September 2015

Link Light Rail Operations and Maintenance Satellite Facility

Final Environmental Impact Statement

SOUNDTRANSIT
Central Puget Sound
Regional Transit Authority

U.S. Department of Transportation
Federal Transit Administration

SOUNDTRANSIT

September 25, 2015

Dear Recipient:

The U.S. Department of Transportation Federal Transit Administration (FTA) and Sound Transit (the Central Puget Sound Regional Transit Authority) have prepared this Final Environmental Impact Statement (Final EIS) on the proposed Link Light Rail Operations and Maintenance Satellite Facility. Sound Transit is the project proponent.

The Final EIS has been prepared pursuant to the National Environmental Policy Act (42 U.S.C. 4321 to 4370e) and the State Environmental Policy Act (Ch. 43.21C RCW). It has been prepared to inform the public, agencies and decision makers about the environmental consequences of building and operating the Link Light Rail Operations and Maintenance Satellite Facility. The Final EIS examines the project alternatives in the cities of Bellevue and Lynnwood, including the preferred alternative identified by the Sound Transit Board.

The major choices for the project involve the location of a light rail operations and maintenance satellite facility. The Sound Transit Board will consider the alternatives evaluated in the Final EIS, public and agency comments on the Draft EIS, and other information before selecting the project to build. After the Sound Transit Board selects the project to build, FTA will issue a Record of Decision, which will state FTA's decision on the project and list mitigation commitments to reduce or avoid impacts.

The Final EIS includes appendices, technical reports, background materials, and responses to comments on the Draft EIS on the enclosed CD. Please see the Fact Sheet of this Final EIS regarding document availability and who to contact for further information about the Final EIS.

Sincerely,

Kent Hale
Environmental Affairs and Sustainability

Central Puget Sound Regional Transit Authority • Union Station
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LINK LIGHT RAIL OPERATIONS AND MAINTENANCE SATELLITE FACILITY
KING AND SNOHOMISH COUNTIES, WASHINGTON
FINAL ENVIRONMENTAL IMPACT STATEMENT

Submitted pursuant to
the National Environmental Policy Act (NEPA) (42 USC 4322(2)(c))
and the State Environmental Policy Act (SEPA) (Ch. 43.21C RCW)
by the

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION

and

CENTRAL PUGET SOUND REGIONAL TRANSIT AUTHORITY
(Sound Transit)

In cooperation with
CITY OF BELLEVUE
CITY OF LYNNWOOD
KING COUNTY
SNOHOMISH COUNTY
U.S. ARMY CORPS OF ENGINEERS

9/15/15
Date of Approval

R. F. Krochalis
Regional Administrator
NEPA Responsible Official
For Federal Transit Administration, Region 10

9/14/2015
Date of Approval

Perry Weinberg
Director, Office of Environmental Affairs and Sustainability
SEPA Responsible Official
For Central Puget Sound Regional Transit Authority

Fact Sheet

Project Title

Link Light Rail Operations and Maintenance Satellite Facility (OMSF)

Proposed Action

The Link Light Rail Operations and Maintenance Satellite Facility (OMSF) project (proposed project) proposes to construct and operate an OMSF to meet the needs of the expanded fleet of light rail vehicles (LRVs) identified in *Sound Transit 2: A Mass Transit Guide, The Regional Transit System Plan for Central Puget Sound* (ST2). The OMSF would be used to store, maintain, and dispatch LRVs for daily service by providing vehicle storage, preventative maintenance inspections, light maintenance, emergency maintenance, interior vehicle cleaning, and exterior vehicle washing. The facility would also be used to accommodate administrative and operational functions, such as serving as a report base for LRV operators. Additional facility elements would include employee parking, operations staff offices, maintenance staff offices, dispatcher work stations, an employee report room, and areas with lockers, showers, and restrooms for both operators and maintenance personnel. Four build alternative sites for the proposed project are evaluated: three in Bellevue and one in Lynnwood, Washington.

Project Proponent and State Environmental Policy Act Lead Agency

Sound Transit
Union Station
401 South Jackson Street
Seattle, Washington 98104
www.soundtransit.org

Dates of Construction and Opening

Sound Transit would begin construction of the proposed project by 2018, and expects it to be ready for operations in 2020.

National Environmental Policy Act Lead Agency

Federal Transit Administration
915 Second Avenue, Suite 3142
Seattle, Washington 98174

Responsible National Environmental Policy Act Official

Richard F. Krochalis, Administrator for Region 10
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Potential Permits and Approvals

The list below pertains to permits that may be required based on the range of alternatives in this Final Environmental Impact Statement (Final EIS).

Permit or Approval	Issuing Agency
Federal	
Section 106 Review	Federal Transit Administration
Section 4(f) Review	Federal Transit Administration
Clean Water Act, Section 404	U.S. Army Corps of Engineers
Federal Endangered Species Act Review	U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration Fisheries Service
State	
Hydraulic Project Approval	Washington Department of Fish and Wildlife
Public Utility Commission Permits	Washington Public Utility Commission
Section 106 Review	Washington State Department of Archaeology and Historic Preservation
National Pollution Discharge Elimination System Stormwater Discharge Permit	Washington State Department of Ecology
Temporary Modification of Water Quality Criteria	Washington State Department of Ecology
Underground Storage Tank Notification Requirement	Washington State Department of Ecology
Water Quality Certification: Section 401	Washington State Department of Ecology
Temporary Construction Easement (SR 520)	Washington State Department of Transportation
Cities	
Street Use Permits	Cities of Bellevue and Lynnwood
Construction Permits	Cities of Bellevue and Lynnwood
Right-of-Way Permits or Franchise for Use of City Right-of-Way	Cities of Bellevue and Lynnwood
Environmental Critical Areas/Sensitive Areas Review	Cities of Bellevue and Lynnwood
Development Permits, including conditional use permit (CUP) or land use code amendment	Cities of Bellevue and Lynnwood
Noise Variance	Cities of Bellevue and Lynnwood
Street Vacations	Cities of Bellevue and Lynnwood
Certificates of Approval	Cities of Bellevue and Lynnwood
Various Approvals: Planning, Design Review, and Arts Commissions	Cities of Bellevue and Lynnwood
Other	
Notification of Intent to Perform Demolition or Asbestos Removal	Puget Sound Clean Air Agency
Pipeline and Utility Crossing Permits	Utility Providers
Utility Approvals: Easements and Use Agreements	Utility Providers

Principal Contributors

This Final EIS was prepared by consultants at the following firms: ICF International, Huitt-Zollars, Heffron Transportation, Inc., Hart Crowser, and Michael Minor and Associates. See Appendix A, *Document Support Information*, Section A.2, for a detailed list of preparers and the nature of their contributions.

Date of Issue of the Final Environmental Impact Statement under SEPA

September 25, 2015

Date of Issue of the Final Environmental Impact Statement under NEPA

October 2, 2015

Next Actions

Following publication of the Final EIS, the Sound Transit Board of Directors will make a final decision on the OMSF alternative to be built. After publication of the Final EIS, FTA is expected to issue a Record of Decision (ROD) on the proposed project.

Related Documents

Environmental Documents

Final Supplemental Environmental Impact Statement on the Regional Transit Long-Range Plan (Sound Transit 2005)

East Link Project Final Environmental Impact Statement (Sound Transit 2011)

Regional Transit Long-Range Plan Update Final Supplemental Environmental Impact Statement (Sound Transit 2014)

Lynnwood Link Extension Final Environmental Impact Statement (Sound Transit 2015)

Other Documents

Sound Transit 2: A Mass Transit Guide, The Regional Transit System Plan for Central Puget Sound (Sound Transit 2008)

Cost and Availability of the Final Environmental Impact Statement

This Final EIS is available for public review in a variety of formats and locations. The Final EIS is available on the Sound Transit website (http://www.soundtransit.org/omsf); the document is also available on CD at no cost from Sound Transit.

Paper copies of the Final EIS are available for the cost listed below.

- Summary - Free
- Final EIS - $25.00
- Technical Background Reports - $11.00–$15.00 each

Copies of the Final EIS and related documents listed above are available for review or purchase at the office of Sound Transit, Union Station, 401 South Jackson Street, Seattle, Washington 98104. To request any of the documents, please contact Erin Green at (206) 398-5464. To review these documents, please call the Sound Transit librarian at (206) 398-5344 during normal business hours (weekdays from 8:00 a.m. to 5:00 p.m.) to arrange an appointment.

Paper copies of the Final EIS documents are also available for review at the following public locations.

- Bellevue Regional Library
- Lynnwood Library
- Washington State Library

Appeals

Washington State Environmental Policy Act (SEPA) challenges to this Final EIS are governed by Sound Transit Resolution R7-1 and the SEPA rules and regulations (Ch. 43.21C RCW and WAC 197-11-680). Sound Transit Resolution R7-1 is available online at http://www.soundtransit.org/About-Sound-Transit/Board-of-Directors/Board-archives/Resolutions-archive.xml. (1994-1997 Resolutions).

As provided in Resolution R7-1, appeals of SEPA determinations must be made in writing by filing a letter of appeal and paying the required fee within 14 days following the date the environmental document is issued. Letters of appeal should be addressed to Joni Earl, Chief Executive Officer, Sound Transit, Union Station, 401 South Jackson Street, Seattle, Washington 98104-2826.

For this Final EIS, appeals must be received by Sound Transit on or before 5:00 p.m. on October 9, 2015. Additional details about the appeals process and requirements are set out in Resolution R7-1 and in the SEPA rules and regulations.

Preface

Sound Transit plans, builds, and operates the regional mass transit system for the central Puget Sound region. The system includes light rail, heavy rail commuter trains, and express buses. In 2005 and again in 2015, Sound Transit updated the *Sound Transit Regional Transit Long-Range Plan* (Long-Range Plan) using public input to refine the long-term vision of mass transit for the region. The Long Range Plan informed the development of ST2, which provides the foundation for expanding the regional transit system. Since voter financing approval in 2008, Sound Transit has been integrating the ST2 program elements with the ongoing light rail, commuter rail, and regional express bus service operations. In addition to added commuter rail and bus service, implementation of ST2 will add approximately 36 miles to the light rail system and increase the existing LRV fleet to approximately 180 vehicles.

Currently, the Link light rail system includes the Forest Street Operations and Maintenance Facility (Forest Street OMF), located at 3407 Airport Way South in the City of Seattle. The Forest Street OMF can serve a maximum of 104 LRVs. The new OMSF is proposed to accommodate the added vehicles required by the ST2 light rail expansion.

Sound Transit, together with FTA, has prepared this Final EIS for the proposed project in compliance with the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA). This Final EIS achieves the following:

- Provides environmental information to assist decision makers in selecting the project alternative to be built.
- Describes the alternatives and their potential environmental impacts.
- Identifies measures to avoid and minimize impacts and, when necessary, mitigate for adverse impacts.
- Considers cumulative and indirect impacts.
- Provides information for other review processes, including:
    - The Endangered Species Act.
    - Section 106 of the National Historic Preservation Act of 1966.
    - Section 4(f) of the Department of Transportation Act of 1966.
    - Section 6(f) of the Land and Water Conservation Fund Act of 1965.
    - Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

The scope of environmental review and range of alternatives evaluated in this Final EIS respond to the following:

- Public and agency comments received during the public scoping process that began in September 2012.
- Public and agency comments received on the 2014 Draft EIS.
- Feedback received from the public and agencies through community workshops, briefings, stakeholder presentations, and agency coordination meetings held since the environmental review process began.

To comply with NEPA and SEPA and to enhance readability, this Final EIS focuses on the most relevant information regarding project definition, potential adverse impacts, and trade-offs among the alternatives. The study area for this Final EIS varies by resource and is described within each resource section of the document, as appropriate.

The Final EIS is organized as follows.

The **Summary** is a separately bound, condensed version of the overall document. It briefly describes the purpose and need for the proposed project, the proposed project's goals and objectives, and the preferred alternative and other alternatives being considered. It presents the impacts for each alternative and potential mitigation, and briefly evaluates and compares the different alternatives. The Summary concludes by identifying areas of uncertainty and the proposed project's next steps.

Chapter 1. Purpose and Need for the Project, describes the proposed project's purpose and need, provides a brief background of the proposed project, and outlines the proposed project's goals and objectives.

Chapter 2. Alternatives Considered, describes the alternatives evaluated and how they were identified and developed for study in this Final EIS. A No Build Alternative is also evaluated to serve as a baseline for comparing the potential effects of the build alternatives. This chapter also provides an overview of the construction approach and a comparison of cost estimates by alternative. It concludes by explaining the proposed project's planning and decision-making context, including the major steps in the environmental evaluation and project development process.

Chapter 3. Affected Environment and Environmental Consequences, describes the built and natural environment in the study areas, explains the impacts from construction and operation of the proposed project alternatives, and describes potential avoidance and minimization measures. In the case that adverse impacts cannot be avoided, compensatory mitigation is identified, as appropriate. This chapter includes the following environmental topics:

3.1 Transportation

3.2 Acquisitions, Displacements, and Relocations

3.3 Land Use

3.4 Economics

3.5 Social Impacts, Community Facilities, and Neighborhoods

3.6 Visual and Aesthetic Resources

3.7 Air Quality and Greenhouse Gases

3.8 Noise and Vibration

3.9 Ecosystems

3.10 Water Resources

3.11 Energy

3.12 Geology and Soils

3.13 Hazardous Materials

3.14 Electromagnetic Fields

3.15 Public Services

3.16 Utilities

3.17 Historic and Archaeological Resources

3.18 Parklands and Open Space

Chapter 4. Alternatives Analysis, compares the project alternatives in terms of affected environment and how effectively they meet the project's goals and objectives.

Chapter 5. Public and Agency Comment Summary, summarizes the comments Sound Transit and FTA received from agencies, tribes, and the public during the comment period on the Draft EIS. It also describes the ways that Sound Transit and FTA advertised the Draft EIS release and publicized the public hearings/open houses and other events**.**

Appendices A through I, provide additional details on the project and Final EIS process. Appendix A includes document support information (references, lists of preparers and recipients, and acronyms), Appendix B provides a summary of public involvement and agency coordination and a list of regulatory information used to prepare this Final EIS. Appendices C and D provide federally required reports on environmental justice and Section 4(f) and 6(f) resources (park and recreation areas, wildlife refuges, and any properties funded by the Land and Water Conservation Fund). Appendix E contains the detailed technical reports prepared for the *Transportation*, *Noise and Vibration*, *Historic and Archaeological Resources*, and *Ecosystems* sections of Chapter 3. Appendix F contains additional technical data that support the resource analysis sections of Chapter 3. Appendix G provides conceptual plans of the proposed project. Appendix H provides a list of mitigation commitments for the Preferred Alternative. Lastly, Appendix I provides all comments made on the Draft EIS and responses to these comments.

