FINAL ENVIRONMENTAL IMPACT STATEMENT

TALARIS RESEARCH INSTITUTE

Prepared for:

City of Seattle
Department of Planning and Development

Prepared by:

Adolfson Associates, Inc.
5309 Shilshole Ave., NW
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December 16, 2004

Preface

This Final Environmental Impact Statement (EIS) was prepared for the City of Seattle Department of Planning and Development to identify and evaluate probable significant adverse environmental impacts that could result from the redevelopment alternatives associated with the Talaris Research Institute and to identify measures that could mitigate those impacts. As such, the Final EIS is a disclosure document. It evaluates the direct, indirect, and cumulative impacts of the redevelopment alternatives, as well as construction-related impacts. This Final EIS does not authorize a specific action or alternative, nor does it recommend for or against a particular course of action; it is one of several key documents that will be considered in the decision-making process for this project. A list of expected licenses, permits and approvals is contained in the **Fact Sheet** to the Final EIS. This Final EIS will accompany the application specifically associated with those permit processes and be considered relative to those applications.

The environmental elements included in this Final EIS were determined as a result of a formal public EIS scoping process that took place from September 9, 2001 through October 2, 2001 and again from May 23, 2002 through June 20, 2002. Comments received were considered by the City's Department of Planning and Development in determining the issues and alternatives to be analyzed in the EIS. Four primary areas of environmental review are evaluated in this document, including:

- Land use (land use patterns: relationship to plans, policies and regulations);
- Height, bulk, and scale;
- Habitat/wetlands; and
- Transportation (traffic and parking).

The EIS also evaluates potential non-significant impacts associated with air and noise, light and glare, and public services and utilities.

Although SEPA requires only a 30-day comment period, the Draft EIS was circulated for an extended 45-day comment period from November 14, 2002 through December 30, 2002. A public hearing on the Draft EIS was held on December 11, 2002.

Comments received have influenced the content of the Final EIS. The period between the Draft EIS and Final EIS was used to provide a greater level of specificity and detail in the Final EIS. In response to concerns raised in comments on the Draft EIS related to height, bulk and scale, additional design work was performed and resulted in modifications to one of the Institute for Advanced Study alternatives. Refinements to both of the single-family development alternatives were made in response to comments about wetlands and critical areas impacts.

This Final EIS is organized into six major sections. The **Fact Sheet** (immediately following this **Preface**) provides an overview of the proposed project, location, permits/approvals required, and information concerning whom within DPD to contact for more information. Chapter 1, **Introduction and Summary** summarizes the description of each alternative, and it provides a

summary matrix of significant environmental impacts, mitigation measures, and unavoidable adverse impacts. Chapter 2, **Description of Alternatives and EIS Scope** contains a detailed description of each redevelopment alternative. Chapter 3, **Affected Environment, Impacts, and Mitigation Measures** contains detailed discussion and impact analysis for the four primary areas of environmental review for each alternative as well as potential mitigation measures. Chapter 4, **Other Potential Impacts and Mitigation Measures**, evaluates potential impacts and mitigation measures for air and noise, light and glare, and public services and utilities. Chapter 5, **Response to Comments**, contains responses to the comments received in writing and comments formally recorded at the Draft EIS Hearing. Finally, the **Appendices** include supplementary material in support of the impact and mitigation discussion and analysis.

FACT SHEET

Name of Proposal

Talaris Research Institute

Proponent

4000 Property, LLC
One 100th Avenue NE
Bellevue, WA 98004

Location

The Talaris Research Institute is proposed to be located at 4000 Northeast 41st Street in the City of Seattle's Laurelhurst neighborhood. The site is currently used as an Institute for Advanced Study; users include the Talaris Research Institute (housed in a temporary facility). The site is generally bounded by Northeast 41st Street on the south; commercial, multi-family, and single-family development along Northeast 45th Street to the north; single-family residences along 42nd Avenue Northeast to the east; and the unimproved 38th Avenue Northeast right-of-way to the west. The project site is located within one mile of Children's Hospital and the University of Washington.

Nature of Proposal

The applicant has proposed in a Master Use Application to redevelop portions of the 18-acre site. The proposed Talaris Research Institute would be an Institute for Advanced Study (IAS) and an interdisciplinary research facility designed to combine the science of learning with the practice of learning. Institute researchers would be specifically investigating how infants and young children acquire and process information about the real world, and disseminating this information to interested constituencies.

This Final EIS evaluates and compares the significant environmental impacts (direct, indirect, cumulative) of four redevelopment alternatives and a No Action alternative, and it discusses possible mitigation measures. This Final EIS identifies Alternative 1B as the Proposed Action for which a Master Use Permit application has been submitted to Seattle Department of Planning and Development (DPD) for review and approval.

With the exception of the No Action alternative, all of the alternatives would entail demolition of some or all of the existing structures on the site. Alternatives 1A and 1B are variations of the proposed Talaris Research Institute. Alternatives 1A and 1B would be constructed in two phases and would result in the construction of 261,000 to 290,000 gross square feet (gsf) of floor area

dedicated to research, laboratory uses, office space, and other support uses. Both underground structured and surface parking would be provided. Three existing one-story wood frame structures on the site, labeled Apartments A, B, and C and totaling approximately 7,485 gsf, would be removed for the development of Phase 1. All three structures are or have recently been used for conference or research purposes. Approximately 50,595 gsf in four existing buildings would remain. Phase 2 of the development would result in the demolition of three additional structures on the site. These would include Building D, the Research Center Seminar Building D; Building E, the Lodge Building; and Building G, an office building located in the east portion of the site. Alternatives 2A and 2B would result in the demolition of all structures on the site and the construction of 90 to 91 single-family homes.

The following summarizes the scope of development associated with each of these four alternatives:

- **Alternative 1A: Institute for Advanced Study with Code Required Parking**
  - 290,000 gsf of redevelopment on three floors (two above grade, one below) in two buildings consisting of research laboratories, office space, a library, auditorium, child care, and other support uses, subject to approval of an administrative conditional use (ACU)
  - Two levels of structured underground parking in each building with a total of 410 spaces
  - 676 surface parking spaces
  - Filling and enhancement of on-site wetlands with appropriate buffers, subject to approval of Environmental Critical Areas exception (ECA exception)
- **Alternative 1B: Institute for Advanced Study, with Reduced Parking, and Design Alternatives to Reduce Bulk and Scale Impacts**
  - 261,000 gsf of redevelopment on three floors (two above grade, one below) in two buildings consisting of research laboratories, office space, a library, auditorium, child care, and other support uses, subject to approval of an ACU
  - Building design elements to minimize bulk and scale that could include rooftop gardens, stone walls along building foundations, privacy and sun screens, etc.
  - Two and one-half levels of structured underground parking for the Phase 1 building providing 375 spaces and another 400 spaces in the Phase 2 building parking garage for a total of 775 spaces
  - 75 surface parking spaces
- **Alternative 2A: Single-Family Development with 38th Avenue NE Improvements**
  - Subdivision of the site into 91 single-family lots
  - House footprints ranging from approximately 1,200 to 1,600 square feet (total house sizes approximately 1,600 to 3,000 square feet)

- Filling and enhancement of on-site wetlands with appropriate buffers, subject to approval of ECA exception
- Avoidance of steep slopes and their buffers
- Development of 38th Avenue NE right-of-way

- **Alternative 2B: Single-Family Development without 38th Avenue NE Improvements**
  - Subdivision of the site into 90 single-family lots
  - House footprints ranging from approximately 1,200 to 1,600 square feet (total house sizes approximately 1,600 to 3,000 square feet)
  - Filling and enhancement of on-site wetlands with appropriate buffers, subject to approval of ECA exception
  - Avoidance of steep slopes and their buffers
  - No development of the 38th Avenue Northeast right-of-way

Lead Agency

City of Seattle Department of Planning and Development (DPD)

Responsible Official

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Pending Applications

Master Use Permit No. 2104047, Alternative 1B, Phase 1.

Governmental Actions

Review and decision on the Master Use Permit application for the proposed Talaris Research Institute.

Required Approvals

Preliminary investigation indicates that the following permits and/or approvals could be required for redevelopment of the site. Additional permits/approvals may be identified during the review process associated with development of specific components of the proposal or alternatives:

State of Washington, Department of Labor and Industries

- Elevator Permits

Puget Sound Clean Air Agency

- Demolition Permits
- Asbestos Surveys

Seattle City Hearing Examiner

- Full subdivision for single-family alternatives

City of Seattle Department of Planning and Development (DPD)

- Master Use Permit, Administrative Conditional Use, SEPA (approve, condition or deny)
- Environmentally Critical Areas Review
- Environmental Critical Areas Exception (for Alternatives 1A, 2A and 2B)
- Demolition Permit
- Shoring Permit
- Mechanical Permit
- Large Project/Comprehensive Drainage Control Plan with Construction Best Management Practices, Erosion and Sediment Control Plan Approvals
- Electrical Permits
- Grading Permits
- Building Permits
- Occupancy Permits

City of Seattle Department of Transportation (SDOT)

- Street use permits

Seattle-King County Department of Health

- Plumbing permits

Authors and Principal Contributors

The Talaris Research Institute EIS has been prepared under the direction of the Seattle Department of Planning and Development (DPD). Research and analysis was provided by the following consulting firms:

- Adolfson Associates, Inc.: Lead EIS consultant, project management, environmental analysis (land use; height, bulk, and scale; noise; light and glare; public services and utilities).
- The Transpo Group: Transportation, circulation, and parking.
- Talasaea Consultants: Habitat/wetlands.
- Brian Gilles: Tree Evaluation.

Location of Background Data

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Draft EIS Issue Date

November 14, 2002

End of Comment Period

December 30, 2002

Final EIS Issue Date

December 16, 2004

Public Hearing

A public hearing was held to receive comments on the Draft EIS. The hearing was held on Wednesday, December 11, 2002, from 6:30 p.m. to 9 p.m. at the University of Washington Center for Urban Horticulture.

Availability of the Final EIS

Copies of the EIS and/or Notices of Availability have been distributed to a number of agencies, organizations, and individuals as noted in the Distribution List located in Appendix A.

Copies of the EIS are available for review at the DPD Public Resource Center located in Suite 2000 of the Seattle Municipal Tower in downtown Seattle (700 Fifth Avenue). Copies of the Final EIS are also available at the following public libraries:

LOCATION	ADDRESS
University Library	5009 Roosevelt Way N.E. Seattle, WA 98105 (206) 684-4063
Northeast Seattle Library	6801 35th Avenue N.E. Seattle, WA 98115 (206) 684-7539
Central Library	1000 4th Avenue Seattle, WA 98104 (206) 386-4636

Supporting documentation, including a wetland delineation report and geotechnical report, are also available for review at the DPD Public Resource Center.

A limited number of complimentary copies of the Final EIS may be obtained from the DPD Public Resource Center while the supply lasts. Additional copies may be purchased at the DPD Public Resource Center for the cost of reproduction. Copies in alternative format can also be made available.

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CHAPTER 1.0
INTRODUCTION AND SUMMARY

1.1 Proponent

The proposed Talaris Research Institute is sponsored by 4000 Property, LLC, a Washington limited liability company.

1.2 Location

The project site is located at 4000 NE 41st Street, in the Laurelhurst neighborhood of Seattle. The 18-acre property is currently occupied by institute for advanced study uses (IAS).

The site is immediately bounded on the south by Northeast 41st Street; on the north by commercial, multi-family, and single-family development; on the east by single-family development; and on the west by the undeveloped 38th Avenue Northeast right-of-way. The project site is also located within one mile of Children's Hospital and the University of Washington.

1.3 Environmental Review: Purpose of the Draft and Final EIS

The purpose of the Environmental Impact Statement (EIS) is to identify and evaluate probable significant and adverse environmental impacts that could result from redevelopment of the project site under various alternatives. The EIS is also intended to identify measures that could mitigate those impacts. The EIS is an information document, ensuring that environmental impacts and mitigation measures for the proposed redevelopment alternatives are disclosed to the public, agencies, decision makers, and other interested parties. It evaluates the long-term direct, indirect, and cumulative impacts of the redevelopment alternatives, as well as short-term construction-related impacts.

The Draft and Final EIS were prepared in compliance with the State Environmental Policy Act (SEPA, Chapter 43.21C, Revised Code of Washington (RCW)); the state SEPA rules (Chapter 197-11 of the Washington Administrative Code (WAC)); and Seattle's Environmental Policies and Procedures Code (Chapter 25.05, Seattle Municipal Code (SMC)). The SEPA process enables the City of Seattle, other interested agencies, and citizens to review and comment on the proposed alternatives. The Draft and Final EIS are two of several documents and sources of information that will be considered in the decision-making process for this project.

The period between publication of the Draft EIS and the Final EIS was used to modify the proposal to add more detail in response to comments received on the Draft EIS.

1.4 Summary of the Alternatives

Chapter 197-11-440(5) WAC requires that an EIS discuss the proposal and reasonable alternatives including the "No Action" alternative. The reasonable alternatives must include actions that could feasibly attain or approximate a proposal's objectives, but at a lower environmental cost or decreased level of environmental degradation.

The Draft and Final EIS evaluate four redevelopment alternatives and a No Action alternative. Two of the alternatives include redevelopment of the site for an expanded IAS; the alternatives differ in the level of design to mitigate bulk and scale impacts, and in the amount of surface parking provided on the site. The other two alternatives address redevelopment of the site as single-family housing and resultant impacts to environmentally critical areas as well as wildlife habitat. The following alternatives are evaluated in this EIS:

- **Alternative 1A: Institute for Advanced Study with Code Required Parking**. Under this alternative, two phases of an expanded IAS (Phases 1 and 2) would be constructed on the 18-acre site currently used for institutional uses. This alternative would incorporate the maximum required parking for Institutes for Advanced Study for Phases 1 and 2 as specified in the City of Seattle's Land Use Code (SMC 23.54.015, Chart A). It would include an increased structure bulk and scale (relative to Alternative 1B) that would reasonably meet the proponent's objectives. An environmental critical areas (ECA) exception and administrative conditional use (ACU) would be required.
- **Alternative 1B: Institute for Advanced Study with Reduced Parking, and Design Alternatives to Reduce Bulk and Scale Impacts.** Alternative 1B would incorporate design alternatives to reduce the perceived bulk and scale of the proposed expanded IAS as perceived by adjacent property owners. The site plan has been revised from that analyzed in the Draft EIS to further reduce the building size and incorporate more design detail addressing height, bulk, and scale issues. The amount of surface parking has been reduced with the addition of another level of structured parking. This alternative also includes less parking capacity than Alternative 1A: Code required parking would be provided under Phase 1, while reduced parking capacity is proposed for Phase 2 of the project. An ACU would be required.
- **Alternative 2A: Single-Family Development with 38th Avenue NE Improvements.** This alternative would include the maximum potential single-family development that would be feasible on the site under the existing zoning of one dwelling unit per 5,000 square feet (SF 5000). Under this alternative, the site could be subdivided and developed all at once or incrementally over time with detached single-family homes. Based on comments received on the Draft EIS, the site plan for Alternative 2A was modified to account for critical area and steep slope buffers, building setbacks, filling and enhancement of wetlands, and relocation of the existing stormwater pipeline into the street right-of-way. Because of this more detailed site planning, it was determined that more lots could be developed than were originally evaluated in the Draft EIS. Alternative 2A would result in subdivision of the property for development of up to 91 lots. Under this alternative, 38th Avenue NE would be developed to provide site access and circulation. An ECA exception would be required.

- **Alternative 2B: Single-Family Development without 38th Avenue NE Improvements**. This alternative would include a single-family alternative that would reasonably approximate the proponent's objective for single-family development at a reduced environmental cost to on-site and off-site drainage systems, wildlife habitat, and environmentally critical areas on the site (wetlands and steep slopes). Alternative 2B assumes code required setbacks, filling and enhancement of wetlands, wetland and steep slope setbacks, and relocation of the existing stormwater pipeline into the street right-of-way. More detailed site planning determined that more lots could be developed than were initially analyzed in the Draft EIS. Under this alternative, the property would be subdivided for development of approximately 90 lots. Under this alternative, 38th Avenue NE would not be improved. An ECA exception would be required.
- **No Action Alternative:** Under the No Action Alternative, it is assumed that no redevelopment would occur on the project site in the near-term. The project site would likely continue to operate as an IAS in the near future. Other potential reasonably foreseeable uses of the site over the long term may include single-family development, public schools, public playgrounds, or private parks, consistent with City of Seattle zoning and comprehensive plan designations, and with uses permitted in single-family zones.

Alternative 1B is the proposed action for which a Master Use Permit application has been submitted.

For the IAS alternatives, development of Phase 1 would be completed in 2006, while construction of Phase 2 would occur by approximately 2010. The schedule for development under the single-family alternatives would vary based on market conditions and whether the site was redeveloped all at once or incrementally over time.

1.5 Significant Issues and Areas of Controversy

Several issues are analyzed in the Draft and Final EIS that were identified during the scoping process for the alternatives and the public comment period on the Draft EIS. Among these issues are parking and traffic impacts, bulk and scale impacts, and impacts to wetlands and wildlife habitat on the site. These issues are addressed in Chapters 3 and 4 of this document.

Among the significant issues raised during the scoping process was the concern regarding impacts to the surrounding neighborhood. Residents of the Laurelhurst neighborhood and surrounding area have expressed concern that their single-family neighborhoods continue to be encroached upon by larger, more intense land uses such as Children's Hospital, University Village Shopping Center, the University of Washington, and multi-family developments. It is acknowledged that proposed development, as permitted under the City's comprehensive plan and land use code, will incrementally and cumulatively add to the overall development intensity of the area. Such regional land use issues are most appropriately addressed in comprehensive land use planning efforts. Specific impacts to the natural and built environment resulting from proposed redevelopment of the Battelle site are addressed in this document; cumulative impacts are also discussed where applicable.

Another concern raised by neighborhood residents during the scoping process is the relationship of the proposed Institute for Advanced Study to the University of Washington. In particular, some individuals raised the concern that the proposed project constitutes expansion of the University beyond its Major Institution Overlay (MIO) zoning boundaries. The Talaris Research Institute, however, is an independently proposed endeavor that receives no funding or support from the University of Washington. The Institute is not sponsored by the University of Washington, nor is it included in the University's recently adopted Master Plan (University of Washington, 2001). However, once completed, it is acknowledged that the Talaris Institute may sponsor researchers from universities and other institutions from around the country who would use the Institute's facilities to conduct research. Potentially this could include researchers from the University of Washington.

The major comments on the Draft EIS focused on the need to:

- Provide greater distinction between the institution alternatives (Alternative 1A and Alternative 1B) and the single-family alternatives (Alternative 2A and Alternative 2B)
- Address height, bulk, and scale impacts of the institution
- Provide more design detail for the institution – façade treatments, modulation, buildings materials, terracing on the site
- Describe buffer width between the institution and surrounding land use
- Provide more detail regarding light and glare impacts of the institution on surrounding neighborhoods
- Address loss of trees
- Address parking demand and potential spillover onto local streets
- Provide more analysis of traffic impacts to neighborhood
- Reevaluate trip generation factors

1.6 Summary Matrix of Impacts and Mitigation Measures

The following table summarizes the more significant impacts and mitigation measures identified in this environmental analysis. It is not intended to be a substitute for the complete discussion of each element that is contained in Chapters 3 and 4 of this EIS.

Table 1–1. Summary of Impacts

Element	Alternatives				
	No Action	**Alternative 1A**	**Alternative 1B**	**Alternative 2A**	**Alternative 2B**
Land Use	• Not applicable in near-term. Potential change in land use over long-term could include single-family residential development, public schools, public playgrounds, or private parks.	• Redevelopment and expansion of existing institution uses. • Reduction in open space and increase in impervious area. • Less integrated with character of surrounding area than Alternative 1B. • Less compatible with comprehensive plan policies for single-family areas than Alternatives 2A, 2B. • Greater potential impacts to wetlands and buffers than Alternative 1B.	• More open space and less impervious area than Alternative 1A due to reduced parking. • Façade and roof gardens provide better integration with surrounding area, more consistency with comprehensive plan policies for single-family areas than Alternative 1A. • No direct impacts to wetlands or buffers.	• Land use similar to surrounding area. • Development of approximately 91 lots consistent with SF 5000 zoning and Seattle Municipal Code requirements. • Greater reduction in shared open space than Alternatives 1A and 1B. • Increased impervious surface compared to Alternatives 1A, 1B and 2B. • Development of 38th Ave. NE would remove vegetated/forested habitat area. • Wetlands would be consolidated thereby requiring filling of lower quality wetlands and mitigation (wetland creation and enhancement) per SMC25.09.160(A)(2). • More consistent with comprehensive plan policies for single-family areas than Alternatives 1A and 1B.	• Impacts similar to Alternative 2A. • Development of approximately 90 lots. • 38th Avenue would not be developed.
Height, Bulk, and Scale	• None identified over short-term. Long-term impacts would vary based on land use.	• Potential localized bulk and scale impacts to residents and landowners along north, west, and east sides of project site from untreated facades. • Bulk and scale impacts to residents, landowners around southern one-half of site less due to topography, landscaping. • Bulk and scale impacts beyond landowners immediately bordering the site minimal due to site topography, low profile of proposed structures.	• Similar to Alternative 1A, but impacts reduced by smaller building, reorientation of building, modulations, rooftop gardens, and façade treatments.	• Bulk and scale impacts minimal because individual homes would be of similar bulk, scale, and style to surrounding neighborhood. • Project would result in greater overall density on the site consistent with SF 5000 zoning; landowners around southern one-half of property would experience greater visual impacts compared to Alternatives 1A and 1B.	• Impacts would be similar in nature compared to Alternative 2A.
Habitat/ Wetlands	• 3.7 acres of existing impervious surfaces would remain. • No wetland or habitat impacts	• 376 sf of wetland fill, loss of 11,309 sf of wetland buffer. • Elimination of 165,784 sf of urban wildlife habitat. • Site would contain 10 acres of impervious surfaces following construction. If unmitigated,	• No direct wetland impacts. • Preserves 4.7 additional acres of habitat than Alternative 1A due to reduction in surface parking and building	• 1,107 sf of wetland fill. • Potential temporary loss of urban wildlife habitat during construction. Urban habitat would be partially replaced by homeowner landscaping following construction. • Some habitat permanently altered by internal roads, driveways, parking, and houses.	• Same as Alternative 2A. • Site would contain 7.1 acres of impervious surfaces following construction.

Element	Alternatives				
	No Action	**Alternative 1A**	**Alternative 1B**	**Alternative 2A**	**Alternative 2B**
	in near-term. Long-term impacts would vary by land use.	possibility of turbid runoff during construction, non-point pollution in Union Bay. • Approximately 292 trees removed, including approximately 3 within critical areas and 32 greater than 24 inches in diameter.	footprint. • Reduced potential impacts to Lake Washington from non-point pollution from impervious surfaces compared to Alternative 1A. • Approximately 176 trees removed, including 11 greater than 24 inches in diameter.	• Site would contain 7.6 acres of impervious surfaces following construction. • Because grading and clearing limits are greatest with this alternative, a higher probability of turbid construction runoff could occur. • If unmitigated, increased impervious surfaces could amplify non-point pollution and magnify discharge capacity to Lake Washington. • Approximately 583 trees removed, including 21 greater than 24 inches in diameter and approximately 11 trees within critical areas. More trees removed than Alternatives 1A or 1B.	• Habitat impacts same as Alternative 2A. • Approximately same number of trees removed as Alternative 2A, including 19 greater than 24 inches in diameter, More trees removed than Alternatives 1A or 1B.
Transportation	• The inter-sections of Northeast 45th St/Northeast 45th Pl/Union Bay Pl and SR-520 eastbound ramps/Montlake Blvd would operate at LOS F during the PM peak hour.	• Excavation would generate 7,700 truck trips during construction of Phase 1 and another 7,700 truck trips during Phase 2 construction. • Phase 1 would generate a net increase of 1,250 trips per day including 163 in the AM peak hour and 157 in the PM peak hour. • Buildout of Phases 1 and 2 would generate a net increase of 1,960 trips per day including 279 in the AM peak hour and 257 in the PM peak hour. • Alternative 1A would increase average delays at the intersection of Northeast 45th St/Northeast 45th Pl/Union Bay Pl. • Delays would increase 4seconds with Phase 1 and 9.9 seconds with Phase 2 during the PM peak hour.	• Similar to Alternative 1A.	• Excavation would generate 1,100 truck trips during construction. • Alternative 2A would generate 350 net new trips per day. Due to changes in travel patterns, AM peak hour trips would be reduced, while PM peak hour trips would slightly increase. • Alternative 2A would decrease average delays by 0.9 seconds at the intersection of Northeast 45th St/Northeast 45th Pl/Union Bay Pl.	• Similar to Alternative 2A except that potential use of 37th and 36th Avenues NE by project traffic would be reduced as a result of not improving the 38th Avenue NE right-of-way..

Table 1–2. Summary of Mitigation Measures

Alternative	Summary of Mitigation Measures
Mitigation Common to All Action Alternatives	**Land Use** • All construction activity should comply with applicable requirements for temporary erosion and sediment control and drainage measures as established by the Seattle Stormwater, Grading and Drainage Control Code (SMC 22.800). • All construction activity should comply with applicable noise control requirements as established by the Seattle noise control codes (see Chapter 4, Noise). • Construction-related traffic impacts on surrounding land uses could be addressed through a construction vehicle routing plan. • The proponent could require that the contractor prepare a staging and construction worker parking plan to mitigate short-term construction impacts to surrounding land uses. • Prior to any remodeling or demolition of existing structures, surveys could be conducted to identify the presence of asbestos, lead-based paint, and to quantify PCB light ballasts and mercury fluorescent light tubes. **Transportation** • All construction worker vehicles could be required parked in a temporary on-site parking area or in a remote off-site parking lot such that the on-site and on-street parking supply in and around the project site is not impacted by construction worker vehicles. • Construction material deliveries could be scheduled and coordinated to and from the site to minimize congestion during peak travel times. • Safe pedestrian and vehicular circulation could be provided adjacent to the construction site through the use of temporary walkways, signs, and manual traffic control. • Trucks could be staged within the construction site. • A flagger could be stationed at the site entrances on Northeast 41st Street to direct and control traffic. **Noise** • Mitigation may be required when noisy construction activities occur adjacent to sensitive receptors (SMC 25.05.675.B.d and 25.05.675L).
1A	**Land Use** • Mitigation measures required by SMC are addressed through the facility design and would be determined through the ACU permit process. Design measures would contribute to the integration of the facility with surrounding land uses, which are primarily single family residential. Alternative 1A would include site perimeter landscaping, including mixed coniferous and deciduous canopy trees with evergreen understory to define the neighborhood edge. An Environmental Critical Areas (ECA) exception would be required for the filling of wetlands. **Height, Bulk and Scale** • Landscaping could be provided along the west, north, and east property boundaries where the buildings abut residential and retail/commercial areas to soften the appearance of the building facades and blend the buildings into the surrounding neighborhood. • Existing trees throughout the site should be retained where feasible and consistent with the site plan to soften the bulk and scale of the buildings and to help the buildings blend in with the existing mature landscaping in the adjacent neighborhoods, as well as retain some of the existing park-like feel of the site. • Trees and other landscaping could be retained to the extent feasible on the southern one-half of the site to screen parking areas and views across the site. Additional plantings around the perimeter of surface parking lots could be provided to provide additional screening. • Additional façade treatments could be provided along the north sides of the Phase 1 and 2 buildings, along the west side of the Phase 1 building, and along the east side of the Phase 2 building. These treatments would help to soften the appearance of bulk and scale on adjacent residents and would be determined during the Administrative Conditional Use Permit process.

Alternative	Summary of Mitigation Measures
	Habitat/Wetlands • Wetland and buffer functions lost due to filling 376 sf of small, isolated wetland and to altering 11,309 sf of wetland buffer should be replaced and improved through wetland replacement and buffer enhancement, consistent with the site plan and applicable City of Seattle regulations. An ECA exception would be required for the filling of wetlands. • A tree preservation plan should be developed to identify trees for preservation and the planting of additional trees to offset tree loss during construction. Periphery trees and large cottonwood trees on the southern portion of the site could be preserved for their habitat value to the extent feasible and consistent with the site plan. Trees in other areas of the site lost through clearing could be replaced through additional plantings around parking areas and buildings, and along the site perimeter to enhance visual screening from adjacent landowners. • Erosion control and water quality BMPs should be implemented to reduce non-point pollution to Union Bay. Flow rates and flow capacity should be minimized by utilizing existing on-site stormwater treatment facilities. • Invasive/exotic plant species in preserved wetlands and buffers could be removed and controlled to enhance wetland functions. Logs, stumps, brush piles, and boulders (if found during site excavation) for wildlife habitat could be incorporated to increase habitat structural diversity. • A variety of sizes of evergreen and deciduous trees and shrubs could be planted to transition a degraded scrub-shrub wetland into a higher quality forested wetland and to improve biological support functions and promote the natural rate of forest succession. • Information signage could be installed along a boardwalk through the created wetland system and along the buffer areas adjacent to development to increase public awareness of adjacent wetland and buffer ecosystems. **Transportation** • Project traffic would increase average delays at the Northeast 45th Street / Northeast 45th Place / Union Bay Place intersection. The intersection currently operates at LOS F in the PM peak hour and is forecast to continue to operate at LOS F under the No Action and the four build alternatives. It is recommended that channelization modifications be made to reduce average delays and project impacts at the intersection. The three lanes on the northbound approach on Union Bay Place are currently striped to provide one left-turn only lane, one shared left-turn/thru lane and one shared right-turn/thru lane. Modifying the channelization to convert the center lane from a shared left-turn/thru lane to a left-turn only lane would provide more capacity for left-turns, which is the highest volume movement in the PM peak hour. The resulting configuration of two left-turn only lanes and one shared right-turn/thru lane would reduce delays at the intersection. • In accordance with DPD Directors Rule 2-94 and SDOT Directors Rule 3-94, a Transportation Management Program (TMP) has been developed for the proposed project. The goal of this program is to reduce employee Single Occupant Vehicle (SOV) travel to the site by a percentage consistent with the intent of SEPA and City practice for similar TMP goals. The standard implementation requirements for the TMP are defined by the Director's Rule. The standard implementation requirements that apply include: • Appointing a Building Transportation Coordinator (BTC); • Holding periodic promotional events; • Installing and maintaining a Commuter Information Center; • Coordinating a ridematch program with Metro's ridematching service; • Performing building occupancy surveys; and • Preparing annual reports and submitting to the SDOT. • Measures to reduce long-term parking demand would focus on increasing transit and carpool mode splits. It is anticipated that commitments will be made through subsequent documentation, as part of the MUP process. In addition to the standard implementation requirements, the following supplemental measures could be implemented to provide incentives for meeting the goals of the TMP: • Transit Subsidy: Provide monthly transit pass subsidies to reduce the cost of a one-month bus pass -- to the extent that transit subsidies are part of the TMP.

