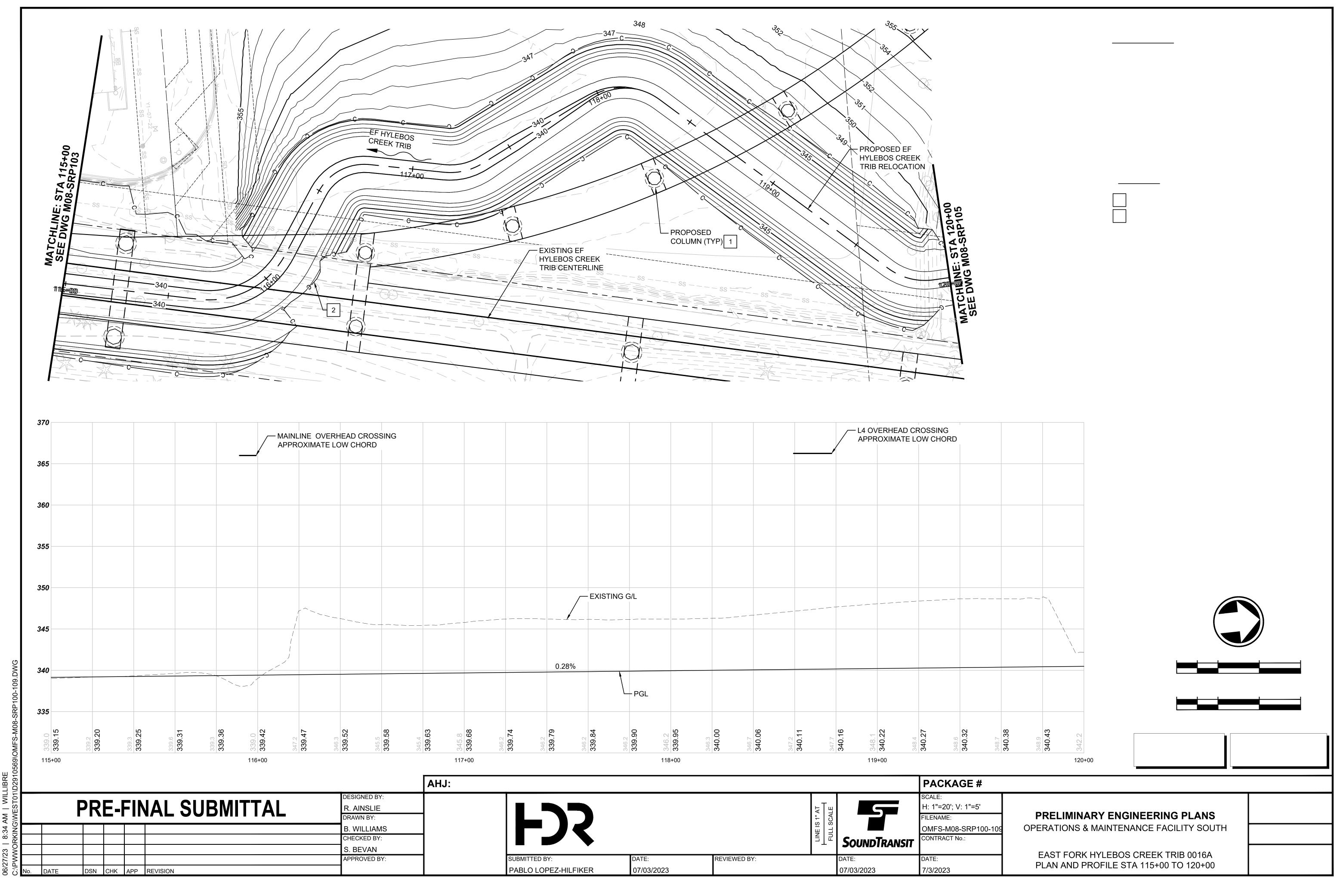




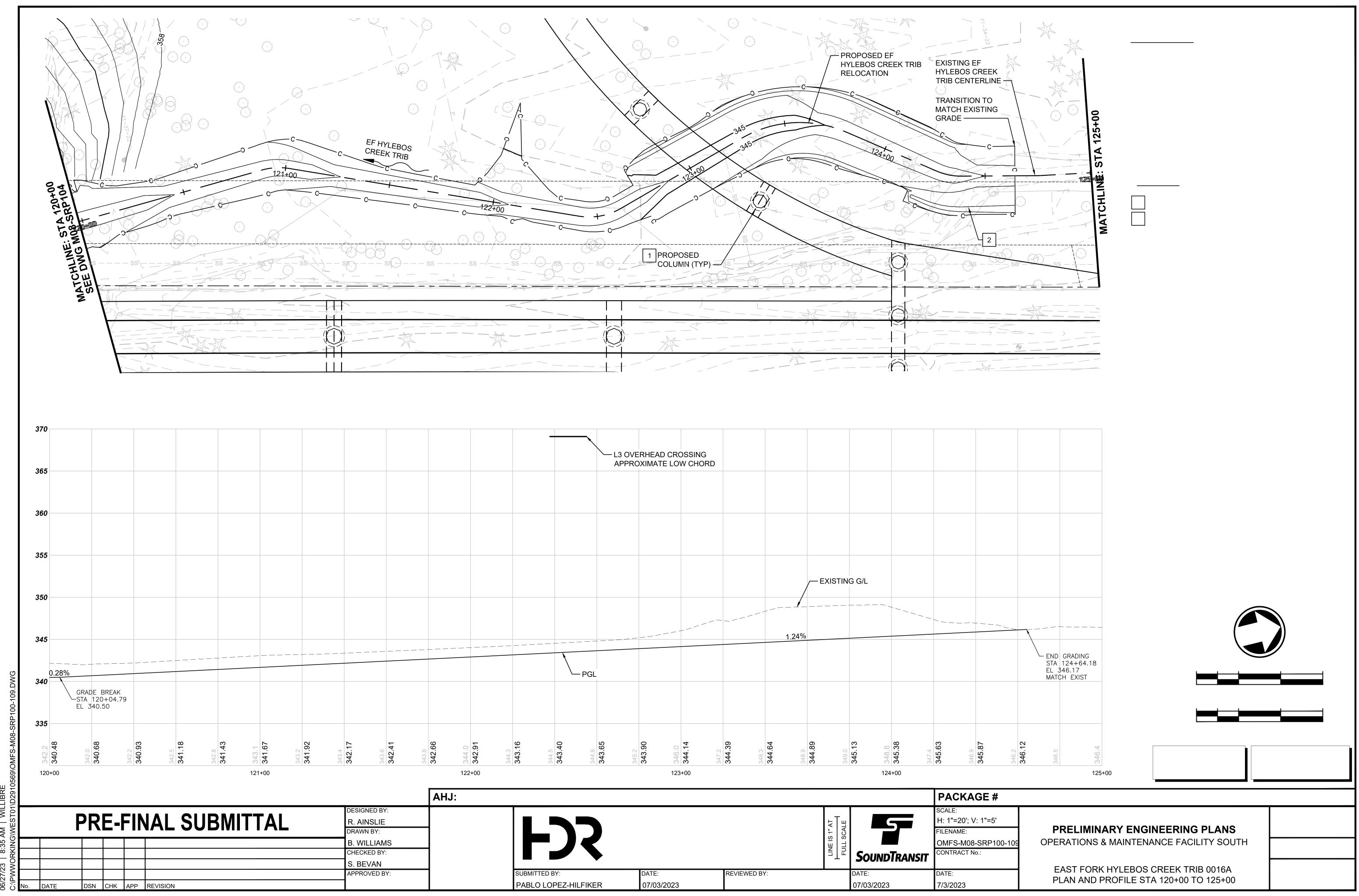




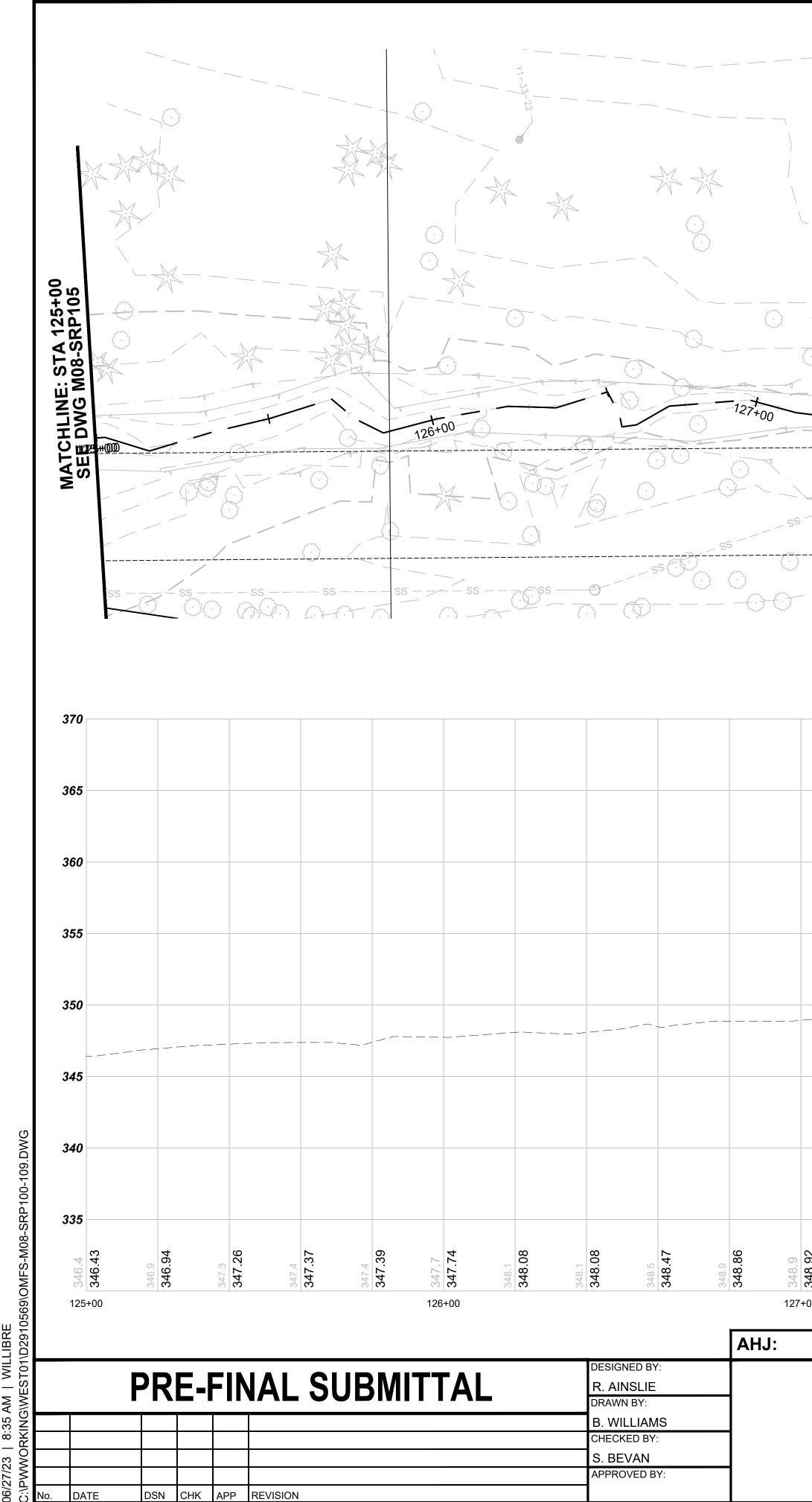
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