

Barkley Urban Village Plan  
State Environmental Policy Act  
Planned Action Draft Environmental Impact  
Statement

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## Planning and Community Development Department

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December 8, 2023

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR THE BARKLEY URBAN VILLAGE  
PLANNED ACTION

Dear Reader:

Barkley Village is a 259-acre area owned primarily by Talbot Real Estate LLC. Since the late 1980s, it has developed as a mixed-use area under a "Planned, Commercial" zoning designation, and is identified in the City's 2016 Comprehensive Plan as an urban village. An urban village is a type of zoning designation that provides for a higher density of housing and jobs and a compatible mix of uses where people can work, shop and recreate near where they live. However, Barkley Village does not have an adopted urban village plan or zoning designation.

The City of Bellingham intends to adopt an urban village plan and associated development regulations for Barkley Village consistent with the City's other urban villages and the vision for the district. The Environmental Impact Statement (EIS) was requested by the proponent as part of a Planned Action under RCW 43.21C.440. A Planned Action is a process for reviewing a proposal to develop a specific geographic area. It provides a more detailed environmental analysis upfront, during the area-wide planning stage, rather than during review of individual projects. The City also intends to enter into a development agreement to further clarify the expectations for the growth of the village.

This Draft EIS for the Barkley Urban Village is an informational document required by the State Environmental Policy Act (SEPA) as the first step in a Planned Action. It analyzes the probable adverse environmental impacts associated with the no action alternative and two development alternatives and provides the public, city, state, federal and tribal governments with qualitative and quantitative information to consider during the decision-making process.

- No Action Alternative (required by SEPA): Assumes growth under the current land use plans and regulations. Density and intensity of development for all land use types would generally be the lowest of the alternatives studied, but the developed area would be larger, with less land preserved as open or park space than either action alternative.
- Action Alternative 1 (moderate density development): reflects future development that would occur under the new Urban Village Plan and associated development regulations, including a reclassification to Urban Village zoning for the entire study area. This alternative would have more overall density and development than the No Action Alternative but less than Action Alternative 2. The developed area would have the smallest footprint under this alternative, with more than half of the land area preserved as open or park space. Action Alternative 1 is the Preferred Alternative identified by the Proponent, Talbot Real Estate LLC.
- Action Alternative 2 (high intensity development): is a variation of Action Alternative 1 that also reflects future development occurring under the new Urban Village Plan and associated development regulations, including a reclassification to urban village zoning for the entire study

area. This alternative would have the highest overall density and development, with substantially higher levels of commercial and multifamily residential development than the No Action Alternative and Action Alternative 1. The developed area would have a similar footprint to Action Alternative 1 but with taller proposed buildings. Similar to Action Alternative 1, more than half of the land area would remain preserved as open or park space.

The analysis and Draft EIS address the following elements of the environment, which were identified during the public scoping process held July 15-August 15, 2022:

- Earth, Geology and Soils
- Air Quality
- Water Resources
- Plants and Animals
- Environmental Health
- Land and Shoreline Use
- Transportation
- Public Services and Utilities
- Cumulative Effects

Key issues facing decision makers include finalization and approval of an Urban Village Plan and Comprehensive Plan amendment through a public process, finalization of a Planned Action Ordinance to streamline development while mitigating environmental impacts, finalization and adoption of a Development Agreement to guide long-term development of the Urban Village, finalizing the designed zoning and development regulations, and developing and implementing a mitigation strategy for wetland impacts.

The Draft EIS and appendices, as well as more information about the Barkley Urban Village planning process, can be reviewed and downloaded at the project website: [www.cob.org/barkleyuv](http://www.cob.org/barkleyuv)

Copies are also available at the Planning and Community Development Department located at 210 Lottie Street, Bellingham WA 98225.

Agencies, tribes, organizations and individuals are invited to comment on the Draft EIS no later than 5:00 p.m. on January 8, 2024. This is the end of a 30-day comment period required per Washington Administrative Code, Section 197-11-455. Email comments are preferred and should be sent to [knabbefeld@cob.org](mailto:knabbefeld@cob.org). Please use Barkley Village Draft EIS in the subject line. Written comments may also be mailed to:

COB Planning and Community Development Department  
ATTN: Kurt Nabbefeld, Development Services Manager  
210 Lottie Street  
Bellingham, WA 98225

Thank you for your interest in the Barkley Urban Village plan. Please contact Darby Galligan, Senior Planner, for questions at [dgalligan@cob.org](mailto:dgalligan@cob.org) or (360) 778-8389.

Sincerely,



Kurt Nabbefeld  
Development Services Manager / SEPA Responsible Official

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# Fact Sheet

## Project Title

Barkley Urban Village Plan

## Proposal

The City of Bellingham (City) proposes to adopt an Urban Village Plan and associated development regulations for the Barkley Urban Village, an existing 259-acre area in northeast Bellingham owned primarily by the Proponent, Talbot Real Estate, LLC. An urban village is a type of zoning designation that provides for a higher density of housing and jobs and a compatible mix of uses where people can work, shop, and recreate near where they live.

The City and the Proponent envision that they will enter into a Development Agreement that will further guide long-term development of the Barkley Urban Village. Concurrent with the adoption of development regulations and the Barkley Urban Village Plan Development Agreement, it is anticipated that the City will also adopt a Planned Action Ordinance.

This Draft Environmental Impact Statement (EIS) addresses the probable significant adverse impacts that could occur as a result of development of the Barkley Urban Village consistent with the Barkley Urban Village Plan, implementing regulations, and the proposed Development Agreement during the buildout horizon. The EIS is being completed holistically for the entire urban village area as part of a Planned Action pursuant to the State Environmental Policy Act (SEPA) (Washington Administrative Code [WAC] 197-11-168 (c)). Under SEPA, the basic steps in designating Planned Action projects are to: (1) prepare an EIS, (2) designate the project as a Planned Action by the adoption of an ordinance, and 3) review future application for consistency with the designated Planned Action. After completion of the Barkley Urban Village Final EIS, it is anticipated that the City will consider and potentially adopt a Barkley Urban Village Planned Action Ordinance. Development projects anticipated to be included in the Planned Action Ordinance are identified in the Draft EIS.

Once adopted, the Barkley Urban Village Planned Action Ordinance will demonstrate that adequate environmental review has been completed and that further environmental review for specific projects under SEPA will not be necessary if they are consistent with the Planned Action Ordinance, Development Agreement, and other applicable regulations. The Planned Action Ordinance would only apply to those future development projects and features identified in this EIS that have been reasonably defined at this time for environmental review purposes and that will be subject to City permit approval. Specific projects that have not been reasonably defined at this stage to allow full environmental review could require additional SEPA environmental review at the time of permit submittal.

## Phasing

A definitive plan for long-term redevelopment of the Barkley Urban Village cannot be formulated at this stage, as specific tenants and users have not been and cannot reasonably be identified for the development buildout period. Therefore, specific building footprints, sizes and designs; the specific location of uses within each area of the Barkley Urban Village; and the specific layout and design of parks, trails and open space cannot be pinpointed. However, in order to conduct comprehensive environmental review, a number of assumptions have been developed for the EIS alternatives related to the continuation of certain existing uses on the site, the amount of mixed-use development, the



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amount of open space (including parks, trails, and habitat), building heights, the road network, the utility and stormwater concept, the impervious area, parking ratios, employment numbers, and mitigation measures. These assumptions create an envelope of potential development and a range of development scenarios (without having specific building plans) and allow for the analysis of probable significant environmental impacts under SEPA.

A different mix and configuration of land uses is allowed within each alternative to provide flexibility for future development to adjust to economic and market conditions over time and to the requirements of specific developers/tenants. As such, the Development Agreement and Planned Action Ordinance would not likely prescribe specific building footprints, sizes, and designs; exact locations of uses within development areas; or specific designs of the park and trail system. Mitigation measures are in some instances tailored to mitigate the impacts that would correlate to a specific development project, such as the traffic mitigation presented in Section 3.8.4.

The Proposed Actions evaluated in this Draft EIS are as follows:

1. Adoption of the Barkley Urban Village Plan that identifies the location, scale, and mix of uses; infrastructure improvements; public amenities; and phasing.
2. Adoption of Barkley Urban Village implementing Development Regulations.
3. Adoption of a Planned Action Ordinance for the Barkley Urban Village.
4. Adoption of a Development Agreement between the City and the Proponent that will identify implementing land use regulations (zoning, subdivision, design standards), infrastructure requirements, phasing, development standards, and mitigation measures within the Barkley Urban Village.

### Proposal (Preferred Alternative and Reasonable Alternatives, including No Action)

This Draft EIS is an informational document required by SEPA before the City can move forward with adopting the Barkley Urban Village Plan, Planned Action Ordinance, and Development Agreement. The Draft EIS provides the public; city, state, and federal government agencies; and tribal governments with qualitative and quantitative information to consider in the decision-making process. It also allows for comments on the proposed scenario and alternatives.

This Draft EIS considers the potential impacts and benefits of three development alternatives for the Barkley Urban Village area:

- The No Action Alternative assumes the Urban Village Plan and associated development regulations would not be adopted and growth and development would occur in line with current land use plans and regulations. Density and intensity of development for all land use types would generally be the lowest of the alternatives studied, and the developed area would be larger, with less land preserved as open or park space than either action alternative.
- Action Alternative 1 (the Proposal/Preferred Alternative): Moderate Density Development Scenario, reflects future development that would occur under the new Urban Village Plan and associated development regulations, including a reclassification to Urban Village zoning for the entire study area. This alternative would have more overall density and development than the No Action Alternative but less than Action Alternative 2. The developed area would have the smallest footprint under this alternative, with more than half of the land area preserved as open or park space. Action Alternative 1 is the Preferred Alternative, also referred to herein as the Proposal.<sup>1</sup>

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<sup>1</sup> The Proposal means the Proposed Action(s) and is also the Preferred Alternative (WAC 197-11-784).

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- Action Alternative 2: High Intensity Development Scenario is a variation of Action Alternative 1 that also reflects future development occurring under the new Urban Village Plan and associated development regulations, including a reclassification to urban village zoning for the entire study area. This alternative would have the highest overall density and development, with substantially higher levels of commercial and multifamily residential development than the No Action Alternative and Action Alternative 1. The developed area would have a similar footprint to Action Alternative 1 but with taller proposed buildings. Similar to Action Alternative 1, more than half of the land area would remain preserved as open or park space.

### Proponent

Talbot Real Estate LLC

### Lead Agency

City of Bellingham Department of Planning and Community Development

### Location

Barkley Urban Village is located within the Barkley neighborhood of Bellingham, Washington. The urban village area is bounded by Vining Street on the east; Sunset Drive on the north; Illinois Street, Barkley Boulevard, and the Railroad Trail on the south; and the greenbelts east of Racine Street and St. Paul Street on the west (see Figure 1-1 in Chapter 1 of this EIS).

### Tentative Date of Implementation

2024 for Barkley Urban Village Plan, Development Agreement, Development Regulations, and Planned Action Ordinance implementation

### Responsible SEPA Official

Kurt Nabbeffeld, Development Services Manager  
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210 Lottie Street  
Bellingham, WA 98225

### EIS Contact Person

Darby Galligan, Senior Planner  
City of Bellingham Planning and Community Development  
[dgalligan@cob.org](mailto:dgalligan@cob.org) | 360-778-8389  
210 Lottie Street  
Bellingham, WA 98225

### Required Permits and Approvals

The following City of Bellingham actions would be required to implement the Proposal:

- Adoption of the Barkley Urban Village Plan as part of the City of Bellingham Comprehensive Plan per the Growth Management Act
- Approval of a Development Agreement between Talbot Real Estate, LLC and the City of Bellingham
- Adoption of Development Regulations for the Barkley Urban Village
- Adoption of a Planned Action Ordinance that will include mitigating measures related to potential environmental and transportation impacts

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These actions include opportunities for public comment, review by applicable City Boards and Commissions, and adoption by City Council, as outlined in Bellingham Municipal Code 21.10.150. Following approval of these implementing documents, permits for infrastructure improvements, construction projects, and redevelopment activities within the Barkley Urban Village over the buildout period could include, but not be limited to, the following:

- City of Bellingham
  - Land Use Permit Approvals; site plan, design review, and critical areas
  - Grading Permit Approval
  - Building Permit Approval
  - Mechanical Permit Approval
  - Plumbing Permit Approval
  - Electrical Permit Approval
  - Fire System Permit Approval
  - Street and other City Right-of-Way Use Permit Application Approval
  - Transportation Concurrency Application Approval
  - Stormwater Management Plan Approval
- Washington State Department of Ecology
  - Section 401 Water Quality Certification and Permit Approval
  - Section 402 National Pollutant Discharge Elimination System (NPDES) Permit Approval
- United States Army Corps of Engineers
  - Section 404 Permit Approval

### Authors and Principal Contributors to the EIS

This Draft EIS has been prepared under the direction of the City of Bellingham. The following consulting firms provided research and analysis associated with this Draft EIS:

- WSP USA: Analysis of earth, geology and soils; air quality, water resources; plants and animals; energy and natural resources; environmental health; land and shoreline use; public services and utilities; cumulative effects
- Transpo Group: Transportation analysis
- Biohabitats: Analysis of existing natural environment conditions
- Northwest Ecological Services: Wetland delineation, critical areas analysis, and preliminary mitigation strategy
- Drayton Archaeology: Analysis of cultural and historic resources effects
- MG2: Development of alternatives and visualizations

### Date of Draft EIS Issuance

December 8, 2023

### Draft EIS Comments

Comments on the Draft EIS are due at 5 p.m., January 8, 2024.

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Email comments are preferred and should be sent to [knabbefeld@cob.org](mailto:knabbefeld@cob.org). Please use the proposal name (Barkley Urban Village Draft EIS) in the subject line.

Written comments may also be mailed to:  
Kurt Nabbefeld, Development Services Manager  
City of Bellingham Planning and Community Development  
210 Lottie Street  
Bellingham, WA 98225

### Type and Timing of Subsequent Environmental Review

A Final EIS is expected to be issued in the first quarter of 2024.

### Location of Background Data

Relevant reports and studies associated with the Barkley Urban Village Plan can be viewed on the project website:

<https://cob.org/barkleyuv>

### Purchase/Availability of Draft EIS

This Draft EIS has been distributed to agencies, organizations, and individuals noted on the Distribution List after this Fact Sheet. The Draft EIS and appendices can be reviewed and downloaded on the project website at:

<https://cob.org/barkleyuv>

Copies of the Draft EIS are also available for review at the City of Bellingham Planning and Community Development Department at 210 Lottie Street, Bellingham, WA 98225.

Flash drives and a limited number of hard copies for public distribution are also available and may be purchased at the City's Planning and Community Development Department for the cost of production.

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## Distribution List

### Federal Agencies

- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Department of Fish and Wildlife

### Tribes

- Lummi Nation
- Nooksack Tribe

### State Agencies

- Washington State Department of Archaeology and Historic Preservation
- Washington State Department of Commerce – Growth Management Division
- Washington State Department of Ecology
- Washington State Department of Fish and Wildlife
- Washington State Department of Natural Resources
- Washington State Department of Transportation

### Regional Agencies

- Northwest Clean Air Agency
- Puget Sound Partnership

### Local Agencies, Commissions/Associations, and Other Entities

- Bellingham School District
- Cascade Natural Gas
- City of Bellingham
  - Mayor
  - City Council
  - Planning Commission
  - Staff
  - Barkley Neighborhood Association and Mayor’s Neighborhood Advisory Commission (MNAC) Representative
  - Roosevelt Neighborhood Association and MNAC Representative
  - Alabama Hill Neighborhood Association and MNAC Representative
- Puget Sound Energy
- Whatcom County Planning and Development Services
- Whatcom Transportation Authority

### Property Owners

- All property owners within the urban village boundary and 500 feet of the edge of the boundary

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Appendix D	Transportation Discipline Report

## Acronyms and Abbreviations

Acronym/Abbreviation	Definition
ADA	Americans with Disabilities Act
APE	Area of Potential Effect
BGEPA	Bald and Golden Eagle Protection Act
BMC	Bellingham Municipal Code
BMP	Best Management Practice
City	City of Bellingham
CFR	Code of Federal Regulations
CO	carbon monoxide
CO <sub>2</sub> e	carbon dioxide equivalent
CWA	Clean Water Act
dBA	Decibel measurement adjusted to consider the varying sensitivity of the human ear to different sound frequencies
Draft EIS	Draft Environmental Impact Statement
DEM	digital elevation model
Ecology	Washington Department of Ecology
EDNA	Environmental Designation for Noise Abatement
EDR	Environmental Data Resources, Inc.
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESSB	Washington State Engrossed Second Substitute House Bill
EV	electric vehicle
FEMA	Federal Emergency Management Agency
FFA	frequently flooded areas
Final EIS	Final Environmental Impact Statement
GHG	greenhouse gases
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
IPaC	Information for Planning and Consultation
ITP	Incidental Take Permit
LOS	level-of-service
MBTA	Migratory Bird Treaty Act
MEV	million entering vehicles

Acronym/Abbreviation	Definition
MFTE	Multi-Family Tax Exemption
MNAC	Mayor's Neighborhood Advisory Commission
MSAT	Mobile Source Air Toxics
MTCO <sub>2e</sub>	metric tons carbon dioxide equivalent
MUTCD	Manual on Uniform Traffic Control Devices
NAAQS	National Ambient Air Quality Standards
NOAA	National Oceanic and Atmospheric Administration
NO <sub>2</sub>	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWCAA	Northwest Clean Air Agency
O <sub>3</sub>	ozone
PHS	Priority Habitats and Species
PM <sub>2.5</sub>	particulate matter less than 2.5 micrometers in size
PM <sub>10</sub>	particulate matter less than 10 micrometers in size
ppm	parts per million
SEPA	State Environmental Policy Act
SDWA	Safe Drinking Water Act
SO <sub>2</sub>	sulfur dioxide
SPCC	Spill Prevention, Control, and Countermeasure
SWPPP	Storm Water Pollution Prevention Plan
TDM	Transportation Demand Management
TDML	total daily maximum load
TESC	Temporary Erosion and Sedimentation Control
TIP	Transportation Improvement Program
TMA	Transportation Management Association
USC	United States Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WCOG	Whatcom Council of Governments
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WRCC	Western Regional Climate Center

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Acronym/Abbreviation	Definition
WSDOT	Washington State Department of Transportation
WCOG	Whatcom Council of Governments
WTA	Whatcom Transportation Authority

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# Chapter 1 Introduction and Summary

## 1.1 Purpose and Need

The City of Bellingham (City) proposes to adopt an Urban Village Plan, associated development regulations, Planned Action Ordinance, and Development Agreement for the Barkley Urban Village, a 259-acre area in northeast Bellingham owned primarily by the Proponent, Talbot Real Estate, LLC. An urban village is a type of zoning designation intended to direct much of the City's future growth into compact urban centers (or "villages") while preserving the character of existing residential neighborhoods. This designation provides for a higher density of housing and job opportunities and a compatible mix of uses where people can work, shop, and recreate near where they live. The City's intent in encouraging the urban village style of development is to discourage urban sprawl and its associated impacts on the environment and society, such as reductions in air and water quality, increases in greenhouse gas emissions, reduced energy efficiency, and more severe impacts on sensitive environmental areas such as habitat.

Since the late 1980s, Barkley Village has developed as a mixed-use area under Commercial and Industrial zoning designations. The Barkley Neighborhood Plan identifies the Barkley Village area as an urban development center and already functions as an urban village in many ways (City of Bellingham 2016a, 2021a). However, the area is currently regulated under 10 different planned development contracts and does not have a formally adopted Urban Village Plan or zoning. The current zoning and regulations have resulted in a complex regulatory environment that does not accurately reflect the urban village vision for the district or support nimble redevelopment to meet the City's infill goals. A formal Urban Village designation is needed to streamline long-term redevelopment of the Barkley Village area and achieve consistency with the future planning vision of the City and the Barkley neighborhood.

This Draft Environmental Impact Statement (EIS) provides a comprehensive, area-wide environmental review of potential future growth scenarios in the Barkley area consistent with the proposed Urban Village Plan. The intent of this initial environmental review is to help streamline future development plans while ensuring the protection of the built, natural, and social environment, as described further in Section 1.4.

## 1.2 Proposal Location and Study Area

The location of the Proposal is the approximately 259-acre area within the Barkley neighborhood of Bellingham, Washington, bounded by Vining Street on the east; Sunset Drive on the north; Illinois Street, Barkley Boulevard, and the Railroad Trail on the south; and the greenbelts east of Racine Street and St. Paul Street on the west. Figure 1-1 shows the boundaries of the proposed urban village. The study area is generally the same as the proposal location but is a bit larger for the transportation analysis, as described in Section 3.8.



Figure 1-1. Proposal Location and Barkley Urban Village Boundary



### 1.3 Urban Village Planning Process

The 2016 Bellingham Comprehensive Plan encourages a system of urban villages and transit corridors that would accommodate a substantial share of the City's future growth and promotes the efficient development of mixed-use activity centers while preserving the character of established single-family residential neighborhoods (City of Bellingham 2016a). The City has adopted master plans, design standards, and regulations for six urban villages: the Downtown, Waterfront, Fairhaven, Fountain, Samish Way, and Old Town Districts.

Per Bellingham Municipal Code (BMC) 20.37, the City requires the development of a master plan for each urban village that establishes the ultimate mix of land uses, appropriate densities, infrastructure requirements, and other typical zoning, design, and development standards. Individual development and design standards are also developed for each urban village, consistent with an adopted master plan, to respond to the existing or intended qualities and character unique to each village. The master plan is then implemented through the adoption of these development and design standards in the city code.

The City and Talbot Real Estate, LLC are currently working through a process to adopt an Urban Village Plan and associated development regulations for the Barkley Village area in a format consistent with the City's other urban village plans and regulations. Because this process involves adoption of a Comprehensive Plan Amendment, it is a Type VI legislative process per BMC 21.10.150. Type VI processes require a Planning Commission public hearing and City Council adoption after a Final EIS is issued. Talbot Real Estate, LLC applied to place the Comprehensive Plan Amendment on the City Council's annual review docket as required by BMC 21.10.150 on March 14, 2022.

The City and the Proponent envision that they will also enter into a Development Agreement that will further guide long-term development of the Barkley Urban Village. Concurrent with the adoption of development regulations and the Barkley Urban Village Plan Development Agreement, it is anticipated that the City will also adopt a Planned Action Ordinance.

This Draft EIS addresses the probable significant adverse impacts that could occur as a result of development of the Barkley Urban Village consistent with the Barkley Urban Village Plan, implementing regulations, and the proposed Development Agreement during the buildout horizon.

It is proposed that the development of Barkley Village be designated by the City of Bellingham as a Planned Action pursuant to the State Environmental Policy Act (SEPA) (Washington Administrative Code [WAC] 197-11-168 (c)). Under SEPA, the basic steps in designating Planned Action projects are to: (1) prepare an EIS, (2) designate the project as a Planned Action by the adoption of an ordinance, and 3) review future application for consistency with the designated Planned Action. After completion of the Barkley Urban Village Final EIS, it is anticipated that the City will consider and potentially adopt a Barkley Urban Village Planned Action Ordinance. Development projects anticipated to be included in the Planned Action Ordinance are identified in the Draft EIS.

The City's Barkley Urban Village Planned Action Ordinance, once adopted, will demonstrate that adequate environmental review has been completed for these identified projects and that further environmental review under SEPA will not be necessary if it is determined that the future development is consistent with the provisions of the Planned Action Ordinance, the Development Agreement, and other applicable regulations. The Planned Action Ordinance would only apply to those future development projects and features identified in this EIS that have been reasonably defined at this time for environmental review purposes and that will be subject to City of Bellingham permit approval. Specific projects that have not been reasonably defined at this stage to allow full environmental review could require additional SEPA environmental review at the time of permit submittal.



### 1.3.1.1 Phasing

A definitive plan for long-term redevelopment of the Barkley Urban Village cannot be formulated at this stage, as specific tenants and users have not been and cannot reasonably be identified for the development buildout period. Therefore, specific building footprints, sizes and designs, the specific location of uses within each area of the Barkley Urban Village, and the specific layout and design of parks, trails and open space cannot be pinpointed. However, in order to conduct comprehensive environmental review, a number of assumptions have been developed for the EIS alternatives related to the continuation of certain existing uses on the site, the amount of mixed-use development, the amount of open space (including parks, trails, and habitat), building heights, the road network, the utility and stormwater concept, impervious area, parking ratios, employment numbers, and mitigation measures. These assumptions create an envelope of potential development and a range of development scenarios (without having specific building plans) and allow for the analysis of probable significant environmental impacts under SEPA.

A different mix and configuration of land uses is allowed within each alternative to provide flexibility for future development to adjust to economic and market conditions over time and to the requirements of specific developers/tenants. As such, the Development Agreement and Planned Action Ordinance would not likely prescribe specific building footprints, sizes and designs, exact locations of uses within development areas, or specific designs of the park and trail system. Mitigation measures are in some instances tailored to mitigate impacts that would correlate to a specific development project, such as the traffic mitigation presented in Section 3.8.4.

The Proposed Actions evaluated in this Draft EIS are as follows:

1. Adoption of the Barkley Urban Village Plan that identifies the location, scale and mix of uses, infrastructure improvements, public amenities, and phasing
2. Adoption of Barkley Urban Village implementing Development Regulations
3. Adoption of a Planned Action Ordinance for the Barkley Urban Village
4. Adoption of a Development Agreement between the City and the Proponent that will identify implementing land use regulations (zoning, subdivision, design standards), infrastructure requirements, phasing, development standards, and mitigation measures within the Barkley Urban Village

## 1.4 State Environmental Policy Act Process

The Proposal by Talbot Real Estate, LLC to designate the Barkley Village portions of the Barkley neighborhood as an urban village is a “Planned Action.” A Planned Action is a process for the review and approval of a proposal to develop a specific geographic area under SEPA (Revised Code of Washington 43.21C.440 and WAC 197-11-164, WAC 197-11-168 (c), and WAC 197-11-172)). A Planned Action provides a more detailed environmental analysis up front during the area-wide planning stage rather than during the review of individual projects. Regulatory agencies then evaluate individual projects for consistency with the Planned Action.

This Draft EIS is an informational document required by SEPA before the City can move forward with a Planned Action decision for the Barkley Urban Village Plan. The Draft EIS provides the public; city, state, and federal government agencies; and tribal governments with qualitative and quantitative information to consider in the decision-making process. It also allows the public and government agencies to comment on the proposed scenario and alternatives.

This Draft EIS describes the following:

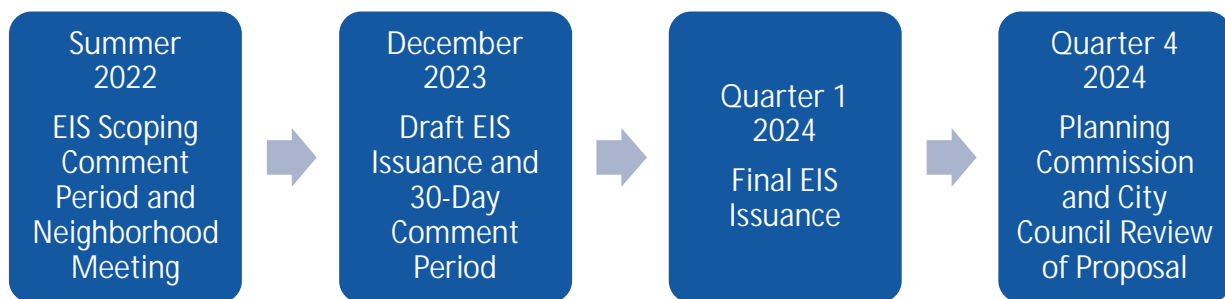
- Existing conditions of the study area
- A Proposal (Action Alternative 1) and two alternatives (No Action Alternative and Action Alternative 2)
- Potential significant, unavoidable, and adverse impacts of the proposal and alternatives
- Potential beneficial outcomes where alternatives protect environmental features in a sustainable manner; improve built, natural, and social environmental characteristics; and emphasize improved access by car, transit, foot, and bike
- Mitigation measures to avoid, minimize, or compensate for potential adverse impacts associated with each of the proposed development alternatives

## 1.5 Public Involvement and Review

At the beginning of the Draft EIS development process, the City held an environmental scoping period and invited public comments between July 15 and August 15, 2022, on topics to study in this Draft EIS. At the start of the comment period, the City issued a public notice identifying its intent to evaluate the No Action Alternative and two other alternatives with varying future land uses, levels of growth, and other elements. The notice identified the following areas for discussion in the EIS: earth, air, water, plants and animals, energy and natural resources, environmental health, land and shoreline use, transportation, public services and utilities, and cumulative effects.

The City held an initial virtual neighborhood meeting on July 26, 2022, to discuss the new Urban Village Plan and zoning and introduce the EIS scoping period. The City received three comments during the scoping period related to construction stormwater runoff, the urban village boundary, planned private property acquisitions, and future plans for St. Clair Street.

The public comment period for this Draft EIS extends from December 8, 2023, to January 8, 2024. After the 30-day comment period, a Final EIS will be prepared that responds to comments on the Draft EIS and describes a Preferred Alternative (aka the Proposal), which is Action Alternative 1. After issuance of the Final EIS, the draft Urban Village Plan, associated development regulations, Planned Action Ordinance, and Development Agreement will be submitted for review by the Planning Commission and City Council. The Planning Commission and City Council will hold additional public hearings and work sessions to review and receive further public comment on the details and implementation of the final proposed alternative.



## 1.6 Proposal Objectives

Talbot Real Estate, LLC, has identified the following principles and objectives to guide development of the urban village:

- Develop and grow an inclusive, vibrant community:

- Continue controlled growth as an economic driver for business and innovation
- Build toward a balanced, diverse mix of housing, office, retail, restaurant, entertainment, and public spaces
- Create safe, equitable places to live and work, which support local economic success, including affordable housing
- Build living infrastructure connected to the natural environment to enable a flourishing ecosystem that:
  - Protects land for the benefit of people and wildlife
  - Protects, restores, and expands wetlands and habitat
  - Provides educational and interpretive opportunities to engage with the environment
  - Expands interconnected trails for health, well-being, and education
- Support sustainable connectivity, transportation, and community:
  - Reduce the need to drive and encourage walking, cycling, and low-carbon transport through a well-planned infrastructure of pedestrian-friendly roads, multimodal trails, and transit improvements
  - Expand, parks, trails, greenways, and public space

## 1.7 Proposal and Alternatives

This Draft EIS assesses the potential impacts and benefits associated with three development alternatives for the Barkley Urban Village area:

- The No Action Alternative assumes growth and development would occur in line with current land use plans and regulations, and the Urban Village Plan and associated development regulations would not be adopted. A mix of residential, commercial, industrial, and open space land uses would remain, similar to today's conditions. Density and intensity of development for all land use types would generally be the lowest of the alternatives studied, except there would be higher levels of single-family housing units and industrial uses than the two action alternatives. However, because density of buildings would be lower, the amount of land affected by development would be higher than Action Alternatives 1 and 2. The No Action Alternative would preserve the least amount of undeveloped land.
- Action Alternative 1/Preferred Alternative: Moderate Density Development Scenario (Proposal) reflects future development that would occur under the new Urban Village Plan and associated development regulations, including a reclassification to Urban Village zoning for the entire study area. This alternative would have more overall density and development than the No Action Alternative but less than Action Alternative 2. A mix of residential, commercial, industrial, and open space land uses would remain. There would be higher levels of industrial and single-family residential development and lower levels of commercial and multifamily development than Action Alternative 2. The greatest amount of undeveloped land would be preserved as open space under this alternative. Action Alternative 1 is the Preferred Alternative. Part of the Proposal is the adoption of a Planned Action Ordinance by the City Council and the approval of a Development Agreement by the City and the Proponent.
- Action Alternative 2: High Intensity Development Scenario is a variation on Action Alternative 1 that also reflects future development occurring under the new Urban Village Plan and associated development regulations, including a reclassification to Urban Village zoning for the entire study area. A mix of residential, commercial, industrial, and open space land uses

would remain. This alternative would have the highest overall density and development, with substantially higher levels of commercial and multifamily residential development than the No Action Alternative and Action Alternative 1. There would be fewer total single-family housing units than the other two alternatives and the same amount of industrial space as under existing conditions. A slightly lower amount of undeveloped land would be preserved as open space under this alternative than Action Alternative 1.

Chapter 2 provides more detailed information about the Proposal and the alternatives studied.

## 1.8 Summary of Impacts and Mitigation Measures

Table 1-1 summarizes the environmental topic areas evaluated in this Draft EIS, potential impacts, and mitigation measures as applicable. The table focuses on the differences among the alternatives. Chapter 3 provides more detailed information about anticipated benefits, impacts and mitigation measures by environmental topic area, including impacts common to all alternatives.

## 1.9 Issues to be Resolved

The key issues to be resolved by decision makers regarding the Barkley Urban Village Plan proposal include:

- Finalization and approval of an Urban Village Plan and Comprehensive Plan Amendment through a public process
- Finalization and approval of a Planned Action Ordinance to streamline development in the urban village while mitigating impacts
- Finalization and adoption of a Development Agreement to guide long-term development of the Barkley Urban Village
- Finalizing the desired zoning designation overlays for the urban village
- Developing and implementing a mitigation strategy for impacts to wetlands

Table 1-1. Summary of Benefits, Impacts, and Mitigation Measures by Alternative

Topic Area	No Action Alternative	Action Alternative 1 (Preferred Alternative)	Action Alternative 2	Mitigation Measures
Earth, Geology, and Soils	Lowest levels of excavation, export, and fill because of lower levels of new development.	Moderate levels of excavation, export, and fill because of moderate levels of new development.	Highest levels of excavation, export, and fill because of highest levels of new development.	Compliance with applicable regulations related to grading, erosion, and sedimentation control. No additional mitigation measures required.
Air Quality	Lowest projected net new emissions of air pollutants and greenhouse gases based on lowest number of forecast new vehicle trips (lowest levels of new development).	More projected net new emissions of air pollutants and greenhouse gases than No Action, less than Action Alternative 2, based on moderate new number of forecast vehicle trips (moderate levels of new development). Higher-density, pedestrian-friendly development patterns and transportation demand management strategies could help reduce emissions.	Highest projected net new emissions of air pollutants and greenhouse gases based on the highest new number of forecast vehicle trips (highest levels of new development). Higher-density, pedestrian-friendly development patterns and transportation demand management strategies could help reduce emissions.	Compliance with applicable emissions regulations would be required under all alternatives. No additional mitigation measures required.
Water Resources	<ul style="list-style-type: none"> <li>▪ Greatest impacts to wetlands</li> <li>▪ Largest amount of new impervious surfaces</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lowest impacts to wetlands</li> <li>▪ Lowest amount of new impervious surfaces</li> </ul>	<ul style="list-style-type: none"> <li>▪ Moderate impacts to wetlands</li> <li>▪ Moderate amount of new impervious surfaces</li> </ul>	<ul style="list-style-type: none"> <li>▪ Development and implementation of a mitigation plan to offset proposed impacts in compliance with City Critical Areas regulations.</li> <li>▪ Compliance with applicable regulations related to stormwater management, erosion, and sedimentation control.</li> </ul>
Plants and Animals	<ul style="list-style-type: none"> <li>▪ Highest potential impacts to plant and animal habitat</li> <li>▪ Lowest acreage of habitat preserved as open space</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lowest potential impacts to plant and animal habitat</li> <li>▪ Highest acreage of habitat preserved as open space</li> </ul>	<ul style="list-style-type: none"> <li>▪ Moderate potential impacts to plant and animal habitat</li> <li>▪ Similar to Action Alternative 1 for preservation of open space</li> </ul>	<ul style="list-style-type: none"> <li>▪ Development and implementation of a mitigation plan to offset proposed impacts in compliance with City Critical Areas regulations.</li> <li>▪ Compliance with applicable regulations related to landscaping and vegetation.</li> </ul>

Topic Area	No Action Alternative	Action Alternative 1 (Preferred Alternative)	Action Alternative 2	Mitigation Measures
Energy and Natural Resources	Lowest total energy consumption and needs because of lower levels of new development.	Moderate total energy consumption and needs, lower per capita energy consumption than No Action Alternative.	Highest total energy consumption and needs, lower per capita energy consumption than No Action Alternative.	Compliance with applicable City of Bellingham regulations and codes related to energy efficiency and consumption. No additional mitigation measures required.
Environmental Health <ul style="list-style-type: none"> <li>Noise</li> <li>Hazardous Materials</li> </ul>	<ul style="list-style-type: none"> <li>Barely perceptible increase in traffic noise levels compared to existing conditions</li> <li>No toxic or hazardous chemicals are expected to be stored, used or produced during construction or operations.</li> </ul>	<ul style="list-style-type: none"> <li>Noticeable increase in traffic noise levels compared to No Action, slightly lower noise levels than Action Alternative 2</li> <li>Same as No Action Alternative</li> </ul>	<ul style="list-style-type: none"> <li>Noticeable increase in traffic noise levels compared to No Action, slightly higher noise levels than Action Alternative 1</li> <li>Same as No Action Alternative</li> </ul>	<ul style="list-style-type: none"> <li>Compliance with applicable noise regulations during construction. No additional mitigation measures proposed for long-term noise changes.</li> <li>Compliance with applicable requirements for hazardous materials handling during construction. No additional mitigation measures required.</li> </ul>
Land and Shoreline Use <ul style="list-style-type: none"> <li>Land Use Patterns and Policies</li> <li>Socioeconomics</li> <li>Housing</li> <li>Historic and Cultural Resources</li> <li>Aesthetics, Light and Glare</li> <li>Parks and Recreation</li> </ul>	<ul style="list-style-type: none"> <li>Lowest increase in future development levels</li> <li>Lowest increase in future capacity for population and jobs</li> <li>Lowest increase in housing units (including affordable units)</li> <li>No impacts to historic and cultural resources</li> <li>Most suburban aesthetic character with lowest density/building heights</li> <li>Lowest acreage of land planned for open space, parks/playgrounds, and active spaces</li> </ul>	<ul style="list-style-type: none"> <li>Moderate increase in future development levels</li> <li>Moderate increase in future capacity for population and jobs</li> <li>Moderate increase in housing units (including affordable units)</li> <li>No impacts to historic and cultural resources</li> <li>Moderately urban aesthetic character with moderate density/building heights</li> <li>Highest acreage of land planned for open space, parks/playgrounds, and active spaces; additional trail network</li> </ul>	<ul style="list-style-type: none"> <li>Highest increase in future development levels</li> <li>Highest increase in future capacity for population and jobs</li> <li>Highest increase in housing units (including affordable units)</li> <li>No impacts to historic and cultural resources</li> <li>Most urban aesthetic character with highest density/building heights</li> <li>Similar to Action Alternative 1 for acreage of open space, parks/playgrounds, active spaces, and trail network</li> </ul>	Compliance with applicable City of Bellingham land use development codes, urban village design guidelines, and zoning regulations. No additional mitigation measures required.

Topic Area	No Action Alternative	Action Alternative 1 (Preferred Alternative)	Action Alternative 2	Mitigation Measures
Transportation	<ul style="list-style-type: none"> <li>Lowest impact on transportation network</li> <li>Smallest number of new vehicular peak-hour trips, intersections operating at Level-of-Service F</li> <li>Sufficient transit capacity</li> <li>Lowest parking demand</li> </ul>	<ul style="list-style-type: none"> <li>Moderate impacts on transportation network</li> <li>Moderate number of new vehicular peak-hour trips, intersections operating at Level-of-Service F</li> <li>Sufficient transit capacity</li> <li>Moderately higher parking demand</li> </ul>	<ul style="list-style-type: none"> <li>Greatest impacts on transportation network</li> <li>Highest number of new vehicular peak-hour trips, intersections operating at Level-of-Service F</li> <li>Some challenges with transit capacity</li> <li>Highest parking demand</li> </ul>	Proposed roadway improvements and transportation demand management strategies would adequately mitigate the impacts of Action Alternative 1 (Preferred Alternative). These mitigation measures are anticipated to be phased and implemented with each specific development project as set forth in Table 3-35. There would be significant unavoidable adverse impacts under Action Alternative 2.
Public Services and Utilities	Lowest new demands on public services and utilities	Moderate new demands on public services and utilities	Highest new demands on public services and utilities	Compliance with all relevant standards and guidelines for provisions of public services and utilities to meet growth in demand. No additional mitigation measures required.

## Chapter 2 Description of Proposal and Alternatives

This Draft EIS assesses the potential impacts and benefits associated with three alternatives for the Barkley Urban Village study area:

- No Action Alternative
- Action Alternative 1: Moderate Density Development Scenario (Proposal)
- Action Alternative 2: High Intensity Development Scenario

Table 2-1 compares the major features of the alternatives, and Sections 2.1 through 2.3 provide more detailed descriptions of the alternatives, including a comparison of their similarities and differences. Figure 2-1, Figure 2-2, and Figure 2-3 provide graphical depictions of the alternatives at a conceptual level.

Table 2-1. Comparison of Existing Conditions and Alternatives

Characteristic	Existing Conditions	No Action Alternative	Action Alternative 1 (Preferred Alternative)	Action Alternative 2
Population	2,170 <sup>a</sup>	1,685 <sup>a</sup>	5,387 <sup>a</sup>	6,837 <sup>a</sup>
Jobs	1,964 <sup>b</sup>	2,708 <sup>b</sup>	4,909 <sup>b</sup>	9,928 <sup>b</sup>
Land Uses				
Retail (square feet)	275,803	355,803	624,526	880,127
Office/Commercial (square feet)	418,413	588,413	1,399,328	3,574,741
Hotel (rooms)	0	0	223	338
Industrial (square feet)	215,000	465,000	375,000	215,000
Multifamily residential (dwelling units)	464	1,339	2,884	3,787
Single-family residential (dwelling units)	12	130	100	22
Community/Cultural <sup>c</sup> (square feet)	0	0	26,800	26,800
Open Space <sup>d</sup> (acres)	108.1	69.85	115.27	110.75
Park/Playground <sup>e</sup> (acres)	1.65	5.22	16.69	17.14
Active Space <sup>f</sup> (acres)	2.78	4.12	13.75	13.75

Source: U.S. Census Bureau 2020a, 2020b; Talbot Group, LLC, MG2, 2021 Whatcom County Buildable Lands Report  
a Existing population based on U.S. Census Bureau 2020 American Community Survey 5-year estimates for Census Tract 8.03, Block Group 4, which most closely matches the proposed urban village boundary but includes some single-family residences that are southeast of the proposed urban village boundary. Future population capacity is calculated based on formulas in 2021 Whatcom County Buildable Lands Report, which assumes 2.499 persons per occupied single-family household (97.5% occupancy rate) and 1.850 persons per occupied multifamily unit (96.4% occupancy rate).

b Existing jobs based on U.S. Census Bureau 2020 Longitudinal Employer-Household Dynamic Data for the study area. Future job capacity calculated based on formulas in 2021 Whatcom County Buildable Lands Report, which assumes one employee for every 440 square feet of commercial space and one employee for every 660 square feet of industrial space (95% occupancy rate).

c Community is defined as spaces that would be open to community uses, such as visitors and interpretive centers for the future planned trail system. Existing and future public buildings, such as the Whatcom County library branch and future school district headquarters, are included in the Office/Commercial category.

d Open Space is based on the definition in BMC 20.08.020 (b). Passive Open Space means all common open space not meeting



the definition of usable space, including, but not limited to, critical areas and their associated buffers, vegetated roofs, and landscape-based low-impact development best management practices.

e Park/Playground is designated space for active recreation.

f Active Space are areas that could be repurposed as community gathering spaces, such as plazas and low-traffic streets.

## 2.1 No Action Alternative

SEPA requires the evaluation of a No Action Alternative to provide a benchmark for comparing the other alternatives. Figure 2-1 graphically depicts the functional land uses, development types, street network and other major features of the No Action Alternative.

Under the No Action Alternative, current land use plans and regulations would remain in place, and the Urban Village Plan and associated development regulations, Planned Action Ordinance, and Development Agreement would not be adopted. Existing zoning classifications, which include Industrial, Industrial/Commercial, Commercial/Industrial/Residential Mixed, Commercial, and Industrial/Residential Mixed classifications, would be retained. A mix of residential, commercial, industrial, open space, and recreational land uses would remain. Redevelopment would continue to occur under the multiple different development agreements that exist today.

As shown in Table 2-1, the No Action Alternative would add about 80,000 square feet of retail space (representing about a 30% increase), 160,000 square feet of office space (37% increase), 250,000 square feet of industrial space (116% increase), 287 multifamily residential units (62% increase), and 130 single-family residential units (more than 1,000% increase) compared to existing conditions. These differences in development would result in the lowest capacity for new jobs and population compared to the two action alternatives.