Table of Contents

List of Appendices

**Technical reports and background information are provided on CD with the Final EIS and available on the project website at www.soundtransit.org/Projects-and-Plans/Link-Operations-and-Maintenance-Satellite-Facility. Printed versions are available on request for the cost of reproduction.*

Tables

Figures

Chapter 1

Purpose and Need for the Project

1.1 Purpose of the Project

The purpose of the Sound Transit Link Light Rail Operations and Maintenance Satellite Facility (OMSF) project (proposed project) is to enable Sound Transit to meet the maintenance and storage needs of the expanded fleet of light rail vehicles (LRVs) identified in *Sound Transit 2: A Mass Transit Guide, The Regional Transit System Plan for Central Puget Sound* (ST2). ST2, financing for which was approved by voters in November 2008, expands Sound Transit's Link light rail transit system and requires additional operations and maintenance facility capacity to support the added LRVs.

The proposed project would do the following:

- Support the intended level of service for expansion of the Link light rail system to the Lynnwood Transit Center, Overlake Transit Center and Kent/Des Moines Transit Center.
- Minimize system annual operating costs and support efficient and reliable light rail service.
- Support regional long-range plans, including the Puget Sound Regional Council's *VISION 2040* and *Transportation 2040* plans, and the *Sound Transit Regional Transit Long-Range Plan* (Long-Range Plan).

The OMSF would provide service and inspections for approximately half of the ST2 fleet (about 90 vehicles), with sufficient capacity to allow expansion of the light rail system beyond ST2 in the corridor where it is located. The existing Forest Street Operations and Maintenance Facility (Forest Street OMF) would continue to provide inspection services as well as heavy repair and overhauls. The OMSF would also store, maintain, and dispatch vehicles for daily service.

1.1.1 ST2 Light Rail Operating Plan

Link light rail extensions of ST2 are planned in King and Snohomish Counties in the metropolitan Puget Sound region. Currently, planned light rail extensions with ST2 funding include the Cities of Bellevue and Redmond in the east, the City of Lynnwood in the north, and the Cities of Kent and Des Moines in the south. The OMSF would be located near either the north or east line to serve the system. The project vicinity and regional setting is shown in Figure 1-1.

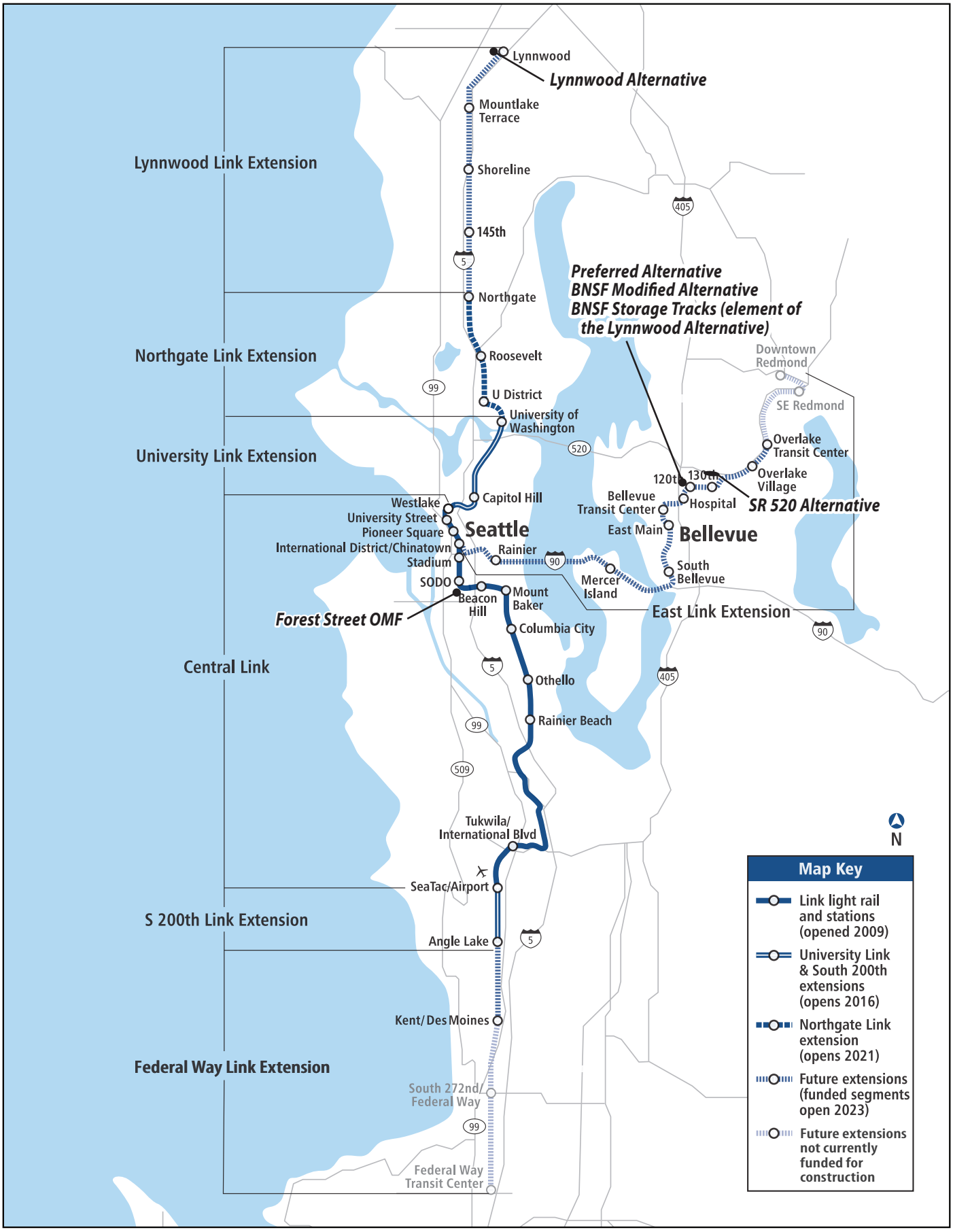
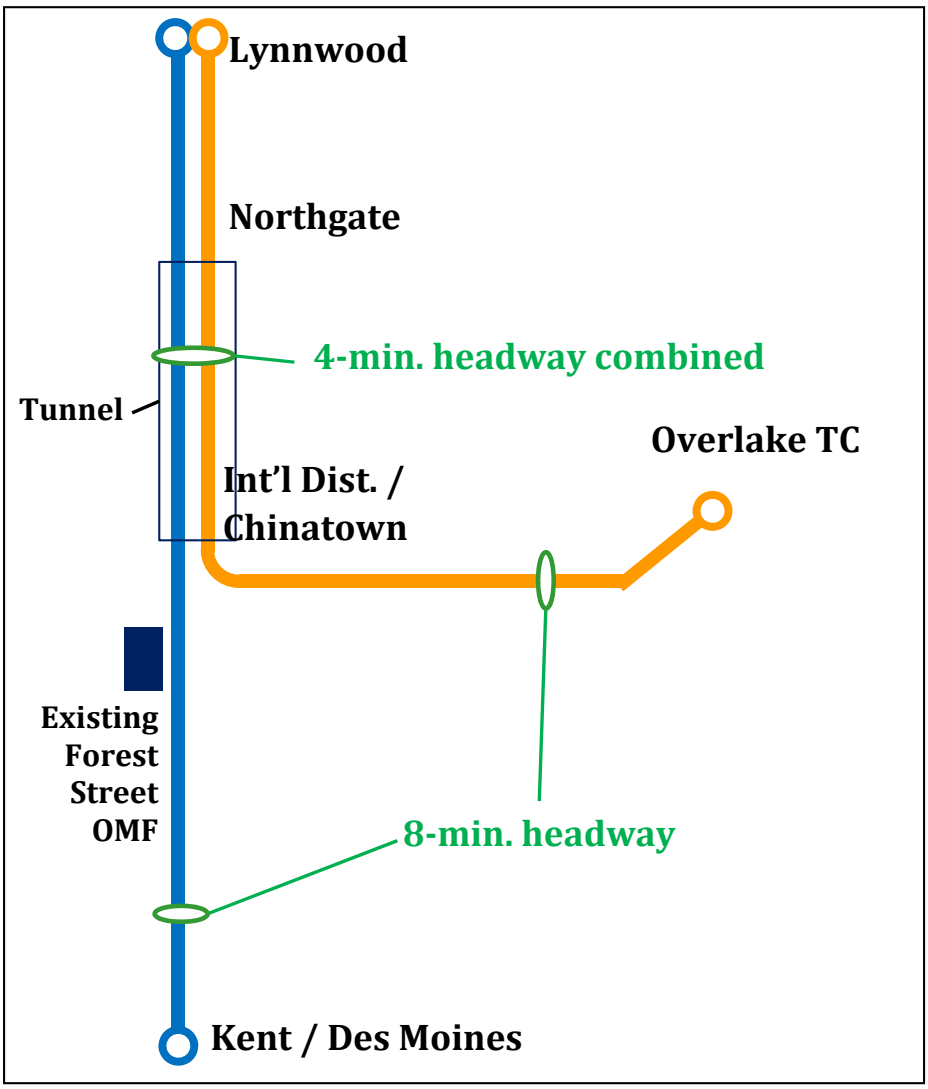


Figure 1-1: Regional Setting for the Build Alternatives
Sound Transit Link Light Rail OMSF Final EIS

Beginning in 2023, Link will operate with two lines, as shown in Figure 1-2. One line will operate between Lynnwood and the Overlake Transit Center (Overlake TC), and the other line will operate between Lynnwood and Kent/Des Moines. The two lines will merge at the International District/Chinatown Station and share the same tracks between the merge point and Lynnwood. The shared tracks will include a tunnel stretching 8.7 miles between the International District/Chinatown Station and the tunnel portal just south of Northgate Transit Center. The two lines will be scheduled to alternate on the shared tracks in both directions. Due to the configuration of tracks, there is no direct operating line between Overlake TC and Kent/Des Moines; therefore, passengers traveling between stations east and south of downtown Seattle must transfer between lines at International District/Chinatown. Similarly, trains cannot be deployed from the Forest Street OMF directly to the tracks headed east toward Overlake TC.

Figure 1-2. Link ST2 System Peak Period Operating Plan



Link uses a fleet of light rail vehicles (LRVs), or cars. Each LRV is 95 feet long and can be operated independently or with other LRVs in a multicar train. The Link system can accommodate trains with up to four LRVs.

Table 1-1 shows key operational characteristics of ST2. The anticipated headways, hours of operation, and fleet requirements are developed for planning purposes based on the build-out of ST2 and projected ridership demand. Actual operations when service opens on each Link extension (north, east, and south) could differ or be adjusted (e.g., shorter train lengths) from what is shown in Table 1-1.

Table 1-1. ST2 Link Operational Characteristics

Hours of Operation	**Weekdays and Saturdays** **Sundays and holidays**	**5:00 a.m. to 1:00 a.m.** **6:00 a.m. to 12:00 a.m.**
Headways	Peak (6:00–8:30 a.m. & 3:00–6:30 p.m.) Off-Peak (8:30 a.m.–3:00 p.m. & 6:30–10:00 p.m.) Early/Late (5:00–6:00 a.m. & 10:00 p.m.–1:00 a.m.)	8 minutes (4 min. on combined section) 10 minutes (5 min. combined) 15 minutes (7.5 min. combined)
LRV Fleet	**Lynnwood – Kent/Des Moines**	
	# Trains	20
	Train Length	4-car
	Service LRVs	80
	Lynnwood – Overlake TC	
	# Trains	19
	Train Length	4-car
	Service LRVs	76
	Total Service LRVs	156
	Spare LRVs (15%)	24
	Total Fleet Size	180

1.2 Need for Project

The Forest Street OMF is in an industrial area of south Seattle and can serve up to 104 LRVs. To implement the ST2 expansion, Sound Transit needs to increase its LRV fleet to approximately 180 vehicles by 2023. The need for the proposed project arises from the Forest Street OMF's inability to store, maintain, and deploy the vehicles needed for the ST2 expansion. The light rail system requires more storage area and greater capacity for necessary service, maintenance, and inspection functions to implement ST2. The proposed OMSF needs to be ready for operations in 2020 to accept delivery of new LRVs and/or store existing LRVs while the new LRVs are tested and prepared for service.

1.3 Project Goals and Objectives

Based on the project purpose, Sound Transit developed evaluation criteria consisting of the goals and objectives listed below. Sound Transit applied these goals and objectives to evaluate potential OMSF alternatives. These criteria address Sound Transit's responsibility to meet public transportation and mobility needs for high-capacity transit infrastructure while also being a responsible steward of the environment, and planning a fiscally feasible project.

- **Transportation Goal.** Facilitate operation of the expanded regional Link light rail system.
    - Locate a facility to provide efficient and reliable light rail service.
- **Environment Goal.** Preserve environmental quality.
    - Minimize potential adverse impacts on the natural and built environment.
- **Financial Goal.** Achieve financial feasibility.
    - Build, operate, and maintain a cost-effective facility.

Chapter 2
Alternatives Considered

2.1 Introduction

This chapter describes the build alternatives for the Sound Transit Link Light Rail Operations and Maintenance Satellite Facility (OMSF) project (proposed project), including the Preferred Alternative and a No Build Alternative. It also describes how the alternatives were identified and developed for study in this Final Environmental Impact Statement (Final EIS). Also presented are those alternatives that were reviewed but eliminated from further consideration and those that met the purpose and need for the proposed project. Four build alternatives are evaluated in this Final EIS: three alternatives in Bellevue and one alternative in Lynnwood, Washington. A No Build Alternative is evaluated and represents the transportation system and environment as they would exist without the proposed project. It also serves as a baseline for comparing the potential effects of the build alternatives. This Final EIS is consistent with guidelines of the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA).

Sound Transit and the Federal Transit Administration (FTA) published a Draft EIS for the proposed project on May 9, 2014, with a 45-day comment period. The Sound Transit Board considered the build alternatives analyzed in the Draft EIS, and the public and agency comments received during the comment period. On July 24, 2014, the Sound Transit Board approved Motion M2014-51, identifying the BNSF Alternative as the preferred alternative for evaluation in the Final EIS along with other build alternatives. The motion also directed staff to further evaluate potential design modifications for the Preferred Alternative in the Final EIS. Chapter 5, *Public and Agency Comment Summary*, summarizes the public comments Sound Transit and FTA received, and Appendix I, *Comments and Responses*, provides the detailed responses and comments.