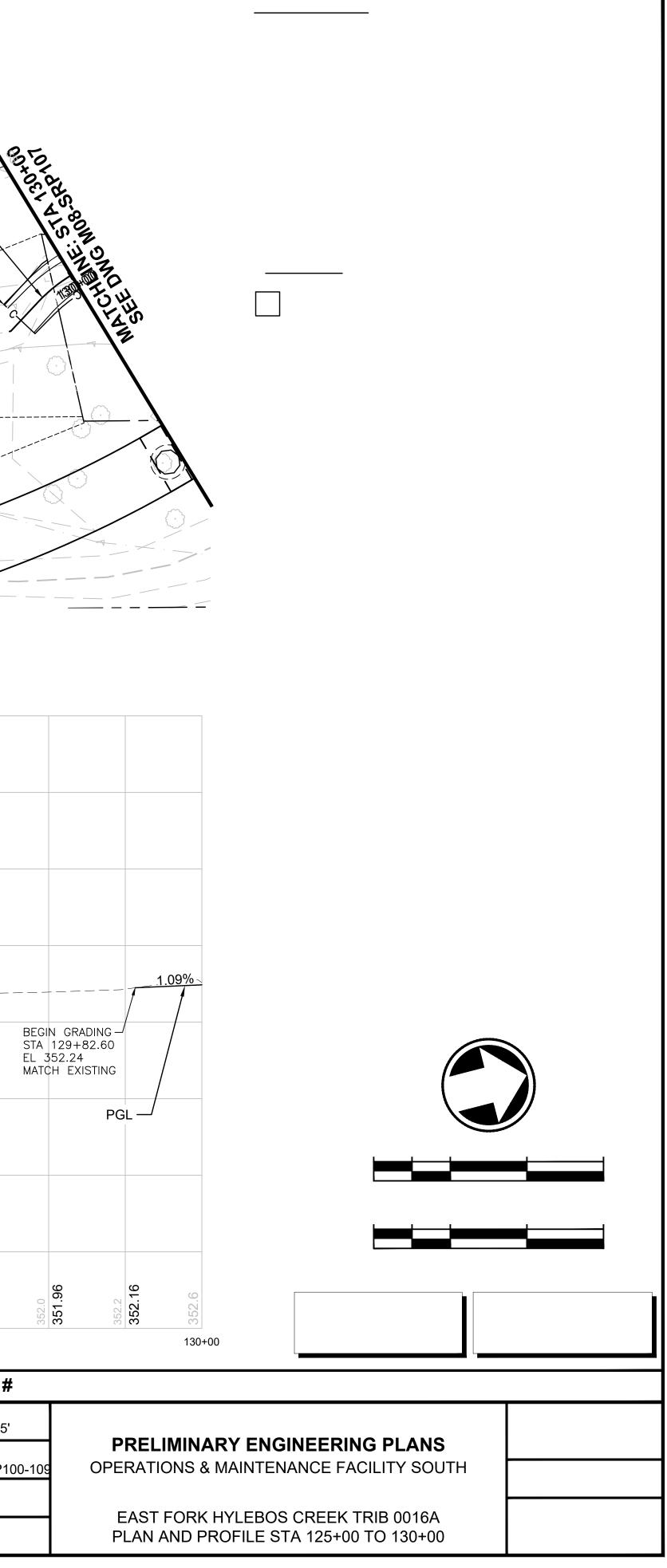
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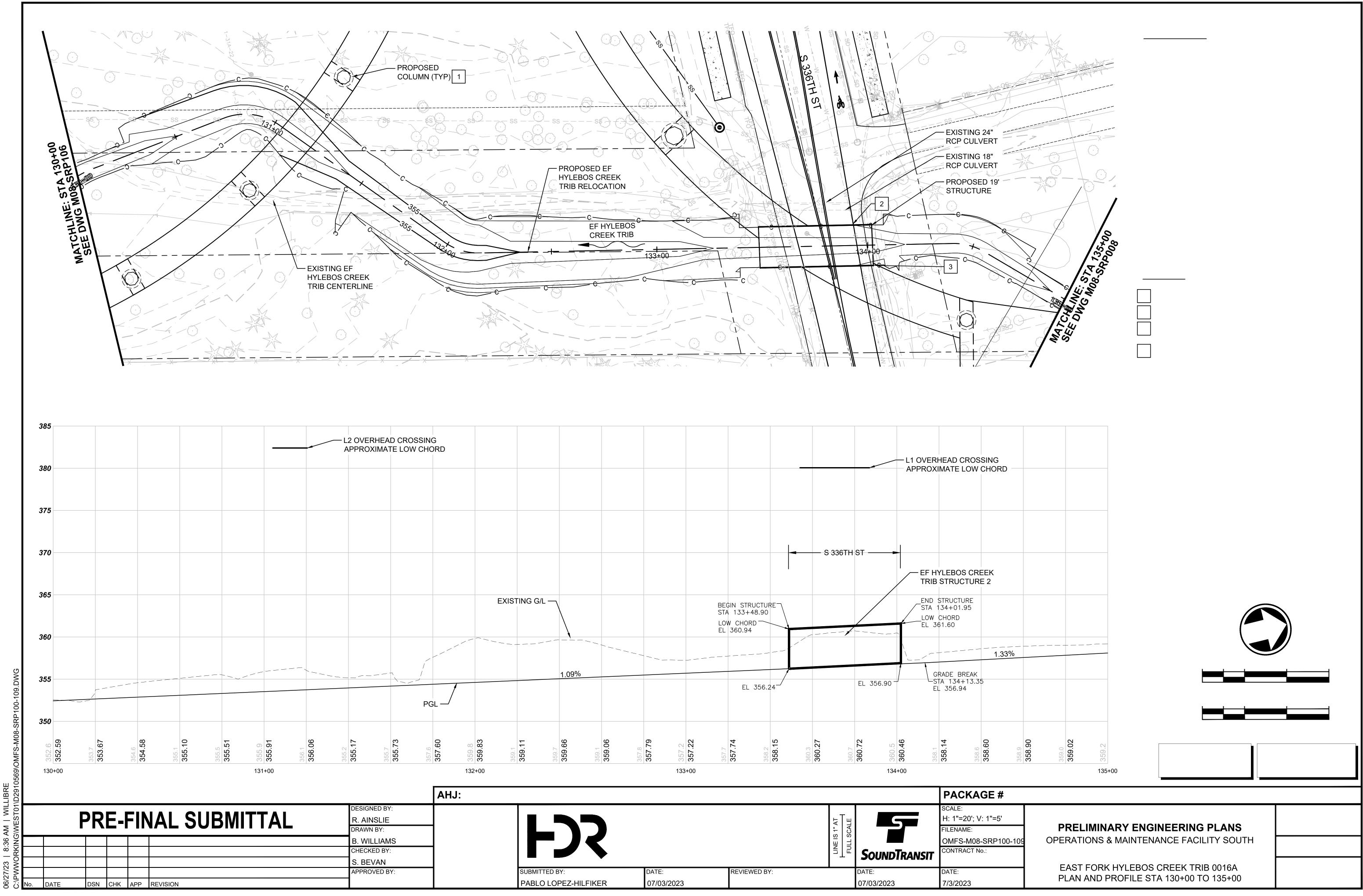