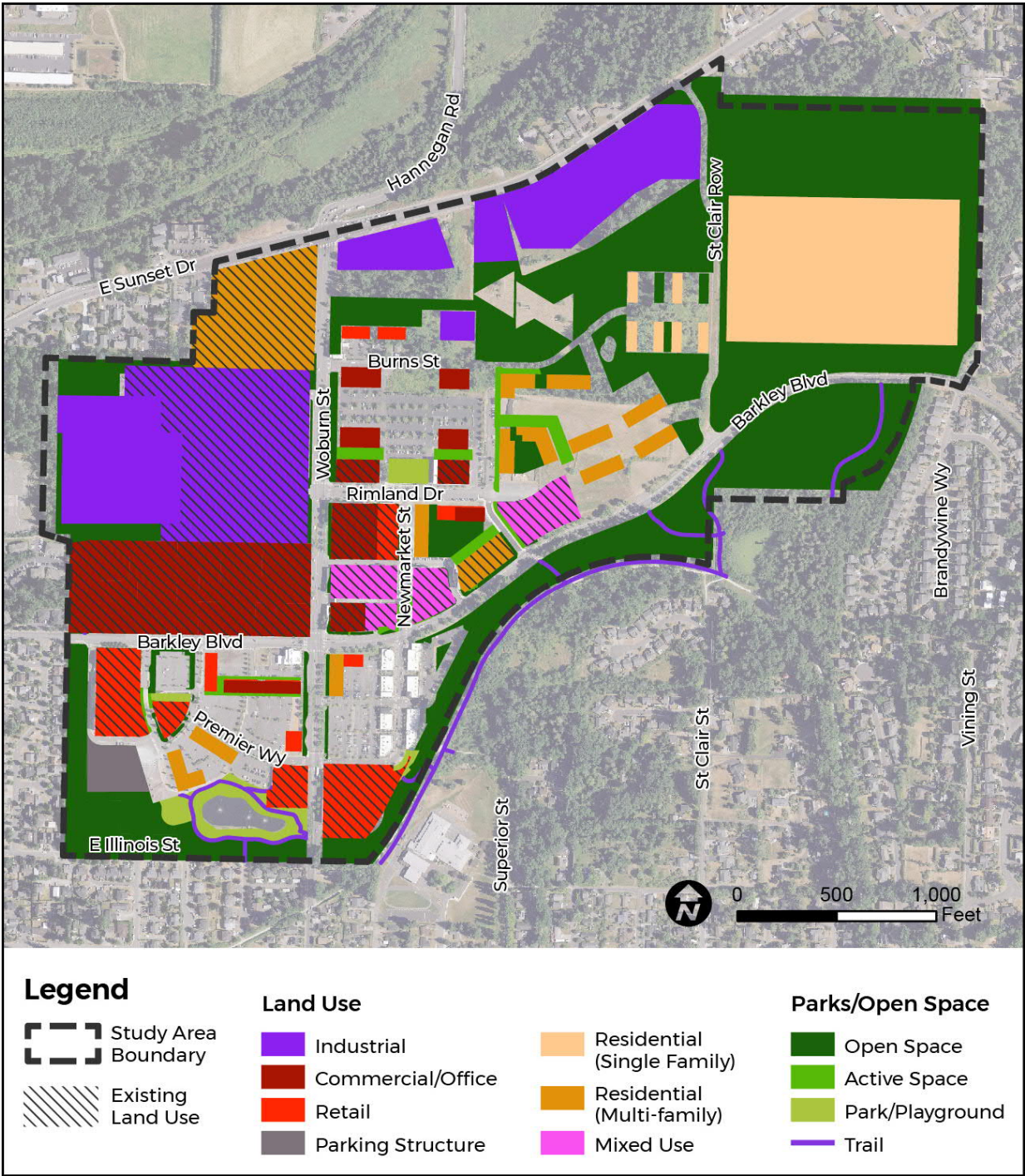
Growth under the No Action Alternative would generally occur at lower levels than the two action alternatives, consistent with existing land use plans and regulations. The No Action Alternative would have the lowest levels of new development for most land use types compared to the two action alternatives, except for:

- Industrial land uses, which would have the greatest amount of square footage of all the alternatives (465,000 square feet). Note that because BMC 20.38.050 D allows a wide range of land use types in industrial zones (including retail trade establishments such as building material, hardware, and garden supply stores; eating and drinking places; service establishments such as salons, automotive repair, and medical laboratories; and many others), this change would not necessarily result in an increase in typical industrial uses, such as manufacturing and warehousing.
- Single-family residential land uses, which would have the largest number of housing units (130 total units).

Similar to existing conditions, most new buildings would be low-rise structures (1 to 4 stories), and surface parking lots would be provided adjacent to new buildings. The No Action Alternative would modify the existing street network by adding new roads, including the development of a new St. Clair Street between Barkley Boulevard and Sunset Drive, and the extensions of the existing Burns Street and Rimland Drive westward to St. Clair Street.

The No Action Alternative would preserve the least amount of undeveloped land as open space compared to existing conditions and the two action alternatives, and would have less park/playground and active space areas than the action alternatives. About 35% of the urban village footprint would be dedicated to open space, park/playground, and active uses under the No Action Alternative.

Figure 2-1. No Action Alternative



## 2.2 Action Alternative 1/Preferred Alternative: Moderate Density Development Scenario (Proposal)

Action Alternative 1, the Proposal/Preferred Alternative, assumes future growth and development would occur consistent with the proposed new Urban Village Plan and associated development regulations and Development Agreement. SEPA review would occur pursuant to the Planned Action Ordinance. The entire area within the urban village boundary would be rezoned to an Urban Village classification to provide flexibility for future development. A mix of residential, commercial, industrial, open space, and recreational land uses would remain. Figure 2-2 graphically depicts the functional land uses, development types, street network, and other major features of Action Alternative 1.

As shown in Table 2-1, Action Alternative 1 would add about 350,000 square feet of retail space (representing more than a 100% expansion), about 1 million square feet of office space (more than 200% increase), 160,000 square feet of industrial space (74% increase), 2,420 multifamily residential units (more than 500% increase), and 100 single-family residential units (more than 700% increase) compared to existing conditions. These differences in development would result in the capacity for about 2,200 more jobs and 2,700 more residents in the area compared to the No Action Alternative.

Action Alternative 1 would generally have higher levels of growth, development, and density than the No Action Alternative, but lower levels than Action Alternative 2, as shown in Table 2-1.

Compared to the No Action Alternative, Action Alternative 1 would have:

- Higher additional square footage of retail and office uses.
- Lower additional square footage of industrial uses. As noted in Section 2.1, because BMC 20.38.050 D allows a wide range of land use types in industrial zones (including retail trade establishments such as building material, hardware, and garden supply stores; eating and drinking places; service establishments such as salons, automotive repair, and medical laboratories; and many others), this change would not necessarily result in an increase in typical industrial uses, such as manufacturing and warehousing.
- More hotel rooms (No Action Alternative assumes no hotel would be built).
- Substantially higher numbers of additional multifamily housing units.
- Fewer single-family housing units.

Compared to Action Alternative 2, Action Alternative 1 would have:

- Lower additional square footage of retail and office uses.
- Higher additional square footage of industrial uses.
- Fewer hotel rooms.
- Fewer multifamily housing units.
- More single-family housing units.

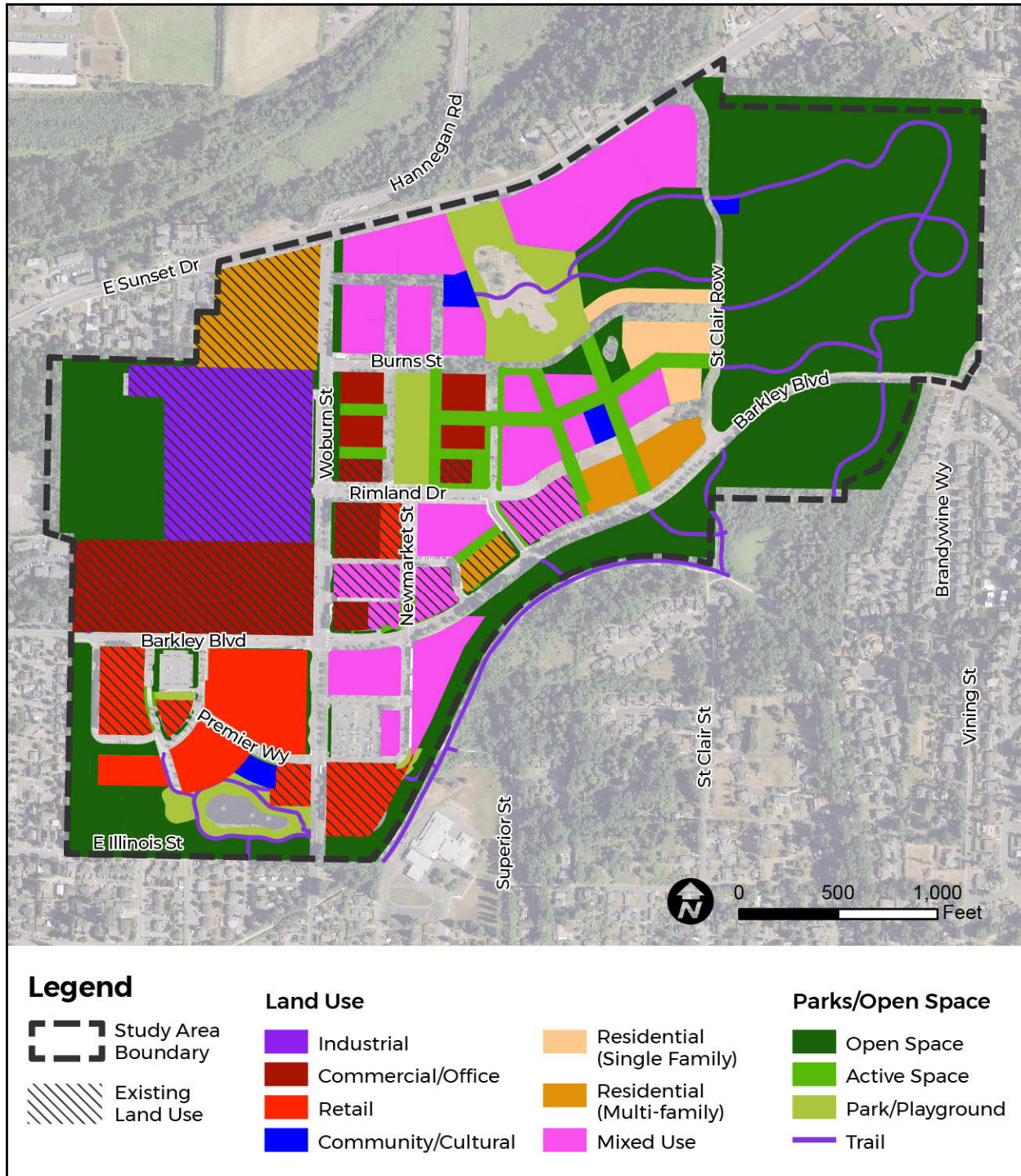
Most new buildings under Action Alternative 1 would be 1 to 6 stories, with the potential for a few substantially taller buildings (up to 25 stories). Additional new parking would primarily be provided below ground level, with some existing parking lots preserved at the surface level. Action Alternative 1 would include the same modifications to the street network as the No Action Alternative, including the development of St. Clair Street between Barkley Boulevard and Sunset Drive, and the extensions of the existing Burns Street and Rimland Drive east to St. Clair Street.

Action Alternative 1 would preserve the largest amount of undeveloped land as open space and would have more park/playground and active space areas than the No Action Alternative, including a new



trail network in the forested area on the east side of the urban village. About 56% of the urban village footprint would be dedicated to open space, park/playground, and active uses under Action Alternative 1.

Figure 2-2. Action Alternative 1/Preferred Alternative: Moderate Density Development Scenario



### 2.3 Action Alternative 2: High Intensity Development Scenario

Action Alternative 2 is a variation of Action Alternative 1 that also assumes adoption of the proposed new Urban Village Plan and associated development regulations. It is not anticipated that a Planned Action Ordinance or a Development Agreement would be adopted or approved as part of Action Alternative 2. As with Action Alternative 1, the entire area within the urban village boundary would be rezoned to an Urban Village classification to provide flexibility for development. A mix of residential, commercial, industrial, open space, and recreational land uses would remain. Figure 2-3 graphically depicts the functional land uses, development types, street network, and other major features of Action Alternative 2.

As shown in Table 2-1, Action Alternative 2 would add about 600,000 square feet of retail space (representing a more than 200% expansion), about 3.1 million square feet of office space (representing about a 730% increase), 22 single-family residential units (about a 180% increase), and 3,323 multifamily residential units (about a 700% increase) compared to existing conditions. The square footage of industrial uses would remain the same as existing conditions. These differences in development would result in the capacity for about 7,200 more jobs and about 4,100 more residents in the area compared to the No Action Alternative.

Action Alternative 2 would have the highest levels of growth and development for all land use types, except for industrial and single-family residential uses. Action Alternative 2 would have the highest overall density of all of the alternatives.

Compared to the No Action Alternative, Action Alternative 2 would have:

- Substantially higher additional square footage of retail and office uses.
- More hotel rooms (No Action Alternative assumes no hotel would be built).
- Substantially higher numbers of multifamily housing units.
- Fewer single-family housing units.

Compared to Action Alternative 1, Action Alternative 2 would have:

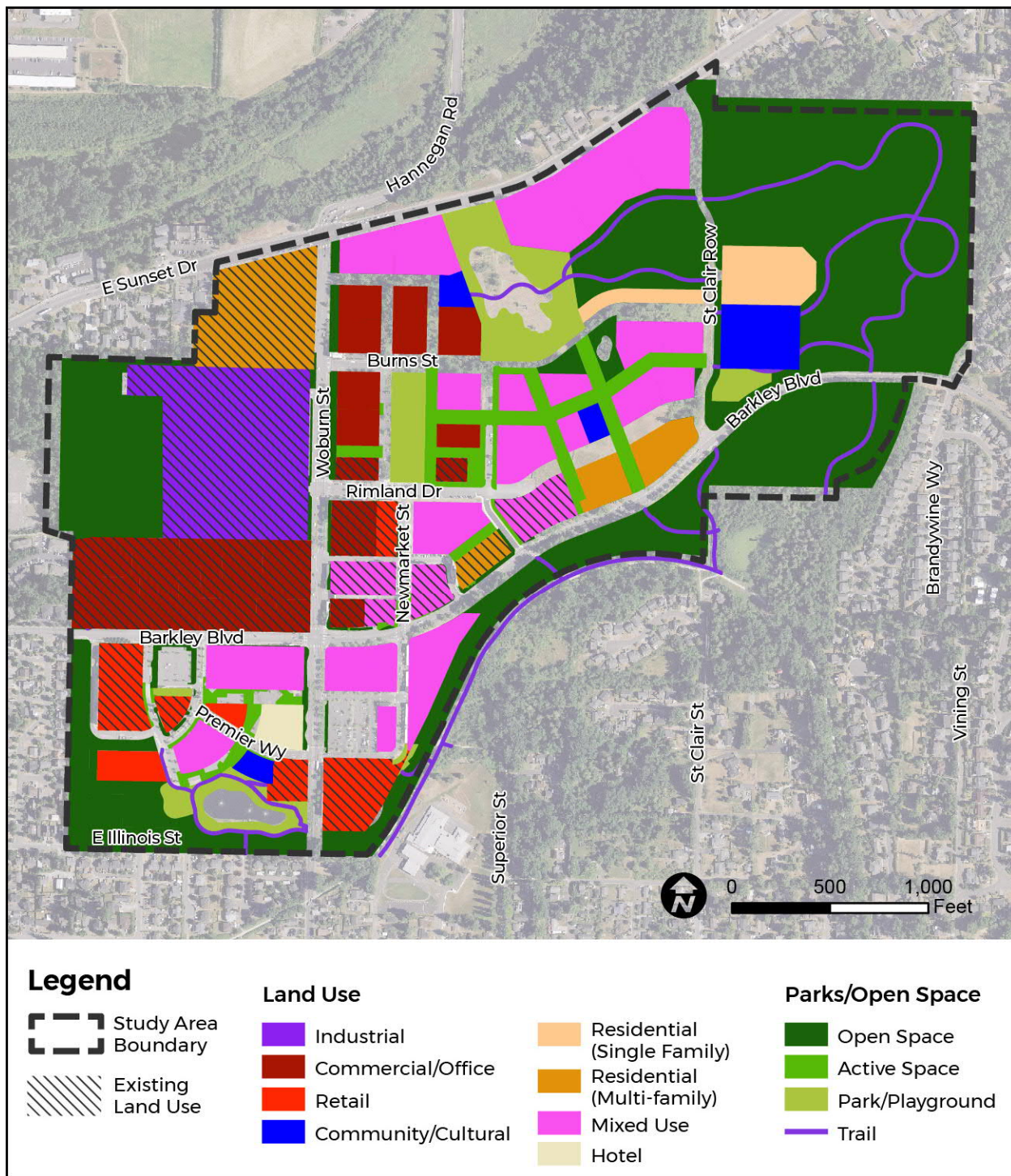
- Substantially higher square footage of retail and office uses.
- More hotel rooms.
- More multifamily housing units.
- Fewer single-family housing units.

New buildings under Action Alternative 2 would generally be taller than under Action Alternative 1 to accommodate the additional proposed density, with many at six stories and the potential for a greater number of taller buildings (15 to 25 stories). Similar to Action Alternative 1, additional new parking would primarily be provided below ground level, with some existing parking lots preserved at the surface level. Action Alternative 2 would include the same modifications to the street network as Action Alternative 1 and the No Action Alternative, including the development of St. Clair Street between Barkley Boulevard and Sunset Drive, and the extensions of Burns Street and Rimland Drive west to St. Clair Street.

Action Alternative 2 would preserve slightly less undeveloped land as open space (by about 1 acre) than Action Alternative 1, as some of this land would be developed as single-family housing. Action Alternative 2 would have the same amount of park/playground and active space areas as Action Alternative 1, including a new trail network in the forested area on the west side of the urban village. About 55% of the urban village footprint would be dedicated to open space, park/playground, and active uses under Action Alternative 2, which is almost the same as Action Alternative 1.



Figure 2-3. Action Alternative 2: High Intensity Development Scenario



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## Chapter 3 Affected Environment, Impacts, and Mitigation

Sections 3.1 through 3.9 of this chapter describe the methodology; affected environment; impacts of the No Action Alternative, Action Alternative 1/Preferred Alternative, and Action Alternative 2; and mitigation measures as applicable for the following topic areas:

- Earth, Geology, and Soils
- Air Quality
- Water Resources
- Plants and Animals
- Energy and Natural Resources
- Environmental Health (Noise and Hazardous Materials)
- Land and Shoreline Use
- Transportation
- Public Services and Utilities

Section 3.10 provides a brief discussion of cumulative effects associated with the alternatives.

### 3.1 Earth, Geology, and Soils

#### 3.1.1 Methodology

Project scientists conducted a review of relevant information about existing conditions of earth, geology, and soils that are applicable to the study area (see Section 1.2), including the following sources:

- Barkley Village Wetland Delineation (Biohabitats 2022)
- Barkley Village State Environmental Policy Act Checklist (Talbot Real Estate, LLC 2022)
- City of Bellingham environmental maps (City of Bellingham n.d.-a)
- Washington Department of Natural Resources (WDNR) geologic maps (WDNR n.d.-a)
- U.S. Department of Agriculture (USDA) Web Soil Survey (USDA 2022)

Scientists reviewed the alternatives to determine potential impacts related to soils, geologic features, geologically hazardous areas, and topography in the study area.

#### 3.1.2 Affected Environment

The study area is located within the Nooksack River valley in western Whatcom County at the northern end of the Puget Lowland region. The Puget Lowland region is a wide, low-lying area that extends between the Cascade Range to the east, the Olympic Mountains to the west, the San Juan Islands in the north, and the southern end of Puget Sound in the south (WDNR n.d.-b). Many of the existing geological features took shape about 12,000 to 15,000 years ago during the Vashon Stade, when large ice sheets called glaciers flowed over the landscapes, collecting and transporting sediment along the way. As a result, the most common geologic unit in the study area is glacial deposits associated with marine outwash (Everson Glaciomarine Drift) (WDNR n.d.-a). Near the ground surface, these glacial deposits and underlying geologic units have weathered to soil (City of Bellingham 2009a).

The topography of the study area is generally rolling. It slopes gently downward from north to south and slopes up from west to east. The portion of the study area west of Sussex Drive is relatively flat, with the terrain sloping down between Barkley Boulevard and East Illinois Street. Slopes are generally 1% to 15% with isolated areas having slopes up to approximately 35%.

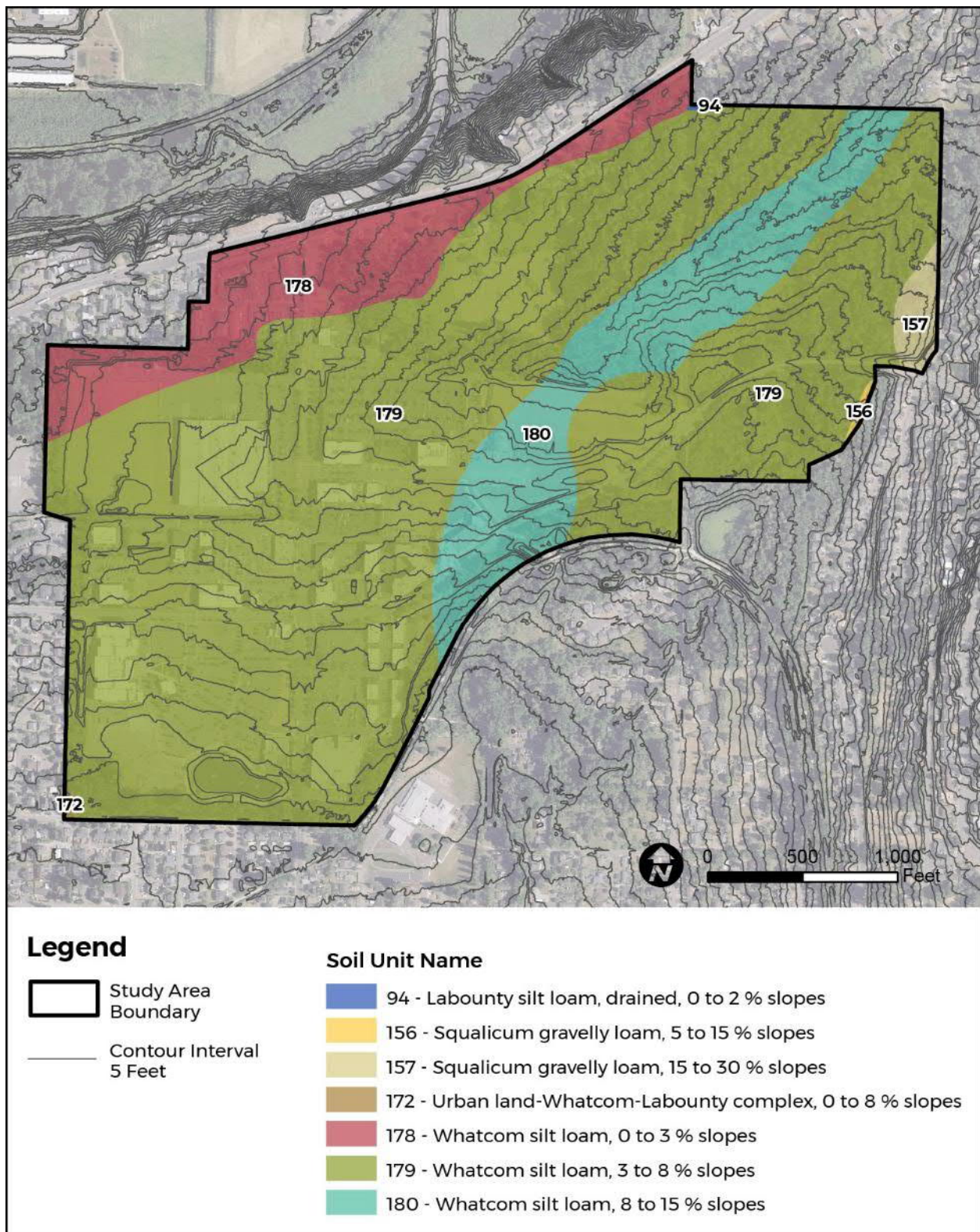
There are no surface indications or history of unstable soils in the study area. No geologic hazards are identified in the study area (City of Bellingham n.d.-a). The area has low to moderate liquefaction susceptibility, defined as the likelihood that soil will liquefy as a result of earthquake shaking (Palmer et al 2004).

The study area includes the soil units described below, listed in numerical order. No agricultural soils are within the study area. Figure 3-1 shows the location of each unit.

- Unit 94 (<1% of project area / <0.1 acre) – Labounty silt loam, drained, 0-2% slopes. This soil type occupies an almost negligible proportion of the study area, nicking the existing right-of-way on the northern boundary. These poorly drained soils occur in landscape depressions and are formed from volcanic ash, loess, and glaciomarine deposits. The top 10 inches can be ash silt loam, while the remainder of the topsoil profile is predominantly loam.
- Unit 156 (1.7% of project area / 4.3 acres) – Squalicum gravelly loam, 5-15% slopes. This soil type and Unit 157 (the same type, with higher slopes) are associated with Fever Creek along the eastern boundary of the study area. These moderately well-drained soils occur on hill slopes and develop from volcanic ash, loess, and slope alluvium over glacial drift. Ash is a typical component throughout the profile, along with gravel and loam fractions.
- Unit 157 (0.9% of project area / 2.3 acres) – Squalicum gravelly loam, 15-30% slopes. See the description above for Unit 156. Note that Unit 157 is higher on the slope than Unit 156 and steeper.
- Unit 172 (0.1% of project area / 0.3 acre) – Urban land – Whatcom-Labounty complex, 0-8% slopes. Like Unit 94 (above), this soil unit occupies a minor amount of the study area but in the extreme southwest corner. The proportions of urban land to Whatcom and Labounty soils are about 40% and 50%, respectively, with the remaining 10% represented by other minor features. Urban land is intensively disturbed. Whatcom and Labounty soils occur on hill slopes and are derived from volcanic ash and loess over glaciomarine deposits. While Whatcom soils are moderately well-drained; Labounty soils are poorly drained.
- Unit 178 (7.6% of project area / 19.3 acres) – Whatcom silt loam, 0-3% slopes. Whatcom silt loam soils (Units 178, 179, and 180) compose the greatest area of the study area and occur in parallel bands extending from the northeast to the southwest. They are listed in order of steepness (i.e., Unit 178 is the least steep, while Unit 180 is the steepest). These moderately drained soils occur on hill slopes and are derived from volcanic ash and loess over glaciomarine deposits. Unit 178 lies along the northwest extent of the project area.
- Unit 179 (77.2% of project area / 195.8 acres) – Whatcom silt loam, 3-8% slopes. See the description above for Unit 178. These soils are intermediate in slope between the other Whatcom silt loams and flank Unit 180.
- Unit 180 (12.5% of project area / 31.7 acres) – Whatcom silt loam, 8-15% slopes. See the description above for Unit 179. These Whatcom silt loams have the steepest slopes of the three on-site and coincide with a ravine.



Figure 3-1. Existing Topography and Soil Types in the Study Area



### 3.1.3 Impacts

#### 3.1.3.1 Impacts Common to All Alternatives

All alternatives would require grading, excavation, export, and fill to varying degrees, as shown in Table 3-1. New roadways and infrastructure would be constructed during all of the alternatives, which would generate more excavation, export, and fill material. Lower volumes of excavation, export, and fill would be required in the more northern and eastern portions of the study area. More detailed information about the source of fill and destination for exported materials will be provided as part of project-specific environmental review. No substantial long-term changes in topography are anticipated under any of the alternatives.

Minor erosion could occur because of ground disturbance during phased construction activities under all alternatives, and impacts would be mitigated as described in Section 3.1.4.

Table 3-1. Approximate Quantities of Soil Excavation, Export, and Fill by Alternative

Element	No Action Alternative	Action Alternative 1 (Preferred Alternative)	Action Alternative 2
Excavation	298,390 cubic yards	987,042 cubic yards	1,379,423 cubic yards
Export	253,631 cubic yards	838,986 cubic yards	1,198,784 cubic yards
Fill	77,556 cubic yards	235,429 cubic yards	331,061 cubic yards

Source: Talbot Real Estate, LLC

#### 3.1.3.2 No Action Alternative

The No Action Alternative provides for the lowest levels of below-grade structured parking and high-rise buildings of all the alternatives. Therefore, it is expected that the projects associated with this alternative would generate the least excavation, export, and fill of the alternatives, as shown in Table 3-1.

#### 3.1.3.3 Action Alternative 1/Preferred Alternative

Action Alternative 1 provides for greater levels of below-grade structured parking and high-rise buildings than the No Action Alternative but lower levels than Action Alternative 2. Therefore, it is expected that the projects associated with this alternative would generate more excavation, export, and fill than the No Action Alternative but less than Action Alternative 2, as shown in Table 3-1.

#### 3.1.3.4 Action Alternative 2

Action Alternative 2 provides for the highest levels of below-grade structured parking and high-rise buildings of all the alternatives. Therefore, it is expected that the projects associated with this alternative would generate the most excavation, export, and fill, as shown in Table 3-1.

### 3.1.4 Mitigation Measures

The potential for erosion during construction or future operations of the alternatives would be minimized with adherence to best management practices (BMPs) approved by the Washington State Department of Ecology (Ecology) and the appropriate provisions of the BMC. The alternatives would comply with applicable temporary erosion and sedimentation control measures required by the City and the National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit's Storm Water Pollution Prevention Plan (SWPPP), where required.

All earthwork and site preparation would be conducted in compliance with relevant grading criteria of BMC 15.42, 16.60, and 16.70. Temporary Erosion and Sedimentation Control (TESC) measures to be implemented would include, but not be limited to, the following:

- The ground surface in the construction area would be sloped and sealed to reduce water infiltration, to promote rapid runoff, and to prevent water ponding.
- To prevent soil disturbance, the size or type of construction equipment may have to be limited.
- No soil would be left uncompacted and exposed to moisture. A smooth-drum vibratory roller, or equivalent, would be used to seal the ground surface.
- Work areas and soil stockpiles would be covered with plastic. Bales of straw and/or geotextile silt fences would be used as appropriate to control soil erosion.
- Excavation and fill placement would be observed on a fulltime basis by a geotechnical engineer (or engineer's representative) experienced in wet weather earthwork to determine that unsuitable materials are removed, and that suitable compaction and site drainage are achieved.
- Excavation slopes would be protected from infiltration and erosion by directing water away from excavations and covering slopes with impermeable membranes, such as plastic sheeting.
- Excavated materials, stockpiles, and equipment would be placed away from the top edge of excavations at a distance equal to at least the depth of the excavation.
- 

### 3.1.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts related to earth, geology, and soils under any of the alternatives.

## 3.2 Air Quality

### 3.2.1 Methodology

Analysts reviewed the area's current air quality status, applicable regulations, and sources of air pollutant emissions associated with construction and operation of the proposed project. Impacts from construction and operations were evaluated qualitatively, based on the proposed land use assumptions described in Chapter 2 and Section 3.7. The potential for increased air pollutant emissions at congested intersections during operations was evaluated qualitatively, using information from the transportation analysis described in Section 3.8.

Operational greenhouse gas (GHG) emissions from the land use types included in each alternative were estimated using the King County SEPA Greenhouse Gas Emissions Inventory Worksheet (King County 2019). Although the worksheet was designed for use within King County and uses assumptions based on King County's land use and energy use data, it remains a useful tool to assess the magnitude of GHG emissions associated with different kinds of development in areas that have not developed a similar tool with local inputs.

The worksheet estimates GHG emissions associated with obtaining construction materials, fuel used during construction, energy consumed during a building's operation, and transportation by building occupants. Worksheet inputs were the number of dwelling units and square footage of other building types summarized in Table 2-1. GHG emission estimates are reported in metric tons of carbon dioxide equivalents or MTCO<sub>2</sub>e. Carbon dioxide equivalents (CO<sub>2</sub>e) are the combination of the pollutants that contribute to climate change adjusted using their global warming potential. GHG emissions are presented as MTCO<sub>2</sub>e in this EIS.



### 3.2.2 Affected Environment

#### 3.2.2.1 General Climate Conditions

The study area is located on the western slope of the Cascade Mountains, where the climate consists of mild, wet, and cloudy winters with cool and comparatively dry summers. The annual precipitation at Bellingham International Airport is 35 inches per year (WRCC 2023).

#### 3.2.2.2 Air Quality Monitor Data

Air quality in the City of Bellingham is regulated by the U.S. Environmental Protection Agency (EPA), Ecology, and the Northwest Clean Air Agency (NWCAA). Each agency has regulations that govern the concentration of pollutants and contaminant emissions. NWCAA is the primary government agency responsible for protecting the air in Island, Skagit, and Whatcom Counties. NWCAA is responsible for enforcing federal, state, and local air quality regulations at stationary sources of air pollution in the agency's jurisdiction. Ecology operates 75 monitoring sites as part of the Washington network. These sites are used to demonstrate that pollutant concentrations are below applicable standards.

Table 3-2 presents the last three years of available monitoring data gathered at the closest monitoring stations to the project area. Particulate matter less than 2.5 micrometers in diameter (PM<sub>2.5</sub>) is monitored at the Pacific Street site in Bellingham, about 0.75 mile south of the project location. The closest ozone monitor is about 13 miles northwest of the project area in Custer. Concentrations of CO<sub>2e</sub> are not measured at local air monitors.

Table 3-2. Air Quality Monitoring Data Closest to Study Area

Pollutant	Monitor Location	Monitor Value	2019	2020	2021
PM <sub>2.5</sub> [µg/m <sup>3</sup> ]	Pacific Street Bellingham	24-Hour 98th Percentile <sup>a</sup>	12	42	12
		Mean Annual <sup>b</sup>	4.6	5.6	4.0
Ozone (ppm)	1330 Loomis Trail Road Custer	First Highest 8-hour Average	0.052	0.063	0.06
		Second Highest 8-hour Average	0.049	0.06	0.052
		Third Highest 8-hour Average	0.049	0.051	0.052
		Fourth-Highest 8-hour Average	0.044	0.050	0.052
		# of Days Standard Exceeded	0	0	0

Source: U.S. Environmental Protection Agency (no date)

<sup>a</sup> 24-hour PM<sub>2.5</sub> NAAQS is met when the 98th percentile, averaged over 3 years, is below 35 µg/m<sup>3</sup>

<sup>b</sup> Annual PM<sub>2.5</sub> NAAQS is met when the annual mean, averaged over 3 years, is below 15 µg/m<sup>3</sup>

<sup>c</sup> Ozone NAAQS is met when the annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years, is below 0.070 ppm

#### 3.2.2.3 Attainment Status

Under the Clean Air Act, the EPA has established the National Ambient Air Quality Standards (NAAQS), which specify maximum concentrations for carbon monoxide (CO), particulate matter less than 10

micrometers in size (PM<sub>10</sub>), PM<sub>2.5</sub>, ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), lead, and nitrogen dioxide (NO<sub>2</sub>). These pollutants are referred to as criteria pollutants.

An area's attainment status is based on data collected by the state monitoring network on a pollutant-by-pollutant basis. Areas that have a history of monitored concentrations above the NAAQS may be designated by EPA as nonattainment areas.

The project is located in the western portion of Whatcom County. This area is currently designated by EPA as in attainment for all criteria pollutants (EPA 2023).

### 3.2.3 Impacts

#### 3.2.3.1 Impacts Common to All Alternatives

##### Emissions from Construction Sources

Construction-related activities would result in short-term emissions of air pollutants from worker and construction vehicle exhaust. These pollutants would include carbon monoxide, nitrogen oxides, volatile organic carbon, particulate matter, and a set of pollutants referred to as Mobile Source Air Toxics (MSATs). MSATs include the following nine compounds: 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. Particulate matter could also be generated where soil would be disturbed by ground clearing and preparation, stockpiling of materials, and by construction vehicles tracking soil from sites onto area streets where other vehicles could stir up and release fugitive dust.

Disruption of traffic during construction (such as a temporary reduction of roadway capacity and increased queue lengths) could result in short-term, elevated concentrations of pollutants from slowed or idling gas-powered vehicles.

In addition to potential air quality impacts, some construction work activities (particularly those involving paving operations using asphalt) could result in short-term odors, which could be detectable to some people near the site and would be diluted as distance from the site increases.

##### Emissions from Operations

Sources of emissions during project operations under all of the alternatives would include exhaust from higher volumes of vehicles on local roadways, emissions from building heating systems (such as boilers and furnaces), and commercial or industrial processes that may occur within the project area.

As with vehicles used during construction, common air pollutants from vehicle exhaust are carbon monoxide, nitrogen oxides, volatile organic carbon, particulate matter, and MSATs. Vehicle exhaust during project operations could occur from higher numbers of vehicle trips generated by residents, retail customers, staff, and transit and delivery vehicles. It is anticipated that air pollutant (MSAT) emissions will continue to decline through 2050, despite increased vehicle use (measured as vehicle miles traveled), due to the implementation of fuel and engine regulations and vehicle technology improvements (FHWA 2016). Other pollutants are expected to show similar trends through 2050 except for particulate matter. Particulate matter is composed of exhaust as well as particles from brake wear and tire wear that are not affected by vehicle exhaust standards, and emissions of those pollutants are expected to trend back upward as vehicle miles traveled increases in the future.

All of the project components are located in an area that is designated by the EPA as in attainment for all criteria pollutants. Due to this area's air quality status, a transportation conformity analysis is not required to demonstrate compliance with the EPA's NAAQS. The localized increases in vehicle activity

from residents, visitors, and transit from a development project are not of the scale that would be expected to change the area's attainment status.

Sources of GHG emissions during operations are energy use, embodied carbon, and transportation emissions. Impacts of GHG emissions are evaluated at the project location (exhaust from vehicles, boilers, and other equipment) as well as upstream emissions (production and transport of fuels, materials, and electricity) that occur at locations away from the project location.

Table 3-3 provides a summary of the estimated lifetime GHG emissions for each alternative, as well as for existing development. Under all the alternatives, GHG emissions would be generated by electricity use, heating and cooling, waste production, and on-road vehicles. The completed worksheets used to estimate emissions for all alternatives are included as Appendix A.

Table 3-3. Estimated Lifetime GHG Emissions by Alternative

	Existing Conditions	No Action Alternative	Action Alternative 1 (Preferred Alternative)	Action Alternative 2
Total GHG Emissions (MTCO <sub>2</sub> e) <sup>a</sup>	1,695,966	3,622,055	6,655,129	10,553,331

<sup>a</sup> Total emissions represent emissions for the project lifespan, as determined by King County SEPA GHG Emissions Worksheet  
GHG = greenhouse gas; MTCO<sub>2</sub>e = metric tons of carbon dioxide equivalent

### 3.2.3.2 No Action Alternative

Impacts to air quality would occur from construction of site-specific development projects and, depending on the type of development, could also occur as the result of operation of specific development projects. Additional traffic associated with new development, as described in Section 3.8, would increase air pollutant emissions due to vehicle exhaust. The increased traffic volumes compared to existing conditions would result in increased congestion at one intersection during peak travel times. Congestion from longer traffic delays could result in increased air pollutant emissions from idling vehicles. However, as stated in Section 3.2.3.1, overall air pollutant emissions are expected to decline in the future because of improvements in vehicle technology and stricter fuel and engine regulations.

Additional energy use associated with new development would result in increased GHG emissions compared to existing conditions, as summarized in Table 3-3. Based on the anticipated development intensity and vehicle trips generated, emissions of all pollutants are projected to be lowest under the No Action Alternative. NWCAA and EPA regulations will continue to apply to individual developments or transportation projects under this alternative.

### 3.2.3.3 Action Alternative 1/Preferred Alternative

The potential causes of impacts to air quality under this alternative would be the same as under the No Action Alternative; however, the intensity of residential and commercial development would be greater, resulting in potentially greater impacts to air quality as the result of construction and operations.

The transportation analysis described in Section 3.8 indicates that the proposed development under Action Alternative 1 has the potential to generate over 19,000 more daily vehicle trips than the No Action Alternative. The increased traffic volumes would result in greater congestion levels at up to three intersections during peak travel times. Congestion from longer traffic delays could result in increased air pollutant emissions from idling vehicles. However, as stated in Section 3.2.3.1, overall air pollutant emissions are expected to decline in the future because of improvements in vehicle

technology and stricter fuel and engine regulations. Furthermore, the transportation demand management strategies identified in Section 3.8.4.2, including encouragement of active transportation modes and infrastructure, could also help to reduce emissions.

The intensity of industrial development would be less than the No Action Alternative. NWCAA regulations would apply to all new and modified industrial sources, which regulate emissions to ensure compliance with the NAAQS.

#### 3.2.3.4 Action Alternative 2

The potential causes of impacts to air quality under this alternative are the same as under the No Action Alternative; however, the intensity of residential and commercial development would be greater than both the No Action Alternative and Action Alternative 1, resulting in more impacts to air quality as the result of construction and vehicle emissions. It is anticipated that operational emissions under this scenario would be the greatest of the three alternatives. However, as stated in Section 3.2.3.1, overall air pollutant emissions are expected to decline in the future because of improvements in vehicle technology and stricter fuel and engine regulations. Furthermore, the transportation demand management strategies identified in Section 3.8.4.2, including encouragement of active transportation modes and infrastructure, could also help to reduce these emissions.

The transportation analysis described in Section 3.8 indicates that the proposed development has the potential to generate over 46,000 more daily vehicle trips than the No Action Alternative, and over 26,000 more daily vehicle trips than Action Alternative 1. The increased traffic volumes would result in greater congestion levels at up to 12 intersections during peak travel times, which is a higher number of affected intersections than the No Action Alternative or Action Alternative 1. Congestion from longer traffic delays can result in increased air pollutant emissions from idling vehicles.

The intensity of industrial development would be similar to existing conditions and lower than the No Action Alternative and Action Alternative 1. NWCAA regulations would apply to all new and modified industrial sources, which regulate emissions to ensure compliance with the NAAQS.

#### 3.2.4 Mitigation Measures

The project would not require mitigation measures during operation. As detailed above, no meaningful impacts on air pollutant emissions are predicted; therefore, no mitigation measures are proposed.

BMPs that can reduce construction vehicle emissions include the following: restricting equipment idling, maintaining equipment in good working order to maximize fuel efficiency, routing truck traffic through areas where the number of stops and delays would be minimized, and encouraging workers to carpool. Best practices to reduce dust include covering or wetting materials in haul trucks, watering exposed soils, using track out control devices, and removing dirt and dust on public roads.

Industrial, commercial, and institutional organizations may also be subject to air permitting requirements. Any organization that plans to install stationary sources of emissions should consult NWCAA for permitting applicability. Examples of stationary sources of emission include boilers, diesel engines, industrial ovens, storage tanks, gasoline-dispensing facilities, surface coating processes, and many types of manufacturing processes. If emergency generators are required at any location during construction, the NWCAA would be consulted for the appropriate permit action.

#### 3.2.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts related to air quality under any of the alternatives.



### 3.3 Water Resources

#### 3.3.1 Methodology

Analysts reviewed existing literature and reference materials to characterize the affected environment and assess potential impacts and benefits of the alternatives, including the following sources:

- Critical Areas Assessment (Supplement) (NW Ecological Services 2023), provided as Appendix B to this Draft EIS
- Natural Resources and Environment (City of Bellingham n.d.-a)
- Bellingham Municipal Code (City of Bellingham n.d.-b)
- CityIQ Online Map Viewer (City of Bellingham n.d.-d)
- Drinking Water Quality Report (2021) (City of Bellingham 2021b)
- Surface and Stormwater Comprehensive Plan (City of Bellingham 2020a)
- Barkley Village Wetland Delineation Report (Biohabitats 2022)
- Water Resources Inventory Area (Ecology 2022b)
- Critical Aquifer Recharge Areas: Guidance Document (2021) (Ecology 2021)
- Washington State Wetland Rating System for Western Washington (2014) (Hruby 2014)
- Frequently Flooded Areas Assessment: Best Available Science Documentation (City of Bellingham 2017)
- Whatcom Creek Fecal Coliform Bacteria Total Maximum Daily Load Technical Report (Ecology Publication No. 20-03-015) (Ecology 2020)
- Whatcom, Squalicum, and Padden Creeks Temperature Total Maximum Daily Load: Water Quality Improvement Report (Ecology Publication No. 11-10-019) (Ecology 2011)

The following assumptions informed the determination of wetland impacts under the alternatives:

- Wetland impacts have been determined based on the land use maps provided. These maps are rough in scale. Actual impacts, per project or even full site buildout are anticipated to change based on final site designs.
- Active space and park/playground areas were reviewed in the same manner as development areas. Impacts were assumed to be avoided only in open space areas (see Chapter 2 and Section 3.7.5 for the location of open space areas).
- In order to provide consistency between review of the three alternatives, impacts were determined based solely on the land use mapping provided. In a number of locations, a direct wetland impact (fill) is shown, as the majority of a wetland would be filled based on the mapping, but a small portion is left in the retained open space. In many cases, the remaining area of wetland is so small that it would be functionally filled and should be permitted as such. However, this assessment opted not to take this approach as it would result in judgment calls for the amount of wetland fill.
- Indirect wetland impacts were determined for all partially filled wetlands or for whole wetlands where the standard buffer would be reduced beyond the minimum allowed in BMC. Indirect impacts result when there is no longer a sufficient protective buffer between the retained portion of the wetland and the proposed development. The indirect impact area will retain the ability to provide some wetland function, but it may be reduced. The area of indirect wetland impact was calculated using the standard buffer size projected from the proposed development edge. Again, this is likely to change based on actual site designs.

- Buffer impacts are not presented at this time because in some alternatives there are none, and in others there are so few. Because most of the wetland impact includes partially filled areas, the project will result in mainly indirect wetland impact rather than buffer impact. There are only one or two very small areas where buffer impact would occur. Mitigation for buffer impacts can occur on-site in the form of buffer enhancement, as needed.
- All three scenarios include a trail network. Impacts associated with trails have not been considered in any of the three scenarios and would be subject to additional environmental review at the development stage. The trail network south of Barkley Boulevard is largely already in place. The trail network proposed in the northern portion of the site can easily be modified to avoid direct wetland impacts. To meet mitigation sequencing it is assumed these trail alignments will be modified. Trails are allowed in buffer per City Code (BMC 16.55.320) with a critical area permit and appropriate mitigation. Additionally, impacts associated with trails would also likely result in similar impacts in all three scenarios.