Sound Transit's existing Forest Street Operations and Maintenance Facility (Forest Street OMF), located at 3407 Airport Way S in the City of Seattle, includes a four-story, 162,000-square-foot building that contains component repair shops, an electronics repair shop, a signals and communications lab, and a communications maintenance shop. It can store and maintain up to 104 light rail vehicles (LRVs), and houses the backup Link Control Center, training rooms, sheriff offices, and staff offices for maintenance and operations management and administrative personnel (Figure 2-1).

Figure 2-1. Typical Link Light Rail Vehicle (LRV)

The proposed project would provide service and inspection functions for approximately 90 additional LRVs with the assumption that the Forest Street OMF would continue to provide inspection, heavy repair, and overhaul services. The OMSF would be used to store, maintain, and dispatch vehicles for daily service. Activities at the OMSF would include preventative maintenance inspections, light maintenance, emergency maintenance, interior vehicle cleaning, and exterior vehicle washing. The facility would need to accommodate administrative and operations functions and would be used as a report base for LRV operators. Space would be needed for employee parking, operations staff offices, maintenance staff offices, dispatcher work stations, an employee report room, and areas with lockers, showers, and restrooms for both operators and maintenance personnel.

2.2 Background and Project Development

In 2011, Sound Transit conducted a system-wide operations analysis for the implementation of *Sound Transit 2: A Mass Transit Guide, The Regional Transit System Plan for Central Puget Sound* (ST2). The results of this analysis were the *ST2 Operations Plan* (June 2011) and the *ST2 Link Light Rail Fleet Management Plan* (June 2011). Both plans assumed a Sound Transit light rail system that extended north to Lynnwood, south to Kent/Des Moines and east to the Overlake Transit Center in Redmond. The operations plan assumed two lines for the extended light rail system: a north-south line from Lynnwood to Kent/Des Moines and an east-north line that extends from the Overlake Transit Center to Lynnwood. Both lines would travel on the same tracks through the Downtown Seattle Transit Tunnel (DSTT) to Lynnwood. To meet future demand (2035), the plan assumes each line would have four-car trains operating every 8 minutes in the peak periods (10 minutes in the offpeak and evenings). This results in a combined frequency of 4 minutes in the segment through the DSTT to Lynnwood (5 minutes in the off-peak periods). Beginning in 2012, Sound Transit conducted a three-part study to identify potential alternatives for the proposed project.

1. **Core Light Rail System Expansion Plan Review**. The Core Light Rail System Expansion Plan Review looked beyond the operations and facilities needs for ST2 to future expansion of the light rail system to Everett, Tacoma, and downtown Redmond consistent with the *Sound Transit Regional Transit Long-Range Plan* (Long-Range Plan).
2. **Link OMSF Corridor Analysis**. The Link OMSF Corridor Analysis identified the constraints, benefits, and trade-offs of locating the OMSF in the north, south, and east corridors.
3. **Potential OMSF Site Identification**. Potential OMSF sites were identified in each of the operable light rail expansion corridors and data were collected for each site illustrating land use and environmental and physical site characteristics.

2.2.1 Core Light Rail System Expansion

The Sound Transit Core Light Rail System Expansion Plan Review analyzed extending light rail to Everett, Tacoma, and downtown Redmond. The Core Light Rail System Expansion is a component of the Long-Range Plan, adopted by the Sound Transit Board in 2014, and it has also been adopted as

part of the Puget Sound Regional Council (PSRC) *VISION 2040* and *Transportation 2040* regional plans. Review of the operations plan and the operations and maintenance (O&M) facility needs associated with the Core Light Rail System Expansion concluded that a total of three O&M facilities will eventually be needed. These include the Forest Street OMF, a second OMF, and one satellite O&M facility (i.e., an OMSF). A "satellite" OMSF would not provide the functions or equipment for heavy repairs such as LRV overhauls, frame straightening, or vehicle painting that a full OMF provides. In addition to the Forest Street OMF south of downtown Seattle, one OMF (or OMSF) will eventually be needed along the north operating line and one along the east operating line (Sound Transit 2012a). However, the third facility will not be required until the light rail system is expanded beyond the light rail extensions identified in ST2.

2.2.2 Link OMSF Corridor Analysis

This analysis identified constraints, benefits, and trade-offs of locating an OMSF in the north, south, and east corridors to serve the ST2 expansion, primarily using the criteria below to determine which corridors would meet the operating needs of the system.

- **Operating Cost.** Located within a transit corridor that minimizes the system operating costs.
- **Reliability.** Able to transition of light rail vehicles between the OMSF and the revenue line without negatively affecting revenue operations or the available nightly maintenance window for the light rail guideway and systems (approximately 1:00 a.m. to 5:00 a.m.).
- **Efficiency.** Site characteristics and location that minimize vehicle maneuvering to position the trains for morning deployment.

Sites located in the north and east corridors would meet these operational needs. Locating an OMSF south of the junction where the north-south line and the north-east line meet at the International District Station (including expansion of the Forest Street OMF) would not be operationally feasible for the following reasons (Sound Transit 2012b):

- The time allotted to deploy trains serving the 6:00 a.m. to 10:00 a.m. morning peak period would be exceeded.
- The nightly inspection and maintenance window (approximately 1:00 a.m. to 5:00 a.m.), when all revenue service trains must be off the system, could not be maintained.
- Expansion of the Forest Street OMF would not provide capacity (e.g., number of vehicle bays, operator report facility, parts storage and component repair) to meet the daily and weekly maintenance and inspection needs for the entire fleet of 180 vehicles. There is insufficient property to expand the Forest Street OMF to provide these needs without vacating or closing 6th Avenue S and/or Airport Way, which are essential for freight mobility in the SODO industrial area.
- If all 180 vehicles were stored on a single site, a system failure during the morning deployment could result in the entire fleet being trapped and unable to begin service.

2.2.2.1 OMSF Features

The proposed project would involve construction and operation of the following site features.

- An enclosed LRV maintenance building containing service bays for maintaining LRVs that would include the following activities and equipment:
  - Exterior LRV washing area
  - Interior LRV cleaning area
  - General service, inspection, and repair bays
  - Wheel truing
  - Equipment and parts storage
  - Shipping and receiving
  - Electronics shop
  - Welding and fabrication shop
  - Brake and coupler shop
- Office space attached to the shop building containing the following areas:
  - Individual offices and workspaces
  - Conference rooms
  - Training room
  - Fitness room
  - Lunch/break room
  - Lockers
  - Restrooms
- Track, switches, overhead catenary power lines, a traction power substation, and signals to support movement of LRVs to and from the mainline and around the facility through the LRV maintenance building and LRV storage area.
- Lead track to provide access between the OMSF and light rail system mainline.
- Maintenance-of-way shops to support maintenance of the infrastructure of the light rail system beyond the LRVs such as track, signals, and power system that would include an attached truck wash.
- Maintenance-of-way office space attached to the maintenance of way shops that would include office space, conference and training rooms, a lunch/break room, and restrooms.
- Outdoor covered and uncovered storage areas.

- Parking for automobiles and two points of road access to the facility with one to be used as a primary access point for most traffic, and the second to serve as an access point for emergency response vehicles and special deliveries or maintenance activities only.

At approximately 32 feet tall, the LRV maintenance building would be the tallest building at the site. This building height is necessary to allow for overhead equipment necessary to perform work on all sides of an LRV, including the top. The LRV maintenance building would also be the largest building on the site. It would house the LRV maintenance shops but it would also be attached to office space that would be used by operators, dispatchers, and administrative staff.

The OMSF would be fenced for security purposes and access to the facility would be controlled by keycard access at the main entrance gate and at all building entrances. The fencing used along portions of the perimeter would be highly visible outside the facility. It would be selected to aesthetically fit with the OMSF and its surrounding environment consistent with code requirements of each local jurisdiction and serve as a partial visual.

Landscaping would also be incorporated into perimeter fence line areas and parking areas as appropriate to diversify the visual landscape of the OMSF. It would include small trees and shrubs as well as lower-profile herbaceous vegetation. Overhead lighting would be provided across the OMSF for security purposes and allow for nighttime operations, since much of the LRV maintenance would occur at night. Lighting would be directed downward and onto the site.

2.3 Identifying Potential OMSF Sites

The identification and evaluation of potential OMSF sites for consideration in the EIS included technical work conducted by Sound Transit, as well as suggestions from agencies and the public during the environmental scoping period. A site identification and evaluation study (described below) that built on the background studies described above. Twenty-one locations were considered in total. Screening criteria were developed based on the OMSF physical and operational requirements, site and environmental constraints, consistency with regional transportation plans, and the proposed project's purpose and need (Chapter 1, *Purpose and Need*). Alternatives that performed poorly against the screening criteria were eliminated from further consideration. The screening criteria addressed both physical and operational needs.

A build alternative would meet the physical needs of the proposed project by being:

- Near an existing or future light rail segment.
- Able to accommodate approximately 90 LRVs.
- 20 to 25 acres of usable land.
- Generally rectangular in shape.

A build alternative that meets operational needs of the proposed project would be:

- Located in a transit corridor that minimizes overall system operating costs.
- Available for the nightly maintenance window (approximately 1:00 a.m. to 5:00 a.m.).
- Minimize vehicle maneuvering to position the trains for morning deployment.
- Consistent with adopted regional transportation plans, including Sound Transit's Long-Range Plan, PSRC Vision 2040, and the key strategies of the PSRC Transportation 2040 plan.

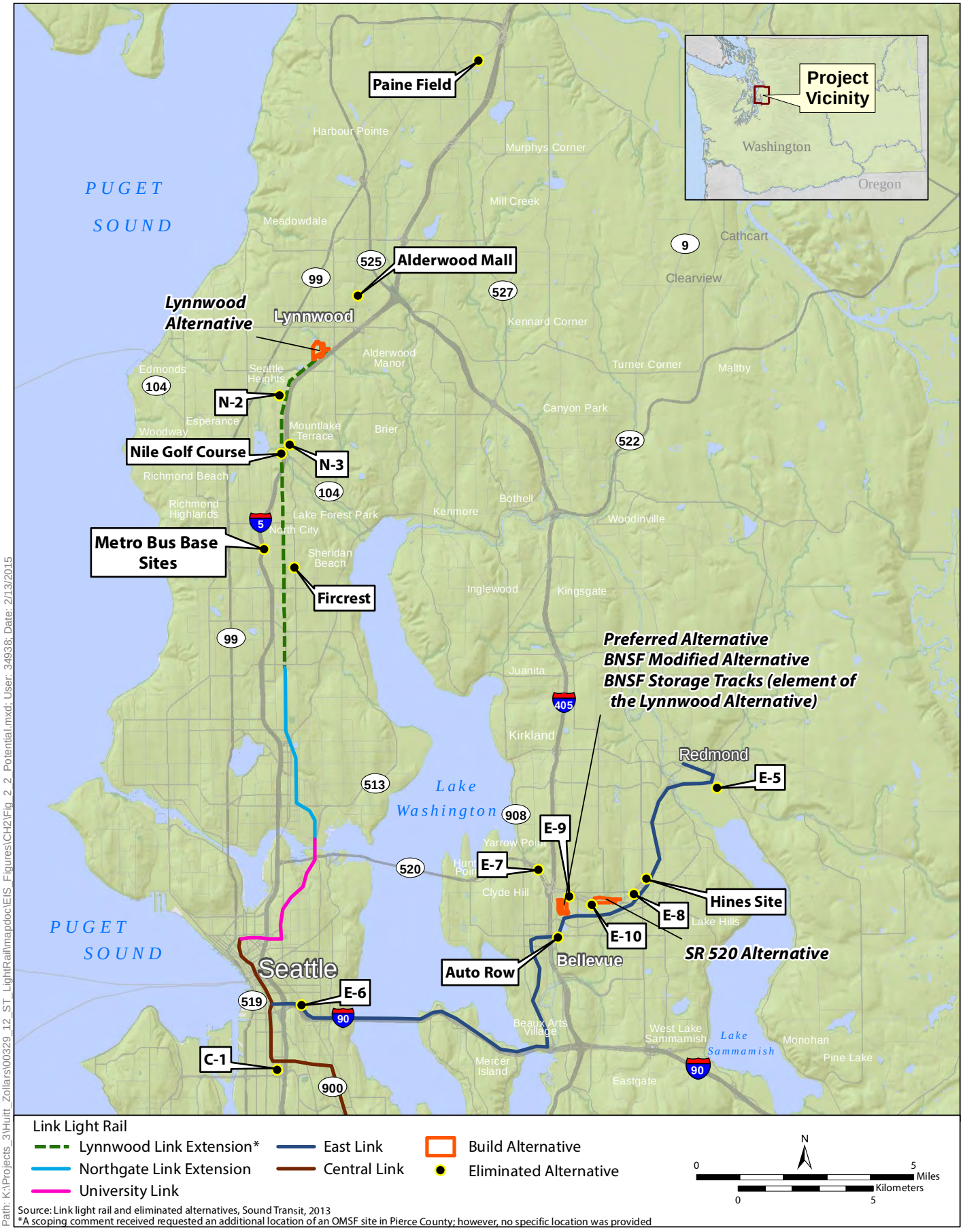
Additional details on potential alternatives identified and considered are included in the following documents, which are available on the Sound Transit project website (www.soundtransit.org/Projects-and-Plans/Link-Operations-and-Maintenance-Satellite-Facility/OMSF-document-archive).

- ***Link OMSF Sites Memo*** **(September 2012).** This report identifies potential site alternatives and associated information related to the land use, environmental, and physical site characteristics. It also evaluates each potential site with respect to system and facility operations (e.g., operating costs, efficiency, and reliability).
- ***Link OMSF Environmental Scoping Information Report*** **(September 2012).** This report describes the environmental scoping process and the potential site alternatives presented during the environmental scoping period.
- ***Sound Transit Board Memo OMSF Site Evaluation and Environmental Scoping Summary Report*** **(November 2012).** This report summarizes the environmental scoping process and public and agency comments received, including suggestions for site alternatives.

All sites identified as potential alternatives are shown in Figure 2-2. As illustrated in the figure, sites indicated with an N, C, or E are described in the *Link OMSF Sites Memo* (Sound Transit 2012c). Other sites were suggested during the environmental scoping period.