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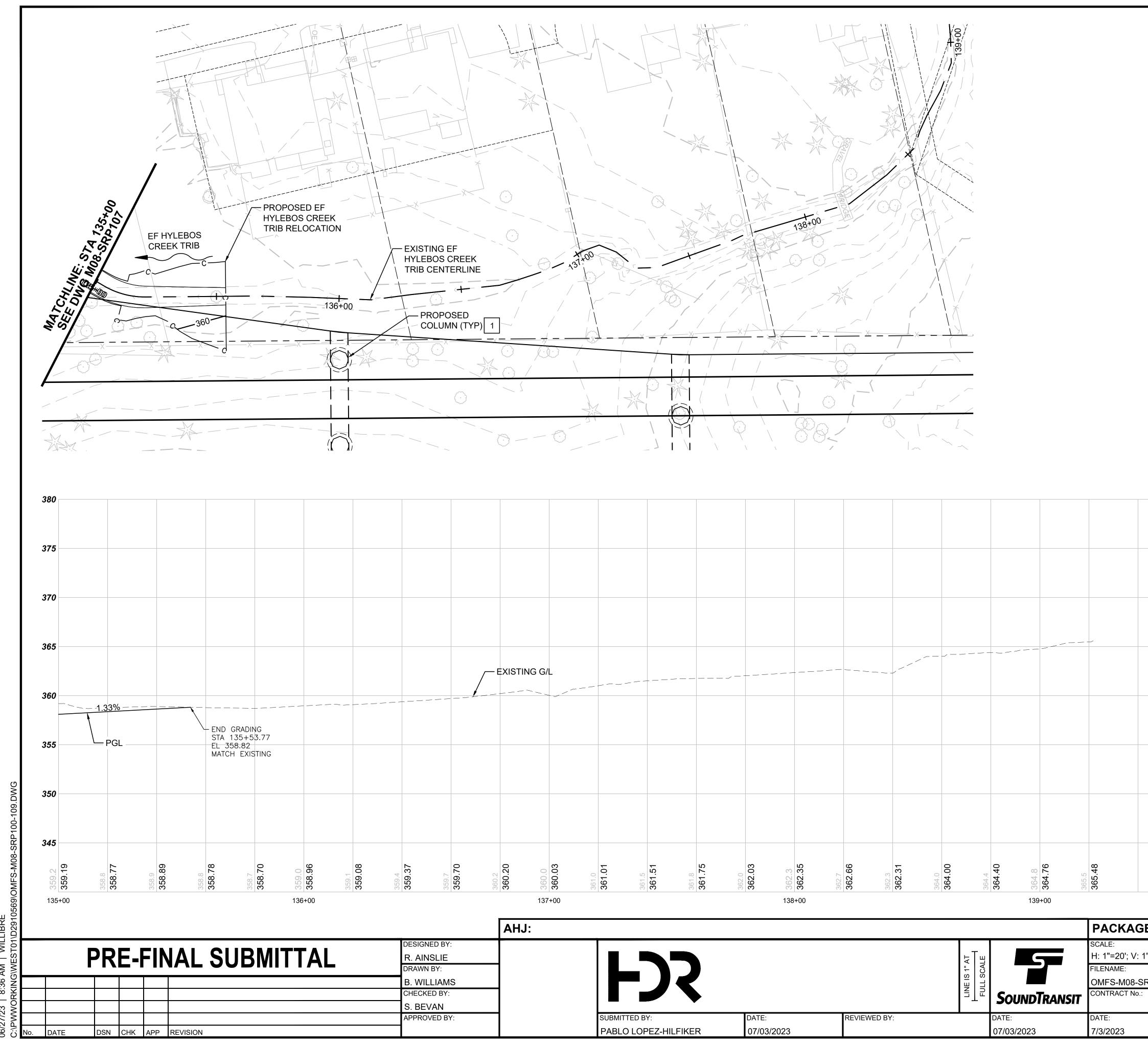
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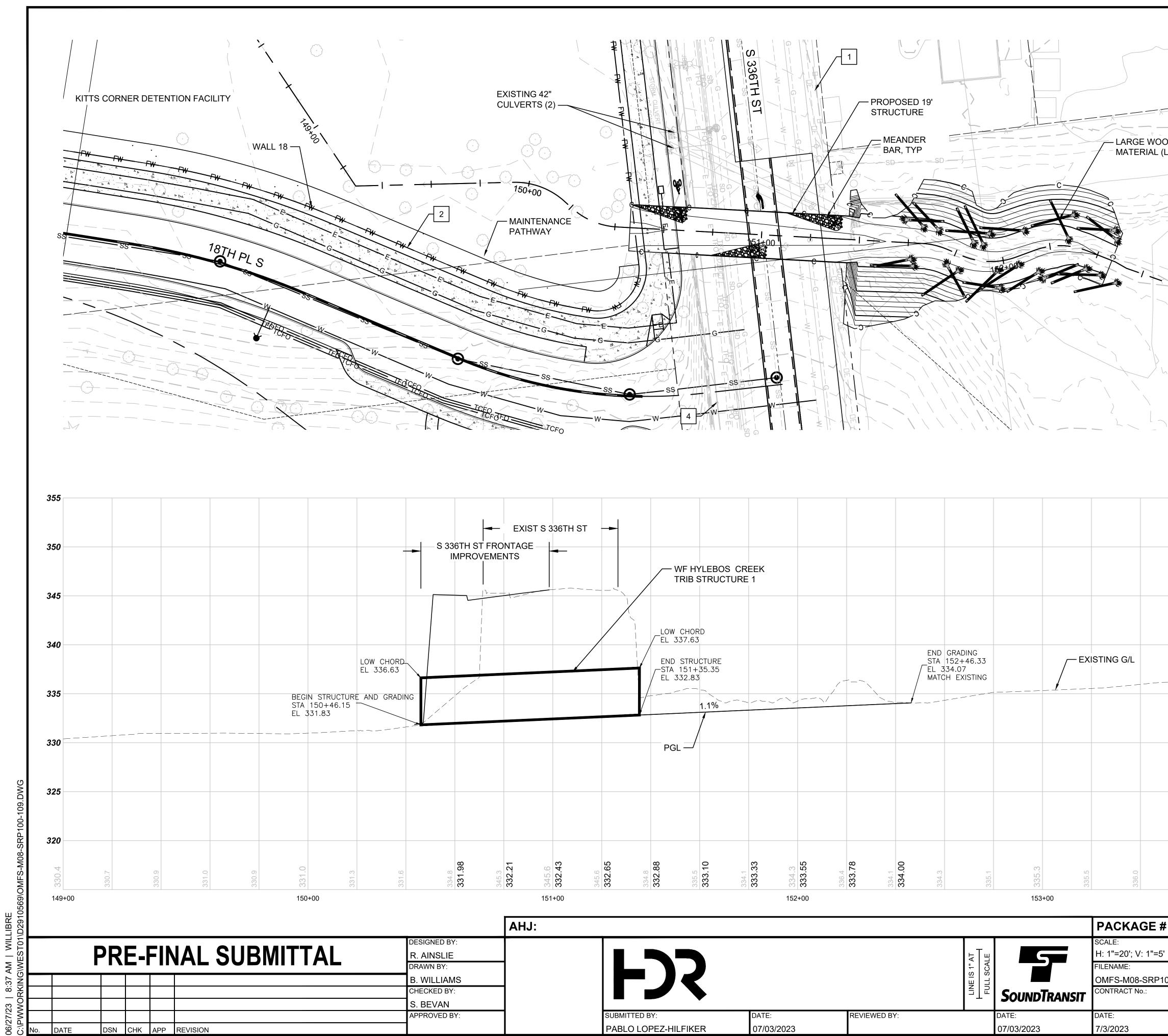


