

CHAPTER 4: LAND USE

4.1 Introduction

This chapter describes the affected environment in the study area and evaluates the project's compatibility with existing, allowed, and intended land uses and the federal, state, and local regulations, plans, and policies that guide and govern land use in the study area. Adopted policies and plans are generally not regulatory in nature, but rather provide guidance regarding the current and future management of land use and other resources. Policies are therefore important considerations for decision makers but generally are not binding requirements. Decision makers must also consider that complete consistency with one policy may mean some degree of inconsistency with another. In such cases, decision makers must weigh the degree of overall consistency with adopted plans in the final decision. For any alternative that is within the shoreline district, the City of Seattle (City) must make a finding that a proposal is consistent with the policies of the Shoreline Management Act, Ecology rules, and the local shoreline master program.

Many comments on the project, and concerns over the years, have focused on how the project would affect adjacent land uses, particularly industrial uses clustered along the Salmon Bay shoreline, many of which are marine-related businesses. These concerns frequently focused on traffic and parking impacts, which are discussed in detail in Chapters 7 and 8 of the EIS. Concerns about the viability of industrial business come in the context of substantial growth and change in land use in the Ballard area in recent years; growth that brings with it pressures of higher density that also affects

industrial neighbors. Listening to these concerns, SDOT determined that it was important to understand how project impacts might affect business viability. SDOT requested an assessment of economic considerations (ECONorthwest, 2016) to inform this land use analysis. While transportation and parking related impacts are discussed in this chapter, it is in the context of their potential effects on business viability. The focus of this chapter is on whether the project would cause changes in land use, and whether those changes, if any, would be consistent with the City's policies.

Where impacts are identified, measures to mitigate or minimize these impacts are described. In this evaluation, an alternative is considered to have the potential for significant adverse environmental impacts if it would likely cause the permanent loss of land uses that are priority (such as water-dependent, water-related, and industrial uses) under adopted City policies. Although economic considerations are not an element of the environment required to be evaluated in an EIS under SEPA, City code does require economic issues to be included in an EIS unless eliminated in the scoping process. SDOT chose to include additional analysis of the potential economic impacts of the Missing Link project in the EIS to assist in decision-making, since it was identified as an issue of concern.

Changes from the DEIS

Chapter 4 includes an analysis of the newly developed Preferred Alternative, which was not included in the DEIS. The DEIS presented incorrect data on water-dependent and water-related uses: that information has been completely revised in the FEIS, including the narrative, table data, and figures. A separate Errata is included as Technical Appendix A (Volume 3) to correct the information presented in the DEIS. The FEIS also reflects additional information collected on transportation and parking resources in the study area. While these changes are substantive, they have not changed the conclusions of the analysis in the EIS.

4.2 Affected Environment

4.2.1 Study Area

The study area for the land use analysis is the area where construction or operation of the project could impact current and future land uses, including business operations and existing character. The study area is bounded by 32nd Ave NW to the west, NW 56th St/20th Ave NW/Leary Ave NW to the north, 8th Ave NW to the east, and Salmon Bay to the south (Figure 4-1). The study area includes properties on both sides of the street adjacent to each of the Build Alternatives and connector segments, areas providing access for those properties, and properties whose primary access may be affected by a proposed Build Alternative.

The team also considered the greater Ballard area when it was needed to provide context and assess the project's overall compatibility with community character, neighborhood plans, and policies for future growth.

4.2.2 Land Uses

Land uses within the study area vary in type, intensity, and their relationship to other nearby uses and amenities (Figure 4-2). Commercial, industrial (including manufacturing), residential, parking, parks and open space, and transportation uses are present, as well as government buildings, a hospital, a training center, and other miscellaneous uses (labeled "other" on Figure 4-2) and vacant or

A water-dependent use is a use that cannot exist in a location other than a waterfront, and is dependent on the water because of the intrinsic nature of its operations.

A water-related use is a use or portion of a use not intrinsically dependent on a waterfront location but whose economic viability is dependent on a location in the shoreline district.

These definitions of waterdependent and water-related uses apply only within the shoreline district (SMC 23.60A.944).

unused parcels (labeled "vacant"). Parking that is accessory to a primary use is designated as the primary use it is associated with; for example, parking accessory to a commercial use is labeled as a commercial use. Stand-alone parking is designated "parking."

Because Ballard is experiencing rapid growth, land uses are dynamic as redevelopment and development occur. Growth pressure continually results in changes to form, type, intensity, and the presence of development in the study area. Parcels that have not maximized development potential, or that are designated as vacant at the time of analysis, may change uses or be developed as growth occurs and new land use preferences are adopted.

Existing uses, architecture, and age of structures contribute to the character of the study area. The southern portion of the study area is the historic center of Ballard where lumber, fishing, and shipbuilding industries developed in the late 1800s, dependent on Salmon Bay to transport raw and finished products. The waterfront industry provided employment opportunities for workers who settled neighborhoods to the north, and NW Market St provided a downtown commercial core (City of Seattle, 2016a). Although most of the activity in the lumber industry has been replaced, many other industrial, manufacturing, and commercial uses remain, particularly along Shilshole Ave NW. Within the shoreline district some of these uses are water-dependent, or support water-dependent uses with repair work or other related services and products.

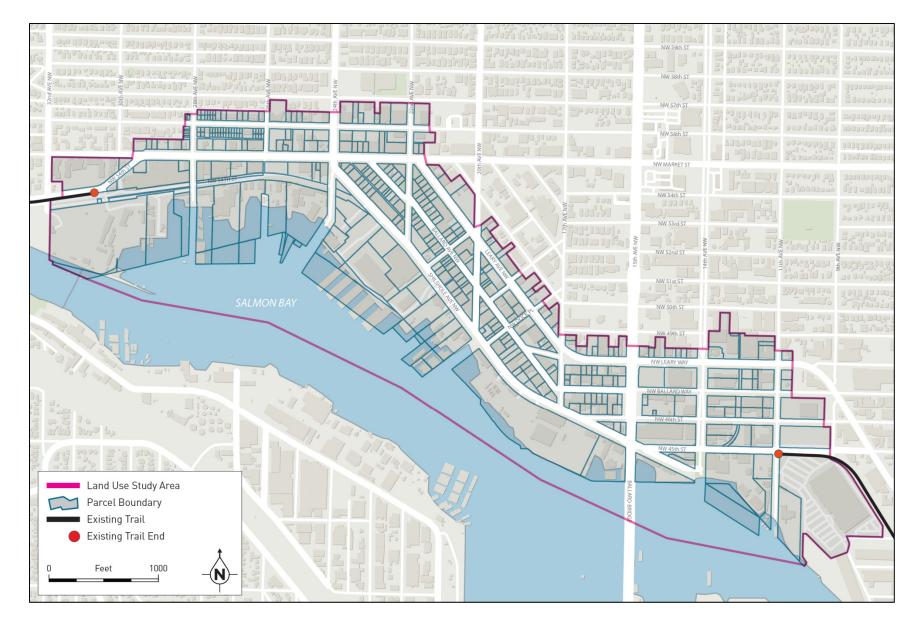


Figure 4-1. Land Use Study Area

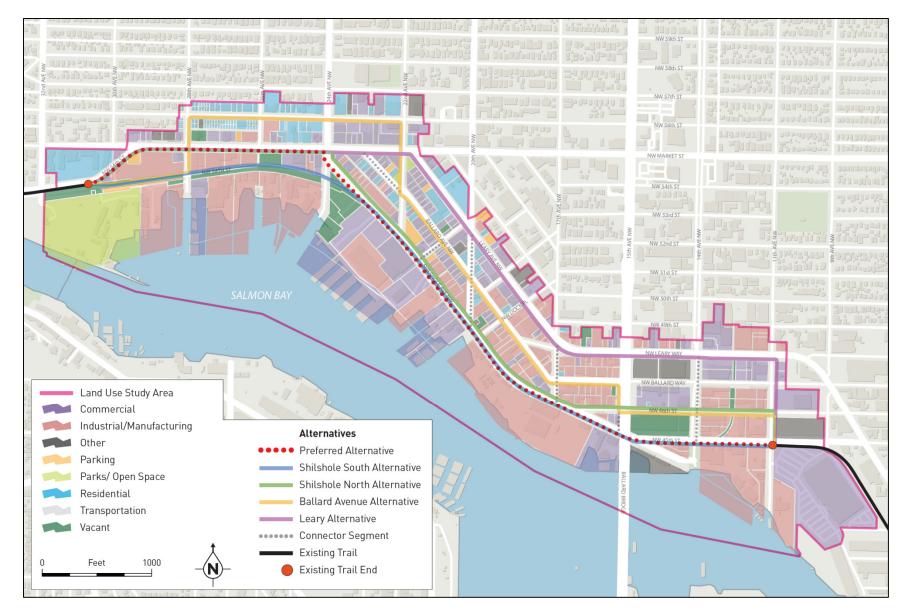


Figure 4-2. Land Uses within the Study Area

The Ballard Terminal Railroad or BTR corridor extends from the Ballard Locks to NW 45th St. The BTR corridor is used for freight transport and provides vehicular access to several abutting parcels. Part of the corridor is used as a public parking area near the Ballard Locks. Uses adjacent to the railroad corridor extending east from the Ballard Locks are mostly industrial, along with commercial uses such as the Stimson Industrial Park offices, Salmon Bay Sand and Gravel, Covich Williams fuel dock, and Sagstad and Branchflower Marinas. Storage, parking, and other activities occur on some of the vacant railroad corridor parcels.

One of Ballard's defining features is the Ballard Avenue Landmark District, which has the same boundaries as the Ballard Avenue National Register of Historic Places (NRHP) district and is also known as "Old Ballard," located along Ballard Ave NW from NW Dock Pl to NW Market St (Figure 4-3). Buildings in the landmark district embody the distinctive characteristics of modest commercial architecture from the 1890s through the 1940s (City of Seattle, 2015b; SWCA, 2016). A variety of restaurants, shops, bars, salons, and other businesses, including some industrial and marine-related service and retail businesses, are located on Ballard Ave NW. Many of these uses are housed in historic buildings.

Near the west end of the study area on NW Market St, uses are mostly commercial along the north side of the street and industrial along the south side of the street; examples include storage, cafes, shops, and a lumberyard. Heading east, uses generally transition to mixed-use residential, and then to pedestrianoriented commercial retail uses (restaurants, shops, bars, boutiques, etc.). Leary Ave NW near NW Market St contains mixed-use residential and commercial uses (cafes, health-related establishments, restaurants, etc.) and transitions to more concentrated industrial/manufacturing uses near the east end of the study area.

The Ballard Locks, Charles S. English, Jr. Botanical Garden, and the Ship Canal are major recreational attractions in the study area. The City also owns and operates a number of local parks and areas designated as shoreline street ends, which provide public shoreline access and views. In addition, special events like the weekly Ballard Farmers Market, the annual weekend-long SeafoodFest, and the Seventeenth of May Festival take place throughout the study area.