### 3.3.2 Affected Environment

This section provides an overview of federal, state, and local regulations applicable to future development and describes the existing conditions related to water resources within the study area.

#### 3.3.2.1 Applicable Federal, State, and Local Regulations

At the federal level, water quality is regulated by the Clean Water Act (CWA) (33 United States Code [USC] § 1251 et seq.) and the Safe Drinking Water Act (SDWA) (42 USC §300f et seq.). While the CWA and SDWA are enforced at the federal level by EPA, they are administered at the state level by various state departments. In Washington, Ecology administers the CWA, and the Washington State Department of Health administers the SDWA.

Ecology also administers the NPDES permit program. NPDES permits address water pollution by regulating sources that discharge to Waters of the United States. These permits include limits on discharge, monitoring and reporting requirements, and other provisions to ensure that the discharge does not negatively impact water quality or people's health.

On the local level, water quality and water resources are protected by several ordinances codified under the BMC. These include the City's Critical Areas Ordinance (BMC 16.55), land clearing ordinance (BMC 16.60), grading ordinance (BMC 16.70), surface and stormwater utility ordinance (BMC 15.16), drainage ordinance (BMC 15.40), and stormwater management ordinance (BMC 15.42).

Generally, for erosion and sediment control, property owners who conduct land-disturbing activities must comply with the requirements and BMPs established in Ecology's Stormwater Management Manual for Western Washington (Ecology 2019). Actions with greater land-disturbing activity have more stringent requirements.

In summary, all development in the City is governed by the BMC and development standards (including those in the Ecology manual), and is reviewed for conformance by the City through its development review process.

#### 3.3.2.2 Existing Water Resources

The study area is within the Nooksack Watershed, also known as Water Resource Inventory Area 1, which encompasses northwestern Washington from the Cascades to the east, to Bellingham Bay and the Strait of Georgia to the west, and along the border of Canada, including the western portion of Whatcom County and small portions of Skagit County (Ecology 2022b). The study area crosses the boundary between two subwatersheds: the Lower Squalicum Creek sub-basin of the Squalicum Creek

watershed to the north and the Fever Creek sub-basin of the Whatcom Creek watershed to the south (Ecology 2022b).

Many urbanized areas in the City are characterized by a high percentage of impervious coverage. Development in Barkley Village has mixed land uses that include retail, commercial, industrial, residential, and community/cultural uses interspersed with green space and open space, as described further in Section 3.7.5. The Lower Squalicum Creek watershed, which includes Barkley Village, consists of between 20% and 40% impervious surfaces (City of Bellingham 2020a). Data on the impervious surfaces of the Fever Creek subwatershed within the Whatcom Creek watershed were unavailable. Both Squalicum Creek and Whatcom Creek are on the State's list of 303(d) impaired waters and have Total Maximum Daily Load (TMDL) for temperature (Ecology 2011). Ecology is also developing a bacterial TMDL for Whatcom Creek (Ecology 2020).

The City's storm drainage system within the study area is focused on providing stormwater capture and conveyance for areas within the public right-of-way through manholes and catch basins that feed into 280 miles of storm drainpipe (City of Bellingham n.d.-a). Stormwater runoff from the site is generated from pervious and impervious surfaces. Impervious surfaces include roofs, sidewalks, and other pedestrian pathways, parking areas, roads, alleys, and drive aprons. Pervious surfaces include lawns, landscaped areas, and forested areas. Runoff is collected and routed to outfall locations within the Squalicum Creek and Whatcom Creek watersheds.

The stormwater systems in the study area include public and privately owned and maintained systems. The public and private improvements include stormwater management systems compliant with stormwater standards applicable at the time of development. Many of the private site improvements include stormwater water quality and flow control systems specific to the individual development areas that manage stormwater runoff prior to release into the City's public conveyance system.

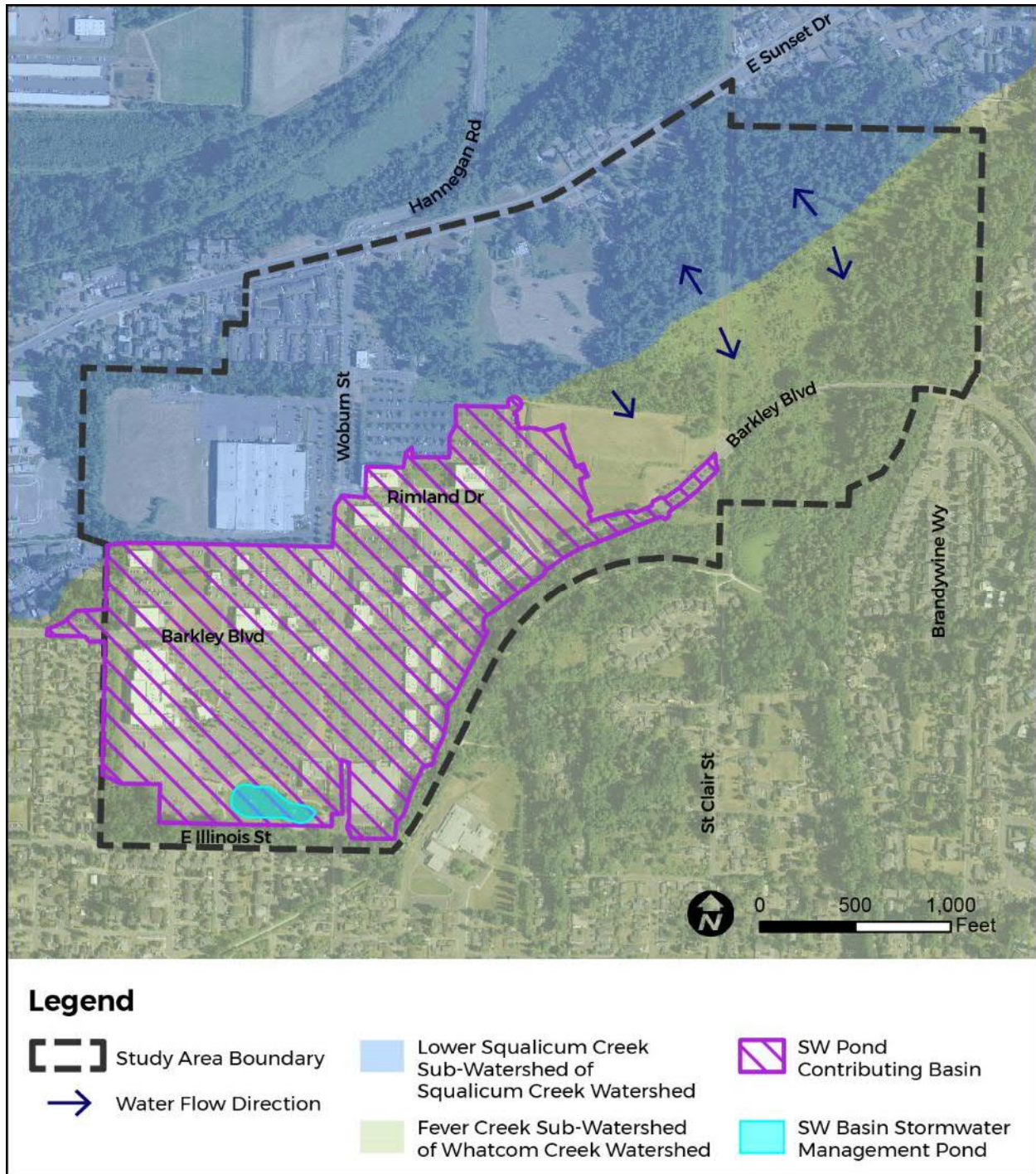
A regional stormwater management system is located within the Whatcom Creek watershed area of the study area. The system includes a stormwater pond (SW Pond) that is located west of Woburn Street near the southern boundary of the study area. This stormwater facility provides water quality treatment and flow control to approximately 81 acres, all but 0.8 acre of which is located within the study area. The basin contributing to the SW Pond includes both public and privately owned improvements. Figure 3-2 illustrates the approximate watershed boundaries, study area, and the contributing basin to the SW Pond.

St. Clair Pond just southeast of the study area, one of the largest stormwater ponds in the City, collects water from the west side of Barkley Hill as well as the area north to Sunset Drive (City of Bellingham 2023). Water from St. Clair Pond flows out of the pond and back into Fever Creek, which in turn drains to Whatcom Creek.

City drinking water comes from Lake Whatcom Reservoir that serves approximately 100,000 people in Whatcom County. This water comes from both rainwater and the Deming Glacier on Mount Baker that flows into the Lake Whatcom watershed (City of Bellingham n.d.-a). As part of the SDWA, the City's water quality lab publishes an annual water quality report, which discloses the results of several parameters including, but not limited to, coliform bacteria, chlorine, lead, copper, and sulfate. The 2021 report stated that all results were in compliance with federal, state, and local regulations (City of Bellingham 2021b).



Figure 3-2. Stormwater Basins in the Study Area



### Streams

The study area contains two streams, Fever Creek and St. Clair Creek (Figure 3-3).

- Fever Creek is a highly channelized, continuously flowing stream that originates from wetlands and stormwater within the eastern portion of the project area. A 2019 habitat and fish barrier assessment determined no channel or mapped stream exists upstream of the dam structure

(Environmental Science Associates, 2019). However, biologists observed a small intermittent channel upstream of the pond, extending through wetlands both north and south of Barkley Boulevard. Fever Creek is a tributary of Whatcom Creek, which originates from Lake Whatcom and drains into the approximately 7.7-square-mile Whatcom Creek watershed. The Whatcom Creek watershed supports coho (*Oncorhynchus kisutch*), chum (*Oncorhynchus keta*), and Chinook salmon (*Oncorhynchus tshawytscha*), as well as steelhead trout (*Oncorhynchus mykiss*). Whatcom Creek is impaired for temperature, fecal coliform, and dissolved oxygen, as listed on Ecology's 303(d) list, and restoration of these habitats is underway (City of Bellingham n.d.-a, Ecology 2011, 2020). Ecology is developing a bacterial TMDL for Whatcom Creek.

- St Clair Creek is a tributary to Fever Creek and originates from wetlands within the undeveloped St Clair right-of-way south of Barkley Boulevard.

The Washington Department of Fish and Wildlife (WDFW) does not consider Fever Creek as fish bearing upstream from the Fever Creek regional detention pond downstream of the site. WDFW does not consider St. Clair Creek as fish bearing north of North Haven Place because the channel loses definition in the wetlands within the Roosevelt Nature Area.

## Wetlands

Wetlands perform water quality and hydrologic functions through several processes, including water quality improvement, water infiltration, bank stabilization, and floodwater retention. Wetlands also support a variety of wildlife species depending on their physical characteristics, including landscape position, the type and number of vegetation classes present, and how frequently water is present. Anadromous and resident fish, amphibians, reptiles, mammals, birds, and invertebrate species use wetland habitats during some portion of their life cycles. Wetlands also have cultural and socioeconomic value by providing opportunities for recreation, education, and research.

Upland vegetated buffer areas protect wetland functions from the effects of surrounding land uses. Factors that influence the performance of a buffer include vegetative structure, percent slopes, soils, and buffer width and length. Wetland buffers in urban settings commonly include invasive species such as Himalayan blackberry (*Rubus armeniacus*) and infrastructure inclusions. Degraded buffer areas provide an opportunity to improve wetland conditions within the City through restoration and enhancement.

The Wetland Rating System for Western Washington separates wetlands into four categories based on their sensitivity to disturbance, rarity, the functions provided, and whether they can be replaced (Hruby 2014).

- Category I wetland criteria include large undisturbed estuarine wetlands, wetlands of high conservation value, bogs, wetlands with mature and old-growth forests, wetlands in coastal lagoons, interdunal wetlands larger than 1 acre, and wetlands with high function.
- Category II wetlands are defined as smaller estuarine wetlands, wetlands that perform functions well, and interdunal wetlands larger than 1 acre.
- Category III wetlands perform functions moderately well, can often be replaced with well-planned mitigation projects, and are interdunal wetlands between 0.1 and 1 acre in size.
- Category IV wetlands are the lowest functioning and are often heavily disturbed, can be replaced, and can often be improved.

The City's Critical Areas Ordinance (BMC 16.55.340) assigns buffer widths to wetlands based upon the state rating system described above. A categorical rating (I – IV) and functional score relating specifically to habitat and adjacent land use intensity determine a wetland buffer width.



A total of 44 wetlands (25.11 acres) are located throughout the study area. Figure 3-3 shows the location of existing wetlands mapped inside and outside of the study area. Table 3-4 summarizes each existing wetland's category, associated acreage, category/habitat functional rating, and City required buffer widths. Additional details on wetlands and their associated features, including figures with the specific locations of wetlands listed in Table 3-4, are included in the Critical Areas Assessment (Appendix B).

Figure 3-3. Existing Streams and Wetlands in and near the Study Area

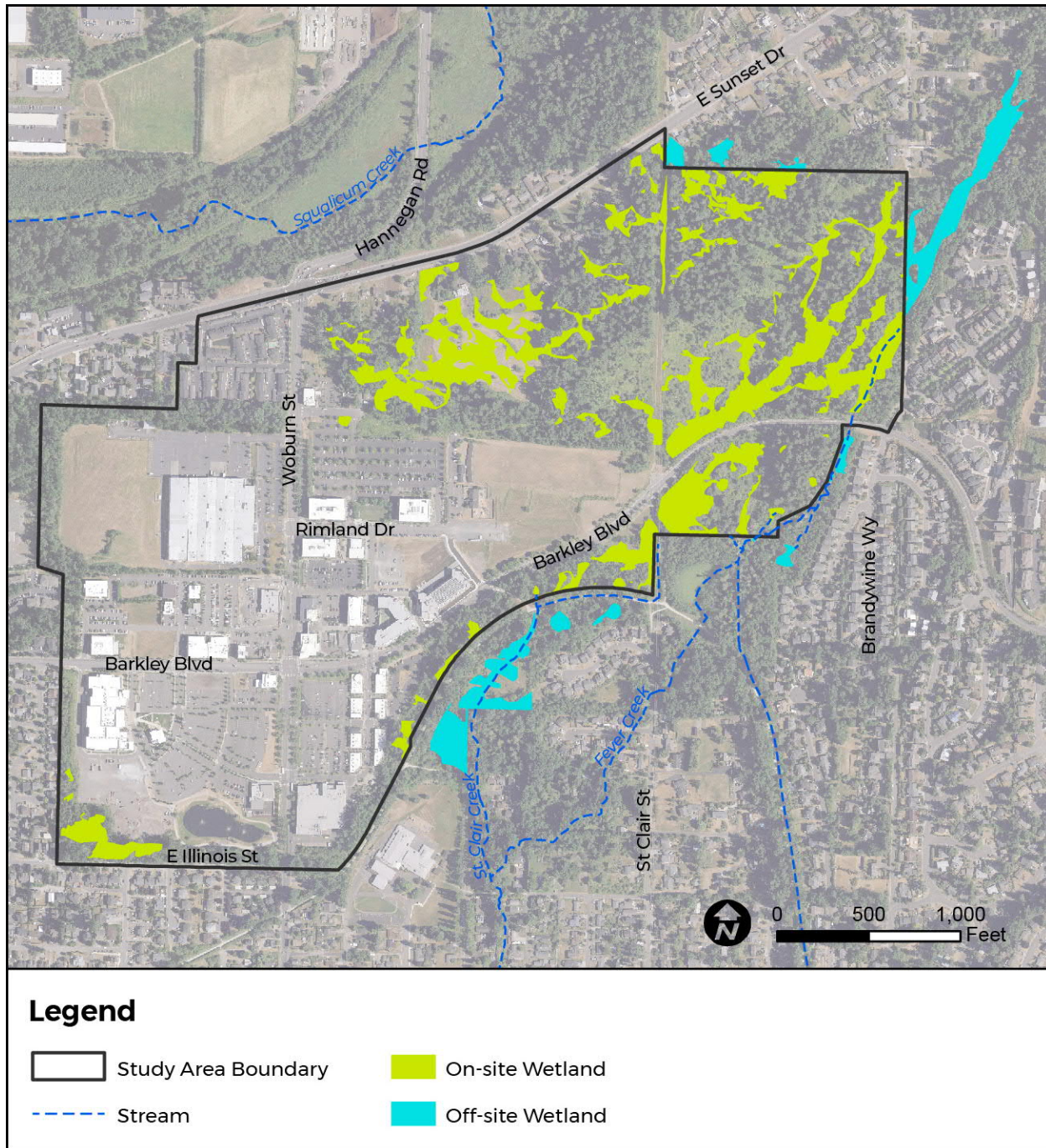


Table 3-4. Existing Wetland Summary

Wetland Name	Approximate Size* (acres)	Category (habitat score)	Buffer (ft)
W-1a	1.20	III (5)	150
W-1c	0.02	III (4)	80
W-3	0.36	III (5)	150
W-4	0.17	III (5)	150
W-5	0.03	III (5)	150
W-7	0.002 [94 sq. ft.]	III (5)	–
W-8	1.20	II (6)	150
W-9	0.06	III (5)	150
W-10c	0.002 [73 sq. ft.]	III (5)	–
W-12	0.35	III (5)	150
W-14	2.47	II (6)	150
W-16a	6.30	III (6)	150
W-16c	0.01	III (3)	80
W-16d	0.02	IV (4)	50
W-17	0.32	III (5)	150
W-19	0.42	IV (4)	50
W-20a	0.16	III (5)	150
W-20b	0.02 [870 sq. ft.]	III (5)	–
W-29	0.41	III (6)	150
W-30	1.37	II (6)	150
W-32	0.78	III (6)	150
W-37	11.35	II (7)	150
W-38	0.01 [434 sq. ft.]	III (5)	–
W-39	0.06	III (5)	150
W-45	0.04	III (5)	150
W-46	0.08	IV (5)	50
W-47	0.21	III (5)	150
W-48a	0.32	III (5)	150
W-48b	0.10	III (5)	150
W-49	0.72	III (6)	150
W-50	0.01 [203 sq. ft.]	III (5)	–
W-A	0.03	III (4)	80
W-B	0.26	III (5)	150



Wetland Name	Approximate Size* (acres)	Category (habitat score)	Buffer (ft)
W-C	0.01 [341 sq. ft.]	III (5)	–
W-D	0.02 [719 sq. ft.]	III (5)	–
W-AA	0.05	III (5)	150
W-BB	0.01 [323 sq. ft.]	III (5)	–
W-CC	0.10	III (5)	150
W-DD	0.01 [531 sq. ft.]	III (5)	–
W-FF	0.01 [593 sq. ft.]	III (5)	–
W-GG	0.04	III (5)	150
W-HH	0.02 [760 sq. ft.]	III (5)	150
W-JJ	0.17	III (4)	80
WL-KK	0.01 [540 sq. ft.]	IV (5)	50

\*Approximate size includes the off-site extent.  
 – buffer not required by City Code

### Frequently Flooded Areas

Frequently flooded areas (FFAs) are regulated by the City to manage potential risks to public safety and property, and to avoid and minimize impacts to fish and wildlife habitats. Such areas commonly overlap riparian and buffer areas that also provide valuable habitat benefits, such as recruitment of large woody debris, areas of natural vegetation, and temporary floodwater storage to attenuate flows. The City defines FFAs as lands “in which the floodplain is subject to a 1 percent or greater chance of flooding in any given year and those lands that provide important flood storage, conveyance, channel forming processes and attenuation functions...” (BMC 16.55.370). According to the code, these areas could include streams, lakes, wetlands and their associated floodplains, flood fringes, or at minimum the 100-year Federal Emergency Management Agency (FEMA) floodway. The intent of identifying and mapping FFAs is to fill gaps where FEMA mapping does not exist and expand flood hazard management tools beyond the FEMA minimums where better information exists (City of Bellingham 2017).

FFAs are mapped throughout the City and within the study area (City of Bellingham n.d.-d). The study area contains FFA features that include wetlands, digital elevation model (DEM) interpolated depressions, dam inundation, city channels, and rivers (City of Bellingham 2017). DEM interpolated depressions were used to identify potential areas of flooding based on topographic features. Dam inundation refers to the inundation areas in the event of a dam failure at full capacity. This includes areas both above and below the City's St. Clair flood control dam; however, these data are not well suited to FFA criteria because dams are engineered and controlled structures with low and infrequent potential for flooding. The study area contains FFAs in the southeast corner of the study area. None of the study area is within the mapped FEMA 100-year floodplain.

### Critical Aquifer Recharge Areas

The City of Bellingham defines critical aquifer recharge areas as “areas with critical recharging effect on aquifers used for potable water as defined by the Washington Administrative Code (WAC) 365-190-030(2)...” and areas that “have prevailing geologic conditions associated with infiltration rates that create a high potential for contamination of ground water resources or contribute significantly to the replenishment of ground water...” (City of Bellingham 2022a). An aquifer is a geologic formation that

provides a water source to wells or springs. Surface geology consists of soils derived from volcanic ash and loess over glaciomarine deposits; aquifers are typically sand and gravel-dominated deposits where ample pore space is present for infiltrated water to be stored and discharged.

BMC 16.55.360 states that “based on the criteria and descriptions in subsections (A) through (E) of this section, the city concludes that there are no critical aquifer recharge areas within the city limits and its jurisdiction at the time of adoption of this chapter. Therefore, there are no express regulations affecting this type of critical area within the city” (City of Bellingham 2022a).

### 3.3.3 Impacts

#### 3.3.3.1 Impacts Common to All Alternatives

All alternatives would include new land development within Barkley Urban Village and the same expansion of the local street network, as described in Chapter 2 and Section 3.8, which would in turn result in the creation of new impervious surfaces.

Development within the study area would occur within the Squalicum Creek watershed or the Whatcom Creek watershed. Care would be taken during development to maintain the predevelopment watershed boundaries through the developed condition. The actual watershed line may vary, but contributing areas to each watershed would be maintained to the extent feasible in order to maintain hydrology in each watershed and minimize diversion of stormwater runoff.

Stormwater system improvements would be constructed as the study area is developed. Improvements will include collection and conveyance systems, water quality treatment facilities, and flow control facilities. Each of these facilities will be specific to the development improvements the stormwater facilities are designed to manage. The improvements would be constructed in accordance with the BMC and adopted stormwater standards, such as Ecology’s Stormwater Management Manual for Western Washington (Ecology 2019). These systems may be designed for each individual parcel, or may be designed as regional facilities to manage multiple parcels.

Stormwater water quality and flow control would be provided by the SW Pond for projects within the SW Pond basin. Few undeveloped sites within the benefit area of the SW Pond would benefit from the facility. Improvements outside of the SW Pond basin would comply with stormwater standards applicable at the time of development.

No work would occur in or adjacent to streams or within regulated stream buffers. However, the creation of new impervious surfaces under all alternatives would impact water quality and stream hydrology of receiving waters and drainages that could impede groundwater recharge and increase the risk of flooding downstream.

Clearing, grading, and stockpiling of soils may cause sediment migration to receiving waters and drainage features. Soil compaction and vegetation removal would increase runoff rates into hydrology features.

All alternatives would result in varying degrees of direct and indirect impacts to wetlands, as described further in Sections 3.3.3.2, 3.3.3.3, and 3.3.3.4. No new structures are proposed in FFAs under any of the alternatives.

#### 3.3.3.2 No Action Alternative

The No Action Alternative would result in the largest new development footprint of all the alternatives and the greatest amount of new surface parking lots. In addition, the No Action Alternative would preserve the least amount of undeveloped land as open space and would result in less open space than

under existing conditions. Therefore, the No Action Alternative would result in the largest overall increase in impervious surfaces and has the highest potential to alter surface drainage patterns.

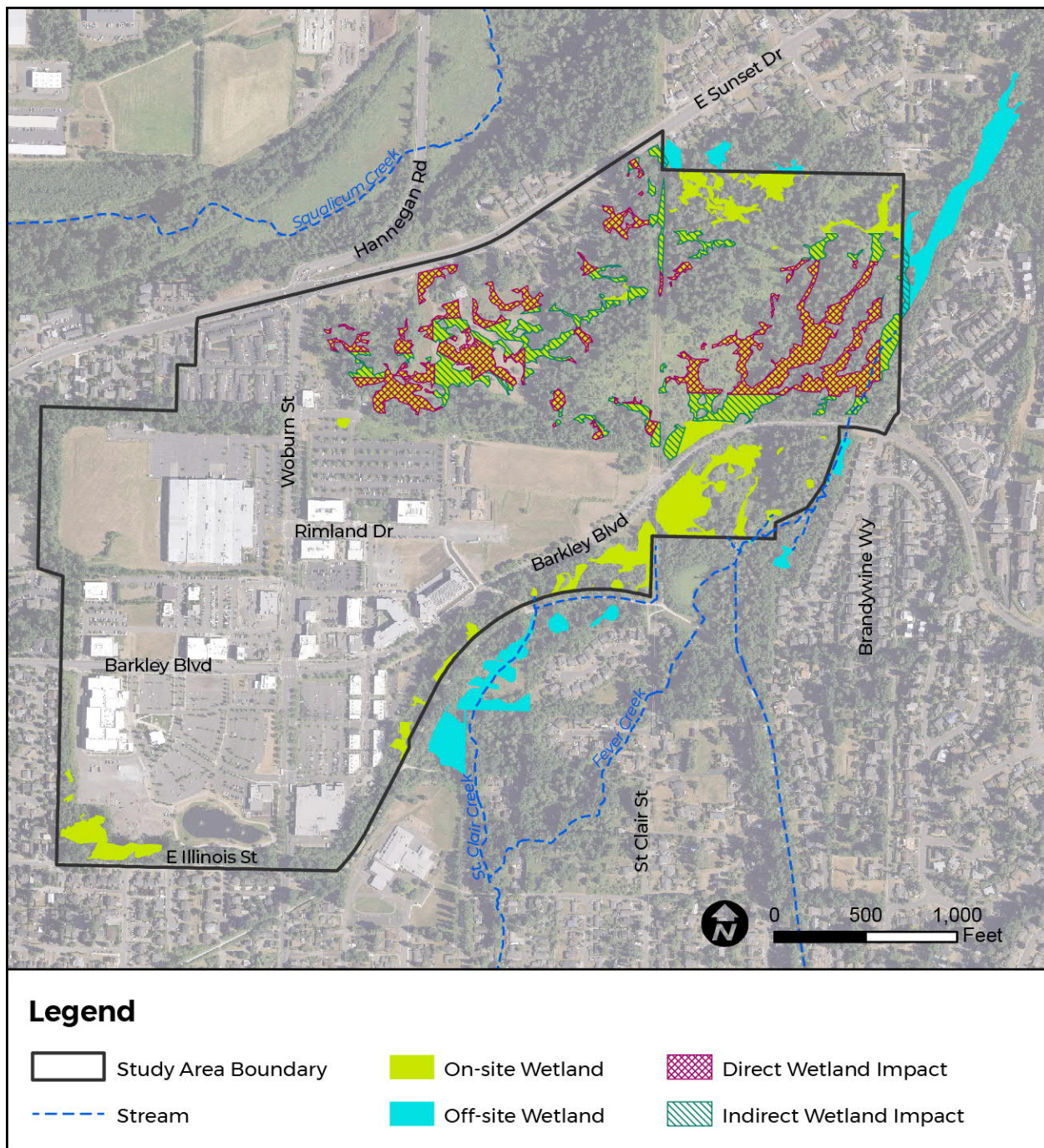
The No Action Alternative would have the highest total direct and indirect wetland impacts, including the largest direct impacts to higher-quality Category II wetlands, as shown in Table 3-5 and Figure 3-4. New single-family homes are proposed in the eastern portion of the study area where higher value, Category II wetlands are concentrated. This development would result in a loss of pervious surfaces and would negatively impact the wetlands and higher functioning, more mature forested buffers located in this portion of the site.

Table 3-5. No Action Alternative: Wetland Impacts

Wetland Category	Direct Wetland Impact (acres)	Indirect Wetland Impact (acres)
II	4.71	2.87
III	4.69	4.15
IV	0.42	0.03
Total	9.82	7.05



Figure 3-4. No Action Alternative: Wetland Impacts



### 3.3.3.3 Action Alternative 1/Preferred Alternative

Action Alternative 1 would provide for higher levels of growth, development, and density than the No Action Alternative but lower levels than Action Alternative 2. Action Alternative 1 would have the smallest new development footprint of any of the alternatives. The additional building development would increase impervious surfaces on the western side of the study area; however, new buildings would be constructed to replace some existing surface parking lots, resulting in limited new impervious surfaces. Additional parking would generally be underground. Action Alternative 1 would preserve the largest amount of open space, which could aid in drainage and infiltration.

Action Alternative 1 would have the lowest total direct and indirect wetland impacts, including less than 1 acre of direct impacts to the higher-quality Category II wetlands, as shown in Table 3-6 and Figure 3-5. This alternative would retain the approximately 40 acres of forested land in the northeastern portion of the site, which would preserve higher functioning (Category II) wetlands, more mature upland forested buffers, and areas that are mapped as an Important Wildlife Habitat Area by the City (Northwest Ecological Services 2023).

Table 3-6. Action Alternative 1/Preferred Alternative: Wetland Impacts

Wetland Category	Direct Wetland Impact (acres)	Indirect Wetland Impact (acres)
II	0.03	0.69
III	6.86	1.13
IV	0.42	0.03
Total	7.31	1.85

### 3.3.3.4 Action Alternative 2

Similar to Action Alternative 1, development under Action Alternative 2 would be more compact than existing conditions or the No Action Alternative and would be concentrated on the west side of the study area. Additional parking would be provided below ground with some existing surface parking maintained.

This alternative would preserve slightly less of the forested land in the northeast quadrant of the study area compared to Action Alternative 1 due to the development of additional single-family housing. Action Alternative 2 would have lower total direct and indirect wetland impacts than the No Action Alternative but higher impacts than Action Alternative 1, as shown in Table 3-7 and Figure 3-6.

Table 3-7. Action Alternative 2: Wetland Impacts

Wetland Category	Direct Wetland Impact (acres)	Indirect Wetland Impact (acres)
II	2.54	0.69
III	6.75	1.44
IV	0.42	0.03
Total	9.71	2.16



Figure 3-5. Action Alternative 1/Preferred Alternative: Wetland Impacts

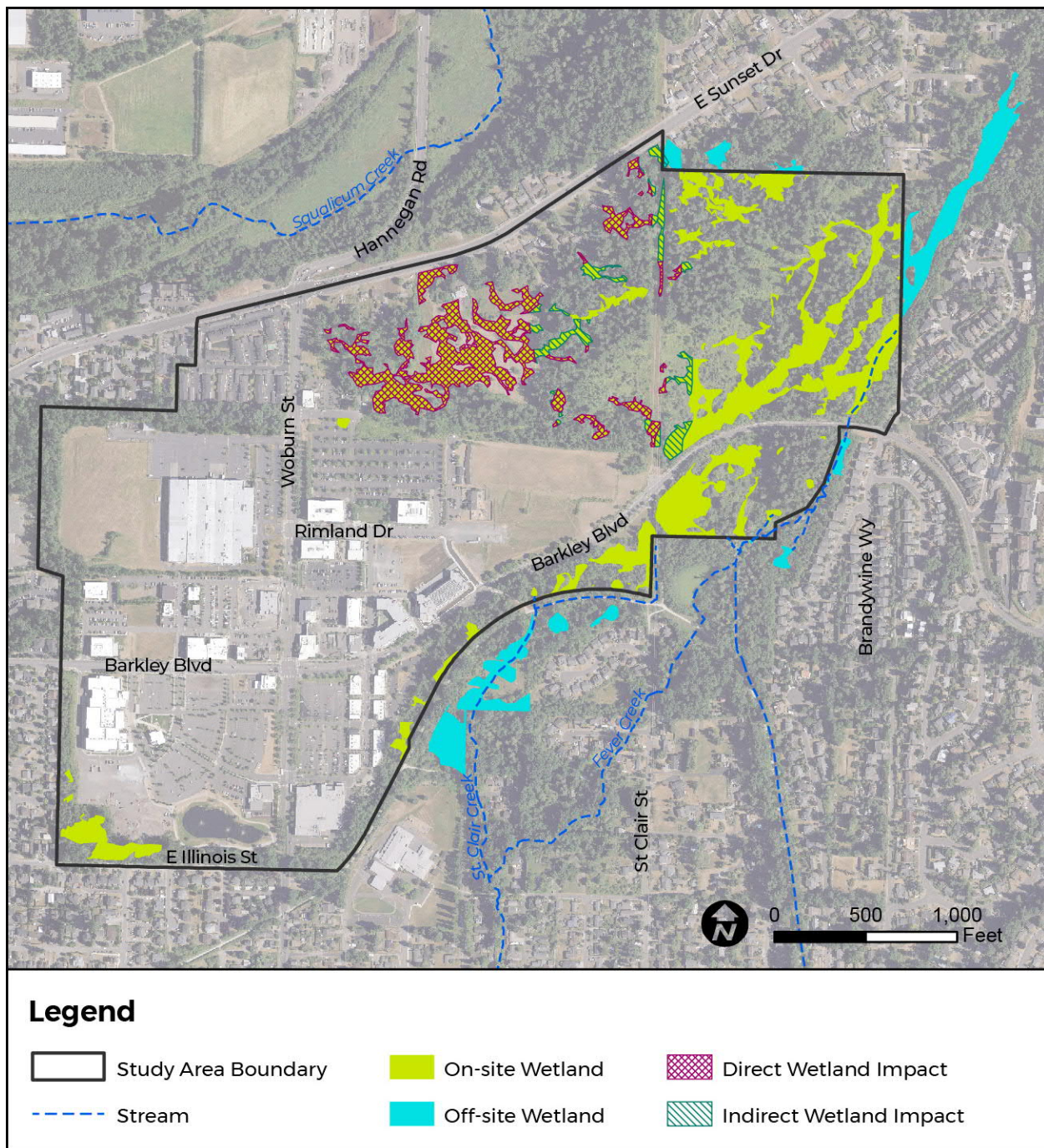
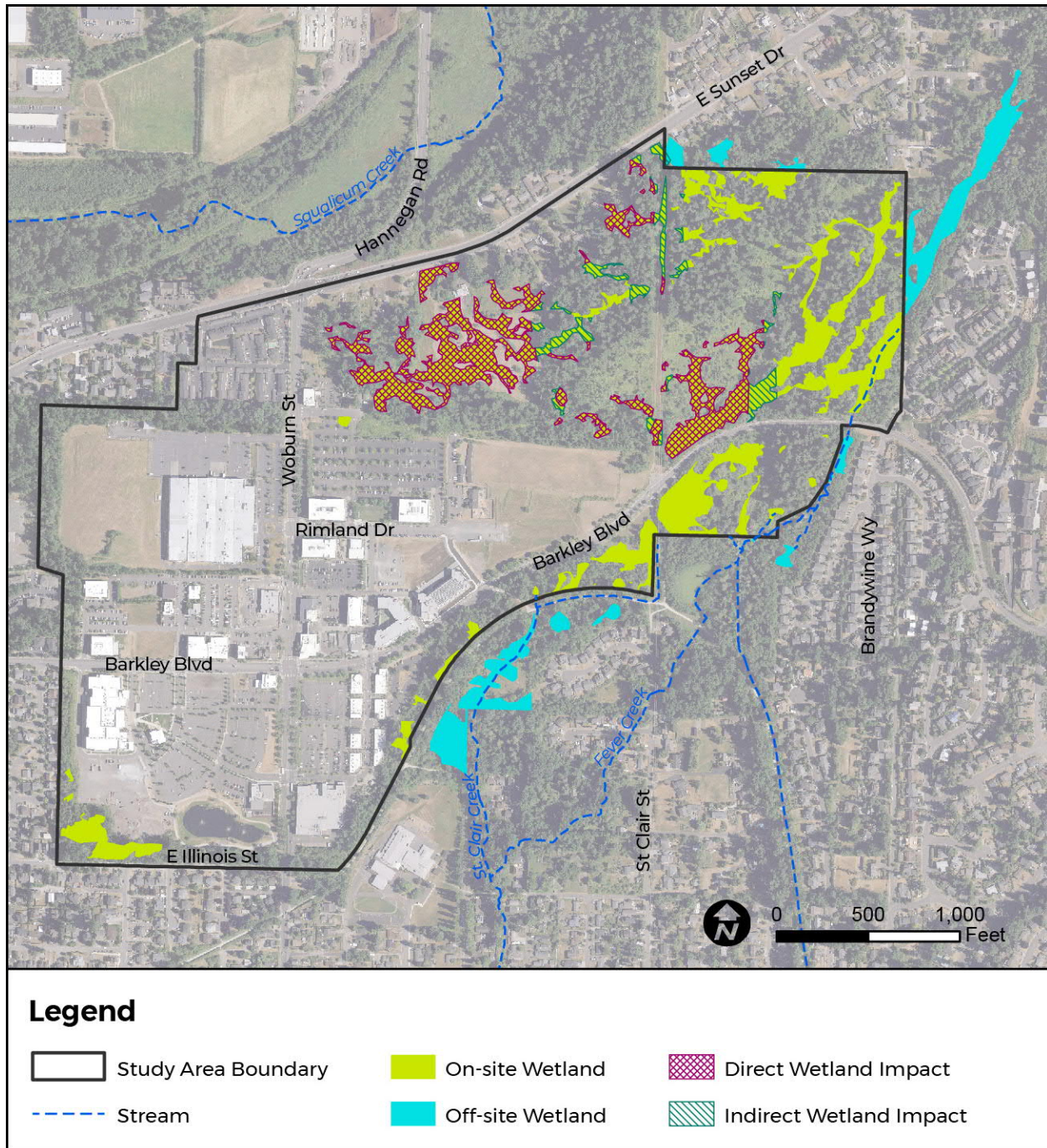




Figure 3-6. Action Alternative 2: Wetland Impacts





### 3.3.4 Mitigation Measures

Local, state, and federal agencies require projects impacting wetlands, streams, or wildlife Habitat Conservation Areas, and/or shorelines to follow mitigation sequencing. Mitigation sequencing is a process where applicants show they have avoided all impacts to regulated areas and their buffers to the furthest extent possible. In some cases, if an alteration to the regulated area is deemed unavoidable, impacts may be allowed if they are mitigated using the best available science and result in no net loss of critical area functions and values. When an alteration or impact to a regulated area is proposed, the applicant must demonstrate that all reasonable efforts have been taken to mitigate impacts in the following prioritized order: 1) Avoid, 2) Minimize, 3) Rectify, 4) Reduce, 5) Compensate.

BMC 16.55.350 assigns mitigation ratios for wetland and wetland buffer impacts depending upon mitigation type, wetland category, and the total square footage of impact, as shown in Table 3-8.

Table 3-8. Wetland and Buffer Replacement Ratios Per BMC 16.55.350

Impact	Creation or Reestablishment	Restoration (Rehabilitation)	Enhancement	Preservation
Category II	3:1	6:1	12:1	16:1
Category III	2:1	4:1	8:1	10:1 case-by-case basis
Category IV	1.5:1	3:1	6:1	5:1 to 10:1 case-by-case basis
Indirect Impacts*	half of the above	half of the above	half of the above	half of the above
Buffer Impacts	-	-	1:1	-

\*Indirect impacts are mitigated at half of the standard ratio

To mitigate for impacts to streams and wetlands, a mitigation plan for each building project consistent with the City's Critical Areas regulations would be developed and would be implemented prior to or concurrent with the phased implementation of each building project. It is anticipated that a variety of types of mitigation would be needed to offset proposed impacts. Table 3-9 through Table 3-11 present how much mitigation would be needed for each alternative if only wetland creation was proposed.

Table 3-9. No Action Alternative: Wetland Impacts and Potential Mitigation Needed

Wetland Category	Direct Wetland Impact (acres)	Replacement Ratio	Wetland Creation (acres)	Indirect Wetland Impact (acres)	Replacement Ratio	Wetland Creation (acres)
II	4.71	3:1	14.13	2.87	1.5:1	4.30
III	4.69	2:1	9.38	4.15	1:1	4.15
IV	0.42	1.5:1	0.63	0.03	0.75:1	0.02
Total	9.82	-	24.14	7.05	-	8.47
32.61 acres of wetland creation needed						

Table 3-10. Action Alternative 1/Preferred Alternative: Wetland Impacts and Potential Mitigation Needed

Wetland Category	Direct Wetland Impact (acres)	Replacement Ratio	Wetland Creation (acres)	Indirect Wetland Impact (acres)	Replacement Ratio	Wetland Creation (acres)
II	0.03	3:1	0.09	0.69	1.5:1	1.04
III	6.86	2:1	13.72	1.13	1:1	1.13
IV	0.42	1.5:1	0.63	0.03	0.75:1	0.02
Total	7.31	-	14.44	1.85	-	2.36
16.80 acres of wetland creation needed						

Table 3-11. Action Alternative 2: Wetland Impacts and Potential Mitigation Needed

Wetland Category	Direct Wetland Impact (acres)	Replacement Ratio	Wetland Creation (acres)	Indirect Wetland Impact (acres)	Replacement Ratio	Wetland Creation (acres)
II	2.54	3:1	7.62	0.69	1.5:1	1.04
III	6.75	2:1	13.50	1.44	1:1	1.44
IV	0.42	1.5:1	0.63	0.03	0.75:1	0.2
Total	9.71	-	21.75	2.16	-	2.50
24.24 acres of wetland creation needed						

For unavoidable impacts, mitigation will be provided based on City code, and state/ federal mitigation requirements. A mitigation plan will be designed specifically to meet the Wetland Mitigation in Washington State guidance document (Ecology et al 2021).

Due to the extent of wetland impacts under any alternative, it is assumed that there will not be adequate on-site wetland mitigation opportunities to provide compensation for all proposed impact. At this time, it is anticipated that mitigation will need to be accomplished through a variety of mitigation types (creation, reestablishment, preservation, enhancement) and that this will include both on and offsite mitigation actions.

Preference will be placed first to on-site mitigation to the greatest extent possible. Approaches to on-site mitigation are likely to include preservation and/or enhancement in the eastern portion of the site, and potentially wetland creation south of Barkley Boulevard.

Off-site mitigation will also be necessary to ensure adequate mitigation of impacts. Alternative mitigation sites are currently being identified. Mitigation sites will be selected based on criteria in the Ecology publication *Selecting Mitigation Sites Using a Watershed Approach* (Hruby et al 2009).

The project area spans two watershed sub-basins, and wetland impacts are anticipated to occur within both the Whatcom Creek and Squalicum Creek watersheds. For Action Alternative 1/Preferred Alternative, the majority of the development area is located in the Squalicum Creek watershed. Therefore, the majority of wetland impact would occur in this watershed as well. The eventual mitigation design will discuss impacts to wetland functions and address how functions are being maintained in each watershed sub-basin. The mitigation design will first attempt to replace lost functions in each watershed if possible, and if not will follow guidance in the Ecology publication *Selecting Mitigation Sites Using a Watershed Approach* (Hruby et al 2009), for any proposed mitigation areas outside of the individual sub-basins.

A SWPPP and a Spill Prevention, Control, and Countermeasure (SPCC) Plan would be developed and implemented during pre-construction, construction, and post-construction phases.

To control stormwater runoff and any potential pollutants, BMPs would be deployed. Erosion and sediment control measures would be applied and monitored at construction sites and on all lands within the study area. Low-impact development practices would be applied that preserve or use natural landscape features and processes to temporarily slow, detain, or filter potential contaminants from stormwater.

### 3.3.5 Significant Unavoidable Adverse Impacts

With mitigation measures as described in Section 3.3.3.2, the project would not result in significant unavoidable adverse impacts to water resources.

## 3.4 Plants and Animals

### 3.4.1 Methodology

Analysts reviewed existing literature and reference materials to characterize the affected environment and assess potential impacts and benefits of the alternatives, including the following sources:

- United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database (USFWS 2022 and 2023a)
- Barkley Village Wetland Delineation (Biohabitats 2022)
- Critical Areas Assessment (Supplement) (NW Ecological Services 2023), provided as Appendix B to this Draft EIS
- Washington and Weather Averages Bellingham (U.S. Climate Data 2022)
- Ecoregions of Washington (EPA 2010)
- Washington State Noxious Weed Control Board (2023)
- Washington Natural Heritage Program (Washington Department of Natural Resources 2023a)
- Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species List (PHS) (WDFW 2023a)
- Washington Department of Natural Resources (WDNR) (WDNR 2023a)

### 3.4.2 Affected Environment

This section provides an overview of federal, state, and local regulations applicable to future development and describes the existing conditions of general habitat types and the species present within the study area.

#### 3.4.2.1 Applicable Federal, State, and Local Regulations

##### Federal Endangered Species Act

The Endangered Species Act of 1973 (ESA), as amended (16 USC §§1531–1544), and the USFWS implementing regulations at 50 Code of Federal Regulations (CFR) Parts 13 and 17 govern federally listed threatened and endangered species and their designated critical habitat. Section 9 of the ESA makes it unlawful to “take” a listed species. Take is defined as “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” Section 10 of the ESA authorizes the USFWS to issue an Incidental Take Permit (ITP) to entities for otherwise lawful activities that may harm listed species or their habitat. To obtain an ITP, an applicant must prepare and submit a Habitat Conservation Plan outlining what the applicant will do to “minimize and mitigate” the impact(s) of the permitted take on listed species.

The ESA is administered jointly by the USFWS for plants and most terrestrial and freshwater wildlife species and by the National Marine Fisheries Service for most marine and anadromous animal species. The ESA defines procedures for listing species, designating critical habitat for listed species, and preparing recovery plans. It also specifies prohibited actions and exceptions.

##### Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) protects migratory birds and prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except as authorized under a valid permit (16 USC 703; 50 CFR 21; 50 CFR 10). Most actions that result in take or the permanent or temporary possession of a protected species or nests containing eggs or young constitute violations of the MBTA. In total, 1,093 bird species are protected by the MBTA, which are listed in 50 CFR §10.13.

##### Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) prohibits the take, possession, or any acts thereof, of any bald or golden eagle, part, nest, or egg (16 USC 668) without a permit issued by the Secretary of the Interior. The BGEPA defines “take” as any act that pursues hunting, wounding, killing, capturing, or disturbing, etc. (16 USC 668c). “Disturb” is defined as agitating or bothering an eagle that causes injury to, decreases productivity of, or causes nest abandonment by the eagle. The BGEPA provides civil and criminal penalties for persons who violate the law or regulations and expands protection beyond the MBTA to define “take” to include disturbance of eagles. In addition to occupied nests, unoccupied nests of eagles are protected under the BGEPA (16 USC 668). In September 2009, the USFWS established rules (50 CFR 22.26 and 22.27) authorizing limited legal take of bald and golden eagles and their nests “when take is associated with, but not the purpose of, an otherwise lawful activity, and cannot practicably be avoided.” Such authorization was provided in the form of either a “standard” or “programmatic” take permit issued by the USFWS, consistent with the regulatory criteria. In December 2016, the USFWS published a final rule (50 CFR 13 and 22) eliminating standard and programmatic take permits and, instead, established an ITP. The final rule establishes that take must be avoided and minimized to the maximum extent practicable. Under the 2016 final rule, the maximum term for an ITP is 30 years, which represents an increase from the five-year term designated in the 2009 rule. Long-term permits

(i.e., greater than five years) will be subject to five-year reviews and require adaptive management provisions.

### Washington State Listed Species

WAC Title 220 Department of Fish and Wildlife details the regulations to protect plant, fish, and wildlife species and maintains lists of priority species that are listed as State Endangered, Threatened, Sensitive, and Candidate Species. Currently, 269 priority species in Washington are regulated by the WDFW (WDFW 2023a). State Endangered is defined as "...seriously threatened with extinction throughout all or significant portions of its range within the state..." and includes 35 species as of the May 2023 WDFW listing. State Threatened are species that are "...likely to become endangered in the future throughout a significant portion of its range..." and includes five species. State Sensitive is defined as species that are "...vulnerable or declining and ...likely to become endangered or threatened in a significant portion of its range..." and includes seven species. Candidate Species are those that are monitored and could be listed as Endangered, Threatened, or Sensitive within the foreseeable future and include 101 species (WAC 220-101).

### Bellingham Critical Areas Ordinance

Fish and wildlife habitat conservation areas are designated in the City's critical area ordinance at BMC 16.55.470 and generally include areas where "...state or federally designated endangered, threatened, and sensitive species have a primary association..."

Similar to wetlands, these habitat conservation areas require an assessment of the presence or absence of species, habitat function, and associated buffer widths in order to maintain and protect these areas. When unavoidable impacts are proposed, mitigation is required.

#### 3.4.2.2 Existing Plant Species

The Critical Areas Report (Appendix B) provides a full list of plant communities observed in the study area and notes the areas where they occur. Noxious weeds identified on-site included: Himalayan blackberry (*Rubus armeniacus*), English hawthorn (*Crataegus monogyna*), English holly (*Ilex aquifolium*), English ivy (*Hedera helix*), Canada thistle (*Cirsium arvense*), herb-Robert (*Geranium robertianum*), Lesser celandine (*Ficaria verna*), and reed canarygrass (*Phalaris arundinacea*).

A review of WDNR threatened and endangered plant species indicated the potential for one threatened plant species to occur: rosy owl's-clover (*Orthocarpus bracteatus*) (WDNR 2023a). Rosy owl's-clover is found adjacent to forested areas dominated by ponderosa pine (*Pinus ponderosa*) and Douglas-fir (*Pseudotsuga menziesii*) in the transition zone between wetland and upland (WDNR 2023b).

#### 3.4.2.3 Existing Animal Species

In general, the site provides habitat for a variety of wildlife species that can tolerate urban or semi-urban environments, and the site provides refuge in a developing area. Wildlife use of the habitat on-site is somewhat limited by the surrounding roads and development that disconnect it from other nearby habitat blocks. However, the property is part of a larger mapped habitat block that extends off-site to the north, south, and east, but it is disconnected from other surrounding habitat by roads and development. Wildlife observed on-site includes a variety of songbirds and deer, and Pacific chorus frogs (*Pseudacris regilla*). Other species that were not observed but are likely to use the site for foraging, breeding, and refugia are those that are well adapted to human presence, such as raptors, bats, and other small mammals, such as squirrels and racoon.



No federal or state Threatened, Endangered, or Candidate Species or State Priority Species were observed within the study area or immediate vicinity. However, the study area may provide suitable habitat for federally listed threatened and endangered species. A review of the USFWS IPaC database indicates that six listed species have the potential to occur within the study area—five animals and one insect.

- Three of the animal species are listed as threatened: marbled murrelet (*Brachyramphus marmoratus*), yellow-billed cuckoo (*Coccyzus americanus*), and bull trout (*Salvelinus confluentus*). The additional two animal species are North American wolverine (*Gulo gulo luscus*), designated as proposed threatened, and Dolly Varden (*Salvelinus malma*), designated as proposed similarity of appearance, threatened due to its similarity to the bull trout.
- The one insect species listed is the monarch butterfly (*Danaus plexippus*) designated as a Candidate Species. Suitable habitat for the monarch butterfly requires the presence of its host plant, milkweed (*Asclepias* spp.), which is not present in Whatcom County.

Of these species, critical habitat has been designated for marbled murrelet, yellow-billed cuckoo, and bull trout, none of which are mapped within the study area.

Analysts identified two seasonal streams within the review area: St. Clair Creek and Fever Creek. No fish were observed within either stream. Based on consultation with WDFW, neither stream is anticipated to be fish bearing.

Steelhead trout (*Oncorhynchus mykiss*) has been known to spawn downstream of the study area in Whatcom Creek and upstream in Squalicum Creek (National Oceanic and Atmospheric Administration [NOAA] 2023a). These water features are included in the final critical habitat of the species. Several distinct populations of steelhead occur throughout the west, including in California, Oregon, Washington, Idaho, and British Columbia based on their abundance and health and are regulated differently. In western Washington, the Puget Sound Distinct Population Segment is listed as federally threatened.

Chinook salmon has been known to occur in Whatcom Creek downstream and Squalicum Creek upstream of the study area (WDFW 2023k). Chinook have several distinct populations occurring in the same states as steelhead. In western Washington, the Puget Sound Evolutionarily Significant Unit is listed as federally threatened.

Eight migratory bird species have the potential to occur within the study area. These include bald eagle (*Haliaeetus leucocephalus*), black swift (*Cypseloides niger*), California gull (*Larus californicus*), evening grosbeak (*Coccothraustes vespertinus*), golden eagle (*Aquila chrysaetos*), olive-sided flycatcher (*Contopus cooperi*), Rufous hummingbird (*Selasphorus rufus*), and western grebe (*Aechmophorus occidentalis*).

The eastern and central portions of Barkley Village have been classified as an Important Wildlife Habitat Area and part of a wildlife corridor based on a model of three surrogate species representing different species guilds (Diamond Head Consulting 2022). This same assessment identified Sunset Drive (SR 542) and Barkley Boulevard as wildlife movement barriers associated with the Important Wildlife Habitat Area. The WDFW PHS database was reviewed and indicated that the Squalicum River corridor occurs in the northwestern portion of the study area with freshwater forested/shrub vegetation and freshwater emergent wetlands present.

Additionally, WDFW PHS maps indicate big brown bat (*Eptesicus fuscus*) occurrence in the township of the review area (NES 2023). This mapping is not site specific. Big brown bats are not a listed species, but regular concentrations, breeding areas, and communal roosts are a Priority habitat. No habitat features that would be used by this species as hibernacula were observed in the review area or vicinity. Multiple

Priority snags were observed within the review area, which have the potential to be used by big brown bat as day roosts. Bats may also use on-site riparian areas as foraging habitat. However, the sporadic snags on-site do not appear to constitute the PHS listing of regular concentration of breeding area or communal roost.

### 3.4.3 Impacts

#### 3.4.3.1 Impacts Common to All Alternatives

Under all alternatives, additional development of Barkley Urban Village would result in a loss of plant and animal habitat through conversion of land cover, increased density of human activity and habitation, and habitat fragmentation. The intensity of the loss of habitat would depend on the alternative. Any development or ground disturbance in proximity to wetlands would result in a loss of habitat for plant and animal species (see Section 3.3.3 for further discussion of wetland impacts).

Construction activities and the operation of any of the alternatives would result in greater levels of noise throughout the study area. This noise could temporarily disturb wildlife species and alter their behavior during foraging, reproduction, and migration. Aquatic species present in wetlands and forested areas could be negatively impacted by increased sedimentation from construction activities and contamination and pollution from runoff.

#### 3.4.3.2 No Action Alternative

The No Action Alternative would likely result in the greatest disruption of plant and animal species and habitat fragmentation based on the location of proposed development. Single-family housing would be developed in areas where wetlands and other natural areas currently provide habitat to a variety of wildlife species and would disrupt the documented wildlife corridor that extends over the northeastern portion of the site. In addition, the No Action Alternative would preserve the least amount of undeveloped land as open space and would remove the greatest amount of vegetation of all the alternatives.

#### 3.4.3.3 Action Alternative 1/Preferred Alternative

Action Alternative 1 would result in the least disruption of plant and animal species and habitat fragmentation based on the location and type of proposed development. As discussed in Section 3.3.3, Action Alternative 1 would retain the highest amount of open space of the alternatives, including the approximately 40 acres of forested land in the northeastern portion of the site, which would preserve higher functioning (Category II) wetlands, more mature upland forested buffers, and areas that are mapped as an Important Wildlife Habitat Area by the City (Northwest Ecological Services 2023).

The establishment of recreation trails in the eastern half of the study area could disturb wildlife species during foraging and reproduction by increasing human presence.

#### 3.4.3.4 Action Alternative 2

Action Alternative 2 would result in greater disruption of plant and animal species and greater habitat fragmentation than Action Alternative 1 but less than the No Action Alternative. As with the No Action Alternative, single-family housing would be developed in areas where wetlands and other natural areas currently provide habitat to wildlife species. Action Alternative 2 would also preserve slightly less open space than Action Alternative 1 but more than the No Action Alternative. This alternative would retain the majority of the mapped Important Wildlife Habitat Area in the northeast portion of the site but would encroach into it to some extent and would reduce the total area of available habitat.

Like Action Alternative 1, the establishment of recreation trails in the eastern half of the study area could disturb wildlife species during foraging and reproduction by increasing human presence.

#### 3.4.4 Mitigation Measures

Local, state, and federal agencies require projects impacting wildlife HCAs to follow mitigation sequencing to show they have avoided and minimized impacts to the furthest extent possible. In some cases, if an alteration to the regulated area is deemed unavoidable, impacts may be allowed if they are mitigated using the best available science and result in no net loss of critical area functions and values.

As discussed in Section 3.3.3.2, a mitigation plan for each building project consistent with the City's Critical Areas regulation would be developed and would be implemented prior to or concurrent with each building project to offset proposed impacts to wildlife corridors, as required.

A SWPPP and SPCC would be developed and implemented during the pre-construction, construction, and post-construction phases. Prior to the beginning of construction, nest surveys would be required by a qualified person within the study area to ensure no regulated species were nesting within the area. If nesting occurred, buffers would be put in place to reduce negative impacts to the birds. Ongoing nest surveys would be required during the nesting periods for regulated species, including bald and golden eagles.

The preservation of forested areas, individual stands of trees, and wildlife habitat are included in the Barkley Urban Village Master Plan to promote enhancement and preservation of habitat.

Future landscaping would include drought-tolerant trees and shrubs within the study area. For areas identified for preservation, invasive species would be removed, and native plants would be planted to enhance the ecosystem.

#### 3.4.5 Significant Unavoidable Adverse Impacts

With the mitigation measures as described in Section 3.4.4, the project would not result in significant unavoidable adverse impacts to plants and animals.

### 3.5 Energy and Natural Resources

#### 3.5.1 Methodology

Analysts completed a desktop review of existing maps, data, and planning documents to identify existing conditions for energy and natural resources. Sources of publicly available information used to document existing conditions for energy and natural resources include the following:

- City of Bellingham Climate Protection Action Plan (City of Bellingham 2018)
- City of Bellingham 2016 Comprehensive Plan (City of Bellingham 2016a)
- City of Bellingham 2020 Parks, Recreation, and Open Space Plan (City of Bellingham 2020c)
- City of Bellingham Summary of Electrification Code Updates (City of Bellingham 2020b; 2022c)
- Barkley Neighborhood Plan (City of Bellingham 2021a)
- Barkley Village State Environmental Policy Act Checklist (March 2022) (Talbot Real Estate, LLC 2022)
- City of Bellingham GIS Data
- One Planet Living sustainability framework (Bioregional Development Group n.d.)

Analysts evaluated potential impacts of the alternatives by conducting a qualitative assessment of expected energy consumption and natural resources conservation based on the proposed land uses and development types, as described in more detail in Section 3.7, and vehicle traffic volumes, described in Section 3.8.

### 3.5.2 Affected Environment

Energy needs for existing development in the study area are met primarily through electric service provided by the local utility company, Puget Sound Energy. Hydroelectric power, a renewable resource, is the principal means of electricity generation in Bellingham (City of Bellingham 2016a). Natural gas is also currently provided to the study area by Cascade Natural Gas. The City has determined that both of these utilities have sufficient capacity to support the City's energy needs for the 20-year planning horizon in the 2016 Comprehensive Plan (City of Bellingham 2016a).

Nearly two-thirds of the existing housing units (91 multifamily units) and about 6% (24,400 square feet) of the commercial space in the study area currently use renewable energy features, including solar. A residential building with 171 units is currently under development and will include two electric heat pump hot water plants and solar panels.

Within the study area, all new buildings will be served by electricity only. Talbot Real Estate, LLC has committed to incorporating solar or wind energy in all future housing and commercial projects to supplement the increased demand for electricity. Talbot Real Estate, LLC has also determined that most areas within Barkley Urban Village would be suitable candidates for solar technologies. All future building projects will incorporate electrical vehicle charging stations. All existing buildings will receive energy assessments to plan for energy saving technology in controls (e.g., LED lighting, HVAC equipment, etc.).

The study area currently has eight publicly accessible electric vehicle (EV) charging stations and 20 dedicated stations within two residential projects, with at least 20 additional dedicated EV chargers planned as part of the latest residential development project under construction.

Talbot Real Estate, LLC has adopted a global sustainability framework called One Planet Living to guide current and future development decisions (Bioregional Development Group n.d.). Within that framework, goals specifically related to energy and natural resources are as follows:

- Reducing consumption, re-using, and recycling with a goal of zero waste and zero pollution
- Making buildings and manufacturing energy efficient with a goal of supplying all energy with renewables
- Using materials from sustainable sources and promoting products that help people reduce consumption
- Reducing the need to travel; encouraging walking, cycling, and low-carbon transport

To encourage the public to conserve energy through education, Talbot Real Estate, LLC has hosted and implemented environmental fairs in the community. Additionally, Talbot Real Estate, LLC hosts environmental education events during the Barkley Market and regularly encourages tenants, residents, and the surrounding community to conserve energy through their monthly newsletters.

The City also encourages energy efficiency measures through its Climate Protection Action Plan (City of Bellingham 2018). In 2022, the City adopted an amendment to its building codes to promote energy efficiency and the decarbonization of new commercial and large multifamily buildings. The amendment included provisions related to building envelopes and insulation, mechanical systems, water heating, electrical power and lighting, metering to assess building energy performance, and



requirements for solar readiness. Notably, use of fossil fuels is no longer permitted for space and water heating in new commercial and large multifamily buildings.

In addition to buildings, transportation is a major contributor to energy consumption in Bellingham and the study area as a whole. However, increasing investments in hybrid and electric vehicles by individuals and the City, as well as a focus on building out bicycle and pedestrian infrastructure citywide, contribute to reductions in transportation-related energy use, as noted in the Climate Protection Action Plan (City of Bellingham 2018).

Natural resources in the study area are described further in Section 3.3 and Section 3.4. About 40% of the urban village study area is currently undeveloped open space, including a large area of forested land in the northeast portion, as described in more detail in Section 3.7.1 and Section 3.7.5. Two petroleum product pipelines traverse the study area: the TransMountain Pipeline under the St. Clair right-of-way, and the Olympic Pipeline under the Vining Street right-of-way.

### 3.5.3 Impacts

#### 3.5.3.1 Impacts Common to All Alternatives

All of the alternatives would generate new development and new vehicle trips, as described in Section 3.8, which would lead to an increase in energy use compared to existing conditions. The amount of increase in energy use would depend on the intensity and type of new development and, in turn, the number of new vehicle trips, and would vary somewhat by alternative. However, all alternatives would also adhere to the principles in the City's Climate Protection Action Plan and revised energy code, which would promote conservation of energy as well as usage of clean and/or renewable sources of energy for transportation and buildings. In addition, all of the alternatives would construct more attached single-family housing and multifamily residential buildings than existing conditions. Research on residential building energy efficiency has found that that single-family detached housing is the least energy-efficient type of housing, while attached single-family and multifamily residential buildings tend to use less energy (Obrinsky and Walter 2016). Larger (five or more unit) buildings were found to use the least amount of energy per household.

#### 3.5.3.2 No Action Alternative

The No Action Alternative would have the lowest square footage of new residential and commercial development and new vehicle volumes compared to existing conditions, as described further in Section 3.7.1 and Section 3.8. Therefore, it is expected that the No Action Alternative would have lower energy consumption than the two action alternatives. In addition, the No Action Alternative would have a less compact development style and would therefore preserve the least amount of undeveloped land as open space, as detailed in Section 3.7.5.

#### 3.5.3.3 Action Alternative 1/Preferred Alternative

Action Alternative 1 would have greater square footage of new residential and commercial development and new vehicle volumes than the No Action Alternative but lower levels than Action Alternative 2, as described further in Section 3.7.1 and Section 3.8. Therefore, Action Alternative 1 would have moderately higher energy consumption compared to the other alternatives. However, because of the larger population and higher density of development, the per capita energy consumption is expected to be lower than the No Action Alternative. Action Alternative 1 would have the smallest new development footprint and would preserve the highest amount of undeveloped land as open space, as detailed in Section 3.7.5.

#### 3.5.3.4 Action Alternative 2

Action Alternative 2 would have the highest square footage of new residential and commercial development and new vehicle volumes, as described further in Section 3.7.1 and Section 3.8. Therefore, it is expected that Action Alternative 2 would have the highest energy consumption compared to the other alternatives. However, because of the larger population and higher density of development, the per capita energy consumption is expected to be lower than the No Action Alternative. Action Alternative 2 would have a similar new development footprint and would preserve a similar amount of undeveloped land as open space compared to Action Alternative 1, as detailed in Section 3.7.5.

#### 3.5.4 Mitigation Measures

No mitigation measures have been identified related to energy and natural resources.

#### 3.5.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts related to energy and natural resources under any of the alternatives.

### 3.6 Environmental Health

The following subsections describe existing conditions and potential impacts related to environmental health, defined by state SEPA regulations as noise, risk of explosion, and releases or potential releases to the environment affecting public health, such as toxic or hazardous materials.

#### 3.6.1 Noise

##### 3.6.1.1 Methodology

Analysts documented the existing noise environment in the study area through sound level measurements conducted during a field visit on August 4, 2022. Each of the six measurements were conducted by WSP for 10 to 30 minutes at areas of common outdoor use within Barkley Urban Village. Section 3.6.1.2 provides more information about existing noise levels.

To determine potential noise impacts during construction and operation of the project, analysts reviewed planned land use changes (as detailed in Section 3.7) and projected traffic data (as detailed in Section 3.8) for each of the alternatives and made a qualitative assessment of whether changes to noise levels would be expected.

The estimated change in noise levels based on future traffic volumes at various land uses was compared to the extent to which noise levels would approach a threshold that is noticeable to the human ear. A barely noticeable change in noise levels typically results from a doubling of traffic volumes or a 2 dBA to 4 dBA increase in noise levels. A readily noticeable increase in noise results from a tripling of traffic volumes or a 5 dBA increase in noise levels. A substantial increase in noise levels typically results from a 10 dBA increase in noise levels.

#### Noise Regulations and Impact Criteria

The BMC does not place sound level limits on environmental noise; therefore, noise limits defined in the WAC apply to the project. Most cities in Washington, including the City of Bellingham, rely, at least in part, on the Washington State Noise Control Ordinance (WAC 173-60). WAC 173-60 establishes residential, commercial, and industrial noise limits, along with construction noise limits.

As shown in Table 3-12, allowable maximum permissible environmental noise levels under the WAC are based on the Environmental Designation for Noise Abatement (EDNA) of the land use: residential (Class A), commercial (Class B), and industrial (Class C). Temporary construction noise is exempt from WAC noise regulations between 7:00 a.m. and 10:00 p.m.

Table 3-12. Washington State Maximum Permissible Environmental Noise Levels

EDNA of Noise Source	EDNA of Receiving Property (dBA)		
	Class A	Class B	Class C
Class A	55/45	57	60
Class B	57/47	60	65
Class C	60/50	65	70

Source: WAC 173-60-040

Notes: Limits for noise received in Class A EDNAs are reduced by 10 dBA during nighttime hours (10 p.m. to 7 a.m.).

EDNA = Environmental Designation for Noise Abatement

Allowable nighttime (10:00 p.m. to 7:00 a.m.) noise levels at Class A receiving properties (residential) are reduced by 10 dBA. Short-term exceedance of the sound levels in Table 3-12 is allowed. During any one-hour period, the maximum level may be exceeded by:

- 5 dBA for a total of 15 minutes,
- 10 dBA for a total of 5 minutes, or
- 15 dBA for a total of 1.5 minutes (WAC 173-60-040).

The allowed exceptions are defined by the percentage of time a given level is exceeded. For example,  $L_{25}$  is the noise level exceeded 15 minutes during an hour. Therefore, the permissible  $L_{25}$  would be 5 dBA greater than the values in Table 3-12, provided that the noise level is below the permissible level for the rest of the hour and never exceeds the permissible level by more than 5 dBA.

An hourly  $L_{eq}$  that is approximately 2 dBA higher than the values in Table 3-12 is an equivalent sound level to the permissible levels, including the short-term exceedances. A  $L_{eq}(h)$  of 59 dBA corresponds approximately to a noise level of 57 dBA for 45 minutes and 62 dBA for 15 minutes, which are the maximum permissible noise levels created by a commercial source (Class B) and received by a residential property (Class A).

### 3.6.1.2 Affected Environment

Barkley Urban Village experiences noise mainly from vehicles traveling on existing roadways within the village and roadways located in the vicinity, including SR 542 to the north and I-5 to the west. Building systems, delivery bays, and outdoor activity areas contribute to ambient noise levels. A number of ongoing construction projects in the area also contribute to current noise levels. Existing noise levels are periodically influenced by aircraft flights from Bellingham International Airport, seaplanes flying from Lake Whatcom, and local helicopter flights.

### Land Uses and Zoning

The study area currently includes a mix of Residential land use (Class A EDNA source and receiving properties), Commercial land use (Class B EDNA source and receiving properties), and Industrial land use (Class C EDNA source and receiving properties). Section 3.7.1 provides more details about existing land uses in the study area.

## Existing Noise Levels

Table 3-13 provides a summary of the recorded sound levels and measurement locations from the August 2022 field visit to the study area. Figure 3-7 shows the locations of each sound level measurement.

Table 3-13. Measured Existing Sound Levels in Study Area

Measurement ID	Location	Date	Start Time	Range of Sound Levels (dBA)						
				Leq	Lmax	Lmin	L90	L50	L10	L1
1	Adjacent to 2211 Burns St	8/4/2022	12:58	57	69	47	50	55	60	65
2	Trail near 2900 Woburn St	8/4/2022	13:30	58	67	52	55	58	60	62
3	Trail near restoration pond	8/4/2022	14:01	50	67	42	45	47	51	60
4	Trail on St. Clair right-of-way	8/4/2022	14:26	50	55	43	47	50	52	54
5	Park near 2215 Rimland Dr.	8/4/2022	14:52	55	69	48	51	53	57	62
6	Near daycare and 2900 Woburn St	8/4/2022	15:34	54	65	49	51	52	56	59

Source: WSP field measurements

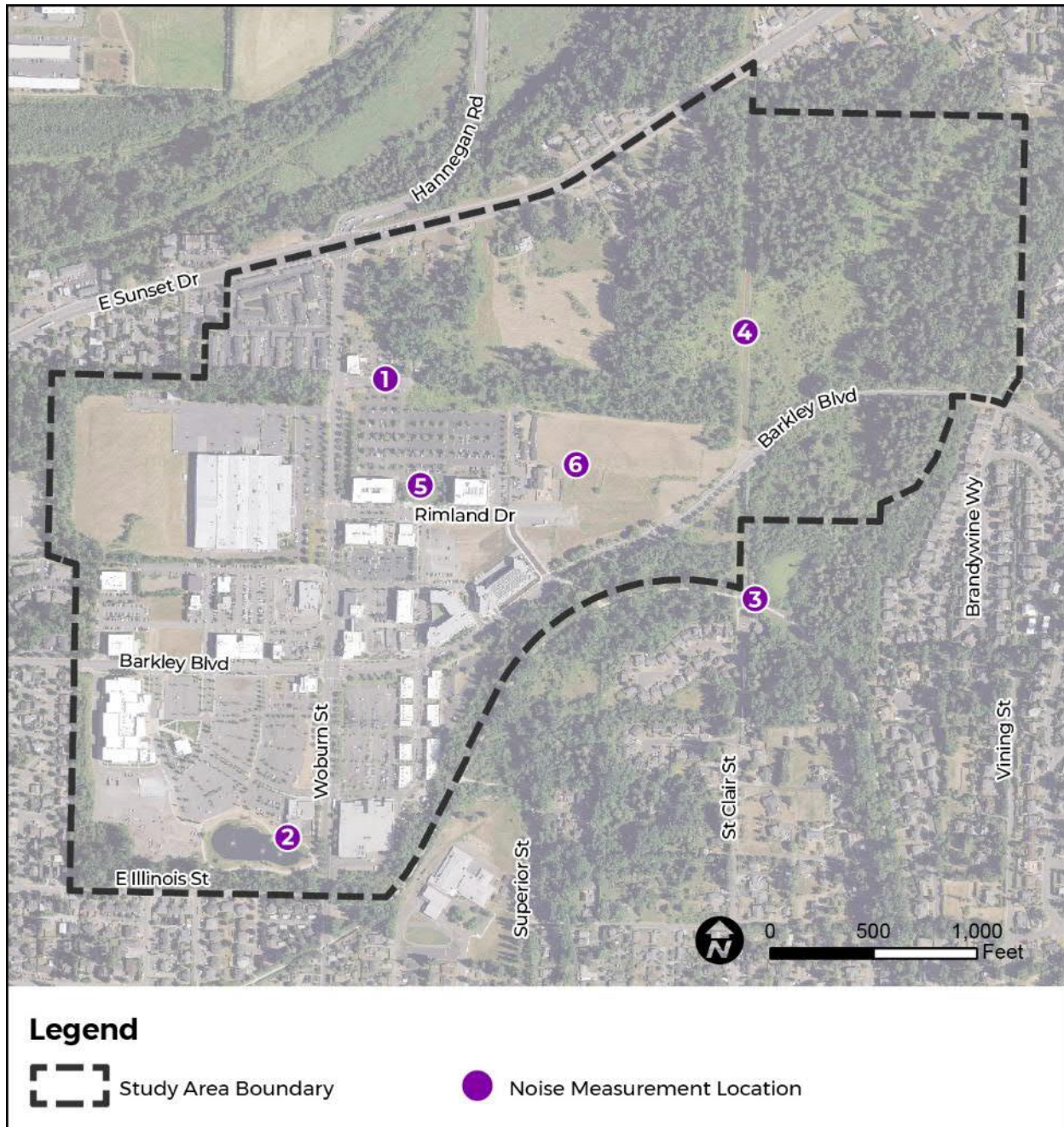
Notes: Noise measurement locations are shown on Figure 3-7 and are intended as a reference for the discussion of potential change in future noise levels; they are not intended as existing peak-hour noise levels.

Leq = Energy Average Sound Levels; Lmax = Maximum Noise Levels; Lmin = Minimum Noise Levels; L1 to L90 = Noise Level Exceeded for percentage of measurement period (1%, 10%, 50%, 90%)

Primary noise sources during all sound level measurements included noise from vehicular traffic traveling on local roadways and limited periods of construction vehicles operating in the distance. Recorded sound levels are typical of an outdoor urban/suburban environment with nearby roadway traffic, common business operations, and outdoor meeting and recreational spaces.



Figure 3-7. Existing Noise Measurement Locations



### 3.6.1.3 Impacts

#### Impacts Common to All Alternatives

During construction of the new buildings proposed as part of the Barkley Urban Village, there would be noise associated with construction equipment. Construction would occur during daytime hours, 7 a.m. to 10 p.m., and within the City's construction noise limits as specified in BMC 10.24.120. This noise would be temporary and would end upon completion of each development project. Noise from project construction is not anticipated to contribute to an increase in noise levels at all residences within the

study area. For construction outside of daytime hours, a noise variance may be required by the City if project construction noise is predicted to exceed the City's noise limits or if nighttime construction is required to maintain daytime traffic flow or schedule requirements.

Once construction of Barkley Urban Village is complete, additional traffic from new roadways and roadway extensions, businesses, and residences within the village would likely increase traffic noise levels under all of the alternatives. New roadways, buildings, and typical activities associated with an increased population in an area all contribute to higher noise levels and a greater likelihood of disturbance caused by noise.

### No Action Alternative

Future noise levels under the No Action Alternative would likely increase from existing noise levels due to the additional vehicle trips generated as part of the ongoing and future planned development. The increase in noise levels is expected to be barely noticeable at most locations with the predicted doubling of traffic volumes under the No Action Alternative compared to existing conditions.

### Action Alternative 1/Preferred Alternative

Future noise levels with Action Alternative 1 are expected to be readily noticeable but below a substantial increase from existing noise levels and slightly higher than the No Action Alternative. Future noise levels with Action Alternative 1 are expected to be slightly lower when compared to noise levels resulting from Action Alternative 2. Lower noise levels expected from Action Alternative 1 in comparison to Action Alternative 2 would be due to lower planned density, resulting in lower noise levels from the operation of transportation facilities and additional building systems. Construction noise is expected to occur for a shorter duration with Action Alternative 1 compared to Action Alternative 2 due to shorter construction schedules for a less massive building development.

### Action Alternative 2

Future noise levels with Action Alternative 2 are expected to be readily noticeable but below a substantial increase from existing noise levels and slightly higher than the No Action Alternative. Future noise levels with Action Alternative 2 are expected to be slightly higher when compared to noise levels resulting from Action Alternative 1. Noise levels expected from Action Alternative 2 in comparison to Action Alternative 1 would be higher due to greater planned density, which would result in higher noise levels from the operation of transportation facilities and additional building systems. Higher noise levels that would extend for longer durations are also expected with Action Alternative 2 as compared to Action Alternative 1 due to longer construction schedules for more massive building development.

#### 3.6.1.4 Mitigation Measures

No long-term operational impacts are predicted to occur because no substantial increases in noise would occur under the alternatives; therefore, no mitigation measures are proposed. Locating higher-volume traffic roadways, delivery bays, and outdoor building systems that generate higher noise levels farther from noise-sensitive land uses can help reduce noise disturbance.

Temporary construction noise levels can be managed through BMPs, which include having contractors follow all City and State restrictions on construction timing and maximum noise levels. Additional measures can be used to reduce temporary construction impacts at noise-sensitive locations, such as residences and parks, whose locations are shown in Section 3.7.1 and 3.7.5. These measures could include having contractors locate the loudest equipment farther from noise-sensitive locations and provide shielding around the loudest equipment.

### 3.6.1.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts related to noise under any of the alternatives.

## 3.6.2 Hazardous Materials

### 3.6.2.1 Methodology

Project scientists conducted a review of relevant information about existing conditions of hazardous materials that are applicable to the Barkley Urban Village study area, including the following sources:

- Environmental Data Resources, Inc. Report (EDR 2022)
- Barkley Village State Environmental Policy Act Checklist (Talbot Real Estate, LLC 2022)
- Washington Department of Ecology Cleanup and Tank Search (Ecology n.d.)

Scientists then reviewed the alternatives to determine potential impacts related to hazardous materials, which would occur if the alternative would be constructed in close proximity to documented hazardous materials sites of concern.

### 3.6.2.2 Affected Environment

Records research revealed no documented sites of concern for hazardous materials or known or potential contamination within the study area. Within the study area, the TransMountain pipeline runs north and south along the St. Clair easement, crossing under Barkley Boulevard near the eastern side of the study area. The pipeline, which is operated by Kinder Morgan, carries crude oil and is regulated as a hazardous liquids pipeline. The Olympic Pipeline, which carries petroleum, runs under the Vining Street right-of-way on the eastern edge of the urban village. The City is currently developing updated pipeline safety provisions.

### 3.6.2.3 Impacts

#### Impacts Common to All Alternatives

Impacts would be similar for the No Action Alternative, Action Alternative 1, and Action Alternative 2. All of the alternatives would include construction of the St. Clair Street extension in the vicinity of the TransMountain Pipeline. Any future construction or ground disturbances in this area would be coordinated with Kinder Morgan and would follow any applicable laws and regulations pertaining to construction near a hazardous liquids pipeline. None of the alternatives would include construction near the Vining Street right-of-way.

No toxic or hazardous chemicals are expected to be stored, used, or produced during the construction or operation of the alternatives. While not anticipated, historical urban land use, roadway, and parking operation raise the potential of encountering contaminated materials during construction. Procedures to identify, characterize, manage, handle, store, and dispose of contaminated soil and groundwater encountered during construction activities would be incorporated into project specifications.

If unanticipated soil or groundwater contamination is encountered during construction activities, remediation of those materials would occur as needed. In compliance with the Model Toxics Control Act Cleanup Regulation (WAC 173-340), a cleanup plan would be developed and implemented to minimize human exposure and for the proper removal and treatment or disposal of contaminated materials in soils or groundwater. This elimination of hazardous materials would reduce future

potential adverse effects to human health and the environment from exposure at those locations or from potential migration.

During construction of the alternatives, relatively small quantities of fuel (including diesel, gasoline, and propane) for various pieces of small equipment would likely be stored on-site. Heavy equipment fueling would likely occur using an on-site fuel delivery provider. Other construction-related materials likely would include solvents and adhesives used in relatively small quantities.

Accidental spills or drips from parked vehicles could occur. For these instances, emergency spill cleanup kits could be staged at these locations. Wastes generated from cleanup activities would be removed and disposed of in accordance with state and federal regulations for the removal, treatment, or disposal of contaminated material. Pollutants deposited on roadways would be managed by the stormwater treatment facilities and additional landscaping buffers that would collect and retain pollutants.

#### 3.6.2.4 Mitigation Measures

All potentially hazardous materials used during construction would be handled and stored in accordance with state and federal hazardous materials handling requirements. If unanticipated residual soil contamination is encountered during construction activities, the remediation of any contaminated soil and groundwater would occur as needed. A formal plan would be developed consistent with state and federal regulations for their removal and treatment or disposal of contaminated soil and groundwater, and measures would be implemented to minimize exposure to people in accordance with applicable regulations.

#### 3.6.2.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts related to hazardous materials under any of the alternatives.



## 3.7 Land and Shoreline Use

### 3.7.1 Land Use Patterns and Policies

#### 3.7.1.1 Methodology

Analysts reviewed relevant information about existing land use patterns and policies that are applicable to the Barkley Urban Village study area, including the following sources:

- City of Bellingham 2016 Comprehensive Plan (City of Bellingham 2016a)
- Barkley Neighborhood Plan (City of Bellingham 2021a)

Analysts then reviewed the alternatives to determine the extent to which they would be compatible with future plans for allocation of land uses and growth in the Comprehensive Plan.

#### 3.7.1.2 Affected Environment

The Comprehensive Plan identifies a system of urban villages and transit corridors that “would accommodate a significant share of the City’s future growth, while preserving established, stable neighborhoods” (City of Bellingham 2016a). Since 2006, the City has approved urban village plans for six areas: Downtown, Fairhaven, Waterfront, Old Town, Samish, and Fountain Districts. The Comprehensive Plan sets forth 10 land use goals, including Goal LU-2, “Foster vibrant urban villages.” Within that goal, the Comprehensive Plan establishes eight supportive policies related to planning, incentives, and transportation systems for urban villages.

The Bellingham Comprehensive Plan, Barkley Neighborhood Plan, and associated planned development contracts have identified an urban village in the vicinity of Barkley Boulevard and Woburn Street for more than a decade. The Comprehensive Plan notes that the existing Barkley District “functions as an urban village in many ways,” and Policy LU-13 includes Barkley in the list of urban villages where the City aims to “promote and facilitate continued development” (City of Bellingham 2016a). The Neighborhood Plan refers to this area as the Barkley Urban Development Center (City of Bellingham 2016a). It notes that the Barkley Urban Village development is “one of the first urban villages to be built in the city” and says that the development “should be recognized as a unique mixed used area with a distinct boundary” (City of Bellingham 2021a).

The proposed Barkley Urban Village area is part of the 814-acre Barkley neighborhood, which was created in 2010 and is located primarily south of Sunset Drive and north of the Roosevelt and Alabama Hill Neighborhoods (City of Bellingham 2021a). The neighborhood is divided into 15 subareas that allow a diverse range of uses from low-density single-family residences to large commercial and industrial developments. Single-family and multifamily residential uses make up about half of the acreage of the neighborhood, with the rest split between commercial, industrial, and public uses. The Barkley Village development is considered a core of the surrounding residential neighborhood. The study area is defined in the Neighborhood Plan as the existing subareas 13 through 19 and the portion of subarea 20 north of Barkley Boulevard, with most development currently located in subareas 18 and 19 at the intersection of Barkley Boulevard and Woburn Street (City of Bellingham 2021a).

The Neighborhood Plan notes that “Substantial residential development within walking distance of commercial businesses, offices, and light industrial employment opportunities are an important component in the success of the urban village. Multi-use buildings, incorporating residential, commercial, and compatible light industrial uses should be encouraged.”

Land uses within the City are governed by the City’s neighborhood plans, zoning designations, and development regulations in the Land Use and Development Code, as well as other design, development,

and environmental regulations. The City's seven general land use categories are Single-Family Residential, Multi-family Residential, Commercial, Industrial, Urban Village, Institutional, and Public (City of Bellingham 2016a). Within the Barkley Urban Village study area, zoning classifications vary by parcel, existing planned contract, or neighborhood defined area. Current classifications include Industrial, Commercial/ Industrial, Commercial/Industrial/Multifamily (Medium Density) Residential Mixed, and Industrial/Multifamily (Medium Density) Residential Mixed. The largest share of the Barkley Urban Village land area by acreage is currently zoned Industrial. BMC 20.38.050 D allows a wide range of land use types in industrial zones, including retail trade establishments such as building material, hardware, and garden supply stores; eating and drinking places; service establishments such as salons, automotive repair, and medical laboratories; and many others. Per BMC 20.00.015, industrial uses throughout Barkley Urban Village are currently restricted to private educational facilities; medical, professional, and general business offices; administrative office services; research and development; light manufacturing; warehousing and distribution; banks; and similar uses.

Structures within the study area include multiple professional office buildings (including medical and financial entities), retail and restaurant buildings, a grocery store, a movie theater, mixed-use commercial buildings, and multifamily residential buildings. There are also buildings operated by public or government entities. Adjacent properties to the study area are primarily residential (including multifamily housing) and institutional (including Roosevelt Elementary School).

About 40% of the urban village study area is currently undeveloped open space, including a large area of forested land in the northeast portion, as described in more detail in Section 3.4, Plants and Animals and Section 3.7.5, Parks and Recreation.

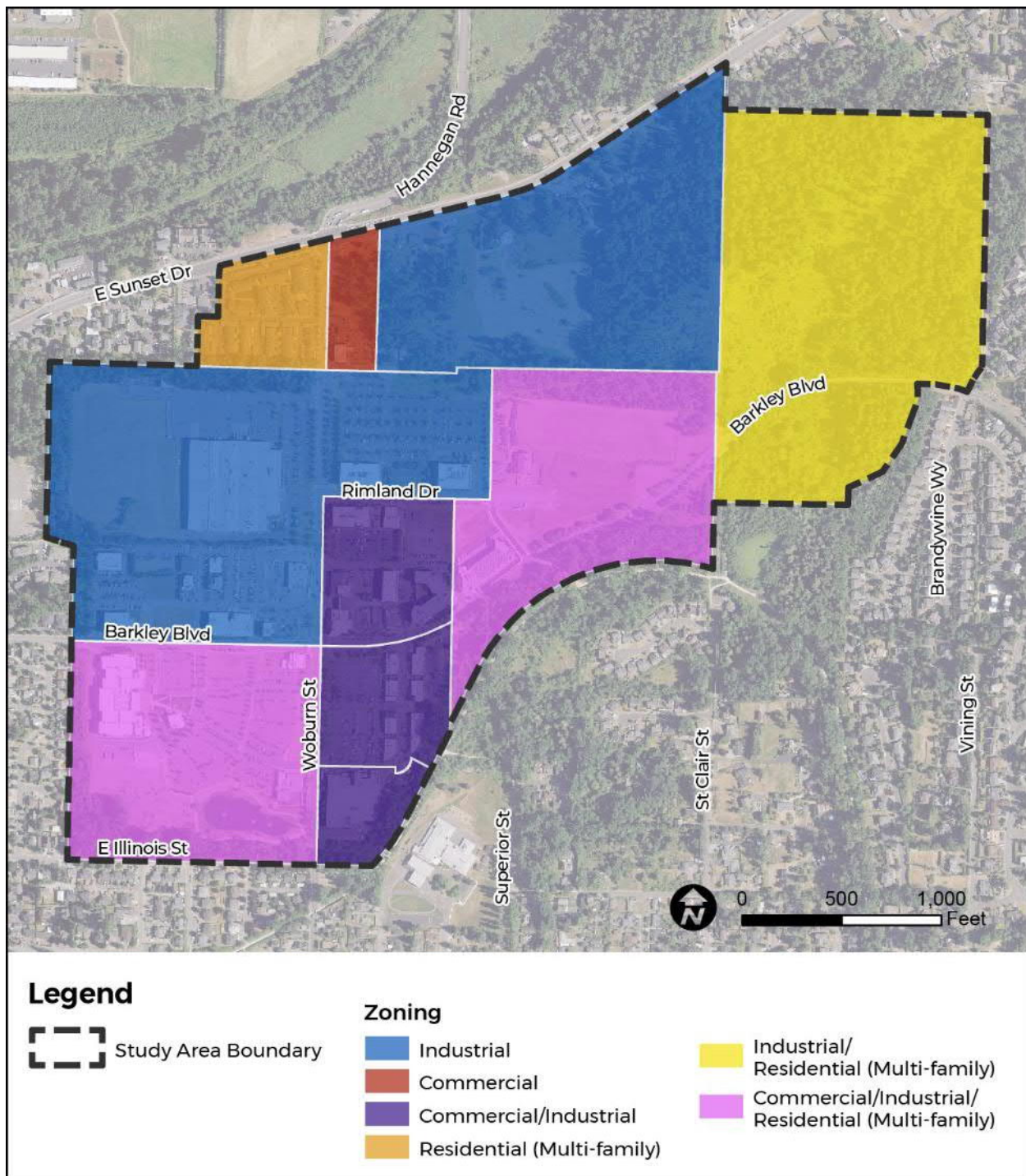
Figure 3-8 shows the location of the current zoning classifications in the study area, and Table 3-14 lists the current zoning designations and acreage occupied in the study area.

Table 3-14. Existing Zoning Classifications in the Barkley Urban Village Study Area

Zoning	Acreage	Percentage of Total Study Area
Industrial (per BMC 20.00.015)	91.5	39%
Commercial/Industrial	21	9%
Commercial/Industrial/Multifamily (Medium Density) Residential Mixed	51.7	22%
Industrial/Multifamily (Medium Density) Residential Mixed	68.5	29%
Total	233.7	100%

Source: Barkley Neighborhood Plan 2021

Figure 3-8. Existing Zoning Classifications in the Study Area



Source: City of Bellingham GIS data

### 3.7.1.3 Impacts

#### Impacts Common to All Alternatives

All of the alternatives would allow for future growth of developed land uses, as shown in Table 3-15. However, the levels of growth would differ by land use type for each alternative, as described in the following subsections.

Table 3-15. Development and Land Use Types under Existing Conditions and Alternatives

Development/Land Use Type	Existing Conditions	No Action Alternative	Action Alternative 1	Action Alternative 2
Retail (square feet)	275,803	355,803	624,526	880,127
Office/Commercial (square feet)	418,413	588,413	1,399,328	3,574,741
Hotel (rooms)	0	0	223	338
Industrial (square feet)	215,000	465,000	375,000	215,000
Multifamily residential (housing units)	464	1,339	2,884	3,787
Single-family residential (housing units)	12	130	100	22
Community/Cultural <sup>a</sup> (square feet)	0	0	26,800	26,800
Open Space <sup>b</sup> (acres)	108.1	69.85	115.27	110.75
Park/Playground <sup>c</sup> (acres)	1.65	5.22	16.69	17.14
Active Space <sup>d</sup> (acres)	2.78	4.12	13.75	13.75

Source: Talbot Group, LLC and MG2

a Community/Cultural is defined as spaces that would be open to community uses, such as visitors and interpretive centers for the future planned trail system. Existing and future public buildings, such as the Whatcom County library branch and future school district headquarters, are included in the Office/Commercial category.

b Open Space is undeveloped land with natural features, habitat, and some passive recreation opportunities.

c Park/Playground is designated space for active recreation.

d Active Space are areas that could be repurposed as community gathering spaces, such as plazas and low-traffic streets.