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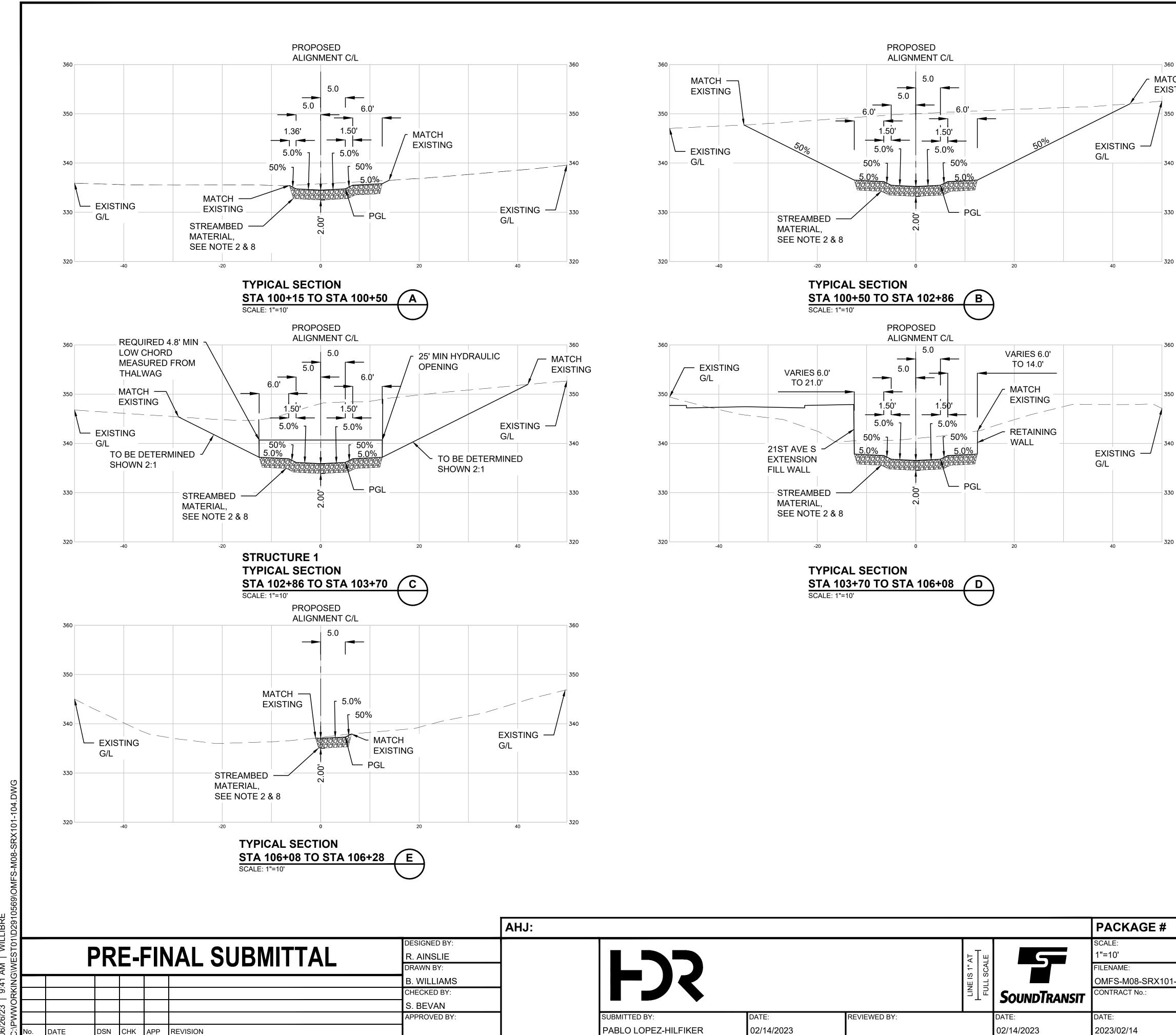
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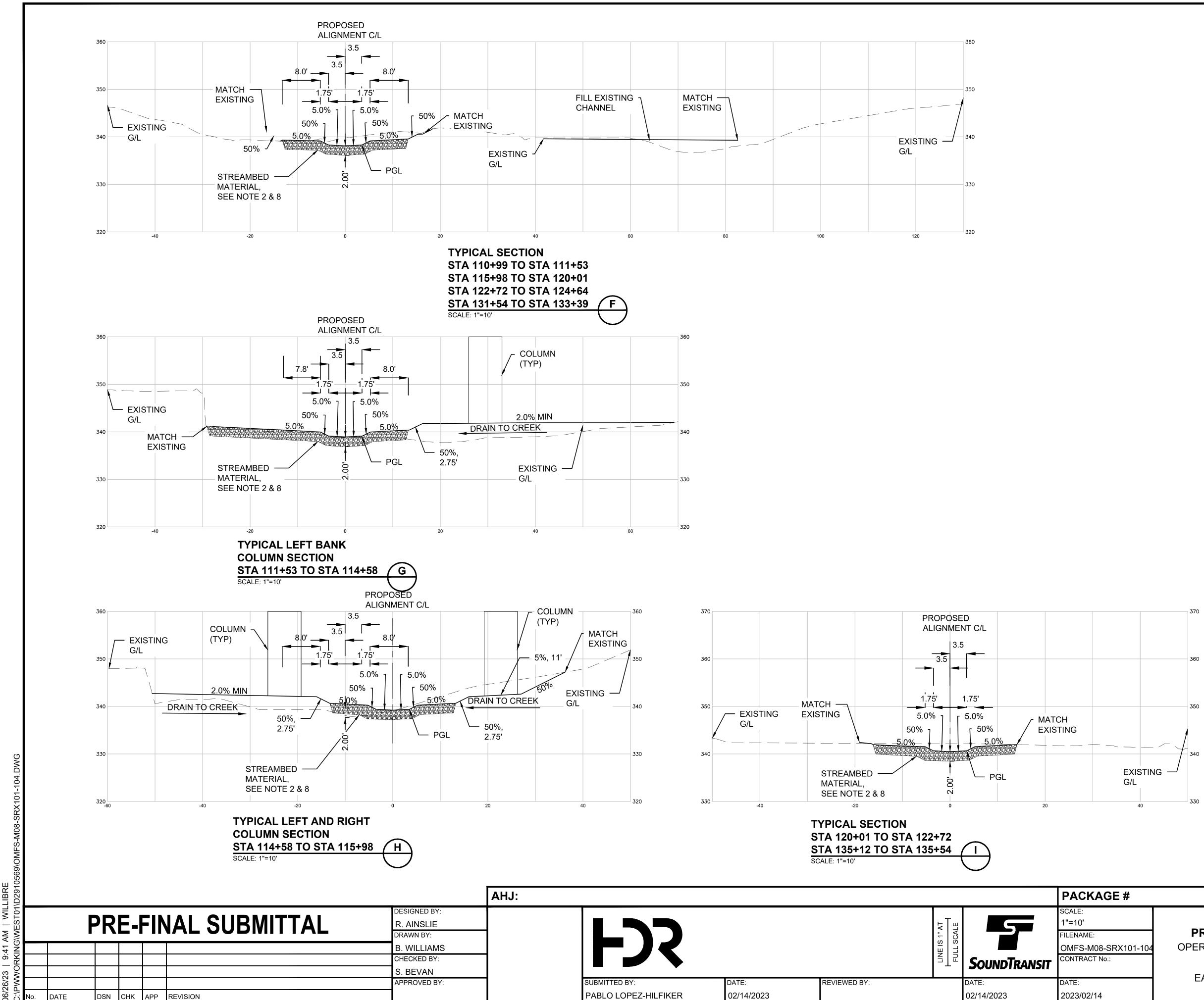
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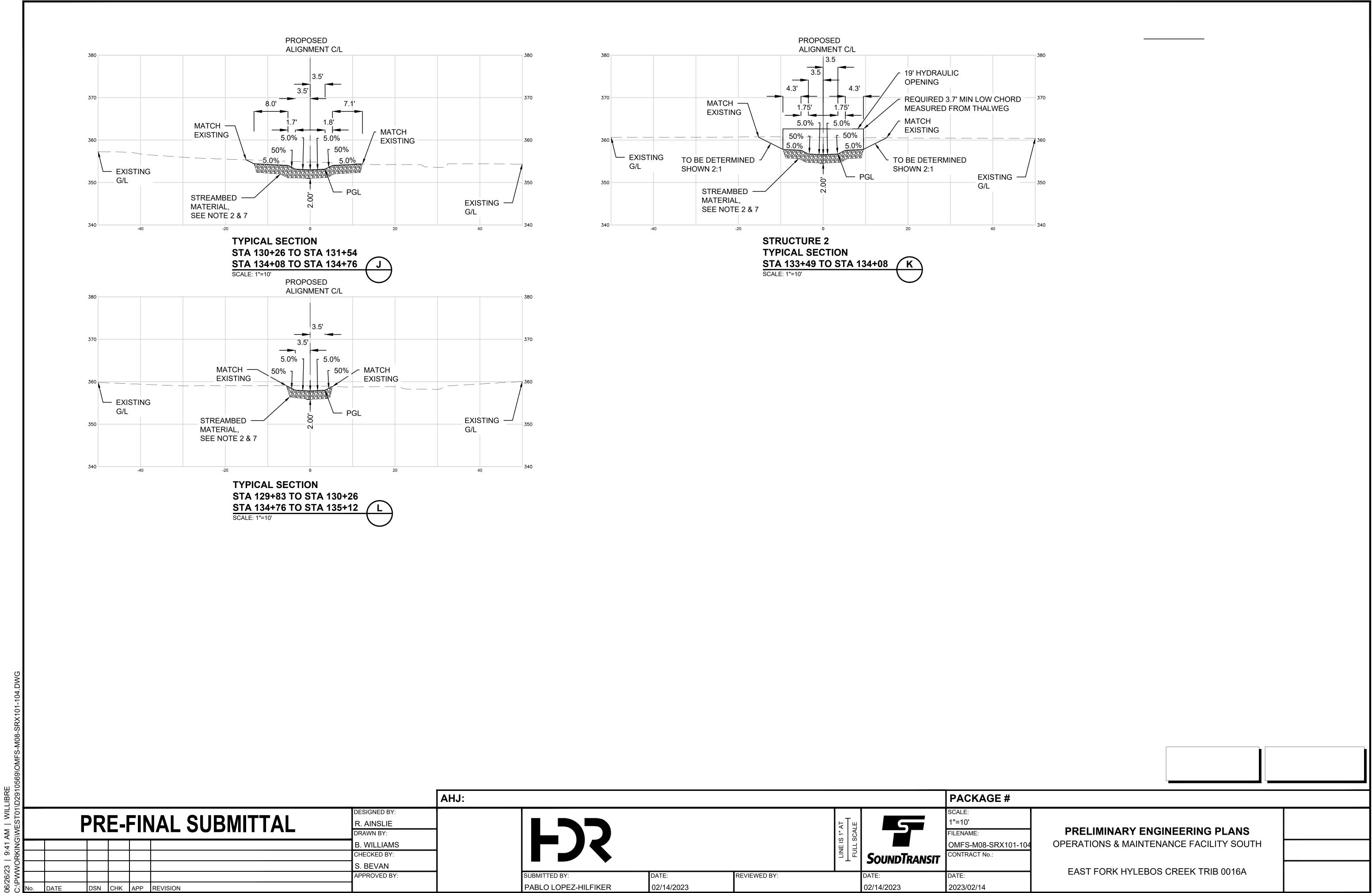
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EAST FORK HYLEBOS CREEK TRIB 0016A