Pedestrian activity is relatively heavy along NW Market St and Leary Ave NW near 20th Ave NW, and along Ballard Ave NW, particularly in the Ballard Avenue Landmark District. This is partly attributed to nearby land uses. The area's concentration of commercial uses provides shopping, dining, and entertainment opportunities that can be accessed by foot by nearby residents living in mixed-use, multifamily, and single-family neighborhoods. The commercial opportunities and special events also attract shoppers from outside of the area. Frequent public transit that runs along NW Market St and Leary Ave NW allows visitors to walk to these destinations from transit stops. Parking is available for drivers in paid lots or on the street throughout the study area.

Existing public rights-of-way provide for freight, transportation, and recreational activity throughout the study area. Regular maintenance and improvements, as well as occasional reconfigurations of the right-of-way occur throughout the study area. Although the east and west trail ends are not currently connected, residential and commercial land uses within the study area create origination and destination points for trail users. Public transit usually provides bicycle racks, which promote multimodal trip opportunities to and from the area. In addition, recreational and commuter trail users traveling through the area to surrounding destinations use Shilshole Ave NW, as well as other rights-of-way within the study area, as the direct connection between the east and west trail ends.

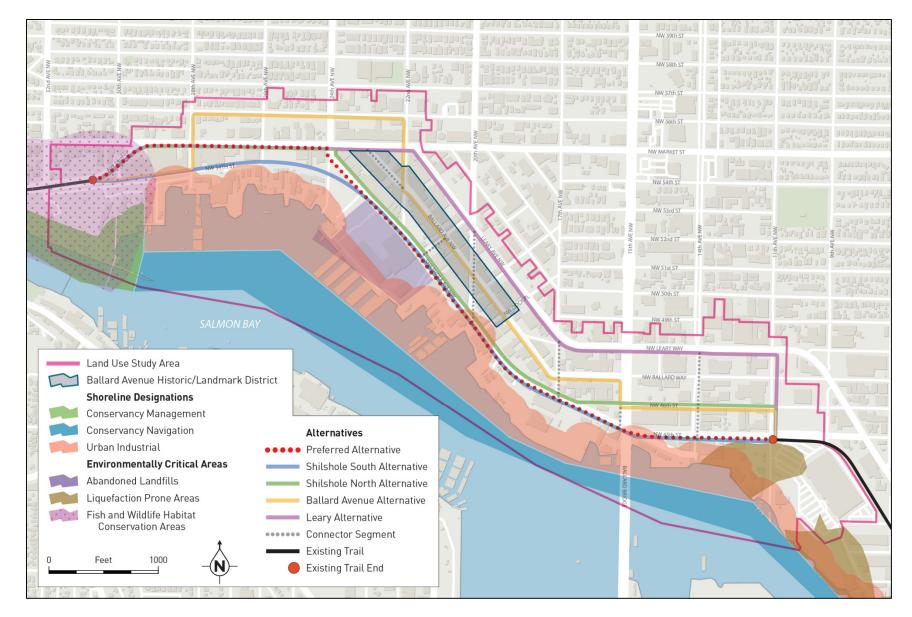


Figure 4-3. Shoreline Environments, Critical Areas, and Ballard Avenue Landmark District

Today, the diversity of land uses and activity in Ballard reflect its past, before zoning regulations were established. Over the years, changes in market demand, population, the economy, and other factors have caused individual uses to persist, adapt, grow, relocate, or discontinue operations. Seattle's current zoning and planning policies support the continuation of long-established industrial uses, as a strong employment base integral to Ballard's historic identity, while also promoting needed capacity for residential and commercial growth in established areas in the northern portion of the study area (City of Seattle, 2016a). Industrial uses include manufacturing, warehousing, and marine uses, as well as water-dependent uses within the shoreline district.

Figure 4-4 displays the approximate square footage of land within the study area that is allocated to each major land use category, excluding rights-of-way. Industrial uses compose the greatest portion, approximately 40% of the total land area, with commercial uses composing approximately 33%, and residential uses accounting for about 8% of the total land area within the study area.

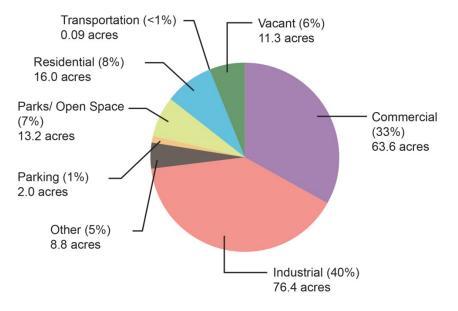


Figure 4-4. Land Area Occupied by Existing Land Uses within the Study Area

4.2.3 **Regulatory Context**

Land use and development in the study area are governed by the federal, state, regional, and local plans and regulations described in this section. The regulations are intended to ensure compatibility and predictability between existing and future land uses. In addition to the overview provided below, the Land Use Discipline Report (ESA, 2016) and Technical Appendix A: Updates and Errata to the Land Use Discipline Report in this FEIS, describe applicable plans and policies in more detail.

Federal and State Laws and Regulations

The study area is adjacent to Salmon Bay, which is under the jurisdiction of the Coastal Zone Management Act. The Washington State Shoreline Management Act is one of the regulations that meets the state's compliance requirements with the federal Coastal Zone Management Act. The Washington State Growth Management Act (GMA) also governs land use in the study area.

Local and Regional Plans and Regulations

The Puget Sound Regional Council's (PSRC's) VISION 2040 is the applicable regional plan relating to land use in the study area (PSRC, 2008).

The City's Comprehensive Plan, land use codes, and supplemental plans guide how and where development should occur. These guidelines support goals and objectives to manage growth, provide efficient and diverse transportation opportunities, maintain and improve economic development, encourage sustainable urban design, and protect environmental resources.

The DEIS evaluated land uses based on the 2005 Comprehensive Plan (City of Seattle, 2005), which was current at that time. In November 2016, after publication of the DEIS, the City adopted the Seattle 2035 Comprehensive Plan. For the FEIS, the Seattle 2035 Comprehensive Plan was reviewed for the goals and policies applicable to the Missing Link project that would differ from the 2005 Comprehensive Plan, which was last amended in 2015. Technical Appendix A: Updates and Errata to the Land Use Discipline Report in this FEIS includes a table that summarizes the differences between applicable goals and policies in the two Comprehensive Plans. The goals and policies that relate to the Missing Link project are generally either identical or substantially the same between the old and new plans, with a few exceptions. In some cases, the policies in the new plan are similar to the old plan, the evaluation in and conclusions of the Land Use Discipline Report (ESA, 2016) are still applicable. The analysis and conclusions presented in this FEIS are based on the review of the goals and policies in the new Seattle 2035 Comprehensive Plan.

Additionally, the SDOT Transportation Freight Mobility Strategic Action Plan (SDOT, 2005) was integrated into the Freight Master Plan (SDOT, 2016a).

The following City plans, policies, and regulations apply to the study area:

- City of Seattle 2035 Comprehensive Plan (City of Seattle, 2016b)
 - Urban Village Growth Strategy
 - Crown Hill/Ballard Neighborhood Plan
 - Ballard-Interbay Northend Manufacturing and Industrial Center (BINMIC) Neighborhood Plan
- Seattle Bicycle Master Plan (SDOT, 2014)
- City of Seattle Parks and Recreation 2011 Development Plan (City of Seattle, 2011)
- City of Seattle Climate Action Plan (City of Seattle, 2013)
- City of Seattle Ballard Urban Design and Transportation Framework Final Report (City of Seattle, 2016a)
- Seattle Pedestrian Master Plan (SDOT, 2017)
- Seattle Move Ballard Draft Plan (SDOT, 2016b)

- City of Seattle Freight Master Plan (SDOT, 2016a)
- City of Seattle Municipal Code (SMC) (City of Seattle, 2015a)
 - Land Use Code (SMC Title 23)
 - Zoning (SMC Title 23, Subtitle III)
 - Shoreline Master Program Code (SMC 23.60A)
 - Environmental Protection and Historic Preservation (SMC Title 25)
 - Regulations for Environmentally Critical Areas (SMC 25.09)
 - Ballard Avenue Landmark District (SMC 25.16)

4.2.4 **Zoning**

The City's Land Use Code implements the City's Comprehensive Plan and regulates land use in Seattle. The purpose of the Land Use Code is to allocate land uses in a compatible, efficient pattern with access to services and amenities and without major disruption to natural resources. The Land Use Code classifies land into different zoning designations, creating parameters for the types of allowed uses, as well as bulk and dimensional standards that determine intensity thresholds for allowed uses. The provisions are designed to provide adequate light, air, access, and open space; conserve the natural environment and historic resources; maintain a compatible scale within an area; minimize traffic congestion; and enhance the streetscape and pedestrian environment. As a multi-use facility, the Missing Link would provide transportation opportunities within the public right-of-way and opportunities for recreation in an open space network. Permits and approvals for allowed uses within any zoning designation may include conditions of approval to ensure that uses are compatible with and meet the intent of the Land Use Code.

The location, intensity, and nature of allowed uses on any parcel of land are determined by the parcel's zoning designation. Zoning in Seattle is regulated by SMC Title 23, Subtitle III – Land Use Code. As shown on Figure 4-5, zoning classifications in the study area include industrial, commercial, multifamily, and residential-commercial zones. Additionally, the Land Use Code identifies overlay designations. The P1 pedestrian overlay designation in the study area encourages intense pedestrian interest and activity at the street level.

4.2.5 Urban Villages

The Urban Village Element of the 2005 Comprehensive Plan and Urban Village Strategy of the Seattle 2035 Comprehensive Plan are to direct growth and character of the city's neighborhoods. A village designation recognizes the contributions that a particular area makes to the city and provides guidance regarding the intended function, character, intensity, type, and degree of growth anticipated for an area. Urban village designations supplement state and regional growth management plans. They provide tailored guidance for further developing Seattle's established, densely developed, and complex urban neighborhoods.

The definition of urban villages changed in the Seattle 2035 Comprehensive Plan (2016) from the 2005 Comprehensive Plan. The study area includes a portion of a hub urban village, the Ballard Hub Urban Village, one of the three types of urban villages designated in the Seattle 2035 Comprehensive Plan. The study area also includes a portion of a designated manufacturing/industrial center, the Ballard-Interbay

Northend Manufacturing and Industrial Center (BINMIC). The BINMIC covers the southern portion of the study area and areas adjacent to Salmon Bay. The Ballard Hub Urban Village covers the remainder of the study area (Figure 4-6).

Hub urban villages, such as the Ballard Hub Urban Village, are communities that provide a balance of housing and employment, generally at densities lower than those found in urban centers but higher than single-family neighborhoods.

Manufacturing/industrial centers, such as the BINMIC, provide siting opportunities for industrial activity and development, and are an important regional resource. Many non-industrial uses are discouraged or prohibited in industrial areas.