Alternative	Summary of Mitigation Measures
	• Preferential Parking for Carpools and Vanpools: Designate a percentage of the long-term parking stalls for preferential carpool or vanpool use. • Bicycle Racks: Install bicycle racks for use by both employees and visitors to the site. • The evaluation of the TMP would be in accordance with the evaluation procedures outlined in Director's Rule 2-94. The long-term monitoring for TMP compliance would be the responsibility of the SDOT. Monitoring would be based on the surveys and reports required as Standard Implementation Requirements.
1B	**Land Use** • Generally, mitigation for land use impacts associated with an increase in intensity of use of the property as IAS might be addressed by architectural and landscape design measures. Mitigation measures required by SMC requirements are addressed through the facility design. These design measures contribute to the integration of the facility with surrounding land uses, which are primarily single family residential. Alternative 1B would include the same site perimeter landscaping as Alternative 1A, plus additional building landscaping such as terraced gardens, and rooftop gardens consisting of raised planters, flowering shrubs, groundcover, and grasses. **Height, Bulk and Scale** • In addition to the mitigation measures listed for Alternative 1A, the following measures have been proposed by the applicant for Alternative 1B to help reduce height, bulk and scale impacts: • Building footprint and total size would be reduced and the building would be oriented 45 degrees off the adjacent city street grid to reduce the appearance of bulk and scale. • Building entrances would be oriented toward the center of the site away from adjacent development to the north and west. • The building facades for Phases 1 would be modulated, or "stepped back" and curved toward the interior of the site to reduce the appearance of bulk and scale and increase structure setbacks along the north and west property boundaries. • Rooftop gardens and plazas would be provided on each modulation with exterior space, a landscaped entry plaza, and greater retention of trees and additional landscaping, open space along the building's west-facing edge would be included in the design to minimize the appearance of bulk. • Façade design treatments would include elements such as stone along the lower exterior walls and sun shades over windows to reduce glare and increase privacy. • Surface treatments such as “board form concrete” and “glazing system” would be used to help soften the building’s appearance. • Surface parking would be reduced on the site to preserve vegetation and views across the southern one-half of the site. **Habitat/Wetlands** • A tree preservation plan should be developed to identify trees for preservation and the planting of additional trees to offset tree loss during construction. Periphery trees and large cottonwood trees on the southern portion of the site could be preserved for their habitat value to the extent feasible and consistent with the site plan. Trees in other areas of the site lost through clearing could be replaced through additional plantings around parking areas and buildings, and along the site perimeter to enhance visual screening from adjacent landowners. • Erosion control and water quality BMPs should be implemented to reduce non-point pollution to Union Bay. Flow rates and flow capacity should be minimized by utilizing existing on-site stormwater treatment facilities. • Invasive/exotic plant species in preserved wetlands and buffers could be removed and controlled to enhance wetland functions. Logs, stumps, brush piles, and boulders (if found during site excavation) for wildlife habitat could be incorporated to increase habitat structural diversity. • A variety of sizes of evergreen and deciduous trees and shrubs could be planted to transition a degraded scrub-shrub wetland into a higher quality forested wetland and to improve biological support functions and promote the natural rate of forest succession. • Information signage could be installed along a boardwalk through the created wetland system and along the buffer areas adjacent to development to increase public awareness of adjacent wetland and buffer ecosystems.

Alternative	Summary of Mitigation Measures
	Transportation • Project traffic would increase average delays at the Northeast 45th Street / Northeast 45th Place / Union Bay Place intersection. The intersection currently operates at LOS F in the PM peak hour and is forecast to continue to operate at LOS F under the No Action and the four build alternatives. It is recommended that channelization modifications be made to reduce average delays and project impacts at the intersection. The three lanes on the northbound approach on Union Bay Place are currently striped to provide one left-turn only lane, one shared left-turn/thru lane and one shared right-turn/thru lane. Modifying the channelization to convert the center lane from a shared left-turn/thru lane to a left-turn only lane would provide more capacity for left-turns, which is the highest volume movement in the PM peak hour. The resulting configuration of two left-turn only lanes and one shared right-turn/thru lane would reduce delays at the intersection. • In accordance with DPD Directors Rule 2-94 and SDOT Directors Rule 3-94, a Transportation Management Program (TMP) has been developed for the proposed project. The goal of this program is to reduce employee Single Occupant Vehicle (SOV) travel to the site by a percentage consistent with the intent of SEPA and City practice for similar TMP goals. The standard implementation requirements for the TMP are defined by the Director's Rule. The standard implementation requirements that apply include: • Appointing a Building Transportation Coordinator (BTC); • Holding periodic promotional events; • Installing and maintaining a Commuter Information Center; • Coordinating a ridematch program with Metro's ridematching service; • Performing building occupancy surveys; and • Preparing annual reports and submitting to the SDOT. • Measures to reduce long-term parking demand would focus on increasing transit and carpool mode splits. It is anticipated that commitments will be made through subsequent documentation, as part of the MUP process. In addition to the standard implementation requirements, the following supplemental measures could be implemented to provide incentives for meeting the goals of the TMP: • Transit Subsidy: Provide monthly transit pass subsidies to reduce the cost of a one-month bus pass -- to the extent that transit subsidies are part of the TMP. • Preferential Parking for Carpools and Vanpools: Designate a percentage of the long-term parking stalls for preferential carpool or vanpool use. • Bicycle Racks: Install bicycle racks for use by both employees and visitors to the site. • The evaluation of the TMP would be in accordance with the evaluation procedures outlined in Director's Rule 2-94. The long-term monitoring for TMP compliance would be the responsibility of the SDOT. Monitoring would be based on the surveys and reports required as Standard Implementation Requirements.
2A	**Land Use** • Environmental Critical Areas exception (ECA exception) (SMC 25.09.300). • SMC requirements for subdivision development in single-family zones, including lot coverage, structure height, yard setbacks, and landscaping insures consistency and compatibility with surrounding land uses. • Mitigation for wetland fill would be provided per SMC25.09.160(A)(2) and would be subject to approval of an ECA exception (SMC 25.09.300). • Steep slope and wetland buffers would be maintained. **Height, Bulk and Scale** • Building setbacks should be followed as described in SMC 23.44. 008 - 016 to insure adequate spacing between homes. **Habitat/Wetlands** • An ECA exception would be required for the filling of wetlands (SMC 25.09.300).

Alternative	Summary of Mitigation Measures
	• Wetland functions and values lost due to the filling of 1,107 sf of wetlands and associated buffer could be replaced and could be improved through wetland creation and buffer enhancement, consistent with applicable City of Seattle regulations (SMC25.09.160(A)(2)). • A tree preservation plan should be developed to identify trees for preservation and the planting of additional trees to offset tree loss during construction. Periphery trees and large cottonwood trees on the southern portion of the site could be preserved for their habitat value to the extent feasible. • Trees in other areas of the site lost through clearing should be replaced through additional plantings around parking areas and buildings, and along the site perimeter to enhance visual screening from adjacent landowners. If development occurs all at once, construction plans could include lot configurations that preserve trees to the extent feasible. • Landowners could be encouraged to retain trees during lot-by-lot design and to use native vegetation in landscaping. • Erosion control and water quality BMPs should be implemented to reduce non-point pollution to Union Bay. Flow rates and flow capacity could be minimized by utilizing existing on-site stormwater treatment facilities. • Invasive/exotic plant species in wetlands could be removed and controlled to further enhance wetland functions. Down logs, stumps, brush piles, and boulders (if found during site excavation) could be incorporated in wetlands and remaining buffers for wildlife habitat. • A variety of sizes of evergreen and deciduous trees and shrubs could be planted in and around wetlands to promote the natural rate of forest succession. • Information signage could be installed along a boardwalk through the created wetland system and along the buffer areas adjacent to development to increase public awareness of the adjacent wetland and buffer ecosystems. • Wetland hydrology could be augmented with clean rooftop runoff slowly released to the wetlands through infiltration trenches placed at the buffer's edge.
2B	**Land Use** • Same as Alternative 2A. • 38th Avenue NE would not be developed, increasing the amount of vegetated open space retained along the west side of the property and reducing impacts to adjacent land use. **Height, Bulk and Scale** • In addition to the mitigation measures listed above for Alternative 2A, the following measures would be implemented as part of the design for Alternative 2B: • 38th Avenue NE would not be developed, increasing the amount of vegetated open space retained along the west side of the property and reducing the overall massing and density of the development at full build-out. **Habitat/Wetlands** • Same as Alternative 2A.

CHAPTER 2.0
DESCRIPTION OF ALTERNATIVES AND EIS SCOPE

2.1 Site Description

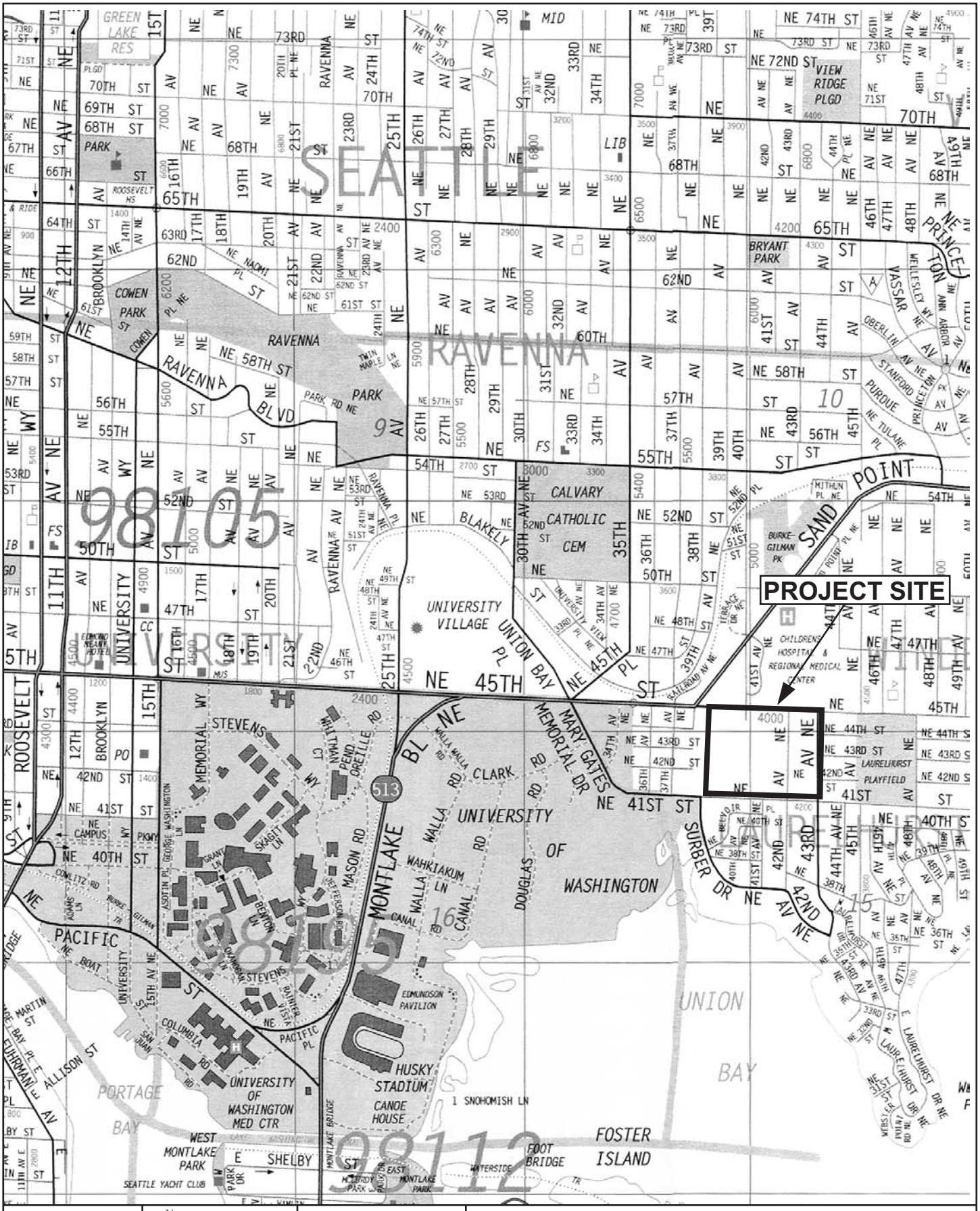
The project area is located in the Laurelhurst neighborhood of the City of Seattle (Figure 2-1). The Laurelhurst neighborhood is a predominantly single-family residential area located to the north and northeast of Union Bay on Lake Washington and east of the University of Washington and the University District neighborhood. The approximate boundaries of the Laurelhurst neighborhood are 37th Avenue NE, Sand Point Way, Windermere Road, Lake Washington, and Union Bay. The eastern boundary of the University of Washington campus is located adjacent to the western portions of Laurelhurst; the University Village shopping center is located approximately one-half mile to the northwest. The Children's Hospital Medical Center campus is located less than 0.25 mile north of Laurelhurst and across Northeast 45th Street.

Land uses surrounding the project site consist of single-family homes to the east, west, and south. Land uses to the north include a commercial/retail strip at the northwest corner of the site. Multi-family apartment buildings and associated parking areas and single-family development border the remainder of the site to the north and northeast.

The 18-acre project site is presently occupied by institute for advanced study (IAS) uses. The site dimensions are approximately 800 feet by 900 feet. Structures on the site include eight one-story buildings used as office and conference space and for support of these uses (e.g., cafeteria, lodging, and maintenance) (Figures 2-2 and 2-3). The site also currently contains 144 striped parking spaces, plus the capacity to accommodate parking for 89 additional vehicles along the site's access road. The site is heavily landscaped with lawn, shrubs, and trees between buildings; the southwest portion of the site is landscaped but does not contain any buildings. The extensive landscaping, including some large trees, and the large area of undeveloped space in the southwest portion of the property give the site a park-like feel.

The northwest portion of the site currently supports three separate one-story, wood frame buildings and a parking area. These buildings are connected by paved pathways and are surrounded by a large number of mature trees and other landscaping. The northeast portion of the site currently contains two buildings and several parking areas. One building houses conference rooms and offices; the other provides lodging for conference attendees. This area is also heavily landscaped and contains several mature trees.

The project site slopes gently to moderately downhill from north to south. A low area with constructed ponds containing a fountain is located generally in the east-central portion of the project site. The ponds are ringed by a footpath, and a pedestrian bridge crosses the middle of



ADOLFSON

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NOT TO SCALE

File name: 21034_vic.ai
Original AAI graphic by: ACT
Edits by: JAB 10/27/04
Date: 8/29/02

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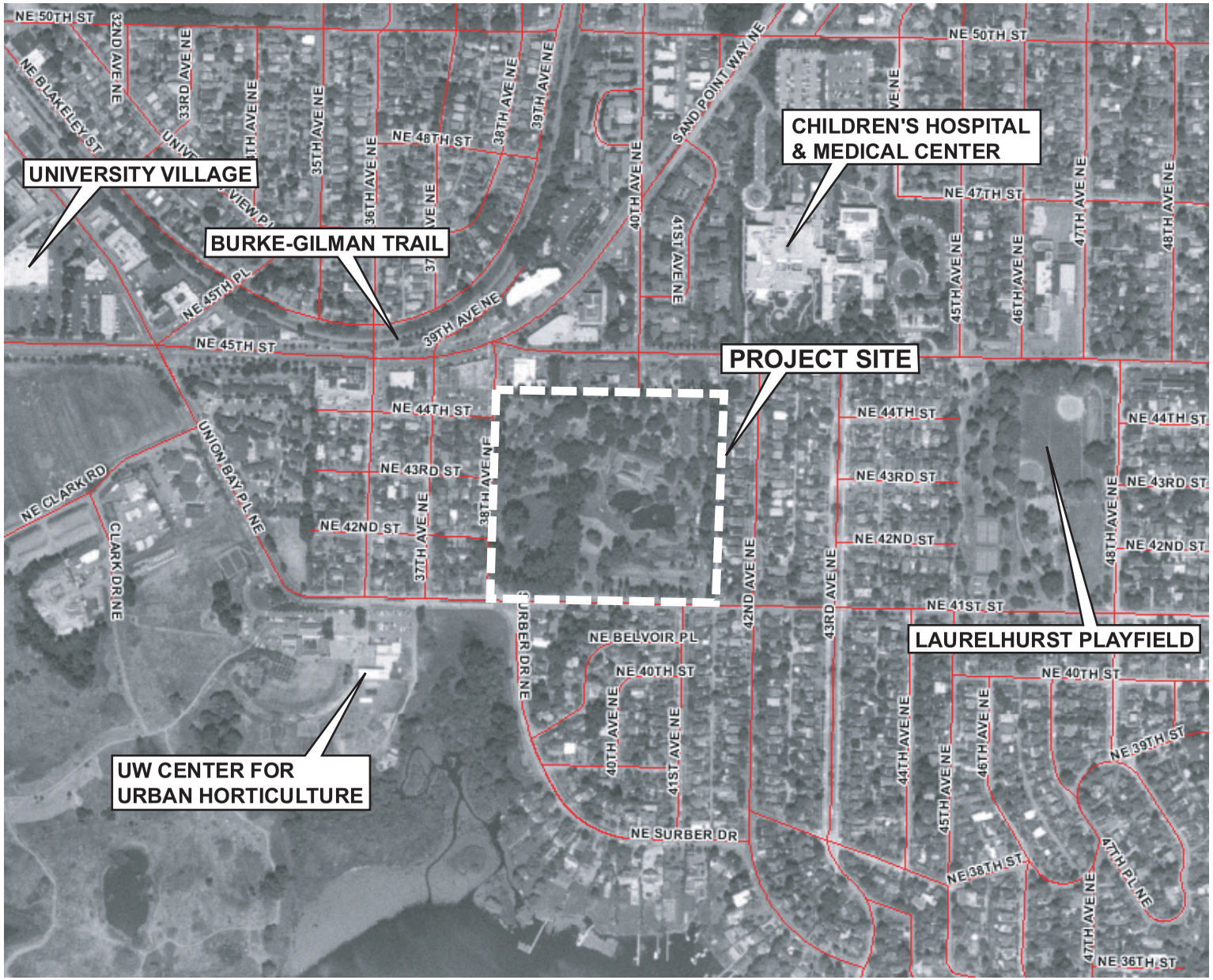
FIGURE 2-1.
VICINITY MAP
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

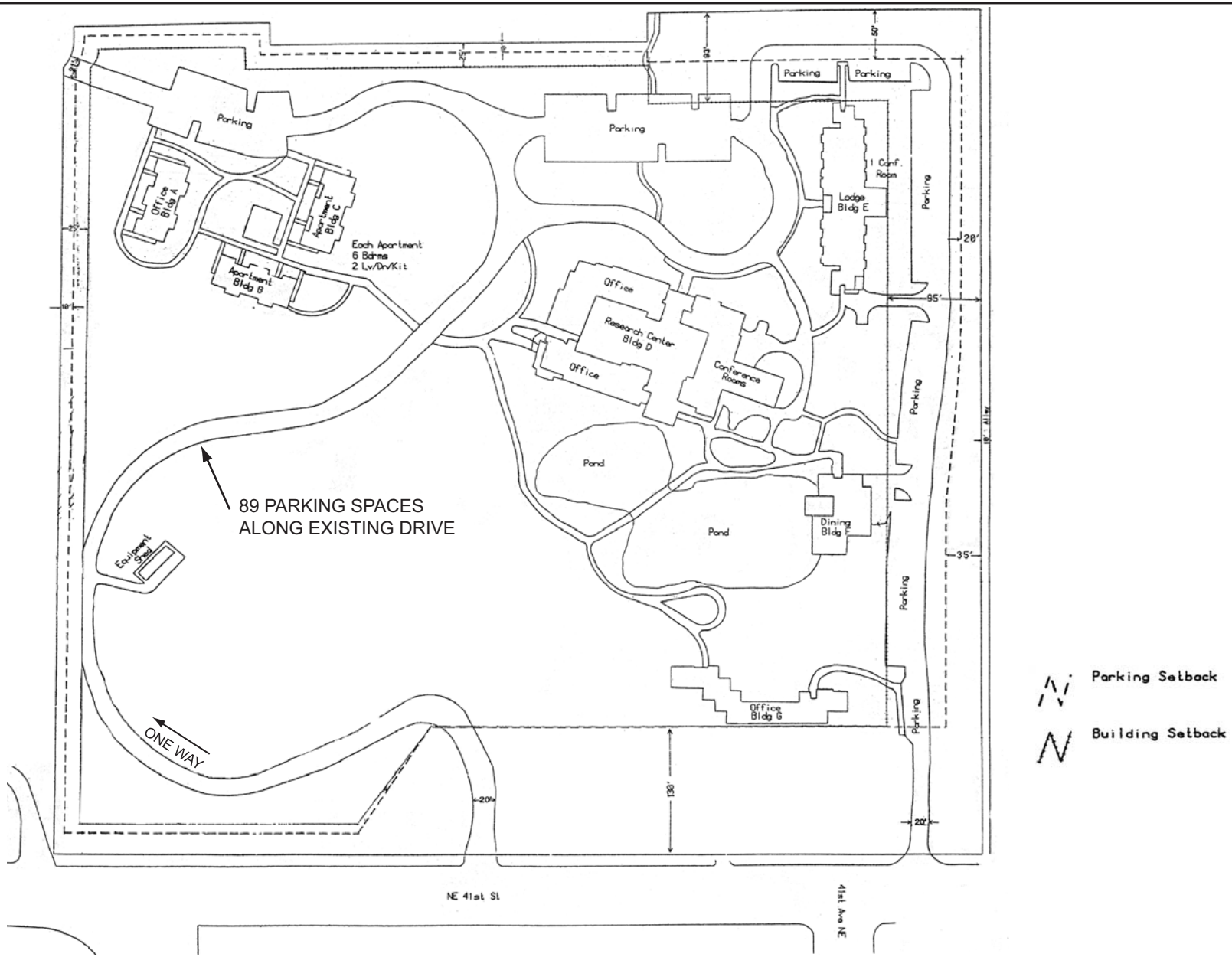


NORTH
No Scale

File name: 21034_site.ai
Original AAI Graphic by: ACT
Edits by:
Date: 8/29/02

Source: King County GIS; Air Photo: 1996.

FIGURE 2-2.
PROJECT SITE MAP
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON



NORTH
No Scale

File name: 21034_site2.ai
Original AAI Graphic by: ACT
Edits by:
Date: 11/12/02

Source: Batelle Memorial Institute.

FIGURE 2-3.
EXISTING SITE PLAN
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

the ponds, connecting the south portion of the site to the main conference center building. A dining building is located immediately to the east of the ponds, while an additional office building is located immediately southeast of the ponds. A small equipment shed is located near the southwest corner of the project site.

Primary access to the site is from Northeast 41st Street on the south. Secondary access to the site is provided from a small driveway off of the developed portion of 38th Avenue Northeast in the northwest corner of the site, and from a second access road off of Northeast 41st Street in the southeast corner of the site. The remainder of the 38th Avenue Northeast right-of-way is unimproved and not open to foot or vehicle traffic. Partially developed street rights-of-way serving single-family homes to the east and single- and multi-family homes to the northeast sit above the project site. A small slope separates these rights-of-way from surface parking areas along the east and northeast property boundary of the project site. Northeast 45th Street is located north of the project site and is separated from the site by commercial/retail and multi-family buildings.

2.2 Project Goals and Objectives

The applicant has identified a number of redevelopment objectives for the project site. Overall, the applicant has expressed the goal of redeveloping and expanding the institute uses on the site in a manner that is consistent with City plans and policies. The applicant has also expressed the intent of designing the project to be consistent with the existing neighborhood character and to preserve existing open space on the site to the extent feasible.

Also governing development on the site is a 1991 Settlement Agreement between Battelle, the Laurelhurst Community Club, and the City of Seattle. This Agreement specified limitations on future redevelopment of the project site, addressing issues such as building height, gross square footage, lot line setbacks, landscaping, and site access. The applicant has expressed an intent to comply with this Agreement as part of its project goals and objectives. However, the applicant has proposed a reevaluation of parking standards contained in the Agreement to more accurately reflect proposed project-specific uses for Institutes for Advanced Study that are not presently defined in the Agreement or the City's land use code. This proposed reevaluation would be processed by DPD as part of the Administrative Conditional Use process as guided by SMC 23.44.022. Parking modifications are discussed under Alternative 1B, below, and in the Transportation section of Chapter 3.

Specifically, the applicant's objectives include the following:

- Redevelop the former Battelle site with uses permitted by the underlying zoning in a manner that meets the needs of the market and that provides adequate financial returns for current and future owners and site investors.
- If possible, achieve a phased expansion of the existing Institute for Advanced Study (IAS) uses on the site to accommodate the Talaris Research Institute and other IAS uses.
- If IAS expansion is not feasible, then redevelop the site as single-family housing at densities consistent with the underlying zoning and market demand.

- For either use, develop project architectural approaches that include superior design to complement the neighborhood and that (for the IAS) provide high levels of interdisciplinary functionality to meet the needs of IAS users within individual buildings.
- For the IAS expansion, minimize new road construction and parking where feasible to help provide open space that would serve as an amenity to both the project and the neighborhood.

2.3 Summary of EIS Scoping Process

The scope of the environmental elements analyzed in the Draft and Final EIS was determined using a formal, public EIS scoping process as required by local and state SEPA regulations. As part of this process, the City held two separate scoping periods for this EIS. Following the issuance of a Determination of Significance on September 10, 2001, the City opened the first scoping period from September 9, 2001, to October 2, 2001. During this first scoping period, a scoping meeting was held on September 25, 2001, from 7:30 p.m. to 9:00 p.m. at the Laurelhurst Community Center, located at 4554 Northeast 41st Street in Seattle. Twenty-six individuals attended the scoping meeting, six of whom offered oral comments. A total of 20 written comments were received during this first scoping period.

The City opened a second scoping period from May 23, 2002, to June 20, 2002, to evaluate an alternative that included single-family housing development of the site. Two public scoping meetings were held during this second period on potential environmental impacts and issues to be addressed in the EIS. The first meeting was held on June 6, 2002, from 6:30 p.m. to 9:00 p.m. at the Center for Urban Horticulture, located at 3501 Northeast 41st Street in Seattle. Thirteen people attended the June 6 meeting. The second meeting was held on June 19, 2002, from 7:00 p.m. to 9:00 p.m., also at the Center for Urban Horticulture. Twelve people attended the June 19 meeting. A total of 10 written comments were received during the second scoping period.

Major issues raised at the scoping meetings and in written comments received during both scoping periods include:

- Parking and Traffic: concerns over impacts of the alternatives on on-street parking and traffic congestion in the neighborhood;
- Height, Bulk, and Scale: concerns over the size and appearance of the proposed alternatives within a predominantly single-family neighborhood;
- Consistency with Settlement Agreement: design of the proposed development and consistency with the terms contained in the 1991 Settlement Agreement;
- Wetlands: concern for the wetland resources on the property; and
- Construction Impacts: neighborhood concerns over construction activities and the duration of construction for the proposed project.

2.4 Description of Alternatives

Chapter 197-11-440(5) WAC requires that an EIS discuss the proposal and reasonable alternatives including the “No Action” alternative. The reasonable alternatives must include

actions that could feasibly attain or approximate a proposal's objectives, but at a lower environmental cost or decreased level of environmental degradation.

This EIS evaluates four redevelopment alternatives and a No Action alternative as required by SEPA. Two of the alternatives include redevelopment of the site for an Institute for Advanced Study (IAS); the alternatives differ in the level of design to mitigate bulk and scale impacts, and in the amount of surface parking provided on the site. The other two alternatives address redevelopment of the site for single-family housing; these alternatives vary in the intensity of development and resultant impacts to environmentally critical areas as well as fish and wildlife habitat. Since the publication of the Draft EIS, additional site analysis and refinements to the IAS Alternative 1B and the single-family alternatives has occurred. Changes to Alternative 1B, included reduction in the overall Phase 1 building size from 128,000 to 98,000 gross square feet (gsf), and reorientation of the building to further reduce bulk and scale impacts of the development on adjacent properties. Further analysis for the single-family alternatives determined that more lots could be developed on the site while still maintaining appropriate setbacks (building, steep slope and wetlands). This was achieved through the consolidation of low quality wetland areas on the site (wetland fill and mitigation/enhancement) and relocating an existing stormwater pipeline into the street right-of-way.