#### No Action Alternative

Because the existing mix of different zoning classifications would be retained depending on location in the study area (as shown in Figure 3-8), the No Action Alternative would be the least compatible with the direction from the Comprehensive Plan and Neighborhood Plan to promote and facilitate continued growth of urban villages and to move forward with formal designation of the Barkley Village area as an urban village. Future development would continue to occur under a series of Planned Development Permits that would need to be updated on a piecemeal basis. Continuation of this complex regulatory environment would not support the nimble redevelopment needed to meet the City's urban village vision and infill goals.

The No Action Alternative would have the lowest increase in future development for all land use types compared to existing conditions except for:

- Industrial development, which would be about 90,000 square feet greater under the No Action Alternative than Action Alternative 1, and about 250,000 square feet greater than under Action Alternative 2. Because BMC 20.38.050 D allows a wide range of land use types in industrial zones (including retail trade establishments such as building material, hardware, and garden supply



stores; eating and drinking places; and service establishments such as salons, automotive repair, and medical laboratories; and many others), this change would not necessarily result in an increase in more typical industrial uses, such as manufacturing and warehousing.

- Single-family residential development, which would be the highest of all alternatives (130 new units).

Despite the lower levels of future development as measured by square footage and number of housing units, the No Action Alternative would have the largest development footprint of all of the alternatives. Growth would occur in a less compact manner, with shorter, less dense buildings occupying more land. As a result, the No Action Alternative would preserve the smallest amount of open space of all alternatives (representing about 35% of the entire urban village area), as discussed further in Section 3.7.5, and represents the most inefficient use of the remaining developable land.

Figure 3-9 shows the proposed development footprint and associated land uses under the No Action Alternative. The areas designated as “mixed use” would have a combination of commercial/office, retail, and/or residential uses. Note that the figure shows building and/or parcel footprints and anticipated uses, rather than zoning designations, for easier comparison with the two action alternatives, under which the whole area would be designated as Urban Village zoning. The zoning designations under the No Action Alternative would remain the same as existing conditions, shown in shown in Figure 3-8. Refer to Section 3.7.5, Parks and Recreation, for figures showing undeveloped or parks and recreational land uses.

### Action Alternative 1/Preferred Alternative

Under Action Alternative 1, the zoning classification would be changed to urban village for the entire study area, allowing for greater flexibility in future development of varying land uses and better reflecting the current development form of the area. The change to urban village zoning under Action Alternative 1 would better support nimble redevelopment needed to meet the City’s urban village vision and infill goals. Action Alternative 1 would allow for a greater increase in future development compared to the No Action Alternative for all land use types except:

- Industrial development, which has about 90,000 less square feet than the No Action Alternative but about 160,000 more square feet than existing conditions. As discussed in the No Action Alternative section, because BMC 20.38.050 D allows a wide range of land use types in industrial zones, this change would not necessarily result in an increase in more typical industrial uses, such as manufacturing and warehousing, over existing conditions.
- Single-family residential development, which would have about 30 fewer dwelling units than the No Action Alternative.

Action Alternative 1 would preserve the largest amount of open space of all alternatives (representing about 56% of the entire urban village area), as discussed further in Section 3.7.5, because future growth would occur in a more compact fashion near existing development.

Figure 3-10 shows the proposed development footprint and associated land uses under Action Alternative 1. The areas designated as “mixed use” would have a combination of commercial/office, retail, and/or residential uses. Note that the figure shows building or parcel footprints and anticipated uses, rather than zoning designations, for easier comparison across alternatives, as the whole area would be designated as Urban Village zoning under Alternative 1. Please see Section 3.7.5, Parks and Recreation, for figures showing undeveloped or parks and recreational land uses.

In addition, the City and the Proponent envision that they will also enter into a Development Agreement that will further guide long-term development of the Barkley Urban Village. Concurrent

with the adoption of development regulations and the Barkley Urban Village Plan Development Agreement, it is anticipated that the City will also adopt a Planned Action Ordinance. The Planned Action Ordinance would only apply to those future development projects and features identified in this EIS that have been reasonably defined at this time for environmental review purposes, and that will be subject to City of Bellingham permit approval. Specific projects that have not been reasonably defined at this stage to allow full environmental review could require additional SEPA environmental review at the time of permit submittal.

### Action Alternative 2

Similar to Action Alternative 1, under Action Alternative 2 the zoning classification would be changed to urban village for the entire study area, allowing for greater flexibility in future development of varying land uses. The change to urban village zoning under Action Alternative 2 would better support nimble redevelopment needed to meet the City's urban village vision and infill goals. Action Alternative 2 would allow for the largest amount of growth in most land use types compared to the other alternatives, except:

- Industrial development, which would remain the same square footage as existing conditions.
- Single-family residential development, which would allow for about 80 fewer dwelling units than Action Alternative 1 and 100 fewer dwelling units than the No Action Alternative.

Action Alternative 2 would preserve almost the same amount of open space as Action Alternative 1 (about 55% of the entire urban village area), as discussed further in Section 3.7.5, because future growth would occur in a more compact fashion around existing development. However, Action Alternative 2 would preserve slightly less open space than Action Alternative 1 because of the potential for development of 16 single-family homes on the existing undeveloped land east of the new St. Clair Street near Burns Street.

Figure 3-11 shows the proposed development footprint and associated land uses under Action Alternative 2. The areas designated as "mixed use" would have a combination of commercial/office, retail, and/or residential uses. Note that the figure shows building or parcel footprints and anticipated uses, rather than zoning designations, for easier comparison across alternatives, as the whole area would be designated as Urban Village zoning under Alternative 2. Refer to Section 3.7.5, Parks and Recreation, for figures showing undeveloped or parks and recreational land uses.

#### 3.7.1.4 Mitigation Measures

All of the alternatives would be planned and constructed in compliance with applicable City land use development codes and zoning regulations. Therefore, no mitigation is proposed for land use patterns and policies.

#### 3.7.1.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts to land use patterns and policies under any of the alternatives.

Figure 3-9. No Action Alternative: Proposed Development Footprint and Associated Land Uses

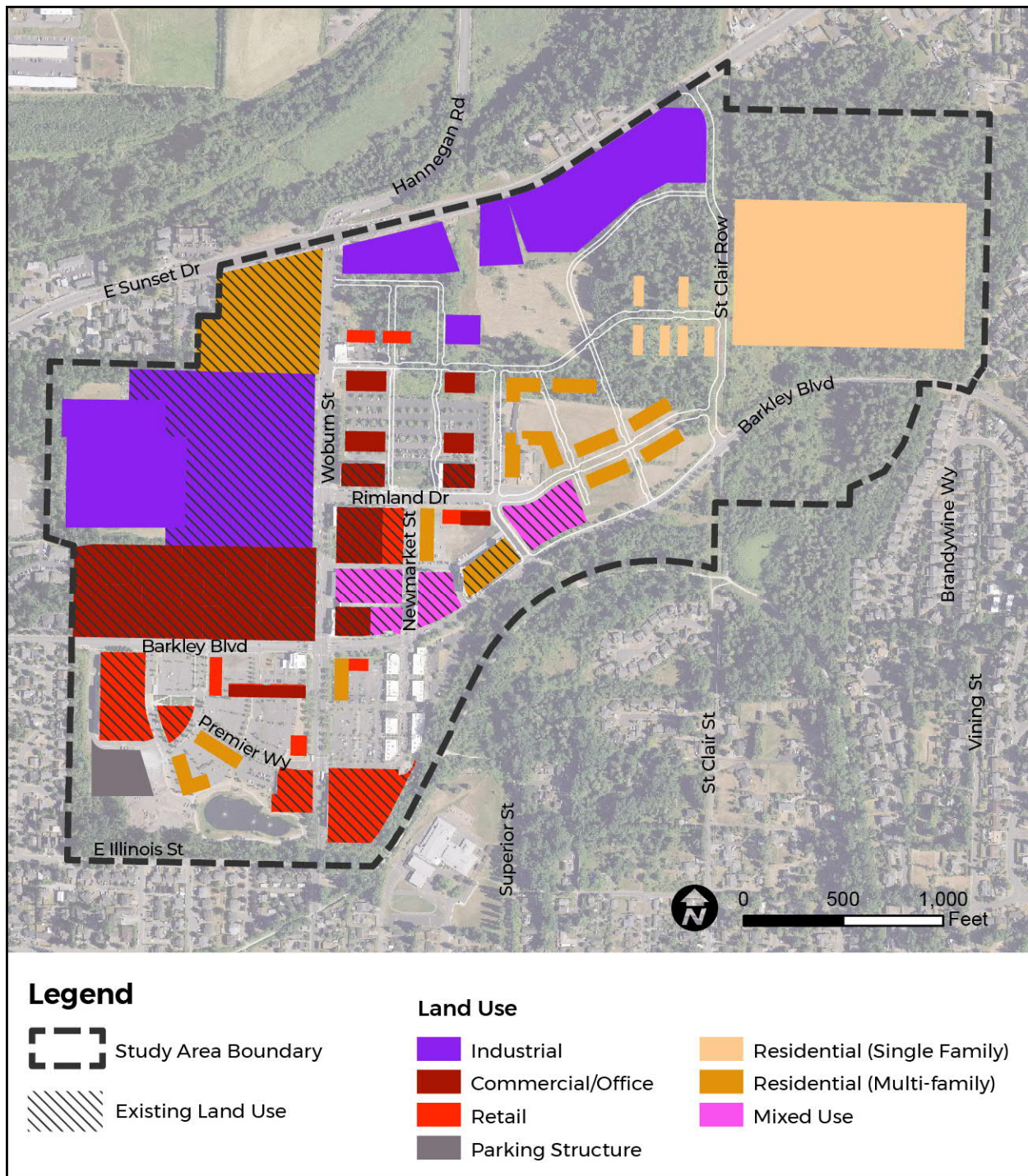




Figure 3-10. Action Alternative 1/Preferred Alternative: Proposed Development Footprint and Associated Land Uses

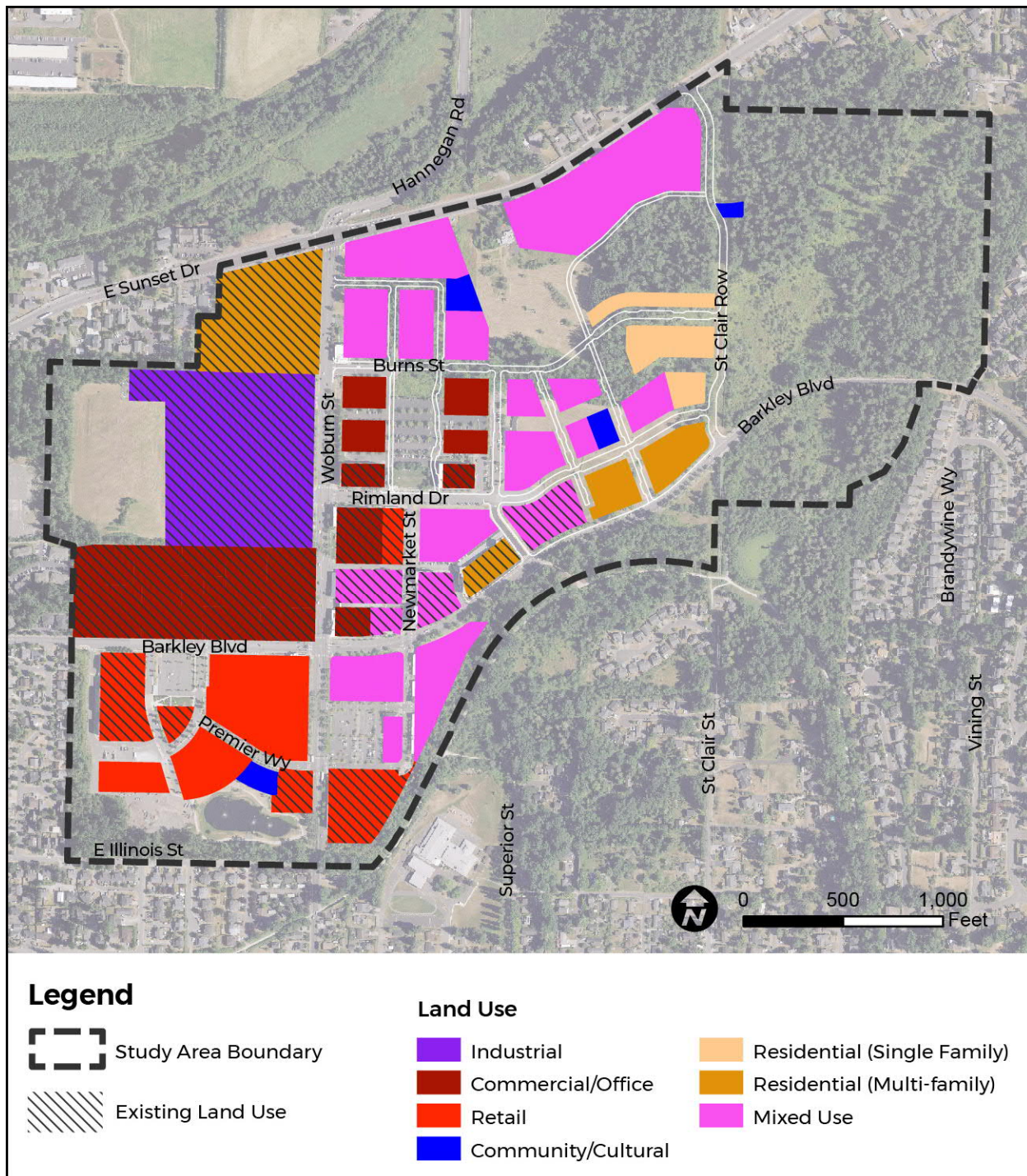
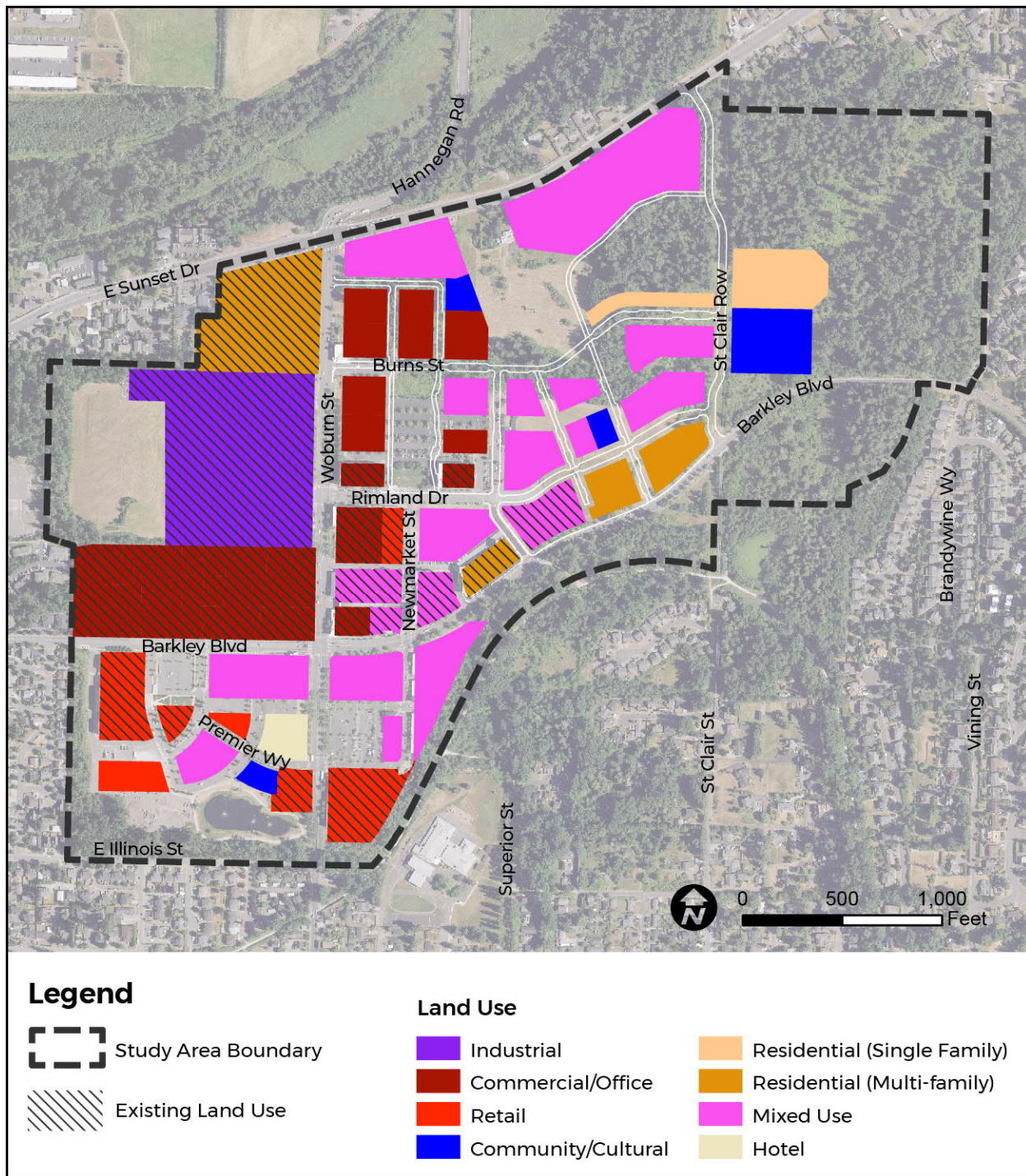




Figure 3-11. Action Alternative 2: Proposed Development Footprint and Associated Land Uses





## 3.7.2 Socioeconomics

### 3.7.2.1 Methodology

Analysts reviewed the latest available U.S. Census Bureau data (2020 American Community Survey 5-year estimates, 2020 Decennial Census, and 2020 Longitudinal Employer-Household Dynamic Data) to develop a demographic profile of the study area (U.S. Census 2020a). Census Tract 8.03, Block Group 4, was used for the population analysis because its boundaries most closely resemble the study area, although it also includes some single-family residences that are southeast of the proposed urban village boundary. 2020 Longitudinal Employer-Household Dynamic Data were used for the employment data because it could be tailored to the exact boundaries of the study area using the U.S. Census On the Map tool. Census data for the City as a whole were used to provide a comparison.

Analysts estimated current and future capacity for jobs in the study area using the growth formulas from the 2022 Whatcom Buildable Lands Report (Whatcom County 2022). Analysts then reviewed the alternatives to compare differences in projected future population and employment.

### 3.7.2.2 Affected Environment

#### Population

The study area is home to about 2,170 people, which represents about 2% of the population of Bellingham (U.S. Census Bureau 2020a). Most of the study area population is between 18 and 49 years old (64%), and the median age is about 35 years old. The study area population makeup is similar to the City as a whole, with a slightly lower percentage of low-income and minority populations than the City in the census tract that includes Barkley Village.

The majority of the study area population (84%) identifies as white, and the remaining 16% identifies as one or more other races. Less than 1% (about 0.7%) of the study area population has limited English proficiency (speaks English less than “very well”), which is lower than the citywide rate of about 3.7% (U.S. Census Bureau 2020a).

The median household income for the study area is about \$61,000 in 2020 inflation-adjusted dollars, which is higher than the median household income for the City as a whole (about \$56,000) (U.S. Census Bureau 2020a). About 14% of the study area population had income levels below the federal poverty level in the last 12 months, which is lower than the City as a whole at 20% (U.S. Census Bureau 2020a).

Table 3-16 summarizes population data for the study area and City for comparison.

Table 3-16. Existing Population of Study Area in Comparison to City

Characteristic	Study Area (Census Tract 8.03, Block Group 4)	City of Bellingham
Total Population	2,170	90,821
Race		
White	1,828 (84%)*	74,590 (82%)
Black or African American	0 (0%)	1,456 (2%)
American Indian and Alaska Native	17 (1%)	827 (1%)
Asian	141 (6%)	5,392 (6%)
Native Hawaiian and Other Pacific Islander	24 (1%)	139 (<1%)
Some other race	127 (1%)	3,165 (4%)
Two or more races	133 (6%)	5,252 (6%)
Age		
Younger than 18	259 (12%)	12,665 (14%)
18 to 34 years old	792 (36%)	35,171 (39%)
35 to 49 years old	605 (28%)	14,508 (16%)
50 to 64 years old	252 (12%)	14,244 (16%)
65 or older	262 (12%)	14,243 (16%)
Income		
Income in the past 12 months below poverty level	314 (14%)	17,227 (20%)
Income in the past 12 months at or above poverty level	1,856 (86%)	68,816 (80%)

Source: U.S. Census Bureau 2020a

\*Percentage of total population is provided in parentheses, rounded to nearest whole number.

## Employment

Bellingham currently has about 48,000 employed people, and the number of jobs in the City is projected to grow to 75,000 by 2036 (U.S. Census Bureau 2020b; Whatcom County 2022). The study area is currently home to about 2,000 jobs and more than 100 businesses representing a variety of employers, including retail, restaurants and food service establishments, healthcare, industrial, financial institutions, a movie theater, government offices, and social service organizations (U.S. Census Bureau 2020b, City of Bellingham 2022a).

The industries with the greatest number of employees in the study area are: (1) manufacturing; (2) finance and insurance; (3) healthcare and social assistance; and (4) real estate and rental and leasing. The percentage of jobs in the manufacturing and finance/insurance industries in the Barkley study area is far greater than in the City as a whole. Table 3-17 summarizes employment data for the study area and Bellingham.

Table 3-17. Existing Employment in the Study Area Compared to City

Employment Element	Study Area	City of Bellingham
Total Jobs	1,964	47,898
Industry		
Agriculture, forestry, fishing and hunting	0 (0.0%)	414 (0.9%)
Utilities	0	108 (0.2%)
Construction	14 (0.7%)	2,554 (5.3%)
Manufacturing	520 (26.5%)	3,183 (6.6%)
Wholesale trade	9 (0.5%)	1,091 (2.3%)
Retail trade	60 (3.1%)	5,817 (12.1%)
Transportation and warehousing	0 (0.0%)	838 (1.7%)
Information	132 (6.7%)	902 (1.9%)
Finance and insurance	342 (17.4%)	1,630 (3.4%)
Real estate and rental and leasing	211 (10.7%)	1,006 (2.1%)
Professional, scientific, and technical services	177 (9.0%)	2,126 (4.4%)
Management of Companies and Enterprises	0 (0.0%)	204 (0.4%)
Administration and Support, Waste Management and Remediation	54 (2.7%)	1,961 (4.1%)
Educational services	22 (1.1%)	5,737 (12.0%)
Health care and social assistance	262 (13.3%)	11,099 (23.2%)
Arts, entertainment, and recreation	22 (1.1%)	812 (1.7%)
Accommodation and Food Services	131 (6.7%)	3,964 (8.3%)
Other services, except public administration	8 (0.4%)	2,097 (4.4%)
Public administration	0 (0.0%)	2,355 (4.9%)

Source: U.S. Census Bureau 2020b

### 3.7.2.3 Impacts

#### Impacts Common to All Alternatives

All of the alternatives would result in future population and employment growth compared to existing conditions. However, the expected levels of growth would differ for each alternative, as shown in Table 3-18 and described in the following subsections.

Table 3-18. Future Projected Population and Employment Capacity in Study Area Under Alternatives

Capacity Element	No Action	Action Alternative 1	Action Alternative 2
Total Population Capacity <sup>a</sup>	2,705	5,387	6,807
Multifamily Residential Occupancy	2,388	5,143	6,754
Single-family Residential Occupancy	317	244	54
Total Jobs Capacity <sup>b</sup>	2,708	4,909	9,928
Commercial (retail, office) Occupancy	2,039	4,370	9,618
Industrial Occupancy	669	540	309

Source: Talbot Group, LLC, MG2

a Calculated based on formulas in Whatcom County Buildable Lands Report 2022, which assumes 2.499 persons per occupied single-family household (97.5% occupancy rate) and 1.850 persons per occupied multifamily unit (96.4% occupancy rate) (Whatcom County 2022). Note that all attached (townhouse-style) housing units are considered single-family housing units for the purposes of this Draft EIS (including the housing analysis in Section 3.7.3 and the transportation analysis in Section 3.8). However, these units may be considered multifamily under the buildable lands analysis depending on their ultimate tax parcel status and would potentially have lower associated occupancy rates. Therefore, the population capacity projections in this analysis are conservative (higher) estimates.

b Calculated based on formulas in Whatcom County Buildable Lands Report 2022, which assumes one employee for every 440 square feet of commercial space and one employee for every 660 square feet of industrial space (95% occupancy rate) (Whatcom County 2022)

### No Action Alternative

The No Action Alternative would have the lowest overall capacity for future jobs and population of all the alternatives because it would have the lowest growth in commercial and residential land uses.

The No Action Alternative would have the highest potential capacity for industrial jobs because it would have the largest increase in industrial land uses of any of the alternatives compared to existing conditions. As noted in Section 3.7.1.3, because BMC 20.38.050 D allows a wide range of land use types in industrial zones (including retail trade establishments such as building material, hardware, and garden supply stores; eating and drinking places; and service establishments such as salons, automotive repair, and medical laboratories; and many others), this change would not necessarily result in an increase in more typical industrial jobs, such as those in manufacturing and warehousing.

### Action Alternative 1/Preferred Alternative

Action Alternative 1 would have a higher overall capacity for future jobs and population than the No Action Alternative but a lower overall capacity than Action Alternative 2. This difference in growth can be attributed to the higher square footage of commercial land uses and residential units compared to the No Action Alternative, and lower square footage of these land uses compared to Action Alternative 2.

Action Alternative 1 would result in a lower capacity for industrial jobs than the No Action Alternative but a higher capacity than Action Alternative 2. As noted in the No Action Alternative section, because BMC 20.38.050 D allows a wide range of land use types in industrial zones, this change would not necessarily result in a higher capacity for more typical industrial jobs, such as those in manufacturing and warehousing.

## Action Alternative 2

Action Alternative 2 would have substantially higher overall capacity for future jobs and population than the other alternatives. All of the increased population would result from the higher number of multifamily residential units as compared to the other alternatives, as the number of single-family units would be lower than existing conditions and the other alternatives.

The higher capacity for jobs would result primarily from the more than four-fold growth in commercial square footage as compared to the No Action Alternative and nearly triple the growth in commercial square footage compared to Action Alternative 1. Industrial jobs would be lower than any of the alternatives because the square footage would remain the same as under existing conditions, while it would increase under the No Action Alternative and Action Alternative 1.

### 3.7.2.4 Mitigation Measures

All of the alternatives would provide benefits to the community through growth in housing and employment opportunities. Allowed growth would occur in compliance with all relevant state and local planning documents. Therefore, no mitigation measures are proposed.

### 3.7.2.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts to socioeconomics under any of the alternatives.

## 3.7.3 Housing

### 3.7.3.1 Methodology

Analysts conducted a review of relevant information about existing housing in the Barkley Urban Village study area and policies related to housing development, including the following sources:

- U.S. Census Bureau American Community Survey 2020 five-year estimates (U.S. Census Bureau 2020a)
- City of Bellingham 2016 Comprehensive Plan (City of Bellingham 2016a)
- Barkley Neighborhood Plan (City of Bellingham 2021a)
- Barkley Village State Environmental Policy Act Checklist (March 2022) (Talbot Real Estate, LLC 2022)
- BMC Sections 20.00.015, 17.82.030
- Washington State Engrossed Second Substitute House Bill (ESSB) 1220

Analysts then reviewed the alternatives to determine their projected effects on the housing supply, including provision of affordable housing, in the study area.

### 3.7.3.2 Affected Environment

Within the area proposed for designation as an urban village, there are currently 379 housing units (464 multifamily and 12 single-family). Per the zoning regulations in BMC 20.00.015, overall residential density for the Barkley Urban Village is required to reach 10.5 housing units per acre. The current code notes that a minimum of 476 units must be developed within the Barkley Urban Village to meet the minimum residential requirements, and a maximum of 1,116 units is allowed in the urban village. The BMC encourages a mix of housing types providing both renter and homeowner opportunities. The majority of existing housing is currently renter-occupied.



Washington State ESSB 1220, which took effect in July 2021, revised state law to require cities to “plan for and accommodate housing affordable to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.” The law also has provisions requiring identification and consideration of housing opportunities across all income levels, including moderate, low, very low, and extremely low-income households.

The City has identified a need to preserve and expand the supply of housing that is affordable to all income levels, including through work to develop its 2023 Consolidated Plan Update and 2025 Comprehensive Plan Update, which started in 2023 (City of Bellingham 2016a). To encourage construction of more affordable units, the City operates the Multi-Family Tax Exemption (MFTE), which offers a 12-year property tax exemption program provided that developers set aside at least 20% of housing units as affordable. BMC 17.82.030 defines affordable as “available to households whose adjusted income is at or below 60 percent of the median family income adjusted for family size for Whatcom County” and/or “for any units with two or more bedrooms that are available to households whose adjusted income is at or below 80 percent of median family income adjusted for family size for Whatcom County.” The MFTE program is active in five neighborhoods, including Barkley Village.

The City also funds projects and activities to provide affordable housing to low-income households and stabilization for those who are at-risk or recovering from homelessness. These programs are funded through the Bellingham Home Fund housing levy that was approved by voters in 2012 and again in 2017, as well as federal funding sources such as the U.S. Department of Housing and Urban Development. Additional funding comes from local sales taxes allocated through House Bill 1590, passed by the Washington State Legislature in 2020, which allows a portion of local sales taxes be allocated to affordable housing. One of these projects in the study area is Trailview, a 77-unit mixed-use affordable housing development that includes a ground-floor day care operated by the YMCA, which was completed in 2023. The study area currently has 221 affordable housing units, which represents about 46% of the existing housing units in Barkley Village.

### 3.7.3.3 Impacts

#### Impacts Common to All Alternatives

All of the alternatives would provide for a greater number of housing units in the future, which would primarily come in the form of new multifamily units, as shown in Table 3-19.

It is assumed that the 11 existing single-family homes on Sunset Street and one single-family home on Burns Street east of Woburn Street would be demolished and redeveloped under all of the alternatives. Talbot Real Estate LLC currently owns or plans to purchase the existing parcels with these single-family homes, demolish the existing structures, and redevelop the land as mixed-use properties. All of the homes purchased by Talbot were converted to rental units with one-year leases specifying that the homes would be removed for redevelopment at some point in the future. It is anticipated that replacement housing units would be available within or near the urban village study area.

It is anticipated that there would be a mix of renter and homeownership opportunities and a diversity of housing options for all income levels under all alternatives. However, the quantity and allocation of single-family and multifamily units would differ among alternatives, as described in more detail in the following sections. Figure 3-9, Figure 3-10, and Figure 3-11 in Section 3.7.1 show the proposed locations of multifamily and single-family residential units under each of the alternatives.

Table 3-19. Housing Units under Existing Conditions and Alternatives

Housing Type	Existing Conditions	No Action Alternative	Action Alternative 1 (Preferred Alternative)	Action Alternative 2
Multifamily residential (dwelling units)	464	1,339	2,884	3,787
Single-family residential (dwelling units)	12	130	100	22
Total housing units displaced	N/A	12 (single-family homes)	12 (single-family homes)	12 (single-family homes)
Total housing units	476	893	2,984	3,821
Affordable housing units	221	221	321	410

Source: Talbot Group, LLC and MG2

### No Action Alternative

The No Action Alternative would allow for about 1,000 more total housing units, representing the lowest number and density of new housing units and the largest number of single-family housing units of all the alternatives. For the purposes of the Transportation analysis in Section 3.8, more than two-thirds of the planned single-family housing units are assumed to be detached homes, and the remainder are assumed to be attached (townhouse-style) homes. No additional new affordable housing units are planned under the No Action Alternative compared to existing conditions.

### Action Alternative 1/Preferred Alternative

Action Alternative 1 would allow for substantially more total housing units than the No Action Alternative (about 1,500 more, representing about double the number under the No Action Alternative) and about 800 fewer total housing units than Action Alternative 2. All of the single-family housing units are assumed to be attached (townhouse-style) homes.

Action Alternative 1 would provide for about 100 more affordable housing units than the No Action Alternative and more than double the existing number of affordable housing units. At full buildout, affordable housing units would compose about 11% of all housing units in the urban village.

### Action Alternative 2

Action Alternative 2 would allow for the highest number of total new housing units and multifamily units of all the alternatives. Action Alternative 2 would allow for substantially fewer new single-family housing units than the No Action Alternative and Action Alternative 1. Most of the single-family homes are assumed to be attached homes, while a handful of the single-family homes would be detached, cottage-style homes.

Action Alternative 2 would offer the largest number of affordable housing units of all the alternatives because it would have the largest overall number of housing units. The percentage of housing units considered affordable would be the same as Action Alternative 1 (about 11%).

#### 3.7.3.4 Mitigation Measures

Existing residential property owners will be compensated for property acquisitions at fair market value. A diversity of new housing options in the Barkley Urban Village study area would be made available prior to any displacements.

### 3.7.3.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts to housing under any of the alternatives because the number of new housing units would far outpace the number of displacements, and there would be housing options for all income levels.

## 3.7.4 Aesthetics, Light and Glare

### 3.7.4.1 Methodology

Analysts assessed current and potential future conditions for aesthetics, light, and glare through performing a site visit, viewing publicly available images of the site through Google Maps and Google Street View, and reviewing the SEPA Checklist prepared for the project (Talbot Real Estate, LLC 2022). Aesthetics refers to the scale and visual quality of the study area, including building heights, views, shading conditions, and overall visual and architectural character.

Analysts also reviewed relevant goals and policies in the Comprehensive Plan (City of Bellingham 2016a) and Neighborhood Plan (City of Bellingham 2021a) and the proposed City of Bellingham Urban Village Guidelines (City of Bellingham 2022b) to assess each alternative's consistency with these goals and policies. Consistency means that the alternative would not contradict stated City goals and policies. Impacts were identified by identifying inconsistencies with City goals and policies related to aesthetics, light, and glare.

### 3.7.4.2 Affected Environment

The general aesthetic character of the existing Barkley Village area varies from a suburban to a natural landscape depending on location, as its eight subareas have differing land uses and zoning designations (see Section 3.7.1). The Barkley Neighborhood Plan notes that "the existing character of the neighborhood, as well as the presence of open space areas, trails and view corridors continue to be valued by neighborhood residents" (City of Bellingham 2021a).

The western half of the study area is primarily developed in a suburban style with low- to medium-rise commercial, industrial, retail, multifamily, and mixed-use buildings (1 to 5 stories) and adjacent paved surface parking lots. Most structures in the study area were built since the late 1990s (U.S. Census Bureau 2020a, Drayton Archaeology 2022). The study area includes a mix of building types and materials, including wood, stone, masonry, steel, glass, concrete, and fiber cement panels.

Development on Newmarket Street south of Barkley Boulevard Street has a "Main Street" feel with single-story restaurants and other businesses on each side of the street, as shown in Figure 3-12. A pocket park with a gazebo is located at the south end, with a connection to Railroad Trail. North of Barkley Boulevard near Newmarket and Weatherby Streets, a growing cluster of newer three- to five-story mixed-use residential and commercial buildings is buffered by native landscaping and multi-colored outdoor sculptures, as shown in Figure 3-13 and Figure 3-14. The Barkley Green and other pocket parks provide gathering spaces for community members adjacent to these buildings.

A mix of deciduous trees and shrubs of varying ages, grass strips, and landscaping islands border the existing streets, sidewalks, and parking lots in the study area to break up expanses of hard surfacing. Existing buildings and street lighting produce a typical amount of light that would be expected from industrial, commercial, residential, and mixed-use land uses.

The eastern half of the study area north of Barkley Boulevard has a natural character with primarily undeveloped old-growth forest and green space on rolling topography and no lighting other than streetlights on Barkley Boulevard (as shown in Figure 3-15).

A set of general design guidelines codified in BMC 20.00.015 Exhibit 1 currently govern the areas that are considered part of Barkley Village. These guidelines have provided the basis for the preparation of planned development contracts for individual projects and pertain to topics such as land use, pedestrian and vehicular connectivity, urban village boundary delineation, natural systems, design, grading, and landscaping. The BMC notes that more specific design guidelines should be developed for site layout, buildings, signs, and landscaping as part of the future urban village development regulations.

The current configuration and development pattern of the study area provide for territorial views because of the lower-rise buildings. Views toward Barkley Village from the adjacent residential neighborhood at higher elevations to the east include the forested area on the eastern half of the study area and the more urbanized low-rise buildings and parking lots on the western half of the study area. The Barkley Village development does not block views of Bellingham Bay farther to the west for the adjacent residential neighborhoods.

New development and redevelopment in urban villages requires review by the City's Design Review Board and Historic Preservation Commission. In December 2022, the City of Bellingham adopted new Urban Village Design Guidelines (City of Bellingham 2022b). These guidelines include a number of statements of intent that apply to all urban villages in the City, such as preserving and using natural systems and features; contributing to the community identity and architectural character of the surrounding area; organizing the site to prioritize the public realm; creating a pedestrian-friendly environment; providing visual interest to and from buildings; creating high-quality, durable, and interesting buildings; and reducing the overall impact on the environment and human health during and after construction.

The Urban Village Design Guidelines also provide specific guidance for Barkley Urban Village, including developing abundant natural open space, parks, and public art; increasing walkability with enhanced pedestrian corridors and trails; adopting environmentally responsible practices in building design, construction, and operations; and integrating thoughtful quality architecture, landscape design, food cultivation, and opportunities to connect with nature.



Figure 3-12. View of Existing Commercial Area on Newmarket Street



Figure 3-13. View of Existing Mixed-Use Building with Outdoor Art and Landscaping



Figure 3-14. View of Existing Multifamily Housing Building and Street Landscaping



Figure 3-15. View of Existing Undeveloped Land on East Side of Study Area



### 3.7.4.3 Impacts

#### Impacts Common to All Alternatives

All of the alternatives would retain a mix of building types and materials, and new buildings would be constructed with a similar mix of materials and types. Additional development and associated vehicle traffic would increase the level of light and glare in the study area to some degree under all alternatives. New development under all alternatives would adhere to the recently adopted City of Bellingham Urban Village Design Guidelines (City of Bellingham 2022b), which would result in a more cohesive visual landscape for future development within the study area. Additional design guidelines specific to Barkley Village may be adopted through the subarea planning process and would be applied to future development under all alternatives.

#### No Action Alternative

The No Action Alternative would generally provide for lower-density development, which would result in shorter and less massive buildings and a more suburban character than the two action alternatives. Most new buildings would be no more than two to three stories tall. Surface parking lots would occupy more of the visual landscape than the two action alternatives, which would lead to more distance between buildings and the potential for a less pedestrian-friendly environment.

The No Action Alternative includes development of single-family residential buildings in the forested area east of the future St. Clair Street, which would reduce the existing natural character of the eastern portion of the study area to a greater extent than the action alternatives.

#### Action Alternative 1/Preferred Alternative

Action Alternative 1 would provide for moderate density development, which would result in a more urban character than the No Action Alternative in the developed part of the study area. Development would be more compact and focused on the west side of the study area, and new buildings would be constructed to replace some existing surface parking lots, leading to a more pedestrian-friendly environment. Action Alternative 1 would include additional parks, playgrounds, and traffic-calmed corridors throughout this developed area compared to the No Action Alternative to provide pedestrian-oriented opportunities for community gathering. The east side of the study area would retain a more natural character than under the No Action Alternative because no development would occur east of St. Clair Street, and a trail network would be constructed in the forested area.

Action Alternative 1 would have some potential for regional bay and Cascade Mountain views from some of the taller proposed buildings. In general, the development proposed under Action Alternative 1 is not expected to alter views from surrounding land uses because of the steep grades of the adjacent residential area to the east and the planned preservation of forested areas on the eastern half of the study area.

The mix of development and open space proposed under Action Alternative 1 would be most compatible with the City of Bellingham Urban Village Design Guidelines.

#### Action Alternative 2

Action Alternative 2 would provide for the highest intensity and density of development, which would result in the most urban character in the study area of all the alternatives. Similar to Action Alternative 1, development under Action Alternative 2 would be more compact than existing conditions or the No Action Alternative and would be concentrated on the west side of the study area. Action Alternative 2

would include the same parks, playgrounds, active spaces, and traffic-calmed corridors as Action Alternative 1 to provide pedestrian-oriented opportunities for community gathering.

The east side of the study area would retain a more natural character than under the No Action Alternative, although this natural character would be reduced compared to Action Alternative 1 because of the potential development of 16 single-family houses in the open space east of St. Clair Street.

With greater numbers of taller buildings, Action Alternative 2 would have the greatest potential for regional bay and Cascade Mountain views of the alternatives. In general, the development proposed under Action Alternative 2 is not expected to alter views from surrounding land uses because of the steep grades of the adjacent residential area to the east and the planned preservation of forested areas on the eastern half of the study area.

Action Alternative 2 would have a greater potential for adverse impacts related to aesthetics, light, and glare because the landscape would include a larger number of taller buildings than the other alternatives.

#### 3.7.4.4 Mitigation Measures

All of the alternatives would be planned and constructed in compliance with all applicable City design guidelines, standards, and regulations. Therefore, no additional mitigation is proposed for aesthetics, light, and glare.

Although the action alternatives would involve taller buildings that could generate more light sources than the No Action Alternative, new development under all of the alternatives would be designed with dark sky criteria to minimize nighttime light pollution and reduce urban sky glow whenever possible. Exterior lighting would be designed according to applicable City regulations related to lighting and would be shielded and/or directed downward to minimize light and glare on adjacent properties. No sources of light or glare outside of the urban village study area are expected to affect any of the alternatives. During construction, activity would be limited to daytime hours whenever possible. Lights would be directed away from residential areas when nighttime construction is necessary.

#### 3.7.4.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts to aesthetics, light, and glare under any of the alternatives.

### 3.7.5 Parks and Recreation

#### 3.7.5.1 Methodology

Analysts identified existing public parks and recreation sites using publicly available mapping data from the City and evaluated planned future parks and recreation sites using information provided by the Talbot Group. Analysts also reviewed planning goals related to open space and parks in the City of Bellingham 2020 Parks, Recreation and Open Space Plan and the Barkley Neighborhood Plan for consistency with the proposed alternatives (City of Bellingham 2020c, 2021a). Impacts were identified by identifying inconsistencies with City goals and policies related to open space, parks, and recreation.

#### 3.7.5.2 Affected Environment

The study area currently contains several pocket parks on private property owned by Talbot Group LLC, including the Barkley Village Green and Barkley Village Gazebo (as shown in Figure 3-16 and Figure 3-17, respectively), and a quarter-mile trail and active space areas near the stormwater pond west of Woburn Street and south of Barkley Boulevard (as shown in Figure 3-18). The public Scramble Nature Playpark is located west of the stormwater pond, and a small neighborhood park is in development adjacent to Mercy Housing's affordable housing project and the expanded YMCA Early Learning Center north of Barkley Boulevard near Weatherby Way. These sites are on private property owned by Talbot Real Estate, LLC but are open to the public. The Scramble Nature Playpark was permanently dedicated to the City for public use in exchange for park impact fee credit associated with residential development.

The City's Railroad Trail, which provides recreational and transportation uses, traverses the southern end of the study area and has numerous connections to the existing development at Barkley Village (as shown in Figure 3-19). The trail also provides connections to the forested Northridge Park and Klipsun Greenway & Trail east of the study area and Whatcom Falls Park southeast of the study area. An informal walking trail exists along the St. Clair corridor. The moderate- to steep-sloping land east of the St. Clair right-of-way between Sunset Drive and Barkley Boulevard is forested and undeveloped, providing a large buffer between the adjacent residential area and the potential for passive recreational opportunities. The Fever Creek Nature Area and Roosevelt Nature Area provide recreational opportunities just south and east of the study area.

Figure 3-20 shows existing City parks, natural areas, and recreational facilities in the vicinity of the study area. The City's Barkley Trail connects to the west side of the study area at Barkley Boulevard and provides a multimodal trail route west to Racine Street and northwest to Sunset Pond Park and the Squalicum Creek corridor.