2.3.1 OMSF Storage Requirements

ST2 light rail expansion to Lynnwood, Kent/Des Moines, and the Eastside will require a fleet of approximately 180 LRVs. Sound Transit's current fleet of 62 LRVs can serve the extensions to the University of Washington and S 200th Street planned to open in 2016. The Forest Street OMF in Seattle has a storage capacity of 104 LRVs. The OMSF would need to accommodate approximately 90 vehicles to efficiently operate the ST2 system (about half of the 180 vehicles needed). The OMSF would also need to provide sufficient fleet capacity for expanding the light rail system beyond ST2 in the corridor where it is located.



Source: Link light rail and eliminated alternatives, Sound Transit, 2013
*A scoping comment received requested an additional location of an OMSF site in Pierce County; however, no specific location was provided

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Figure 2-2: Potential OMSF Sites
Sound Transit Link Light Rail OMSF Final EIS

The storage tracks are configured so each row stores two four-car trains (eight cars per row). To accommodate 90 cars, 12 rows are needed. As a result, all OMSF sites are designed with storage capacity for up to 96 LRVs.

The dimensions and configuration of a typical light rail operations and maintenance facility is primarily driven by the space required for a runaround track. The runaround track allows vehicles to enter the site and either go directly to the storage area or continue to the maintenance and/or wash bays for service and then return to the storage area directly without the operator changing ends of the train. The size is also driven by the size of the maintenance building and the number of storage tracks needed to accommodate the fleet. (The Forest Street OMF has 13 rows with eight cars per row.)

The following potential alternatives were evaluated against the screening criteria and eliminated from further consideration in the Draft EIS for the reasons stated. Additional detail on the potential alternatives described in Table 2-1 is included in the *Link OMSF Sites Memo* (Sound Transit 2012c). In addition, some comments received during the environmental scoping process suggested alternative sites that are also described in Table 2-1, but none of these alternatives meet the OMSF siting criteria.

Table 2-1. Potential and Suggested Alternatives during Public Scoping of the Draft EIS

Potential Alternative	Reason Not Advanced
C-1: Forest Street OMF	Expanding the Forest Street OMF by 10.86 acres could accommodate the storage tracks required for 80 more LRVs, but it would not provide the necessary space for maintenance functions. The entire ST2 fleet of 180 LRVs cannot be reliably or efficiently deployed from an expanded Forest Street OMF because of the limited capacity of deploying service to the Eastside. Finally, by consolidating the fleet at a single site, a system failure during the morning deployment could trap the entire fleet.
N-2: 220th St SW and I-5	This potential site is 17.5 acres, which does not meet the minimum acreage needed for the OMSF, and adjacent land is limited because the site is constrained on three sides by public arterial roads and Interstate 5 (I-5) on the east. The site assumes vacating 64th Avenue W between 200th Street SW and 224th Street SW. The site would require extensive grading and retaining walls to achieve topography suitable for the development of an OMSF.
N-3: 236th St SW and I-5	This potential site is 17.8 acres, which does not meet the minimum acreage needed for the OMSF, adjacent land is limited because the site is constrained by I-5 on the west and a public street on the north (overpass to I-5). The site is also constrained by critical areas to the south (wetlands and stream) and its irregular shape.
E-5: Redmond	The E-5 site is located 4 miles from the main East Link terminus at Overlake Transit Center that will be built during ST2. Developing this site would require building 4 miles of additional guideway with substantial capital and operating costs.
E-6: Dearborn St and Rainier Ave S	Site E-6 is approximately 9.95 acres, which does not meet the minimum acreage needed for developing an OMSF.

Potential Alternative	Reason Not Advanced
E-7: SR 520 & I-405	The E-7 site contains critical areas associated with Yarrow Creek, and steep slopes require extensive grading and recontouring. Access would require a long lead track (approximately 6,900 linear feet, 3,450 feet of track for each direction) that would affect efficiency of operations and increase capital costs. In addition, this site would require relocating and reconfiguring Northup Way.
E-8: 148th Ave NE and 20th Ave NE	Site E-8 contains areas of steep slopes and erosion hazard areas. The topography would require substantial earthwork. The site is composed of 11 land parcels in existing commercial retail and office uses, including a large anchor retail store (Fred Meyer) and several other restaurants and retail businesses. Development of this site would require substantial acquisition and relocation efforts. This site had the highest assessed value of all sites identified and evaluated.
E-9: Metro Bus Facility 120th Ave NE	The site is approximately 22.65 acres; however, a creek (west tributary of Kelsey Creek) meanders through the middle of the site and avoiding this area decreases the usable land by approximately 3.5 acres, which is below the minimum size required for it to be a viable alternative.
E-10: Northup Way and 130th Ave NE	Site E-10 contains some steep slopes, the southwest corner of the site is immediately adjacent to a wetland and stream (west tributary of Kelsey Creek), and substantial grading efforts would be required. The portion of the site adjacent to the East Link 130th Avenue Station is zoned for Residential Commercial Node 1, which represents the center of the Bel-Red Subarea, and is zoned for the highest density of transit-oriented mixed-use development. Thus, this location has the greatest incompatibility with the Bel-Red Subarea redevelopment goals and policies.
Auto Row: An approximately 22-acre site located along 116th Ave NE, south of NE 8th St in the City of Bellevue. The site is proximate to the East Link line.	This site is narrow at both ends, making it difficult to accommodate all required OMSF facilities and track work on the site. In addition, the City of Bellevue has secured funding and is advancing work on the NE 4th Street Extension Project, between 116th Avenue NE and 120th Avenue NE. This roadway extension project will bisect the suggested site into two separate, approximately 10-acre sites, making development of the OMSF at this location infeasible.
Near Alderwood Mall: This site is located north of I-5, south of 184th St SW, and east of 33rd Ave W in the City of Lynnwood.	This site is not proximate to the light rail line (the Alderwood Mall is approximately 1.5 miles or about 8,000 feet north of the Lynnwood Transit Center) and there is no funded light rail line extending north of Lynnwood Transit Center as part of ST2.

Potential Alternative	Reason Not Advanced
Near Paine Field: This site is located west of the Everett Mall in the City of Everett.	This site is not proximate to the light rail line and there is no funded light rail line serving the Paine Field area or other areas of Everett (north of Lynnwood Transit Center) as part of ST2.
Location of an OMSF Site in Pierce County: This site was suggested for somewhere in Pierce County, but specifics on location were not provided.	There is no location in Pierce County that is proximate to the light rail line as part of ST2. There is no funded light rail line in ST2 serving Pierce County other than Tacoma Link, which will not be connected to the greater light rail system as part of ST2.
Hines Site: This site is located northwest of SR 520 and east of 148th St in the City of Redmond.	The Hines Site is located northwest of State Route (SR) 520 on the Microsoft Campus, along East Link between the Overlake Village and Overlake Transit Center. The East Link alignment in this location runs in a retained cut on the southeast side of SR 520. The retained cut passes under the existing NE 31st/NE 36th Street bridge, which passes over SR 520 and provides access to this part of the Microsoft Campus. A connection to this site from the East Link line would necessitate substantial design revisions to the East Link main line guideway profile, such as spanning or tunneling under SR 520 to access this site. A connection to this site from East Link would have high capital costs and would create operational inefficiencies.
Fircrest Residential Habilitation Center for the Developmentally Disabled: This site is located along 15th Ave NE in the City of Shoreline.	This site is located along 15th Avenue NE in Shoreline, approximately 1.5 miles from the Lynnwood Link Extension. To access the site, a lead track would need to be constructed through single-family neighborhoods to the east of the Lynnwood Link Extension located in the I-5 corridor. A connection to this site from the Lynnwood Link Extension would have high capital costs, create operational inefficiencies, and result in impacts on residential neighborhoods.
Shoreline Metro Bus Base: An approximately 17-acre site located on the west side of I-5 at N 163rd St in the City of Shoreline.	This site is approximately 17 acres, which does not meet the minimum site size requirements. It is located on the west side of I-5 and the Lynnwood Link Extension in this vicinity on the east side of I-5. Access to the site would involve lead track spanning over or tunneling under I-5 travel lanes.
Nile Golf Course: This site is located on the west side of I-5 at the Snohomish/King County boundary in the City of Mountlake.	This site is on the west side of I-5 and the Lynnwood Link Extension in this vicinity on the east side of I-5. Access to the site would involve lead track spanning over or tunneling under I-5 travel lanes, which would have high capital costs and create operational inefficiencies.
Sources: Sound Transit 2012c; 2012d.	

Another alternative suggested during the environmental scoping period involved separating operations and maintenance functions on two smaller sites along each light rail extension north and east (i.e., a two-site OMSF option). Specific locations for two smaller facilities were not suggested. Although this suggestion was not identified for detailed evaluation in the Draft EIS by the Sound Transit Board, Sound Transit analyzed this suggestion in response to inquiries from partner

jurisdictions. The results of this analysis are included in Appendix F.1, *Additional Detail on the Two Site OMSF Option*, of this Final EIS.

The analysis concludes that the two-site option would require the following:

- More land in total than the individual site alternatives being studied in this Final EIS (approximately 34 acres total compared to 22 to 25 acres), associated with increases in property acquisition costs.
- $5 million more in annual operating costs due to the need for increased operations and maintenance staff to run the two facilities.
- Additional specialized equipment and facility features that become redundant and contribute to the increased annual operating and facilities maintenance costs.
- Higher capital costs (approximately $70 to $110 million).

As a result, the two-site option was not carried forward for review in the EIS.

Some comments received during the Draft EIS comment period suggested additional alternatives. The alternatives suggested during the Draft EIS public review are described in Table 2-2. None meet the OMSF siting criteria and/or purpose and need for the project.

Table 2-2. Potential and Suggested Alternatives during Public Review of the Draft EIS

Potential Alternative	Reason Not Advanced
Location of an OMSF to the north in Everett	Locations near Everett were previously considered during site screening. There is no funded light rail line serving areas of Everett (north of Lynnwood Transit Center) as part of ST2.
Location of an OMSF to the east in Redmond	Site E-5 in Redmond was previously considered during site screening. Developing a site in Redmond would require building additional guideway with substantial capital and operating costs.
Location of an OMSF to the south in Tacoma	Locations near Tacoma were previously considered during site screening. However, Tacoma Link will not be connected to the greater light rail system as part of ST2.
Location of an OMSF in downtown Seattle	The comment did not identify a particular location in downtown Seattle. Expanding the existing Forest Street OMF in Seattle was considered during site screening (Site C-1). An expanded or second facility in downtown Seattle would not allow the fleet of 180 vehicles to be reliably or efficiently deployed to serve the Eastside.
Location of an OMSF at Interstate 5 (I-5)/Alderwood Mall Parkway/State Route (SR) 525 intersection	A site near Alderwood Mall was previously considered during site screening. This specific location is not proximate to the light rail line and is approximately 1.5 miles north of the Lynnwood Transit Center. There is no funded light rail line extending north of the Lynnwood Transit Center as part of ST2.
Underground OMSF design	An underground OMSF would have prohibitive capital costs.

Source: Sound Transit 2014a.

2.4 ULI Advisory Services Panel and Stakeholder Concepts

In March 2014, Sound Transit sponsored an Urban Land Institute (ULI) Advisory Services Panel in Seattle. The panel was asked to identify and document transit-oriented development (TOD) and economic development opportunities and strategies around each build alternative site. The panel toured each site and surrounding area and interviewed staff from Sound Transit and the City of Bellevue, as well as other stakeholders. The City of Lynnwood staff declined to participate in the field tours and workshops held with the panel.

Afterward, the panel made observations and recommendations, including opportunities for design modifications at each build alternative site (Appendix F.5, *Advisory Services Panel Report*). Suggested modifications were focused on creating more space along street frontages, which would allow for redevelopment and/or site screening of the OMSF through preserving existing vegetation or creating a landscaped area. The panel addressed the potential for joint development, through either public-public or public-private partnerships, which could include overbuilding and decking at the OMSF to create a podium to support future development over portions of the facility. It noted that overbuilding may not be financially feasible, although it should be considered where the zoning would allow for sufficient height and density to recoup the initial investment in additional costs. It noted common community concerns and misperceptions regarding light rail maintenance facilities, such as noise, light, traffic, and 24-hour activity. It also noted the key to addressing these concerns is through collaboration with the community and design strategies, such as site orientation and layout, setbacks and landscaping, and architectural materials for buildings. Table 2-3 summarizes the concepts and observations made by the ULI Advisory Services Panel for each OMSF build alternative.

Table 2-3. Urban Land Institute Concepts and Observations

OMSF Alternative	ULI Advisory Services Panel Concepts and Observations
Preferred Alternative	"Slenderize" the build alternative site as practical, locate some OMSF track work in the Eastside Rail Corridor, and realign 120th Avenue NE to the east to create more buffer and/or developable space along 120th Avenue NE. Consider moving OMSF buildings to the north end of the site and concentrate parking on the south end to more readily accommodate potential overbuild on the south end of the site, closest to the East Link 120th Avenue Station node.
BNSF Modified Alternative	The panel decided to focus on the Preferred Alternative at this location and did not provide specific concepts or observations unique to the BNSF Modified Alternative.
SR 520 Alternative	Extend site footprint to the east to create space along 130th Avenue NE for daylighting Goff Creek and creating an open space "gateway" to Bel-Red. “Slenderize” the build alternative site by cantilevering the administrative building over the storage tracks and moving the operations building to the west.
Lynnwood Alternative	Consider joint development with Edmonds School District to colocate LRV and school bus maintenance and storage functions. Relocate planned school district administrative facilities to the future Lynnwood Transit Center light rail station area to activate TOD in Lynnwood urban center. Include landscaping along 52nd Avenue to create a buffer.

Source: Urban Land Institute 2014 (Appendix F.5).

Following the panel's work and completion of the Draft EIS comment period, including review of public and agency comments, the Sound Transit Board in July 2014 identified the BNSF Alternative as the OMSF preferred alternative for evaluation, along with the other build alternatives in the Final EIS (Motion 2014-51). The Board's action directed Sound Transit staff to maximize TOD potential on and surrounding the OMSF site, design the project to maximize compatibility with the *Bel-Red Subarea Plan* (City of Bellevue 2009), consider ULI recommendations, and work with the City of Bellevue and interested stakeholders "with the goal of developing a preliminary design that integrates the OMSF with the surrounding land uses."