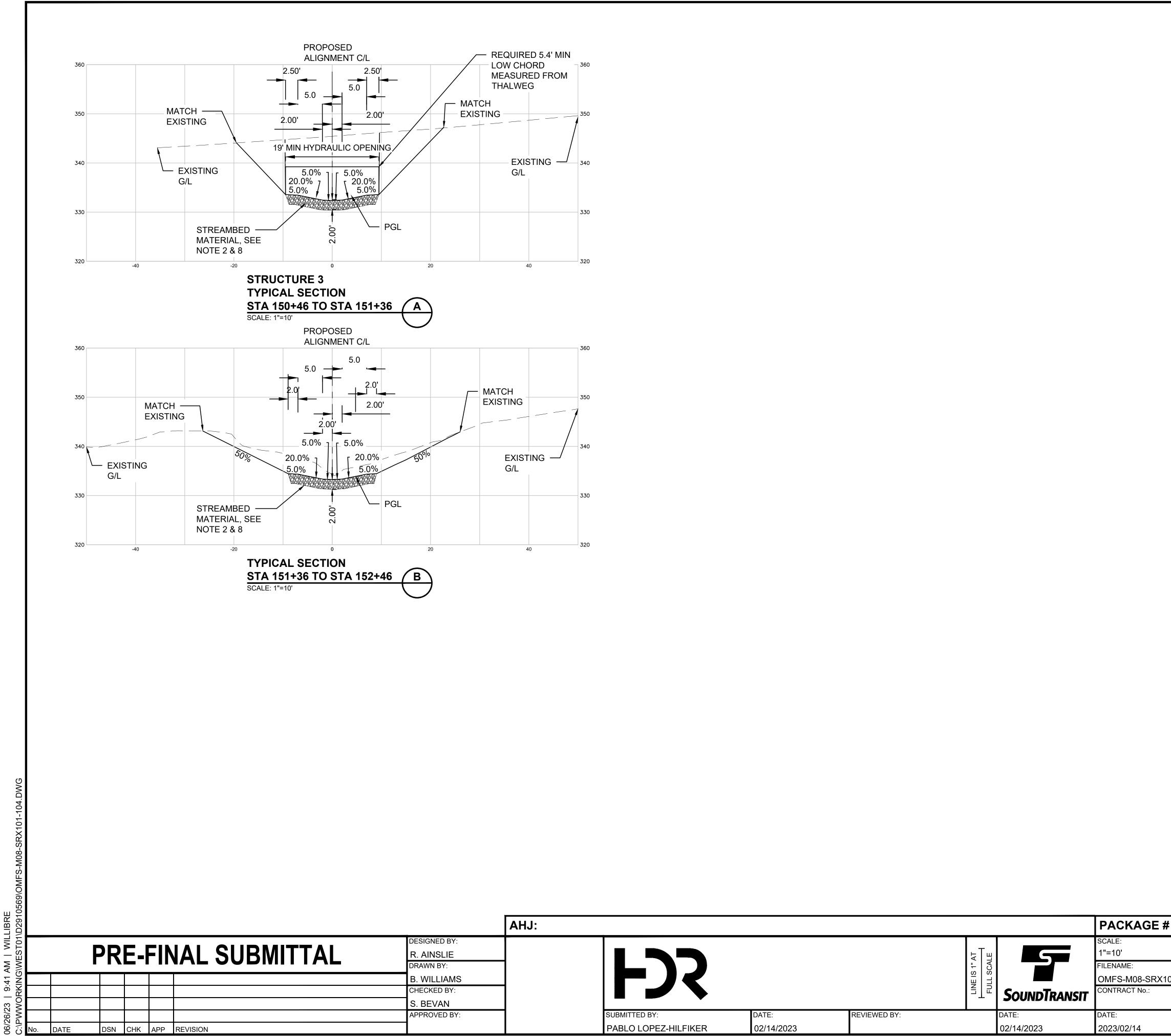
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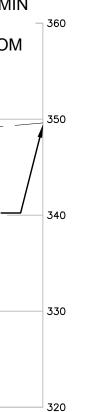


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101-104	PRELIMINARY ENGINEERING PLANS OPERATIONS & MAINTENANCE FACILITY SOUTH WEST FORK HYLEBOS CREEK TRIB 0014C	



APPENDIX E usfws official species list



AE 0030-17 | Final Biological Assessment



United States Department of the Interior

FISH AND WILDLIFE SERVICE Washington Fish And Wildlife Office 510 Desmond Drive Se, Suite 102 Lacey, WA 98503-1263 Phone: (360) 753-9440 Fax: (360) 753-9405



In Reply Refer To: Project Code: 2023-0047264 Project Name: Operations and Maintenance Facility South November 27, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/whatwe-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office. Attachment(s):

Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

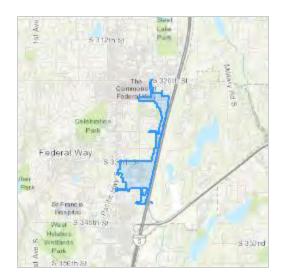
This species list is provided by:

Washington Fish And Wildlife Office

510 Desmond Drive Se, Suite 102 Lacey, WA 98503-1263 (360) 753-9440

PROJECT SUMMARY

Project Code:	2023-0047264
Project Name:	Operations and Maintenance Facility South
Project Type:	Railroad - New Construction
Project Description:	The purpose of the Central Puget Sound Regional Transit Authority
	(Sound Transit) Operations and Maintenance Facility South (OMF South)
	project is to construct an operations and maintenance facility (OMF) in
	the South Corridor to support Sound Transit's Link light rail system
	expansion. This expansion and the related increase in the light rail vehicle
	(LRV) fleet and daily operations is identified in Sound Transit 3: The Regional Transit System Plan for Contral Puget Sound (Sound Transit 2)
	Regional Transit System Plan for Central Puget Sound (Sound Transit 3).
	OMF South would:
	- Provide a facility with the capacity to receive, test, commission, store,
	maintain, and deploy vehicles to support the
	intended level of service for the system-wide light rail system expansion.
	- Support efficient and reliable light rail service that minimizes system
	operating costs.
	- Support and connect efficiently to the regional system and be technically
	and financially feasible to build, operate,
	and maintain, consistent with the Sound Transit 3 Plan and Sound
	Transit's Regional Transit Long-Range Plan.
	- Preserve and promote a healthy and sustainable environment by
	minimizing adverse impacts to people and the
	natural and built environments.
	Project elements would include: construction of over a mile of elevated
	track and guideway between the terminus of the Federal Way Light Rail
	Extension in Federal Way, Washington (currently under construction) and
	the proposed OMFS between 336th Street South and 344th Street South;
	construction of the operations and maintenance facility, test tracks,
	stormwater management facilities, culvert replacements, stream channel
	modifications, compensatory mitigation, and clearing, grading and fill
	necessary to accommodate the abovementioned actions.
Project Location:	
	e location of the project can be viewed in Google Maps: <u>https://</u>
www.google.con	n/maps/@47.304488649999996,-122.30251289530742,14z



Counties: King County, Washington

ENDANGERED SPECIES ACT SPECIES

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
North American Wolverine <i>Gulo gulo luscus</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/5123</u>	Proposed Threatened
BIRDS NAME	STATUS
Marbled Murrelet Brachyramphus marmoratus Population: U.S.A. (CA, OR, WA) There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <u>https://ecos.fws.gov/ecp/species/4467</u>	Threatened
Streaked Horned Lark <i>Eremophila alpestris strigata</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <u>https://ecos.fws.gov/ecp/species/7268</u>	Threatened
Yellow-billed Cuckoo Coccyzus americanus Population: Western U.S. DPS There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <u>https://ecos.fws.gov/ecp/species/3911</u>	Threatened

REPTILES

NAME	STATUS
Northwestern Pond Turtle Actinemys marmorata No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/1111</u>	Proposed Threatened

FISHES

NAME	STATUS
Bull Trout Salvelinus confluentus	Threatened
Population: U.S.A., conterminous, lower 48 states	
There is final critical habitat for this species. Your location does not overlap the critical habitat.	
Species profile: <u>https://ecos.fws.gov/ecp/species/8212</u>	

INSECTS

NAME	STATUS
Monarch Butterfly Danaus plexippus	Candidate
No critical habitat has been designated for this species.	
Species profile: <u>https://ecos.fws.gov/ecp/species/9743</u>	
Taularia (= visulga) Chagleeren et Europudruga aditha taulari	En don govo d