The Parks, Recreation and Open Space Plan establishes eight goals and underlying objectives (City of Bellingham 2020c). Objectives that are relevant to this analysis include:

- Provide a system of parks, trails, and open space so that all residents live within one-half mile of a safe route of a developed park or trail
- Incorporate art and whimsy into park facilities
- Provide more small gathering spaces, especially in the urban area as infill occurs
- Protect environmental features that reflect Bellingham's natural character, including ridgelines, critical areas, forests, and wildlife corridors
- Steward and protect open spaces from invasive species, illegal activity, and inappropriate use, and revegetate where appropriate



- Provide environmental education opportunities such as interpretive signage or other educational programs to promote the value of the natural environment throughout the park system
- Ensure new development invests in and dedicates new parks, trails, street trees, and open space
- Provide an interconnected trail system so all residents are within a one-half mile of a safe route
- Balance the demand for public access and interpretive education with protection of environmentally sensitive areas and historic sites
- Provide safe street crossings (e.g., beacons, raised crossings, signalization, medians) that connect to parks and trails

The Barkley Neighborhood Plan includes multiple goals related to preservation and enhancement of open space and vegetated areas in the neighborhood, particularly around Barkley Urban Village (City of Bellingham 2021a). These goals include the following:

- Implementing an integrated open space and trail system
- Implementing strategies to preserve healthy trees on hillsides where views are desired
- Retaining and enhancing existing buffers with native vegetation around the Barkley Urban Village
- Planning for and providing a trail network with connections to existing trails or pedestrian connections to neighborhood amenities as development occurs

Figure 3-16. Existing Barkley Village Green on Farmers Market Day



Figure 3-17. Existing Barkley Gazebo in Newmarket Street Commercial Area



Figure 3-18. Existing Recreational Trail and Stormwater Pond off Woburn Street



Figure 3-19. Existing Railroad Trail Connection to Barkley Village Commercial Area

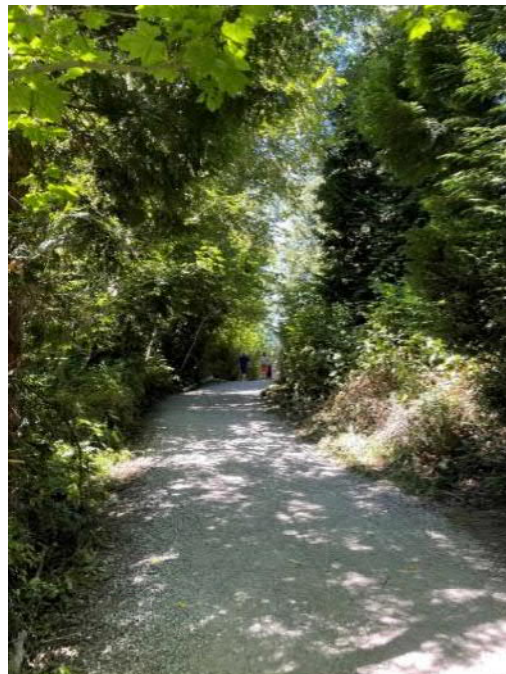




Figure 3-20. Existing Public Parks, Trails, and Natural Areas Near Study Area



### 3.7.5.3 Impacts

#### Impacts Common to All Alternatives

All of the alternatives would retain and expand existing parks and recreation sites in the future. However, the two action alternatives would provide for more open space, more space that could be used for recreation, and a more extensive trail network than the No Action Alternative, as shown in Table 3-20 and described in the following subsections.

Table 3-20. Parks and Recreation Elements under Existing Conditions and Alternatives

Element	Existing Conditions	No Action Alternative	Action Alternative 1	Action Alternative 2
Open Space <sup>a</sup> (acres)	108.1	69.85	115.27	110.75
Park/Playground <sup>b</sup> (acres)	1.65	5.22	16.69	17.14
Active Space <sup>c</sup> (acres)	2.78	4.12	13.75	13.75
Trail network (linear feet)	6,920	6,920	14,900	14,900
Percentage of Urban Village Acreage Dedicated to above uses	45%	35%	56%	55%

Source: Talbot Group, LLC and MG2

a Open Space is based on the definition in BMC 20.08.020 (b). Passive Open Space means all common open space not meeting the definition of usable space, including, but not limited to, critical areas and their associated buffers, vegetated roofs, and landscape-based low-impact development best management practices.

b Park/Playground is designated space for active recreation.

c Active Space are areas that could be repurposed as community gathering spaces, such as plazas and low-traffic streets.

#### No Action Alternative

The No Action Alternative would preserve the least amount of undeveloped land as open space, park/playground, and active space of all the alternatives, representing about 35% of the urban village footprint. The No Action Alternative would also have less open space than under existing conditions. Under the current Neighborhood Plan, the forested area east of St. Clair between Sunset Drive and Barkley Boulevard is designated for a mix of industrial and residential uses. It is assumed that a substantial portion of this undeveloped land would be converted to residential uses under the No Action Alternative. In addition, the existing trail network would not be expanded as extensively under the No Action Alternative as under the two action alternatives. Therefore, the No Action Alternative would be the least compatible with City parks, trails, and open space goals and level-of-service standards. Figure 3-21 shows the proposed open space, park/playground, and active space lands and trail network under the No Action Alternative.

#### Action Alternative 1/Preferred Alternative

Action Alternative 1 would have the highest amount of undeveloped land preserved as open space through preserving the majority of the forested area on the east side of the study area, representing about 56% of the urban village footprint. Action Alternative 1 would also add a more extensive trail network (about 8,000 more linear feet than under the No Action Alternative). This alternative is therefore most consistent with City parks, trails, and open space goals and level-of-service standards. Figure 3-22 shows the proposed open space, park/playground, and active space lands and trail network under Action Alternative 1.



## Action Alternative 2

Action Alternative 2 would have the same amount of land devoted to park/playground and active space uses as Action Alternative 1 and the same additional linear feet of trails. There would be slightly less undeveloped land preserved as open space under Action Alternative 2 because it is anticipated that about 3 acres of the existing forested land on the east side of the study area adjacent to the new St. Clair Street would be developed as single-family residential land uses. Overall, about 55% of the urban village study area would be dedicated to open space, park/playground, and active space uses. This alternative is more consistent with the City parks, trails, and open space goals and level-of-service standards than the No Action Alternative and similarly compatible when compared to Action Alternative 1. Figure 3-23 shows the proposed open space, park/playground, and active space lands and trail network under Action Alternative 2.

### 3.7.5.4 Mitigation Measures

No mitigation measures are proposed or warranted because none of the alternatives would displace existing parks and recreational uses, and all of the alternatives would adhere to landscaping, open space, and design requirements defined in applicable City codes and development regulations.

### 3.7.5.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts to parks and recreation under any of the alternatives.

Figure 3-21. No Action Alternative: Proposed Parks and Recreation Elements





Figure 3-22. Action Alternative 1/Preferred Alternative: Proposed Parks and Recreation Elements





Figure 3-23. Action Alternative 2: Proposed Parks and Recreation Elements





### 3.7.6 Historic and Cultural Preservation

#### 3.7.6.1 Methodology

This section draws upon the Cultural Resource Assessment conducted by Drayton Archaeology in March 2022, provided as Appendix C to this Draft EIS. The assessment was conducted to satisfy compliance requirements for the future U.S. Army Corps of Engineers permit to be sought by the Proponent, which requires compliance with 36 CFR part 800, or Section 106 of the National Historic Preservation Act of 1966, as amended (Section 106).

The Cultural Resource Assessment included a thorough background review and field investigation of the proposed project site. On-site fieldwork included systematic visual pedestrian reconnaissance and subsurface investigation of areas of proposed impact, including 180 shovel probes excavated throughout the project study area.

Analysts assessed whether the alternatives would result in potential adverse effects to historic properties or archaeological resources in the study area during construction or operations. A historic property is typically defined as one aged 50 years or older and is defined in 36 CFR part 800.16(l)(1), as "... any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria." Federal regulations (36 CFR 800.5) define the criteria of adverse effects as "when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association."

#### 3.7.6.2 Affected Environment

The study area (known as the Area of Potential Effects or APE) consists of approximately 250 acres and is bounded to the south along E. Illinois Street, to the north along E. Sunset Drive/Vining Street, to the west behind Regal IMAX cinemas, and to the east by Sussex Drive in Township 38 North, Range 3 East, Sections 16, 20, and 21 of the Willamette Meridian. The APE is composed of 153 individual tax parcels. Appendix C provides a figure showing the APE.

No properties eligible for the National Register of Historic Places (NRHP) are located within a 0.50-mile radius of the project. The NRHP lists properties deemed worthy of preservation because of local, regional, or national historic significance.

One historic-aged building is located within the project APE, known as the KPUG Radio Station, at 2340 E. Sunset Drive. The KPUG Radio Station is recommended as not eligible for inclusion in the NRHP under all applicable criteria. The building does not possess an important association with the communication media industry, nor does it possess an important association or represent a significant contribution to the context of women-owned businesses in Washington. Additionally, changes to its windows preclude it from NRHP eligibility, as these alterations have degraded its integrity of materials, design, workmanship, and feeling.

#### 3.7.6.3 Impacts

Because there are no NRHP-eligible properties within the urban village boundaries, there would be no adverse effects to historic properties under any of the alternatives. Based on the background review conducted by Drayton Archaeology, it has been determined that the alternatives are located within an

area of low probability for historic era precontact cultural deposits, structures, or isolated items. No cultural materials were located during the field investigation. Therefore, none of the alternatives are expected to have impacts on archaeological resources.

#### 3.7.6.4 Mitigation Measures

If archaeological resources (e.g., shell midden, faunal remains (bones), stone tools, historic glass, metal, or other materials) are observed during project activities, all work in the immediate vicinity must stop and the area secured. The project archaeologist must be contacted immediately to inspect the materials and contact relevant parties. An assessment of the materials and consultation with government and tribal cultural resources staff is a requirement of Washington law. Once the situation has been assessed, steps to proceed can be determined.

If human remains or indeterminate bones are encountered, work will stop immediately. The area surrounding the remains must be secured and of adequate size to protect them from further disturbance until the state provides a notice to proceed. Any remains should be covered and secured against further disturbance and communication established with the Bellingham Police Department, the State Archaeologist or State Historic Preservation Officer, and any consulting Tribes. An inadvertent discovery plan will be included in project-specific contract documents or work plans.

#### 3.7.6.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts to historic and cultural resources under any of the alternatives.

### 3.8 Transportation

This section is based on the Barkley Urban Village Plan Draft Transportation Discipline Report prepared by Transpo Group (Transpo) in September 2023, which is provided as Appendix D.

#### 3.8.1 Methodology

The following section summarizes the methodology used to evaluate the transportation elements of the Barkley Urban Village, including the transportation data that were collected, and the measures used to assess the performance of each of the major transportation system components under each alternative. The alternatives were evaluated for a 2045 horizon year, which is consistent with the City's forthcoming Comprehensive Plan and developed in coordination with the City. The analysis focuses on weekday AM and PM peak-period conditions when the Barkley Urban Village site is expected to have the greatest impact on the transportation system. The evaluation methodology was developed in coordination with the City and is detailed further in Appendix D.

##### 3.8.1.1 Study Area

The study area for the transportation analysis was developed in coordination with the City and represents the locations most likely to be impacted by rezoning and redevelopment of Barkley Village. The analysis focuses on the area in the immediate vicinity of the existing Barkley Village site and along major corridors outside the immediate vicinity that would likely serve as access to and from the site area. These major corridors include E. Sunset Drive, Barkley Boulevard, Woburn Street, Orleans Street, and Alabama Street. The study area includes 24 intersections (19 existing intersections and 5 future intersections), as outlined in Figure 3-24.

### 3.8.1.2 Data Collection

The evaluation included the collection of data for each of the major transportation elements. Data collection activities and data sources used included:

- AM and PM weekday peak-period turning movement counts collected by Transpo in May 2022 and September 2022, which included vehicle traffic volumes as well as heavy vehicle (truck) percentages, bicycle volumes, and pedestrian crossing counts
- GIS data outlining sidewalks, bicycle routes, and multi-use trails provided by the City
- Signal timing and phasing information from the respective controlling jurisdiction
- Bus routes and schedules published by the Whatcom Transportation Authority (WTA)
- Transit ridership data for 2019 and boarding and alighting data for an average weekday in 2018 provided by WTA
- Collision data provided by the Washington State Department of Transportation (WSDOT)

### 3.8.1.3 Travel Forecasts

Future traffic volume forecasts for the 2045 horizon year were developed based on a combination of inherent annual background growth, trips generated by developments permitted and planned within the study area (pipeline projects), and net new vehicle trips generated by each alternative.

#### Background Growth

An annual growth rate of 0.5 percent was assumed for both the No Action and action alternatives and was agreed to with the City. This growth rate was derived from the Whatcom Council of Governments (WCOG) traffic model and the projected annual traffic growth along adjacent roadways between 2019 and 2045.

#### Pipeline Projects

Traffic associated with pipeline projects that are permitted and planned for but are not generating traffic yet were included in the future traffic volume forecasts. A current list of pipeline projects was provided by the City and includes the following developments:

- Barkley Heights: A 72-unit residential development located on the north end of Sussex Drive, north of Barkley Boulevard
- McLeod Development: A 36-unit residential development located south of McLeod Road and west of Magrath Road

It should be noted that the Bellingham School District Administration Building and the Pinehurst/Manning residential building were both under construction at the time traffic counts were collected, but not yet generating trips. These projects are incorporated as part of the No Action and action alternative analyses as they are located within the Barkley Village boundaries.

#### Trip Generation

Trip generation estimates for the No Action and action alternatives were prepared based on vehicle trip rates identified using the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition and the proposed land uses under the No Action and action alternatives.

Person trips were developed based on the Trip Generation Manual vehicle trip rates and vehicle-to-person factors from the City of Bellingham Multimodal Transportation Impact Fee Rate Schedule for 2022 (BMC Table 19.06.040 (A)). A person trip represents a single one-way trip made by any mode of

travel by an individual person from an origin to a destination. Person trips were then separated by mode based on the mode split assumptions shown in Table 3-21.

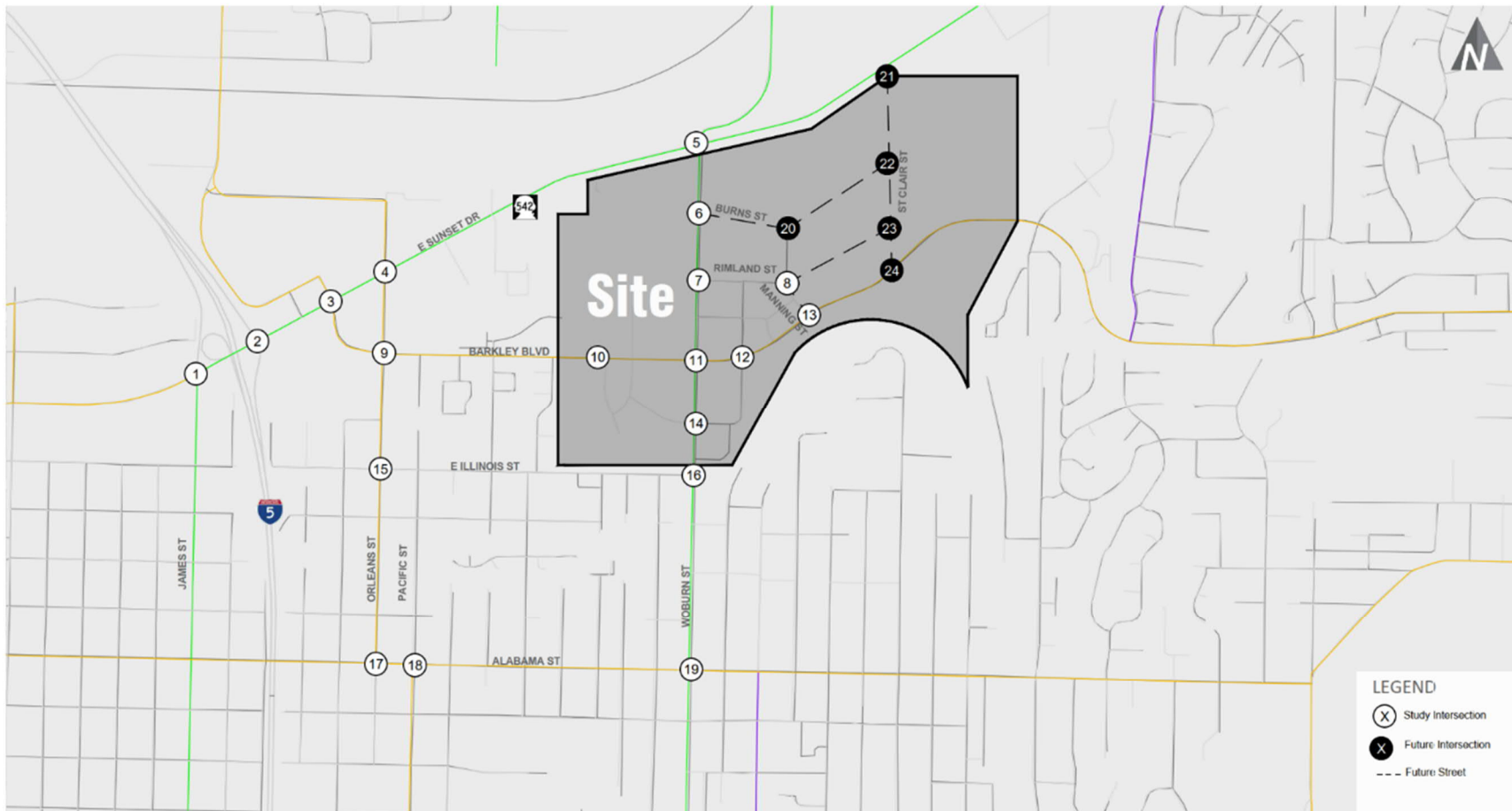
Table 3-21. Applied Mode Splits

Land Use	Mode Split / Land Use				
	Office / Industrial	Residential	Retail	Hotel	Recreational Community Ctr
Vehicle	75%	70%	65%	85%	60%
Transit	5%	10%	5%	5%	5%
Non-Motorized/Other	20%	20%	30%	10%	35%

Following the application of the proposed mode splits, person trips by vehicle were then converted back to vehicle trips based on the vehicle-to-person factors referenced previously. Additionally, a pass-by rate was applied to vehicle trips for retail uses. Pass-by trips represent vehicles that are already traveling on the adjacent roadway network and choose to stop at the site. For example, someone stopping at the supermarket on their way home from work would be considered a pass-by trip. This vehicle would already be on the roadway for their commute and therefore would not be considered a net new vehicle trip. A pass-by trip does not result in a new vehicle trip along the primary roadway network, but does result in additional vehicle trips at site driveways. As approved by the City, a pass-by reduction rate of 29 percent was applied to retail uses during the PM peak hour, consistent with the rate outlined in the City of Bellingham Multimodal Transportation Impact Fee Rate Schedule for 2022 (BMC Table 19.06.040 (A)).



Figure 3-24. Transportation Study Area and Site Vicinity



## Trip Distribution

Vehicle trips associated with the No Action and action alternatives were assigned to the study intersections based on the trip distribution shown in Figure 3-25, the location of land uses throughout the project extents, and the proposed internal roadway network. The trip distribution was developed based on the 2045 WCOG traffic model.

### 3.8.1.4 Evaluation Criteria

The following evaluation criteria were used to evaluate the potential transportation-related impacts of the No Action and action alternatives for each mode of transportation.

## Intersection Impacts

The operational characteristics of an intersection are determined by calculating the intersection vehicular level-of-service (LOS). The LOS analysis was completed based on procedures identified in the Highway Capacity Manual (HCM) using Synchro 11. At signalized and all-way stop-controlled intersections, vehicular LOS is measured in average control delay per vehicle and is typically reported using the intersection delay. At unsignalized side-street stop-controlled intersections, vehicular LOS is measured by the average delay on the worst movement of the intersection. Traffic operations and average vehicle delay for an intersection can be described qualitatively with a range of levels-of-service (LOS A through LOS F), with LOS A indicating free-flowing traffic and LOS F indicating extreme congestion and long vehicle delays.

Project impacts on vehicular LOS were identified by comparing the intersection operations for the No Action Alternative to the action alternatives and are based on the City's adopted LOS standards. Bellingham has adopted HCM vehicular LOS "E" (v/c 0.91-1.0) standards for intersection and arterial segments throughout the City.

In addition to intersection capacity analyses, queuing analyses were performed at the study area intersections using Synchro 11 software to understand if storage capacity is sufficient to accommodate 50th and 95th percentile queues.

## Transit

The evaluation of transit service was based on passenger loading. Passenger loading is an indication of the utilization of a transit corridor based on an identified service capacity. Its value is expressed as the ratio of passengers to bus capacity. This parameter is an important measure that provides insight into passenger comfort, both in terms of finding a seat and crowding levels on the transit vehicle. WTA allows this factor to exceed 1.00 for short distances where passengers can stand on the bus. For "High ridership urban service on segments of less than 10 minutes" a load factor of 1.75 or less is considered sufficient. For "Other Urban Service" a load factor of less than 1.25 is considered optimal and a load factor of less than 1.40 is considered adequate.

The existing passenger loading was determined based on the transit information obtained by WTA, and future passenger loading was based on the trip generation estimates for the No Action and action alternatives.

## Non-Motorized

A qualitative review of non-motorized access and circulation was conducted to evaluate pedestrian and bicycle facilities. This analysis focused on the identification of conflict areas between non-motorized and motorized traffic, the availability of existing non-motorized facilities, connections to these facilities from the site, and what amenities and facilities are proposed on-site.

Figure 3-25: Trip Distribution



## Parking

The parking analysis focused on on-site parking, with the goal of setting the appropriate balance of meeting parking requirements while not encouraging single-occupancy vehicle trips. The analysis includes an estimate of parking demand and the recommended parking supply based on data in ITE's Parking Generation Manual, 5th Edition.

## Safety

Existing traffic safety issues were determined by reviewing five years of collision records. Typically, intersections with collision rates greater than 1.0 collisions per million entering vehicles (MEV) are earmarked for continued evaluation and potential safety interventions.

### 3.8.2 Affected Environment

This section describes the street system, non-motorized, transit, and parking components of the existing transportation system in the vicinity of the Barkley Urban Village site.

#### 3.8.2.1 Street System

Major roadways currently providing access to the site include Sunset Drive, Woburn Street, and Barkley Boulevard. Table 3-22 provides an inventory of the key roadways serving Barkley Village.

Table 3-22. Roadway Network Existing Conditions Summary

Roadway	Roadway Classification <sup>1</sup>	Speed Limit	# Lanes	Pedestrian Facilities	Bicycle Facilities	Parking	Truck Route <sup>2</sup>
Sunset Drive	Principal Arterial	35 mph	5-7 <sup>3</sup>	Sidewalk (both sides)	Bike Lanes	--	T3
Woburn Street	Principal Arterial	35 mph	2-6 <sup>4</sup>	Sidewalk (both sides)	--	Both Sides (south of E Maryland St)	T3
Hannegan Road	Principal Arterial	35 mph	3-5 <sup>5</sup>	No Sidewalks	--	--	T2
Barkley Boulevard	Secondary Arterial	35 mph	3-5 <sup>5</sup>	Sidewalks (both sides) <sup>6</sup>	Bike Lanes	--	--
Alabama Street	Secondary Arterial	30 mph	4-5 <sup>7</sup>	Sidewalks (both sides)	--	--	--
Pacific Street (south of Alabama St)	Secondary Arterial	25 mph	2-3 <sup>8</sup>	Sidewalks (both sides)	--	Both Sides	--
Orleans Street (north of Alabama St)	Secondary Arterial	25 mph	2-3 <sup>8</sup>	Sidewalks (both sides)	Bike Lanes	East Side	--
E. Illinois Street	Residential	25 mph	2	Sidewalks (one side) <sup>9</sup>	Sharrows	Both Sides	--

1. WSDOT

2. City of Bellingham 2016 Comprehensive Plan (FGTS Class)

3. Two to three lanes in each direction with a two-way left-turn lane and double left-turn lanes at some intersections

4. One lane in each direction south of Illinois Street and two lanes in each direction with single or double left-turn lanes at intersections

5. One to two lanes in each direction with a center two-way left-turn lane

6. No sidewalks on the south side of the roadway east of Manning Street

7. Two lanes in each direction with a center two-way left-turn lane west of Woburn Street; two lanes in the east direction, one lane in the west direction, and a center two-way left-turn lane east of Woburn Street

8. Two lanes in each direction with single left-turn lanes at intersections

9. Intermittent sidewalk facilities on at least one side of the roadway in all locations except between Racine Street and Pacific Street



### 3.8.2.2 Transit Services

Barkley Village is served by transit with service provided by WTA. Table 3-23 summarizes the transit routes in which a stop is located within 0.25-mile from the site.

Table 3-23. Summary of Existing Transit Service

Transit Service	Approximate Hours of Operation <sup>1</sup>	Weekday Peak Hour Headway (Min)
<b><u>GO Lines</u></b>		
<b>Route 331</b> (Downtown to Cordata/WCC)	Mon – Fri: 6:05 a.m. to 10:40 p.m. Sat: 7:55 a.m. to 10:40 a.m. Sun: 8:10 a.m. to 8:10 p.m.	15
<b><u>Other Fixed Routes</u></b>		
<b>Route 49</b> (Downtown to Bakerview Spur)	Mon – Fri (to Bakerview Spur): 6:55 a.m. to 12:45 p.m. Mon – Fri (to Downtown): 1:15 p.m. to 6:05 p.m. Sat: 8:55 a.m. to 6:05 p.m.	15-30
<b>Route 72X</b> (Kendall to Bellingham Station)	Mon – Fri: 6:06 a.m. to 8:35 p.m. Sat: 7:37 a.m. to 8:05 p.m. Sun: 7:37 a.m. to 8:20 p.m.	60-90
<b>Route 525</b> (Barkley to Downtown)	Mon – Fri: 6:50 a.m. to 8:00 p.m. Sat: 8:25 a.m. to 6:50 p.m. Sun: 8:35 a.m. to 7:35 p.m.	60
<b>Route 540</b> (Sunset to Downtown)	Mon – Fri: 6:21 a.m. to 6:29 p.m. Sat: 8:21 a.m. to 6:29 p.m.	60
1. Schedules based on Whatcom Transportation Authority		

In addition to service frequency, the passenger loading at stops serving Barkley Village were evaluated for the routes that serve the site. Of note, Route 525 did not serve the Barkley Village site at the time boarding and alighting data were collected and was not included in the passenger loading analysis as a result.

All routes have a passenger load ratio of 1.0 when passing the bus stops serving the Barkley Village site. Route 331, which is the highest frequency route to serve the site, has a higher passenger load ratio in the PM peak hour in both directions (0.40 to 0.43 in the direction of Cordata; 0.87 to 0.89 in the direction of Downtown). Route 72X, which is a key commuter route, has a higher passenger load ratio in the AM peak hour toward Bellingham (0.37) and in the PM peak hour toward Kendall (0.53).

While service is provided frequently within the study area and many routes are well utilized, key areas of concern within the study area impact overall transit operations as noted by the City and WTA. In particular, Routes 331 and 525 travel south along Woburn Street, which narrows to a two-lane cross-section at E. Illinois Street and encounters the at-grade, highly utilized Railroad Trail crossing. At the intersection of Woburn Street and Alabama Street south of the Barkley Urban Village site, multiple bus routes turn on or off of Woburn Street and experience delay due to long queues. According to the City and WTA, the constraints along Woburn Street between E. Illinois Street and Alabama Street have impacts to the on-time performance of Routes 331 and 525 and would be further impacted by vehicular growth along the roadway. Appendix D provides a more detailed analysis of projected passenger loading under existing conditions.

### 3.8.2.3 Non-Motorized Facilities

Pedestrian and bicycle facilities were assessed in the study area to examine existing connectivity and to identify existing issues or deficiencies. Walking and biking are key modes of transportation in the City, with these modes representing over 10 percent of the overall means of travel to work under existing conditions.

The Barkley Urban Village site includes residential and commercial space under existing conditions, and both the external and internal roadway networks have been designed to accommodate continued growth. While much of this transportation growth is expected to be vehicular in nature, the majority of existing roadways have sidewalks and bicycle facilities along multiple roadways that provide access to Barkley Urban Village. The Barkley Urban Village site is also accessible to a key shared-use pathway (Railroad Trail). While the roadway network within the Barkley Urban Village site is fairly limited at this time, the roadways that do exist provide non-motorized facilities, and there is opportunity to build on this roadway network in a way that caters to non-motorized traffic. Any new roadway within the Barkley Urban Village site would need to meet City roadway design standards (as outlined in the June 2018 Development Guidelines & Improvement Standards), which would include the incorporation of facilities for non-motorized travel, such as sidewalks, crosswalks, and curb ramps along all roadways and bicycle lanes along some roadways.

#### Bicycle Facilities

East-west bicycle lanes are provided along Sunset Drive and Barkley Boulevard. East of Cornerstone Lane, buffered bicycle lanes are provided along Barkley Boulevard. Additionally, shared-lane markings are provided along E. Illinois Street.

Limited north-south bicycle facilities are provided in the vicinity of the site. A mix of shared-lane markings and bicycle lanes are provided along Orleans Street, and shared-lane markings are provided along St. Paul Street.

Some bicycle parking is available but is generally limited and concentrated near major retail buildings, such as the Haggen supermarket.

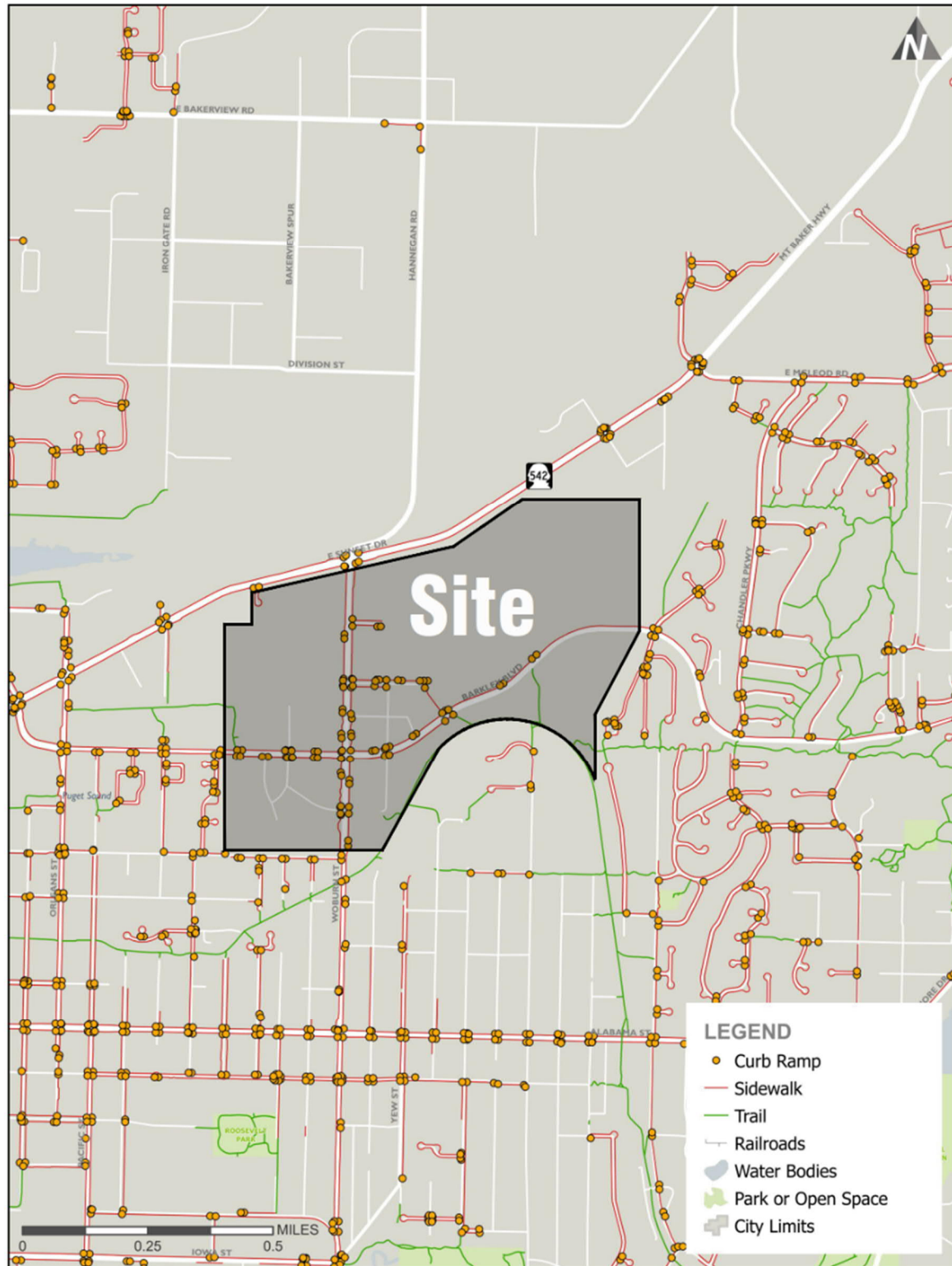
#### Pedestrian Facilities

Figure 3-26 depicts the existing pedestrian network within and surrounding the Barkley Urban Village site. As shown, the majority of roadways within and surrounding the Barkley Urban Village site provide sidewalks on both sides of the street, with some roadways providing sidewalks on a single side of the roadway. The majority of intersections include crosswalks and curb ramps; however, some curb ramps are not currently compliant with the Americans with Disabilities Act (ADA), as shown on Figure 3-26. These locations have been identified as part of the City's 2021 ADA Transition Plan, which outlines an implementation and prioritization plan for addressing citywide ADA deficiencies over the next 30 to 50 years.

#### Shared-Use Trail Facilities

Multiple shared-use trail facilities are located in the vicinity of the Barkley Urban Village site, including the Railroad Trail, the Barkley Trail, and the Klipsun Trail. These trails are depicted in Figure 3-26 and discussed in Section 3.7.5.

Figure 3-26. Existing Pedestrian Facility and Trail Network



### 3.8.2.4 Parking

#### On-street Parking

On-street parking is primarily limited to a handful of roadways that are internal to the Barkley Urban Village site, including Rimland Drive, Sloane Street, and Newmarket Street. On-street parking is free along these roadways, but some of the parking spaces, particularly those near mixed-use buildings, have time limits.

Farther from the site, on-street parking is provided along Woburn Street south of E. Maryland Street and along the majority of residential streets. These on-street parking spaces are open to all vehicles and do not have time limit restrictions.

#### Off-street Parking

A substantial amount of off-street parking, primarily in the form of surface parking lots, is provided within the Barkley Urban Village site. Shared parking is provided for some shopping centers and commercial areas, such as the cinema shopping center located at the southwest corner of Barkley Boulevard and Woburn Street. Some larger commercial uses, such as the existing light industrial building, and all residential uses provide parking areas for employees or residents. While the majority of off-street parking consists of surface parking lots, recently constructed buildings along Barkley Boulevard provide structured parking within the building footprint.

### 3.8.2.5 Traffic Volumes

Existing weekday peak-hour traffic volumes are summarized in Figure 3-27 and are detailed in the attachments to Appendix D. Existing traffic volumes are based on traffic counts collected in the spring and fall of 2022 at the study intersections.

### 3.8.2.6 Vehicular Operations

Existing LOS and delay were calculated at the study intersections. Table 3-24 summarizes the existing intersection operations, and Appendix D contains detailed operational analysis and LOS worksheets for the existing peak-hour conditions.



Table 3-24. Existing Weekday Peak-Hour Intersection Operations

Intersections	Intersection Control <sup>1</sup>	AM Peak Hour		PM Peak Hour	
		LOS <sup>2</sup>	Delay <sup>3</sup>	LOS <sup>2</sup>	Delay <sup>3</sup>
1. James Street/E Sunset Drive	Signalized	D	46.2	E	64.4
2. I-5 NB Ramps/E Sunset Drive	Signalized	C	21.0	E	66.8
3. Barkley Boulevard/E Sunset Drive	Signalized	C	26.7	D	46.4
4. Orleans Street/E Sunset Drive	Signalized	C	22.2	D	38.1
5. Woburn Street/E Sunset Drive	Signalized	D	52.9	E	73.2
6. Woburn Street/Burns Street	TWSC	C	17.6	B	12.4
7. Woburn Street/Rimland Street	Signalized	A	3.3	A	6.1
8. Manning Street/Rimland Street	AWSC	A	7.3	A	7.6
9. Orleans Street/Barkley Boulevard	Signalized	B	19.6	C	24.4
10. Howe Place/Barkley Boulevard	Signalized	A	7.2	A	9.4
11. Woburn Street/Barkley Boulevard	Signalized	B	16.7	B	19.6
12. Newmarket Street/Barkley Boulevard	Signalized	A	5.0	B	12.4
13. Manning Street/Barkley Boulevard	TWSC	B	13.9	C	17
14. Woburn Street/Newmarket Street	Signalized	A	5.7	B	10.7
15. Orleans Street/E Illinois Street	TWSC	C	15.7	C	26.0
16. Woburn Street/E Illinois Street	TWSC	D	25	<b>F</b>	<b>50.8</b>
17. Orleans Street/Alabama Street	Signalized	B	14.2	B	13.8
18. Pacific Street/Alabama Street	Signalized	A	7.7	B	10.6
19. Woburn Street/Alabama Street	Signalized	C	23.2	C	27.9

Source: Highway Capacity Manual and Transpo Group 2022

1. TWSC = two-way stop control and AWSC = all-way stop control

2. Level-of-service (LOS) based on Highway Capacity Manual (6th edition) and Highway Capacity Manual (2000) methodology (for non-NEMA standard signals).

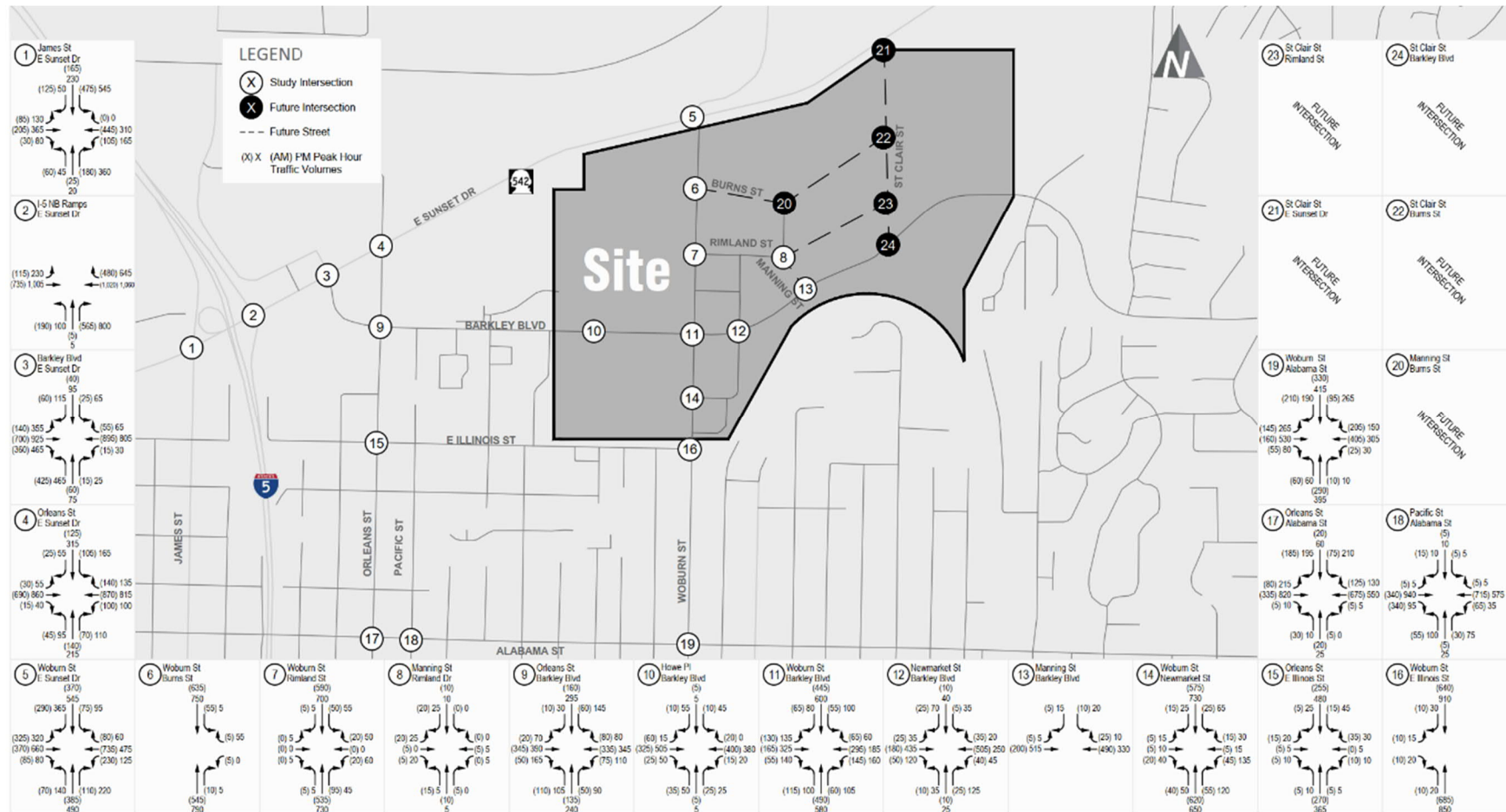
3. Average delay in seconds per vehicle.

Generally, study area intersections operate at acceptable LOS, with the exception of the intersection of Woburn Street and E. Illinois Street, which operates at LOS F during the PM peak hour. This intersection is side-street stop-controlled, which means that the reported LOS and delay are experienced by the side street (in this case E. Illinois Street), and traffic along Woburn Street is free flowing with minimal delay. Poor operations at this intersection are primarily due to high vehicular volumes along Woburn Street that limit the available gaps for vehicles turning left from E. Illinois Street. While the delay and resulting LOS exceed City standards, it should be noted that the corresponding 95th percentile queue along E. Illinois Street would be less than two vehicles during the PM peak hour.

### Queuing

In addition to the queuing evaluation outlined above for the intersection of Woburn Street and E. Illinois Street, a comprehensive queuing analysis was performed for the full study area to understand if existing storage capacity is sufficient at the study intersections. At the majority of intersections, the existing storage capacity is sufficient to accommodate both the 50th and 95th percentile queues. Some queuing issues are identified at study intersections along Sunset Drive, particularly near the connection to I-5 where signalized intersections are closely spaced and space for turn pockets is limited, and along Woburn Street. While the analysis identified turn pockets that do not sufficiently accommodate the 50th or 95th percentile queues, primarily during the PM peak hour, the analysis did not identify queues that extend into adjacent intersections. The detailed queuing analysis is provided in the attachments to Appendix D.

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### 3.8.2.7 Safety Analysis

Collision records at the study area intersections were reviewed to identify existing traffic safety issues. The most recent five-year summary of collision data from WSDOT was from 2017 to 2021. No study intersections reported an average rate of more than 1.0 collision per MEV, which indicates that the frequency of collisions is low and there are no significant traffic safety issues at the study intersections under existing conditions.

### 3.8.2.8 Programmed and Planned Improvements

Based on a review of the City of Bellingham's Six-Year (2022-2027) Transportation Improvement Program (TIP) and WSDOT's (2022-2025) Statewide TIP, no transportation-related improvements are identified within the study area outside of those proposed as part of the Barkley Urban Village development.

Based on the WTA Transit Development Plan 2022-2027, there are some planned service changes that would improve transit access to and from the Barkley Urban Village site, including added trips on Routes 72X and 331 (scheduled for 2023), increased frequency on the Gold GO Line/Route 331 (scheduled for 2025), and added/modified service on Route 49 (scheduled for 2027). Related to improvements on the Gold GO Line/Route 331, the removal of parking and rechannelization of Woburn Street to provide two southbound lanes is defined as an unfunded improvement under Project #3 "Clean Energy" in the Preliminary 2024-2029 TIP.

As it relates to increased frequency on the Gold GO Line, WTA is currently undergoing a study to assess the viability of speed and reliability improvements along two corridors and the potential for bus rapid transit in each. One of corridors being studied is the existing Gold GO Line, which directly serves Barkley Urban Village and travels along Sunset Drive, Woburn Street, and Alabama Street within the study area.

Additionally, it should be noted that a rectangular rapid-flashing beacon was planned for construction at the study intersection of Orleans Street/E. Illinois Street in the summer of 2023.

## 3.8.3 Impacts

### 3.8.3.1 Impacts Common to All Alternatives

#### Street System

Internal access will vary among each of the alternatives evaluated based on the proposed uses and density within each area. Figure 2-1, Figure 2-2, and Figure 2-3 in Chapter 2 show the proposed street system and vehicular connectivity for the No Action Alternative, Action Alternative 1, and Action Alternative 2, respectively.

Overall, the proposed primary street system is consistent between the No Action and action alternatives. Most notably, the proposed transportation network includes the extension of Burns Street as an east-west public roadway through the site and the construction of St. Clair Street as a new north-south public roadway providing access to the site. The remaining roadways within the site would be private roadways and alleys. All proposed roadways would be a single lane in each direction.

Additionally, the proposed street network would result in changes to some existing intersections and the addition of new intersections as follows:

- Manning Street/Burns Street: Three-leg side-street (Manning Street) stop-controlled intersection

- St. Clair Street/E. Sunset Drive: Three-leg side-street (St. Clair Street) stop-controlled intersection
- St. Clair Street/Burns Street: Four-leg side-street (Burns Street) stop-controlled intersection
- St. Clair Street/Rimland Drive: Three-leg side-street (Rimland Drive) stop-controlled intersection
- St. Clair Street/Barkley Boulevard: Three-leg side-street (St. Clair Street) stop-controlled intersection

### Transit

The Barkley Urban Village project team is coordinating with WTA regarding the establishment of a transit or multimodal hub within the Barkley Urban Village site as part of the action alternatives. An exact location for this transit hub has not yet been established; however, it is intended to provide space for multiple bus bays to help accommodate growth in transit activity in the area.