4.2.6 Shorelines

The Shoreline Master Program (SMP) implements the Shoreline Goals and Policies of the Comprehensive Plan and includes the regulations codified in SMC 23.60A—Seattle Shoreline Master Program Regulations. The SMP guides and regulates the development of city shorelines in order to protect shoreline ecosystems; encourage water-dependent uses; provide for maximum public use and enjoyment of the shorelines; and preserve, enhance, and increase views of and access to the water. The shoreline district includes Elliott Bay, Lake Washington, Puget Sound, the Ship Canal (which includes Salmon Bay), Lake Union, the Duwamish River, Green Lake, associated wetlands, and all land within 200 feet of these water bodies.

Portions of the study area along Shilshole Ave NW and near NW 54th St are within 200 feet of the Ship Canal (Salmon Bay) (Figure 4-3). All property within the shoreline district is subject both to the standards of the applicable zone and to the requirements imposed by the SMP (as well as requirements imposed by other applicable codes).

The SMP designates "shoreline environments" within the shoreline district. Like zoning designations, each shoreline environment has unique, allowable uses and development standards, based on existing and aspirational uses, character, and function. Of Seattle's 11 shoreline environments, three are present in the study area: Urban Industrial (UI), Conservancy Management (CM), and Conservancy Navigation (CN). For further discussion, see the Land Use Discipline Report (ESA, 2016). Reconfiguration of the existing right-of-way for the Missing Link would be allowed within the shoreline district under the SMP.

One of the purposes of the SMP is to encourage water-oriented uses within the shoreline district. Priority uses are those designated as water-oriented uses, including water-dependent, water-related, and water-enjoyment uses within the shoreline district. A water-dependent use is a use that cannot exist in a location other than a waterfront location, and is dependent on the water because of the intrinsic nature of its operations. A water-related use is a use or portion of a use not intrinsically dependent on a waterfront location but whose economic viability is dependent on a location in the shoreline district.

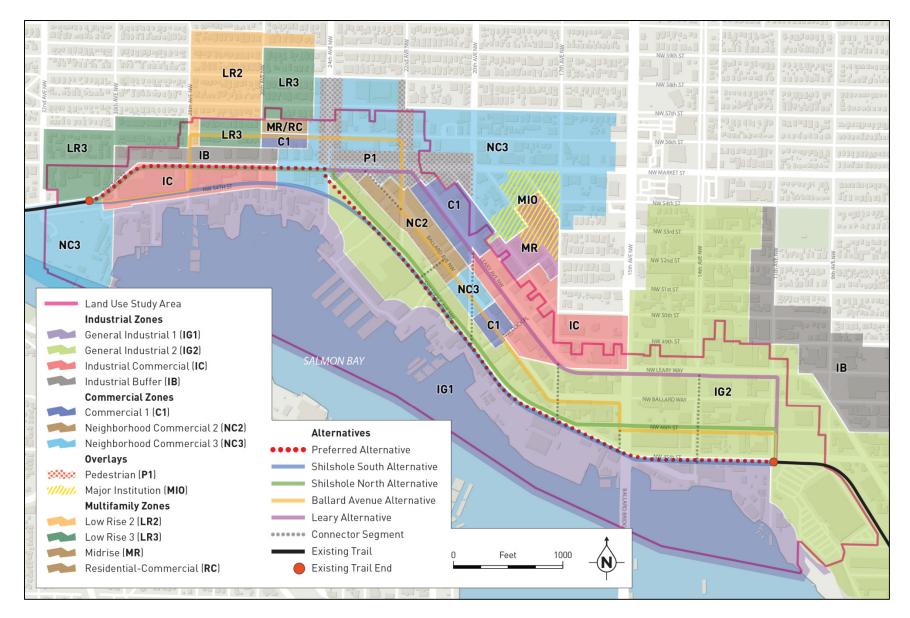


Figure 4-5. Zoning Classification of Parcels in the Study Area

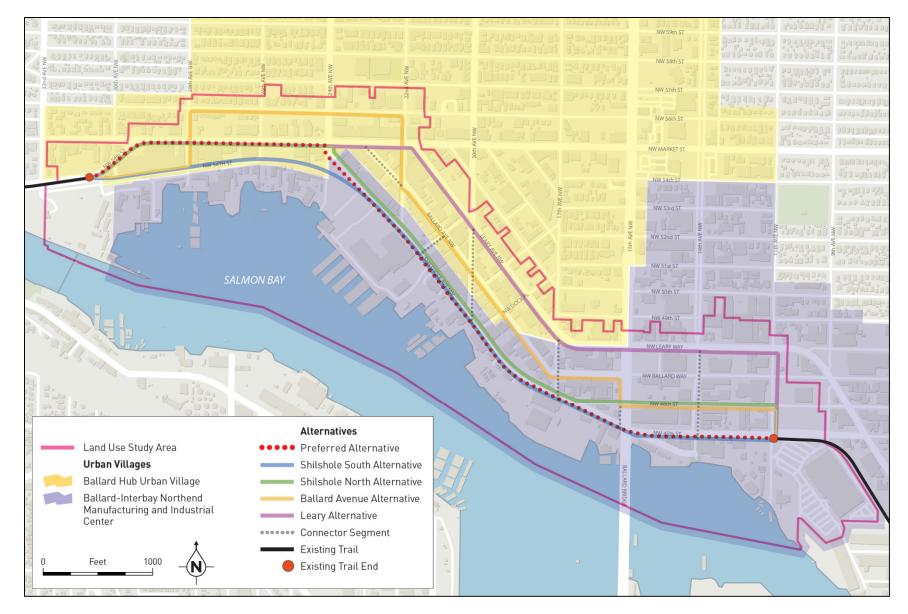


Figure 4-6. Ballard Hub Urban Village and the Ballard-Interbay Northend Manufacturing Industrial Center

4.2.7 Environmental Protection and Historic Preservation

SMC Title 25 regulates designated historic areas and environmentally critical areas. Title 25 protects sensitive environmental features, buildings, landmarks, and architecture that establish the city's unique identity while allowing reasonable development. The regulations promote safe, stable, and compatible development that avoids adverse environmental impacts and potential harm to the designated areas, adjacent property, and the surrounding neighborhood.

Environmentally Critical Areas

An abandoned landfill, liquefaction-prone zones, and fish and wildlife habitat conservation areas are present in the study area (Figure 4-3).

The abandoned landfill is southwest of Shilshole Ave NW, and the land is now used for industrial and office uses. Development within the former landfill area is subject to special engineering and construction management requirements to prevent damage from methane gas buildup, subsidence, and earthquake-induced ground shaking.

The liquefaction-prone zones are located at the southeastern-most corner of the study area. Development in liquefaction-prone areas may require soil engineering studies to determine the physical properties of the surficial soils, especially the thickness of unconsolidated deposits and their liquefaction potential.

Fish and wildlife habitat conservation areas are located near the west trail end and are lands designated and managed to encourage the long-term viability and the proliferation of targeted species. Areas designated by WDFW as priority habitats and species areas are considered to be fish and wildlife habitat conservation areas. Development in fish and wildlife habitat conservation areas that does not encroach within, alter, or increase environmental impacts may be exempt from the critical areas regulations. All other development proposed within fish and wildlife habitat conservation areas or their associated buffers requires an application that complies with SMC Title 25. The project proponent must submit the application to the City and obtain necessary permits and approvals prior to undertaking development.

Ballard Avenue Landmark District

A portion of the study area along Ballard Ave NW lies within the Ballard Avenue Landmark District, an area of historical significance to Ballard and Seattle. The Ballard Avenue Landmark District boundary runs along Ballard Ave NW from NW Dock Pl to the southeast to NW Market St to the northwest (Figure 4-3). All property within the district is subject both to the standards of the applicable zone and regulations concerning the district status. The district designation is intended to preserve, protect, enhance, and perpetuate cultural, social, economic, architectural, and historic heritage. The City has adopted regulations to protect or improve the aesthetic and economic vitality and values of the district; to promote and encourage continued private ownership and use of historic buildings and structures; and to promote the local identity of the area to the extent that these objectives can be reasonably attained. (For more information on the district designation, see Chapter 10, Cultural Resources.)

4.3 Potential Impacts

The land use analysis examined the potential for the project to alter land uses in the study area in a way that would be inconsistent with adopted plans and policies. Transportation, parking, and economic impacts were considered to the extent that they could affect existing land uses (Parametrix, 2017a, 2017b; ECONorthwest, 2016). The consistency of an alternative with adopted policies, plans, and regulations

was also considered. If an alternative could change land use in a way that is inconsistent with policies and plans, this would be a potentially significant adverse impact.

4.3.1 No Build Alternative

Effect on Existing Uses

The No Build Alternative would not alter current land uses. These uses would either remain consistent or continue to adapt and change as determined by population and business growth, market conditions, and regulatory changes.

Consistency with Adopted Plans, Policies, and Codes

The No Build Alternative is inconsistent with regional and local land use plans that emphasize multimodal transportation opportunities and improved connectivity for nonmotorized transportation modes, particularly in areas experiencing rapid growth and development, such as the Ballard Hub Urban Village. Motorized and nonmotorized traffic within the study area is expected to grow between 2015 and 2040 (Parametrix, 2017a). Under the No Build Alternative, nonmotorized users in the study area would continue to travel on available sidewalks and along the street network, which lacks designated bike lanes. Particularly along Shilshole Ave NW, which nonmotorized users often use as a direct link between the two trail ends, the increase in traffic would increase user conflicts and slow freight movement. The No Build Alternative would not mitigate those conflicts through the engineering and design of a designated trail.

The No Build Alternative would be inconsistent with the following policies and plans:

- **City of Seattle Comprehensive Plan**: Goals and policies promote transportation improvements that support walking, strive to direct future development and density to areas conducive to walking and bicycling, and provide increased opportunities to walk and bicycle between urban villages by connecting trails and providing an open space network. Goals also include the facilitation of industrial traffic flow and truck mobility. The No Build Alternative would not improve conditions for pedestrian and bicycle opportunities, and the increased potential for user conflicts would not improve traffic flow or truck mobility. The eastern terminus of the existing trail is located within the BINMIC.
- **Freight Master Plan**: The Freight Master Plan focuses primarily on urban truck movement to support Seattle's increasing demand for the delivery of goods and services in a safe and reliable manner. The vision of the Freight Master Plan is "A vibrant city and thriving economy connecting people and projects within Seattle and to regional and international markets." The vision is supported by six goals addressing: economy, safety, mobility, state of good repair, equity, and the environment. The No Build Alternative would not be consistent with the plan's safety initiative which requires the city to assess conflicts between bicycle and freight mobility to improve safety and the predictable movement of goods and people, nor the plan's strategy to implement improvements that benefit freight mobility.
- **PSRC's VISION 2040**: Transportation investments in regional growth centers and areas with compact, mixed-use development are an integral component of the regional strategy, particularly for nonmotorized uses. Completion of the Missing Link is included as a key project in the Transportation 2040 Update. The No Build Alternative would not be consistent because the Missing Link project would not be built.