Alternative 1A and the housing alternatives (Alternatives 2A and 2B), as proposed, would require review under the provisions of the Environmentally Critical Areas portion of the Land Use Code. All three are dependent upon the granting of an Environmental Critical Areas (ECA) exception. On a preliminary basis, these alternatives may not meet the code's criteria for granting an ECA exception. Therefore, they may prove infeasible or require modifications to meet ECA requirements or the sponsor's objectives.

2.4.1 Alternative 1A: Institute for Advanced Study with Code-required Parking

Under this alternative, two phases of an Institute for Advanced Study (Phases 1 and 2) would be constructed on the 18-acre site that is currently used for institutional uses. This alternative would incorporate the required parking for Institutes for Advanced Study as specified in the City of Seattle's Land Use Code (SMC 23.54.015, Chart A). This alternative represents an increased structure bulk and scale (compared to Alternative 1B) that would reasonably meet the proponent's objectives. Figure 2-4 shows the site plan for Phase 1 and Phase 2 development of Alternative 1A.

Facility Description

The proposed Phase 1 facility, the Talaris Research Institute, would include approximately 127,000 gsf located in a single structure. The structure would not exceed 30 feet in height above grade and would be located in the northwest portion of the site (Figure 2-4). The facility would be an interdisciplinary research institute focused on the investigation of how infants and young children acquire and process information about their surroundings. Primary uses associated with Phase 1 would include research areas, laboratories, and associated workspaces (Table 2-1). Other uses would include offices, an auditorium, a library, and childcare facility. The existing conference center in the northeast corner of the site would remain as part of Phase 1.

Phase 2 of the proposal would include the construction of an additional 163,000 gsf in a second building located east of the Phase 1 building (Figure 2-4). Under Alternative 1A, this structure would consist of two floors and would have a maximum height of 30 feet, similar to the Phase 1 structure. This building would be of similar dimensions and height as the Phase 1 building. While specific uses of this facility have not been defined, uses would be similar to those of the Phase 1 building (research, laboratory, and office space) and would be consistent with an Institute for Advanced Study.

Table 2–1. Area and Use by Floor, Phase 1, Alternative 1A

Floor	Proposed Uses[1]	Approximate Floor Area[1]
1 (partially underground)	Main entry, public outreach, auditorium, library, and other support spaces	45,800
2	Main scientific research area	62,800
3	Northwest public entrance to Institute, executive administration, childcare/pre-school, landscaped plaza roofs, exterior children's play area, decks	18,600
PB (underground)	105 parking stalls	46,934
PA (underground)	105 parking stalls, loading dock	54,624

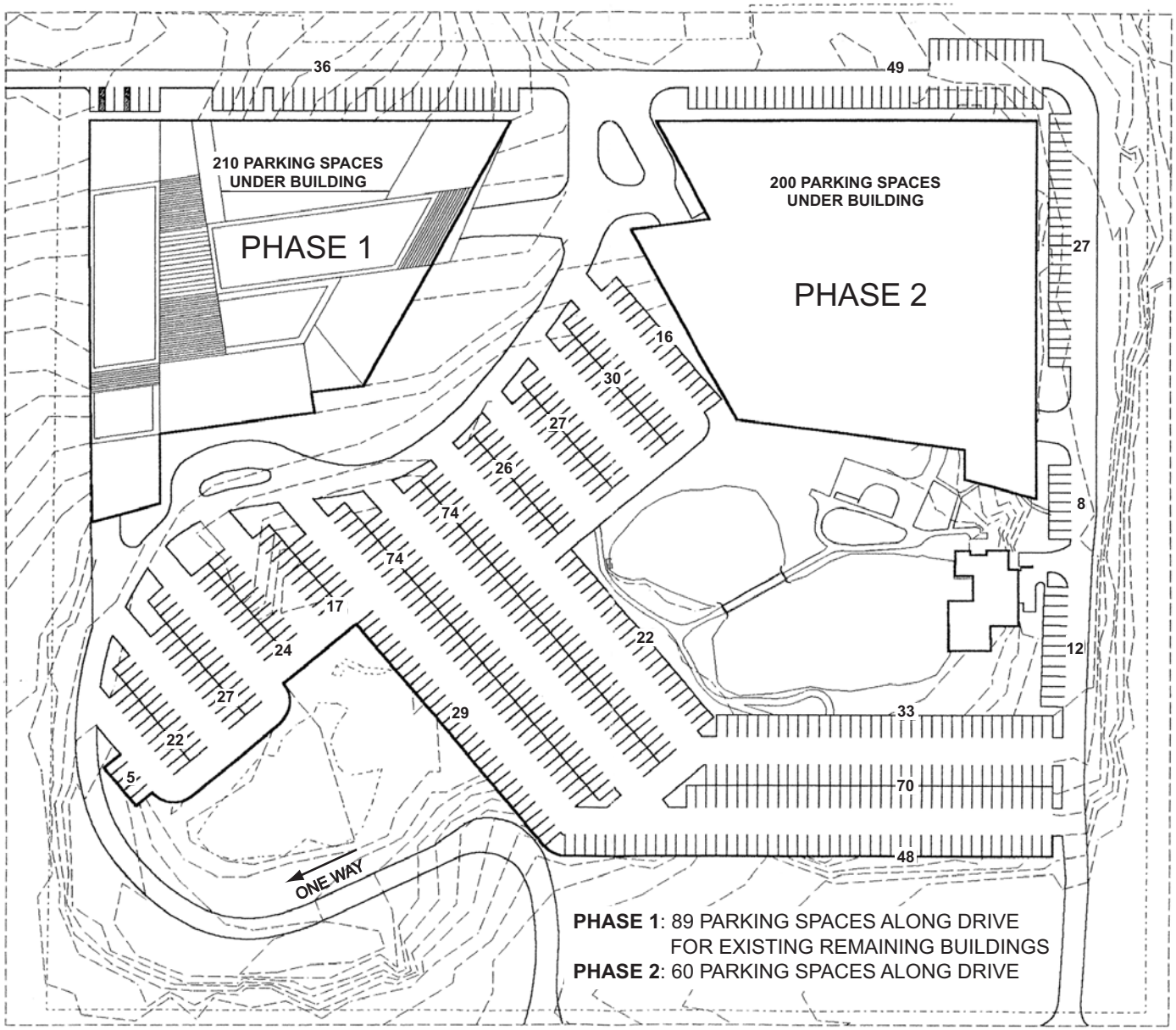
1. Proposed uses and floor area are intended to be a representative approximation of uses. Actual area allocated to uses may vary.

Table 2-2 provides the approximate numbers of clients, students, and employees who would be expected to use the Phase 1 facility. The Talaris Research Institute would operate 7 days per week, with most activities taking place from Monday through Friday during regular business hours (approximately 8:00 a.m. to 6:00 p.m.). Conference activities would vary but would not be a regularly scheduled use. Instead, conferences would occasionally occur over weekend days as well as during weekdays. Schedules for ongoing research by graduate students may also vary and could include sporadic evening and weekend use of the facility.

Table 2–2. Approximate Daily Number of Users by User Type

Users	Approximate Number[1]
Permanent Staff	174 (90 full time staff or researchers, 84 graduate students)
Subject's Parents	25
Adult Subjects	4
Outreach	5
Conference Facilities	100 (occasional use, not a daily occurrence)
Childcare Workers	17
Children at Childcare Center	50

1. Staff and user numbers are intended to be a representative approximation. Actual number of users of different types may vary.



NORTH
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Original AAI Graphic by: ACT
Edits by: JAB
Date: 4/29/04

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FIGURE 2-4.
ALTERNATIVE 1A SITE PLAN - PHASES 1 & 2
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

Parking and Access

Under Alternative 1A, Phase 1 would incorporate parking requirements for existing Institutes for Advanced Study and Conference Facilities as established by the Land Use Code (SMC 23.54.015, Chart A). Under the Code, the proposed Talaris Research Institute (Phase 1) would require 508 parking spaces, while the Talaris conference facilities that would remain onsite would require an additional 233 parking spaces. Therefore, the total parking spaces required for Phase 1 development under the Code would be 741 spaces. Under Alternative 1A, approximately 210 parking spaces would be provided in structured parking located under the Phase 1 building; the remaining 524 spaces would be developed as surface parking; a total of 734 spaces would be provided.

Based on projected gross square footage and proposed uses, development of Phase 2 would construct an additional 352 spaces (359 required); 200 of these spaces would be provided in structured parking under the Phase 2 building. With demolition of remaining structures on the site and buildout of Phase 2, a total of 1,086 spaces would be provided, slightly exceeding the Code requirement of 1,079 stalls. Approximately 676 parking spaces would be provided in surface parking, while the remaining 410 spaces would be provided in subsurface structured parking (Figure 2-4). Refer to the Transportation section for more detail on parking and access.

The existing entrance off of Northeast 41st Street would continue to provide site access. A drop-off site would be constructed on the south side of the Phase 1 building. Access to below-grade parking would be provided on the southwest and northeast corners of the building. Truck loading bays would be located below-grade in the subsurface parking structure. Landscaping would be provided along the west and north perimeters of the site and in other areas around the structure and associated parking areas.

Development Scale and Open Space

Under this alternative, both the Phase 1 and Phase 2 structures would be approximately 30 feet high. Of the two sides of the Phase 1 structure bordering adjacent properties, the portion of the Phase 1 structure along the west side of the site would be approximately 283 feet long, while the north side would be approximately 350 feet long. The portion of the Phase 2 structure bordering adjacent properties to the east would be approximately 324 feet along, while the northern façade would be approximately 318 feet long. Alternative 1A does not propose modulation or façade treatments.

Following buildout of Phases 1 and 2, approximately 8 acres of open space in lawns, open water, and vegetation would be preserved on the site outside of building footprints and parking areas.

Site Demolition

Three existing one-story wood frame structures on the site, labeled Apartments A, B, and C and totaling approximately 7,485 gsf, would be removed for the development of Phase 1. All three structures are or have recently been used for conference or research purposes. Approximately 50,595 gsf in four existing buildings would remain.

Phase 2 of the development would result in the demolition of three additional structures on the site. These would include Building D, the Research Center Seminar Building D; Building E, the Lodge Building; and Building G, an office building located in the east portion of the site.

2.4.2 Alternative 1B: Institute for Advanced Study with Reduced Parking, and Design Alternatives to Reduce Bulk and Scale Impacts

Alternative 1B would incorporate design features to reduce bulk and scale impacts of the development on adjacent properties. This alternative also includes less parking capacity than Alternative 1A; under this alternative, approximately 850 parking spaces would be constructed for Phases 1 and 2, both below grade and in surface parking lots. Figure 2-5 shows the site plan for Phase 1 and Phase 2 development of Alternative 1B.

Facility Description

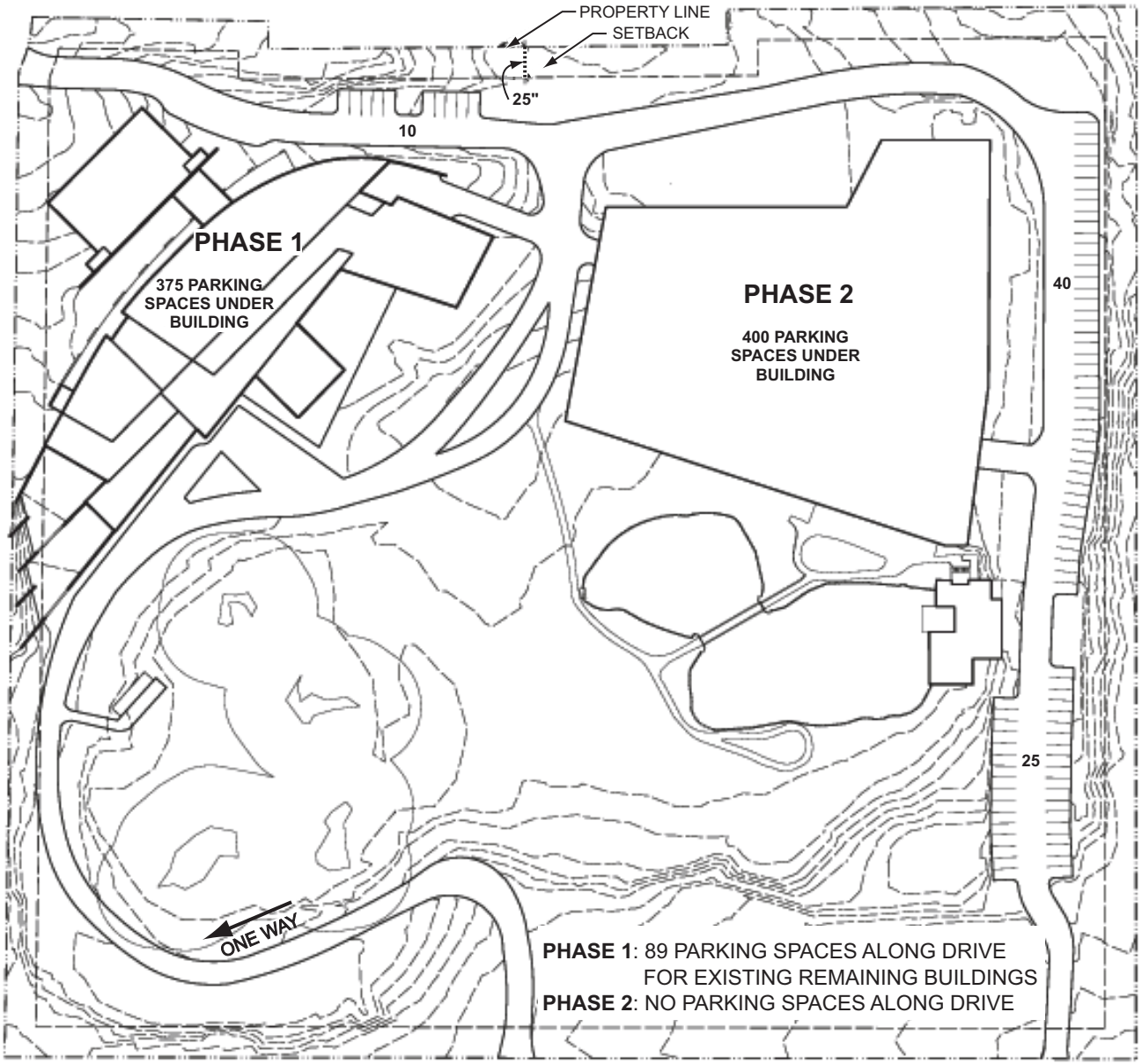
Similar to Alternative 1A, the proposed Phase 1 facility would consist of an Institute for Advanced Study and include approximately 98,000 gsf in a single structure. Uses would include research areas and associated workspaces, offices, laboratories, an auditorium, a library, and a daycare facility (Table 2-3). In addition, the Phase 1 building would be designed with a maximum above-grade height of 30 feet, with the remaining portions of the building located below grade (Figure 2-6). Refer to the Height, Bulk and Scale section for more detail on bulk and scale issues.

Under Alternative 1B (similar to Alternative 1A) Phase 2 would include the construction of an additional 163,000 gsf in another building located east of the Phase 1 building. The approximate number of users and permanent staff for this alternative would be consistent with Alternative 1A as discussed above.

Table 2–3. Area and Use by Floor, Phase 1, Alternative 1B

Floor	Proposed Uses[1]	Approximate Floor Area[1]	Garage Area
1 partially underground	Main entry, public outreach, auditorium, scientific research and office area, parking stalls and other support spaces	27,600	30,250[2]
2	Northwest public entrance to Institute, childcare/pre-school, landscaped plaza roofs, exterior children's play area, decks, scientific research area and office area	40,000	
3	Scientific research area, office area and other support spaces	27,600	
PB underground	Elevator lobby, mechanical/electrical rooms and parking	1,200	56,100
PA	Elevator lobby, mechanical/electrical rooms and parking	1,200	55,500

1. Proposed uses and floor area are intended to be a representative approximation of uses. Actual area allocated to uses may vary.
2. Garage area underground.



NORTH
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Original AAI Graphic by: ACT
Edits by: JAB
Date: 4/29/04

Source: NBBJ.

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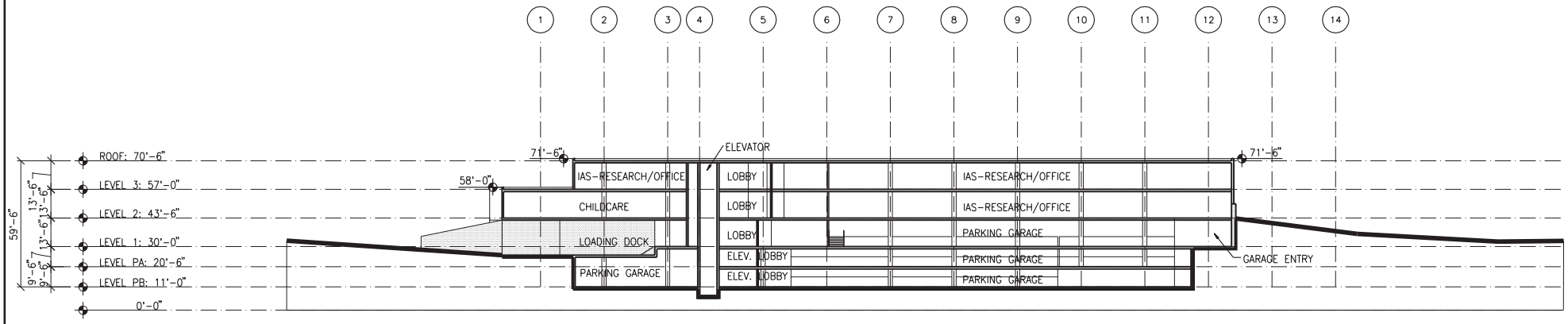
FIGURE 2-5.
ALTERNATIVE 1B SITE PLAN - PHASES 1 & 2
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON



1 SW-NE SECTION
SCALE: 1/32" = 1'-0"
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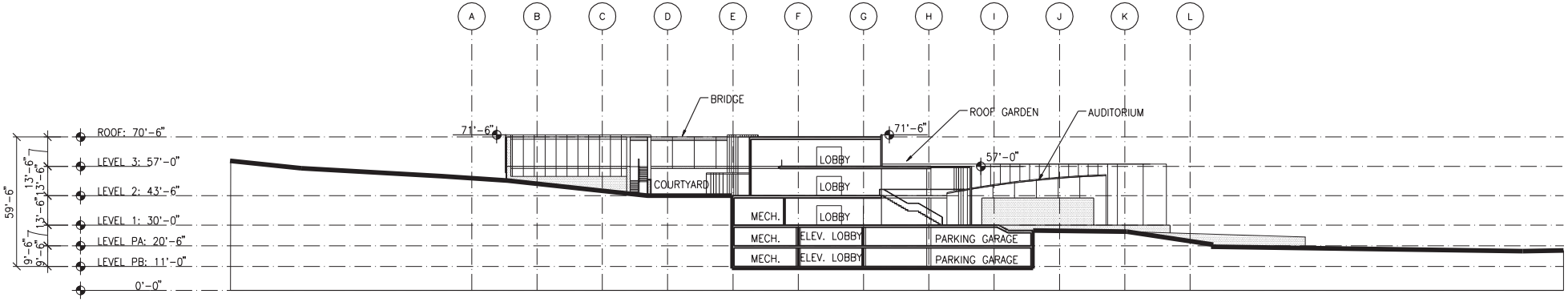

2 NW-SE SECTION
SCALE: 1/32" = 1'-0"
0 16' 32' 64'

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Original graphic by: JAB
Edits by:
Date: 10/27/04

Source: NBBJ, 2004.

FIGURE 2-6.
ALTERNATIVE 1B CROSS SECTIONS
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

Parking and Access

Phase 1 under Alternative 1B includes retention of a substantial portion of the existing striped stalls and 89 overflow parking stalls on the site. Two and one-half floors of subsurface structured parking would provide 375 parking spaces for researchers, scientists, and guests. Combined with 176 surface parking spaces, and 89 existing overflow spaces along the access drive, the project would include a total of 640 spaces for Phase 1. Phase 1 of Alternative 1B would meet code-required parking, including parking required for the existing Talaris Conference Center, which will remain.

For Alternative 1B, reduced surface parking is proposed under Phase 2. With the demolition of remaining structures on the site (except cafeteria) and buildout of Phase 2, a total of 1,041 parking spaces would be required. At buildout of both phases, the project would include a total of 850 parking spaces of which 775 would be subsurface parking spaces and 75 would be surface parking spaces (Figure 2-5). Refer to the Transportation section for more detail on parking and access.

The existing entrance off of Northeast 41st Street would continue to provide site access. A drop-off location would be constructed on the south side of the Phase 1 building, and access to below-grade parking would be provided on the southwest and northeast corners of the building. Truck loading bays would be located below-grade in the subsurface parking structure. Landscaping would be provided along the west and north perimeters of the site and in other areas around the structure and associated parking areas.

Development Scale and Open Space

The Phase 1 structure would be situated in the northwest portion of the site to retain open space and to minimize impacts to the surrounding single-family residential neighborhood. The facility would be partially embedded in the slope at this location and would have a maximum above-grade height of 30 feet, with the remaining portions of the building located below grade. While façade dimensions would be similar to Alternative 1A, successive aboveground floors would be modulated, or “stepped back,” to minimize the bulk of the façade. Large areas of terraces and roof gardens would also be included in the proposal to blend the facility with the surrounding lawns and vegetation.

Alternative 1B would also include a number of design treatments to minimize bulk and scale impacts and to address compatibility issues between the buildings and adjacent neighborhoods. Examples of what these design elements could include are as follows:

- Rooftop gardens to replace views of roofing materials;
- Stone walls along the building foundations in place of concrete foundation walls;
- Privacy screens and sun screens along building facades; and
- Additional landscaping along site perimeter and building facades.

The Phase 2 structure would be of a similar height, bulk, and scale, and would likely have similar design features to the Phase 1 building.

Following buildout of Phases 1 and 2, approximately 13 acres of open space in lawns, open water, and vegetation would be preserved outside of building footprints and surface parking areas.

Site Demolition

Site demolition for this alternative is the same as that required for Alternative 1A.

2.4.3 Alternative 2A: Single-Family Development with 38th Avenue NE Improvements

This alternative would include the maximum potential single-family development on the site under the existing zoning of one dwelling unit per 5,000 square feet (SF 5000). Under this alternative, the site could be subdivided and developed all at once or incrementally over time.

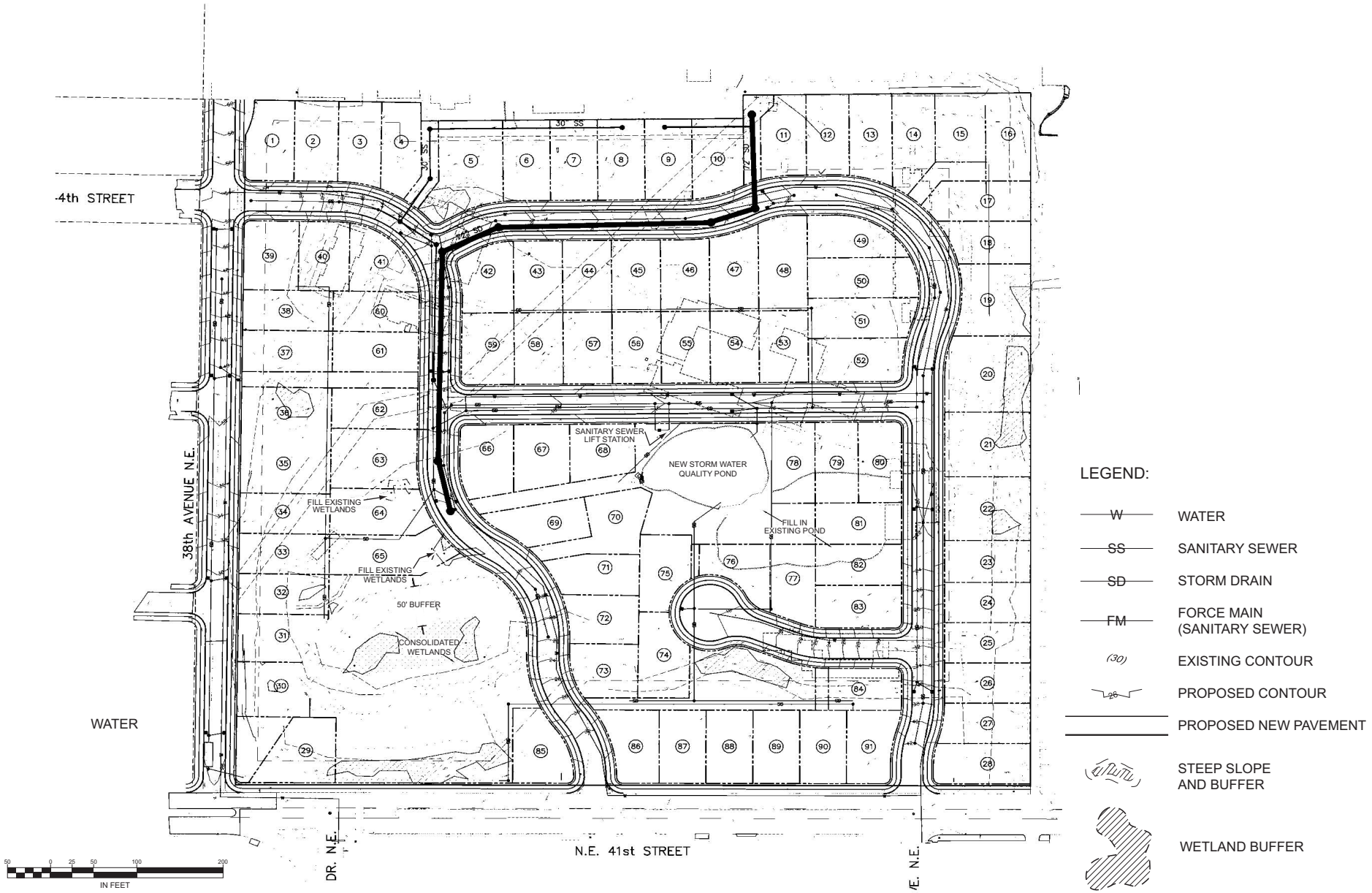
Site Layout

This alternative includes subdivision of the site into 91 single-family housing lots along with new internal roads, two cul-de-sacs, and a total of four access points (Figure 2-7). Under Alternative 2A, the 38th Avenue Northeast right-of-way would also be developed to provide site access and circulation. Under the proposed lot configuration, the existing storm sewer that crosses the site would be relocated to the street right-of-way, two lower quality wetlands would be filled and the remaining higher quality wetlands enhanced. The number of lots identified for Alternative 2A would provide buffers for the consolidated wetlands, as well as avoid vegetated steep slopes and their buffers as specified in SMC Chapter 25.09. This alternative would require an ECA exception.

Development Scale and Style

Under this alternative, lot sizes, house sizes, and architectural styles would be compatible with the adjacent residential neighborhoods, which are similarly zoned SF 5000. It is anticipated that dwelling unit footprints would range from approximately 1,200 to 1,600 square feet. While design of individual homes would vary, it is assumed that individual lots would contain one dwelling unit, a driveway, and a detached or attached garage. Minimum yards and setbacks required by the Land Use Code for Single-Family Residential 5000 (SF 5000) lots would be provided, including:

- Minimum front yard: 20 feet;
- Minimum rear yard: 25 feet and/or 20 percent of lot depth; and
- Minimum side yards: 5 feet.



NORTH

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Original AAI Graphic by: JAB
Edits by:
Date: 04/27/04

Source:
4000 Property LLC. Talaris Research Institute. Seattle, WA 2004.

FIGURE 2-7.
ALTERNATIVE 2A SITE PLAN
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

Site Access

Under this alternative, access to the south side of the subdivision would be provided from two streets entering from Northeast 41st Street (see figure 2-7).

Access to the subdivision from the west would entail improvement of the existing and currently undeveloped 38th Avenue Northeast right-of-way. Access to individual lots would also be provided for off-street parking.

Site Demolition

Under this alternative, development of 91 single-family lots would require the demolition of all existing structures and driveways on the project site. This includes a total of approximately 43,611 gsf in eight buildings composed of office space, conference facilities, apartments/lodging, a dining building, and equipment shed.

2.4.4 Alternative 2B: Single-Family Development without 38th Avenue NE Improvements

Alternative 2B is a single-family alternative that would reasonably approximate the proponent's objective for single-family development at a reduced environmental cost to on-site and off-site drainage systems, fish and wildlife habitat, and environmentally critical areas. Under Alternative 2B, 38th Avenue NE would not be improved and would remain as undeveloped public right-of-way.

Site Layout

Under this alternative, the site would be subdivided for single-family development in a layout similar to Alternative 2A (Figure 2-8). Relocation of the storm sewer pipeline, wetland fill and enhancement would be the same as described for Alternative 2A. The number of lots identified for Alternative 2B would provide buffers for the consolidated wetlands, as well as avoid vegetated steep slopes and their buffers as specified in SMC Chapter 25.09. This would require an ECA exception. Under this alternative, 38th Avenue NE would also be retained in its current vegetated and undeveloped condition to preserve the trees and habitat. Overall, this alternative would result in approximately 90 lots, 1 fewer lot than Alternative 2A.

Development Scale and Style

Similar to Alternative 2A, the style and scale of single-family homes under this alternative would be compatible with the adjacent residential neighborhood. Individual lots would contain a driveway and garage in addition to a dwelling unit. Minimum yards and setbacks required in a Single-Family Residential 5000 (SF 5000) zone would be provided.