Sound Transit and the City of Bellevue assembled a stakeholder group comprising agency personnel, former Bellevue Planning Department officials and Planning Commission members, neighboring property owners and neighborhood representatives, TOD advocacy representatives, and private developers advancing TOD in the vicinity of the 120th Avenue Station. The stakeholder group met three times in fall 2014. Table 2-4 summarizes four alternative concepts for the Preferred Alternative that were developed and discussed during the stakeholder meetings. At the conclusion of the stakeholder meetings, representatives of the group provided the Sound Transit Board with their collective recommendations.

All of the ULI Advisory Services Panel and stakeholder group recommendations have been considered, and some have been advanced into project design for the Preferred Alternative as described in Section 2.6.1, *Preferred Alternative*. Designs of the other build alternatives have not been modified in the Final EIS. If any of the other build alternatives were selected to be built, the ULI Advisory Services Panel recommendations for those build alternatives would be explored further and potentially incorporated into the OMSF layout and design. Where those recommendations could increase impacts (such as acquisition of additional property), decrease impacts (such as avoiding stream impacts), or enhance TOD opportunities at each site, these issues are described in the EIS for each resource area as applicable.

Table 2-4. OMSF Stakeholder Committee Concepts for the Preferred Alternative

Concept	Description	Benefits and Challenges
Scheme A-1	• North-south orientation, similar to the layout included in the Draft EIS • Considered moving rail car storage tracks on east side of site, nearest to 120th Avenue NE	• No impacts on Metro's East Base. • Creates development opportunities on the south end of the site, but limited opportunities along 120th Avenue NE. • Maintains OMSF schedule.
Scheme A-2	• North-south orientation, similar to the layout included in the Draft EIS • Considered realigning 120th Avenue NE to create developable space between the OMSF and 120th Avenue • Considered moving rail car storage tracks on east side of site, nearest to 120th Avenue NE	• Requires relocation of Metro's East Base. • Creates development opportunities on south end of the site and along 120th Avenue NE. • Maintains OMSF schedule. • Additional cost to realign 120th Avenue NE.

Concept	Description	Benefits and Challenges
Scheme B	• East-west orientation, to move the majority of the OMSF footprint outside of the 0.25-mile TOD zone centered on the East Link 120th Avenue Station	• Creates better frontage on the Eastside Rail Corridor. • Requires relocation of Metro's East Base. • Delays the OMSF schedule. • Requires more property acquisition than schemes A-1 and A-2.
Scheme C	• Split-site concept, locating maintenance buildings adjacent to the Eastside Rail Corridor, and rail storage tracks east of 120th Avenue NE. • Storage tracks would be decked over to allow development on top of this portion of the OMSF.	• Delays the OMSF schedule. • Would hinder development of the northern portion of the Spring District. • Requires two crossings of 120th Avenue NE. • Most expensive scheme.

Source: Sound Transit Stakeholder Meeting Summary Reports, 2014b
TOD = transit-oriented development

2.5 No Build Alternative

This EIS evaluates a No Build Alternative, as required under NEPA and SEPA, to represent the transportation system and the environment as they would exist without the proposed project. The No Build Alternative provides a baseline against which the other alternatives can be compared. It includes projects and proposals that are expected to be built by 2035. For transportation improvements, this includes projects identified in regional and local transportation improvement programs with identified funding for implementation. Local land use or site development proposals are considered part of the No Build Alternative by virtue of completed project-level environmental review and land use or building permit approvals.

The No Build Alternative includes light rail transit improvements included in ST2, including light rail extensions to Lynnwood, Overlake Transit Center, and Kent/Des Moines, but an OMSF would not be built. The operations and maintenance support needs for the existing and currently planned and funded Link light rail system would be served exclusively by the Forest Street OMF south of downtown Seattle, which has the capacity to maintain up to 104 LRVs. Overnight storage of up to 16 LRVs would be built along the Eastside Rail Corridor as currently designed in East Link. The East Link facility would provide for overnight storage and vehicle operator parking, but it would not provide LRV maintenance functions. The No Build Alternative assumes a maximum light rail fleet size of 104 LRVs, because this is the design capacity for vehicle maintenance at the Forest Street OMF. The No Build Alternative LRV fleet is approximately 76 fewer vehicles than the minimum number of LRVs (approximately 180) needed to operate the system at planned service levels under ST2. The No Build Alternative assumes that all LRVs would be deployed from the Forest Street OMF at the beginning of service each day, except for the 16 LRVs deployed directly from the East Link storage track along the Eastside Rail Corridor.

2.6 Build Alternatives

The Sound Transit Board of Directors considered the proposed project's purpose and need, the physical and operational requirements of the OMSF and associated site screening criteria, and EIS scoping comments and suggestions provided by agencies and the public. In December 2012, the Sound Transit Board adopted Motion M2012-82, which identified four build alternatives for detailed evaluation in the Draft EIS. The EIS discusses the potential environmental impacts that may result from construction and operation of the proposed project under each of these build alternatives. Chapter 4, *Alternatives Analysis*, also discusses how each alternative meets the goals and objectives developed for the proposed project. The locations of the four build alternative sites are shown in Figure 2-3 and features that would be included in the OMSF are described in Section 2.2.2.1, *OMSF Features*.

Three of the four build alternatives would include high-capacity transit improvements to the Eastside Rail Corridor south of SR 520 and north of NE 12th Street in the City of Bellevue. The Eastside Rail Corridor is "railbanked," which permits interim trail use, utility infrastructure, and other compatible uses of the corridor, while keeping it available for reactivation of freight rail service in the future. Sound Transit now owns this portion of the Eastside Rail Corridor subject to King County's trail easement and reactivation rights. Potential high-capacity transit uses in the corridor evaluated in this Final EIS are consistent with the shared uses allowed under the corridor's easement provisions and envisioned by the Eastside Rail Corridor Regional Advisory Council (2013).

2.6.1 Preferred Alternative

Under the Preferred Alternative, Sound Transit would construct the OMSF on property located between the Eastside Rail Corridor on the west and 120th Avenue NE on the east, south of SR 520 and north of NE 12th Street in the City of Bellevue. This site is approximately 28 acres, including 2 acres of the Eastside Rail Corridor now owned by Sound Transit, and is located along the adopted East Link revenue line northwest of the 120th Avenue Station. The OMSF development footprint is approximately 21 acres leaving approximately 6 acres for redevelopment at the southern end of the site. One additional acre at the northern end of the site is planned to be used for development of an interim trail. A conceptual layout is shown in Figure 2-4a and an aerial view is shown in Figure 2-4b.

Sound Transit Board Motion M2014-51 directed staff to prioritize and incorporate agency and community TOD potential consistent with the Sound Transit TOD Policy (Resolution R2012-24).

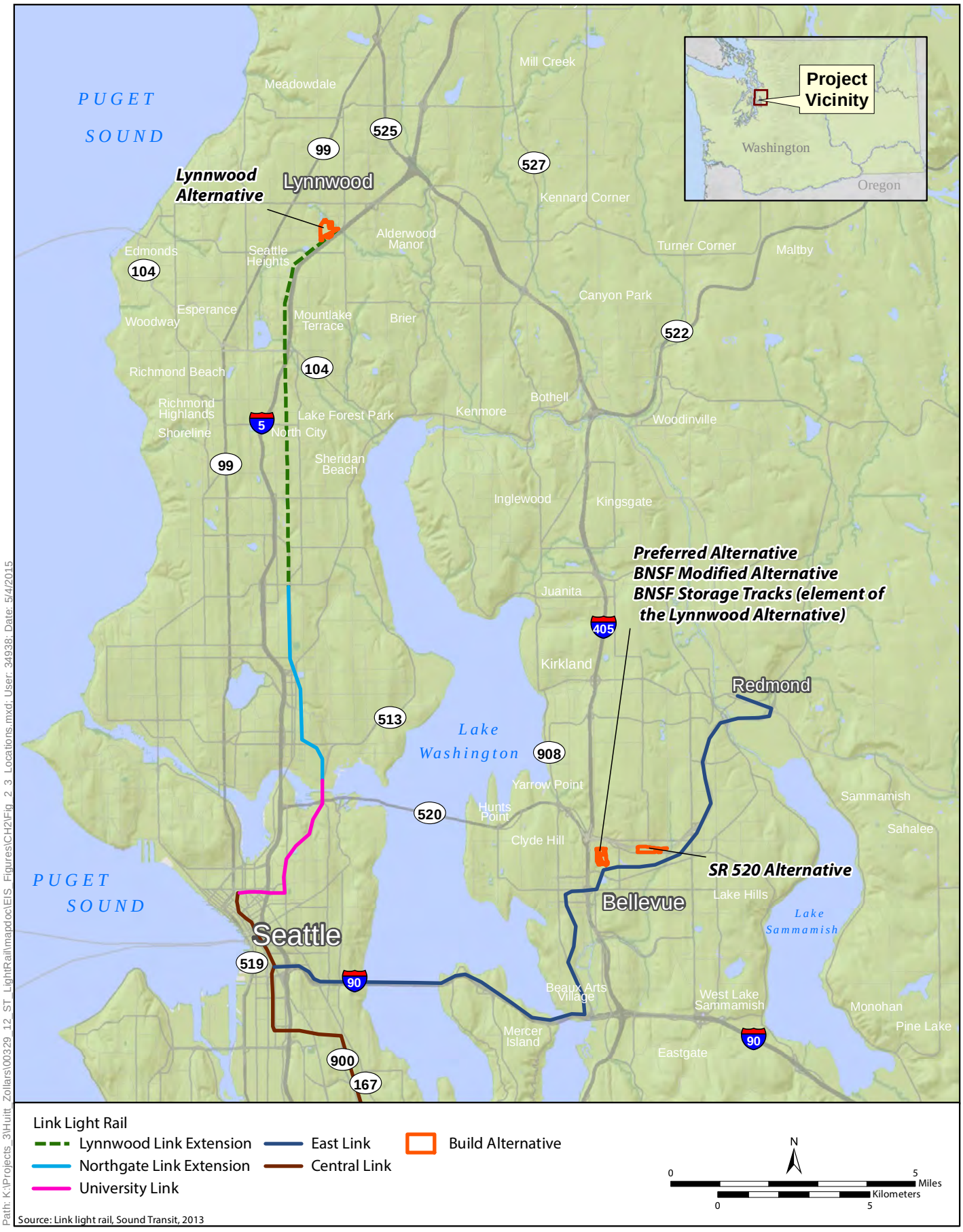

Figure 2-3: Locations of the Build Alternatives
Sound Transit Link Light Rail OMSF Final EIS