- Seattle Bicycle Master Plan: The Missing Link is identified as a "catalyst project" whose completion would eliminate a critical network gap and increase user safety. The No Build Alternative would not be consistent because it does not complete the multi-use trail and the network gap would remain.
- **City of Seattle Parks and Recreation 2011 Development Plan**: The plan includes the development of new multi-use trails in accordance with the Bicycle Master Plan, which promotes completion of the Missing Link. The No Build Alternative would not be consistent because it does not complete the Missing Link or develop a new multi-use trail.

4.3.2 Impacts Common to All Build Alternatives

Construction

Construction impacts associated with all of the Build Alternatives include the following:

- Noise generated by construction equipment could disturb business patrons, particularly in commercial areas, or could disturb residential uses.
- Increased traffic from construction crews could delay freight movement for commercial and industrial uses.
- Increased parking needs from construction crews and reduction of available on-street parking could displace or discourage business patrons of retail and entertainment commercial uses and employees for other uses.
- Dust and debris from land-disturbing activities could inhibit pedestrians in pedestrian-oriented commercial centers and other business patrons, employees, and residents.
- Potential partial and temporary sidewalk and road closures could inhibit pedestrians in pedestrianoriented commercial centers and other business patrons, employees, and residents.
- Roadway congestion could delay freight movement and goods delivery, and frustrate business patrons and residents.
- Temporary changes to driveway widths and locations, and temporary loss of loading zones could disrupt industrial, manufacturing, and commercial uses; could delay or disrupt traffic and access to existing uses near the project footprint; and could delay the movement of goods, although access to all uses within the study area would be maintained.

Noise, traffic, dust and debris, and sidewalk and road closures could result in a temporary loss in patronage for businesses, particularly commercial retail and entertainment that rely on auto and foot traffic. Traffic congestion could delay pick-up and delivery of goods, thus impacting normal business activities. Nonmotorized activity would continue during construction, which would result in user conflicts; however, nonmotorized users would generally use alternative routes to avoid the construction. All construction impacts are expected to be minor and temporary, are not expected to disrupt uses to the extent of being inconsistent with adopted codes, and therefore would not have a significant adverse impact on land uses in the study area.

Operation

Effect on Existing Land Uses

All of the Build Alternatives would connect the existing trail ends, thus providing a dedicated, nonmotorized connection between the surrounding neighborhoods, and connecting trail users to parks and open space, businesses within the study area, and employment opportunities. The project would provide infrastructure improvements such as the new trail, sidewalks, landscaping, and buffers. Improvements would channel most existing BGT users to the new trail and attract new users because the trail would reduce the potential for user conflicts and link to the rest of the BGT. The improvements would also beautify the streetscape and repair sidewalk segments, attracting additional people to the study area. However, some existing sidewalk uses within the right-of-way, including outdoor seating areas, landscaping, and signage, may require modification or relocation as a result of the trail.

The infrastructure improvements could support existing and expanding residential and commercial uses near the trail. Residential and commercial uses could benefit from trail users because new people could be potential residents, customers, and workers (ECONorthwest, 2016). However, the improvements may not support and could even discourage new and expanded industrial uses.

Transportation and parking are important to business activities in the study area. Changes in traffic flow and access can disrupt normal activities and impact the viability of a land use. Freight vehicles require more right-of-way than smaller cars or trucks to conduct business activities, and freight movement is an important economic factor for many businesses. Alterations to the road network associated with all Build Alternatives would facilitate traffic flow at some study area intersections (Parametrix, 2017a), which could encourage ongoing activity of existing uses within the study area. However, all Build Alternatives would likely result in minor delays at some intersections and access points for uses along the alignment.

Elimination of designated loading zones would occur with all of the Build Alternatives, except for the Shilshole South Alternative. Elimination of loading zones could negatively impact business activities, particularly for auto-oriented commercial businesses. Additional people in the study area could also delay freight transport by crossing the roads and driveways used by freight vehicles. Because of the minor disruptions to access and loading for some of these uses within the BINMIC, a minor adverse impact could occur. The impact would not be significant and could be minimized (but not completely eliminated) through the design measures described in Section 1.7.1, Roadway Design and Safety Considerations, and the Transportation Discipline Report (Parametrix, 2017a).

All Build Alternatives would also eliminate parking spaces. The study area has the capacity to absorb parking displaced by each of the Build Alternatives. Additionally, trail completion could offset some loss of parking by encouraging people to travel using nonmotorized means. See Chapter 8, Parking, and the Parking Discipline Report (Parametrix, 2017b) for a discussion of parking impacts.

Businesses would likely adapt to the minor delays, loss of parking, and changes to loading areas along with other changing conditions. These adaptations could increase operating costs, which could place incremental economic pressure on some businesses (ECONorthwest, 2016). However, none of the Build Alternatives are expected to displace existing uses or cause changes that would result in the loss of a business. Impacts are not expected to affect business operating costs to the extent that they would be unable to operate.

Consistency with Adopted Plans, Policies, and Codes

The GMA and several planning documents promote the development of infrastructure for nonmotorized and multimodal transportation opportunities, particularly where the infrastructure connects population centers and existing infrastructure segments (e.g., PSRC's VISION 2040 and Transportation 2040, City of Seattle Climate Action Plan, City of Seattle Parks and Recreation 2011 Development Plan, Seattle Bicycle Master Plan, and Pedestrian Master Plan). These guidance documents influence the development of local codes that regulate current land use and future development, and inform regulators' decisionmaking process when land use permits are submitted for approval. A project adheres to adopted plans, policies, and codes so that current development is consistent with local and regional long-term plans for land use and so that as land is developed, user conflicts are minimized. If a project does not adhere to adopted plans and policies, user conflicts could negatively affect community health, safety, and welfare.

In general, the project would be consistent with most policies. The BGT is used for both commuting and recreation. State, regional, and local plans and policies generally promote the development of infrastructure for nonmotorized and multimodal transportation opportunities, particularly to connect population centers and existing infrastructure segments. Completion of the Missing Link is specifically included in some plans as a priority improvement. Build Alternatives that minimize trail length in the BINMIC and maximize trail length in the Ballard Hub Urban Village are the most consistent with adopted policies, as described below.

Seattle 2035 Comprehensive Plan

The Urban Village Element, Land Use Element, and Transportation Element from the 2005 Comprehensive Plan (last amended 2015), and the Urban Village Growth Strategy, Land Use, and Transportation sections of the Seattle 2035 Comprehensive Plan generally promote transportation improvements that support walking and bicycling; the provision, expansion, and enhancement of parks and open space; and provision of amenities to support the interests of a range of uses and people. Completion of the Missing Link is specifically included in some parts of both Comprehensive Plans as a priority improvement in order to provide alternatives to motorized transportation, to connect neighborhoods, and for the positive health impacts that trail recreation could provide. The Build Alternatives would be consistent with these aspects of the current Seattle 2035 Comprehensive Plan (City of Seattle, 2016b).

All of the Build Alternatives would serve the Ballard Hub Urban Village. Build Alternatives that locate greater trail length in the Ballard Hub Urban Village would be more consistent with adopted policies that support activated streetscapes in a pedestrian-oriented environment. For details about the applicable adopted policies, see the Land Use Discipline Report (ESA, 2016) and the Comprehensive Plan Crosswalk Table (Appendix F) in Technical Appendix A: Updates and Errata to the Land Use Discipline Report in this FEIS.

Comprehensive Plan policies for the BINMIC support commuting to work to and through the BINMIC by bicycle and walking, but policies also direct that the trail's design should consider the operational requirements of adjacent property owners and users (as determined by the City), the safety of trail users, the operational requirements of industrial users, and that through trails should be located away from industrial areas. Policies discourage actions that could delay freight movement or interfere with industrial uses. Within the BINMIC, water-dependent and industrial uses are intended to be the highest priority use. All of the Build Alternatives require some portion of the trail to be within the BINMIC because the eastern end of the existing trail is in the BINMIC. As such, all Build Alternatives could impact existing industrial uses in the BINMIC. While inconsistencies with the BINMIC policies cannot be avoided, impacts can be mitigated by reducing the types of conflicts that the policy seeks to avoid.

The amount of trail that would be located in the BINMIC varies by alternative (Table 4-1). These and other differences among the alternatives are described separately in Sections 4.3.3 through 4.3.7.

Build Alternative	Length of Trail in BINMIC (approx. linear feet)	Length of Trail in Ballard Hub Urban Village (approx. linear feet)	Adjacent Land in Industrial Uses (acres and %)	Number of Adjacent Water- dependent and/or Water-related Uses ²
Preferred	4,545	2,513	31 acres (44%)	27
Shilshole South	4,455	1,983	50 acres (54%)	42
Shilshole North	4,512	2,135	13 acres (41%)	7
Ballard Avenue	2,814	4,704	15 acres (38%)	9
Leary	2,308	4,466	7.4 acres (21%)	3

Table 4-1. Summary of Urban Villages and Land Uses Affected by Build Alternatives¹

¹Includes parcels abutting the alternative or only gaining access via abutting parcels. See Appendices A–D in the DEIS Technical Appendix A, and the Updates and Errata to Technical Appendix A for parcels included for all the Build Alternatives.

² Water-dependent and water-related uses are only within the shoreline district.

There could be minor to moderate impacts to priority uses in the BINMIC under any Build Alternative, primarily due to impacts on access, egress, and loading. These impacts are described in greater detail in the Transportation Discipline Report (Parametrix, 2017a). However, the impacts would be localized to particular businesses and, while potentially reducing business activity at certain times, are not expected to cause any business to fail. Therefore, the vitality of the BINMIC would not be significantly adversely impacted under any Build Alternative. See the Economic Considerations Report for details (ECONorthwest, 2016).

All Build Alternatives would reconfigure the existing right-of-way to accommodate the project. The Missing Link would also use a portion of the BTR corridor that overlays street right-of-way, typically at crossings, but in some cases the trail would also parallel the tracks. The Missing Link would provide both a recreation and transportation function, serving nonmotorized commuters from nonindustrial and industrial area businesses.

Seattle Freight Master Plan

The Seattle Freight Master Plan strives to improve the movement of goods throughout the city, but particularly to and within industrial and manufacturing centers. It focuses primarily on urban truck movement, but recognizes that rail, marine, air freight, and pipeline are also important means of transport. The six goals of the Freight Master Plan are: economy, safety, mobility, state of good repair, equity, and environment.

All Build Alternatives would make traffic flow, roadway, and rail improvements that support the plan's goals and policies for efficient traffic flow and safe movement of goods. However, some designated and undesignated loading zones would be altered and removed under all of the Build Alternatives, affecting the delivery and collection of goods that are integral to many industrial and commercial uses. In addition, all of the Build Alternatives would cause minor increases in delays at driveways, which could negatively impact the delivery and collection of goods. The magnitude of impacts to freight mobility would vary

among the alternatives, but none of the Build Alternatives would be inconsistent with the Freight Master Plan. See the Transportation Discipline Report for details (Parametrix, 2017a).