Site Access

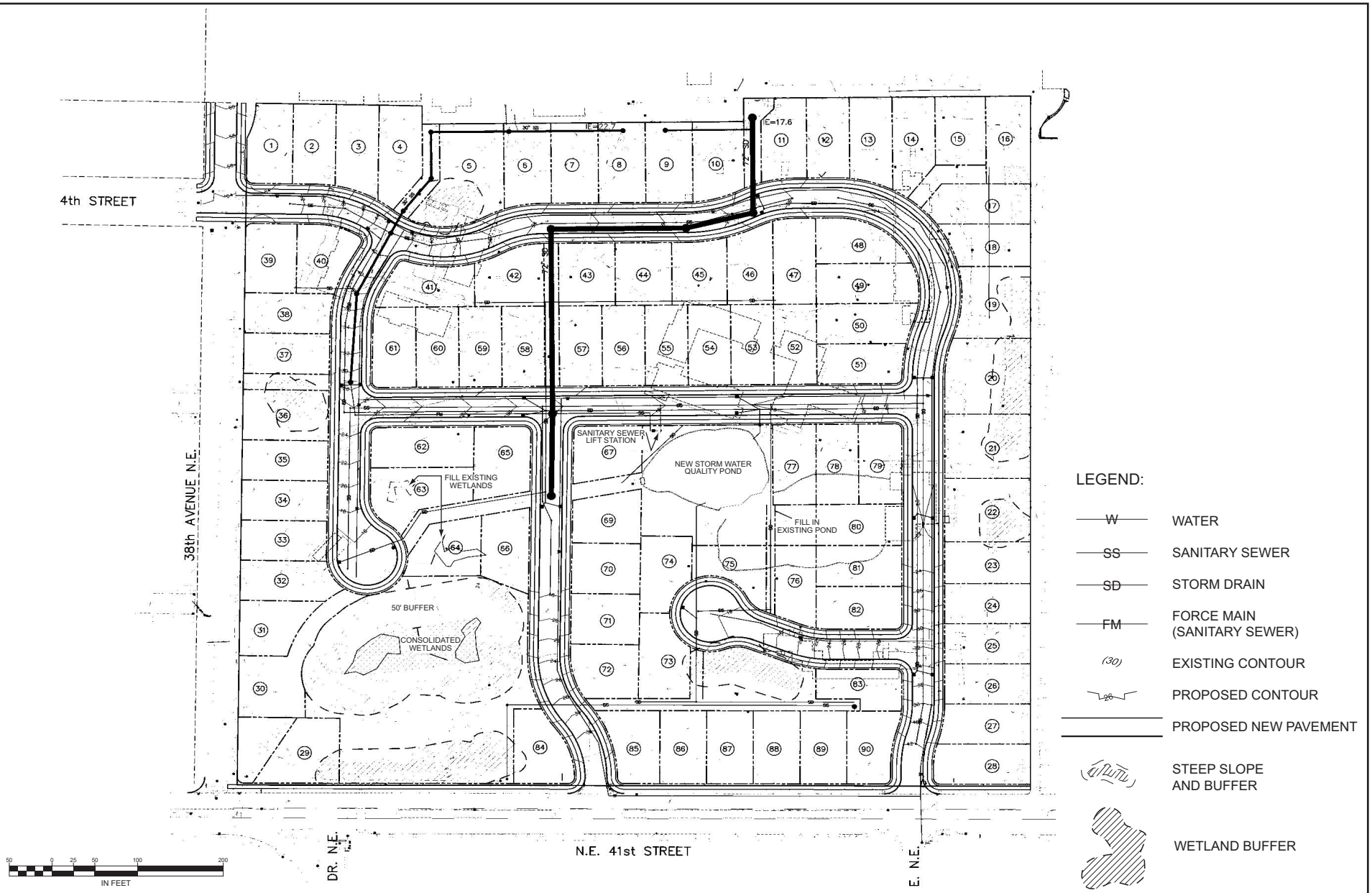
Because the 38th Avenue NE right-of-way would not be developed under this alternative, access to the site would likely be provided via the two access points from NE 41st Street, and from an extension of NE 44th Street in the northwest corner of the site. Access would also be provided to individual lots to provide for off-street parking.

Site Demolition

Similar to Alternative 2A, development of single-family lots under this alternative would likely require the demolition of all of the existing structures and driveways on the project site.

2.4.5 No Action Alternative

Under the No Action Alternative, it is assumed that no redevelopment would occur on the project site in the near term. The project site would likely continue to operate as a conference center in the near future. Other potential reasonably foreseeable uses of the site over the long term may include single-family development, public schools, public playgrounds, or private parks consistent with City of Seattle Zoning and Comprehensive Plan designations, and with permitted uses in single-family zones.



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Original AAI Graphic by: JAB
Edits by:
Date: 04/27/04

Source:
4000 Property LLC. Talaris Research Institute. Seattle, WA 2004.

FIGURE 2-8.
ALTERNATIVE 2B SITE PLAN
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

CHAPTER 3.0
AFFECTED ENVIRONMENT, IMPACTS AND MITIGATION MEASURES

3.1 Land Use

The following section discusses potential land use impacts associated with each alternative analyzed in this Final EIS. The tables in this section highlight applicable sections of the Seattle Municipal Code for each alternative and discuss compatibility of alternatives with applicable code sections. The summary matrix below supplements the complete discussion of land use impacts in this section.

Summary Matrix of Impacts by Alternative

Alternative	Applicable SMC Sections	Summary of Impacts
Alternative 1A – Proposed Institute for Advanced Study with I Required Parking	• 23.44.008-23.44.016 – Development Standards – Single-Family Residential • 23.44.022 – Institution Uses in Single-Family Zones • 23.44.022 N. – Development Standards for Existing Institutes for Advanced Study • 23.54 – Quantity and Design Standards for Access and Off-Street Parking • 25.05 – SEPA Rules • 25.09 – Regulations for Environmentally Critical Areas (ECA) • 25.11 – Tree protection regulations • 22.800 to 22.808 – Stormwater, Grading and Drainage Control	• No major changes in existing land use; redevelopment and expansion of existing institution uses. • Reduction in open space; increase in impervious area. • Less integrated with character of surrounding area. • Greater gross square footage. • Modification to wetlands (fill and mitigation enhancement) would require an ECA exception and Type II land use decision.
Alternative 1B - Institute for Advanced Study with Reduced Parking and Design Alternatives to Reduce Bulk and Scale Impacts	• Same as Alternative 1A.	• Similar impacts as Alternative 1A. Differences include: • More open space, less impervious area (4.7 acres less than Alternative 1A) due to reduced surface parking (541 fewer stalls) and less building gross square footage (29,000 gsf less).

Alternative	Applicable SMC Sections	Summary of Impacts
Alternative 2A – Single Family Development with 38th Avenue NE Improvements	• 23.44.008-23.44.016 – Development Standards – Single-Family Residential • 23.22 – Subdivisions • 25.05 – SEPA Rules • 25.09 – Regulations for Environmentally Critical Areas • 25.11 – Tree protection regulations • 22.800-22.808 – Stormwater, Grading, and Drainage Control	• Land use would be similar to existing residential land use in surrounding area. • Greater reduction in shared open space than Alternatives 1A and 1B. • Development of 38th Ave. NE and vegetated slopes would remove vegetated/forested habitat area. • Modification to wetlands (fill and mitigation enhancement) would require an ECA exception and Type II land use decision. • More consistent with Comprehensive Plan policies for single-family areas than Alternatives 1A and 1B.
Alternative 2B – Single Family Development without 38th Avenue NE Improvements	• Same as Alternative 2A	• Similar impacts as Alternative 2A. Primary difference is that 38th Ave. NE would not be developed with Alternative 2B. Vegetated, forested area in right-of-way would be retained. • Modification to wetlands (fill and mitigation enhancement) would require an ECA exception and Type II land use decision.
No Action Alternative	• No applicable code sections in near term. Development over the long term would comply with applicable sections of the Seattle Municipal Code for subdivisions; single-family development; environmentally critical areas; and stormwater, grading and drainage control.	• Not applicable in near term. Potential change in land use over long term could include single-family residential development, public schools, public playgrounds, or private parks.

3.1.1 Affected Environment

Existing Land Use

The project site is located in the Laurelhurst neighborhood of Seattle. Formerly owned by the Battelle Memorial Institute, the site was developed in 1967 and has been used for research and conference center uses since that time. The property currently contains institute for advanced study uses. Table 3-1 shows the number of employees associated with the current uses.

Table 3-1. Approximate Number of Employees by Use

Users	Approximate Number
Talaris Conference Center	24
Other IAS Users (Battelle)	45
Talaris Research Institute	8
Relationship Research Institute (John Ottoman/ sponsored by Talaris)	20
Total:	**97**

The site is occupied by seven low-profile buildings separated by lawns and landscaping, with an additional structure, a small storage shed, located on the western portion of the site. A man-made two-celled pond with a fountain, and an undeveloped, non-landscaped area in the southwest portion of the site provide open space between buildings and parking areas. Asphalt surfaces include parking lots, internal circulation and access roads, and walkways. The existing impervious surface area for the site is shown below in Table 3-2. See Chapter 1 for more information about the project site.

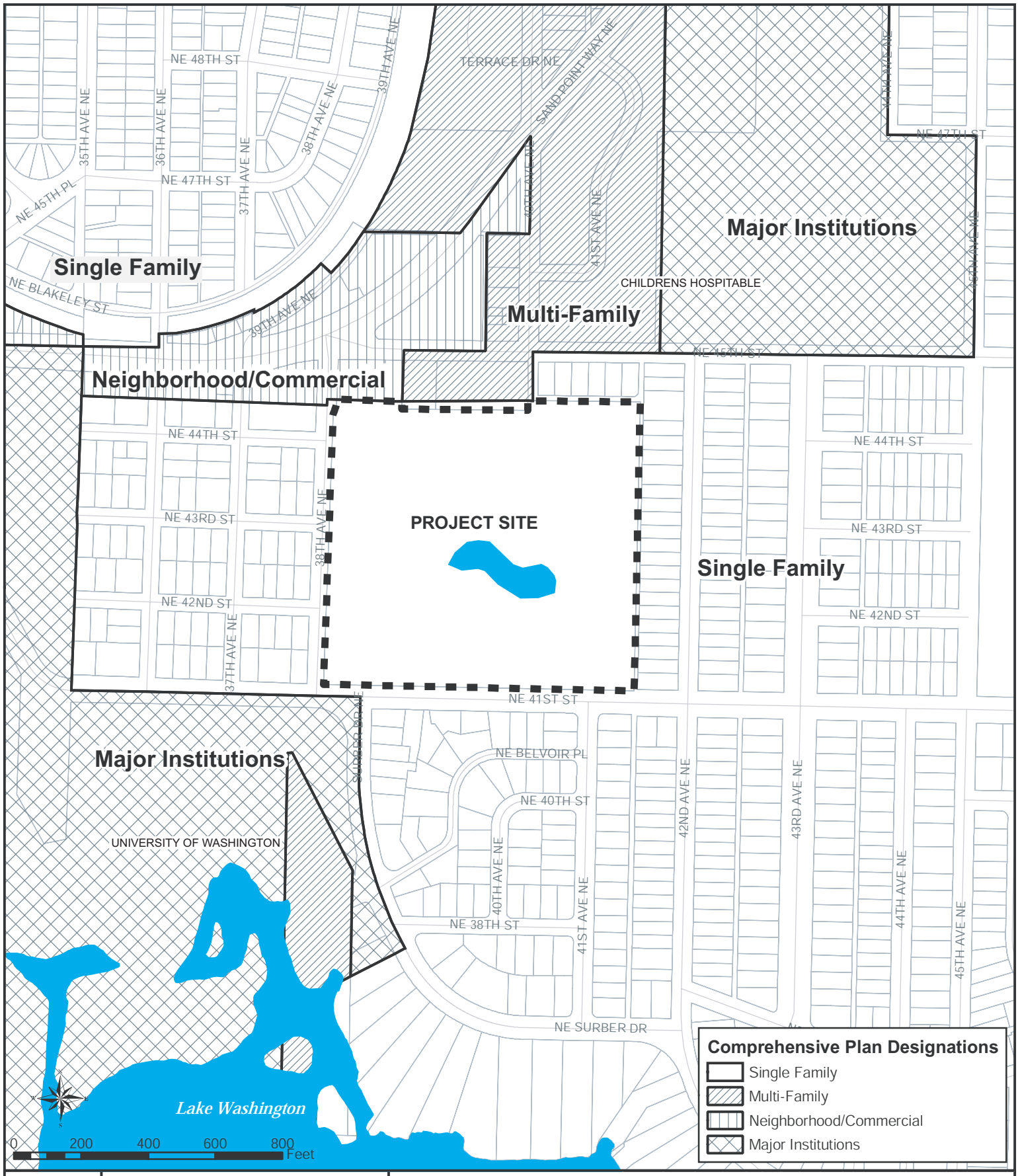
Table 3-2. Existing Impervious Surface Area

Site Features	Area	
Buildings	44,000 sf	
Sidewalks and Plazas	10,000 sf	
Surface Parking:	76,890 sf	(144 surface stalls at 330 sf/stall)
Site Roads	50,400 sf	(includes 89 parking spaces along drive)
Total:	181,290 sf	

Surrounding land uses include single-family residential on the south, west, and east sides of the property. Neighborhood commercial properties (ProRobics Health Club, Laurelhurst Cleaners, Laurelhurst Family Medical and Dental), multi-family residential property (Laurelhurst Apartments), and single-family residential property border the north perimeter of the project site, fronting Northeast 45th Street. In addition to residential and commercial development, land uses in the surrounding area include the University of Washington Center for Urban Horticulture to the southwest, University Village Shopping Center to the west, Children's Hospital and Medical Center to the northeast, and the Laurelhurst Playfield to the east (Figure 2-2).

Land Use Designations and Zoning

According to the *Seattle Comprehensive Plan Future Land Use Map*, the property is designated as a Single Family Residential area (City of Seattle, 2000). Comprehensive Plan land use designations surrounding the property include Single Family Residential to the east, south, and west; Multi-Family Residential and Commercial/Mixed Use Areas to the north; and Major Institution (University of Washington) to the southwest (Figure 3-1).



Map data shown are the property of the sources listed below. Inaccuracies may exist, and Adolfson Associates, Inc. implies no warranties or guarantees regarding any aspect of data depiction.

Source: City of Seattle, 2000

FIGURE 3-1
COMPREHENSIVE LAND USE DESIGNATIONS
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

Consistent with the Comprehensive Plan's land use designation, the project site is zoned Single Family Residential, with a minimum lot size of 5,000 square feet (SF 5000). Previous development of the site by Battelle Memorial Institute resulted in the creation of an "Institution Use" within this single-family zone. Institution uses are permitted by Seattle's Land Use Code in single-family zones as an administrative conditional use, provided they comply with specific development criteria. The existing Talaris Research Institute and the Battelle Memorial Institute are considered IAS uses under the Institution Uses section of the City's Land Use Code.

New or expanding institutions in single-family zones require the approval of a Master Use Permit for an Administrative Conditional Use. Seattle Land Use Code Section 23.44.022 establishes development criteria for institution uses in single-family zones. These criteria are discussed further below.

Development Trends in the Project Vicinity

The following section summarizes other planned, ongoing, and recently completed development projects in the vicinity of the project site. Each project is briefly described, identifying the scale and time horizon of each development.

University Village Shopping Center, Village North Development: This project includes construction of approximately 104,000 square feet of additional retail space and a multi-level parking garage, located approximately one-half mile northwest of the project site. Construction of the project was recently completed.

Blakeley Commons Mixed-Use: This project is located on Blakeley Street between 30th Avenue Northeast and 27th Avenue Northeast, approximately three-quarters of a mile northwest of the project site. The project includes 106 multi-family dwelling units and 8,800 square feet of retail space. Both Phase 1 (45 units) and Phase 2 (61 units) are complete.

Children's Hospital and Medical Center: The project includes a 100,000-square-foot administrative office building at Sand Point Way Northeast and Northeast 70th Street (completed in 2003) and the 100,000-square-foot Janet Sinegal Patient Care building (completed in 2004).

UW Medical Center Surgery Pavilion: This project is located at the southwest corner of Montlake Boulevard and Northeast Pacific Street, approximately one and one-half miles southwest of the project site. This project includes 160,000 square feet of new operating rooms and other clinic facilities, and a 275-space underground garage. This project was completed in 2003.

University of Washington Master Plan: The approved master plan for the University of Washington campus includes approximately 3 million square feet of new space to be developed to accommodate student, faculty, and staff growth between 2002 and 2012. The University of Washington is located approximately one mile southwest of the project site.

Sand Point Magnuson Park Development, Long Range Master Plan: The park includes a total area of 352 acres. The proposed project includes redevelopment of approximately 153 acres for drainage, a wetland/habitat complex, and sports fields/courts. Phases 1 through 5 would be completed between 2004 and 2012. Magnuson Park is located approximately two miles northeast of the project site.

Street Rights-of-Way

An undeveloped north-south street right-of-way is located along the west property line of the project site. This right-of-way, 38th Avenue Northeast, has been developed between Sand Point Way Northeast and Northeast 44th Street. The remaining right-of-way between Northeast 44th Street and Northeast 41st Street is currently undeveloped. Single-family residential homes border the right-of-way to the west; in some locations, local residents have extended lawns and landscaping into the right-of-way.

Seattle subdivision regulations require that all subdivisions be served by one or more streets that provide adequate ingress and egress to and from the subdivision (SMC 23.22.100.A). Additionally, every lot in the subdivision should be provided with convenient vehicular access to a street or to a permanent appurtenant easement (SMC 23.22.100.C).

Relationship to Plans, Policies, and Regulations

Comprehensive Plan Policies

The City of Seattle has established comprehensive land use goals and policies in the *Comprehensive Plan: Toward a Sustainable Seattle*, originally adopted in 1994 and last amended in 2001 (City of Seattle, 2001b). The plan adopts an Urban Village Strategy for the City's preferred development pattern. The plan includes the following language:

> *The intent is to accommodate growth by building on successful aspects of the city's existing urban character, continuing the development of concentrated, pedestrian friendly mixed-use urban villages of varied intensities at appropriate locations throughout the city.* (City of Seattle, 2001b)

The plan also establishes goals and policies for areas outside of urban villages. These areas are less densely developed and consist primarily of single-family residential development.

The project site is not located within any designated urban village. The University District Urban Center is located approximately one-half mile west of the property, bounded by Montlake Boulevard Northeast and Union Bay Place Northeast. For areas outside of urban villages, the Comprehensive Plan establishes the following goal:

> ***LG27****: Allow limited amounts of development in areas of the city outside centers and urban villages to maintain the general intensity of development that already characterizes these areas and to promote the targeted level of growth in village and center locations.* (City of Seattle, 2001b)

As previously discussed, the project is located within an area designated as Single-Family Residential in the Comprehensive Plan. Single-family areas zoned SF 5000 are considered high-density single-family areas in the Comprehensive Plan. The plan establishes the following goals and policies for high-density single-family residential areas:

> ***LG57:*** *Use the Single-family 5000 zone to protect areas which are predominantly in single-family residential use from incompatible uses.*

L73: *Affirm and encourage residential use by one household as the principal use in single-family residential areas and the primary use permitted outright.*

L74: *Limit the number and types of non-residential uses permitted in single- family residential areas to protect those areas from the negative impacts of incompatible uses.*

L77: *Control the location, scale, access and development standards of institutions and facilities in single-family areas in order to reduce negative impacts such as noise, traffic and parking problems in order to protect Seattle's single-family housing stock through a conditional use or master planning process that considers:*

- *Concentration of institutions of facilities*
- *Bulk and siting*
- *Traffic and parking*
- *Demolition of residential structures*
- *Height and scale*

Comprehensive Plan policies L80 through L86 further address bulk and siting, height limitations, non-conforming structures, and parking in single-family zones to promote consistency and compatibility of development in single-family areas (City of Seattle, 2001b). These policies are implemented by development standards for single-family zones established in the Seattle Municipal Code (see below).

Neighborhood Planning

Another component of comprehensive planning in the City of Seattle is neighborhood planning. The Seattle Department of Neighborhoods maintains a collection of 180 recent and historic neighborhood plans and background documents on neighborhood planning in Seattle. Neighborhood plans generally pertain to areas that have capacity to grow. The Laurelhurst neighborhood is a largely built-out, single-family neighborhood. Accordingly, there is no neighborhood plan for Laurelhurst, nor is there likely to be one in the future (Grace, personal communication, 2002).

Seattle Municipal Code

Several sections of the Seattle Municipal Code are applicable to the proposed redevelopment alternatives. These include development standards for single-family zones, design requirements for institution uses in single-family zones, subdivision design standards, regulations for environmentally critical areas, and stormwater and drainage control requirements. Applicable sections of the code are briefly discussed below.

Development Standards for Single-Family Zones. Title 23 of the Seattle Municipal Code (Seattle Land Use Code), Sections 23.44.008 through 23.44.016, establish development standards for uses permitted outright in single-family zones. New or expanding institution uses in single-family zones must comply with these standards, as well as additional requirements, unless modified elsewhere in the Land Use Code or under a Major Institution Master Plan.

Subdivision development within single-family zones must also comply with these standards. Table 3-3 summarizes these standards.

In addition to development standards for uses permitted outright, Section 23.44.022 of the Seattle Land Use Code establishes criteria for institution uses located within single-family zones. Institutions in single-family zones require approval of an administrative conditional use (ACU). The development criteria are intended to ensure that institution uses are compatible with the character of surrounding single-family development. Under the general criteria that apply to all administrative conditional uses in single-family zones (SMC 23.44.018), a conditional use can be conditioned or denied by DPD based on a determination as to whether the proposed use meets the criteria for establishing a specific conditional use and whether the use will be materially detrimental to the public welfare or injurious to property in the zone or vicinity that the property is located. In addition to meeting development standards for uses permitted outright, DPD can also impose requirements to protect other properties in the zone or vicinity. Development criteria for dispersion, noise and odors, landscaping, light and glare, bulk and siting, parking and loading, and transportation are established in the code. Each of these criteria are briefly discussed below.

Table 3-3. Development Standards for Uses Permitted Outright in Single-Family Zones (SMC Sections 23.44.008 through 23.44.016)

Element	Development Standards
Exterior Lighting	Lighting should be shielded and directed away from residentially zoned lots.
Tree Requirements	Trees should be maintained through either planting or development of a tree preservation plan.
Lot Requirements	The minimum lot size in the SF 5000 zone shall be 5000 square feet. The maximum lot coverage cannot exceed 35 percent of the lot area.
Height Limits	Base structure height in single-family zones is established as 30 feet. Additional height is permitted if both adjacent structures exceed 30 feet, if the roof above the height limit is pitched at a rate not less than 3 to 12, or if the lot is sloped, allowing one additional foot of height for each 6 percent of slope (on the downhill side of the structure only).
Transportation	Proposed uses must meet the transportation concurrency level-of-service standards as established in SMC Chapter 23.52.
Yards	Generally, front yards should be at least 20 feet, rear yards 25 feet, and side yards 5 feet. Variations of these requirements are based on the size of abutting yards; the slope of the lot; and the location of the lot with respect to streets, corners, and alleys.
Parking	Parking is required as provided in SMC Chapter 23.54. Additionally, Chapter 23.44.016 requires that vehicular access to parking from an improved street, an alley, or an easement be maintained. Generally, accessory parking should be located on the same lot as the principal use. (Please see Transportation section below for additional discussion of parking requirements).

Dispersion. The Seattle Land Use Code directs that new institution uses or expanding institution uses that include expansion of lot lines located in single-family zones should be geographically dispersed. Generally, the distance between lot lines of one institution use and another should be at least 600 feet. However, a proposed institution may be located less than 600 feet from another institution if the intent of the dispersion criteria is achieved due to the

presence of physical elements such as bodies of water; large open spaces or topographical breaks; or other elements such as arterials, freeways, or nonresidential uses that provide substantial separation from other institutions (SMC 23.44.022.E.1.b).

Noise and Odors. All institution uses in a single-family zone must be designed and operated in compliance with the Seattle Noise Ordinance, Chapter 25.08 of the Seattle Municipal Code. Development of an institution use in a single-family residential zone should consider the location on the lot of proposed facilities, on-site parking, outdoor recreation areas, ventilating mechanisms, and other noise or odor-generating facilities. Mitigation measures to reduce the potential for noise and odors may include landscaping, sound barriers or fences, adjustments to yard or parking standards, setting hours of operation, or other measures (SMC 23.44.022.H.). Chapter 4 of the Draft and Final EIS provides a more thorough discussion of applicable noise requirements.

Landscaping. Landscaping is required to integrate the institution use with adjacent areas, and to reduce the potential for erosion or extensive stormwater runoff. Landscaping is used to screen parking areas and to generally reduce the appearance of bulk from adjacent streets and residentially zoned properties. Landscaping materials are required to be compatible with surrounding vegetation (SMC 23.44.022.I.).

Light and Glare. In addition to exterior lighting requirements established for uses permitted outright in residential zones, nonreflective surfaces are required to help reduce glare (SMC 23.44.022.J.). Chapter 4 of the Draft and Final EIS provides a more thorough discussion of light and glare.

Bulk and Siting. Section 23.44.022.K establishes bulk and siting requirements for institution uses in single-family zones, including provisions for lot setbacks, height limits, and façade scale. The Height, Bulk, and Scale section of this chapter provides a detailed discussion of bulk and scale requirements applicable to this project.

Parking and Loading Berth Requirements. Parking and loading berth requirements are generally established by Chapter 23.54 of the Seattle Land Use Code, Quantity and Design Standards for Access and Off-Street Parking. For new or expanding institution uses in single-family zones, Seattle Department of Planning and Development (DPD) can modify the requirements based on information contained in the associated transportation plan (discussed below). Generally, the number of off-street parking spaces and loading berth requirements for specific uses is based on gross floor area, as established in Chart A, Section 23.54.15 of the Land Use Code. Refer to the Transportation section of this chapter for additional discussion.

Transportation Plan. The Seattle Land Use Code requires the preparation of a transportation plan for proposed new institution uses within single-family zones, or expanding institution uses that will require an additional 20 or more parking spaces. The DPD can determine the scope and level of detail required for the plan. Generally, the transportation plan should consider traffic, parking, parking overflow, safety, and the availability of public transit systems to serve the proposed project (SMC 23.44.022.M). The Transportation section of this chapter discusses these issues in further detail.

Existing Institutes for Advanced Study

The Seattle Land Use Code (SMC 23.44.022. N) specifically addresses existing institutes for advanced study within single-family zones by establishing the following development standards:

Minimum lot size should be at least 15 acres;

Lot coverage for all structures should not exceed 20 percent of the lot area;

Structures should be set back at least 25 feet from all lot lines;

Parking areas should be set back at least 10 feet from all lot lines;

When expanding, parking should be provided as established in Section 23.54.015 (summarized above); and

Landscaping should be provided and maintained between lot lines and any structure (SMC 23.44.022.N).

Subdivision Regulations. Chapter 23.22 of the Seattle Municipal Code (SMC) establishes a plat process, survey requirements, and design and construction standards for the development of subdivisions. Subdivision codes include provisions for environmentally critical areas, transportation concurrency level-of-service, reservation of land for public uses, design and construction standards, and street and utility improvements. Full subdivision would require filing of an application for subdivision with the City, followed by a preliminary review of the proposed subdivision. Subdivision applications are processed according to the procedures established in SMC 23.76, Procedures for Master Use Permits and Hearing Examiner's Decision, and additional procedures established in SMC 23.22.

Procedures for Master Use Permits and Council Land Use Decisions. Chapter 23.76 SMC establishes the procedures for land use decisions made by the City of Seattle. These procedures are intended to: support an integrated and consolidated land use permit process, integrate the environmental review process with the procedures for review of land use decisions, and provide for the consolidation of appeals for all land use decisions. Land use decisions are classified into five (5) categories based on the amount of discretion and level of impact associated with each decision.

Environmentally Critical Areas. Chapter 25.09 of the Seattle Municipal Code defines environmentally critical areas (ECAs) and establishes development standards for land containing ECAs. ECAs include wetlands, steep slopes, landslide-prone areas, liquefaction-prone areas, flood-prone areas, riparian corridors, fish and wildlife habitat conservation areas, and abandoned landfills. The project site contains wetlands, and portions of the project site have slopes greater than or equal to 40 percent. Specific criteria for steep slopes and wetlands, are described below.

Chapter 25.09.160 establishes development standards, buffers, compensation standards, and restoration standards for wetlands 100 square feet or larger. Refer to the Habitat/Wetlands section in this chapter for additional information.

Chapter 25.09.180 establishes development limitations and buffers for areas having over 40 percent slope. Generally, development should be avoided on areas over 40 percent slope. Additionally, 15-foot buffers are required from the top or toe of a steep slope whenever practicable based on geotechnical and hydrological site constraints and the impacts of proposed

construction methods on the stability of the slope (SMC 25.09.180 A.2). Slopes with a vertical elevation change not exceeding 20 feet and not part of a larger steep-slope system, or slopes created artificially by previous grading activities, may be exempt from steep-slope regulations (SMC 25.09.180 D.4).

Chapter 25.09.240 establishes development standards for subdivision proposals located in riparian corridor buffers, wetlands and wetland buffers, and steep slopes (over forty percent 40%). In addition to complying with Subtitle III Platting Requirements established in Chapter 23.20, lots should be configured to preserve the identified environmentally critical area (ECA) and its buffer. New lots should contain at least one building site and access to the site that is outside the identified ECA.