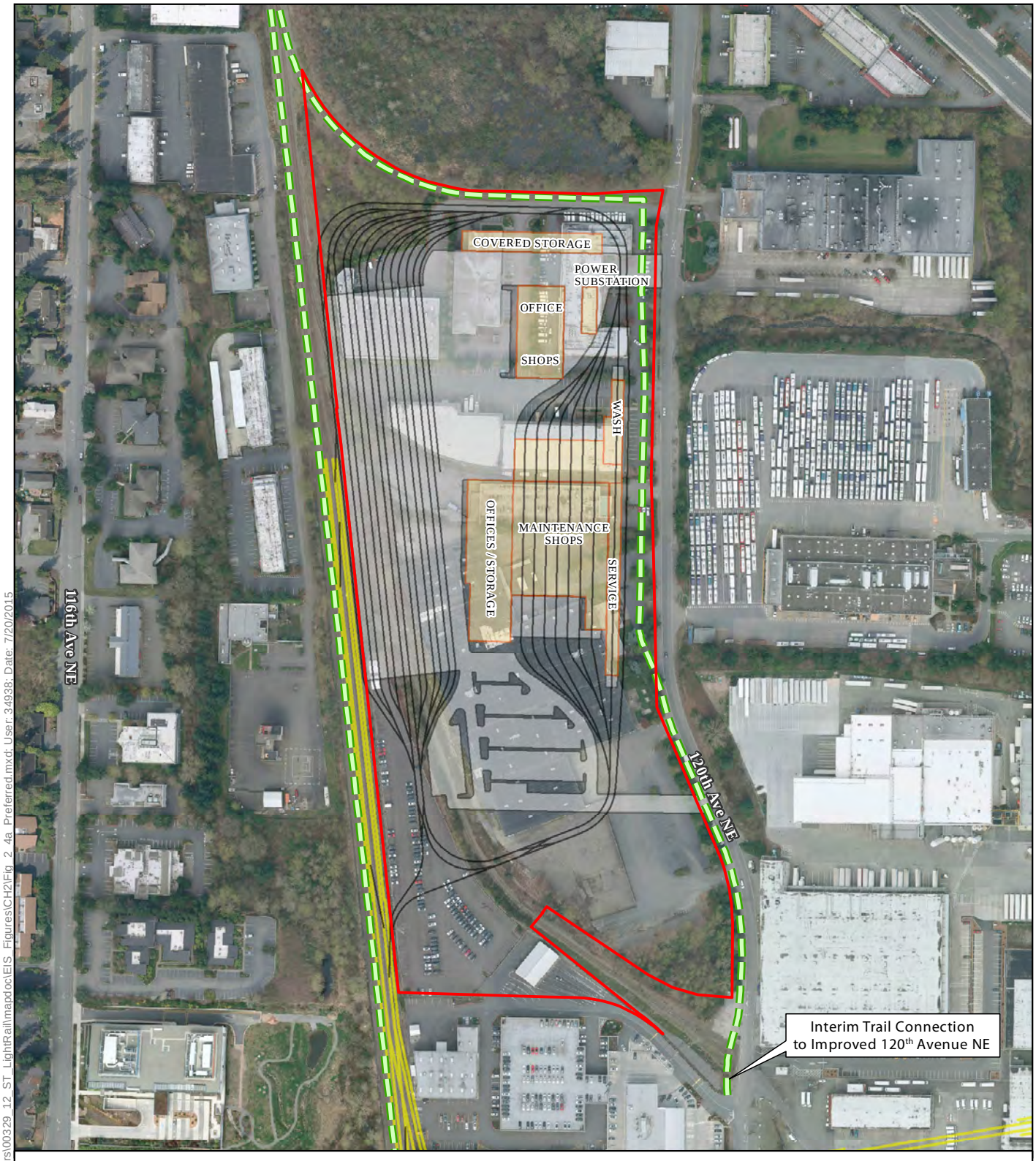

Figure 2-4a: Preferred Alternative
Sound Transit Link Light Rail OMSF Final EIS

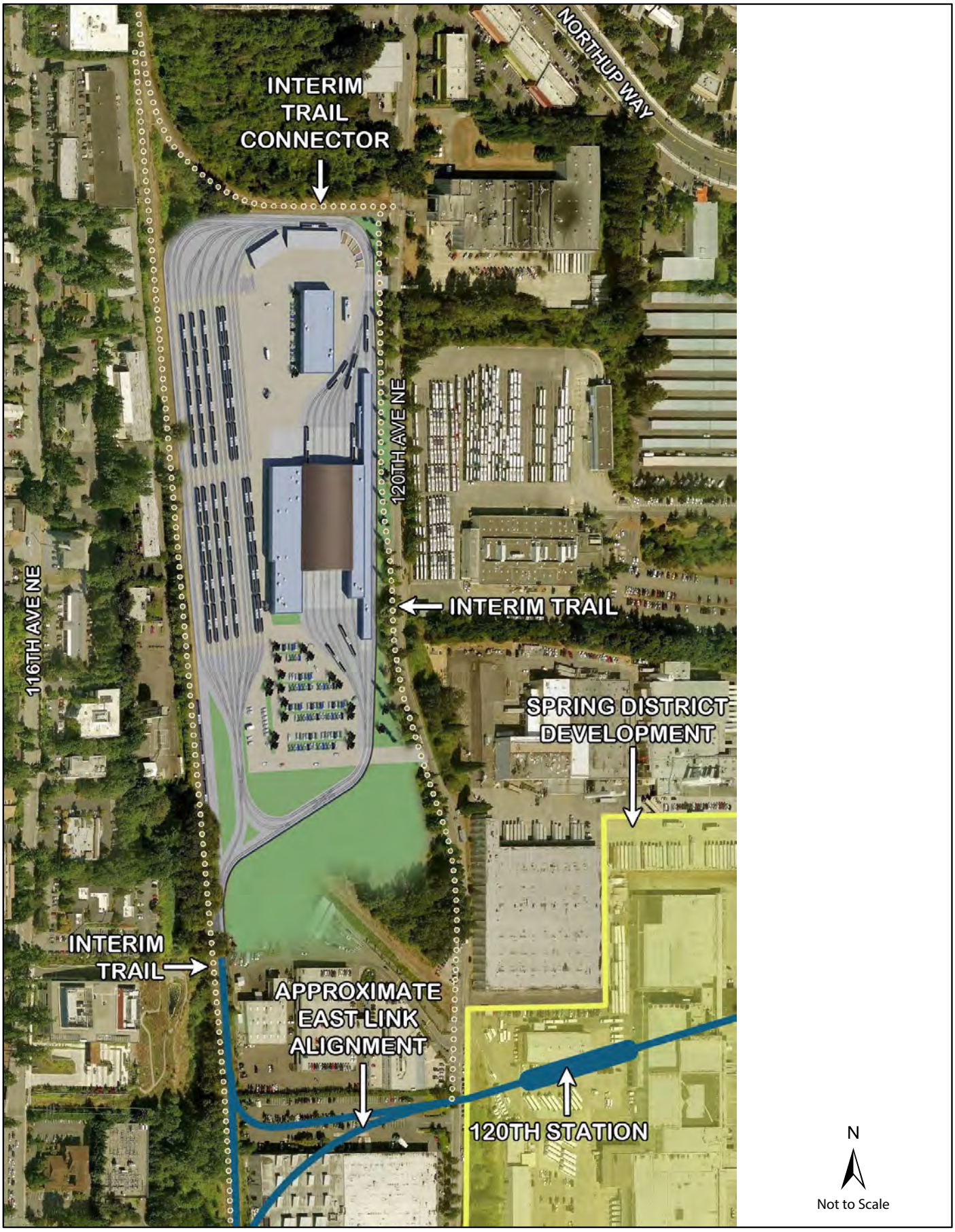

Figure 2-4b: Preferred Alternative—Aerial View
Sound Transit Link Light Rail OMSF Final EIS

Since the Draft EIS, the project team has refined the site design and layout to incorporate key concepts identified during the ULI and stakeholder work, as well as ongoing coordination with the City of Bellevue:

- It reduced the facility footprint by approximately 9% (from 23 to 21 acres).
- It moved the OMSF buildings to the north to allow more land for TOD at the southern portion of the site, nearest to the East Link 120th Avenue Station area.
- It set back the OMSF footprint an additional 25 feet from 120th Avenue NE to allow more opportunity for site screening and frontage improvements.
- It revised the maintenance building location and configuration to avoid building over an existing King County sanitary sewer trunk line.

In addition, the Preferred Alternative includes project elements identified during the Stakeholder Process, which make the OMSF more compatible with the vision and policies of the *Bel-Red Subarea Plan* (City of Bellevue 2009). The subarea plan calls for concentrating TOD in station areas (i.e., station nodes), creating pedestrian and bicycle connectivity between light rail station areas and the future regional trail in the Eastside Rail Corridor, and restoring streams and open space as properties in the Bel-Red Subarea are redeveloped.

The Preferred Alternative includes the following elements that address these objectives:

- Onsite infrastructure would be designed to facilitate potential future development on or adjacent to the OMSF, such as utility stub-outs and a structural shear wall to support future building over part of the facility. Specific proposals for developing property on or adjacent to the OMSF would undergo their own separate, project-level environmental review, land use approvals, and design review by the City of Bellevue.
- A setback from 120th Avenue NE to minimize the bulk and scale of the façade and allow visual screening from adjacent properties. The service and wash bays that front 120th Avenue NE would be set back approximately 80 feet or more from the roadway and would be approximately 22 feet high. The vehicle maintenance shops, LRV roof maintenance shop, and offices west of the service and wash bays have modulated increases in building height (from approximately 26 to 40 to 32 feet, respectively). The OMSF frontage along 120th Avenue NE would have a decorative fence set back approximately 60 feet from the roadway. The area between the roadway and the fence would be landscaped to screen the trackwork, OCS wires, and buildings and would also include a multipurpose pathway for pedestrians and bicyclists. Existing mature trees and landscaping along 120th Avenue NE would be preserved as practicable.
- Three interim trails: One in the Eastside Rail Corridor from the pedestrian connection between the Hospital Station and 116th Avenue N to SR 520 would be developed (in coordination with King County Metro) approximately 10 feet wide, made of crushed gravel, and located on the existing railbed; a second along the north side of the OMSF on an abandoned rail spur to

connect the Eastside Rail Corridor and 120th Avenue NE; and a third in the landscaped frontage along 120th Avenue NE, to connect to the East Link 120th Avenue Station (Figure 2-4c).

- Improvements to allow the eventual daylighting of a portion of the West Tributary of Kelsey Creek. The stream is located in the wetland complex north of the Preferred Alternative site, and flows in a pipe under and parallel to 120th Avenue NE for approximately 340 feet, before discharging to an open channel on the east side of 120th Avenue NE. The Preferred Alternative design would include a northern access driveway and a north interim trail connection to accommodate an approximate 65-foot-long fish-passable culvert. The creek could then be realigned and daylighted by others for approximately 350 feet when the City of Bellevue implements planned realignment and improvements to 120th Avenue NE.

The differences in direct impacts between the BNSF Alternative evaluated in the Draft EIS and the Preferred Alternative are minor. One additional vacant parcel would be acquired, but no additional business displacements would occur. Wetland impacts would be greater, but largely as a result of better information gathered during development of the Final EIS rather than changes to the Preferred Alternative design. The maintenance offices and shops building would be two stories rather than one, similar to the BNSF Modified Alternative.

The reduction in size overall would reduce the amount of impervious area; and the greater roadway setback and landscaping would reduce potential for visual impacts for the Preferred Alternative. The inclusion of an interim trail in the Eastside Rail Corridor would result in different, beneficial impacts on recreational resources. There would not be differences in direct impacts for traffic, light rail operations, land use, economics, social/community facilities, air quality, noise and vibration, energy, geology and soils, hazardous materials, electromagnetic fields, public services, utilities, or historic and archaeological resources.

2.6.2 BNSF Modified Alternative

Under the BNSF Modified Alternative, Sound Transit would construct the OMSF on both sides of the Eastside Rail Corridor west of 120th Avenue NE on the east, south of SR 520 and north of NE 12th Street in the City of Bellevue. This site is located along the adopted East Link revenue line and is approximately 34 acres, including 2 acres of Eastside Rail Corridor now under Sound Transit ownership. The OMSF development footprint on the site is approximately 24 acres leaving approximately 8 acres for future redevelopment. The storage tracks would be located on the western portion of the site, west of the rail corridor. Other OMSF facilities would be located adjacent to the east side of the rail corridor, leaving the frontage area along 120th Avenue NE available for other development. The design acknowledges the railbanked status of the Eastside Rail Corridor by allowing sufficient width and vertical clearances to accommodate a future trail or freight rail use of the corridor, as well as existing utilities in the corridor. A conceptual layout of this site is shown in Figure 2-5a and an aerial view is shown in Figure 2-5b.

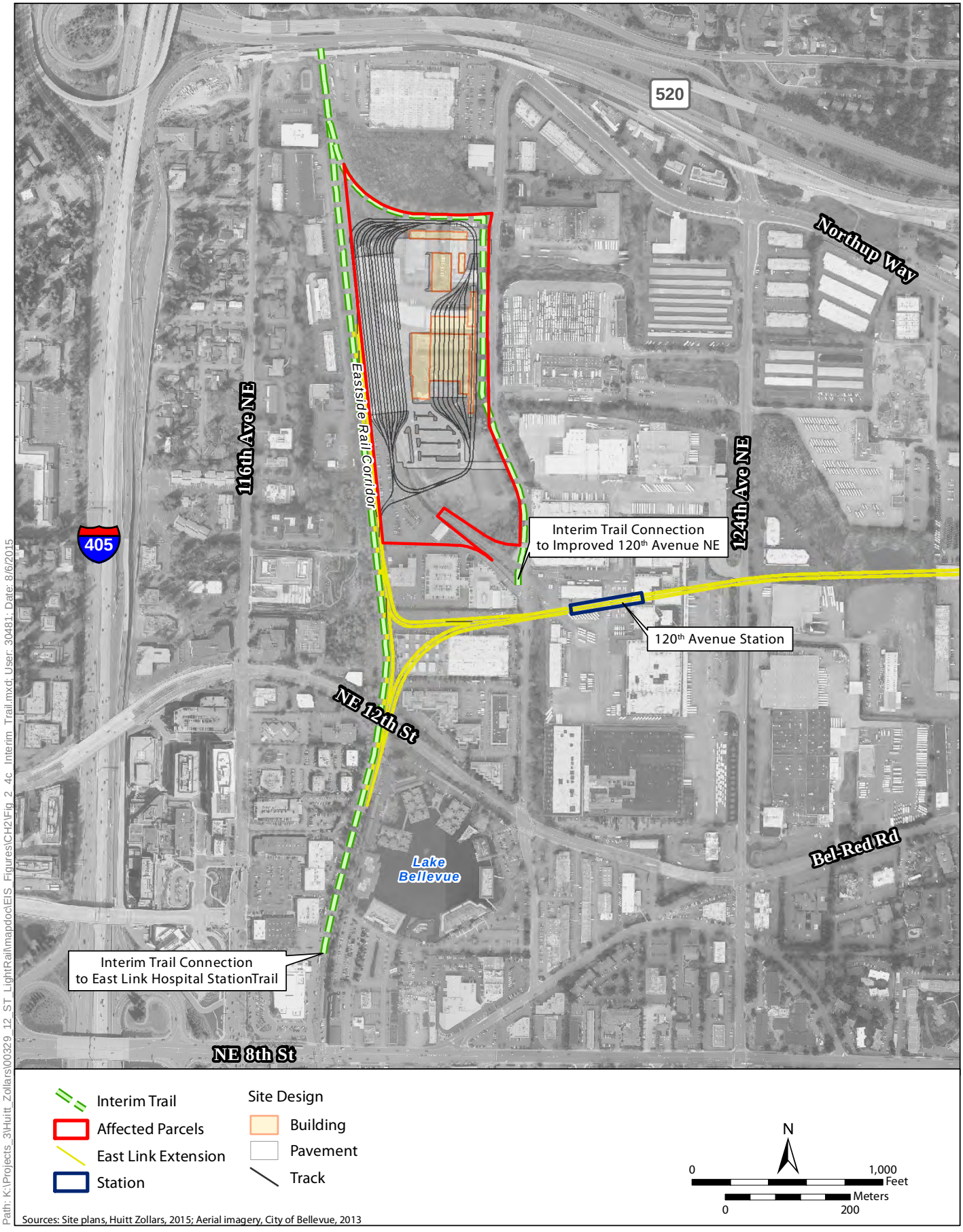

Figure 2-4c: Proposed Interim Trail in the Eastside Rail Corridor
Sound Transit Link Light Rail OMSF Final EIS

Figure 2-5a: BNSF Modified Alternative
Sound Transit Link Light Rail OMSF Final EIS