Taylor's (=whulge) Checkerspot *Euphydryas editha taylori* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <u>https://ecos.fws.gov/ecp/species/5907</u>

Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency:ParametrixName:Steven KruegerAddress:719 2nd Avenue, Suite 200City:SeattleState:WAZip:98104Emailskrueger@parametrix.comPhone:2068417839

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Transportation



APPENDIX F

PROJECT AREA PHOTOGRAPHS



AE 0030-17 | Final Biological Assessment



Photo 1: West Fork Hylebos Creek Tributary 0014C, looking at downstream end of S 336th Street Crossing and as it enters large detention facility between S 336th Street and SR 99



Photo 2: Interior of detention facility – No defined channel of West Fork Hylebos Creek Tributary 0014C (October 10, 2019)



Photo 3: Outlet of Detention facility and West Fork Hylebos Creek Tributary 0014C prior to being piped beneath SR 99 (October 10, 2019)



Photo 4: Dry channel of the East Fork Hylebos Creek Tributary 0016A south of South 336th Street (October 9, 2019)



Photo 5: East Fork Hylebos Creek upstream of S 336th Street (April 20, 2023)



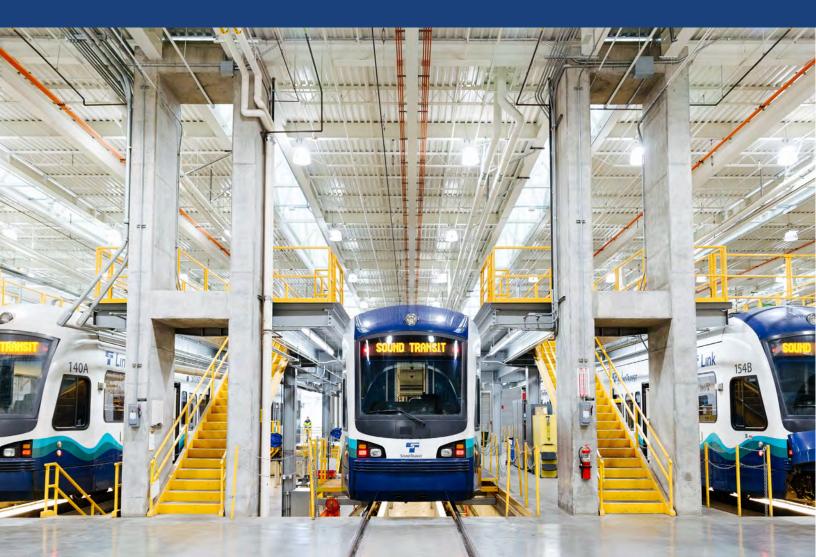
Photo 6: East Fork Hylebos Creek Tributary 0016A looking downstream as channel loses definition through riverine wetland (WFW-01) south of S 336th Street (October 9, 2019)

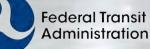


Operations and Maintenance Facility South

Final Environmental Impact Statement

Appendix J: Environmental Mitigation Plan





SoundTransit

June 2024

Appendix J: Environmental Mitigation Plan

This appendix lists the environmental mitigation commitments identified in the Final Environmental Impact Statement (EIS) that would be implemented to mitigate the impacts of the Preferred Alternative identified in the Final EIS. Many of the potential impacts identified through the EIS process will be mitigated through incorporation of avoidance, minimization, or improvement elements that are now included in the definition and design of the project. If the Sound Transit Board ultimately selects another alternative to build differing from the Preferred Alternative, the mitigation plan will be modified accordingly.

Table J-1 describes the mitigation measures associated with the operating (long-term) impacts of OMF South first, then the measures associated with construction. The final mitigation measures will be included as conditions of the Federal Transit Administration's (FTA) Record of Decision (ROD) for the project. FTA will incorporate them in any future grant agreement that FTA may award Sound Transit for construction of OMF South. Sound Transit will track these measures and report regularly to FTA to ensure that the mitigation commitments are being met. Where appropriate, Sound Transit will incorporate mitigation requirements into its contracting documents for final design and construction.

The commitments described in Table J-1 are based on those listed in the Final EIS for the Preferred Alternative. After the Sound Transit Board selects the project to be built, and as the project moves into final design, these measures may be revised, and additional measures or design features may be identified and added to the ROD to address project impacts associated with operations or construction. As additional measures are identified or revised during the final design of the project, FTA would review such measures to ensure that they are consistent with previously awarded federal grants.

Some of the environmental mitigation commitments listed in Table J-1 would require coordination with other parties, such as state and federal agencies or local jurisdictions, as part of the project's permitting or approvals process. These outside agencies and jurisdictions may request additional or other measures than those proposed in the EIS, which would require further coordination.

Measures to avoid potential impacts to the environment would continue to be identified as the project advances to final design. Measures to minimize potential impacts, such as best management practices (BMPs) or other protocols that are typically included in the project during construction, are already documented and included in Sound Transit's general construction specifications and conditions.

For the purposes of identifying environmental mitigation commitments, mitigation is generally required when an environmental impact or effect is determined to be significant and adverse. Measures to avoid or minimize project effects are already part of Sound Transit's established policies, design criteria standards, or procedures, and general construction specifications. These measures would automatically be included as part of the project. Mitigation commitments identified in this Environmental Mitigation Plan will be monitored, implemented, and periodically reported to the lead environmental officials.

			I able J-I	Willyation Flat
Resource	Final EIS Chapter/ Section	Impact Topic	Period	Mitigation/Avoidance Description
			Long-Term	No mitigation required.
	Arterial and Street Operations	Construction	A construction transportation management plan would be implemented to address site access, traffic control, hauling routes, impacts to transit, construction employee parking, impacts to local businesses, and pedestrian and bicycle control. This plan would be developed in coordination with Federal Way and Washington State Department of Transportation (WSDOT).	
		Freight Mehility	Long-Term	No mitigation required.
		Freight Mobility	Construction	No mitigation required.
		3.2 Transit	Long-Term	No mitigation required.
Transportation 3.2	3.2		Construction	Transit service modifications would be coordinated with King County Metro to minimize construction impacts and disruptions to bus facilities and service. This could include posting informational signage before construction at existing transit stops that would be affected by construction activities. Prior to closing a portion of the Federal Way/S 320th Street Park & Ride for construction, Sound Transit would work with King County Metro and WSDOT to determine its utilization rates and that of the nearby Federal Way Downtown Station. If the lots are at or near capacity, Sound Transit would implement alternative measures, such as routing transit riders that use these locations to available spaces at nearby park-and-ride lots, such as the Star Lake Park & Ride, or leasing parking lots or new parking areas within the vicinity of the temporarily closed lot.
		Nonmotorized	Long-Term	No mitigation required.
		Facilities	Construction	No mitigation required.
		Parking	Long-Term	No mitigation required.
			Construction	No mitigation required.
		Safety	Long-Term	No mitigation required.
			Construction	No mitigation required.

Table J-1Mitigation Plan

Resource	Final EIS Chapter/ Section	Impact Topic	Period	Mitigation/Avoidance Description
Acquisitions, Displacements, and Relocations	3.3	Displacements	Long-Term	Sound Transit would compensate affected property owners that are displaced by the project. This compensation would comply with Sound Transit's Real Property Acquisitions and Relocation Policy, Procedures, and Guidelines; the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (the "Uniform Act"); and the State of Washington's relocation and property acquisition laws and regulations, including Revised Code of Washington (RCW) 8.26 and Washington Administrative Code (WAC) 468-100. In addition to compensating property owners for property rights, other forms of compensation, including moving expenses, replacement housing payments, nonresidential reestablishment, and other eligible expenses, could be provided. Sound Transit would consult with WSDOT staff to develop appropriate site-specific measures and off-site mitigation, agreed to by WSDOT and the Federal Highway Administration (FHWA), that would meet the intended function of the original Resource Conservation Areas (RCAs).
			Construction	No mitigation required.
Land Use	3.4	Land Use	Long-Term	No mitigation required.
	Land Use 5.4		Construction	No mitigation required.
			Long-Term	No mitigation required.
Economics	3.5	Local Businesses	Construction	 During construction Sound Transit would develop measures to address the potential impacts to local businesses, these measures could include: Providing a 24-hour construction telephone hotline. Establishing effective communications with the public through measures such as meetings and construction updates, alerts, and published schedules. Providing an ombudsman consistent with Sound Transit policy. Providing detour, open-for-business, and other signage as appropriate. Maintaining access as much as possible to each business and coordinating in advance with businesses during times of limited access.
Environmental Justice, Social			Long-Term	Mitigation would include that identified for Transportation, Acquisition, Displacements and Relocations, Visual and Aesthetic Resources, and Noise and Vibration.
Resources, Community Facilities, and Neighborhoods	3.6	Social	Construction	No mitigation required.