Chapter 25.09.300 establishes the conditions for modification of environmental critical area development standards. An ECA exception is required to develop or use property that abuts or is on designated environmentally critical areas. The review process and procedures for an ECA exception are considered a Type II land use decision and are subject to an administrative open record appeal hearing to the Hearing Examiner (SMC 23.76).

Tree Protection. SMC Chapter 25.11 and Director's Rule 6-2001 define the City of Seattle's tree regulation framework. Specifically, Chapter 25.11 provides tree protection regulations, requiring protection of trees identified as "exceptional" and encouraging retention of trees over 6 inches in diameter. Tree removal in environmentally critical areas, such as wetlands, is regulated by SMC Section 25.09.320.

Stormwater, Grading, and Drainage Control. Seattle's Stormwater, Grading, and Drainage Control Code (SMC 22.800-22.808) and associated Director's Rules establish requirements for temporary erosion and sediment control during construction, as well as source control, flow control, and stormwater treatment for development projects. Projects resulting in 5,000 square feet or more of impervious surface, or one acre or more of land-disturbing activity, require development of a comprehensive drainage control plan to demonstrate compliance with code requirements (SMC 22.802.020). Table 3-4 summarizes best management practices required to comply with the Code (SWMB, 2002).

Table 3-4. Stormwater, Grading, and Drainage Control Best Management Practices

Stormwater, Grading and Drainage Control Requirements	Best Management Practices (BMPs)
Construction Stormwater Control Technical Requirements (Director's Rule 16-2000)	Temporary Cover Practices for exposed earth surfaces: • Temporary seeding • Mulching and matting • Clear plastic covering • Permanent Cover Practices: • Preserving natural vegetation • Maintaining buffer zones • Permanent seeding or sodding and planting Topsoiling

Stormwater, Grading and Drainage Control Requirements	Best Management Practices (BMPs)
Construction Stormwater Control Technical Requirements (Director's Rule 16-2000)	Structural Erosion Control: • Stabilized construction entrance and tire wash • Construction road stabilization • Dust control • Pipe slope drains • Subsurface drains • Surface roughening • Gradient terraces • Bioengineered protection of very steep slopes • Level spreader • Interceptor dike and swale • Check dams
Construction Stormwater Control Technical Requirements (contd.) (Director's Rule 16-2000)	Sediment Retention: • Filter fence • Straw bale barrier • Brush barrier • Gravel filter berm • Storm drain inlet protection • Sediment trap • Temporary sediment pond
Source Control Technical Requirements (Director's Rule 17-2000)	• Inspection of stormwater conveyance systems and treatment systems at least annually • Maintain grass and other vegetation that is integral to the stormwater system • Maintain records of when each structure or system was inspected and cleaned • Repair structural defects identified during routine inspections promptly • Sweep paved areas regularly • Inspect and clean gutters, drains and catch basins at least annually
Flow Control Technical Requirements (Director's Rule 26-2000)	• Flow control will not be required as the stormwater runoff from the site will be conveyed in a public storm drain and discharged directly to Lake Washington.
Stormwater Treatment Technical Requirements (Director's Rule 27-2000)	• Biofiltration swale • Filter strip • Wetpond • Wetvault • Stormwater wetland • Media filter

3.1.2 Impacts

This section of the Final EIS identifies construction and operational land use impacts associated with each proposed redevelopment alternative. Construction impacts are temporary in nature, while operational impacts are longer term. The discussion of operational impacts includes both

direct and indirect impacts, including compatibility with surrounding land uses, compliance with Comprehensive Plan policies, and compliance with municipal code requirements and design standards.

Alternative 1A: Institute for Advanced Study with Code-Required Parking

Construction

Buildout of Phases 1 and 2 under Alternative 1A would temporarily alter existing land uses and require clearing and grading of approximately 11 acres for buildings and parking. Approximately 77,200 cubic yards (cy) of excavation would be required for each, for a total of approximately 154,400 cy of excavation. Construction would take place over approximately 15 months each for Phases 1 and 2. Construction of Phase 1 would be completed in 2006, while Phase 2 could start in 2009.

Development of Phase 2 would require additional SEPA and Administrative Conditional Use permit review.

Staging areas for construction would be established on existing or new surface parking lots on the northern portion of the site and would likely be located between the Phase 1 and 2 buildings. Construction vehicles would primarily access the site from Northeast 41st Street. Construction-related traffic moving to and from the site would include large trucks and earth moving equipment, as well as vehicles operated by construction workers.

Short-term, construction-related impacts would likely affect surrounding residential and commercial land uses. These impacts would likely include temporary increases in localized noise levels, increased levels of dust, and increases in traffic congestion as a result of construction-related truck traffic. Construction-related traffic is typically addressed through a construction vehicle routing plan (SMC 25.05.675 B.2.g.). Construction-related noise impacts, including construction hours of operation and construction noise levels, are regulated by the City of Seattle Noise Code (SMC Chapter 25.08). For a more detailed analysis of noise and air impacts associated with construction, see Chapter 4 of this Final EIS.

Construction could also expose contaminated soils or groundwater during excavation or grading activities, but the potential for such exposure is low. A Phase I Environmental Assessment was conducted for the project site in November 1994 and a preliminary environmental assessment (PEA) update was completed in February 2000 (Hart Crowser, 2000). The property has been used for office, conference, and research facilities since its initial development in 1967. Only one neighboring property, Laurelhurst Cleaners, adjacent to the north at 3815 Northeast 45th Street, was found to have potential for migratory contaminants such as dry cleaning solvents. The PEA found that the potential for subsurface contamination resulting from on-site activities is low (Hart Crowser, 2000). The PEA notes the presence of asbestos-containing steam pipe insulation and fittings in the mechanical room of Building D, the research center and office complex. Additionally, other building materials may also contain asbestos and lead-based paint.

Construction impacts to water quality from stormwater runoff are discussed in the Habitat/Wetlands section of this chapter, and Chapter 4, Public Services and Utilities.

Operation – Direct Impacts

Overall, Alternative 1A would redevelop and expand existing institution uses on the property but would not result in a conversion to a different land use type. Alternative 1A would involve development of approximately 290,000 gsf in two buildings, to be used primarily for research, laboratories, office space, an auditorium, and a daycare facility. Currently, the project site contains approximately 44,000 square feet of development allocated among seven buildings dedicated to research, office, lodging, and conference space along with accessory support uses. Following buildout of Phase 2, Alternative 1A would increase the amount of research, office, and conference space on the site, along with accessory uses (e.g., daycare facility) by approximately 246,000 gsf. Parking would increase by approximately 816 parking spaces, in a combination of below grade and surface parking.

The redevelopment of the site would increase the number of permanent staff, research subjects, and other visitors traveling to and from the site daily. Table 3-5 identifies the approximate number of users by user type.

Table 3-5. Approximate Daily Number of Users by User Type

Users	Approximate Number1
Permanent Staff	174 (90 full time staff or researchers, 84 graduate students)
Subject's Parents	25
Adult Subjects	4
Outreach	5
Conference Facilities	100 (occasional use, not a daily occurrence)
Childcare Workers	17
Children at Childcare Center	50

1 Staff and user numbers are intended to be a representative approximation. Actual numbers of different user types may vary.

While Alternative 1A would not change the type of land use on the site (institute for advanced study), it would alter the site's land use patterns. Specifically, Alternative 1A would reduce existing landscaping on the site and proportionately increase impervious area in structures and parking. This reduction would particularly affect lawn and landscaped areas in the south-central portion of the site that presently provide informal open space for the surrounding neighborhood. Under Alternative 1A, portions of this open space area would be developed for surface parking. Table 3-6 shows the proposed site features and impervious surface area for Phase 1 and Phase 2 under Alternative 1A.

Table 3-6. Alternative 1A Impervious Surface Area

Phase 1 Site Features	Area	
Buildings	99,349 sf	(68,462 sf new + 30,887 sf old to remain)
Sidewalks and Plazas	10,000 sf	(end of Phase 1)
Surface Parking Only	172,920 sf	(524 surface stalls at 330 sf/stall)
Site Roads	50,400 sf	(same as existing conditions)
Total Phase 1	332,669 sf	
Phase 2 Site Features	**Area**	
Buildings:	154,512 sf	(81,500 sf new + 68,462 Phase 1 new + 4,550 old to remain)
Sidewalks and Plazas	10,000 sf	(end of Phase 1)
Surface Parking Only:	223,080 sf	(152 additional surface stalls + 524 surface stalls Phase 1)
Site Roads	50,400 sf	(same as existing conditions)
Total Phases 1 and 2:	437,992 sf	

Alternative 1A would result in the greatest amount of impervious surface area (10 acres), which represents an increase of 5.9 acres compared to existing conditions. The impervious surface area would increase by about 3.5 acres with Phase 1 and 2.4 acres with Phase 2. Compared to Alternative 1B, the impervious surface area would be about 2.8 acres greater after Phase 1 and 4.7 acres greater after Phase 2. At buildout, the total impervious surface area would be 2.4 acres greater than Alternative 2A and 2.9 acres greater than Alternative 2B. The balance of the site (7.9 acres) would remain as landscaped areas and vegetated open space, including critical areas and their associated buffers.

Development of Alternative 1A would be generally consistent with applicable Comprehensive Plan policies for areas of the city outside of urban villages and single-family neighborhoods. While development of Alternative 1A would increase the intensity of uses on the property, no expansion of institution uses would occur beyond the property boundaries. Accordingly, the general intensity of development that characterizes the project area beyond the site would be maintained. Additionally, Alternative 1A would not result in the demolition of single-family residences, or the displacement of existing single-family residents or housing.

Development of Alternative 1A would not result in an increase in encroachment of institution uses in a single-family zone and would be consistent with criteria for dispersion. As shown on Figure 2-7, the project site lot line is located within 600 feet of Children's Hospital, a major institution located to the northeast of the project site. The Children's Hospital site is zoned for single-family residential development (SF 5000) with a Major Institution Overlay. Children's Hospital is separated and visually screened from the project site by commercial and residential development, and by Northeast 45th Street. University of Washington property is located south of the proposed project site; this area is zoned for multi-family residential development (L1),

also with a Major Institution Overlay. University of Washington property, approximately 100 feet from the project site, is separated by Northeast 41st Street. Additionally, the portion of University of Washington property nearest to the project site has not been developed, and consists of wetlands, trees, and open space. While the proposal would increase the intensity of development on the site, it does not include any expansion of lot lines.

The project site has occasionally been subject to litter from football pre-game parties on the lawn adjacent to Northeast 41st Street, and from students using the back parking lots at night. Following development of Alternative 1A, the property would have a greater amount of lighting associated with security around the facility and parking lots; thereby increasing the potential for light and glare to escape the site. Additionally, the facility would be monitored by after-hours security personnel.

Table 3-7 summarizes consistency of Alternative 1A with applicable sections of the city's Land Use Code. Where multiple sections of code apply, the most restrictive design requirement for each element is compared to Alternative 1A.

Table 3-7. Consistency of Alternative 1A with Applicable Land Use Code Sections

Element	Requirement and Applicable Code Section	Alternative 1A Design (Phases 1 and 2)
Bulk and Siting	Facades for new/expanding institutions exceeding 30 feet in length adjacent to street/residentially zoned lot need to include design features such as landscaping, modulation and architectural features to reduce bulk and scale impacts (SMC 23.44.022.K.4)	Phase 1: Building would exceed 30-foot façade length – 283-foot façade on east and 350 foot façade on north side Phase 2: Similar in bulk and scale to Phase 1
Lot Size and Coverage	Lot Size: no less than 15 acres. Lot Coverage: not more than 20 percent of site or 155,248 square feet (SMC 23.44.022N).	Lot Size is 17.82 acres. Proposed Lot Coverage (new and remaining buildings): Phase 1: 99,349 square feet Phase 2: 154,512 square feet (total)
Height Limits	Maximum base structure height in SF zone: 30 feet (SMC 23.44.012).	Maximum above grade height: 30 feet.
Structure Setbacks	25-foot setback required from all lot lines (SMC 23.44.022N).	Building setbacks are 25 feet or greater.
Parking	Requirements as established in SMC 23.54.015 for institutes for advanced study in single-family zones (existing) would require 741 spaces total (Phase 1) and 1079 spaces total (Phase 2).	Phase 1: 734 spaces total in both below grade and surface parking lots. Phase 2: 1,086 spaces total in both below grade and surface parking lots.
Parking Setbacks	10-foot setback required from all lot lines (SMC 23.44.022N).	Parking setbacks are 10 feet or greater.
Landscaping	Required between lot lines and structures and/or parking lots (SMC 23.44.022.I; 23.44.022.N).	Proposed landscape design includes building perimeters, parking areas, and site perimeter.
Exterior Lighting/ Light and Glare	Exterior lighting should be shielded and directed away from residential lots and the use of nonreflective surfaces is required (SMC 23.44.008.H; SMC 23.44.022.J).	Final design would comply with lighting requirements.

Element	Requirement and Applicable Code Section	Alternative 1A Design (Phases 1 and 2)
Dispersion	Institution uses in SF zones should be 600 feet from one another, unless separated by physical elements (water, open space, topographical break) or structural elements (arterials, freeways, nonresidential structures).	Property is less than 600 feet from Children's Hospital (northeast) and UW Center for Urban Horticulture (southwest), but separated from each by arterials (see additional discussion of dispersion above). Consistent with dispersion criteria. No changes in lot lines proposed.
Tree Protection	Prevent untimely and indiscriminate removal or destruction of trees (SMC 25.11)	Removal of 292 trees, of which 32 are greater than 24 inches in diameter; none qualify as exceptional.
Wetlands	Wetlands 100 square feet or larger and associated 50-foot buffers should be avoided (SMC 25.09.160).	Phase 1 would not impact wetlands or wetland buffers; Phase 2 surface parking would impact one wetland and buffer in southwest corner of property (see Habitat/Wetlands section for detailed discussion). ECA exception required for filling wetlands (SMC 25.09).
Steep Slopes	Areas of 40 percent or greater slope (plus 15-foot buffer) should be avoided; artificially created steep slopes or areas with less than 20-foot vertical rise may be exempt (SMC 25.09.180).	Isolated areas of slope greater than 40 percent but with less than 20 feet of vertical rise would be graded, including northwest corner of property for buildings and southeast corner of property for surface parking. Steep slopes along the east boundary of property would be avoided.
Stormwater, Grading and Drainage	Projects with 5,000 square feet or more of impervious surface, or 1 acre or more of land disturbing activity, require development of a comprehensive drainage control plan (SMC 22.802.020). The plan should demonstrate compliance with temporary erosion and sediment control, source control, flow control, and treatment requirements.	Stormwater Control and Treatment concept design would comply with SMC provisions.

For further discussion of compatibility with surrounding land uses and consistency with applicable municipal code sections, see the Height, Bulk, and Scale and Habitat/Wetlands sections of this chapter, and Chapter 4, Light and Glare.

Indirect (Growth Inducing) Impacts

Development of Alternative 1A would increase the number of permanent employees on the site to approximately 174. This increase in daytime population is not considered to be significant, but it could create additional demand for off-site, commercial/retail services in support of employees located on the project site (e.g. additional restaurants/coffee shops, etc.). Occasional use of conference facilities would not dramatically increase the number of current users of the property (approximately 150 people per day during conference activity). However, the demolition of lodging facilities on the site could increase demand in the vicinity for hotel development. The areas that could be affected would likely be within the commercial areas roughly one-half mile from the project site, along Northeast 45th Street, Sand Point Way Northeast, and Union Bay Place Northeast.

Development of Alternative 1A would provide code-required parking as established by SMC 23.54.015 for IAS uses in single-family zones. The proposed parking would meet or exceed anticipated peak parking demand, including times when conferences are held at the facility. For further discussion of parking supply and potential impacts, refer to the Transportation section of this chapter.

Alternative 1B: Institute for Advanced Study with Reduced Parking and Design Alternatives to Reduce Bulk and Scale Impacts

Construction

Construction impacts associated with development of Alternative 1B would be approximately equivalent to those described for Alternative 1A. The duration of construction would be the same as Alternative 1A. However, the reduced surface parking and smaller building size proposed by Alternative 1B would reduce the amount of grading necessary by approximately 8.3 acres. Reduced earth moving and construction for surface parking would proportionately reduce construction-related impacts to surrounding neighborhoods. There would be no direct wetland or wetland buffer impacts under this alternative. See the Habitat/Wetlands section of this chapter for more information.

Operation – Direct Impacts

The change in intensity of land use as proposed by Alternative 1B would be similar in nature to that discussed for Alternative 1A. Lot size, lot coverage for all structures, height limits, structure and parking setbacks, and exterior lighting would comply with municipal code requirements. Alternative 1B differs from Alternative 1A in that its reduced building size/footprint and surface parking would retain more open space on the site.

Based on comments received on the Draft EIS, the site plan for Alternative 1B was modified, and the overall size of the Phase 1 building under Alternative 1B was reduced from 128,000 gsf to 98,000 gsf (a reduction of 30,000 gsf). Additionally, the building orientation, modulation, design treatments, and landscaping were further refined to reduce visual impacts of the facility on surrounding land uses.

Table 3-8 shows the proposed site features and impervious surface area for Phase 1 and Phase 2 under Alternative 1B.

Table 3-8. Alternative 1B Impervious Surface Area

Phase 1 Site Features	Area	
Buildings	90,887 sf	(60,000 sf new + 30,887 sf old to remain)
Sidewalks and Plazas	10,000 sf	(end of Phase 1)
Surface Parking Only*:	58,080 sf	(176 surface stalls at 330 sf/stall)
Site Roads	50,400 sf	(same as existing conditions)
Total Phase 1:	209,367 sf	
Phase 2 Site Features	**Area**	
Buildings:	146,050 sf	(81,500 sf new + 60,000 Phase 1 new + 4,550 old to remain)
Sidewalks and Plazas	10,000 sf	(end of Phase 1)
Surface Parking Only:	24,750 sf	(total surface stalls reduced to 75)
Site Roads	50,400 sf	(same as existing conditions)
Total Phases 1 and 2:	231,200 sf	

*Surface parking serves existing conference center that remains.

Of the development alternatives, Alternative 1B would result in the least amount of impervious surface area (5.3 acres). Compared to existing conditions, the impervious surface area would increase by about 1.1 acres – 0.6 acre with Phase 1 and 0.5 acre with Phase 2. Compared to Alternative 1A, the impervious surface area for Alternative 1B would be about 2.8 acres less after Phase 1 and 4.7 acres less after Phase 2. At buildout, the total impervious surface area would be 2.3 acres less than Alternative 2A and 1.8 acres less than Alternative 2B. The balance of the site (12.7 acres) would remain as landscaped and vegetated open space including critical areas and their associated buffers.

Table 3-9 summarizes consistency of Alternative 1B with applicable sections of the city's Land Use Code. Where multiple sections of code apply, the most restrictive design requirement for each element is compared to Alternative 1B.

Table 3-9. Consistency of Alternative 1B with Applicable Land Use Code Sections

Element	Requirement and Applicable Code Section	Alternative 1B Design (Phases 1 and 2)
Bulk and Siting	Facades for new/expanding institutions exceeding 30 feet in length adjacent to street/residentially zoned lot need to include design features such as landscaping, modulation and architectural features to reduce bulk and scale impacts (SMC 23.44.022.K.4)	Phase 1: Building would exceed 30-foot façade length – reorienting building about 45 degrees (northwest/southeast) off the street grid, intended to minimize continuous building facades on the north and west 25-foot property setback line; incorporates modulation and façade treatments to address bulk and scale impacts Phase 2: Similar in bulk and scale to Phase 1
Lot Size and Coverage	Lot Size: no less than 15 acres. Lot Coverage: not more than 20 percent of site or 155,248 square feet (SMC 23.44.022N).	Lot Size is 17.82 acres. Proposed Lot Coverage (new and remaining buildings): Phase 1: 90,887 square feet Phase 2: 146,050 square feet (total)

Element	Requirement and Applicable Code Section	Alternative 1B Design (Phases 1 and 2)
Height Limits	Maximum base structure height in SF zone: 30 feet (SMC 23.44.012).	Maximum above grade height: 30 feet.
Structure Setbacks	25-foot setback required from all lot lines (SMC 23.44.022N).	Building setbacks are 25 feet or greater.
Parking	Requirements as established in SMC 23.54.015 for institutes for advanced study in single-family zones (existing) would require 741 spaces total (Phase 1) and 1079 spaces total (Phase 2).	Phase 1: 640 spaces in both below grade parking and surface spaces. Phase 2: 850 spaces (Phase 1 and 2) in both below grade and surface parking lots.
Parking Setbacks	10-foot setback required from all lot lines (SMC 23.44.022N).	Parking setbacks are 10 feet or greater.
Landscaping	Required between lot lines and structures and/or parking lots (SMC 23.44.022.I; 23.44.022.N).	Proposed landscape design includes building perimeters, parking areas, and site perimeter.
Exterior Lighting/ Light and Glare	Exterior lighting should be shielded and directed away from residential lots and the use of nonreflective surfaces is required (SMC 23.44.008.H; SMC 23.44.022.J).	Final design would comply with lighting requirements.
Dispersion	Institution uses in SF zones should be 600 feet from one another, unless separated by physical elements (water, open space, topographical break) or structural elements (arterials, freeways, nonresidential structures).	Property is less than 600 feet from Children's Hospital (northeast) and UW Center for Urban Horticulture (southwest), but separated from each by arterials (see additional discussion of dispersion above). Consistent with dispersion criteria. No changes in lot lines proposed.
Tree Protection	Prevent untimely and indiscriminate removal or destruction of trees (SMC 25.11)	Removal of 176 trees, of which 11 are greater than 24 inches in diameter; none qualify as exceptional.
Wetlands	Wetlands 100 square feet or larger and associated 50-foot buffers should be avoided (SMC 25.09.160).	No wetlands or wetland buffers would be impacted.
Steep Slopes	Areas of 40 percent or greater slope (plus 15-foot buffer) should be avoided; artificially created steep slopes or areas with less than 20-foot vertical rise may be exempt (SMC 25.09.180).	Isolated areas of slope greater than 40 percent but with less than 20 feet of vertical rise would be graded in the northwest corner of property for buildings. Steep slopes along the east boundary of property would be avoided.
Stormwater, Grading and Drainage	Projects with 5,000 square feet or more of impervious surface, or 1 acre or more of land disturbing activity, require development of a comprehensive drainage control plan (SMC 22.802.020). The plan should demonstrate compliance with temporary erosion and sediment control, source control, flow control, and treatment requirements.	Stormwater Control and Treatment concept design would comply with SMC provisions.

Indirect (Growth Inducing) Impacts

Because the facility under Alternative 1B would employ the same number of staff, development of Alternative 1B would result in equivalent demand for off-site commercial/retail services and hotel/lodging as discussed for Alternative 1A.

Alternative 2A: Single-Family Development with 38th Avenue NE Improvements

Construction

Since the publication of the Draft EIS, additional site analysis and refinement of the single-family alternatives has occurred. This analysis determined that up to 29 more lots could be developed on the site while still maintaining appropriate setbacks (building, steep slope and wetlands). This might be achieved through the consolidation of wetland areas on the site (wetland fill and mitigation/enhancement) and relocating an existing stormwater pipeline into the street right-of-way. Under Alternatives 2A, all of the lots are a minimum of 5,000 square feet as required by the zoning. There are some lots that are larger due to the layout of streets, steep slopes and wetlands. Some of the lots are in the 8,000 to 9,000 square-foot range.

Alternative 2A, as proposed, is dependent upon an ECA review and granting of an exception. In the event the exception criteria are not met, the alternative under consideration would require further modification to meet requirements per SMC 25.09.300.

Alternative 2A would result in less impervious surface than Alternatives 1A and 1B. Due to water table depth, homes would not likely have basements; as a result, construction of homes and streets would result in approximately 11,000 cy of grading or excavation, approximately 143,400 cy less than full build-out of Alternative 1A.

Temporary construction impacts to adjacent land uses (noise, dust, construction traffic, etc.) would be similar to Alternatives 1A and 1B but would be more dispersed throughout the site. As a result, construction could more substantially affect other surrounding land uses, such as those south of the project site, compared to Alternative 1A or 1B. Incremental development would extend construction-related impacts over a longer period of time.

Operation – Direct Impacts

Development of Alternative 2A would change land use on the site from existing uses as IAS (conference facility and office space) to single-family residential uses. Lot sizes, house sizes, and architectural styles would be compatible with the adjacent residential neighborhoods. Lot sizes would be a minimum of 5,000 square feet, similar to the surrounding neighborhood west, south, and east of the property (Figure 3-2). It is anticipated that dwelling unit footprints would range from approximately 1,200 to 1,600 square feet, similar to surrounding residential land uses. While design of individual homes would vary, it is assumed that individual lots would contain one dwelling unit, a driveway, and a detached or attached garage.

Development of Alternative 2A would be consistent with Comprehensive Plan goals and policies for single-family areas. Development would also comply with development standards for uses

permitted outright in single-family zones with minimum 5,000-square-foot lots and regulations for environmentally critical areas (SMC 25.09.240). Specifically, lot configuration and location of internal roads would relocate stormwater conveyance pipes into street rights-of-way, consolidate wetlands (filling and enhancement of wetlands), and account for required wetland (remaining wetlands and consolidated wetlands) and steep slope buffers.

An ECA exception would be required for the proposed modification of wetlands and their associated buffers; this would be a Type II land use decision.

Subdivision design under Alternative 2A is subject to SMC 23.22-054, which may result in modifications to the proposed plat, if approved. Alternative 2A would also constitute a physical change in land use, with a reduction in open space that is currently informally used by neighborhood residents for recreational purposes and loss of the vegetated buffer provided within the 38th Avenue NE right-of-way.

At buildout, the impervious surface area under Alternative 2A is estimated at 333,274 square feet (7.6 acres); this accounts for building footprints, drives and road area. This change represents a 95 percent increase (3.5 acres) over existing conditions. The impervious surface area would be about 2.4 acres less than Alternative 1A (Phase 1 and 2) and 2.3 acres greater than Alternative 1B.

Table 3-10 compares applicable development standards and Seattle Municipal Code requirements to Alternative 2A.

Table 3-10. Consistency of Alternative 2A with Applicable Code Sections

Element	Requirement and Applicable Code Section	Alternative 2A – 91 Single Family Lots
Lot Size and Coverage	Lot Size – minimum 5000 sq. ft. Coverage – not more than 35 percent (SMC 23.44.010), or 1,750 square feet.	Lot Sizes: 5,000 square feet. Lot Coverage: dwelling unit footprints would range from 1,200 to 1,600 square feet.
Height Limits	Maximum base structure height in SF zone is 30 feet (SMC 23.44.012).	Maximum above grade height would be 30 feet.
Yard and Setbacks	Min. front yard: 20 feet. Min. rear yard: 25 feet. Min. side yards: 5 feet.	All lots would comply.
Parking	One parking space for each single-family dwelling unit (SMC 23.54.015).	Each lot would contain a driveway and an attached or detached garage.
Subdivision and Lot Access	Access to subdivisions by one or more arterials; adequate access and circulation for residents and emergency response; access to all lots by street (SMC 23.22.100A).	Access would be provided at four locations (including development of currently unimproved 38th Ave Northeast): • extension of Northeast 44th Street, • extension of Northeast 43rd Street, • extension of 41st Ave Northeast, and • new street at existing entrance to property from Northeast 41st Street.

Element	Requirement and Applicable Code Section	Alternative 2A – 91 Single Family Lots
Tree Protection	Prevent untimely and indiscriminate removal or destruction of trees (SMC 25.11)	Removal of approximately 583 trees, of which approximately 21 are greater than 24 inches in diameter; none qualify as exceptional.
Wetlands	Wetlands 100 square feet or larger and associated 50 foot buffers should be avoided (SMC 25.09.160; 25.09.240; 23.22.058)	Wetlands would be consolidated. Wetlands C and D would be filled and mitigated per SMC 25.09.160(A)(2). An ECA exception would be required for the filling of wetlands and their associated buffers. See Habitat/Wetlands section for detailed discussion.
Steep Slopes	Areas of 40 percent slope or greater (plus 15-foot buffer) should be avoided; artificially created steep slopes or areas with less than 20 feet vertical rise may be exempt (SMC 25.09.180).	Isolated areas of 40 percent slope or greater, but with less than 20 feet vertical rise would be graded. Steep slopes along the east boundary of property could be avoided. Impacts to steep slope buffers would be avoided.
Easements and Improvements	Drainage, stormwater, and utility easements (electric, telephone, water, gas, etc.) and improvements (streets, water, sanitary sewer, etc.) are required for new subdivisions (SMC 23.22.100E; 23.22.102).	Subdivision design and construction would comply.

Development of Alternative 2A would improve the currently undeveloped 38th Avenue Northeast right-of-way, between Northeast 44th Street and Northeast 41st Street. Development of 38th Avenue Northeast would provide access to the subdivision from more than one street, improving traffic circulation and safety by providing more access points to the subdivision for emergency response vehicles. However, development of the right-of-way would replace vegetation and trees with a functioning street, possibly removing wildlife habitat. Adjacent landowners have constructed fences in portions of the 38th Avenue right-of-way. Additionally, a north-south gravel alley adjacent to the east edge of the property could require improvement. The northern portion of this alley is currently undeveloped, although adjacent landowners have constructed a stairway within the right-of-way.

Indirect (Growth Inducing) Impacts

Development of Alternative 2A would increase the population on the project site by approximately 91 to 364 persons (assuming a single-family population range of 1 to 4 persons per lot, occupying 91 lots). This development would increase demand for public services (fire and police) and utility services (gas, electric, water, wastewater, etc.). The development would also increase the demand for goods and services in the area, such as grocery stores, retail shops, gas stations, etc. The development would also increase demand on public parks, schools, and hospitals in the Laurelhurst area. For a discussion of these impacts, please refer to Chapter 4, Public Services and Utilities in this Final EIS.