All of the Build Alternatives have been designed to provide predictability and would improve overall safety compared to the No Build Alternative. However, there is potential for some new impacts depending on final design, including sight distances at driveways and conflicts between drivers and trail design features such as planter strips. Measures to avoid and minimize these impacts are described in Section 1.7.1, Roadway Design and Safety Considerations, and the Transportation Discipline Report (Parametrix, 2017a).

City of Seattle Codes: Zoning, Shoreline, Critical Areas, and Historic Preservation

The Missing Link project would be allowed in all zoning designations and the shoreline district within the study area. The Build Alternatives would be designed in compliance with critical areas regulations and would be subject to approval by the Ballard Avenue Landmark District Board for compliance with the Ballard Avenue Landmark District requirements, where applicable. The Build Alternatives may make the area more attractive to development; however, any new development would be required to be consistent with uses allowed in each zone.

4.3.3 **Preferred Alternative**

Construction

In addition to the construction impacts described in Section 4.3.2, Impacts Common to All Build Alternatives, the Preferred Alternative could affect land within 200 feet of the shoreline. Small portions of the Preferred Alternative are within the UI shoreline environment (see Figure 4-3). As described in other chapters of this FEIS, the project would include BMPs to promote consistency with these requirements. The project would comply with applicable critical areas and shoreline regulations.

Operation

Effect on Existing Uses

In the BINMIC, industrial and water-dependent uses are priority uses. Land uses abutting or gaining access along the Preferred Alternative are approximately 44% industrial, 31% commercial, 18% parks and open space (the Ballard Locks and Charles S. English, Jr. Botanical Garden), and 4% vacant, with other uses composing about 3% of the total (see Figures 4-2 and 4-7). The percent of industrial and commercial land uses along the Preferred Alternative is similar to that of the study area (compare Figures 4-4 and 4-7). The parcels along the Preferred Alternative include about 31 acres of land in industrial use.

Of the 46 total parcels abutting or gaining access along the Preferred Alternative, 16 are water-dependent and 11 are water-related (see Table 4-1). Water-dependent and water-related uses combined occupy the highest concentration of land by area (85%) along the Preferred Alternative. These water-dependent and water-related uses within the shoreline district are industrial, commercial, other, or parks and open space. The parks and open space parcels are the 13-acre Ballard Locks and Charles S. English, Jr. Botanical Garden and are included in all Build Alternatives. The Preferred Alternative has fewer water-dependent and water-related uses than the Shilshole South Alternative, but more than the other Build Alternatives for both types of uses. The areas where these uses can be located are limited because their viability depends on their proximity to water.

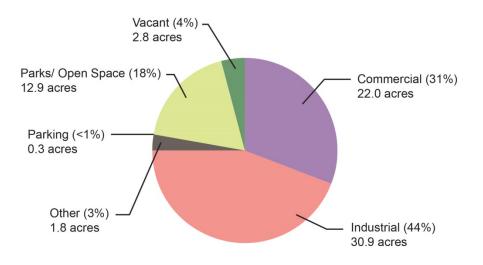


Figure 4-7. Existing Land Uses along the Preferred Alternative

Industrial uses within the study area rely on freight mobility. Freight vehicles tend to occupy more rightof-way than smaller cars or trucks to conduct business activities, which could conflict with the multi-use trail. Changes in traffic flow and access can disrupt normal activities and impact the viability of a land use. Roadway improvements included in the Preferred Alternative would result in a similar (or better) level of service at all intersections, except one, as compared to the No Build Alternative (Parametrix, 2017a). The Preferred Alternative would cross about 39 driveways and loading zone spaces (Parametrix, 2017a). Where the trail intersects access locations, vehicles would need to stop and check for pedestrians and bicyclists before advancing. This impact would likely occur for only short periods (up to an 11second delay over the No Build Alternative), mostly during commute times, and would not be significant. See the Transportation Discipline Report for details (Parametrix, 2017a). Some drivers would view this as an inconvenience, and it could add to operating costs for some businesses, particularly those with higher volumes of vehicle trips crossing the trail; see the Economic Considerations Report (ECONorthwest, 2016). While these transportation impacts could add to the operational costs, they would not result in changes to land uses.

With the Preferred Alternative, there would be a net reduction of up to four loading zone spaces. Generally, the City prioritizes the retention of loading zone spaces and would work with adjacent businesses to retain or replace loading zones as needed; thus, not all four would necessarily be lost. The Preferred Alternative could also potentially remove some informal loading areas that are within the City right-of-way. However, it is not possible to quantify these areas because they are unpermitted and the City does not recognize them as loading zones (see Chapter 8, Parking, and the Parking Discipline Report [Parametrix, 2017b]). Several commercial and industrial uses have high truck loading, unloading, and delivery activity at driveway locations relative to other uses. Because uses are highly industrial along this alignment, the loss of loading zone spaces and delays during loading and unloading activities could need to be relocated or the business would need to otherwise adapt because vehicles would not be allowed to block the trail while loading and unloading. Required adjustments and delays could increase costs for businesses, but are not expected to cause significant impacts because businesses would likely adjust their practices around these areas (ECONorthwest, 2016).

The Preferred Alternative would remove 344 parking spaces, a combination of on-street (paid and nonpaid) and off-street spaces (Parametrix, 2017b). This number includes unregulated parking that is often double- and sometimes triple-parked, so this number is conservatively high. Removal of these parking spaces would impact the overall parking availability for businesses in the area, the weekly Ballard Farmers Market, and other special events. Employees of businesses along the alignment largely use the spaces for parking, and completion of the trail would require employees to use other parking areas or commute by transit or nonmotorized means. This could result in inconvenience and increased costs for some businesses and employees. It would contribute to a trend of increased congestion in the area that may deter some customers who may choose to patronize businesses with available parking. See Chapter 8, Parking, and the Parking Discipline Report (Parametrix, 2017b).

Many nonmotorized users currently travel on Shilshole Ave NW and NW 45th St east of 24th Ave NW to connect to the east trail end because this is generally the shortest, flattest, and fastest route. For all of the Build Alternatives, it is assumed that nonmotorized users (particularly bicycle traffic) would shift to the trail corridor. Nonmotorized users would also continue to use other roadways in the study area depending on their destination (Parametrix, 2017a). Industrial vehicles (such as fork lifts) and heavy-duty commercial trucks are common along this alignment. Conflicts between vehicles and trail users along this alignment could cause additional delays for freight, with associated increased costs as described above.

While additional delays in access and freight movement may occur, the trail would not prohibit access to any properties, and impacts from the trail would not be significant. Increasing delays in access, however, could contribute to increased operational costs for some businesses (ECONorthwest, 2016).

Consistency with Adopted Plans, Policies, and Codes

The Preferred Alternative is consistent with adopted plans and policies, except for the BINMIC policies in the Comprehensive Plan that relate to locating the trail within the BINMIC.

City of Seattle Comprehensive Plan and Freight Master Plan

Approximately 4,545 linear feet of the Preferred Alternative lies within the BINMIC, representing about 52% of the total 8,768 linear feet for this alternative (Table 4-1). The Preferred, Shilshole South, and Shilshole North Alternatives would have similar lengths of trail in the BINMIC. All three of these alternatives would have more trail within the BINMIC than the Ballard Avenue and Leary Alternatives; however, this impact is not significant because it would not change land uses within the study area.

Of the 46 total uses abutting or gaining access along the Preferred Alternative, 16 are water-dependent and 11 are water-related (see Table 4-1). One of the BINMIC policies in the Comprehensive Plan calls for the highest priority to be placed on water-dependent and industrial uses. The Preferred Alternative could cause intermittent disruptions to driveway operations for these types of uses, an adverse impact that could be minimized (but not completely eliminated) through the design measures described in Section 1.7.1, Roadway Design and Safety Considerations, and the Transportation Discipline Report (Parametrix, 2017a).

The Comprehensive Plan contains goals and policies to improve industrial traffic flow to and through the BINMIC, facilitate truck mobility, and enhance truck connections. The Preferred Alternative could reduce the level of service at two intersections, but freight mobility would be maintained or improve at other intersections. While this alternative could have minor impacts to truck mobility, it would include trail design measures that assist truck mobility, thus improving traffic flow and connections in that portion of the study area, and continuing to support industrial land uses. See Section 1.7.1, Roadway Design and

Safety Considerations; Chapter 7, Transportation; and the Transportation Disciple Report (Parametrix, 2017a).

While this alternative could have minor impacts to truck mobility, it would reestablish NW 45th St as a two-way street open to trucks, thus improving traffic flow and connections in that portion of the study area, and continuing to support industrial land uses. A new signal at 17th Ave NW and Shilshole Ave NW would improve traffic flow, which would benefit both freight and non-freight traffic (Parametrix, 2017a).

By increasing access delays for vehicles, the portion of the Preferred Alternative that runs along Shilshole Ave NW could cause minor impacts to water-dependent and industrial uses, which are priority uses in the BINMIC policies. None of these impacts are considered significant because they would not cause a permanent loss of a priority land use (ECONorthwest, 2016).

City of Seattle Codes: Zoning, Shoreline, Critical Areas, and Historic Preservation

Land adjacent to the Preferred Alternative is mostly zoned to accommodate medium to heavy industrial uses as well as some neighborhood commercial (Figure 4-5). The neighborhood commercial zone supports pedestrian-oriented uses. Trails, such as the Missing Link, would be allowed in all zones. A nominal segment of the Preferred Alternative at the intersection of 24th Ave NW and NW Market St is within the pedestrian overlay, which encourages pedestrians in the downtown Ballard area. The Preferred Alternative would provide pedestrian and nonmotorized access nearby, which would be generally consistent with the goal to encourage a pedestrian-oriented streetscape.

A small portion of the Preferred Alternative is within the UI shoreline environment (Figure 4-3). The Missing Link would be permitted in this shoreline environment and would be required to comply with all applicable shoreline regulations. An abandoned landfill and a liquefaction-prone zone are near the Preferred Alternative, and fish and wildlife habitat conservation areas are within the project footprint near the Ballard Locks. Development in this area would comply with critical areas regulations.

The Preferred Alternative lies outside of the Ballard Avenue Landmark District, and would therefore not be required to comply with development requirements for the district.

4.3.4 Shilshole South Alternative

Construction

Construction impacts that could occur are described in Section 4.3.2, Impacts Common to All Build Alternatives. Similar to the Preferred Alternative, small portions of the Shilshole South Alternative are within the UI shoreline environment (see Figure 4-3). As described in other chapters of this FEIS, the project would include BMPs to promote consistency with these requirements. The project would comply with applicable critical areas and shoreline regulations.