Table J-1	Mitigation Plan (continued)
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Resource	Final EIS Chapter/ Section	Impact Topic	Period	Mitigation/Avoidance Description
Visual and Aesthetic Resources	3.7	Visual	Long-Term	 In addition to design criteria for the final project, specific environmental mitigation commitments will be implemented to reduce long-term visual impacts of the project. These include the following: Mitigation Measure 1: In areas adjacent to residents where there is adequate space, add on-site landscaping adjacent to residential areas to help screen views of project components while ensuring safety and security of residents. Mitigation Measure 2: In areas adjacent to residences where not enough room exists for landscaping under Mitigation Measure 1, Sound Transit would treat the walls with visually interesting elements, such as design treatments that incorporate textures, patterns, color, or climbing vines. Mitigation Measure 3: Within the WSDOT right-of-way, Sound Transit would consult with WSDOT to develop appropriate site-specific measures for roadside vegetated areas and mitigate the conversion of these areas to right-of-way with replacement property or with other measures agreed to by WSDOT and FHWA, consistent with the WSDOT Roadside Policy Manual (WSDOT 2022). The manual describes the extent of mitigation that would be required for lost vegetation, vegetation types, and tree replacement ratios, including irrigation requirements and plant establishment criteria. Sound Transit would refine the environmental mitigation commitments as the project design is further developed and feedback from reviewing agencies and the public is received. Environmental mitigation commitments, which include long-term maintenance, safety, and security consideration.
			Construction	Where practicable, Sound Transit would place construction screens and/or barriers to limit the visibility of work areas when adjacent to visually sensitive receivers.
Air Quality and		Air Quality	Long-Term	No mitigation required.
Greenhouse Gas Emissions	3.8		Construction	No mitigation required.

Table J-1Mitigation Plan (continued)

Resource	Final EIS Chapter/ Section	Impact Topic	Period	Mitigation/Avoidance Description
Noise and 3.9	Light rail noise	Long-Term	When noise would exceed Federal Transit Administration (FTA) moderate or severe impact criteria, Sound Transit would provide noise environmental mitigation commitments consistent with its Link Light Rail Noise and Vibration Policy (Resolution No. R2023-15) and FTA's 2018 Transit Noise and Vibration Impact Assessment Manual. During final design, an updated Noise and Vibration analysis will be prepared to confirm impacts during operations, incorporating any design changes. All predicted noise levels and environmental mitigation commitments will be reviewed, and mitigation would be modified as needed to reduce noise levels to below the FTA impact criteria. If equivalent mitigation could be achieved by a less costly means or if the final design analysis shows no impact, then the mitigation measure may be modified or eliminated. After light rail operations begin, if the resulting noise were to exceed FTA criteria, Sound Transit would evaluate the need for additional mitigation.	
Vibration	Vibration ground bo	Vibration and ground borne noise	Long-Term	No mitigation required.
		Traffic Noise	Long-Term	Sound Transit will provide traffic noise mitigation measures where traffic noise levels are predicted to be above the 2042 No-Build levels from removal of the existing WSDOT berm and noise wall. Mitigation would be designed to maintain 2042 No-Build noise levels and could include replacement of noise walls and berms. Sound Transit would conduct additional noise analysis during final design in coordination with WSDOT to confirm whether noise mitigation is needed.
		Construction noise and vibration	Construction	Sound Transit will require a detailed Noise and Vibration control plan from the contractor as part of construction.

Table J-1	Mitigation Plan (continued)
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Resource	Final EIS Chapter/ Section	Impact Topic	Period	Mitigation/Avoidance Description
Ecosystem Resources 3.10	Ecosystems	Long-Term	For unavoidable long-term impacts on streams and stream buffers, Sound Transit would develop a compensatory mitigation plan during the permitting phase in accordance with applicable federal, state, and local requirements and guidelines. Impacts on streams would be mitigated through restoration actions developed in collaboration with federal, state, local, and Tribal biologists. For unavoidable long-term impacts on wetlands and wetland buffers, Sound Transit would develop a compensatory mitigation plan in accordance with applicable federal, state, and local requirements and guidelines. Sound Transit could use a combination of mitigation strategies to achieve no net loss of wetland function and area, such as off-site compensatory mitigation within the Hylebos Creek watershed, use of King County's in-lieu fee program, use of wetland mitigation banks, and/or other mitigation measures.	
		Construction	On-site restoration would be undertaken to offset temporary construction impacts. Examples of such restoration activities include restoring in-stream habitat with large woody debris and planting temporarily disturbed wetlands and riparian buffers with native species. Compensatory mitigation would be provided for construction impacts that last for more than one growing season and for permanent conversion of wetlands from one vegetation type to another (e.g., forested wetland to emergent or scrub-shrub wetland) as well as for indirect impacts on wetlands.	
		Water Resources	Long-Term	No mitigation is required. Mitigation related to stream and wetland impacts are described under Ecosystems Resources.
Water 3.11 Resources	3.11		Construction	Best management practices (BMPs) would be utilized to protect water quality during construction. No mitigation required. Mitigation related to stream and wetland impacts is described under Ecosystems Resources.
Geology and	0.40	Geology and Soils	Long-Term	No mitigation required.
Soils	3.12		Construction	No mitigation required.
Hazardous	3.13	Hazardous Materials sites	Long-Term	No mitigation required.
Materials	3.13		Construction	No mitigation required.
Public Services	3.14	.14 Public Services	Long-Term	No mitigation required.
	0.14		Construction	No mitigation required.

Table J-1	Mitigation Plan (continued)
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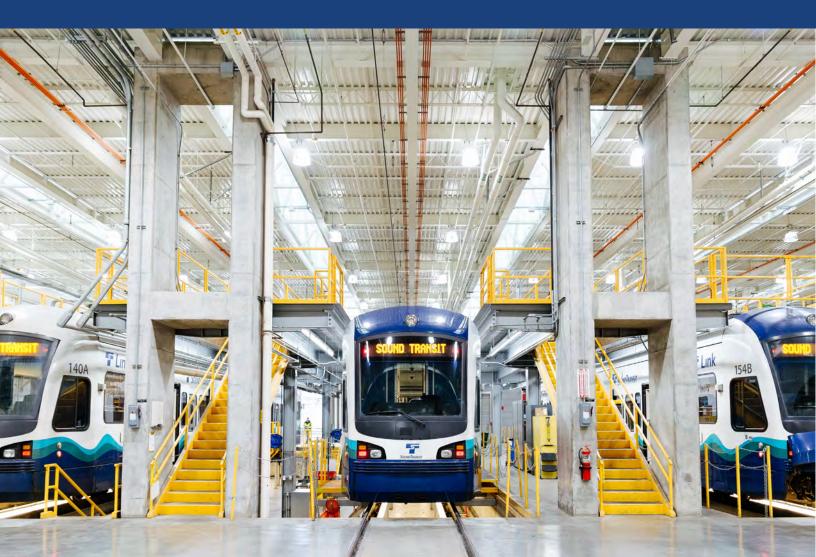
Resource	Final EIS Chapter/ Section	Impact Topic	Period	Mitigation/Avoidance Description
		Utilities	Long-Term	No mitigation required.
Utilities, Energy,		Ounties	Construction	No mitigation required.
and	3.15	Eporav	Long-Term	No mitigation required.
Electromagnetic	3.10	Energy	Construction	No mitigation required.
Fields		EMF	Long-Term	No mitigation required.
			Construction	No mitigation required.
Listaria and		l listaria and	Long-Term	No mitigation required.
Historic and Archaeological Resources	3.16 Historic and archaeological resources	Construction	An Inadvertent Discovery Plan, which addresses the process and procedures for potential archaeological finds during construction, has been developed and would be in place prior to the start of construction.	
Parks and Recreational 3.17 Resources		B.17 Parks and Recreational Resources	Long-Term	No mitigation required.
	3.17		Construction	No mitigation required.
Section 4(f) and 6(f) Resources	3.18	Section 4(f) and 6(f) Resources	Long-Term and Construction	No mitigation required.

Table J-1Mitigation Plan (continued)



Final Environmental Impact Statement

Appendix K: Potential Preferred Alternative Design Refinements



Federal Transit Administration



June 2024

1 Introduction

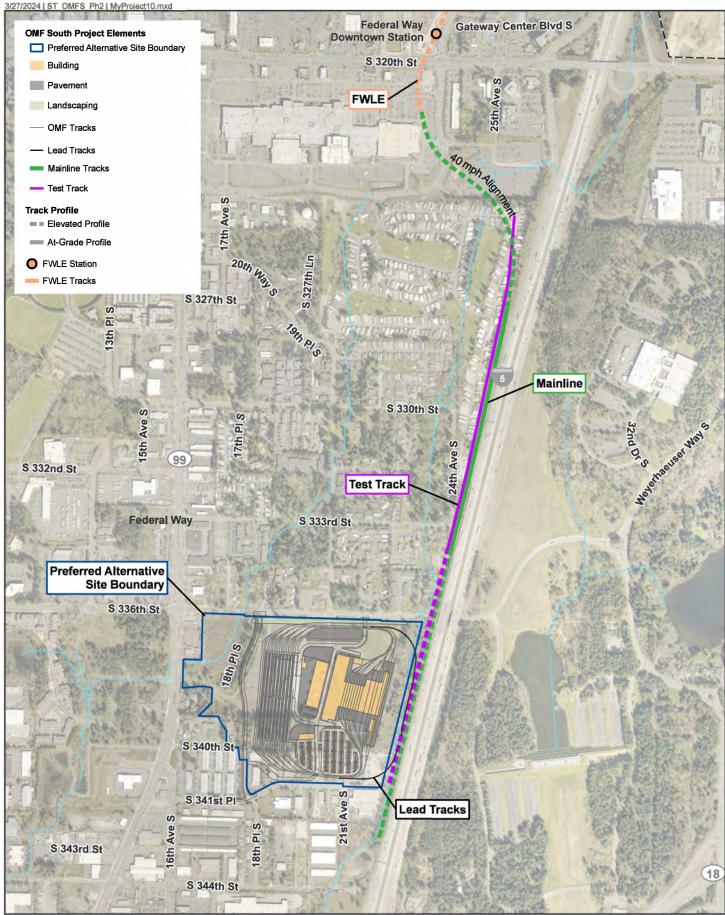
The purpose of this appendix is to provide a description of potential design refinements to the Preferred Alternative and an overview of potential environmental impacts. It also identifies elements of the environment where the potential impacts of the design refinements would differ from those described in the Final Environmental Impact Statement (EIS).