Alternative 2B: Single-Family Development without 38th Avenue NE Improvements

Construction

Similar to Alternative 2A, the site plan for Alternative 2B (Figure 2-8) has been modified to account for code-required setbacks, wetland and steep slope buffers, consolidation of wetlands, and to show the relocation of the stormwater pipeline into the street right-of-way. The net result of these changes yielded an increase in the potential number of lots (to 90 lots) from that analyzed in the Draft EIS.

Construction impacts associated with development of Alternative 2B would be similar in nature to those described for Alternative 2A. With a difference of only 1 lot and the retention of the undeveloped 38th Avenue NE right-of-way, construction duration is not expected to differ significantly from Alternative 2A. Retention of vegetated/forested areas within the 38th Avenue Northeast right-of-way would reduce the amount of grading and excavation and resulting construction impacts on surrounding land uses to the west. The impervious surface area would be about 0.5 acre less than Alternative 2A.

Operation – Direct Impacts

Generally, direct land use impacts associated with the development of Alternative 2B would be similar in nature to those described for Alternative 2A. As with Alternatives 2A and 1A, modification to wetlands would require an ECA exception. The main differences between Alternatives 2A and 2B are that Alternative 2B proposes 90 lots (rather than 91) and the 38th Avenue Northeast right-of-way would be retained in its current undeveloped state, preserving more vegetation, trees, and open space.

Indirect (Growth Inducing) Impacts

Indirect impacts associated with the development of Alternative 2B would be similar to those described for Alternative 2A. With a reduction of only 1 lot, the increase in residential population would be approximately 1 to 4 persons less than Alternative 2A. Consequently, demand on utilities, public services, and commercial goods and services would be proportionately less (see Chapter 4, Public Services and Utilities).

No Action Alternative

Under the No Action Alternative, existing land uses on the project site including conference facilities and office space would likely continue at current levels. No construction or redevelopment would be anticipated in the near future on the project site. No additional pressure for commercial development or demand on public services in the surrounding area would be anticipated.

Over the long term, land use on the project site could be developed to single-family residential development, public schools, public playgrounds, private parks, or other land uses consistent

with City of Seattle Zoning and Comprehensive Plan designations, and with permitted uses in single-family zones.

3.1.3 Cumulative Impacts

The proposed redevelopment of the Battelle site coupled with development identified in the Children's Hospital Master Plan would intensify the institutional presence adjacent to the single-family neighborhood.

3.1.4 Mitigation Measures

Mitigation measures common to all alternatives analyzed in the Draft and Final EIS, with the exception of the No Action Alternative, may include, but are not limited to:

Construction-related traffic impacts on surrounding land uses could be addressed through a construction vehicle routing plan.

The contractors could be required to prepare a staging and construction worker parking plan to mitigate short-term construction impacts to surrounding land uses.

Specific mitigation measures associated with each proposed alternative are discussed below. Additional mitigation measures may be imposed to reduce or eliminate identified adverse impacts. Mitigation must be reasonable and capable of being accomplished.

Alternatives 1A and 1B

Generally, mitigation for land use impacts associated with an increase in intensity of use of the property as IAS could be achieved by architectural and landscape design measures (see Height Bulk and Scale mitigation).

Alternatives 2A and 2B

Aside from design elements required by code, no mitigation measures for development of the project site as a single-family residential subdivision have been identified. Further review of an actual application for subdivision and ECA exception would identify and evaluate potential mitigation measures. Filling of wetlands if permitted through the ECA exception process, would require mitigation or compensation on or off the project site (see the Habitat/Wetlands section of this chapter).

3.1.5 Significant Unavoidable Adverse Impacts

All of the action alternatives would unavoidably increase the intensity of land use on the project site, or change land uses from existing conditions.

During construction phases of any alternative, unavoidable adverse impacts are associated with the cumulative effects of construction activities (i.e., traffic, noise, etc.) occurring in the vicinity of the project site. These impacts may not be significant due to their temporary nature.

Construction mitigation associated with specific impacts such as air quality, noise and traffic are discussed in their respective chapters of this Final EIS.

3.2 Height, Bulk, and Scale

The following section discusses potential height, bulk, and scale impacts associated with each alternative analyzed in the Draft and Final EIS. The analyses in this section highlight applicable sections of the Seattle Municipal Code for each alternative and evaluate through visual analysis potential impacts to surrounding neighborhoods. Text has been added throughout this section to address comments received in response to the Draft EIS. Primary issues raised in comment letters pertaining to the height, bulk, and scale analysis focused on the following issues:

Providing greater distinction between institution alternatives (Alternatives 1A and 1B);

Façade treatments;

Building modulation; and

Building materials.

The site plan for Alternative 1B (Figure 2-5) has been revised to address these concerns.

The summary matrix below supplements the complete discussion of impacts in this section.

Summary Matrix of Impacts By Alternative

Alternative	Summary of Impacts
Alternative 1A	• Potential localized bulk and scale impacts to residents and landowners along north, west, and east sides of project site from untreated facades. • These impacts would be less around southern one-half of site due to topography and landscaping.
Alternative 1B	• Similar to Alternative 1A, but impacts reduced by smaller building, reorientation of building, modulations, rooftop gardens, and façade treatments.
Alternative 2A	• Bulk and scale impacts would be minimal because individual homes would be of similar bulk, scale, and style to surrounding neighborhood. • Project would result in greater overall density on the site; however, density would be consistent with underlying SF 5000 zoning and character of the surrounding neighborhoods; landowners around southern one-half of property would experience greater impacts compared to Alternatives 1A and 1B.
Alternative 2B	• Impacts would be similar to Alternative 2A.
No Action	• None identified over short-term. Long-term impacts would vary based on land use.

3.2.1 Affected Environment

Regional Setting

The proposed Talaris Research Institute is located within the Laurelhurst neighborhood in the City of Seattle. The Laurelhurst neighborhood is bounded on the west by University Village and the University of Washington, on the south by Union Bay, on the east by Lake Washington, and on the north by Sand Point and the Windermere neighborhood. Laurelhurst began to take shape as a residential neighborhood approximately between approximately 1920 and 1940. The current Laurelhurst neighborhood consists mainly of large, single-family homes that are a mix of one- and two-story structures on single-family zoned lots of approximately 5,000 square feet (Figure 3-2). Home styles are generally classic, with neatly landscaped yards containing many mature ornamental shrubs and trees.

Children's Hospital is located approximately 0.1 mile northeast of the project site and encompasses approximately 25 acres. The hospital is multi-leveled and is built on a slope with the top portion of the hospital visible from the south boundary of the project site along Northeast 41st Street. The original hospital building was constructed in 1953, with periodic expansions over the years. The building is modern in style with little ornamentation and is painted white. The current hospital facility encompasses approximately 603,495 square feet. It stands out among the single-family neighborhood in which it sits, but is softened by mature trees and landscaping.

To the southwest of the site is the University of Washington's Center for Urban Horticulture. This site consists of single-story wooden greenhouse, classroom, and office buildings with large windows. The five acre site contains many gardens and grassy areas that are open to the public providing a park-like open-space similar in feel to the existing project site setting. The facility is surrounded by the 70-acre Union Bay Natural Area.

The Laurelhurst Playfield is located approximately one-eighth mile to the east of the project site. Laurelhurst Playfield encompasses 13.5 acres and contains ball fields, tennis courts, a children's play area, restrooms, and meadows. This park is open to the public from 4:00 a.m. to 11:30 p.m. seven days a week.

To the north of the project site and along Northeast 45th Street are retail, commercial, and multi-family apartment buildings. These buildings are mostly one- to three-stories and were constructed between 1940 and 1980, with updated facades that include awnings and other exterior treatments to bring the buildings to pedestrian scale. Building colors vary by business but are dominated by warm colors such as greens, browns, yellows, and reds. Buildings are a mix of concrete and wood structures, with exterior treatments to individualize each business.

SINGLE FAMILY DEVELOPMENT WEST OF THE PROJECT SITE

SINGLE FAMILY DEVELOPMENT EAST OF THE PROJECT SITE

ADOLFSON

NORTH
No Scale

File name: Fig08_existing_neighborho.ai
Original graphic by: JAB
Edits by:
Date: 04/28/04

Source:
Adolfson Associates, Inc., 2004.

FIGURE 3-2.
SINGLE FAMILY DEVELOPMENT IN PROJECT VICINITY
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

Project Site

The existing project site is an 18-acre site consisting of seven single-story, low-profile buildings used as IAS and conference space, plus a small storage facility on the western part of the site. Existing buildings are simple, brown in color, and generally unadorned. These buildings blend into the existing landscape and are screened by the many mature trees located throughout the project site.

The site is heavily landscaped between buildings and the southwest portion of the site is undeveloped. The extensive and mature landscaping and the large area of undeveloped space in the southwest portion of the property give the site a park-like feel. The project site slopes from the northwest corner to the south property boundary, with the south half of the site at the lowest elevation and the northwest corner at the highest elevation.

The northwest portion of the site, where Phase I of the Talaris Research Institute is proposed, currently supports three separate one-story, wood frame buildings. Buildings are 16 feet high with a pitched roofline, and are arranged at right angles with the open side facing the circular driveway. Each building footprint covers approximately 2,400 square feet for a total of 7,200 square feet of building coverage. These buildings are connected by paved pathways and are surrounded by a large number of mature trees and other landscaping. These buildings are constructed on the sloping northwest portion of the project area such that viewers on the west see only the pitched roofs with the remainder of the buildings hidden below the slope. Some viewers from the north would have similar views of these buildings, with the exception of second and third story apartments whose views are mostly blocked by the tall, mature trees between the conference center buildings and the apartment buildings on the north boundary.

The northeast portion of the site currently contains two buildings similar in size, color, and style to those discussed above. One is the main conference center and the other is the lodging facility. The conference center buildings are 1.5 stories, with the west building a deep "U" shape (building footprint of approximately 9,700 square feet) facing the shallower "U" shaped east building (building footprint of approximately 6,400 square feet). Color and style are generally the same as described above for the other buildings. The lodge building is a two-story, 39 foot high structure of the same color and style as the previously-described structures. The lodge has a building footprint of approximately 6,300 square feet. This area is also heavily landscaped and contains many mature trees. Both buildings are partially visible to properties along the east boundary through the existing large trees between the residential area and the conference center buildings.

In approximately the middle portion of the project site is a two-lobed, constructed pond and fountain. This pond is ringed by a footpath, and a pedestrian bridge crosses the middle of the pond, connecting the south portion of the site to the main conference center building. Adjacent to the east side of the east lobe of the pond is the dining hall. This is a two-story structure of the same color and similar style as other buildings on the project site. The dining area is glass walled to allow views toward the pond and conference center grounds. The dining hall building has a footprint of approximately 5,000 square feet.

Viewshed

No views are available from or across the project site as defined by SMC 25.05.675.P Public View Protection (e.g., Mount Rainier, Lake Washington). There are no views of mountains, water, or other visual amenities from the project site.

No views of mountains, bodies of water, or other specific visual amenities are available across the project site, even though the project site sits lower than the surrounding uses. Some homes to the west and particularly the east, have expansive views across the project site from upper levels. Abutting residences (including apartments along the north boundary) enjoy a view across a heavily landscaped property containing many large, mature trees and maintained landscaping. Businesses adjacent to the northwest corner of the project site face Northeast 45th Street/Sandpoint Way. The project site is much less densely developed than the surrounding residential and commercial areas and provides visual relief from the building density of the surrounding uses.

Adjacent neighbors may consider the existing Talaris Conference Center property a visual amenity as the campus is park-like with an open grassy area, landscaping, and a large number of mature, native and non-native trees.

No historic district or City of Seattle-designated landmarks are present on or in the vicinity of the proposed project site.

Relevant Local, State, and Federal Standards and Guidelines

City of Seattle. The project site is currently in a Single Family Zone (SF 5000) with an existing Institutional Use designation. The proposed project is a continuation of the existing Institution Use in this single-family zone, which is permitted as a Conditional Use (SMC 23.44.022). Institutional Uses must meet the development standards for uses permitted outright except as modified in SMC 23.44.022.

The Seattle Municipal Code (SMC) sets forth specific policies and guidelines regarding the height, bulk, and scale of development projects. Section 23.44.022.K establishes bulk and siting requirements for institution uses in single-family zones, including provisions for lot setbacks, height limits, and façade scale. Height, bulk, and scale compatibility policies are included in SMC 25.05.675.G. This section of Seattle's Municipal Code outlines general policies and guidelines for new developments of compatible height, bulk, and scale with the surrounding neighborhood. Measures to mitigate the adverse impacts of substantially incompatible height, bulk, and scale are described that could be imposed by a decision-maker to condition or deny a proposal. The City's policy regarding height, bulk, and scale of development projects states that projects should be reasonably compatible with the general character of development anticipated by the adopted land use policies (SMC 25.05.675.G.2.a).

The proposed Talaris Research Center would be constructed on a parcel currently considered an Institutional Use. This area is bordered on three sides by single-family residential and on one side by retail and commercial uses, and a multi-family apartment building. The underlying Single Family Zone (SF 5000) establishes a height limit of 30 feet, with additional height permitted for sloped lots on the downhill side of the structure only (SMC 23.44.012).

Landscaping is also required to integrate the institution with adjacent areas and reduce the appearance of bulk of the institution (SMC 23.44.022). Table 3-11 below further summarizes bulk and siting development standards for Institution Uses in single-family zones.

Table 3-11. Bulk and Siting Development Standards for Institution Uses in Single-Family Zones (SMC Section 23.44.022.K)

Element	Development Standards
Lot Requirements	For lots larger than one acre with large street frontage, proposed institutions should incorporate design and architectural features to provide continuity of the block front and to integrate the proposed structures with residential structures and uses in the immediate area.
Yards	Generally, front yards should be 20 feet, rear yards 25 feet, and side yards ten feet. No structure other than freestanding walls, fences, or similar structures should be closer than ten feet to the side lot line. The side lot line setback can be reduced to five feet if it will not significantly increase impacts to adjacent residential lots and if there will be a demonstrable public benefit.
Height Limits	Generally, gymnasiums and auditoriums that are accessory to an institution may extend up to 35 feet, provided that the portions 35 feet high are at least 20 feet from all property lines. Additionally, pitched roofs on a gymnasium or auditorium which have a slope of not less than three to twelve (3:12) may extend up to 45 feet.
Facade Scale	If any façade of a new or expanding institution use is greater than 30 feet in length, and is adjacent to a street or a residential lot, then the Director may require design features to be incorporated to minimize the appearance of bulk. Design features may include, but are not limited to, modulation, architectural features, landscaping or increased yards.

The general policies contained in SMC 25.05.675.G pertaining to height, bulk, and scale may also apply to development of the project site as a single-family residential subdivision. Specific development standards, including lot coverage, height, and yard setbacks, for single-family development are established in SMC Sections 23.44.008 through 23.44.016. Development standards for institutions in single-family zones are established in SMC 23.44.022. For additional detail, refer to the Land Use section of this chapter, Table 3-3.

3.2.2 Impacts

Alternative 1A: Institute for Advanced Study with Increased Bulk and Scale and Code-required Parking

Construction

No height, bulk, or scale impacts are expected as a result of construction activities for Alternative 1A.

Operation

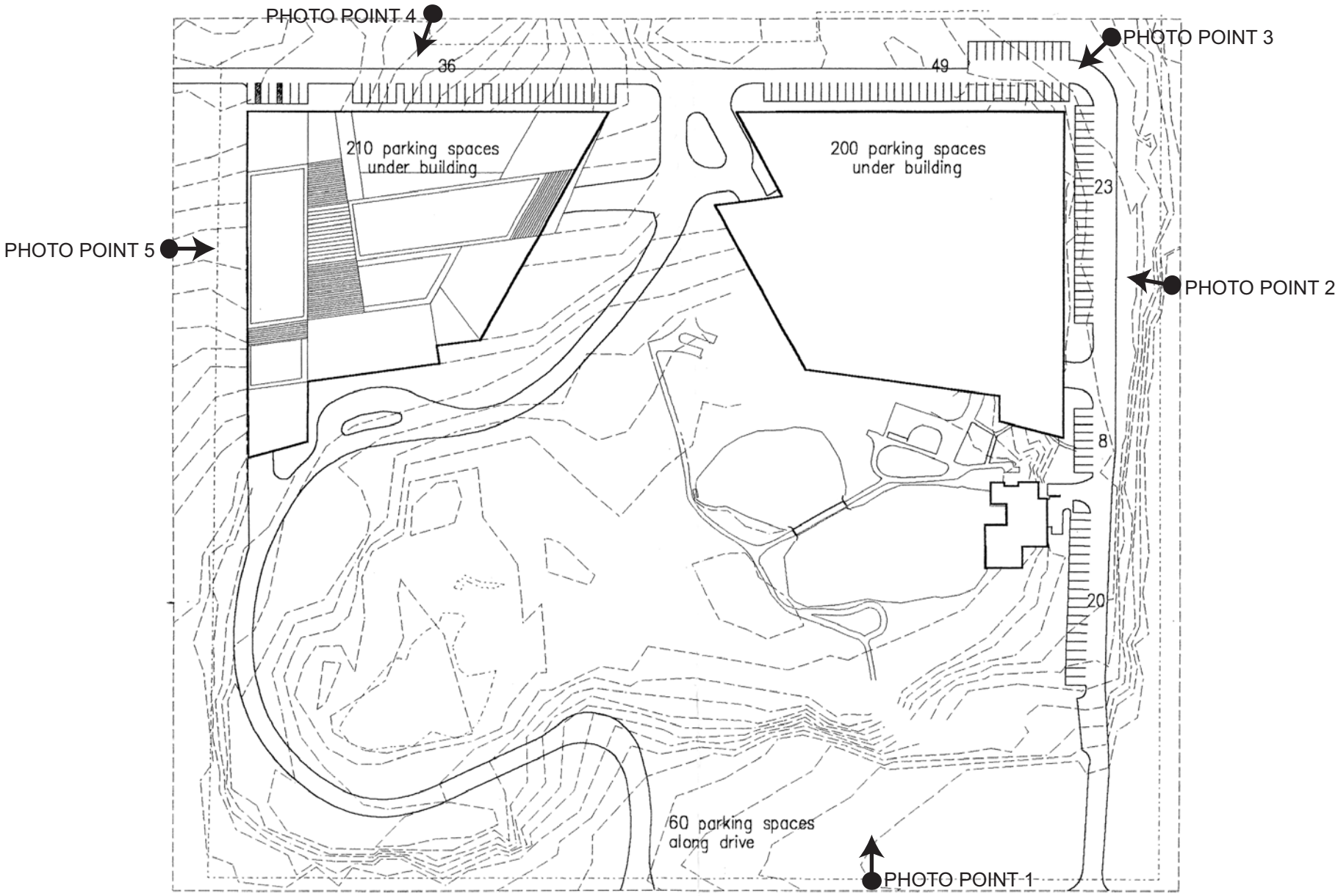
Once construction is completed, the project site would contain two primary structures. The Phase 1 building would be located in the northwest corner of the property, while the Phase 2 building would be located in the northeast corner. Both buildings would utilize site topography to minimize building heights; the Phase 1 facility would be built into the existing hillside sloping down from north to south. While the Phase 2 building has not been designed, it is anticipated that similar construction techniques would be employed to take advantage of the site topography. A setback of 25 feet would be provided along the west side of the property and along the western part of the north boundary. Along the western boundary of the property, the 25-foot setback would be in addition to the 50-foot setback from adjacent properties provided by the 38th Avenue Northeast undeveloped right-of-way. Structure setback would be increased to 93 feet along the eastern portion of the north boundary.

Views from homes and businesses adjacent to Phase 1, located on the northwest portion of the project site, would be modified by the proposed project. The three existing single-story buildings in this area would be demolished and replaced by a new structure with a footprint of 68,462 square feet. The new building would appear as a single above-ground story on its north and west sides, and would be three above-ground stories on its southeast-facing façade, taking advantage of the slope of the site in this area. The new structure would include a 283 foot-long façade on the west side, setback 25 feet from the property line, and a façade of 350 feet on the north side, setback 70 to 90 feet from the property line (Figure 2-4, Alternative 1A Site Plan). Building height would not exceed 30 feet above the highest elevation on the project site. A number of mature trees and other associated landscaping would be removed within clearing limits for the construction of the building. However, a number of other trees would remain around the site's perimeter to the north, and in the 38th Avenue Northeast right-of-way to the west. See the Habitat/Wetlands section for a discussion of impacts to trees.

The Phase 2 building would be similar in height, bulk, and scale to the Phase 1 building described above. Three existing low-profile buildings would be demolished and replaced by one larger structure. Impacts would be similar to the Phase 1 building, with a maximum building height of 30 feet. However, the slightly greater structure setback along the northeast property line would provide for greater visual separation from adjacent land uses compared to the Phase 1 structure. A number of existing trees would also be removed for construction of the Phase 2 building with a few trees preserved along the driveway that would serve to screen the building from view, soften the building façade, and blend it into the surrounding mature landscape.

To evaluate potential bulk and scale impacts to adjacent residents and building occupants, several photos were taken from vantage points around the site's perimeter (Figure 3-3; Photo Points 1 through 5). Photos were then rendered to include accurately-positioned sketches of the proposed institute for advanced study (Alternatives 1A and 1B). These sketches are not intended to depict final exterior design details; rather, they portray building height and façade length and how visible they would be as perceived from adjacent locations.

Photos 1 through 5 depict building profile views from points on the north, south, east, and west boundaries of the project site (Figure 3-3). Bulk and scale impacts to adjacent residents and landowners would be greatest along the west portions of the site for the Phase 1 structure (Photo Point 5). Impacts from the Phase 2 structure would be greatest along the north and east borders



NORTH
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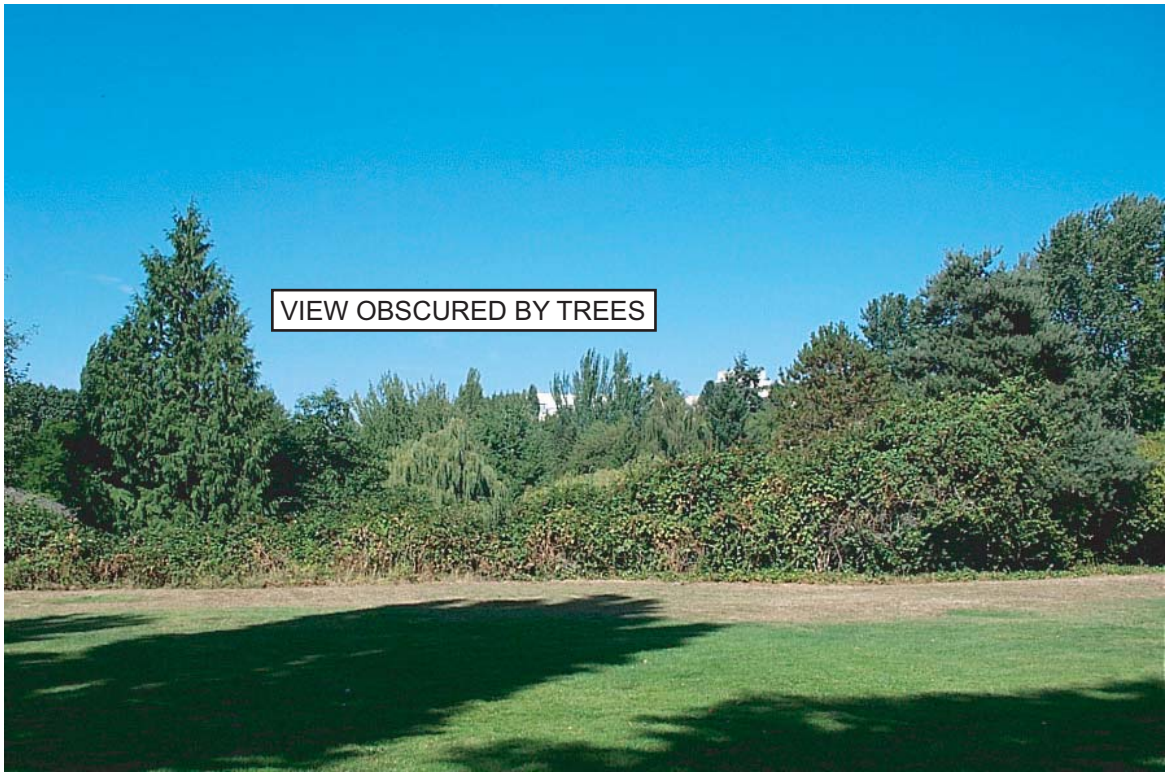
File name: Fig09_photopts.ai
Original AAI Graphic by: ACT
Edits by: JAB
Date: 4/29/04

Source: NBBJ.

FIGURE 3-3.
PHOTO POINTS
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON



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NORTH
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Original graphic by: ACT
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Date: 10/02/02

PHOTO POINT 1.
VIEW OF PROPOSED
INSTITUTE FOR ADVANCED STUDY
TALARIS INSTITUTE EIS

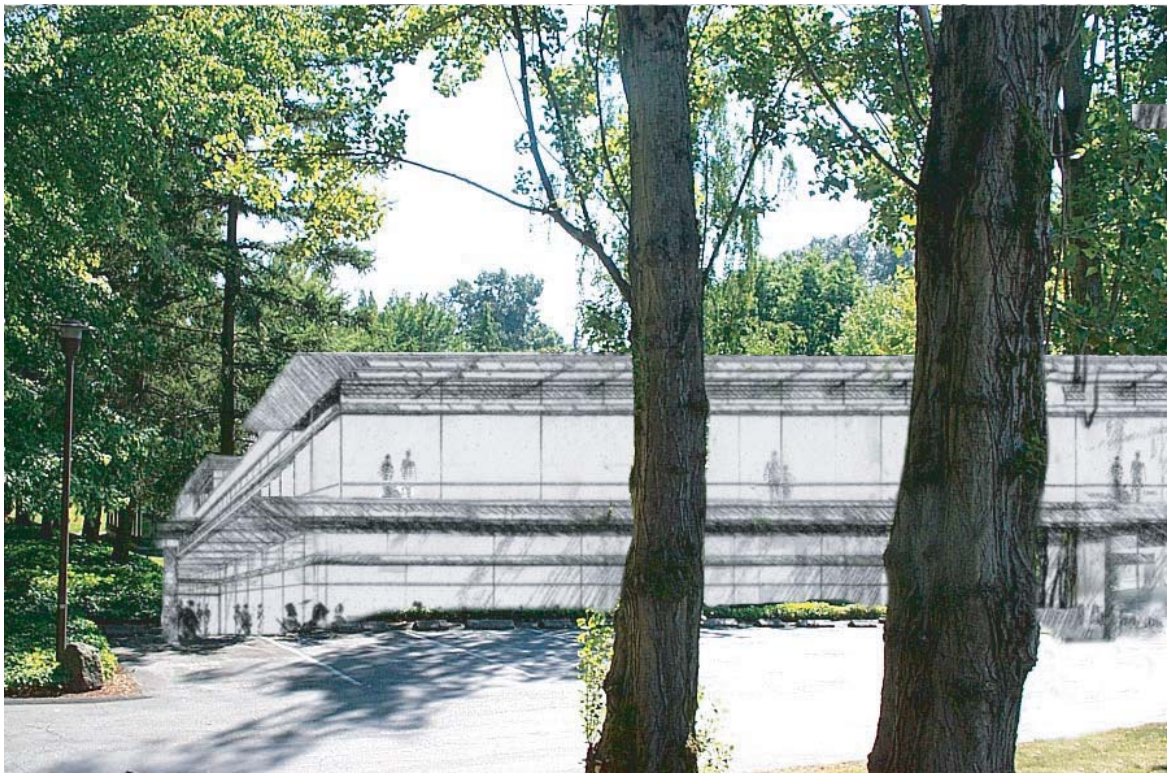
ADOLFSON

NORTH
No Scale

File name: 21034_ppt2.ai
Original graphic by: ACT
Edits by:
Date: 10/02/02

Source: NBBJ.