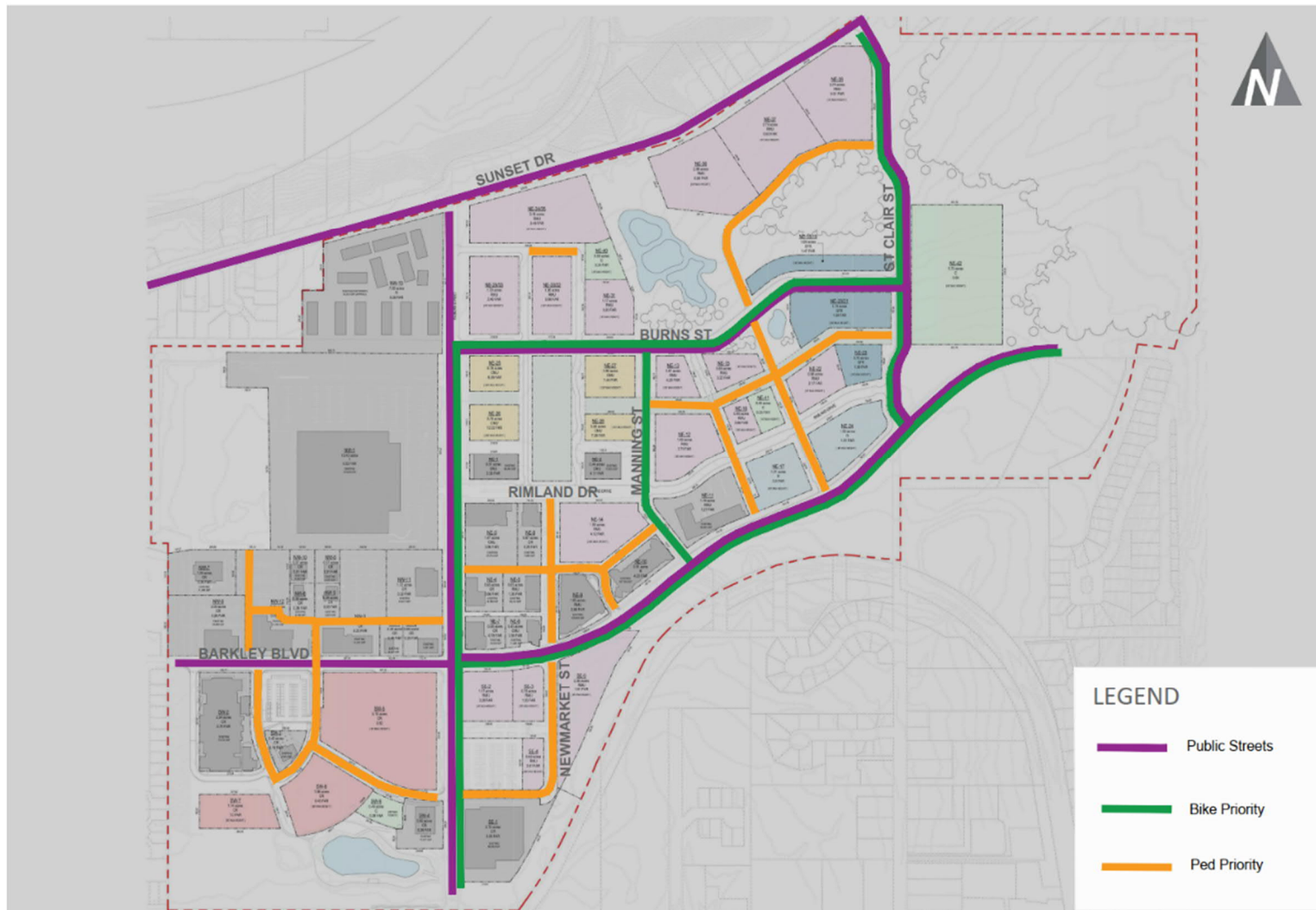
### Non-Motorized Facilities

The proposed internal roadway network would include several roadways that prioritize pedestrian and bicycle modes, as shown on Figure 3-28. Burns Street, St. Clair Street, and Manning Street would provide bicycle facilities, and all internal roadways would include sidewalks, crosswalks, and ADA-compliant curb ramps. Additionally, there would be a network of trails within the site that connects to the existing shared-use trail network.

Each alternative would also include long- and short-term bicycle parking consistent with City requirements. In addition to bicycle parking that is located in key public areas such as the transit hub, bicycle parking would be included as part of each individual development project. At a minimum, the amount of bicycle parking provided would meet City requirements and would be assessed during the development review process.



Figure 3-28. Proposed Transportation Network and Modal Priorities



### 3.8.3.2 No Action Alternative

This section summarizes the impacts of the No Action Alternative and establishes the baseline for the impacts of the action alternatives.

#### Trip Generation

The trip generation projections for the No Action Alternative are based on the multimodal trip generation methodology outlined in Section 3.8.1.3. The trip generation projections are summarized in Table 3-25, and detailed trip generation calculations are provided in the attachments to Appendix D. As shown, the No Action Alternative is projected to generate 7,807 net new weekday vehicle trips above existing conditions, with 631 vehicle trips occurring during the AM peak hour and 7,807 vehicle trips occurring during the PM peak hour.

Table 3-25. No Action Alternative Weekday Vehicle Trip Generation

Land Use	Size	Daily Trips	AM Peak-Hour Trips			PM Peak-Hour Trips		
			In	Out	Total	In	Out	Total
<u>No Action</u>								
Retail (LU #820)	80,000 sf	1,924	27	17	44	85	91	176
<i>Pass-By Reduction (29%)</i>		-	-	-	-	-26	-26	-52
Office (LU #710)	191,545 sf	1,557	190	29	219	36	170	206
Multifamily Low-Rise (LU #220)	402 du	1,897	28	85	113	90	54	144
Multifamily Mid-Rise (LU #221)	225 du	715	13	46	59	38	24	62
Single-Family Attached (LU #215)	36 du	181	3	8	11	9	6	15
Single-Family Detached (LU #210)	94 du	620	12	34	46	39	22	61
Light Industrial (LU #110)	250,000 sf	913	121	18	139	17	104	121
<b>Total Net New</b>		<b>7,807</b>	<b>394</b>	<b>237</b>	<b>631</b>	<b>288</b>	<b>445</b>	<b>733</b>
Notes: du = dwelling units, sf = square feet								

#### Transit Impacts

The No Action Alternative is projected to generate 1,086 daily net new weekday transit trips<sup>2</sup> above existing conditions, with 81 transit trips occurring during the AM peak hour and 102 transit trips occurring during the PM peak hour. It is assumed that transit trips would be distributed to the available transit routes based on the vehicular trip distribution patterns. There would be sufficient capacity within the existing transit service to accommodate the new transit trips that would be generated under the No Action Alternative. Based on the projected passenger demand, it is expected that new transit trips would be accommodated within seated capacity of the buses as the passenger load ratio is not projected to exceed 1.0 for any of the routes serving the site.

While transit activity is expected to be sufficiently accommodated via existing transit service, it should be noted that intersection delay resulting from increased vehicular activity would have a negative impact on overall transit operations and could impact on-time performance. Appendix D provides a more detailed analysis of projected passenger loading under the No Action Alternative.

<sup>2</sup> A transit trip represents a person taking the bus as their mode of travel, with one transit trip representing a single one-way bus trip.

## Non-Motorized Impacts

The No Action Alternative is projected to generate 3,293 daily net new weekday non-motorized trips<sup>3</sup> above existing conditions, with 231 occurring during the AM peak hour and 321 occurring during the PM peak hour. The transportation network proposed as part of the No Action Alternative would meet or exceed the City's design requirements and would provide key connectivity to the surrounding local and regional pedestrian network, bicycle facilities, and shared-use trails.

Off-site, the additional non-motorized trips combined with the increased vehicular volumes would create additional potential conflicts between non-motorized and vehicular traffic. This is particularly notable at the existing at-grade Railroad Trail crossing along Woburn Street. Additionally, this crossing currently has a pedestrian-actuated flashing crossing. Delay as a result of the at-grade crossing is already observed under existing conditions. With increased non-motorized activity, the crossing could result in additional delay for vehicular traffic along Woburn Street, including transit traffic.

## Traffic Volumes

The No Action traffic volumes were projected based on growth in background traffic, pipeline projects, and vehicle trips associated with the proposed No Action development. The resulting No Action Alternative peak-hour traffic volumes are shown in Figure 3-29.

## Operational Impacts

### Intersection Operations

The No Action weekday peak-hour intersection operations are summarized in Table 3-26. As shown in the table, the majority of study intersections would continue to operate acceptably during the weekday AM and PM peak hours under the No Action Alternative.

Consistent with the existing conditions, the intersection of Woburn Street and E. Illinois Street is projected to operate at LOS F, but under the No Action conditions, the intersection is projected to operate at LOS F during the AM peak hour in addition to the PM peak hour. This intersection is side-street stop-controlled, which means that the reported LOS and delay would be experienced by the side street (in this case E. Illinois Street), and traffic along Woburn Street would be free flowing with minimal delay. Poor operations at this intersection would primarily be due to high vehicular volumes along Woburn Street that limit the available gaps for vehicles turning left from E. Illinois Street. While the delay and resulting LOS would exceed City standards and increase compared to existing conditions, it should be noted that the corresponding 95th percentile queue along E. Illinois Street would be less than five vehicles during the PM peak hour.

Additionally, the intersection of Woburn Street and Burns Street is projected to operate at LOS F during the PM peak hour under the No Action conditions. This intersection is currently side-street stop-controlled. With the increase in development density surrounding Burns Street as part of the No Action Alternative, the LOS degrades to LOS F with 52.6 seconds of delay along the side street approach of Burns Street. Traffic along Woburn Street would be free flowing with minimal delay. Poor operations at this intersection are primarily due to high vehicular volumes along Woburn Street that limit the available gaps for vehicles turning left from Burns Street.

Beyond the study intersections, the increase in vehicular traffic along Woburn Street, coupled with the increase in non-motorized trails users, would result in additional delay for vehicular traffic along

<sup>3</sup> A non-motorized trip represents a person walking or biking as their mode of travel, with one non-motorized trip representing a single one-way walking or cycling trip.

Woburn Street, including general purpose traffic and transit traffic. This crossing currently has a pedestrian-actuated flashing crossing, such that increased non-motorized activity would increase the dedicated crossing time for trail users and impact the vehicular flow of Woburn Street.

Table 3-26. No Action Alternative Weekday Peak-Hour Analysis Results

Intersections	Intersection Control <sup>1</sup>	AM Peak Hour		PM Peak Hour	
		LOS <sup>2</sup>	Delay <sup>3</sup>	LOS <sup>2</sup>	Delay <sup>3</sup>
1. James Street/E Sunset Drive	Signalized	D	45.3	D	51.1
2. I-5 NB Ramps/E Sunset Drive	Signalized	C	21.5	E	59.7
3. Barkley Boulevard/E Sunset Drive	Signalized	C	28.0	D	49.9
4. Orleans Street/E Sunset Drive	Signalized	C	22.4	D	36.0
5. Woburn Street/E Sunset Drive	Signalized	D	50.6	E	56.8
6. Woburn Street/Burns Street	TWSC	E	36.3	F	52.6
7. Woburn Street/Rimland Street	Signalized	B	11.8	B	14.0
8. Manning Street/Rimland Street	AWSC	A	7.3	A	7.4
9. Orleans Street/Barkley Boulevard	Signalized	C	26.7	D	41.2
10. Howe Place/Barkley Boulevard	Signalized	C	20.0	C	34.4
11. Woburn Street/Barkley Boulevard	Signalized	C	27.9	C	31.2
12. Newmarket Street/Barkley Boulevard	Signalized	A	6.3	C	20.8
13. Manning Street/Barkley Boulevard	TWSC	C	16.4	C	23.8
14. Woburn Street/Newmarket Street	Signalized	A	6.8	B	15.8
15. Orleans Street/E Illinois Street	TWSC	C	18.7	E	38.2
16. Woburn Street/E Illinois Street	TWSC	F	60.4	F	>200
17. Orleans Street/Alabama Street	Signalized	B	18.1	B	16.8
18. Pacific Street/Alabama Street	Signalized	A	9.0	B	13.8
19. Woburn Street/Alabama Street	Signalized	C	28.9	D	42.6
20. Manning Street/Burns Street	TWSC	A	8.5	A	8.4
21. St Clair Street/E Sunset Drive	TWSC	C	17.6	C	23.6
22. St Clair Street/Burns Street	TWSC	A	9.6	A	9.7
23. St Clair Street/Rimland Street	TWSC	A	9.2	A	9.2
24. St Clair Street/Barkley Boulevard	TWSC	C	15.8	C	17.4

Source: Highway Capacity Manual and Transpo Group 2022

1. TWSC = two-way stop control and AWSC = all-way stop control

2. Level-of-service (LOS), based on Highway Capacity Manual (6th edition) and Highway Capacity Manual (2000) methodology (for non-NEMA standard signals).

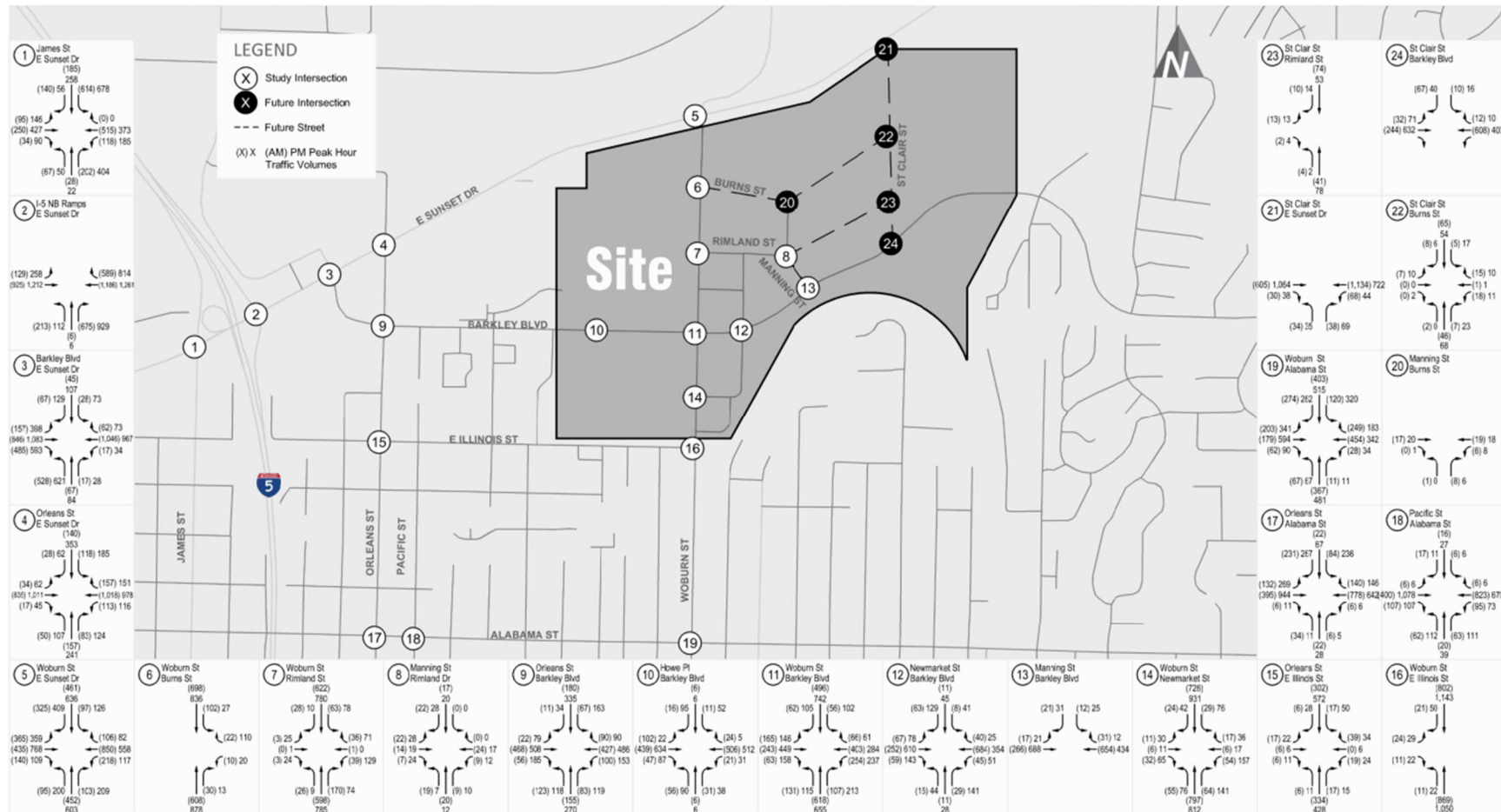
3. Average delay in seconds per vehicle.

## Queuing

In addition to the queuing evaluation outlined above for the intersection of Woburn Street and E. Illinois Street, a comprehensive queuing analysis was performed for the full study area to understand if storage capacity is sufficient to accommodate both the 50th and 95th percentile queues. Consistent with existing conditions, the existing storage capacity would be sufficient to accommodate both the 50th and 95th percentile queues at the majority of study intersections. There would be some queuing issues at study intersections along Sunset Drive, particularly near the connection to I-5 where signalized intersections are closely spaced and space for turn pockets is limited, and along Woburn Street. Additionally, new queuing issues were identified along Alabama Street at the intersections with Pacific Street and Woburn Street. At these intersections, the 95th percentile queues for some lane groups would exceed the available storage length during the PM peak hour. The detailed queuing analysis is provided in the attachments to Appendix D.



Figure 3-29. No Action Alternative (2045) Weekday Peak-Hour Traffic Volumes



## Parking

Under the No Action Alternative, additional off-street parking would be provided to support the new development. On-street parking would be provided along the majority of internal roadways to serve short-term commercial parking needs and residential visitors.

The parking demand for the No Action Alternative is based on the net new development anticipated within the Barkley Urban Village boundary. As shown in Table 3-27, a peak parking demand of 1,592 parking spaces is projected for new development under the No Action Alternative.

Table 3-27. No Action Alternative Parking Demand Projections

Land Use	Size	Parking Demand Rate <sup>1</sup>	Mode Split Reduction <sup>2</sup>	Peak Parking Demand
Retail (LU #820)	80,000 sf	1.95 per ksf	35%	49 spaces
Office (LU #710)	191,545 sf	2.39 per ksf	25%	343 spaces
Light Industrial (LU #110)	250,000 sf	0.65 per ksf	25%	122 spaces
Multifamily Low-Rise (LU #220)	402 du	1.21 per du	--	486 spaces
Multifamily Mid-Rise (LU #221)	225 du	1.31 per du	--	295 spaces
Single-Family Attached (LU #215)	36 du	2.28 per du	--	82 spaces
Single-Family Detached (LU #210)	94 du	2.28 per du	--	214 spaces
<b>Total Net New Parking Demand</b>				<b>1,592 spaces</b>

ksf = 1,000 square feet; du = dwelling unit

Source: ITE Parking Generation, 5th Edition

1. For retail, office, and multifamily residential uses, parking demand rates from ITE Parking Generation, 5th Edition were used. For single-family residential uses, the parking demand rate was based on vehicle ownership data from the U.S. Census for the census tracts in which the Barkley Village site resides (7 and 8.03, Whatcom County).
2. The parking demand for retail and office uses was reduced consistent with the applied mode splits as not all trips to these uses would require a vehicle. For residential trips, no mode split reduction was assumed as parking demand would be dictated by vehicle ownership.

## Safety Analysis

As traffic volumes increase under the No Action Alternative, traffic safety issues could increase proportionately; however, no significant safety concerns are identified within the study area under existing conditions.

### 3.8.3.3 Action Alternative 1/Preferred Alternative

This section summarizes the future transportation conditions and transportation-related impacts of Action Alternative 1 as compared to the No Action Alternative.

## Trip Generation

The trip generation projections for Action Alternative 1 are based on the multimodal trip generation methodology outlined previously. The trip generation projections are summarized in Table 3-28, and detailed trip generation calculations are provided in the attachments to Appendix D. As shown, Action Alternative 1 is projected to generate 27,569 net new weekday vehicle trips above existing conditions, with 2,136 trips occurring during the AM peak hour and 2,533 net new trips occurring during the PM peak hour. This represents a difference of 19,762 new daily trips above the No Action Alternative, with 1,505 new trips occurring during the AM peak hour and 1,800 new trips occurring during the PM peak hour.

Table 3-28. Action Alternative 1/Preferred Alternative Estimated Weekday Vehicle Trip Generation

Land Use	Size	Daily Trips	AM Peak-Hour Trips			PM Peak-Hour Trips		
			In	Out	Total	In	Out	Total
<b><u>Action Alternative 1</u></b>								
Retail (LU #820)	355,814 sf	8,560	119	74	193	377	410	787
<i>Pass-By Reduction (29%)</i>		-	-	-	-	-114	-114	-228
Office (LU #710)	962,654 sf	7,828	967	132	1,099	175	865	1,040
Hotel (LU #310)	223 keys	1,510	49	39	88	57	55	112
Multifamily Low-Rise (LU #220)	331 du	1,560	21	71	92	75	43	118
Multifamily Mid-Rise (LU #221)	1,760 du	5,590	105	351	456	292	189	481
Multifamily High-Rise (LU #222)	329 du	1,050	21	41	62	41	33	74
Single-Family Attached (LU #215)	100 du	508	9	25	34	24	15	39
Single-Family Detached (LU #210)	-12 du	-79	-2	-3	-6	-4	-4	-8
Light Industrial (LU #110)	160,000 sf	584	79	10	89	11	67	78
Recreational Community Ctr (LU # 495)	26,800 sf	458	19	10	29	21	19	40
<b><i>Total Alt. 1 Net New (above Existing Conditions)</i></b>		<b>27,569</b>	<b>1,387</b>	<b>750</b>	<b>2,136</b>	<b>955</b>	<b>1,578</b>	<b>2,533</b>
Notes: du = dwelling units, sf = square feet								

### Transit Impacts

Action Alternative 1 is projected to generate 3,467 daily net new weekday transit trips above existing conditions, with 255 transit trips occurring during the AM peak hour and 326 transit trips occurring during the PM peak hour. As compared to the No Action Alternative, this would result in a difference of 2,381 daily net new weekday transit trips, with 174 additional transit trips occurring during the AM peak hour and 224 additional transit trips occurring during the PM peak hour.

It is assumed that transit trips would be distributed to the available transit routes based on the vehicular trip distribution patterns. There would be sufficient capacity within the existing transit service to accommodate the new transit trips that would be generated by Action Alternative 1. Based on the projected passenger demand, the majority of transit routes traveling through the site would continue to operate with a passenger load factor below 1.0. Only Route 331 is projected to operate with a passenger load above 1.0 during the PM peak hour for buses traveling in the direction of Downtown. Based on WTA standards for acceptable passenger load factors, the projected passenger loads for Route 331 would be considered acceptable. Additionally, it is expected that transit capacity would increase under Action Alternative 1 based on the proposed WTA plans to increase frequency of service for Route 331, but the specific increase in service has not been identified.

While transit activity generated by Action Alternative 1 is expected to be sufficiently accommodated via existing transit service, it should be noted that intersection delay resulting from increased vehicular activity would have a negative impact on overall transit operations and could impact on-time performance. Given the increase in vehicular traffic associated with Action Alternative 1, potential impacts to transit operations would be worse compared to the No Action Alternative. Appendix D provides a more detailed analysis of projected passenger loading under Action Alternative 1.

### Non-Motorized Impacts

Action Alternative 1 is projected to generate 11,821 daily net new weekday non-motorized trips above existing conditions, with 798 occurring during the AM peak hour and 1,156 occurring during the PM peak hour. The transportation network proposed as part of Action Alternative 1 would meet or exceed

the City's design requirements and would provide key connectivity to the surrounding local and regional pedestrian network, bicycle facilities, and shared-use trails.

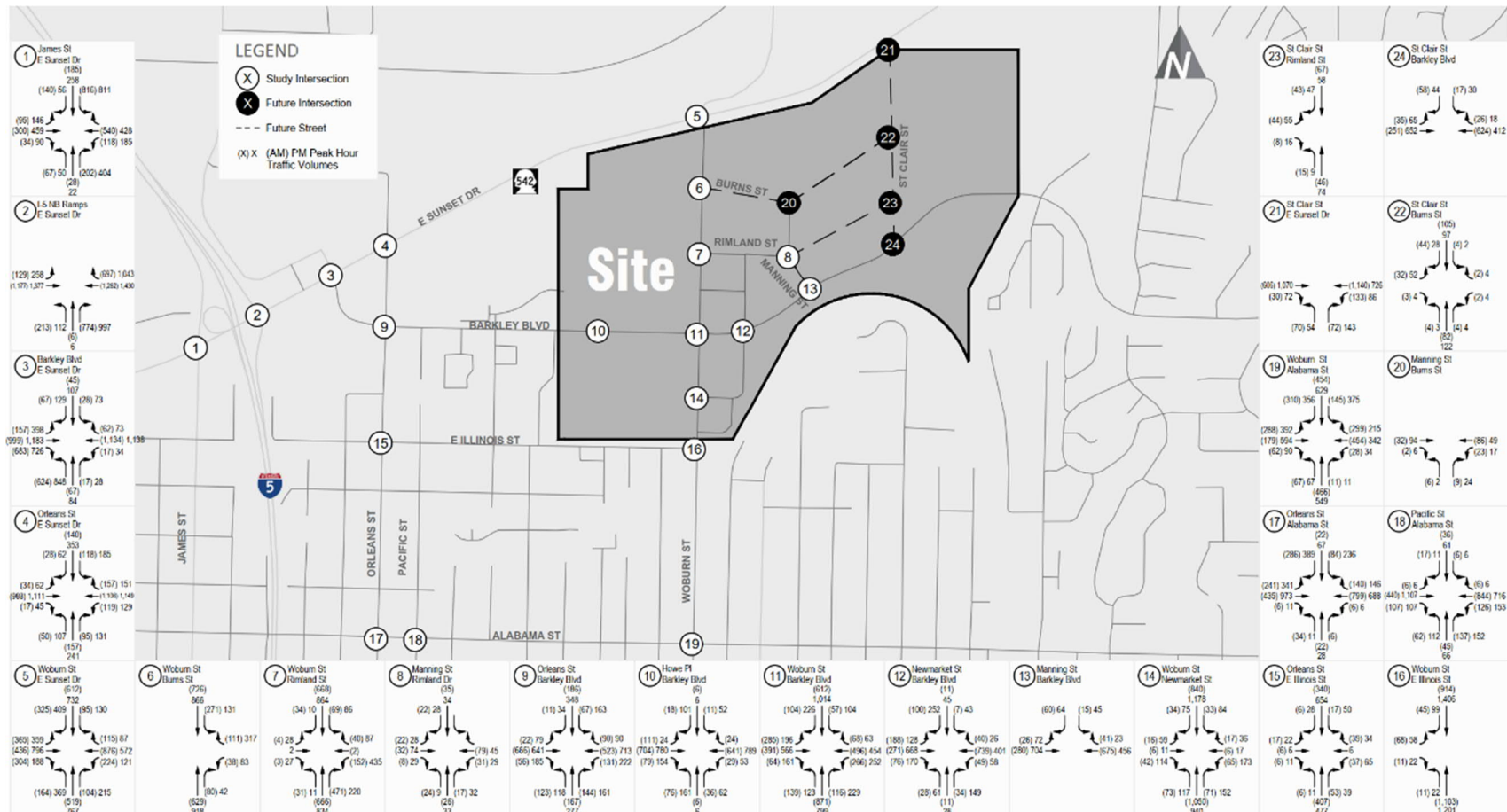
Off-site, the additional non-motorized trips combined with the increased vehicular volumes would create additional potential conflicts between non-motorized and vehicular traffic. This is particularly notable at the existing at-grade Railroad Trail crossing along Woburn Street. Additionally, this crossing currently has a pedestrian-actuated flashing crossing. Delay as a result of the at-grade crossing is already observed under existing conditions. With increased non-motorized activity, the crossing could result in additional delay for vehicular traffic along Woburn Street, including transit traffic.

### Traffic Volumes

The Action Alternative 1 traffic volumes were projected based on growth in background traffic, pipeline projects, and vehicle trips associated with development of Action Alternative 1. The resulting Action Alternative 1 peak-hour traffic volumes are shown in Figure 3-30.



Figure 3-30. Action Alternative 1/Preferred Alternative (2045) Weekday Peak-Hour Traffic Volumes



## Operational Impacts

### Intersection Operations

Table 3-29 compares the Action Alternative 1 weekday peak-hour intersection operations results with the No Action Alternative results.

Table 3-29. Action Alternative 1/Preferred Alternative Weekday Peak-Hour Analysis Results

Intersections	Intersection Control <sup>1</sup>	AM Peak Hour				PM Peak Hour			
		No Action		Action Alt. 1		No Action		Action Alt. 1	
		LOS <sup>2</sup>	Delay <sup>3</sup>	LOS <sup>2</sup>	Delay <sup>3</sup>	LOS <sup>2</sup>	Delay <sup>3</sup>	LOS <sup>2</sup>	Delay <sup>3</sup>
1. James Street/E Sunset Drive	Signalized	D	45.3	D	44.9	D	51.1	D	50.3
2. I-5 NB Ramps/E Sunset Drive	Signalized	C	21.5	D	47.0	E	59.7	E	79.6
3. Barkley Boulevard/E Sunset Drive	Signalized	C	28.0	C	29.9	D	49.9	E	69.2
4. Orleans Street/E Sunset Drive	Signalized	C	22.4	C	21.8	D	36.0	C	30.6
5. Woburn Street/E Sunset Drive	Signalized	D	50.6	E	59.4	E	56.8	E	78.4
6. Woburn Street/Burns Street	TWSC	E	36.3	<b>F</b>	<b>70.6</b>	<b>F</b>	<b>52.6</b>	<b>F</b>	<b>160.0</b>
7. Woburn Street/Rimland Street	Signalized	B	11.8	A	7.5	B	14.0	C	21.8
8. Manning Street/Rimland Street	AWSC	A	7.3	A	8.1	A	7.4	A	8.6
9. Orleans Street/Barkley Boulevard	Signalized	C	26.7	D	43.1	D	41.2	D	54.8
10. Howe Place/Barkley Boulevard	Signalized	C	20.0	B	10.9	C	34.4	B	18.0
11. Woburn Street/Barkley Boulevard	Signalized	C	27.9	D	36.6	C	31.2	D	48.8
12. Newmarket Street/Barkley Boulevard	Signalized	A	6.3	B	13.7	C	20.8	C	27.0
13. Manning Street/Barkley Boulevard	TWSC	C	16.4	C	17.5	C	23.8	E	42.3
14. Woburn Street/Newmarket Street	Signalized	A	6.8	A	8.3	B	15.8	B	12.6
15. Orleans Street/E Illinois Street	TWSC	C	18.7	C	22.9	E	38.2	<b>F</b>	<b>143.5</b>
16. Woburn Street/E Illinois Street	TWSC	<b>F</b>	<b>60.4</b>	<b>F</b>	<b>&gt;200</b>	<b>F</b>	<b>&gt;200</b>	<b>F</b>	<b>&gt;200</b>
17. Orleans Street/Alabama Street	Signalized	B	18.1	C	24.3	B	16.8	C	24.4
18. Pacific Street/Alabama Street	Signalized	A	9.0	B	12.3	B	13.8	B	17.4
19. Woburn Street/Alabama Street	Signalized	C	28.9	D	48.5	D	42.6	E	65.6
20. Manning Street/Burns Street	TWSC	A	8.5	A	9.0	A	8.4	A	9.0
21. St Clair Street/E Sunset Drive	TWSC	C	17.6	D	27.7	C	23.6	E	41.4
22. St Clair Street/Burns Street	TWSC	A	9.6	B	10.3	A	9.7	B	10.7
23. St Clair Street/Rimland Street	TWSC	A	9.2	A	9.7	A	9.2	A	9.8
24. St Clair Street/Barkley Boulevard	TWSC	C	15.8	C	17.3	C	17.4	C	22.1

Source: Highway Capacity Manual and Transpo Group 2022

1. TWSC = two-way stop control and AWSC = all-way stop control

2. Level-of-service (LOS), based on Highway Capacity Manual (6th edition) and Highway Capacity Manual (2000) methodology (for non-NEMA standard signals).

3. Average delay in seconds per vehicle.

As shown in Table 3-29, two intersections are projected to operate at LOS F during the AM peak hour and three intersections are projected to operate at LOS F during the PM peak hour under Action Alternative 1:

- Woburn Street/Burns Street

This intersection currently operates as a side-street stop-controlled intersection. With the increase in development density surrounding Burns Street as part of Action Alternative 1, the LOS would degrade to LOS F with 70.6 seconds of delay along the side street approach of Burns Street during the AM peak hour. The LOS would degrade to LOS F with 160 seconds of delay along the side street approach of Burns Street during the PM peak hour. Traffic along Woburn Street would be free flowing with minimal delay. Poor operations at this intersection would be primarily due to high vehicular volumes along Woburn Street that limit the available gaps for

vehicles turning left from Burns Street. While the delay and resulting LOS would exceed City standards, it should be noted that the corresponding 95th percentile queue along Burns Street would be approximately four vehicles in length during the AM peak hour and ten vehicles in length during the PM peak hour and would not extend into the adjacent intersection.

- Woburn Street/E. Illinois Street

Consistent with Existing and No Action conditions, this intersection would operate at LOS F during the AM and PM peak hours. Delay along the side street approach of E. Illinois Street would increase substantially during both peak hours. Traffic along Woburn Street would be free flowing with minimal delay. This increase in side street delay would likely be due to an increase in traffic along Woburn Street, which would limit gaps for vehicles turning left from E. Illinois Street to Woburn Street. While the delay and resulting LOS would exceed City standards, it should be noted that the corresponding 95th percentile queue along E. Illinois Street would be approximately eight vehicles in length during the AM peak hour and 11 vehicles in length during the PM peak hour and would not extend into the adjacent intersection.

- Orleans Street/E. Illinois Street

This intersection currently operates as a side-street stop-controlled intersection. This intersection would degrade to LOS F with 143.5 seconds of delay along the westbound side street approach of E. Illinois Street during the PM peak hour. Traffic along Orleans Street would be free flowing with minimal delay. This increase in delay would likely be due to an increase in traffic along Orleans Street, which limits gaps for vehicles turning from E. Illinois Street onto Orleans Street. While the delay and resulting LOS would exceed City standards, it should be noted that the corresponding 95th percentile queue along E. Illinois Street would be approximately seven vehicles in length and would not extend into the adjacent intersection.

Beyond the study intersections, the increase in vehicular traffic along Woburn Street, coupled with the increase in non-motorized trails users, would result in additional delay for vehicular traffic along Woburn Street, including general purpose traffic and transit traffic. This crossing currently has a pedestrian-actuated flashing crossing, such that increased non-motorized activity would increase the dedicated crossing time for trail users and impact the vehicular flow of Woburn Street.

## Queuing

Consistent with No Action conditions, the existing storage capacity would be sufficient to accommodate both the 50th and 95th percentile queues for the majority of study intersections. As compared to the No Action conditions, there would be seven additional intersections with queuing issues during the AM peak hour and three additional intersections with queuing issues during the PM peak hour. At most of these intersections, only the 95th percentile queues would exceed the available storage capacity, and these queues would extend beyond an existing turn pocket rather than extending into adjacent intersections. The detailed queuing analysis is provided in Appendix D.

## Parking

Under Action Alternative 1, new off-street parking would primarily be provided in below-grade parking structures for mixed-use buildings and surface parking or individual driveways for single-family residential units. On-street parking would be provided along the majority of internal roadways to serve short-term commercial parking needs and residential visitors.

The parking demand for Action Alternative 1 is based on the net new development anticipated within the Barkley Urban Village boundary. As shown in Table 3-30, a peak parking demand of 3,898 parking spaces is projected for new development under Action Alternative 1. Compared to the No Action Alternative, this is a parking demand increase of 2,306 parking spaces.

Table 3-30. Action Alternative 1/Preferred Alternative Parking Demand Projections

Land Use	Size	Parking Demand Rate <sup>1</sup>	Mode Split Reduction <sup>2</sup>	Peak Parking Demand
Retail (LU #820)	355,814 sf	1.95 per ksf	35%	49 spaces
Office (LU #710)	962,654 sf	2.39 per ksf	25%	343 spaces
Hotel (LU #310)	223 keys	0.74 per key	--	165 spaces
Light Industrial (LU #110)	160,000 sf	0.65 per ksf	25%	78 spaces
Multifamily Low-Rise (LU #220)	331 du	1.21 per du	--	401 spaces
Multifamily Mid-Rise (LU #221)	1,760 du	1.31 per du	--	2,306 spaces
Multifamily High-Rise (LU #222)	329 du	0.98 per du	--	322 spaces
Single-Family Attached (LU #215)	100 du	2.28 per du	--	228 spaces
Single-Family Detached (LU #210)	-12 du	2.28 per du	--	-27 spaces
Recreational Community Center (LU #495)	26,800 sf	2.07 per ksf	40%	33 spaces
<b>Total Net New Parking Demand</b>				<b>3,898 spaces</b>

ksf = 1,000 square feet; du = dwelling unit

Source: ITE Parking Generation, 5th Edition

1. For retail, office, hotel, light industrial, multifamily residential and recreation uses, parking demand rates from ITE Parking Generation, 5th Edition were used. For single-family residential uses, the parking demand rate was based on vehicle ownership data from the U.S. Census for the census tracts in which the Barkley Village site resides (7 and 8.03, Whatcom County).
2. The parking demand for retail, office, light industrial, and recreation uses was reduced consistent with the applied mode splits as not all trips to these uses would require a vehicle. For residential uses no mode split reduction was assumed as parking demand would be dictated by vehicle ownership. Additionally, no reduction was applied to the hotel use as patrons may decide to drive to the hotel and park but choose other modes for trips to and from the hotel.

## Traffic Safety

As traffic volumes increase under Action Alternative 1, traffic safety issues could increase proportionately; however, no significant safety concerns are identified within the study area under existing conditions.

### 3.8.3.4 Action Alternative 2

This section summarizes the future transportation conditions and transportation-related impacts of Action Alternative 2 as compared to the No Action Alternative.

## Trip Generation

The trip generation projections for Action Alternative 2 are based on the multimodal trip generation methodology outlined previously. The trip generation projections are summarized in Table 3-31, and detailed trip generation calculations are provided in the attachments to Appendix D. As shown, Action Alternative 2 is projected to generate 54,083 net new weekday vehicle trips above existing conditions, with 4,874 trips occurring during the AM peak hour and 5,450 net new trips occurring during the PM peak hour. This represents an increase of 46,276 new daily trips above the No Action Alternative, with 4,243 trips occurring during the AM peak hour and 4,717 trips occurring during the PM peak hour.



Table 3-31. Action Alternative 2 Weekday PM Peak-Hour Analysis Results

Land Use	Size	Daily Trips	AM Peak-Hour Trips			PM Peak-Hour Trips		
			In	Out	Total	In	Out	Total
<u><b>Action Alternative 2</b></u>								
Retail (LU #820)	611,415 sf	14,708	207	127	334	650	702	1,352
<i>Pass-By Reduction (29%)</i>		-	-	-	-	-196	-196	-392
Office (LU #710)	3,111,067 sf	25,298	3,121	426	3,547	571	2,789	3,360
Hotel (LU #310)	338 keys	2,300	74	58	132	86	84	170
Multifamily Low-Rise (LU #220)	408 du	1,930	27	87	114	94	52	146
Multifamily Mid-Rise (LU #221)	2,257 du	7,176	134	451	585	375	240	615
Multifamily High-Rise (LU #222)	658 du	2,096	42	82	124	82	66	148
Single-Family Attached (LU #215)	18 du	90	2	4	6	3	5	8
Single-Family Detached (LU #210)	4 du	27	0	3	3	0	3	3
Recreational Community Ctr (LU # 495)	26,800 sf	458	19	10	29	21	19	40
<b>Total Alt. 2 Net New (above Existing Conditions)</b>		<b>54,083</b>	<b>3,626</b>	<b>1,248</b>	<b>4,874</b>	<b>1,689</b>	<b>3,761</b>	<b>5,450</b>
Notes: du = dwelling units, sf = square feet								

### Transit Impacts

Action Alternative 2 is projected to generate 6,060 daily net new weekday transit trips above existing conditions, with 506 transit trips occurring during the AM peak hour and 611 transit trips occurring during the PM peak hour. It is assumed that transit trips would be distributed to the available transit routes based on the vehicular trip distribution patterns. There would be sufficient capacity within the existing transit service to accommodate the new transit trips that would be generated by Action Alternative 2 for the majority of routes. Based on the projected passenger demand, the majority of transit routes traveling through the site would operate with a passenger load factor above 1.0 during at least one peak hour, including Route 331, Route 72X, and Route 540.

Route 331 is projected to operate with a maximum passenger load of 1.51 during the PM peak hour for buses traveling in the direction of Downtown. Route 72X is projected to operate with a maximum passenger load of 1.03 during the PM peak hour for buses traveling in the direction of Kendall. Based on WTA standards for acceptable passenger load factors, the projected passenger loads for Route 331 and 72X would be considered acceptable. Route 540 is projected to operate with a maximum passenger load of 1.41 during the AM peak hour in the direction of Sunset Drive. Based on WTA standards for acceptable passenger loads, this would be just above the acceptable passenger load of 1.40. However, it is also expected that transit capacity would increase based on the proposed WTA plans to increase frequency of service for Route 331. An increase in transit service in the vicinity of the site would be required to support future growth and transit demand. The additional frequency of service proposed along Route 331 may be sufficient to offset some of these impacts, but standing-room-only conditions would likely continue for Routes 72X and 540.

Consistent with Action Alternative 1, intersection delay resulting from increased vehicular activity would have a negative impact on overall transit operations and could impact on-time performance. Given the projected increase in vehicular traffic associated with Action Alternative 2, potential impacts to transit operations would be worse compared to the No Action Alternative and Action Alternative 1. Appendix D provides a more detailed analysis of projected passenger loading under Action Alternative 2.

### Non-Motorized Facilities

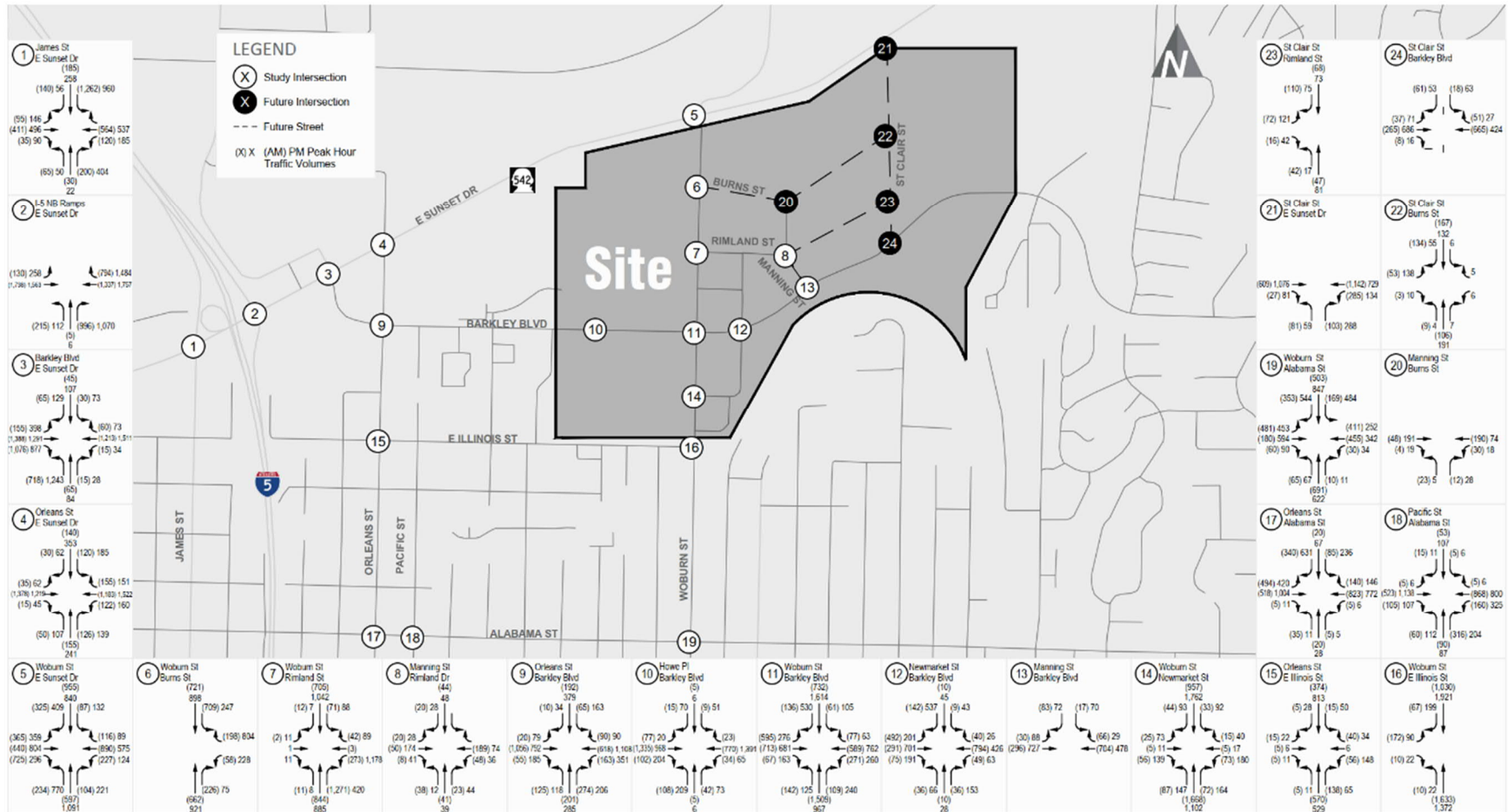
Action Alternative 2 is projected to generate 22,131 daily net new weekday non-motorized trips above existing conditions, with 1,737 occurring during the AM peak hour and 2,314 occurring during the PM peak hour. The transportation network proposed as part of Action Alternative 2 would meet or exceed the City's design requirements and would provide key connectivity to the surrounding local and regional pedestrian network, bicycle facilities, and shared-use trails.

Off-site, the additional non-motorized trips combined with the increased vehicular volumes would create additional potential conflicts between non-motorized and vehicular traffic. This is particularly notable at the existing at-grade Railroad Trail crossing along Woburn Street. Additionally, this crossing currently has a pedestrian-actuated flashing crossing. Delay as a result of the at-grade crossing is already observed under existing conditions. With increased non-motorized activity, the crossing could result in additional delay for vehicular traffic along Woburn Street, including transit traffic. Given the increase in overall non-motorized and vehicle trips associated with Action Alternative 2, potential impacts to non-motorized safety and vehicular operations would be worse compared to the No Action Alternative and Action Alternative 1.