Operation

Effect on Existing Uses

In the BINMIC, industrial and water-dependent uses are the highest priority uses. Land uses abutting or gaining access along the Shilshole South Alternative are approximately 54% industrial, 26% commercial, 14% parks and open space (the Ballard Locks and Charles S. English, Jr. Botanical Garden), and 3% vacant, with other uses composing about 2% of the total (see Figures 4-2 and 4-8). The abutting parcels for this alternative include about 50 acres of land in industrial use, the most of any Build Alternative.

Land uses abutting or gaining access along the Shilshole South Alternative are more industrial compared to the overall study area (compare Figures 4-4 and 4-8).

Of the 58 total uses abutting or gaining access along the Shilshole South Alternative, 29 are waterdependent and 13 are water-related (see Table 4-1). These water-dependent and water-related uses include industrial, commercial, parks and open space, and other uses. The parks and open space parcels are the 13-acre Ballard Locks and Charles S. English, Jr. Botanical Garden and are abutting all Build Alternatives. This alternative has the highest number of water-dependent and water-related uses of any Build Alternative. Water-dependent and water-related uses combined have the largest area of land (89%) along the Shilshole South Alternative. The areas where these uses can be located are limited because their viability depends on their proximity to water.

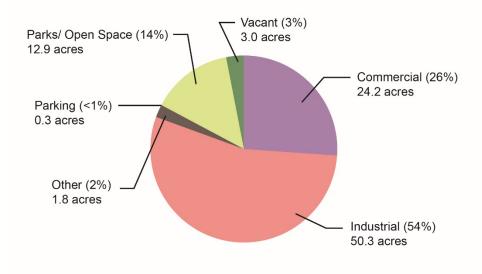


Figure 4-8. Existing Land Uses along the Shilshole South Alternative

Industrial uses in the study area rely on freight mobility. Roadway improvements included in the Shilshole South Alternative would result in similar (or better) levels of service at all intersections, except one, as compared to the No Build Alternative (Parametrix, 2017a). This alternative would cross about 37 driveways and loading zone spaces. Where the trail intersects access locations, vehicles would need to stop and check for pedestrians and bicyclists before advancing, resulting in minor delays to business activities. This impact would likely occur for only short periods (up to 11 seconds more than the No Build Alternative), mostly during commute times, and would not be significant. See the Transportation Discipline Report for details (Parametrix, 2017a). Some drivers would view this as an inconvenience, and it could add to operating costs for some businesses. While the impacts would not result in changes to land uses, they could add to the operational costs for some businesses, particularly those with higher volumes of vehicle trips crossing the trail; see the Economic Considerations Report (ECONorthwest, 2016).

The Shilshole South Alternative is the only Build Alternative where no formally designated loading zone spaces would be removed. It could potentially remove some informal loading areas that are within the City right-of-way. However, it is not possible to quantify these areas because they are generally unpermitted and the City does not recognize them as loading zones (see Chapter 8, Parking, and the Parking Discipline Report [Parametrix, 2017b]). Several commercial and industrial uses have high truck loading, unloading, and delivery activity at driveway locations relative to other uses. Because uses are highly industrial along this alignment, delays during loading and unloading could negatively impact

industrial uses. Some loading activities that currently occur within the City right-of-way would need to be relocated, or the business would need to otherwise adapt because vehicles would not be allowed to block the trail while loading and unloading. Required adjustments and delays could increase costs for businesses, but are not expected to cause significant impacts because businesses would likely adjust their practices around these areas (ECONorthwest, 2016).

The Shilshole South Alternative would remove about 279 parking spaces (Parametrix, 2017b). This number includes unregulated parking that is often double- and sometimes triple-parked, so this number is conservatively high. Removal of these parking spaces would impact the overall parking availability for businesses in the area, the weekly Ballard Farmers Market, and other special events. Employees of businesses along the alignment largely use the spaces for parking, and completion of the trail would require employees to use other parking areas or commute by transit or nonmotorized means. This could result in inconvenience and increased costs for some businesses and employees. It would contribute to a trend of increased congestion in the area that may deter some customers, who may choose to patronize businesses in locations with available parking (ECONorthwest, 2016).

Many nonmotorized users currently travel on the segment of the Shilshole South Alternative east of 24th Ave NW to connect to the east trail end because this is generally the shortest, flattest, and fastest route. The Shilshole South Alternative would channel more recreational users, in addition to commuters, through the manufacturing and industrial area. This would be most noticeable in the area between the Ballard Locks and 24th Ave NW along the unimproved NW 54th St right-of-way, which currently has few nonmotorized users. This increase in nonmotorized users would likely increase the number of user conflicts with vehicles accessing their businesses, resulting in potential delays that could cause inconvenience and/or additional costs for businesses along this section of the route. These additional delays and associated costs are not expected to result in the businesses closing (ECONorthwest, 2016).

While additional delays in access and freight movement may occur, the trail would not prohibit access to any properties, and impacts from the trail would not be significant. Increasing delays in access, however, could contribute to increased operational costs for some businesses (ECONorthwest, 2016).

Consistency with Adopted Plans, Policies, and Codes

The Shilshole South Alternative is consistent with adopted plans and policies, except for the BINMIC policies in the Comprehensive Plan that relate to locating the trail within the BINMIC.

City of Seattle Comprehensive Plan and Freight Master Plan

Approximately 4,455 linear feet of the Shilshole South Alternative lies within the BINMIC, representing about 69% of the total 6,438 linear feet for this alternative (Table 4-1). The Preferred, Shilshole South, and Shilshole North Alternatives would have similar lengths of trail in the BINMIC. All three of these alternatives would have more trail within the BINMIC than the Ballard Avenue and Leary Alternatives. The Shilshole South Alternative would abut the largest number of water-related and water-dependent uses of the Build Alternatives (Table 4-1).

The Shilshole South Alternative could cause minor disruptions to driveway operations for these types of uses. Disruption could be minimized through the design measures described in Section 1.7.1, Roadway Design and Safety Considerations, and the Transportation Discipline Report (Parametrix, 2017a).

The Comprehensive Plan contains goals and policies to improve industrial traffic flow to and through the BINMIC, facilitate truck mobility, and enhance truck connections. The Shilshole South Alternative could reduce the level of service at one intersection, but would maintain (or improve) traffic flow at others.

Traffic improvements along NW 45th St and the signal at 17th Ave NW would be the same as the Preferred Alternative.

By increasing access delays for freight vehicles in the BINMIC, the Shilshole South Alternative could cause minor impacts to water-dependent and industrial uses, which are specified as priority uses in the BINMIC policies. None of these impacts are considered significant because they would not cause a permanent loss of a priority land use (ECONorthwest, 2016).

City of Seattle Codes: Zoning, Shoreline, Critical Areas, and Historic Preservation

Land adjacent to the Shilshole South Alternative is mostly zoned to accommodate medium to heavy industrial uses, with some commercial. The Missing Link would be allowed in all zones. Unlike the other Build Alternatives, the Shilshole South Alternative is completely outside of the pedestrian overlay. While not specifically consistent with the goal to encourage a pedestrian-oriented streetscape within the downtown Ballard area, it is generally consistent in that it would provide pedestrian and nonmotorized access nearby.

A portion of the Shilshole South Alternative is within the UI shoreline environment (Figure 4-3). The Missing Link would be permitted in this shoreline environment, and it would be required to comply with all applicable shoreline regulations.

An abandoned landfill and a liquefaction-prone zone are adjacent to the Shilshole South Alternative, and fish and wildlife habitat conservation areas are within the project footprint near the Ballard Locks. Development in this area would comply with critical areas regulations.

The Shilshole South Alternative lies outside of the Ballard Avenue Landmark District, and would therefore not be required to comply with development requirements for the district.

4.3.5 Shilshole North Alternative

Construction

Construction impacts that could occur are described in Section 4.3.2, Impacts Common to All Build Alternatives. In addition, although less than the Preferred and Shilshole South Alternatives, small portions of the Shilshole North Alternative are within the UI shoreline environment (see Figure 4-3). As described in other chapters of this FEIS, the project would include BMPs to promote consistency with these requirements. The project would comply with applicable critical areas and shoreline regulations.

Operation

Effect on Existing Uses

Industrial and water-dependent uses are priority uses in the BINMIC. Land uses abutting the Shilshole North Alternative are approximately 41% industrial, 39% parks and open space (the Ballard Locks and Charles S. English, Jr. Botanical Garden), 15% commercial, 3% parking, 2% vacant, and less than 1% residential and other uses (see Figures 4-2 and 4-9). All uses along this alignment take access directly from the street frontage.

The mix of land uses abutting the Shilshole North Alternative has a similar percentage of industrial, more parks and open space, less commercial, and less residential compared to the overall study area (compare Figures 4-4 and 4-9).

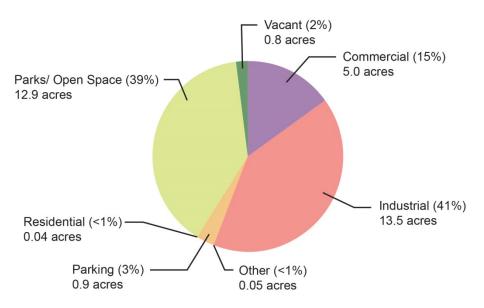


Figure 4-9. Existing Land Uses along the Shilshole North Alternative

Of the 64 total uses abutting this alternative, two uses are water-dependent and 5 are water-related uses (see Table 4-1). The water-dependent uses are the 13-acre Ballard Locks and Charles S. English, Jr. Botanical Garden, which abuts all of the Build Alternatives. This alternative has fewer water-dependent uses than the Preferred, Shilshole South, and Ballard Avenue Alternatives, and the same number of water-dependent uses as the Leary Alternative. This alternative has fewer water-related uses than the Preferred and Shilshole South Alternatives, the same number as the Ballard Avenue Alternative, and more than the Leary Alternative. Water-dependent and water-related uses are about 50% of the land by area along the Shilshole North Alternative.

Changes in traffic flow and access can disrupt normal activities and impact the viability of a land use. Roadway improvements included in the Shilshole North Alternative would result in a decrease in the level of service at four intersections but would maintain (or improve) the level of service at the others relative to the No Build Alternative (Parametrix, 2017a).

The Shilshole North Alternative would cross approximately 54 loading zones and driveways. This alternative would remove the highest number of designated loading zone spaces (approximately 24). It is possible that these spaces could remain by shifting them to other locations along existing block faces, to the other side of a street, or to an adjacent block. Generally, the City prioritizes the retention of loading zone spaces and would work with adjacent businesses to retain or replace loading zones as needed. Thus, not all 24 would necessarily be lost (Parametrix, 2017b).

Because industrial and commercial uses typically have high loading, unloading, and delivery activity at driveways, the removal of loading zones and delays at access points could impact business activities. However, delays at driveways are expected to occur for short periods (up to 10 seconds of delay more than the No Build Alternative), mostly during commute periods, and are therefore not expected to substantially affect business operations (Parametrix, 2017a). Businesses with driveways crossing the trail would need to adjust their operations so that the trail is not blocked by vehicles except during active ingress and egress. Some drivers would view this as an inconvenience, and it could add to operating costs for some businesses. While the impacts would not result in a change land uses, they could add to the operational costs for some businesses, particularly those with higher volumes of vehicle trips crossing the trail; see the Economic Considerations Report (ECONorthwest, 2016).