As discussed in the Final Environmental Impact Statement (EIS), of the three build alternatives, the Preferred Alternative would have the greatest impacts to ecosystem resources, specifically streams, mature native forest, and wetlands. The U.S. Army Corps of Engineers expressed concerns over the amount of wetland impacts during environmental review and permit preapplication coordination meetings. Acknowledging these concerns and recognizing the potential scope, budget, and schedule ramifications of a complex environmental permitting and mitigation process, Sound Transit is exploring the feasibility of refining the Preferred Alternative design to further reduce ecosystem impacts. Sound Transit is also exploring the feasibility of reducing utility impacts that could also have scope, budget, and schedule implications. Key site design refinements include the following:

- Rotating the Operations and Maintenance Facility (OMF) South site elements 90 degrees
- Shifting the proposed 18th Place S extension to the east and out of the wetland on the northwestern portion of the site (Wetland WFW-02)
- Reducing the number of lead tracks to access the site from four to two
- Moving the main gate from S 341st Place to 18th Place S and adding a secondary gate on S 336th Street
- Removing Link System-Wide Storage from the site
- Switching the location of the mainline track and test track so that the test track would be on the west side of the mainline track rather than the east side

A conceptual design showing these refinements is provided in Figure K.1-1. All of the design refinements are anticipated to be within the potential construction limits of the Preferred Alternative, as described in Chapter 2 of the Final EIS. The design refinements are anticipated to have similar impacts as described for the Preferred Alternative to most elements of the environment, listed below. As a result, these elements are not discussed further in this appendix.

- Acquisitions, displacements, and relocations
- Land use
- Economics
- Environmental justice, social resources, community facilities, and neighborhoods
- Air quality and greenhouse gas emissions
- Water resources
- Geology and soils
- Hazardous materials



Data Sources: King County; Cities of Des Moines, Federal Way, Kent (2019).

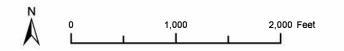


FIGURE K.1-1 Potential Preferred Alternative Design Refinement

- Public services
- Utilities, energy, and electromagnetic fields
- Historic and archaeological resources
- Parks and recreational resources
- Section 4(f) and 6(f) resources

For other elements of the environment, the design refinements may have different impacts than described in the Final EIS for the Preferred Alternative. Those elements of the environment are discussed qualitatively below.

- Transportation
- Visual and aesthetic resources
- Noise and vibration
- Ecosystem resources

If the Sound Transit Board selects to build the Preferred Alternative and the design refinements are advanced, additional environmental review of certain elements of the OMF South impact analysis and mitigation measures may be needed.

1.1 Transportation

The potential design refinements would change the access points into the OMF South site. The main gate would be accessed from 18th Place S, north of S 341st Street instead of from S 341st Place east of the S 18th Place intersection as currently shown for the Preferred Alternative (see Figure K-1). A secondary access point would be on S 336th Street and would have limited use for deliveries and possibly emergency services serving the OMF South site. Moving the gate access to S 18th Place would not be expected to substantially change general traffic movements in the area beyond what was analyzed in the Final EIS for the Preferred Alternative. The limited traffic at the S 336th Street secondary access would not be expected to impact traffic volumes along S 336th Street. No new traffic impacts are anticipated with the design refinements.

1.2 Visual and Aesthetic Resources

Changes to 18th Place S, track, and building locations within the OMF South site itself are not anticipated to change visual impacts to sensitive receivers next to the site.

One design refinement would switch the location of the mainline track and test track so that the test track would be on the west side of the mainline rather than the east side, as described for the Preferred Alternative. The Preferred Alternative design has a high visual change and high visual impact to residences along the mainline within Belmor and along 24th Avenue S to just north of S 336th Street. Switching the test track location would change the view of the primarily elevated mainline to the test track. However, it would not change the high visual impact, as identified in the Final EIS for the Preferred Alternative.

1.3 Noise and Vibration

As stated above, the potential design refinements would switch the location of the mainline track and the test track within Belmor and along 24th Avenue S and change the orientation of the OMF site, which would move the location of the northern lead track into the OMF South site to the south. Moving the northern lead track into the OMF South site would position the track and associated crossovers and turnouts farther from residences located to the north of S 336th Street.

The mainline track structure for the Final EIS Preferred Alternative provides shielding for the residences in Belmor from the noise generated by the at-grade test track. Switching the locations of the tracks would remove that shielding. However, most of the transit noise would be generated by the cumulative Tacoma Dome Link Extension (TDLE) operations on the mainline tracks in the future. The change in the location of the test tracks would also potentially affect the exposure to highway traffic noise levels from I-5. The cumulative changes in the OMF South mainline tracks noise, the traffic noise, and the TDLE mainline operations noise could result in additional impacts in the vicinity of Belmor and need for additional noise mitigation.

At the northern end of Belmor, the mainline tracks for the Preferred Alternative are on an elevated structure, which reduces the vibration levels relative to at-grade track. Relocating the at-grade test track closer to the residences in the northern portion of Belmor could result in new vibration impacts in this area and the need for vibration mitigation.

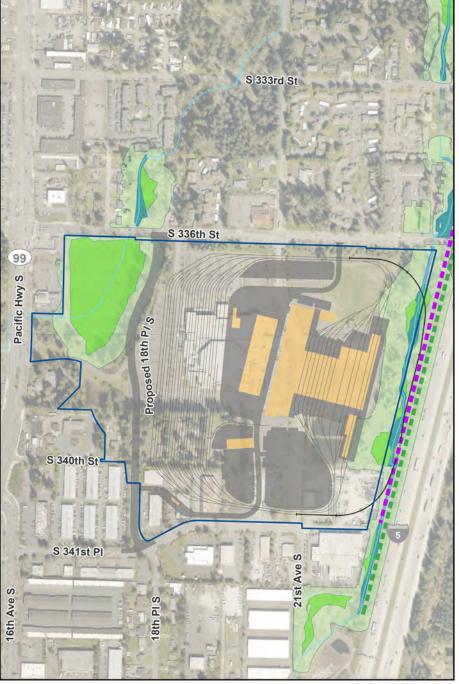
If the design refinements or other similar changes were to advance, Sound Transit would conduct noise and vibration analysis during final design. All predicted noise levels and mitigation measures would be reviewed, and mitigation would be modified as needed to reduce noise levels to below the FTA impact criteria. When noise would exceed FTA moderate or severe impact criteria, Sound Transit would provide noise mitigation measures consistent with its Link Light Rail Noise and Vibration Policy (Resolution No. R2023-15) and the Transit Noise and Vibration Impact Assessment Manual (FTA 2018).

1.4 Ecosystem Resources

One of the potential design refinements would shift the proposed alignment of 18th Place S approximately 100 feet east in the vicinity of Wetland WFW-02 and the West Fork Hylebos Creek Tributary 0014C. This would move the proposed road alignment out of Wetland WFW-02 and the West Fork Hylebos Creek Tributary and thus avoid direct impacts to the wetland and stream. This design could potentially reduce long-term wetland impact areas up to 30 percent compared to the Preferred Alternative analyzed in the Final EIS. The shifted alignment of 18th Place S extension would only affect the buffer areas of Wetland WFW-02 and buffer areas of the West Fork Hylebos Creek Tributary. Figure K.1-2 compares the conceptual layouts of the Preferred Alternative and the potential design refinement in relation to the existing wetlands and streams and their buffers.

The eastern site boundary that parallels East Fork Hylebos Creek Tributary could potentially shift to the west 10 to 20 feet, which may allow for a larger stream corridor than currently analyzed in the Final EIS.

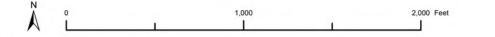




Preferred Alternative - Potential Design Refinement

FIGURE K.1-2 Comparison of Preferred Alternative and Potential Design Refinements

Data Sources: King County; Cities of Des Moines, Federal Way, Kent (2023).



OMF South

2 NEXT STEPS

If the Sound Transit Board selects the Preferred Alternative as the project to be built, Sound Transit would continue to explore the feasibility of the Potential Preferred Alternative Design Refinements or other measures that could reduce project impacts. If the design refinements are advanced, additional environmental review of certain elements of the OMF South impact analysis and mitigation measures may be needed.

3 REFERENCES

FTA (Federal Transit Administration). 2018. Transit Noise and Vibration Impact Assessment Manual. FTA Report No. 0123. Federal Transit Administration, John A. Volpe National Transportation System Center and Cross-Spectrum Acoustics Inc. Available at: <u>https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-</u> <u>innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.</u>