### Traffic Volumes

The Action Alternative 2 traffic volumes were projected based on growth in background traffic, pipeline projects, and vehicle trips associated with development of Action Alternative 2. The resulting Action Alternative 2 peak-hour traffic volumes are summarized in Figure 3-31.

Figure 3-31. Action Alternative 2 (2045) Weekday Peak-Hour Traffic Volumes



## Operational Impacts

### Intersection Operations

Table 3-32 compares the Action Alternative 2 weekday peak-hour intersection operations results with the No Action Alternative results.

Table 3-32. Action Alternative 2 Weekday Peak-Hour LOS Results

Intersections	Intersection Control <sup>1</sup>	AM Peak Hour				PM Peak Hour			
		No Action		Action Alt. 2		No Action		Action Alt. 2	
		LOS <sup>2</sup>	Delay <sup>3</sup>	LOS	Delay	LOS	Delay	LOS	Delay
1. James Street/E Sunset Drive	Signalized	D	45.3	D	53.8	D	51.1	D	50.8
2. I-5 NB Ramps/E Sunset Drive	Signalized	C	21.5	D	54.4	E	59.7	F	162.2
3. Barkley Boulevard/E Sunset Drive	Signalized	C	28.0	C	32.1	D	49.9	F	149.3
4. Orleans Street/E Sunset Drive	Signalized	C	22.4	C	20.7	D	36.0	C	31.8
5. Woburn Street/E Sunset Drive	Signalized	D	50.6	F	127.1	E	56.8	F	147.9
6. Woburn Street/Burns Street	TWSC	E	36.3	F	102.2	F	52.6	F	>200
7. Woburn Street/Rimland Street	Signalized	B	11.8	E	78.3	B	14.0	F	>200
8. Manning Street/Rimland Street	AWSC	A	7.3	A	9.7	A	7.4	A	9.9
9. Orleans Street/Barkley Boulevard	Signalized	C	26.7	F	92.5	D	41.2	F	131.7
10. Howe Place/Barkley Boulevard	Signalized	C	20.0	B	14.1	C	34.4	E	65.6
11. Woburn Street/Barkley Boulevard	Signalized	C	27.9	F	132.6	C	31.2	F	181.7
12. Newmarket Street/Barkley Boulevard	Signalized	A	6.3	C	24.7	C	20.8	C	23.5
13. Manning Street/Barkley Boulevard	TWSC	C	16.4	C	19.6	C	23.8	F	106.4
14. Woburn Street/Newmarket Street	Signalized	A	6.8	B	13.5	B	15.8	C	28.7
15. Orleans Street/E Illinois Street	TWSC	C	18.7	E	49.9	E	38.2	F	>200
16. Woburn Street/E Illinois Street	TWSC	F	60.4	F	>200	F	>200	F	>200
17. Orleans Street/Alabama Street	Signalized	B	18.1	E	66.2	B	16.8	E	63.3
18. Pacific Street/Alabama Street	Signalized	A	9.0	C	23.3	B	13.8	C	27.3
19. Woburn Street/Alabama Street	Signalized	C	28.9	F	126.1	D	42.6	F	111.8
20. Manning Street/Burns Street	TWSC	A	8.5	B	10.1	A	8.4	A	9.8
21. St Clair Street/E Sunset Drive	TWSC	C	17.6	F	86.4	C	23.6	F	139.2
22. St Clair Street/Burns Street	TWSC	A	9.6	B	12.0	A	9.7	B	14
23. St Clair Street/Rimland Street	TWSC	A	9.2	B	10.8	A	9.2	B	11.0
24. St Clair Street/Barkley Boulevard	TWSC	C	15.8	C	19.0	C	17.4	E	39.6

Source: Highway Capacity Manual and Transpo Group 2022

1. TWSC = two-way stop control and AWSC = all-way stop control

2. Level-of-service (LOS), based on Highway Capacity Manual (6th edition) and Highway Capacity Manual (2000) methodology (for non-NEMA standard signals).

3. Average delay in seconds per vehicle.

As shown in Table 3-32, seven intersections are projected to operate at LOS F during the AM peak hour and 12 intersections are projected to operate at LOS F during the PM peak hour under Action Alternative 2.

- I-5 NB Ramps/E. Sunset Drive  
This signalized intersection is projected to operate at LOS F with 162.2 seconds of delay during the PM peak hour. The existing lane configuration would be insufficient to process the significant increase in vehicular volumes. Additionally, 95th percentile queues for some lane groups would extend beyond the available storage capacity for turn-lane pockets and/or through lanes, which could impede operations at adjacent intersections.
- Barkley Boulevard/ E. Sunset Drive



This signalized intersection is projected to operate at LOS F with 149.3 seconds of delay during the PM peak hour. The existing lane configuration would be insufficient to process the significant increase in vehicular volumes. Additionally, 95th percentile queues for some lane groups would extend beyond the available storage capacity for turn-lane pockets and/or through lanes, which could impede operations at adjacent intersections.

- Woburn Street/E. Sunset Drive

This signalized intersection is projected to operate at LOS F with 127.1 seconds of delay during the AM peak hour and at LOS F with 147.9 seconds of delay during the PM peak hour. The existing lane configuration would not be sufficient to process the significant increase in vehicular volumes, particularly given the high number of turning volumes from each approach. Additionally, 95th percentile queues for some lane groups would extend beyond the available storage capacity for turn-lane pockets and/or through lanes during the AM and PM peak hours, which could impede operations at adjacent intersections.

- Woburn Street/Burns Street

This intersection currently operates as a side-street stop-controlled intersection. With the increase in development density surrounding Burns Street as part of Action Alternative 2, the LOS would degrade to LOS F with 102.2 seconds of delay along Burns Street during the AM peak hour. During the PM peak hour, LOS would degrade to LOS F with over 200 seconds of delay along Burns Street. Traffic along Woburn Street would be free flowing with minimal delay. Poor operations at this intersection would primarily be due to high vehicular volumes along Woburn Street that would limit the available gaps for vehicles turning left from Burns Street. While the delay and resulting LOS would exceed City standards, it should be noted that the corresponding 95th percentile queue along St. Clair Street would be approximately two vehicles in length and would not extend into the adjacent intersection. However, the southbound left 95th percentile queue would be nearly 24 vehicles in length during the AM peak hour and over 60 vehicles in length during the PM peak hour, which would impede operations at the adjacent intersection of Woburn Street and E. Sunset Drive.

- Woburn Street/Rimland Drive

This signalized intersection is projected to operate at LOS F with over 200 seconds of delay during the PM peak hour. The existing lane configuration would be insufficient to process the significant increase in vehicular volumes. Additionally, 95th percentile queues for some lane groups would extend beyond the available storage capacity for turn-lane pockets and/or through lanes, which could impede operations at adjacent intersections along public streets as well as along private streets internal to the site.

- Orleans Street/Barkley Boulevard

This signalized intersection is projected to operate at LOS F with 92.5 seconds of delay during the AM peak hour and at LOS F with 131.7 seconds of delay during the PM peak hour. The existing lane configuration would be insufficient to process the significant increase in vehicular volumes. Additionally, 95th percentile queues for some lane groups would extend beyond the available storage capacity for turn-lane pockets and/or through lanes during the AM and PM peak hours, which could impede operations at adjacent intersections.

- Woburn Street/Barkley Boulevard

This signalized intersection is projected to operate at LOS F with 132.6 seconds of delay during the AM peak hour and at LOS F with 181.7 seconds of delay during the PM peak hour. The existing lane configuration would be insufficient to process the significant increase in vehicular volumes. Additionally, 95th percentile queues for some lane groups would extend beyond the available storage capacity for turn-lane pockets and/or through lanes during the AM and PM peak hours, which could impede operations at adjacent intersections.

- Manning Street/Barkley Boulevard

This intersection currently operates as a side-street stop-controlled intersection. During the PM peak hour this intersection would degrade to LOS F with 106.4 seconds of delay along the southbound side street approach of Manning Street. Traffic along Barkley Boulevard would be free flowing with minimal delay. This increase in side street delay would likely be due to an increase in traffic along Barkley Boulevard, which limits gaps for vehicles turning from Manning Street to Barkley Boulevard. While the delay and resulting LOS would exceed City standards, it should be noted that the corresponding 95th percentile queue along St. Clair Street would be approximately seven vehicles in length and would not extend into the adjacent intersection.

- Orleans Street/E. Illinois Street

This intersection currently operates as a side-street stop-controlled intersection. During the PM peak hour this intersection would degrade to LOS F with over 200 seconds of delay along the westbound approach of E. Illinois Street. Traffic along Woburn Street would be free flowing with minimal delay. This increase in side street delay would likely be due to an increase in traffic along Orleans Street, which would limit gaps for vehicles turning left from E. Illinois Street to Orleans Street. Additionally, the corresponding 95th percentile queue along E. Illinois Street would be approximately 22 vehicles in length and would extend into the adjacent minor intersections along a residential street.

- Woburn Street/E. Illinois Street

Consistent with Existing and No Action conditions, this intersection would operate at LOS F, and delay along E. Illinois Street would increase substantially during the AM and PM peak hours. Traffic along Woburn Street would be free flowing with minimal delay. This increase in side street delay would likely be due to an increase in traffic along Woburn Street, which limits gaps for vehicles turning left from E. Illinois Street to Woburn Street. Additionally, the corresponding 95th percentile queue along E. Illinois Street would extend into the adjacent minor intersections along a residential street during the AM and PM peak hours.

- Woburn Street/Alabama Street

This signalized intersection is projected to operate at LOS F with 126.1 seconds of delay during the AM peak hour and at LOS F with 111.8 seconds of delay during the PM peak hour. The existing lane configuration would be insufficient to process the significant increase in vehicular volumes, particularly given the high number of turning volumes from each approach. Additionally, 95th percentile queues for some lane groups would extend beyond the available storage capacity for turn-lane pockets and/or through lanes during the AM and PM peak hours, which could impede operations at adjacent intersections.

- St. Clair Street/E. Sunset Drive

This intersection is proposed to operate as a side-street stop-controlled intersection. With the increase in development density as part of Action Alternative 2, the LOS would degrade to LOS F with 86.4 seconds of delay along the side street approach of St. Clair Street during the AM peak hour. During the PM peak hour, the LOS would degrade to LOS F with 139.2 seconds of delay along St. Clair Street. Traffic along E. Sunset Drive would be free flowing with minimal delay. This increase in side street delay would likely be due to an increase in traffic along E. Sunset Drive which limits gaps for vehicles turning from St. Clair Street to E. Sunset Drive. While the delay and resulting LOS would exceed City standards, it should be noted that the corresponding 95th percentile queue along St. Clair Street would be approximately 10 vehicles in length during the AM peak hour and 15 vehicles in length during the PM peak hour and would not extend into the adjacent intersection.

Beyond the study intersections, the increase in vehicular traffic along Woburn Street, coupled with the increase in non-motorized trail users would result in additional delay for vehicular traffic along Woburn Street, including general purpose traffic and transit traffic. This crossing currently has a pedestrian-actuated flashing crossing, such that increased non-motorized activity would increase the dedicated crossing time for trail users and impact the vehicular flow of Woburn Street.

### Queuing

Unlike the No Action and Action Alternative 1 conditions, the existing storage capacity would not be sufficient to accommodate both the 50th and 95th percentile queues for the majority of study intersections. As compared to the No Action conditions, 12 additional intersections would experience queuing issues during the AM peak hour and 6 additional intersections would experience queuing issues during the PM peak hour. At many of these intersections, both the 50th and 95th percentile queues would exceed the available storage capacity, with 11 instances of queues extending from one intersection into the next. This would impact operations at adjacent intersections and could lead to gridlock conditions. The detailed queuing analysis is provided in Appendix D.

### Parking

Under Action Alternative 2, new off-street parking would primarily be provided in below-grade parking structures for mixed-use buildings and surface parking or individual driveways for single-family residential units. On-street parking would be provided along the majority of internal roadways to serve short-term commercial parking needs and residential visitors.

The parking demand for Action Alternative 2 is based on the net new development anticipated within the Barkley Urban Village boundary. As shown in Table 3-33, a peak parking demand of 10,384 parking spaces is projected for new development under Action Alternative 2. Compared to the No Action Alternative, this is a parking demand increase of 8,791 parking spaces.

Table 3-33. Action Alternative 2 Parking Demand Projections

Land Use	Size	Parking Demand Rate <sup>1</sup>	Mode Split Reduction <sup>2</sup>	Peak Parking Demand
Retail (LU #820)	611,415 sf	1.95 per ksf	35%	378 spaces
Office (LU #710)	3,111,067 sf	2.39 per ksf	25%	5,577 spaces
Hotel (LU #310)	338 keys	0.74 per key	--	250 spaces
Multifamily Low-Rise (LU #220)	408 du	1.21 per du	--	494 spaces
Multifamily Mid-Rise (LU #221)	2257 du	1.31 per du	--	2,957 spaces
Multifamily High-Rise (LU #222)	658 du	0.98 per du	--	645 spaces
Single-Family Attached (LU #215)	18 du	2.28 per du	--	41 spaces
Single-Family Detached (LU #210)	4 du	2.28 per du	--	9 spaces
Recreational Community Center (LU #495)	26,800 sf	2.07 per ksf	40%	33 spaces
<b>Total Net New Parking Demand</b>				<b>10,384 spaces</b>

ksf = 1,000 square feet; du = dwelling unit

Source: ITE Parking Generation, 5th Edition

- For retail, office, hotel, multifamily residential and recreation uses, parking demand rates from ITE Parking Generation, 5th Edition were used. For single-family residential uses, the parking demand rate was based on vehicle ownership data from the U.S. Census for the census tracts in which the Barkley Village site resides (7 and 8.03, Whatcom County).
- The parking demand for retail, office, and recreation uses was reduced consistent with the applied mode splits as not all trips to these uses would require a vehicle. For residential uses no mode split reduction was assumed as parking demand would be dictated by vehicle ownership. Additionally, no reduction was applied to the hotel use as patrons may decide to drive to the hotel and park, but choose other modes for trips to and from the hotel.

## Traffic Safety

As traffic volumes increase under Action Alternative 2, traffic safety issues could increase proportionately. However, no significant safety concerns are identified within the study area under existing conditions.

### 3.8.3.5 Summary of Alternatives Impacts

The No Action and action alternatives have varying levels of transportation-related impacts, which are summarized at a high level in Table 3-34. Action Alternative 2 would have the greatest impact on the transportation network, with a substantial number of failing intersections, queuing issues, and transit impacts.

Table 3-34. Summary of Transportation-Related Impacts

Transportation Element	Alternative Impacts Comparison		
	No Action Alternative	Action Alternative 1 (Preferred Alternative)	Action Alternative 2
<b>Vehicular Impacts<sup>1</sup></b>			
<i>Vehicular Peak-Hour Trip Generation</i>	AM: 631 trips PM: 733 trips	AM: 2,136 trips PM: 2,533 trips	AM: 4,874 trips PM: 5,450 trips
<i>Intersections operating at LOS F</i>	AM: 1 intersection PM: 2 intersections	AM: 2 intersections PM: 3 intersections	AM: 7 intersections PM: 12 intersections
<i>Intersections with 95th percentile queues exceeding storage capacity for at least one lane group</i>	AM: 2 intersections PM: 9 intersections	AM: 9 intersections PM: 12 intersections	AM: 14 intersections PM: 15 intersections
<b>Transit</b>			
<i>Routes with passenger load ratio above 1.0</i>	None	AM: None PM: Route 331	AM: Route 540 PM: Routes 331 and 72X
<i>Routes with passenger load ratio above acceptable threshold</i>	None	None	AM: Route 540 PM: None
<b>Non-Motorized</b>	Increased conflicts at at-grade Railroad Trail crossing	Increased conflicts at at-grade Railroad Trail crossing above No Action Alternative	Increased conflicts at at-grade Railroad Trail crossing above No Action Alternative and Action Alternative 1
<b>Parking</b>	Demand: 1,592 spaces	Demand: 3,898 spaces	Demand: 10,384 spaces

1. Intersection delay and vehicle queues also negatively effect on-time performance of transit services.

### 3.8.4 Mitigation Measures

The proposed mitigation measures aim to reduce vehicular demand, increase capacity of the transportation network, and/or address existing inefficiencies within the surrounding transportation system. Specific mitigation measures to support development of the Barkley Village site could include roadway and intersection improvements as well as transportation demand management and parking strategies. The proposed mitigation measures directly address intersections that do not meet the City's LOS E threshold while taking into consideration transit and non-motorized modes of transportation and providing improvements for these modes to address anticipated incremental impacts. As noted in the section below, several of these mitigation measures address issues that exist under existing and/or No Action conditions rather than issues that arise solely due to the proposed development.



As a definitive plan for each building within the Barkley Urban Village cannot be formulated at this stage, a transportation mitigation plan has been developed that upon its phased implementation would reduce impacts for each building project below the level of significance based on PM peak-hour trips and for each specific project.

### 3.8.4.1 Roadway and Intersection Improvements

To increase capacity of the transportation network, the following intersection and roadway improvements are proposed. These improvements were coordinated with the City and deemed to be the most effective method for addressing impacts with multimodal impacts in mind and are in line with the City's goals and priorities for this area. Additional details regarding the selection and evaluation of mitigation measures along the Woburn Street corridor are provided in Appendix A. Table 3-35 summarizes the proposed roadway and intersection improvements (inclusive of internal roadways), the benefit of each improvement, and the identified PM peak-hour trip trigger for each improvement. This mitigation table applies to the phased development of the Barkley Urban Village under the No Action Alternative and Action Alternative 1/Preferred Alternative.

- Woburn Street Corridor: Under existing conditions, Woburn Street narrows from a four-lane roadway to a two-lane roadway prior to the intersection with E. Illinois Street. This lane decrease, in conjunction with the at-grade Railroad Trail crossing and corridor-wide transit activity, results in queuing issues along the corridor and operational issues at unsignalized intersections. In particular, the intersection of Woburn Street/E. Illinois Street operates at LOS F during the PM peak hour under existing conditions with delay further increasing under the No Action and action alternatives. Additionally, at the intersection of Woburn Street/Alabama Street, 95th percentile queues exceed the available storage length during the PM peak hour under the No Action and action alternatives. To address the existing and projected issues at these intersections along the Woburn Street corridor, the improvements described below are proposed. These improvements would be required when total development levels generated by the project reach 1,770 total PM peak-hour trips. As these improvements address existing issues or issues that would arise regardless of the proposed project, the improvements would either be implemented by the City with the Master Developer contributing a pro-rata share of the cost or implemented by the Master Developer with an impact fee credit and/or cost-sharing agreement with the City established.
  - Woburn Street Restriping: It is proposed that on-street parking be restricted along the west side of Woburn Street to accommodate two lanes of vehicle traffic in the southbound direction between E. Illinois Street and Alabama Street. Physical widening may be required in the vicinity of E. Illinois Street, but further engineering evaluation would be required. This change would increase overall vehicular capacity along the corridor for both general purpose and transit traffic; however, it should be noted that converting the parking lane to a travel lane along Woburn Street would likely preclude future implementation of bicycle facilities along Woburn Street within the existing right-of-way. Of note, this improvement is currently listed as an unfunded improvement under Project #3 Clean Energy in the Preliminary 2024-2029 TIP.
  - In conjunction with the widening, the second (innermost) southbound lane would become a left-turn lane leading up to the intersection of Woburn Street/Alabama Street and the southbound right-turn lane would be extended to E. North Street. The reconfiguration of the southbound approach would address existing and projected queuing issues that would impact both general purpose and transit traffic. Most notably, extension of the southbound turn lanes would allow buses turning left and right from Woburn Street to enter turn lanes earlier than is possible under the existing configuration and bypass queues in the through

lane. This would allow transit and general purpose traffic to travel more efficiently through the intersection.

- Woburn Street/E. Illinois Street: Implementation of right-in/right-out turn restrictions along E. Illinois Street are proposed. This improvement would alleviate the poor LOS conditions during both peak hours and could decrease cut through traffic along residential streets.
- Railroad Trail Crossing at Woburn Street: Construction of a grade-separated Railroad Trail crossing at Woburn Street is proposed. This improvement would eliminate non-motorized/vehicle conflicts that exist today as well as eliminate delay incurred by both non-motorized and vehicular traffic (general purpose and transit traffic). This improvement would more than mitigate the incremental impacts of the action alternatives because it would provide improvements that alleviate existing issues that impact all modes of transportation.
- Woburn Street/Burns Street: This intersection is projected to operate at LOS F under the No Action and action alternative scenarios. Installation of a traffic signal is proposed at the intersection of Woburn Street and Burns Street to address vehicular delay, provided that at least one Manual on Uniform Traffic Control Devices (MUTCD) signal warrant is met. A traffic signal at this location would also provide pedestrian signal heads, push buttons, cross walks, and ADA-compliant curb ramps that provide additional pedestrian connectivity across Woburn Street. If a signal at this location is not approved by City of Bellingham/WSDOT, the intersection could be modified to limit access to right-in, right-out and left-in. This improvement would be required when total development of the proposed project levels reach one of the following two conditions:
  - 405 total PM peak-hour trips generated by the project if St. Clair Street has not yet been constructed between Burns Street and Sunset Drive.
  - 709 total PM peak-hour trips generated by the project if St. Clair Street has been constructed between Burns Street and Sunset Drive.
- Orleans Street/E. Illinois Street: This intersection is projected to operate at LOS F under the action alternative scenarios. Installation of a traffic signal is proposed at the intersection of Orleans Street and E. Illinois Street, provided that at least one MUTCD signal warrant is met. This improvement would benefit both vehicular and pedestrian modes as this intersection is part of an existing Safe Routes to School program. This improvement would be required when overall development of the proposed project generates 1,545 total PM peak-hour trips.

Table 3-35. Phased Mitigation Measures Applicable to the No Action Alternative and Action Alternative 1/Preferred Alternative

Proposed Improvement	Benefit	Identified Trigger
Construction of Burns St extension westward to St Clair St	Serves as local access to the northern portion of the development and as a supplemental east-west connection through the project site.	To be constructed concurrent with development. Each abutting parcel to develop full street improvements and provide a continuous connection to Woburn St or St Clair St allowing external access and egress.
Construction of St Clair St between Sunset Dr and Barkley Blvd	Serves as a supplemental north-south connection on the east side of the project and alleviates pressure from Woburn St.	To be constructed concurrent with development. Each abutting parcel to develop full street improvements and provide a continuous connection to either Sunset Dr or Barkley Blvd allowing external access and egress. Connection between Sunset Dr and Burns St to be completed with any development of parcels NE-18, NE-19, NE-36, NE-37, or NE-38 (or such analogous areas as defined in future site plans). Connection between Burns St and Barkley Blvd to be completed with any development of parcels NE-20, NE-21, NE-23, or NE 42 (or such analogous areas as defined in future site plans).
Install traffic signal at Woburn St/Burns St (if approved by City of Bellingham/WSDOT) or limit intersection access to right-in, right-out, and left-in.	Improvement alleviates high levels of delay along Burns St, which currently operates as stop-controlled and full access.	Improvement required when total development levels generated by the project reach one of the following two conditions: <ul style="list-style-type: none"> <li>405 total PM peak-hour trips generated by the project if St Clair St has not been constructed between Burns St and Sunset Dr</li> <li>709 total PM peak-hour trips generated by the project if St Clair St has been constructed between Burns St and Sunset Dr</li> </ul> If signal improvement is implemented, at least one traffic signal warrant must be met.
Install traffic signal at Orleans St/E Illinois St	Traffic signal alleviates high levels of delay alongside street approaches which currently operate as stop-controlled.	Traffic signal required when total development levels generated by the project reach 1,545 total PM peak-hour trips, provided that at least one traffic signal warrant is met.
Restriping of Woburn St to two through lanes in the southbound direction between Newmarket St and Alabama St	Increase overall vehicular capacity along the corridor for both general purpose and transit traffic and allows for enhanced transit service along the corridor.	To be implemented when total development levels generated by the project reach 1,770 total PM peak-hour trips, which equates to an increase of approximately 10 percent of the traffic along Woburn St compared to No Action conditions. Implemented either by the City with the Master Developer contributing a pro-rata share of the cost or, in the event that construction has not commenced by the identified PM peak-hour trip trigger, implemented by the Master Developer with an impact fee credit and/or cost-sharing agreement with the City put into place.

Proposed Improvement	Benefit	Identified Trigger
Implementation of right-in/right-out turn restrictions at Woburn St/ E Illinois St	Alleviates high levels of delay along the side street and decreases cut through traffic along residential streets.	Implemented concurrent with the Woburn St restriping project. Implemented either by the City with the Master Developer contributing a pro-rata share of the cost or, in the event that construction has not commenced by the identified PM peak-hour trip trigger, implemented by the Master Developer with an impact fee credit and/or cost-sharing agreement with the City put into place.
Reconfiguration of the southbound approach of Woburn St/Alabama St to extend right- and left-turn lanes	Addresses existing and projected queuing issues that impact both general purpose and transit traffic.	Implemented concurrent with the Woburn St restriping project. Implemented either by the City with the Master Developer contributing a pro-rata share of the cost or, in the event that construction has not commenced by the identified PM peak-hour trip trigger, implemented by the Master Developer with an impact fee credit and/or cost-sharing agreement with the City put into place.
Construction of grade-separated Railroad Trail crossing at Woburn St	Eliminates non-motorized/vehicle conflicts that exist today as well as eliminates delay incurred by both non-motorized and vehicular traffic.	Implemented concurrent with or prior to the Woburn St restriping project. Implemented by the City with the Master Developer contributing a pro-rata share of the cost or, in the event that construction has not commenced by the identified PM peak-hour trip trigger, implemented by the Master Developer with an impact fee credit and/or cost-sharing agreement with the City put into place.

### 3.8.4.2 Transportation Demand Management and Parking Strategies

The implementation of Transportation Demand Management (TDM) programs and parking strategies can reduce vehicle trip generation and lessen congestion for all roadway users. A TDM plan will be provided to reduce vehicular demand of the action alternatives, reduce reliance on single-occupancy vehicles, and encourage non-auto modes of transportation. The specific TDM measures to be included in the TDM plan would be coordinated and finalized with the City, but the following TDM and parking strategies are examples of some of the strategies that may be included:

- Revise parking code to establish lower parking requirements for Barkley Village as a designated Urban Village<sup>4</sup>
- Implement shared parking strategies for uses with differing peak parking demand
- Design public and private streets and/or spaces to encourage non-motorized and transit activity, which could include allocating space for a mobility hub and/or transportation network facilities such as micromobility parking and/or charging for scooters, bicycles, and/or e-bikes
- Explore the provision of a private shuttle service/circulator as a first-mile/last-mile connection to the surrounding non-motorized and transit services
- Encourage employer participation in a Commute Trip Reduction plan, including the following elements:
  - Designation of a Transportation Coordinator

<sup>4</sup> Changes to parking code would require coordination with City staff.



- Regular distribution of information to employees regarding alternatives to single-occupancy vehicle commuting
- Implementation of a set of measures designated to reduce single-occupancy vehicle commuting such as:
  - Preferential parking for high-occupancy vehicles
  - Provision of commuter ride matching services
  - Provision of bicycle parking facilities, lockers, changing areas, and showers for employees who bike or walk to work
- Provide WTA bus pass subsidies to tenants
- Work with carshare companies to provide multiple designated carshares and carshare parking spaces within the Urban Village
- Establish a Transportation Management Association (TMA) for the Urban Village that encourages participation from tenants and provide annual trainings
- Require TMA to provide bicycle safety training, bicycle maintenance training, transit training, or other non-auto trainings/services at least twice per year
- Conduct periodic surveys of the TDM effectiveness every two years

While the specific impact of the proposed TDM and parking measures may vary, it is conservatively assumed that the collective impact of a typical TDM program would result in a decrease in the vehicle mode share by a minimum of 10 percent for the proposed land uses. This reduction is in line with the transportation impact fee reductions used by the City based on Fehr & Peers' MXD+tool, which uses research to predict vehicle trip generation by identifying the relationship between travel modes and the built environment. This is also consistent with the Washington Commute Trip Reduction law for employers with 100 or more employees. The City has established reductions ranging from 2 to 15 percent with opportunities for multiple reductions based on a project's location in an urban village, proximity to transit, and demand management measures such as bus passes and carshare programs.

#### 3.8.4.3 Vehicular Operations with Proposed Mitigation Measures

Through a combination of outlined TDM/parking measures and infrastructure improvements, vehicular impacts would be eliminated or reduced. A comparison of the peak-hour operations with proposed mitigation measures incorporated is provided in Table 3-36 for Alternative 1 and Table 3-37 for Alternative 2. Detailed results are included in Appendix D.

Under Action Alternative 1, the proposed mitigation measures identified in Table 3-35 would address all intersection LOS issues during the AM and PM peak hours.

Under Action Alternative 2, the proposed mitigation measures would reduce delay at all study intersections, but LOS F conditions would remain at six intersections during the AM peak hour and 10 intersections during the PM peak hour. While additional roadway and intersection improvements could be implemented to further mitigate the impacts of Action Alternative 2, additional vehicular travel lanes or additional turn lanes at intersections would conflict with the goals and priorities for non-motorized modes and road diet projects that have been recently implemented within the study area. As such, additional roadway and intersection improvements were not considered for Action Alternative 2.

Table 3-36. Action Alternative 1/Preferred Alternative Weekday Peak-Hour Analysis Results w/ Mitigation Measures

Intersections	AM Peak Hour				PM Peak Hour			
	Alt. 1		Alt. 1 Mitigated		Alt. 1		Alt. 1 Mitigated	
	LOS <sup>1</sup>	Delay <sup>2</sup>	LOS	Delay	LOS	Delay	LOS	Delay
1. James Street/E Sunset Drive	D	44.9	D	44.6	D	50.3	D	48.7
2. I-5 NB Ramps/E Sunset Drive	D	47.0	C	31.0	E	79.6	E	73.0
3. Barkley Boulevard/E Sunset Drive	C	29.9	C	27.8	E	69.2	E	62.5
4. Orleans Street/E Sunset Drive	C	21.8	C	21.8	C	30.6	D	35.2
5. Woburn Street/E Sunset Drive	E	59.4	E	57.9	E	78.4	E	71.1
6. Woburn Street/Burns Street	<b>F</b>	<b>70.6</b>	A	5.9	<b>F</b>	<b>160.0</b>	B	13.7
7. Woburn Street/Rimland Street	A	7.5	A	5.6	C	21.8	B	18.7
8. Manning Street/Rimland Street	A	8.1	A	8.0	A	8.6	A	8.4
9. Orleans Street/Barkley Boulevard	D	43.1	D	35.4	D	54.8	D	52.0
10. Howe Place/Barkley Boulevard	B	10.9	C	27.3	B	18.0	E	76.5
11. Woburn Street/Barkley Boulevard	D	36.6	D	40.7	D	48.8	D	42.1
12. Newmarket Street/Barkley Boulevard	B	13.7	A	7.8	C	27.0	C	28.3
13. Manning Street/Barkley Boulevard	C	17.5	C	17.0	E	42.3	E	36.9
14. Woburn Street/Newmarket Street	A	8.3	B	14.0	B	12.6	B	12.9
15. Orleans Street/E Illinois Street	C	22.9	A	6.1	<b>F</b>	<b>143.5</b>	A	6.7
16. Woburn Street/E Illinois Street	<b>F</b>	<b>&gt;200</b>	B	12.6	<b>F</b>	<b>&gt;200</b>	C	17.1
17. Orleans Street/Alabama Street	C	24.3	C	21.7	C	24.4	C	22.4
18. Pacific Street/Alabama Street	B	12.3	B	11.6	B	17.4	B	16.6
19. Woburn Street/Alabama Street	D	48.5	D	45.5	E	65.6	E	63.4
20. Manning Street/Burns Street	A	9.0	A	8.9	A	9.0	A	8.9
21. St Clair Street/E Sunset Drive	D	27.7	C	24.3	E	41.4	D	48.7
22. St Clair Street/Burns Street	B	10.3	B	10.1	B	10.7	B	73.0
23. St Clair Street/Rimland Street	A	9.7	A	9.6	A	9.8	A	62.5
24. St Clair Street/Barkley Boulevard	C	17.3	C	16.8	C	22.1	C	35.2

Source: Highway Capacity Manual and Transpo Group 2022

1. Level-of-service (LOS), based on Highway Capacity Manual (6th edition) and Highway Capacity Manual (2000) methodology (for non-NEMA standard signals).
2. Average delay in seconds per vehicle.

Table 3-37. Action Alternative 2 Weekday Peak-Hour Analysis Results w/ Mitigation Measures

Intersections	AM Peak Hour				PM Peak Hour			
	Alt. 2		Alt. 2 Mitigated		Alt. 2		Alt. 2 Mitigated	
	LOS <sup>1</sup>	Delay <sup>2</sup>	LOS	Delay	LOS	Delay	LOS	Delay
1. James Street/E Sunset Drive	D	53.8	D	47.6	D	50.8	D	50.6
2. I-5 NB Ramps/E Sunset Drive	D	54.4	E	64.8	F	162.2	F	153.7
3. Barkley Boulevard/E Sunset Drive	C	32.1	C	25.2	F	149.3	F	120.8
4. Orleans Street/E Sunset Drive	C	20.7	C	23.8	C	31.8	C	31.5
5. Woburn Street/E Sunset Drive	F	127.1	F	105.2	F	147.9	F	126.4
6. Woburn Street/Burns Street	F	102.2	F	99.8	F	>200	E	71.6
7. Woburn Street/Rimland Street	E	78.3	D	35.9	F	>200	F	171.1
8. Manning Street/Rimland Street	A	9.7	A	9.1	A	9.9	A	9.3
9. Orleans Street/Barkley Boulevard	F	92.5	F	93.4	F	131.7	F	106.5
10. Howe Place/Barkley Boulevard	B	14.1	D	40.4	E	65.6	F	153.5
11. Woburn Street/Barkley Boulevard	F	132.6	F	104.6	F	181.7	F	130.9
12. Newmarket Street/Barkley Boulevard	C	24.7	B	16.5	C	23.5	C	30.3
13. Manning Street/Barkley Boulevard	C	19.6	C	18.6	F	106.4	F	73.0
14. Woburn Street/Newmarket Street	B	13.5	B	11.6	C	28.7	B	14.9
15. Orleans Street/E Illinois Street	E	49.9	A	6.3	F	>200	A	8.9
16. Woburn Street/E Illinois Street	F	>200	B	13.4	F	>200	C	24.6
17. Orleans Street/Alabama Street	E	66.2	E	57.0	E	63.3	D	47.4
18. Pacific Street/Alabama Street	C	23.3	B	19.9	C	27.3	C	21.4
19. Woburn Street/Alabama Street	F	126.1	F	121.3	F	111.8	F	100.7
20. Manning Street/Burns Street	B	10.1	A	9.8	A	9.8	A	9.6
21. St Clair Street/E Sunset Drive	F	86.4	E	48.6	F	139.2	F	86.1
22. St Clair Street/Burns Street	B	12.0	B	11.4	B	14	B	12.8
23. St Clair Street/Rimland Street	B	10.8	B	10.4	B	11.0	B	10.6
24. St Clair Street/Barkley Boulevard	C	19.0	C	18.3	E	39.6	D	33.8

Source: Highway Capacity Manual and Transpo Group 2022

1. Level-of-service (LOS), based on Highway Capacity Manual (6th edition) and Highway Capacity Manual (2000) methodology (for non-NEMA standard signals).

2. Average delay in seconds per vehicle.

### 3.8.5 Significant Unavoidable Adverse Impacts

The evaluated action alternatives and corresponding levels of development for each would result in new trips for all travel modes—vehicles, transit, pedestrians, and bicycles. While the proposed TDM program and roadway improvements would adequately mitigate the impacts of Action Alternative 1, as shown in Table 3-36, there would be significant unavoidable adverse impacts associated with Action Alternative 2 at 11 intersections. Additionally, vehicle queues at intersections would continue to back up beyond residential and commercial driveways, as well as upstream intersections, which is a risk to public safety.

## 3.9 Public Services and Utilities

### 3.9.1 Methodology

Analysts completed a desktop review of existing maps and City planning documents to identify public services and utilities and their existing and projected future capacity within the study area. Public services are defined by SEPA as fire stations, police stations, schools, parks and recreation facilities, maintenance, communication, water/stormwater, sewer/solid waste, and other governmental services or utilities (community centers, libraries). Refer to for Section 3.3.2 for a discussion of stormwater facilities and Section 3.7.5 for a discussion of parks and recreation facilities.

Sources of publicly available information used to document existing public services and utilities include the following:

- City of Bellingham 2016 Comprehensive Plan (City of Bellingham 2016a)
- City of Bellingham Surface and Stormwater Comprehensive Plan (September 2020)
- Bellingham Fire Department 2020 Annual Report (Bellingham Fire Department 2020)
- City of Bellingham Development Guidelines and Improvement Standards (updated 2016) (City of Bellingham 2016b)
- City of Bellingham 2009 Comprehensive Sewer Plan (City of Bellingham 2009a)
- City of Bellingham 2009 Water System Plan (City of Bellingham 2009b)
- City of Bellingham 2013 Water System Plan Update (City of Bellingham 2013)
- City of Bellingham 2016 Wastewater Conveyance Plan (City of Bellingham 2016c)
- Barkley Neighborhood Plan (City of Bellingham 2021a)
- Barkley Village State Environmental Policy Act Checklist (March 2022) (Talbot Real Estate LLC, 2022)
- Bellingham Public Schools attendance maps (Bellingham Public Schools n.d.)
- City of Bellingham GIS Data
- Google Earth

Impacts were determined by assessing the extent to which each of the alternatives would be consistent with adopted systems planning documents and/or meet adopted LOS standards for public services and utilities, if identified. Consistency means that the alternative would not contradict stated City plans.

### 3.9.2 Affected Environment

Existing public services and utilities for the study area include the following:

- Fire and police: No fire or police stations are within 500 feet of the project area. The nearest fire station is Bellingham Fire Department Station 4 at 2306 Yew Street, which serves the Roosevelt, Alabama Hill, Barkley, and Silver Beach neighborhoods. The Comprehensive Plan notes that this fire station is adequate to meet anticipated demand during the 20-year planning period. As funding becomes available, remodeling and updating the facility will likely be needed in the 20-year planning period to maximize facility use and maintain adopted service levels (City of Bellingham 2016a).
- Schools: The study area is part of the Bellingham School District. No schools are in the urban village boundary. The Bellingham School District Administration Building is currently under construction within Barkley Village and is anticipated to include an early learning center. Two schools are within 500 feet of the project area: the Bellingham Christian School and the Roosevelt Elementary School. Three public elementary schools (Roosevelt, Northern Heights, and Sunnyland Elementary Schools); two middle schools (Whatcom and Shuksan Middle Schools), and one high school (Squalicum High School) have enrollment areas overlapping the urban village boundary (Bellingham Public Schools n.d.). Sunnyland Elementary School was rebuilt to almost double its original size in 2022.
- Communications: Numerous telephone communications and wireless data services are available in the City, including Barkley Village. Telephone service is provided by CenturyLink, WAVE, and Comcast. Multiple cable operators provide services in Bellingham, including



Comcast (Xfinity), Frontier, and CenturyLink. Cellular providers include AT&T, Verizon, and T-Mobile.

- **Water/stormwater:** The City supplies water service to customers throughout Bellingham, including the Barkley Village area (City of Bellingham 2016a). Lake Whatcom is a major source of drinking water. The study area is presently served with four different water subsystems, all of which are “fairly new and consequently in good condition” (City of Bellingham 2021b). The City’s Comprehensive Water Plan includes “significant revisions to the existing systems” as part of long-range planning (City of Bellingham 2009b). The most recent Water System Plan Update noted that despite population growth, total water use has been declining steadily since 1990, which “reflects the ever-increasing awareness of individual customers to conserve and use water wisely” (City of Bellingham 2013). The Water System Plan Update also notes that the City has adequate water rights to meet its current and projected demand for water, assuming population growth rates consistent with the Comprehensive Plan. See Section 3.3.2 for a more detailed description of stormwater systems in the study area.
- **Sewer/solid waste:** The City provides municipal wastewater collection and treatment services throughout Bellingham (City of Bellingham 2016a). Existing sanitary sewer facilities in the Barkley neighborhood are mostly in “good” to “excellent” condition because most are recently constructed (City of Bellingham 2021b). The plan also notes that gravity sewer service is available to most existing parcels within the neighborhood, and the industrial area along East Bakerview Road has hydraulic capacity downstream for continued growth. The study area is located in the Sunset/Mt. Baker and Central Basins in the City’s sewer service area. The 2016 Wastewater Conveyance Plan identified seven areas in the Central Basin that are projected to have insufficient capacity in the Central Basin, including on Woburn Street near Barkley Village, and recommended capital improvements to address these capacity issues (City of Bellingham 2016c). New sewer infrastructure is planned for areas of Barkley Village that are not currently served, as well as capital improvements to sewer pipe capacity adjacent to and/or overlapping the study area.

Sanitary Service Company provides garbage and recycling services for homes and businesses in the City, including Barkley Village. The City encourages waste reduction, composting, and recycling to manage demand for solid waste services (City of Bellingham 2016a).

- **Other governmental services:** The Bellingham Public Library operates a 1,400-square-foot Barkley Branch at 3111 Newmarket Street in Barkley Village.
- **Other utilities:** Puget Sound Energy builds, operates, and maintains the electrical utility network serving the City, including Barkley Village. The Comprehensive Plan notes that Puget Sound Energy’s electrical distribution system has sufficient capacity to serve Bellingham through the planning period (to 2036), with future plans to upgrade several older transmission lines, rebuild or locate some smaller substations, and continually reinforcing transmission capacity via the N.W. Washington Transmission Project (City of Bellingham 2016a). Cascade Natural Gas Corporation builds, operates, and maintains natural gas service for the City of Bellingham and Whatcom County, including the Barkley Village area. The Comprehensive Plan notes that Cascade’s natural gas distribution system has sufficient capacity to serve Bellingham and its growth areas through the planning period (to 2036), noting that some system capacity enhancements and upgrades may be needed in the future (City of Bellingham 2016a).

### 3.9.3 Impacts

#### 3.9.3.1 Impacts Common to All Alternatives

All of the alternatives would have the potential to create greater demand for public services and utilities because of increased population and jobs in the study area compared to existing conditions. Growth and development are expected to occur incrementally as individual development projects are constructed, and the associated impacts are expected to occur incrementally as well.

As noted in Section 3.9.2, fire, police, and emergency services are expected to be adequate to meet the needs identified in the Comprehensive Plan. Over time, additional staffing and equipment may be required in order to maintain or improve performance levels for fire, police, and emergency services. In addition, construction-related impacts could result in increased service calls for construction inspections and response to potential construction-related accidents.

The Bellingham School District projects that citywide enrollment will continue to grow along with project population increases during the 20-year planning horizon and identifies needed capital improvements on six-year planning horizons based on the most current population projections (City of Bellingham 2016a). The City has determined that the existing Barkley Branch library facility is adequate to meet the anticipated demand during the 20-year planning period, as long as the private building owner continues to provide this space at reduced cost (City of Bellingham 2016a).

As discussed in Section 3.9.2, existing public utilities, combined with planned future upgrades and improvements, are expected to have sufficient capacity to support growth anticipated in the 2036 Comprehensive Plan. However, depending on the alternative selected, development may require additional new extensions and upgrades to utility infrastructure to meet City goals established in the Comprehensive Plan and supporting plans.

All of the alternatives would have the potential for temporary impacts to utilities during construction.

#### 3.9.3.2 No Action Alternative

The No Action Alternative would have the lowest levels of population growth, job growth, and new residential and commercial development compared to existing conditions, as described further in Section 3.7, Land and Shoreline Use. Therefore, it is expected that the No Action Alternative would have lower future demands on public services and utilities than the two action alternatives.

#### 3.9.3.3 Action Alternative 1/Preferred Alternative

Action Alternative 1 would have greater levels of population growth, job growth, and new residential and commercial development than the No Action Alternative but lower levels than Action Alternative 2. Therefore, Action Alternative 1 would have moderate additional demand for public services and utilities compared to the other alternatives.

#### 3.9.3.4 Action Alternative 2

Action Alternative 2 would have the highest levels of new residential and commercial development and the highest growth in population and jobs. Therefore, Action Alternative 2 would have the highest demand on public services and utilities compared to the other alternatives. If growth under this alternative exceeds what was projected in the Comprehensive Plan and associated systems plans, additional capacity would need to be considered for key public services and utilities serving the Barkley Village area.

### 3.9.4 Mitigation Measures

All development would occur in coordination with the City's comprehensive planning process and would comply with all relevant standards and guidelines for provision of public services and utilities to meet growth in demand. Therefore, no additional mitigation measures are proposed for public services and utilities.

### 3.9.5 Significant Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts related to public services and utilities under any of the alternatives.

### 3.10 Cumulative Effects

The City provided the following list of projects that are permitted and planned but not yet constructed for consideration in this analysis:

- Barkley Heights: A 72-unit residential development located on the north end of Sussex Drive, north of Barkley Boulevard
- McLeod Development: A 36-unit residential development located south of McLeod Road and west of Magrath Road

These projects were included in the future traffic volume forecasts presented in Section 3.8; therefore, the transportation analysis is cumulative in nature.

Given the scale and number of development proposals within the study area under each of the alternatives, the alternatives together with other planned development projects are not expected to result in greater or substantially different impacts than those identified in the effects analyses for each environmental topic area.

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