The Shilshole North Alternative could remove about 206 parking spaces (Parametrix, 2017b). The removal of these parking spaces could impact parking availability for businesses and special events. Generally, industrial and commercial uses have high truck loading, unloading, and delivery activity relative to other uses. Removal of these spaces could have negative impacts to business activity but is not expected to result in a significant impact to land uses along this alignment because other travel modes and off-street parking options are available. Loading and unloading may need to be relocated for some businesses, possibly requiring spaces to be located across the street or on side streets. See Chapter 8, Parking, and the Parking Discipline Report (Parametrix, 2017b).

Many nonmotorized users currently use the segment of the Shilshole North Alternative between 24th Ave NW and 17th Ave NW because this is generally the shortest, flattest, and fastest route. For all of the Build Alternatives, it is assumed that nonmotorized users (particularly bicycle traffic) would shift to the trail corridor. Nonmotorized users would also continue to use other roadways in the study area depending on their destination (Parametrix, 2017a).

Consistency with Adopted Plans, Policies, and Codes

Similar to the Preferred and Shilshole South Alternatives, the Shilshole North Alternative is consistent with adopted plans and policies, except for the BINMIC policies that relate to locating the trail within the BINMIC.

City of Seattle Comprehensive Plan and Freight Mobility Master Plan

Approximately 4,512 linear feet of the Shilshole North Alternative is within the BINMIC, representing 68% of the total 6,647 linear feet for this alternative (Table 4-1). The Preferred, Shilshole South, and Shilshole North Alternatives would have similar lengths of trail in the BINMIC. All three of these alternatives would have more trail within the BINMIC than the Ballard Avenue and Leary Alternatives. Disruption to driveways and intersections could be minimized through the design measures described in Section 1.7.1, Roadway Design and Safety Considerations, and the Transportation Discipline Report (Parametrix, 2017a).

The Comprehensive Plan contains goals and policies to improve industrial traffic flow to and through the BINMIC, facilitate truck mobility, and enhance truck connections. The Shilshole North Alternative would be consistent with these policies because it could generally improve or maintain the level of service at most intersections. However, there would be a decrease in the level of service at four intersections compared to the No Build Alternative.

By increasing access delays for freight vehicles, the portion of the Shilshole North Alternative that runs along Shilshole Ave NW could cause minor impacts to water-dependent and industrial uses, which are specified as priority uses in the BINMIC policies. None of these impacts are considered significant because they would not cause a permanent loss of a priority land use (ECONorthwest, 2016).

City of Seattle Codes: Zoning, Shoreline, Critical Areas, and Historic Preservation

Land adjacent to the Shilshole North Alternative is mostly zoned to accommodate medium to heavy industrial and commercial uses. Similar to the Preferred Alternative, a portion of the Shilshole North Alternative would be within a neighborhood commercial zone, which supports pedestrian-oriented uses. A nominal segment of the alignment at the intersection of 24th Ave NW and NW Market St is in the pedestrian overlay, which encourages pedestrian uses in the downtown Ballard area (Figure 4-5). The Missing Link would be allowed in all zones.

Although less than the Preferred and Shilshole South Alternatives, a portion of the Shilshole North Alternative is within the UI shoreline environment. The Missing Link project would be required to comply with all applicable shoreline regulations.

No portions of the Shilshole North Alternative are within the Ballard Avenue Landmark District (Figure 4-3). Similar to other alignments, critical areas are present nearby, and development would comply with critical areas regulations.

4.3.6 Ballard Avenue Alternative

Construction

Construction impacts that could occur are described in Section 4.3.2, Impacts Common to All Build Alternatives. Although less than the Preferred and Shilshole South Alternatives, a small portion of this alternative is within the UI shoreline environment (see Figure 4-3). As described in other chapters of this FEIS, the project would include BMPs to promote consistency with these requirements. The project would comply with applicable critical areas and shoreline regulations.

Operation

Effect on Existing Uses

Land uses abutting or gaining access along the Ballard Avenue Alternative are approximately 38% industrial, 33% parks and open space, 13% commercial, 8% vacant, and 7% residential, with parking and other uses making up the remaining (see Figure 4-10). All uses abutting this alternative access their properties directly from the street frontage. The mix of land uses adjacent to this alternative is about the same industrial and residential, less commercial, and more parks and open space than the overall study area (compare Figures 4-4 and 4-10). Of the 97 total uses adjacent to the alternative, four uses are water-dependent and five uses are water-related. These water-dependent and water-related uses are clustered at the west end of this alternative, and include industrial uses and parks and open space. The parks and open space parcels are the 13-acre Ballard Locks and Charles S. English, Jr. Botanical Garden, which abut all of the Build Alternatives. The Ballard Avenue Alternative has fewer water-dependent uses than the Preferred and Shilshole South Alternatives, and more than the Shilshole North and Leary Alternatives. This alternative has fewer water-related uses than the Preferred and Shilshole South Alternative, and more than the Leary Alternative. Water-dependent and water-related uses combined are about 56% of the land by area along the Ballard Avenue Alternative.

The southeast portion of the Ballard Avenue Alternative is largely industrial, and the middle and northwest segments are largely retail commercial, transitioning into more multifamily uses near the western portion (Figure 4-2). The parcels are relatively small and most have no off-street parking. The Ballard Avenue Landmark District largely inhibits redevelopment because the buildings and structures are historic. Existing industrial and commercial uses in the southeast portion of the alignment are mostly small-scale industrial on relatively small parcels compared to the Shilshole North and Shilshole South Alternatives. Future uses in the Ballard Avenue Landmark District are likely to include more commercial and residential development.

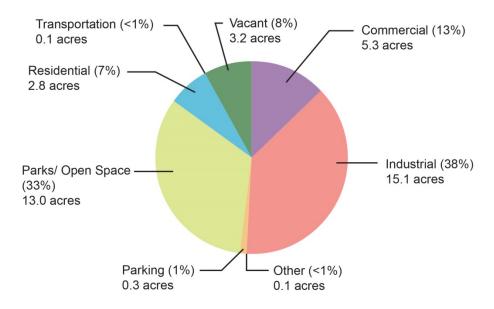


Figure 4-10. Existing Land Uses along the Ballard Avenue Alternative

Changes in traffic flow and access can disrupt normal activities and impact the viability of a land use. Roadway improvements included in the Ballard Avenue Alternative would result in a decrease in the level of service at three intersections but would maintain (or improve) the level of service at the others relative to the No Build Alternative (Parametrix, 2017a). Where the trail intersects access locations, vehicles would need to stop and check for pedestrians and bicyclists before advancing. This impact would likely occur for only short periods (up to 12 seconds more than the No Build Alternative), mostly during commute times, and would not be significant. See the Transportation Discipline Report for details (Parametrix, 2017a). Some drivers would view this as an inconvenience, and it could add to operating costs for some businesses. The Ballard Farmers Market is a permitted use on Ballard Ave NW, which would be impacted by the Ballard Alternative; see the discussion in Chapter 5, Recreation.

This alternative would cross about 41 driveways and loading zone spaces (Parametrix, 2017a). The Ballard Avenue Alternative would potentially remove up to 14 loading zone spaces. It is possible that these spaces could remain by shifting them to other locations along existing block faces, to the other side of a street, or to an adjacent block. Generally, the City prioritizes the retention of loading zone spaces and would work with adjacent businesses to retain or replace loading zones as needed. Thus, not all 14 would necessarily be lost (Parametrix, 2017b).

The Ballard Avenue Alternative could remove about 198 parking spaces that serve adjacent land uses and special events. This loss of on-street parking is not expected to significantly affect land uses along the Ballard Avenue Alternative. See discussion in Chapter 8, Parking, and the Parking Discipline Report (Parametrix, 2017b).

For all of the Build Alternatives, it is assumed that nonmotorized users (particularly bicycle traffic) would shift to the trail corridor. Nonmotorized users would also continue to use other roadways in the study area depending on their destination (Parametrix, 2017a). The Ballard Avenue Alternative would channel many more recreational users through areas of commercial, retail, and entertainment uses than the Preferred, Shilshole North, and Shilshole South Alternatives. Delivery vehicles associated with business activity along this alternative alignment are largely small to medium commercial vehicles, except in the industrial area near the southeast end of the alignment. The nature of many of the commercial, retail, and

entertainment uses along this alternative may be more consistent with trail user patronage than industrial uses. Nearby residential and commercial uses could serve as starting points and destinations for trail users.

Consistency with Adopted Plans, Policies, and Codes

The Ballard Avenue Alternative is consistent with adopted plans and policies, except the BINMIC policies that relate to locating the trail within the BINMIC.

City of Seattle Comprehensive Plan and Freight Master Plan

The Ballard Avenue Alternative is more consistent with Comprehensive Plan policies and goals that promote the expansion of open space networks in high-density areas targeted for residential growth with high pedestrian, bicycle, or transit use than the Preferred, Shilshole South, and Shilshole North Alternatives.

Approximately 2,814 linear feet of the Ballard Avenue Alternative is within the BINMIC, representing 37% of the total 7,518 linear feet for this alternative. The Ballard Avenue and Leary Alternatives would have the least length of trail within the BINMIC of the Build Alternatives (Table 4-1). All of the Build Alternatives are generally not consistent with policies that encourage trails to be located outside of the BINMIC. As with other Build Alternatives, these impacts would not be significant because operation of any of the Build Alternatives is not expected to result in land use changes (ECONorthwest, 2016). Disruption could be minimized through the design measures described in Section 1.7, Roadway Design and Safety Considerations, and the Transportation Discipline Report (Parametrix, 2017a).

By increasing access delays for freight vehicles in the BINMIC, the Ballard Alternative could cause minor impacts to water-dependent and industrial uses. None of these impacts are considered significant because they would not cause a permanent loss of a priority land use (ECONorthwest, 2016).

City of Seattle Codes: Zoning, Shoreline, Critical Areas, and Historic Preservation

Zoning adjacent to the Ballard Avenue Alternative is mixed- and light-industrial, commercial, and residential (Figure 4-5). Similar to the Preferred, Shilshole North, and Leary Alternatives, the Ballard Alternative includes neighborhood commercial zones that specifically support active and attractive pedestrian-oriented experiences. This alternative crosses the pedestrian overlay on 22nd Ave NW and NW Market St. The Missing Link would be allowed in all zones.

Although less than the Preferred and Shilshole South Alternatives, a small portion of the Ballard Avenue Alternative is within the UI shoreline environment, where the proposed use would be permitted. Similar to other alternatives, the western portion of the alignment is within critical areas (Figure 4-3), and development in this area would need to be consistent with critical areas regulations.