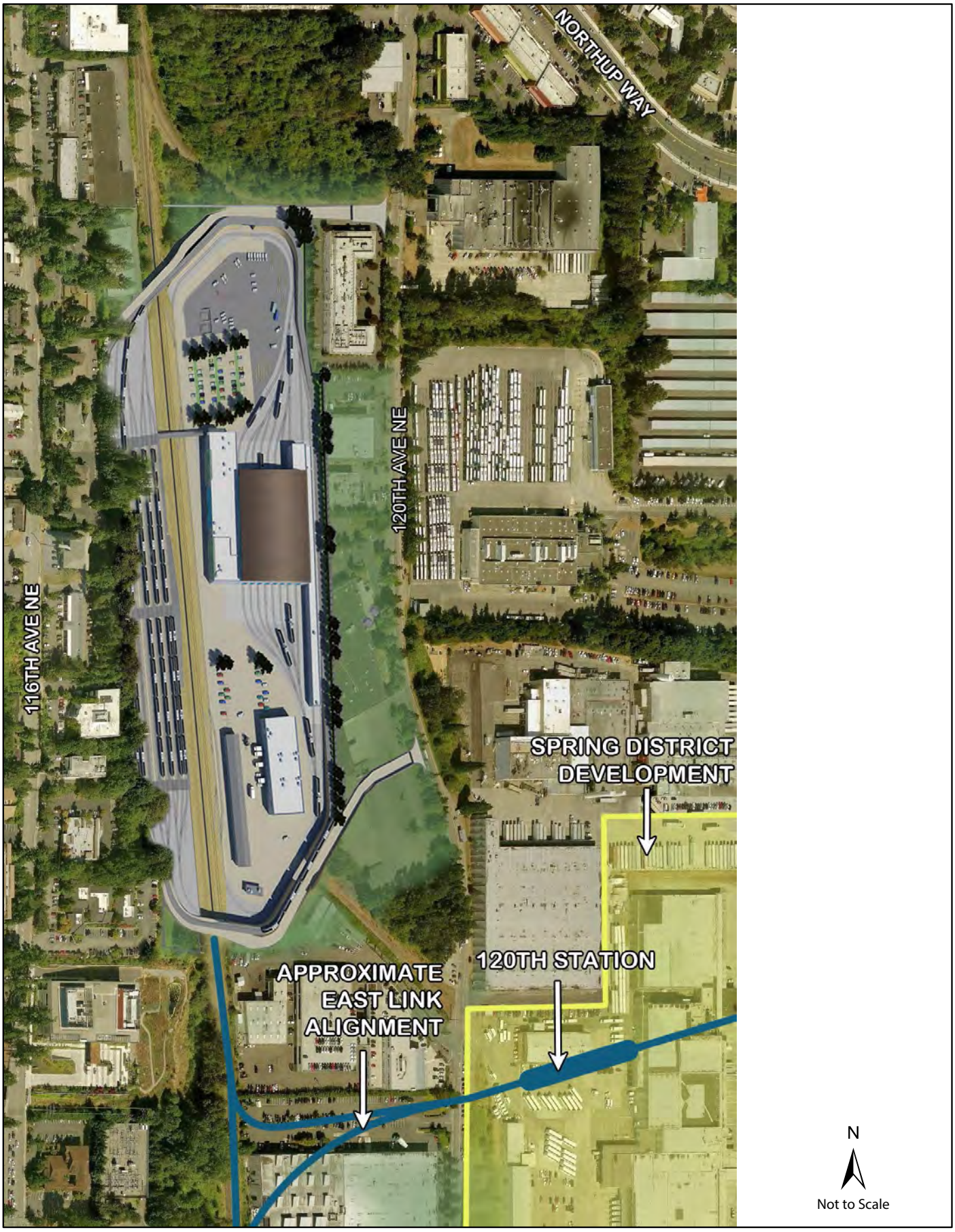

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Figure 2-5b: BNSF Modified Alternative—Aerial View
Sound Transit Link Light Rail OMSF Final EIS

As described in Table 2.3, the ULI Advisory Services Panel did not make specific recommendations for the BNSF Modified Alternative because the layout of the build alternative was specifically designed to maximize TOD potential at the south end of the site and along the frontage of 120th Avenue NE.

2.6.3 SR 520 Alternative

Under the SR 520 Alternative, Sound Transit would construct the OMSF south of SR 520 and north of Northup Way/NE 20th Street, east of 130th Avenue NE and west of 140th Avenue NE in the City of Bellevue. This site is located along the adopted East Link revenue line and is approximately 25 acres. The OMSF development footprint encompasses the entire site, leaving no substantial area for redevelopment. A conceptual layout of this site is shown in Figure 2-6a. Primary access to the site would be directly off of NE 20th Street west of 136th Place NE. The configuration of buildings under this alternative would vary from the other alternatives in that the operations offices would be in a separate building to the west of the LRV maintenance shops, and the LRV covered wash and service bay would be in a separate building east of the LRV maintenance shops as shown in Figure 2-6a. An aerial view is shown in Figure 2-6b.

Based on the concepts identified during the ULI Advisory Services Panel work and subsequent coordination with the City of Bellevue, the SR 520 Alternative site layout could be revised by shifting the OMSF to the east and making it narrower. This would allow for the potential daylighting of Goff Creek and create a greater buffer along the frontage of Northup Way. However, it would also displace additional businesses and the TOD potential at the alternative site would remain limited.

2.6.4 Lynnwood Alternative

The Lynnwood Alternative would be north of I-5 and east of 52nd Avenue/ W Cedar Valley Road in the City of Lynnwood. The OMSF footprint for the Lynnwood Alternative would require approximately 24 acres of land. Approximately 41 acres would need to be acquired, given existing parcel boundaries, and approximately 4 acres are designated as wetlands and wetland buffers, leaving approximately 13 acres for redevelopment. The Lynnwood Link Extension would be located along the Lynnwood Alternative site for the OMSF.

The Lynnwood Alternative for the OMSF also includes LRV storage, operator report facilities, and interior cleaning functions for up to 32 LRVs at a separate location (referred to as the BNSF Storage Tracks, a component of the Lynnwood Alternative). The BNSF Storage Tracks would be located north of NE 12th Street and south of SR 520 in the City of Bellevue, within the Sound Transit-owned portion of the Eastside Rail Corridor and on an adjacent property located immediately east of the Eastside Rail Corridor to provide morning service to the Eastside. The design acknowledges the railbanked status of the Eastside Rail Corridor by allowing sufficient width to accommodate a future trail or freight rail use of the corridor, as well as existing utilities in the corridor. Conceptual layouts of the Lynnwood Alternative for the OMSF with the Lynnwood Link Extension alignment, an aerial view of the Lynnwood Alternative site, and the BNSF Storage Tracks are shown in Figures 2-7a through 2-7c, respectively.

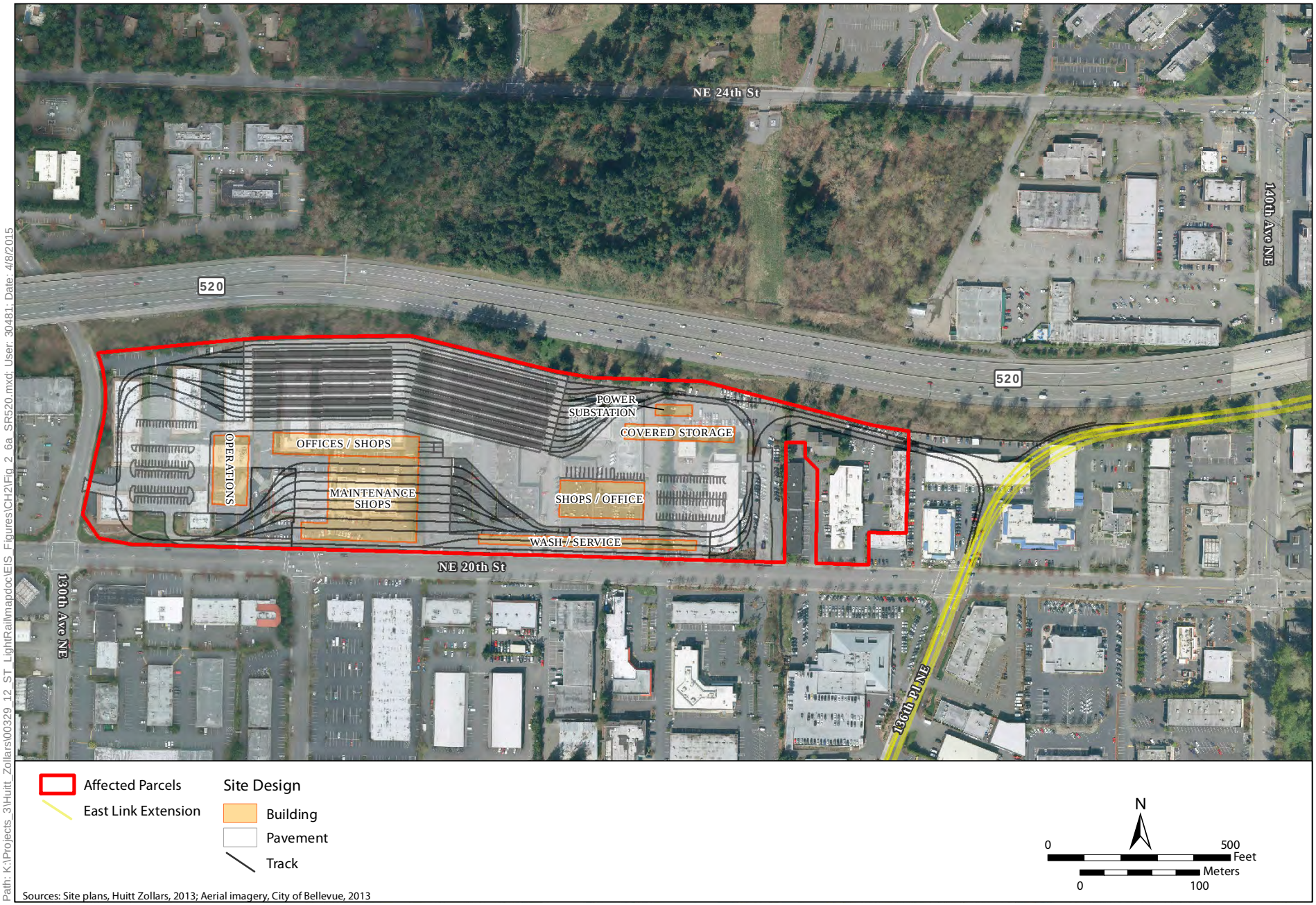

Figure 2-6a: SR 520 Alternative
Sound Transit Link Light Rail OMSF Final EIS

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Figure 2-6b: SR 520 Alternative—Aerial View
Sound Transit Link Light Rail OMSF Final EIS

Figure 2-7a: Lynnwood Alternative with Lynnwood Link Extension Alignment
Sound Transit Link Light Rail OMSF Final EIS

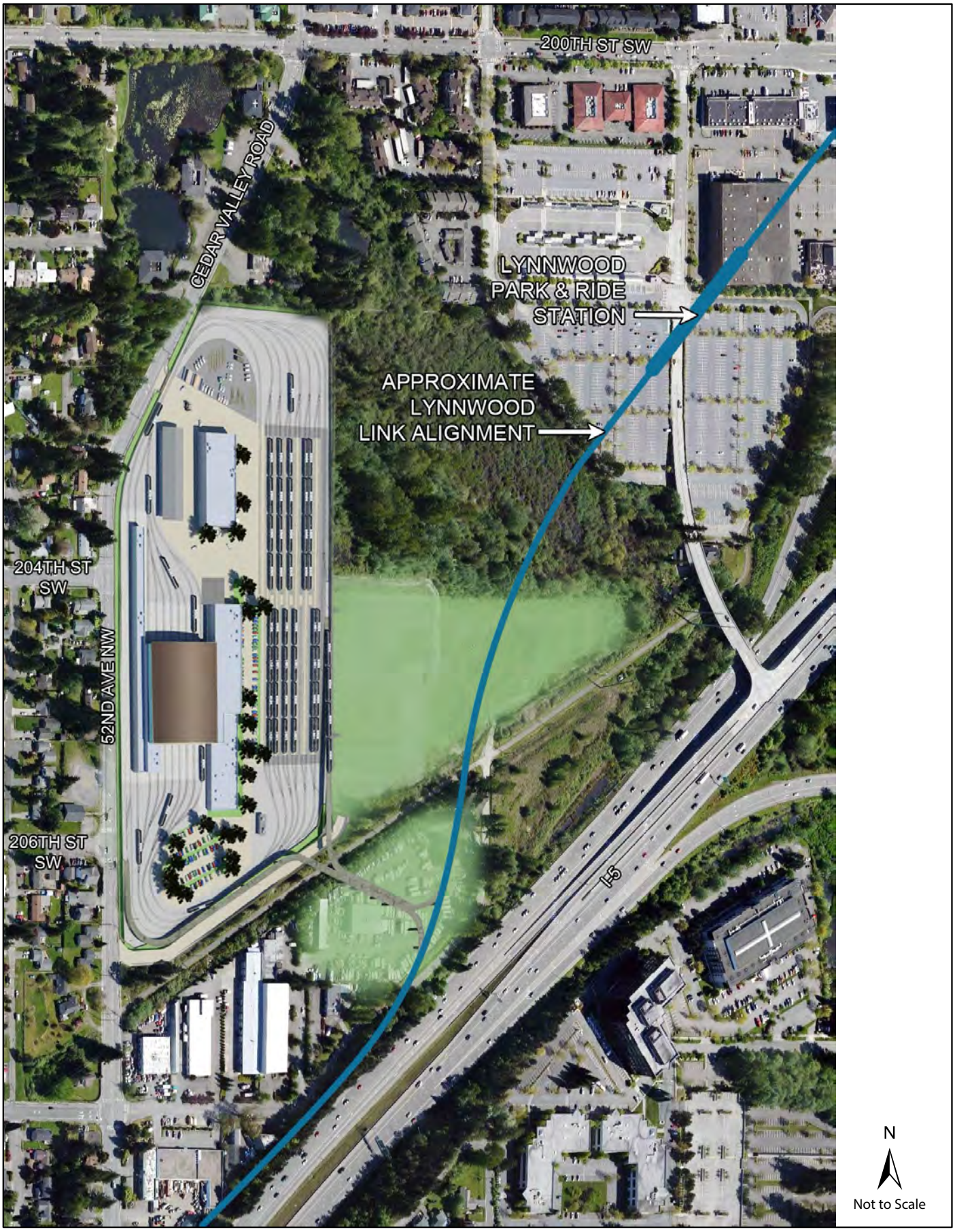

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Figure 2-7b: Lynnwood Alternative with Lynnwood Link Extension Alignment—Aerial View
Sound Transit Link Light Rail OMSF Final EIS

Figure 2-7c: Lynnwood Alternative, BNSF Storage Tracks*
Sound Transit Link Light Rail OMSF Final EIS
*The BNSF Storage Tracks are located in Bellevue

Based on the concepts identified during the ULI Advisory Services Panel work, the Lynnwood Alternative could be revised to allow for co-location of school district bus maintenance facilities on the same site. This would require the school district administrative buildings to be developed nearer to the Lynnwood Transit Center, closer to the City Center where TOD has been planned. This concept would not result in surplus land at the OMSF in Lynnwood and would require cooperation of the district.

2.7 Overview of Construction Approach

This section provides an overview of potential construction activities and timing. Construction activities would include civil construction, systems installation, testing, and startup activities. Site preparation, primary construction, and finish construction would take place during the civil construction phase.

Major construction activities are as follows.

- Demolition (buildings, pavement)
- Clearing and vegetation removal
- Installing erosion siltation control best management practices (BMPs)
- Fill and excavation
- Utility extensions, relocations, or disruptions
- Drainage changes
- Construction activity in or near a water body or sensitive area
- Elevated structure construction
- Retaining wall construction
- Pile driving or auguring piles
- Temporary partial road or lane closures and detour routes
- Temporary, partial, or limited access
- Delivery of materials and equipment

2.7.1 Construction Sequence and Activities

A construction plan will be developed at the end of the preliminary engineering phase of the project to establish the various construction phases and construction contracts, their estimated schedule and duration, and appropriate sequencing. Major construction activities would demolish existing buildings, relocate utilities, and grade and excavate the site. The next phase of construction would include installing track work and electrical systems (overhead catenary system power lines, etc.) and constructing OMSF buildings.