PHOTO POINT 2.
VIEW OF PROPOSED
INSTITUTE FOR ADVANCED STUDY
TALARIS INSTITUTE EIS



ADOLFSON

NORTH
No Scale

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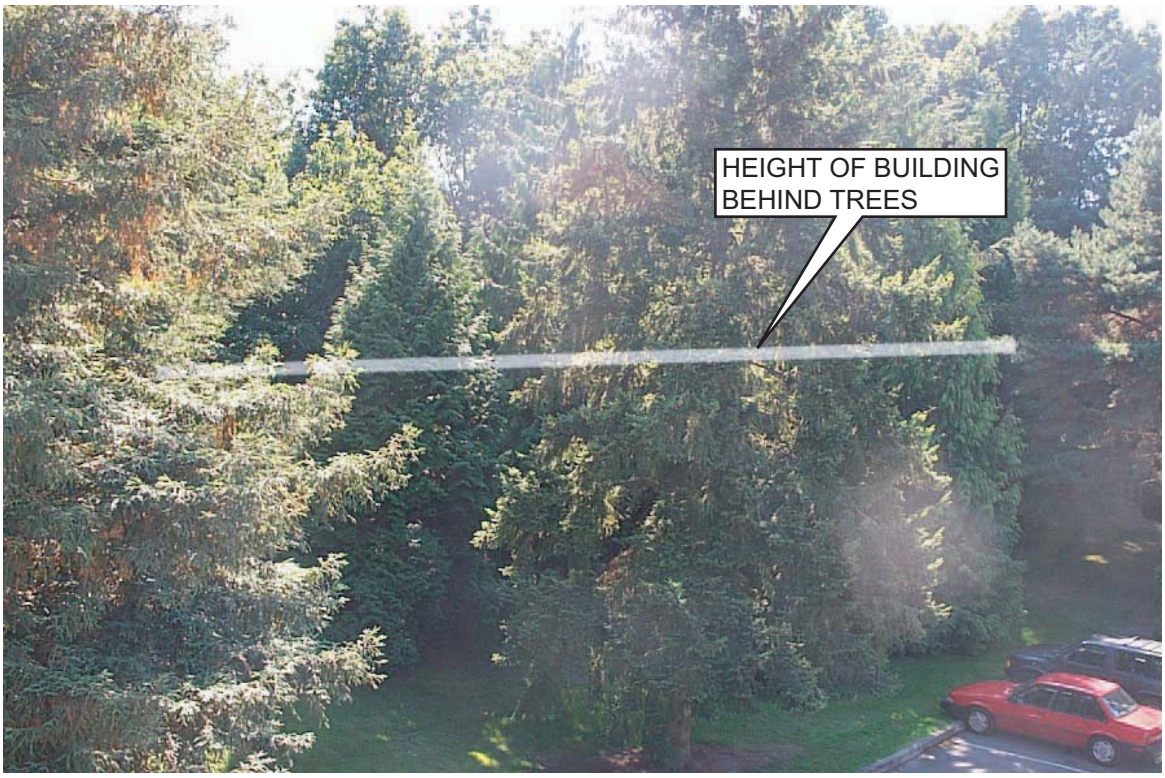
Original graphic by: ACT
Edits by:
Date: 10/02/02

Source: NBBJ.

PHOTO POINT 3.
VIEW OF PROPOSED
INSTITUTE FOR ADVANCED STUDY
TALARIS INSTITUTE EIS



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NORTH
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Original graphic by: ACT
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Date: 10/02/02

Source: NBBJ.

PHOTO POINT 4.
VIEW OF PROPOSED
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TALARIS INSTITUTE EIS

ADOLFSON

NORTH
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Original graphic by: ACT
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Date: 10/02/02

Source: NBBJ.

PHOTO POINT 5.
VIEW OF PROPOSED
INSTITUTE FOR ADVANCED STUDY
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of the site for the Phase 2 building where adjacent land uses would be in closest proximity to the new structures (Photo Points 2 and 3). Retention of mature coniferous trees along the northern perimeter of the site would screen views from the north (Photo Point 4).

While there are no specific amenities visible across the project site (e.g., mountains, water), impacts could include a loss of general view corridors across the site because the proposed facility would be a single building rather than individual buildings separated by pathways and landscaping. The increase of building bulk and scale could be perceived as a significant visual impact to residents along the west, northeast, and east sides of the project site. However, figures show that the combination of low building profile, site topography, and landscaping would help to reduce bulk and scale impacts on several surrounding properties.

While landscaping and topography would minimize bulk and scale impacts to residents adjacent to the southern one-half of the project site (Photo Point 1), much of this landscaping is proposed to be removed for construction of surface parking under Alternative 1A (Figure 2-4). As a result, views from residences along the south boundary of the project site would change from one of landscaping and lawn area (Photo Point 1) to views across paved parking areas to each building. This change in views could be perceived by residents as a significant impact.

As required by code (see Table 3-11 above), façade treatments to minimize the appearance of bulk and scale on adjacent land uses for Alternative 1A would be determined and incorporated into the design during the Administrative Conditional Use Permit Process.

Alternative 1B: Institute for Advanced Study with Reduced Parking and Design Alternatives to Reduce Bulk and Scale Impacts

Construction

No height, bulk, or scale impacts are expected as a result of construction activities for Alternative 1B.

Operation

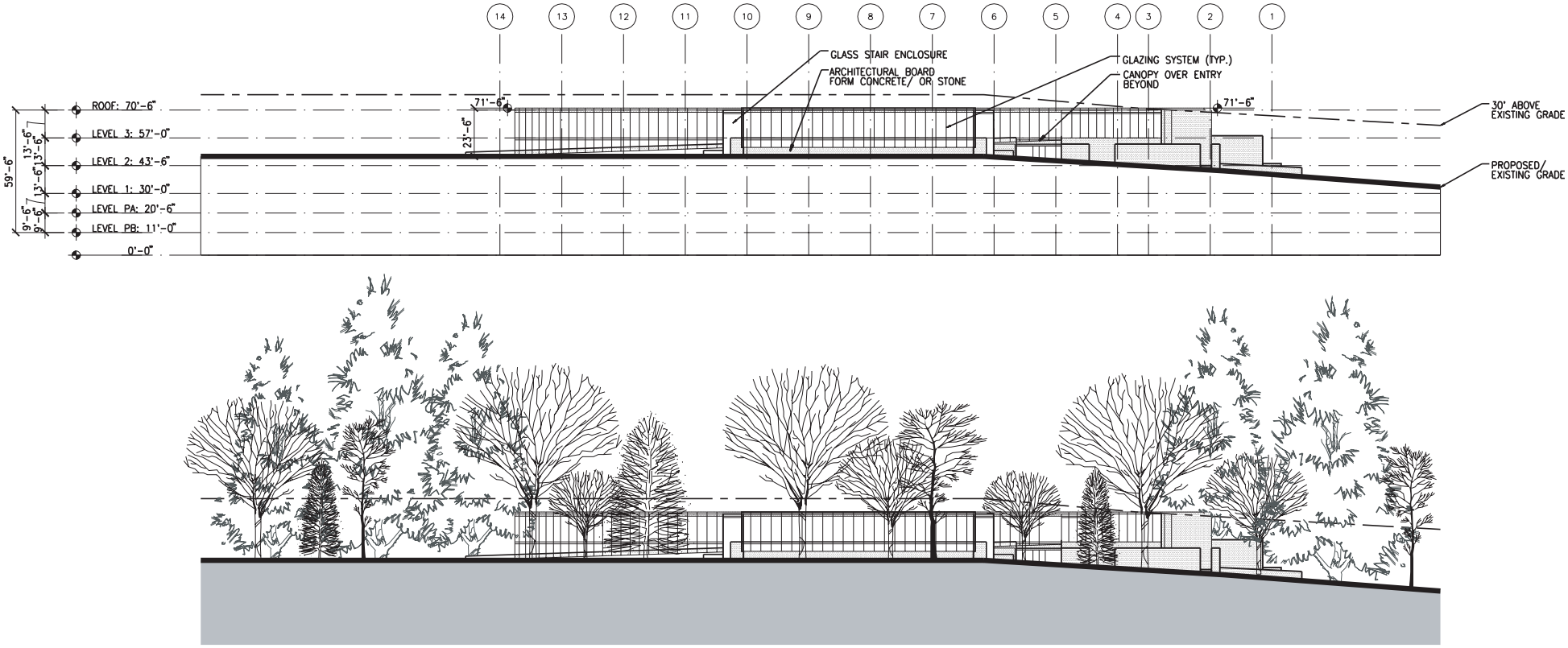
Bulk and scale impacts resulting from Alternative 1B would be less than those described for Alternative 1A as a result of reduced building footprint and gross square footage; revised building configuration on the site; structure modulations and increased open space along property setbacks; architectural and façade design treatments; and landscaping. For development during Phase 1, the total building size would be 30,000 GSF less than Alternative 1A, and the building footprint would be reduced from 68,462 to 60,000 square feet. The Phase 1 building would be situated approximately 45 degrees off the surrounding street grid (northwest/southeast) and configured such that all garage driveways and the main pedestrian entrance would be directed toward the interior of the site and visually screened from adjacent properties (Figure 2-5, Alternative 1B Site Plan).

Building height under Alternative 1B would not exceed 30 feet above existing grade, similar to Alternative 1A. Figures 3-4 through 3-7 show the building elevations (northwest, northeast, southwest and southeast) and illustrate how the site topography would be used to mitigate bulk and scale impacts. As illustrated, the above grade floors of the building would be modulated, or "stepped back," to reduce façade bulk when viewed from off site.

Modulation would serve to soften the building's façade by breaking up the exterior. This configuration and design would also eliminate continuous (283 to 350 feet long) building facades along the north and west 25-foot property line setback as proposed under Alternative 1A. Instead, under Alternative 1B the facility would approach the western 25-foot setback in only two locations, at the western-most corners of the childcare facility and at the research offices northwest of the courtyard separating the two buildings (Figure 2-5). The northwest/southeast configuration of the building allows the building to recess back from these corners toward the interior of the site, so that structure setbacks from the west property boundary vary from 25 to 60 feet. Similarly, the above grade structure setbacks along the north property line would vary from 75 to 150 feet. The varying setbacks and the proposed curvature and modulation of the Phase 1 building's walls help to reduce the façade bulk by providing greater amounts of open and landscaped space adjacent to the west and north property boundaries.

In addition to structure size, configuration, and modulation, Alternative 1B would employ a number of design techniques to minimize the appearance of bulk and scale from neighboring properties beyond that which is proposed for Alternative 1A. Alternative 1B would address bulk and scale impacts along the western and northern portions of the building by incorporating façade treatments. These treatments could include the use of privacy screen and sunscreens to increase privacy and minimize glare from windows, and stone along the lower portions of the façade to integrate the facility with the surrounding landscape. Surface treatments such as "board form concrete" and "glazing system" would be used to help soften the building's appearance. Board formed concrete is cast-in-place concrete with a surface pattern created by rough wood grain in the forms. It softens the concrete surface by giving it natural wood texture and a smaller scale pattern of grooves and shadows.

The glazing system forms the majority of the external walls and consists of vision glass and supporting mullions. In low-rise buildings, areas of vision glass tend to reflect the natural foliage at grade at acute angles and allow views into the building at more normal angles. The pattern changes with the light and weather and is intended to soften the surface by giving it life and a changing appearance. Figure 3-8 illustrates how these treatments would be incorporated into the building design and how the building would be viewed from offsite. The proposed Phase 1 building also includes rooftop gardens and plazas on each modulation with exterior space, a landscaped entry plaza, a courtyard separating the main building from the northwestern-most offices, additional landscaping and greater retention of trees and landscaped area along its west-facing edge to further minimize the appearance of bulk.



1 NORTHWEST ELEVATION
SCALE: 1/32" = 1'-0"
0 16' 32' 64'

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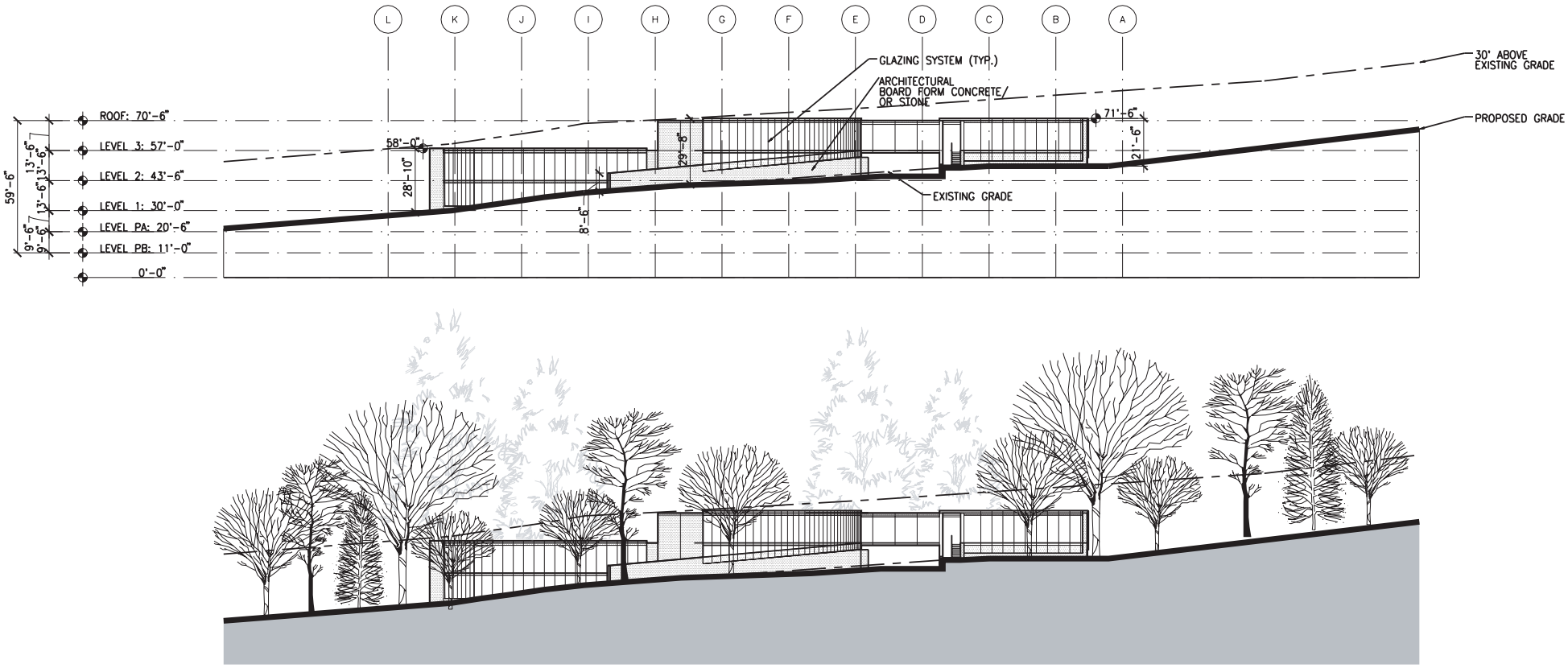
File name: Fig3-04_alt1b_elev.ai
Original graphic by: JAB
Edits by:
Date: 10/27/04

Source: NBBJ, 2004.

FIGURE 3-4.
ALTERNATIVE 1B NORTHWEST ELEVATION
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON



2 NORTHEAST ELEVATION
SCALE: 1/32" = 1'-0"
0 16' 32' 64'

ADOLFSON

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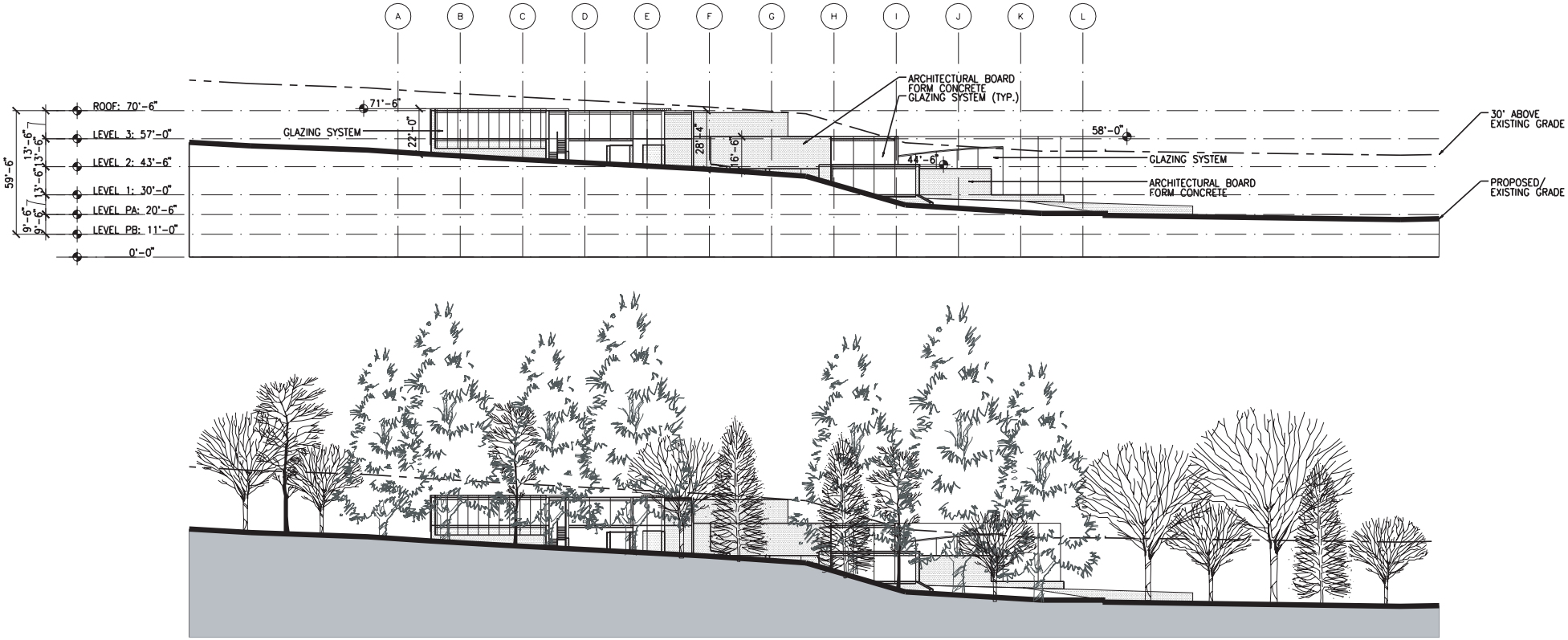
Original graphic by: JAB
Edits by:
Date: 10/27/04

Source: NBBJ, 2004.

FIGURE 3-5.
ALTERNATIVE 1B NORTHEAST ELEVATION
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON



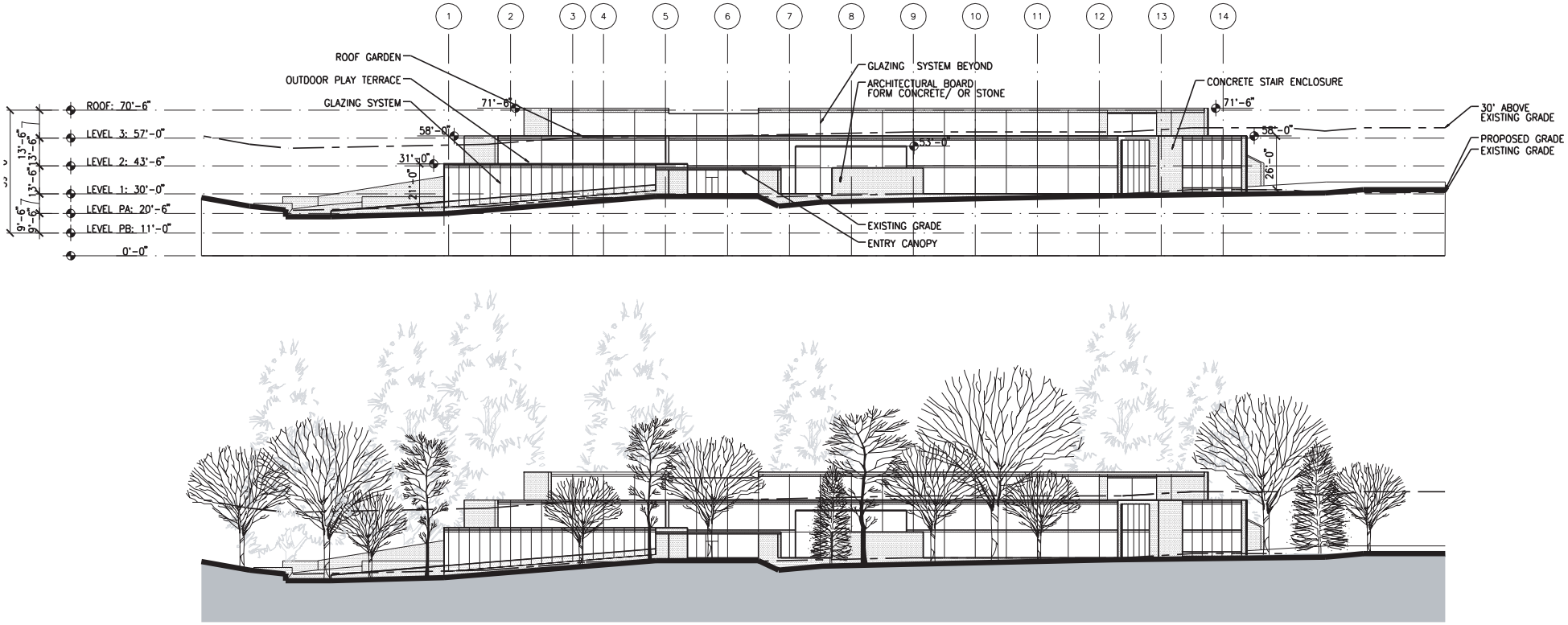
2 SOUTHWEST ELEVATION
SCALE: 1/32" = 1'-0"
0 16' 32' 64'

ADOLFSON

File name: Fig3-06_alt1b_elev.ai
Original graphic by: JAB
Edits by:
Date: 10/27/04

Source: NBBJ, 2004.

FIGURE 3-6.
ALTERNATIVE 1B SOUTHWEST ELEVATION
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON



1 SOUTHEAST ELEVATION
SCALE: 1/32" = 1'-0"
0 16' 32' 64'

ADOLFSON

File name: Fig3-07_alt1b_elev.ai
Original graphic by: JAB
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Date: 10/27/04

Source: NBBJ, 2004.

FIGURE 3-7.
ALTERNATIVE 1B SOUTHEAST ELEVATION
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

From northern portion of 38th Avenue right-of-way
looking east toward the facility

ADOLFSON

File name: Fig3-08_alt1b_pro.ai
Original graphic by: JAB
Edits by:
Date: 10/27/04

Source: NBBJ, 2004.

FIGURE 3-8.
ALTERNATIVE 1B PROFILE
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

Compared to Alternative 1A, visual impacts to residents surrounding the south half of the site would be substantially reduced under Alternative 1B due to the reduced amount of surface parking and greater retention of trees and landscaping on southern portions of the site.

The Phase 2 building would be similar in height, bulk, and scale to the Phase 1 building described above. While design for the Phase 2 building has not occurred, façade treatments would likely be provided to match the design for the Phase 1 building to help minimize bulk and scale impacts to residents to the north and east of the building.

Alternative 2A: Single-Family Development with 38th Avenue NE Improvements

Construction

No height, bulk, or scale impacts are expected as a result of construction activities for Alternative 2A.

Operation

Under Alternative 2A, the project site is proposed to be developed into 91 single-family lots as allowed under current zoning. Individually, the homes would be similar in height, bulk, scale, and style to the homes in the existing surrounding neighborhoods and would not exceed the 30-foot height limit except as allowed by SMC 23.44.012.

While bulk and scale impacts from individual homes would be minimal, the cumulative massing and density of the development at full build-out would substantially change the project site. At present, there is a large amount of undeveloped open space, particularly in the south portion of the site. This open space consists of large trees, pathways, grass, mature landscaping, wetland areas, and the two ponds. Under Alternative 2A, views of this open space area from surrounding properties would be substantially altered. The existing park-like feel of the site would be replaced by a continuation of the single-family residential development that borders the site to the east, west, and south.

The development of 38th Avenue NE under Alternative 2A would alter views of the property most significantly from neighboring properties to the west. Currently the 50-foot wide right-of-way is undeveloped between NE 41st Street and NE 44th Street and consists of vegetation and trees. Views toward the west side of the property would change to a view of a developed street, sidewalks, driveways, and homes similar to single-family residential development in the surrounding area (Figure 3-2). Figure 3-9 shows an existing view of the site and an illustration of the site with single-family development.

VIEW OF EXISTING SITE FROM NE 41ST STREET

VIEW OF SINGLE FAMILY DEVELOPMENT FROM NE 41ST STREET

ADOLFSON

NORTH
No Scale

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Original graphic by: JAB
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Date: 10/27/04

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NBBJ, 2004.

FIGURE 3-9.
SINGLE FAMILY DEVELOPMENT ALTERNATIVE
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

Alternative 2B: Single-family Development without 38th Avenue NE Improvements

Construction

No height, bulk, or scale impacts are expected as a result of construction activities for Alternative 2B.

Operation

Height, bulk, and scale impacts as a result of development of Alternative 2B would be similar in nature to those described above for Alternative 2A. Under this alternative, 90 lots (1 fewer lot than Alternative 2A) would be created on the project site. The existing trees and vegetation would be retained within the undeveloped portion of the 38th Avenue Northeast right-of-way, preserving a greater amount of vegetation to screen views of the project site from the west. The massing and density of this development would be slightly less than that for Alternative 2A and would provide slightly more open space (0.5 acre) due to not developing the 38th Avenue NE right-of-way. Overall, the existing park-like feel of the site would be replaced by a continuation of the single-family residential development that borders the site to the east, west, and south, but with slightly less density than Alternative 2A.

No Action Alternative

Construction

Under the No Action Alternative, no construction-related height, bulk, and scale impacts resulting from construction would occur as no new development would take place on the project site.

Operation

Under the No Action Alternative, no operation-related height, bulk, and scale impacts resulting from new operation activities would occur as no new development would take place on the project site.

3.2.3 Cumulative Impacts

Cumulatively, all of the alternatives, in combination with other ongoing projects in the area, would contribute to the perception of greater building density in the Laurelhurst area over the long term.

3.2.4 Mitigation Measures

Alternatives 1A and 1B

Design measures may contribute to the integration of the facility with surrounding land uses, which are primarily single-family residential. Alternative 1A would include site perimeter landscaping, including mixed coniferous and deciduous canopy trees with evergreen understory, to define the neighborhood edge. Alternative 1B would include the increased site perimeter landscaping, plus additional building landscaping such as terraced gardens, and rooftop gardens consisting of raised planters, flowering shrubs, groundcover, and grasses. Alternative 1B would also provide an overall smaller building, configured and modulated to minimize visual impacts of the facility as viewed from neighboring properties. Mitigation specific to these alternatives follows.

Alternative 1A

Landscaping could be provided along the west, north, and east property boundaries where the buildings abut residential and retail/commercial areas to soften the appearance of the building facades and blend the buildings into the surrounding neighborhood.

Existing trees throughout the site could be retained where feasible and consistent with the site plan to soften the bulk and scale of the buildings and to help the buildings blend in with the existing mature landscaping in the adjacent neighborhoods, as well as retain some of the existing park-like feel of the site.

Trees and other landscaping could be retained to the extent feasible on the southern one-half of the site to screen parking areas and views across the site. Additional plantings around the perimeter of surface parking lots could be provided to provide additional screening.

Additional façade treatments could be provided along the north sides of the Phase 1 and 2 buildings, along the west side of the Phase 1 building, and along the east side of the Phase 2 building. These treatments would help to soften the appearance of bulk and scale on adjacent residents, and would be determined during the Administrative Conditional Use Permit process.

Alternative 1B

In addition to the mitigation measures listed above for Alternative 1A, the following measures have been proposed by the applicant as part of the design for Alternative 1B:

The building footprint and total size would be reduced (by 8,462 square feet and 30,000 gsf respectively) and the building would be oriented 45 degrees off the adjacent city street grid.

The building facades for Phases 1 and 2 would be modulated, or "stepped back" and curved toward the interior of the site to reduce the appearance of bulk and scale and increase structure setbacks along the north and west property boundaries.

Rooftop gardens and plazas would be provided on each modulation with exterior space, a landscaped entry plaza, additional landscaping, and greater retention of trees and open space

along the building's west-facing edge would be included in the design to minimize the appearance of bulk.

Façade design treatments would include elements such as stone along the lower exterior walls and sun shades over windows to reduce glare and increase privacy.

Surface parking would be reduced on the site to preserve vegetation and views across the southern one-half of the site.

Alternative 2A

Building setbacks should be followed as described in SMC 23.44.022 to insure adequate spacing between homes.

Alternative 2B

In addition to the mitigation measures listed above for Alternative 2A, the following measures would be implemented as part of the design for Alternative 2B:

38th Avenue NE would not be developed, increasing the amount of retained vegetated open space along the west side of the property and reducing the overall massing and density of the development at full build-out.

3.2.5 Significant Unavoidable Adverse Impacts

While alternatives would involve some increase in building density and could result in some bulk and scale impacts, impacts would be localized and may be mitigated through design treatments and landscaping.

3.3 Habitat/Wetlands

This chapter of the EIS evaluates habitat/wetlands impacts associated with the project alternatives and the No Action alternative. This chapter evaluates potential impacts to wetlands, wildlife habitat, and aquatic resources.

Summary Matrix of Impacts By Alternative

Alternatives	Impacts				
	Wetland	**Wetland Buffer**	**Wildlife & Habitat**	**Aquatic Habitat**	**Tree Impacts**
1A	376 sf of wetland fill; ECA exception required.	Loss of 11,309 sf of wetland buffer	Construction of 676 surface parking spaces would eliminate 165,784 sf of urban wildlife habitat.	10 acres of impervious surfaces. Possibility of turbid runoff during construction. If unmitigated, volume and rate of runoff from 7.3 acres of new impervious surfaces could amplify non-point pollution in Lake Washington.	Approximately 292 trees removed, of which 32 are greater than 24 inches in diameter; approximately 3 trees within critical areas.
1B	No direct impacts	No direct impacts	Reduced building footprint and surface parking would save 188,530 sf of urban wildlife habitat.	5.3 acres of impervious surfaces (1.4 acres new). Reduced potential impacts to Lake Washington from non-point pollution from impervious surfaces compared to Alternative 1A.	Approximately 176 trees removed, of which 11 greater than 24 inches in diameter; no trees removed from critical areas.
2A	1,107 sf of wetland fill; ECA exception required	Loss of wetland buffer	Urban wildlife habitat would be disrupted or displaced during construction; this habitat may be partially replaced by homeowner landscaping following construction. Some habitat would be permanently altered by internal roads, driveways, parking, and houses. Steep slopes would be preserved.	7.6 acres of impervious surfaces. Because grading and clearing limits are greatest with this alternative compared to Alternatives 1A and 1B, there is a higher probability of turbid construction runoff could occur. If unmitigated, increased impervious surfaces could amplify non-point pollution and magnify discharge capacity to Lake Washington.	Approximately 583 trees removed, of which approximately 21 are greater than 24 inches in diameter; approximately 11 trees within critical areas.
2B	Same as Alternative 2A.	Same as Alternative 2A.	Similar to Alternative 2A. Compared to Alternative 2A, fewer habitats would be lost during construction as a result of 38th Avenue NE not being developed. Urban habitat may be partially replaced by homeowner landscaping following construction. Wetland habitat and vegetation along steep slopes would be modified.	Approximately 7.1 acres of impervious surfaces. Impacts similar to Alternative 2A. Because 38th Avenue NE would not be developed, impervious surface are slightly lower than Alternative 2A.	Number of trees removed similar to Alternative 2A. Approximately 19 trees are greater than 24 inches in diameter.
No Action	No direct impacts identified	No direct impacts identified	No direct impacts identified.	3.9 acres of existing impervious surfaces would remain.	No direct impacts identified.