A portion of the alternative, from NW Market St to NW Dock Pl, is within the Ballard Avenue Landmark District. This area is particularly sensitive to changes in character, culture, social, and historic use. While the project would be allowed, it would have to be consistent with the development requirements for the District, subject to approval from the Ballard Avenue Landmark District Board.

4.3.7 Leary Alternative

Construction

Construction impacts that could occur are described in Section 4.3.2, Impacts Common to All Build Alternatives. Although less than the other Build Alternatives, a small portion of this alternative is within the UI shoreline environment (see Figure 4-3). As described in other chapters of this FEIS, the project would include BMPs to promote consistency with these requirements. The project would comply with applicable critical areas and shoreline regulations.

Operation

Effect on Existing Uses

Land uses abutting or gaining access along the Leary Alternative are approximately 21% industrial, 23% commercial, 37% parks and open space, 13% other, 3% residential, with the remaining parking and vacant (see Figure 4-11). All uses abutting this alternative take access directly from the street frontage. The mix of land uses along this alternative is less industrial, commercial, and residential, but more parks and open space and other uses compared to the study area as a whole (compare Figures 4-4 and 4-11). The Leary Alternative would locate the trail along an alignment with the lowest proportion of industrial uses (Table 4-1). Many of the uses along the Leary Alternative rely on small to medium commercial trucks for the delivery of goods.

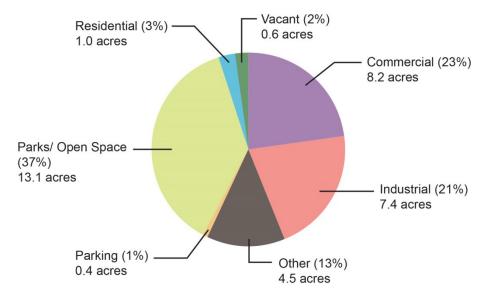


Figure 4-11. Existing Land Uses along the Leary Alternative

The parks and open space parcels are the 13-acre Ballard Locks and Charles S. English, Jr. Botanical Garden. Of the 60 uses, two uses are water-dependent and one is water-related (see Table 4-1). The water-dependent uses are the 13-acre Ballard Locks and Charles S. English, Jr. Botanical Garden, which are included in all Build Alternatives. The Leary Alternative has the same number of water-dependent uses as the Shilshole North Alternative, but less than the other Build Alternatives. It has fewer water-related uses than all of the other Build Alternatives. Water-dependent and water-related uses combined are about 44% of the land by area along the Leary Alternative.

Changes in traffic flow and access can impact the viability of a land use. Under the Leary Alternative, level of service would be reduced at six intersections compared to the No Build Alternative. However, other intersections would be improved or be the same as the No Build Alternative (Parametrix, 2017a).

Approximately 29 driveways and loading zone spaces would be located along the Leary Alternative, the least of any Build Alternative. About 15 loading zone spaces could be removed with construction of this alternative (Parametrix, 2017b). It is possible that these spaces could remain by shifting them to other locations along existing block faces, to the other side of a street, or to an adjacent block. Generally, the City prioritizes the retention of loading zone spaces and would work with adjacent businesses to retain or replace loading zones as needed. Thus, not all 15 would necessarily be lost.

Vehicles crossing the trail could experience minor delays as drivers stop and check for pedestrians and bicyclists before advancing to the roadway (Parametrix, 2017a, 2017b). This impact would likely occur for only short periods (up to 27 seconds more than the No Build Alternative), mostly during commute times, and is not expected to be significant. The delay at driveways would be the greatest with this alternative.

The Leary Alternative could remove approximately 82 parking spaces, the fewest of any of the Build Alternatives (Parametrix, 2017b). Similar to other Build Alternatives, businesses and residential uses could be impacted by the reduction in parking spaces. Fewer spaces may be available for special events in the study area. This loss of on-street parking is not expected to significantly affect land uses along the Leary Alternative. See Chapter 8, Parking, and the Parking Discipline Report for a discussion of parking impacts (Parametrix, 2017b).

For all of the Build Alternatives, it is assumed that nonmotorized users (particularly bicycle traffic) would shift to the trail corridor. Nonmotorized users would also continue to use other roadways in the study area depending on their destination (Parametrix, 2017a).

Consistency with Adopted Plans, Policies, and Codes

As with all other Build Alternatives, the Leary Alternative is consistent with plans and policies, except for the BINMIC policies that relate to locating the trail within the BINMIC.

City of Seattle Comprehensive Plan and Freight Master Plan

Approximately 2,308 linear feet of the Leary Alternative is within the BINMIC, which is about 34% of the total length (6,774 linear feet) of this alternative (Table 4-1). The length of this alternative within the BINMIC is slightly less than the Ballard Avenue Alternative and less than the Preferred, Shilshole South, and Shilshole North Alternatives. Completion of the trail would support plans and policies for the Ballard Hub Urban Village. The Leary Alternative, along with the Shilshole North Alternative, abuts the fewest number of water-dependent uses compared with the other Build Alternatives. It does not abut any water-related uses. All of the Build Alternatives are generally not consistent with policies that encourage trails to be located outside of the BINMIC; however, this impact is not significant because it would not cause a permanent loss of a land use (ECONorthwest, 2016). Potential impacts could be minimized through the design measures described in Section 1.7.1, Roadway Design and Safety Considerations, and the Transportation Discipline Report (Parametrix, 2017a).

City of Seattle Codes: Zoning, Shoreline, Critical Areas, and Historic Preservation

Zoning adjacent to the Leary Alternative allows for a mix of different types of industrial and commercial uses. It has more commercial zoning than the Preferred, Shilshole South, and Shilshole North

Alternatives, and it includes a neighborhood commercial zone that specifically supports active and attractive pedestrian-oriented experiences. Of all the Build Alternatives, the Leary Alternative has the most length in the pedestrian overlay in downtown Ballard (Figure 4-3). Consistent with the Land Use Code's intent for this overlay, this area along NW Market St is developed with mixed street-level uses that concentrate retail and service opportunities. The Missing Link would be allowed in all zones.

A small portion of the Leary Alternative is within the UI shoreline environment but no part is within the Ballard Avenue Landmark District (Figure 4-3). The Missing Link would be permitted in the shoreline environment and would be required to comply with all applicable shoreline regulations. Similar to other alternatives, the western portion of the alignment is within critical areas, and development in this area would need to be consistent with critical areas regulations (Figure 4-3).

4.3.8 Connector Segments

As with the Build Alternatives, the connector segments are consistent with adopted plans and policies, except the BINMIC policies that relate to locating the trail within the BINMIC. Most of the segments are located at least partially within the BINMIC. However, these segments could be used to reduce the total length of trail in the BINMIC by connecting to either the Ballard Avenue or Leary Alternative outside of the BINMIC.

Ballard Avenue NW

The Ballard Avenue NW connector segment is entirely outside of the BINMIC designation; it lies within neighborhood commercial zoning designations, and within the Ballard Avenue Landmark District (Figures 4-3, 4-5, and 4-6). Construction along this segment would be subject to approval by the Ballard Avenue Landmark District Board to comply with District regulations. This segment would be consistent with adopted plans, policies, and codes.

NW Vernon Place

Approximately 50% of the NW Vernon Place connector segment is within the BINMIC and would be inconsistent with the same plan goals and policies as previously described (Figure 4-6). The segment lies within the industrial and commercial zoning designations (Figure 4-5). A portion of the segment is within the Ballard Avenue Landmark District (Figure 4-3). Construction along this segment would be subject to approval by the Ballard Avenue Landmark District Board to comply with District regulations.

20th Avenue NW

Approximately one-quarter of the 20th Avenue NW connector segment is within the BINMIC and would be inconsistent with the same plan goals and policies as previously described (Figure 4-6). The segment lies within industrial, neighborhood commercial, and commercial zoning designations (Figure 4-5). A portion of the segment is within the Ballard Avenue Landmark District (Figure 4-3). Construction along this segment would be subject to approval by the Ballard Avenue Landmark District Board to comply with District regulations. A small portion of this connector segment would be within the shoreline district.

17th Avenue NW

The 17th Avenue NW connector segment is entirely within the BINMIC and would be inconsistent with the same plan goals and policies as previously described (Figure 4-6). The segment is within an industrial zoning designation.

15th Avenue NW

The entire 15th Avenue NW connector segment is within the BINMIC and would be inconsistent with the same plan goals and policies as previously described (Figure 4-6). The segment is within an industrial zoning designation.

14th Avenue NW

The entire 14th Avenue NW connector segment is within the BINMIC and would be inconsistent with the same plan goals and policies as previously described (Figure 4-6). The segment is within an industrial zoning designation.

4.4 Avoidance, Minimization, and Mitigation Measures

The following measures are common to all Build Alternatives.

4.4.1 **Construction**

Construction of the Missing Link would cause traffic delays and disruptions to residential and business uses in and around the project footprint. The following measures would be used to minimize those impacts:

- The contractor would be required to develop construction and staging plans, including a traffic control plan, to minimize impacts to business and residential access, maintain traffic flow, and maintain business visibility to encourage continued patronage.
- The City would maintain access to private property to the maximum extent feasible, and would notify property owners in advance of activities that might temporarily limit access. The City would provide wayfinding information and assist businesses to minimize impacts of construction.
- The public and business owners would be provided information about the construction schedule, hours of operation, location and duration of lane closures, and changes to parking provisions. This information would allow businesses to coordinate business operations such as delivery times, hours of operation, and other activities accordingly, as well as to provide information to customers to encourage continued patronage.
- The construction schedule and hours of operation would be timed and coordinated with other construction projects to minimize impacts to adjacent and surrounding properties to the greatest extent feasible.
- Additional measures, such as flaggers, could be employed to minimize freight delays in areas heavily used by freight, consistent with City policies promoting efficient transportation flow in industrial areas and to minimize impacts to industrial and manufacturing uses.
- To the extent feasible, loading zones and access would be maintained or alternative loading locations identified to minimize impacts to uses that rely on the delivery and shipment of goods.
- If the City requires temporary construction easements, the City would provide just compensation, as determined by a qualified appraiser to property owners. The City would generally restore temporary construction easements to their pre-construction condition.

4.4.2 **Operation**

The alternatives evaluated for the Missing Link are all partially within industrial zoned areas and the BINMIC. City plans and policies focus on the preservation of land in this area for water-dependent and industrial uses. Therefore, minimizing the extent of the trail within the BINMIC could minimize impacts. Connector segments could be utilized to channel trail users into the Ballard Hub Urban Village, where zoning and policies encourage trail completion, connection, and user activity during day and evening hours. Additional mitigation measures described in Section 1.7.1, Roadway Design and Safety Considerations, and the Transportation Discipline Report (Parametrix, 2017a) could also reduce trail impacts to adjacent land uses. SDOT will coordinate with adjacent businesses and property owners throughout the design process with regard to modification of the right-of-way. including outdoor seating areas, landscaping, and signage.