Typical construction would occur on a 5- to 6-day work week schedule and would occur primarily during daytime hours. In some situations (such as when street detours are involved or when daytime construction periods need to be abbreviated to reduce impacts), additional shifts, all-week, nighttime, or 24-hour construction activities could be necessary.

Excess excavated material would be removed and hauled to a permitted disposal site. Truck hauling would require a loading area, staging space for trucks awaiting loading, and provisions to prevent tracking soil on public streets. Truck haul routes would require approval by local jurisdictions. This would allow surface hauling activities to be concentrated during daytime periods to minimize potential impacts from noise on sensitive receptors such as residences, or to avoid peak traffic periods.

2.7.2 Staging Areas and Construction Easements

No offsite staging areas or construction easements would be required to construct the OMSF for the Preferred Alternative or the BNSF Modified Alternative. Construction of these alternatives is anticipated to take place within the footprint of the property being acquired for the proposed project. The Lynnwood Alternative would require additional staging areas in the form of easements for access, construction work, and placement of support columns, associated footings, and elevated guideway across the Interurban Trail that would provide light rail access between the OMSF and the Lynnwood Link Extension revenue service line. Temporary construction easements from WSDOT may be required for the SR 520 Alternative.

2.8 Consideration of Other Relevant Sound Transit Projects

2.8.1 Lynnwood Link Extension

As part of ST2, Sound Transit is extending light rail 8.5-miles from Northgate to Lynnwood. The *Lynnwood Link Extension Draft EIS* was published and provided to the public for review in July 2013, and the *Lynnwood Link Extension Final EIS* (Sound Transit 2015) evaluated the preferred alternative and all other Lynnwood Link alternatives studied in the Draft EIS. Preliminary engineering design has been completed and on April 23, 2015, the Sound Transit Board selected the project to be built by adopting Motion M2015-33. FTA issued the Record of Decision (ROD) in July 2015. Final design of the extension is anticipated to begin in 2016 and construction is expected from 2018 to 2023. The start of service is targeted for 2023, and the proposed project for the OMSF would need to be completed before that to support the planned levels of light rail service.

For purposes of this EIS and due to Lynnwood Link Extension's geographical location in relation to the proposed OMSF, the environmental impacts determined for the Lynnwood Link Extension are included in the cumulative impact analysis of this EIS. Cumulative impacts are discussed throughout Chapter 3, *Affected Environment and Environmental Consequences*.

2.8.2 East Link

As part of ST2, East Link will expand light rail from downtown Seattle to the Eastside with stations serving Mercer Island, south Bellevue, downtown Bellevue, Bel-Red, and Redmond's Overlake area. This expansion will connect to the existing Link light rail system between downtown Seattle and Sea-Tac Airport. East Link is designed to provide storage for up to 16 LRVs in the Eastside Rail Corridor north of NE 12th Street in Bellevue, at the same location identified as the BNSF Storage Tracks under the Lynnwood Alternative site and adjacent to the Preferred Alternative and BNSF Modified Alternative sites for the proposed project. If any of the OMSF build alternatives is selected to be built, the storage for 16 LRVs in the Eastside Rail Corridor would be removed from the East Link project.

The Final EIS and associated FTA and Federal Highway Administration (FHWA) ROD documents for East Link were issued in 2011, and the project has entered final design. Early work such as utility relocation in some areas began in 2015. Major construction of this extension is planned for 2016 to 2022. For this extension of light rail to deliver its planned level of service, the OMSF would provide the needed LRV maintenance and storage necessary to support the system. Therefore, the proposed OMSF would need to be operational by the end of 2020 to accept delivery of new LRVs and support break-in and testing procedures for those LRVs.

For purposes of this EIS and due to East Link's geographical location in relation to the proposed OMSF, the environmental impacts that have been determined for East Link are included in the cumulative impact analysis of this EIS, which is provided throughout Chapter 3, *Affected Environment and Environmental Consequences*.

This Final EIS uses the temporary working names for the East Link stations. On June 25, 2015, the Sound Transit Board adopted permanent names for East Link stations (Motion M2015-58), as shown in Table 2-5.

Table 2-5. East Link Stations

Temporary Working Station Name	Permanent Station Name
Rainier Station	Judkins Park Station
Mercer Island Station	Mercer Island Station
South Bellevue Station	South Bellevue Station
East Main Station	East Main Station
Bellevue Transit Center Station	Bellevue Downtown Station
Hospital Station	Wilburton Station
120th Station	Spring District/120th Station
130th Station	Bel-Red/130th Station
Overlake Village Station	Overlake Village Station
Overlake Transit Center Station	Redmond Technology Center Station

2.8.3 Federal Way Link Extension

As part of ST2, Sound Transit is extending light rail from the Angle Lake Station in SeaTac (under construction) to the south, approximately 2.5 miles to Kent/ Des Moines. While ST2 funding is only available to extend light rail to Kent/ Des Moines, Sound Transit and FTA issued the *Federal Way Link Extension Draft EIS* in April 2015, which studies alternatives that would extend approximately 7.6 miles south to the Federal Way Transit Center. The OMSF, in combination with the Forest Street OMF in Seattle, would provide storage and maintenance for the light rail fleet serving the Federal Way Link Extension. There are no OMSF alternatives near this extension. For most topics focused on site-specific impacts, the potential environmental impacts identified for the Federal Way Link Extension are not relevant to the OMSF and are not included in the cumulative impact analysis of this EIS. Exceptions include impacts of a regional nature (such as air quality, or system-wide light rail operations).

2.9 Environmental Commitments and Sustainability

As an agency that has built and operated light rail, commuter rail, and regional express bus service in multiple Puget Sound communities, Sound Transit has established programs, best practices, and policies that are incorporated as part of the OMSF. These include the agency's sustainability and environmental management programs (as outlined in Sound Transit's Sustainability Program) and a commitment to satisfying all applicable laws and regulations and mitigating significant adverse environmental impacts responsibly and reasonably, consistent with Sound Transit's policies.

The key goals of Sound Transit's sustainability and environmental management programs are to protect the environment and create a healthy community and economy. The agency's core mission of moving people on transit is the most important action the agency can take to improve the local environment, connect communities, reduce sprawl, and enable citizens to thrive within their means by saving dollars on transportation. The agency is also working to conserve resources and incorporate sustainability into everyday operations.

In 2004, the Sound Transit Board adopted an environmental policy for the agency that applies to all activities, from planning and design to construction and operations.

The policy commits Sound Transit to protecting the environment for present and future generations by doing the following:

- Being in full compliance with all environmental laws and regulations and strive to exceed compliance by the continual improvement of our environmental performance through cost-effective innovation and self-assessment.
- Restoring the environment by providing mitigation and corrective action, and monitor to ensure environmental commitments are implemented.
- Improving its ability to manage and account for environmental risk.
- Avoiding environmental degradation by minimizing releases to air, water, and land.

- Preventing pollution and conserve resources by reducing waste, reusing materials, recycling, and preferentially purchasing materials with recycled content.
- Continuing to educate the public about the environmental benefits of its transit.

In 2007, the Sound Transit Board directed the agency's Chief Executive Officer to integrate sustainable practices and strategies throughout the agency. In addition to setting yearly targets for sustainability, in 2011, Sound Transit adopted a sustainability plan establishing long-term and short-term priorities. The plan addresses areas such as energy use, water use, stormwater management, wetland mitigation, air quality improvements including greenhouse gas emissions, toxic materials, materials consumption, and solid waste. These areas are considered in all of the agency's activities, including planning, design, operation, and maintenance of investments such as the OMSF.

Sound Transit has also incorporated guidelines from the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification system into its design and operation standards. The agency's design criteria include a checklist of required and voluntary measures with specific, measurable standards to help maximize sustainability opportunities for the project during design, construction, and operation. These sustainability opportunities may also support permit requirements or help mitigate environmental impacts, and help maximize and extend the environmental and public benefits of the project.

Since 2007, Sound Transit has been one of a select number of transit agencies nationwide to achieve certification in the international ISO 14001 standard. This system holds the agency accountable for identifying and controlling environmental impacts, setting and achieving objectives and targets, and demonstrating continual improvements in performance. In August 2015, the American Public Transportation Association awarded Sound Transit the highest level of recognition ("platinum") for Sound Transit's commitment to sustainability.

In addition to meeting environmental commitments, Sound Transit will continue to avoid and minimize impacts where possible. Where adverse impacts cannot be avoided at this stage of design, this Final EIS identifies many potential measures to mitigate the adverse impacts of the proposed project (Appendix H, *Mitigation Plan*). Sound Transit will integrate some measures into the proposed project; other potential measures are noted that might further reduce or eliminate impacts. These commitments will be included in the ROD.

2.10 Funding and Estimated Project Costs

ST2 tax revenue would fund the OMSF. The proposed project would also be eligible to seek grant funding through FTA's New Starts Program, as authorized under the Moving Ahead for Progress in the 21st Century Act (MAP-21) and federal grants. The estimated capital costs for developing each of the build alternatives and the estimated annual cost to operate each alternative are listed in Table 2-6.

Table 2-6. Estimated Capital and Operating Costs of OMSF Build Alternatives

Build Alternative	Real Estate and Relocation (million dollars)[a]	Final Design and Construction (million dollars)[a,b]	Total Capital Cost (million dollars)[a]	Annual Operating Cost (million dollars)[c]
Preferred Alternative	$100	$280	$380	$70
BNSF Modified Alternative	$110	$330	$440	$70
SR 520 Alternative	$105	$310	$415	$70
Lynnwood Alternative	$55	$330	$385	$73

[a] 2015 dollars.

[b] Includes professional services and unallocated contingency.

[c] Annual labor cost in 2015 dollars to operate the facility.

The current level of project design includes uncertainties regarding the project scope, engineering data, mitigation requirements, schedule, and project delivery methods. Therefore, the project cost estimates at this stage are conceptual costs. These estimates focus on the project elements that are defined consistently across alternatives, that capture the essential physical features of alternatives, and that help distinguish alternatives from one another.

The project capital cost estimates include the following elements:

- Construction costs, including demolition and work to prepare the site (e.g., earthwork); trackway/guideway; train control electrical, signal, and communication systems; maintenance and administrative facilities; and associated improvements.
- Property acquisition costs, including relocation assistance.
- Costs for design, permitting, agency administration, and program management.

In addition, costs for construction change orders and an unallocated contingency were estimated as a percentage of the above estimates.

The estimated annual cost to operate the OMSF alternatives reflects facility maintenance staff, utility and mechanical staff, rail operations staff, systems maintenance staff (power and signals), and administrative staff labor costs. The annual cost to operate the OMSF is driven primarily by labor costs. Table 2-7 illustrates the facility staffing requirements for each build alternative. The Lynnwood Alternative would require off-site storage tracks in Bellevue, duplicating some of the functions such as LRV cleaning and operator reporting. Due to this, the Lynnwood Alternative requires more operations and maintenance staff than the Preferred Alternative, BNSF Modified Alternative, and SR 520 Alternative.

Table 2-7. Staffing Requirements of the Build Alternatives

	Staffing Requirement					
Build Alternative	**Onsite Administration**	**Rail Operation**	**Vehicle Maintenance**	**Material Handling**	**Facilities**	**Total Employees**
Preferred Alternative	7	98	81	4	40	230
BNSF Modified Alternative	7	98	81	4	40	230
SR 520 Alternative	7	98	81	4	40	230
Lynnwood Alternative[a]	7	73	81	4	40	205
BNSF Storage Tracks	0	31	15	1	6	53

[a] Total employees for the Lynnwood Alternative is 258.

2.11 Next Steps and Schedule

Following issuance of the Final EIS, the Sound Transit Board of Directors will consider the analysis in the Final EIS, including public and agency comments, and is expected to make a decision on the OMSF project to be built. FTA is then expected to issue a ROD on the project, which documents the findings by FTA that the project has met the requirements of NEPA and related environmental regulations. The ROD describes the project to be built, alternatives considered, public opportunity to comment, public comments and responses, basis for the decision to approve the project, and mitigation measures required. Once the ROD is issued, Sound Transit would begin property acquisition, final design, permitting, and ultimately.

2.11.1 Project Schedule

The current project schedule is shown in Table 2-8.

Table 2-8. Project Schedule

Preliminary Design and Environmental Review	**Time Period**
Environmental Scoping	Fall 2012
Sound Transit Board Identified Draft EIS Alternatives	December 2012
Draft EIS Published	Spring 2014
Draft EIS Comment Period	45 days
Sound Transit Board Identified Preferred Alternative for Final EIS	July 2014
Final EIS Published	Fall 2015
Sound Transit Board Identifies Project to Build	Fall 2015
Federal Record of Decision	Fall 2015
Final Design, Construction, and Operation Targets	**Time Period**
Final Design and Permitting	2016–2018
Construction	2018–2020
Ready for Operations	2020

2.11.2 Benefits and Disadvantages of Delaying Project Implementation

As required by SEPA, this section discusses the benefits and disadvantages of reserving implementation of the proposed project for some future time, compared to possible approval at this time. The primary benefit of delaying the proposed project would be to postpone the costs and impacts associated with project construction.

There are several disadvantages of delaying implementation of the proposed project.

- A delay would compromise Sound Transit's ability to purchase, test, and commission additional LRVs in advance of opening light rail extensions to Lynnwood, Overlake Transit Center in Redmond, and Kent/Des Moines approved under ST2.
- Delaying the OMSF would require Sound Transit to operate the expanded system at a lower level of service than planned, or delay some or all of the planned ST2 light rail extensions until it developed additional operations and maintenance capacity. Degraded levels of service could include increased headways (less frequent trains serving stations) and decreased passenger capacity (operating 3-car rather than 4-car trains).
- Lower service levels and less light rail passenger capacity could result in fewer commuters using transit, including LRV and secondary impacts on bus transit service in those corridors planned to be served by Link light rail. Those commuters may continue using automobiles instead, resulting in greater vehicular and greenhouse gas emissions.
- A delay in the proposed project would delay construction expenditures within the local and regional economy.
- Delaying the proposed project would likely result in higher construction costs due to inflation.