3.3.1 Affected Environment

Overview

General Property Description

The 17.8-acre site contains the Battelle Memorial Institute campus, with a variety of buildings, parking areas, landscaped areas, and vegetated non-landscaped areas. Approximately 14 acres of the site are either landscaped or developed with parking areas or buildings. Primary non-landscaped areas are located in the southwestern portion of the site and in a strip of vegetation south of Building G. Invasive weeds, namely Himalayan blackberry (*Rubus discolor*), English ivy (*Ilex aquifolium*), climbing nightshade (*Solanum dulcamara*), and Japanese knotweed (*Polygonum cuspidatum*) dominate non-landscaped vegetation on the site. Non-landscaped areas also contain some large black cottonwood trees. In contrast, landscaped areas contain European turf grasses and a variety of non-native trees and shrubs (see Tree section, below).

Past grading for landscaping and prior development of the Battelle Memorial Institute has modified the topography of the site. The site's current topography gently slopes to a low depressed area located within the loop road on the west-central portion of the site. Most site runoff is routed to a two-celled pond located near the center of the property.

The site's existing two-celled pond is approximately 0.6 acre in size. An existing 60-inch storm drain, owned by the City of Seattle, routes stormwater runoff from the pond off-site to the southwest. A 72-inch pipe conveying runoff runs from the northeast to the southwest under the site; storm runoff originating from Buildings A, B, and C directly discharges to this 72-inch pipe. Both the 72-inch and the 60-inch pipes converge on the southwestern portion of the property before being routed to Union Bay in Lake Washington.

Historical Land Use

Extensive historical alteration of drainage patterns, soils, and plant communities have changed the site and surrounding Laurelhurst neighborhood from a forested lake fringe wetland to a residential neighborhood containing single-family housing, commercial areas, and parks (Raedeke Associates, Inc., 1992). In the 1800s, the Laurelhurst area was cleared and logged, and the lowering of Lake Washington altered natural drainage patterns and allowed human settlement in the vicinity. The area was settled prior to the end of the 1920s (Raedeke Associates, Inc., 1992).

By1967, portions of the project site had been graded and filled, including the present-day loop road area (Raedeke Associates, Inc., 1992). The first phase of construction of the Battelle Memorial Institute occurred from 1966 to 1967 and involved the removal of peat, the deposition of fill material, and the construction of the on-site pond. Overflow from the pond was connected to the existing 60-inch diameter storm sewer, and the 72-inch pipe presently running through the site was installed during this time. The second phase of construction involved the removal of additional peat and the deposition of fill material around the loop road area (Raedeke Associates, Inc., 1992).

Wetlands

Background Information

A number of sources were reviewed to collect information on past and current wetland and habitat conditions on the site. Background information was reviewed prior to field investigations and included the following:

National Wetlands Inventory Map (Seattle North, Quad), U.S. Fish and Wildlife Service, 1987.

Critical Areas Folio, City of Seattle, 1992.

Wetland Assessment Summary Report, Raedeke Associates, Inc., 1992.

Response to Comments/Wetland Reconnaissance, Raedeke Associates, Inc., 1996.

Aerial photographs for the years 1936 and 1956.

The King County Washington Soil Survey Series, Natural Resources Conservation Service (NRCS) (formerly the Soil Conservation Service), 1952.

National Wetland Inventory (NWI) maps developed by the U.S. Fish and Wildlife Service (USFWS) indicate that no wetlands are located on the project site. Additional site-specific work conducted in 1992 did not specifically identify wetlands on the site (Raedeke Associates, Inc., 1992).

The City of Seattle's Critical Areas Folio map does indicate that wetlands are located in the southern portion of the site (City of Seattle, 1992). Based on inquiry into the source of the City's mapping information, however, no data or professional information to support the wetland mapping on the site was identified. Due to its urban location, no soils information is available for the site from the Natural Resources Conservation Service (NRCS).

Field Investigation

In February 1998, a site reconnaissance was conducted to assess the existing environment at the site and in a radius of several city blocks. Observations were made of plant communities, wildlife habitats, and the locations of potential wetland areas. Wetland conditions on the site were re-evaluated and wetlands delineated in March 2001. An evaluation of the vegetation, soils, and hydrology was made at various locations throughout the site. Special attention was placed in those areas along the interface of the wetland and upland. Criteria outlined in the Washington State Wetlands Identification and Delineation Manual (Ecology, 1997) and the U.S. Army Corps of Engineers Wetland Delineation Manual (Corps, 1987) were used to determine probable wetlands. Present and past land use practices were also noted, as were significant geological and hydrological features. The U.S Army Corps of Engineers (Corps) confirmed the determination of wetland boundaries.

Plant species were identified according to the taxonomy of Hitchcock and Cronquist (1973). Wetland status of plant species was assigned according to the list of plant species that occur in wetlands, published by the U.S. Fish and Wildlife Service (Reed, 1988; Reed, 1993). Wetland

classes were determined on the U.S. Fish and Wildlife Service's system of wetland classification (Cowardin, *et. al.* 1979).

Existing Wetlands

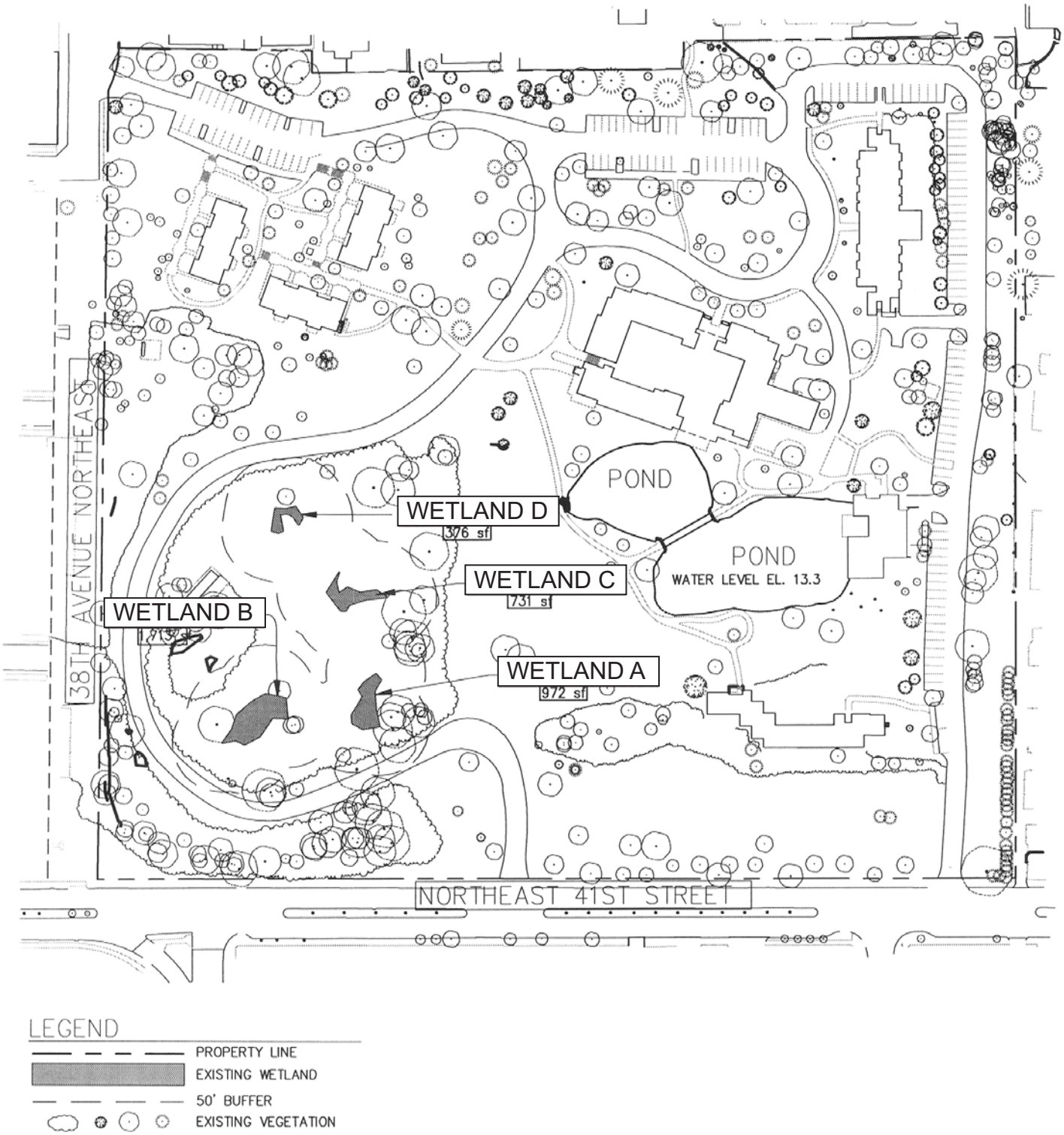
Four wetland areas (Wetlands A, B, C, and D) totaling 0.38 acre were identified in the southwestern corner of the project site (Figure 3-10; Table 3-12). Wetlands A through D are in close proximity and are similar in physical appearance. These wetlands share similar plant species, soil type, and general characteristics, only differing in size, shape, and location. The functions of each wetland are very similar in value (see Appendix B**,** Wetland and Wildlife study). Wetlands A through D are classed by the Cowardin system (Cowardin et al., 1979) as palustrine scrub-shrub seasonally flooded wetlands.

Table 3-12. Characteristics of Onsite Wetlands

Wetland	Wetland Size	Cowardin Class	Comments
Wetland A	972 sf	PSSC1	Small, isolated, low value wetland dominated by Himalayan blackberry.
Wetland B	1,713 sf	PSSC	Isolated wetland dominated by invasive weeds.
Wetland C	731 sf	PSSC	Small, isolated wetland with a mosaic of hydric and marginally-hydric to non-hydric soils. Vegetation dominated by invasive weeds.
Wetland D	376 sf	PSSC	Very small, isolated wetland in shallow depression. Vegetation dominated by invasive weeds.

1. Palustrine Scrub-Shrub Seasonally-flooded wetland

All of the delineated wetlands are located within the loop road area in the topographically lowest portion of the project site. These wetlands consist of isolated topographic depressions dominated by the aggressive, invasive weed, Himalayan blackberry. Subordinate plant species include climbing nightshade, colonial bentgrass (*Agrostis tenuis),* creeping buttercup (*Ranunculus repens*) and stinging nettle (*Urtica dioica*). Himalayan blackberry primarily occurs in open, disturbed areas typically associated with non-wetland habitats. However, Himalayan blackberry may also dominate some disturbed wetland habitats. Although the nature of the invasive plant community did not provide a reliable indication of wetland conditions, soils and hydrology parameters provided a more reliable indicator of wetland conditions.



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Original graphic by: ACT
Edits by: JAB
Date: 10/27/04

Source: Talasea Consultants, LLC; 08/02.

FIGURE 3-10.
PROJECT SITE WETLANDS
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SEATTLE, WASHINGTON

Soils within the wetland areas generally consist of a mosaic of very dark brown to nearly black silt or silt loam. Variability within soil colors appeared to coincide (at least partly) with a mosaic of slight hummocks within the wetlands, which may be the result of fill placed during the time of original site development in the late 1960s. Although some of these small hummocks did not exhibit hydric soil, the entire area was considered as one wetland if the area of hydric soils was more than 50 percent of the total area of both hydric and non-hydric soils. This methodology was based on procedures outlined in the Washington State Wetlands Rating System (Ecology, 1993).

The hydrology parameter was satisfied if soil saturation was observed within 12 inches of the ground surface during the February and March 1998 field observations. Site hydrology was considered abnormal in March 2001 due to significantly below normal rainfall. Therefore, hydrology data from the 1998 field investigations were used.

Overall, none of the areas delineated as wetland support dominant wetland plant species. Soils and hydrology in these areas, however, were marginally wetland in character; as a result, these areas were conservatively identified as wetlands (Appendix B).

Tall black cottonwood trees line the periphery of the loop road and additional trees are located to the south and west of the loop road. None of these trees are rooted in wetland areas. Less abundant native species that occur in the vicinity of onsite wetlands include Pacific willow (*Salix lasiandra*), common horsetail (*Equisetum arvense*), lady fern (*Athyrium filix-femina*), and western bittercress (*Cardamine occidentalis*). The Pacific willow and most other plant species growing within these wetlands are covered by Himalayan blackberry.

Functional Analysis

Overall, wetlands on the site scored relatively low for every function because of their small size, isolated nature, lack of forested cover, dominance of invasive weeds, low biological support, and the lack of habitat functions and structure. As previously mentioned, vegetation in on-site wetlands is dominated by non-native Himalayan blackberry, creeping buttercup, climbing nightshade, and giant hogweed, none of which provide substantial habitat for local wildlife. Stinging nettle is co-dominant seasonally in the spring and summer and tends to form a mosaic within dense blackberry growth. No appreciable stormwater functions are provided by these small, isolated, wet depressions since most of the stormwater from the site enters the man-made two-celled pond before discharging to a pipe. On-site wetlands have low aesthetic value as the result of the dominance of invasive weeds.

Terrestrial Vegetation and Wildlife

Wildlife Background Information

Background research of wildlife information included a review of relevant state and federal agency databases to determine wildlife species presence on or in the vicinity of the site. No federally-listed species were identified onsite or in the immediate vicinity of the project site. The Washington Department of Fish and Wildlife's (WDFW) Priority Habitats and Species (PHS) database identified a history of great blue heron breeding in the wetland area located on the project site in 1993; however, no breeding activity has been documented since that time

(WDFW, 2001; Appendix B). Two nesting pairs were observed in 1993, but the PHS reported that the two nests were not occupied in 1994. No nests or blue heron individuals were observed on the site in 1996, or have been observed since then.

In 1993, great blue herons were also observed breeding south of the project site near the University of Washington Urban Horticulture Center. No nests or individuals are identified in the PHS database for this site after 1993.

No priority fish species or bald eagle nests are identified on the site by the PHS database. No other priority wildlife species, including bald eagle, other raptors, or great blue heron, have recently been identified on the project site or in the immediate vicinity (Link, personal communication, September 2002). Bald eagle and great blue heron, however, may forage in nearby Union Bay on Lake Washington.

Wildlife Field Investigation

A project site wildlife reconnaissance was conducted in November 2001. General wildlife observations were also made during the March 2001 wetland reconnaissance and delineation. (Appendix B).

The American and northwest crow, glaucous-winged gull, a variety of songbirds, common waterfowl, and eastern gray squirrel were observed during the wildlife reconnaissance. However, no priority habitats or species were observed during the field reconnaissance. No woodpecker feeding stations, raptor nests, significant waterfowl activity, nesting cavities, mammal scats or tracks, or other indicators of wildlife were observed leading to the identification of priority habitats or species. Although raptors commonly nest in large cottonwood trees, no nests were found in the site's cottonwood trees during the field survey. Trees were systematically inspected for nests, droppings, or other indicators of raptor activity.

No high quality waterfowl habitat was observed on the project site. Urban ponds such as the site's pond may function as resting areas for some species of waterfowl; however, high quality habitat was not observed. Waterfowl may utilize the on-site pond throughout the year, choosing not to migrate south with other waterfowl during seasonal migrations along the Pacific flyway.

No bald eagle nests, roosts, droppings, or other occurrences were observed during the site reconnaissance. Although bald eagle commonly nest or roosts in large cottonwood trees in the vicinity of lakes and other foraging areas, no indicators of eagle use were observed in or immediately adjacent to the project site. No great blue heron nests, roosts, droppings, or occurrences were noted during the site reconnaissance.

Wildlife Habitat

Wildlife habitats located on the project site are highly modified and are characteristic of urban/suburban landscapes. These habitats are dominated by urban/suburban-adapted wildlife species, primarily songbirds and small mammals. The site contains assorted urban environments that include degraded wetlands, landscaped areas, pond, non-landscaped areas, large cottonwood trees, and buildings.

For this analysis, the site was divided into six habitat areas based on dominant plant communities, wildlife habitat, water features and location on the site (Figure 3-11). Each of these habitat areas attracts different assemblages of wildlife. For example, waterfowl may utilize the pond, songbirds can utilize ornamental trees and shrubbery, and bald eagle and great blue heron could potentially utilize large cottonwood trees located on-site.

More species may utilize the site than could be observed during field reconnaissance because spatial and temporal occurrence would limit visual observations of some species to specific hours of the day, seasons of the year, and/or microhabitats found on the site. Based on the King County Wildlife Habitat Profile (1987), up to 50 species can occur in moderately vegetated urban and suburban habitat types such as those found on the site. This tally of wildlife includes two species of reptile, 37 species of bird (mostly songbirds and, to a lesser extent, waterfowl, namely ducks and geese), and 11 species of mammal (mostly rodents).

Habitat Area 1: Wetlands

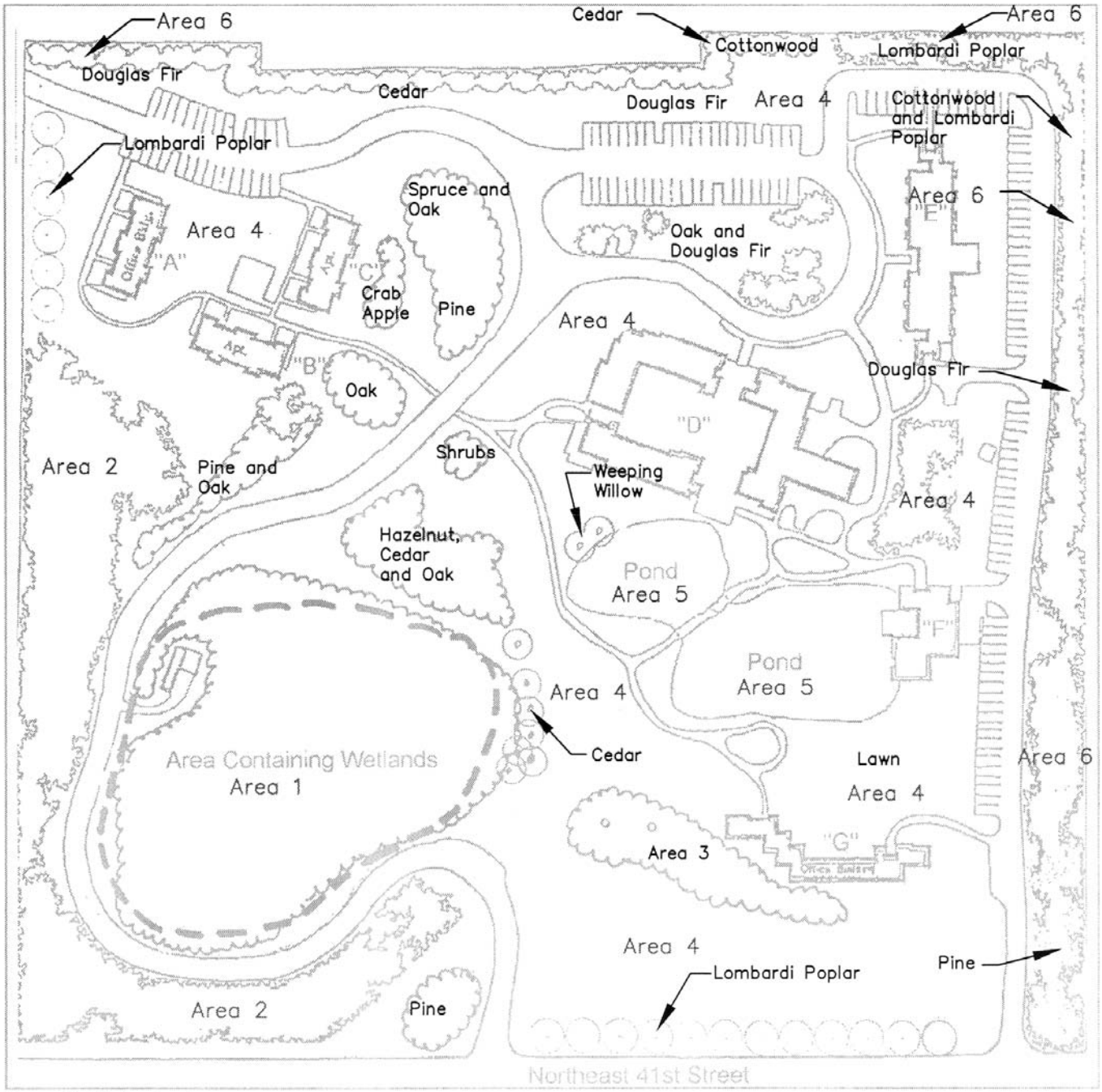
Area 1 (94,790 sf) contains Wetlands A through D and is dominated by invasive plants, as described above. Although the site's wetlands and their buffers are highly degraded, they provide some habitat value for wildlife species. Multi-layered vegetation (herbs, shrubs, and trees) provides structural diversity and increased habitat value to wildlife. The large cottonwood trees near the loop road provide canopy habitat and seed forage in this area. Shrubs provide forage and cover for songbirds and smaller animals. Herbs provide some forage and cover habitat for small mammal species.

Scrub-shrub wetlands locally support up to 22 species of wildlife based on the King County Wildlife Habitat Profile (1987). However, other species of songbirds and small mammals (rats, raccoons, and opossums) are expected to forage for blackberry and take shelter in the dense thickets. Songbirds, crows, raptors, and great blue heron could potentially perch or nest in black cottonwood trees near the wetlands; however, no nests were observed during site reconnaissance.

Area 2: Non-landscaped Area on Western and Southern Periphery of Site

Area 2 (56,727 sf) is a non-landscaped area characterized by large black cottonwood trees and an understory dominated by Himalayan blackberry. Other abundant shrubs include red-osier dogwood (*Cornus stolonifera*) and English holly (*Ilex aquifolium*). Some snowberry (*Symphoricarpos albus*) and young red alder (*Alnus rubra*) also occur in this area. The herbaceous layer consists of stinging nettle, bracken fern (*Pteridium aquilinum*), and sword fern (*Polystichum munitum*). Creeping buttercup occurs at the edge of this plant community and adjacent to the loop road. English ivy (*Hedera helix*) is climbing the cottonwood trees to the canopy, and the western portion of this area has large patches of Japanese knotweed shading out other understory plants.

Based on the King County Wildlife Habitat Profile (1987), urban/suburban environments that are mostly vegetated can support up to 80 species, 60 of which are birds, primarily songbirds. Songbirds, crows, raptors, or great blue heron may perch or nest in black cottonwood trees. However, no nests were observed in this area. Trees and shrubs provide cover and their seeds and berries provide forage for songbirds and small mammals, such as the raccoon, opossum, and rats. It is expected that similar numbers of species utilize the wetland area within the loop road.



Area 1: Wetlands Area
Area 2: Naturally Vegetated Site Periphery
Area 3: Natural Vegetation Near Buildings
Area 4: Landscaped Area (Majority of the Site)
Area 5: Ponds
Area 6: Landscaped Periphery Vegetation (North and East Boundary of Property)

ADOLFSON

NORTH
No Scale

File name: Fig3_11_hab.ai
Original graphic by: ACT
Edits by: JAB
Date: 10/27/04

Source: Talasea Consultants, LLC; 08/02.
Base Map Source: Battelle Memorial Institute.

FIGURE 3-11.
PROJECT SITE HABITAT TYPES
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

Area 3: Non-Landscaped Vegetation Near Building G

This area (14,523 sf) contains several large black cottonwood trees and several mature red alder. One western red cedar occurs in this area and may provide some habitat value. Himalayan blackberry and some small cottonwood and red alder trees dominate understory vegetation. Vines of English ivy are climbing the black cottonwood trees to the canopy, and climbing nightshade and some thimbleberry also occur in this area. This plant community is situated on a small, steep-sloped area, where some erosion was observed during field investigations.

It is expected that a similar number and composition of species as Areas 1 and 2 would utilize this area. However, fewer species are expected to utilize this area because of its smaller size and diminished habitat diversity. Songbirds, crows, raptors, or great blue heron may perch or nest in cottonwood trees; however, no nests were observed. As with Areas 1 and 2, trees and shrubs provide cover and their seeds and berries provide forage for songbirds and small mammals.

Area 4. Landscaped Areas

The habitat area encompasses most of the site, which is landscaped with turf grasses and non-native trees and shrubs. Tree species consist of Austrian pine (*Pinus nigra*), pin oak (*Quercus palustris)*, northern red oak (*Quercus rubra*), and Norway spruce (*Picea abies*), as well as a non-native species of crab apple (*Malus sp.*). Other non-native tree species may occur on the site in smaller quantities. Trembling aspen (*Populus tremuloides*), a native species, occurs in patches throughout these areas.

Songbirds and small mammals utilize seeds and berries foraged from both conifer and broad-leafed tree species. Songbirds utilize landscaped vegetation for nesting, foraging, and cover. Landscaped vegetation also provides some habitat value, such as foraging and cover, for small mammals. Based on the King County Wildlife Habitat Profile (1987), 42 species may utilize moderately vegetated urban/suburban environments as habitat. These species include two reptile species (garter snakes), 39 bird species (including hawks, California quail, mallard duck, glaucous-winged gull, doves, pigeons, northern flicker, and songbirds), and 11 mammal species (moles, voles, chipmunks, raccoon, eastern gray squirrel, mice, and rats). Common opossum and bat species may also occur in this habitat.

Part of the landscaped area is open mowed grass. Worms, insects, and other invertebrates, as well as wind-blown seeds, may attract a variety of birds and small mammal foragers to these areas. Wildlife species that commonly utilize mowed grass as habitat include 17 species, namely 14 bird species, and 3 mammal species (King County, 1987). These species include Canada goose, mallards, bushtit, crow (Northwestern and American), American robin, and European starling. Killdeer commonly nest on lawns and may utilize this area as nesting habitat. Mammal species include Townsend's mole, Pacific mole, and eastern gray squirrel. Moles typically utilize lawns as burrowing habitat.

Area 5: Open Water

A two-celled constructed pond (26,136 sf) is located in the southeastern portion of the project site. A walking bridge extends across the middle, narrow section of the pond and connects to a trail system that extends around most of the pond. Building F is located on the eastern edge of

the pond, and Building D is located immediately north of the pond's western lobe. No vegetation or aquatic bed was observed within the pond. Lawn grass extends to the edge of the pond as part of the site landscaping. The pond edge is hardened with rockery and is free of trees other than two weeping willow trees (*Salix sepulcralis*) located on the pond's western edge.

A healthy freshwater pond ecosystem can support up to 71 species of wildlife, including 10 amphibian species, three reptile species, 51 bird species (mainly shorebirds, seagulls, and waterfowl), and 7 mammal species (mostly semi-aquatic mammals) (King County, 1987). However, the habitat structure of the on-site, two-celled stormwater pond is not intact, and thereby would support far fewer species. No amphibians, reptiles, or semi-aquatic mammals, such as the beaver or muskrat, would occur in this urban pond.

The pond provides habitat for waterfowl, mainly the Canada goose and migratory ducks, such as the American widgeon and mallard duck. No waterfowl nesting is likely to occur in or near the pond because of routine mowing of grass to the pond's edge and the absence of aquatic vegetation. Pond water is stagnant throughout the year with presumably some mixing in summer and autumn. An in-water sprinkler system provides some year-round aeration. Nonetheless, extensive algae blooms likely create an oxygen deficit during summer months.

Minimal aquatic life is supported in this environment. Amphibians are not likely to utilize the pond for breeding habitat, because no emergent vegetation is available for egg adhesion, and the lack of vegetative cover would subject amphibians to high predation rates from seagulls, crows, raccoons, and other predators. No anadromous fish occur in this pond, as flow-control structures and a network of pipes from the pond to Lake Washington present barriers to upstream anadromous fish migration. The pond may support small warm water fish species, namely stickleback.

Area 6: Landscaped Periphery Vegetation

Area 6 (61,568 sf) consists of landscaped periphery vegetation composed of a combination of native and non-native tree species situated along the property line. Trees consist of black cottonwood, Douglas fir, western red cedar, Austrian pine, and Lombardi poplar. Almost no understory vegetation occurs in this area. Similar to Area 4, 42 species may utilize moderately vegetated urban/suburban environments as habitat. However, the absence of understory vegetation likely reduces the number of species that potentially could utilize this habitat. While the absence of shrub cover likely limits mammal utilization of this area, small mammal species may forage for seeds and berries, and songbirds may utilize existing trees for nesting, perching, foraging, and cover.

Trees

Trees on the project site were evaluated to determine potential impacts to trees, including trees identified as "exceptional" by applicable City of Seattle tree regulations. The tree evaluation was conducted by a qualified arborist following the protocol of the International Society of Aboriculture for tree assessment. Overall tree health and site conditions were also assessed. Tree health was rated from healthy to poor, examining factors such as size, vigor, crown conditions, needle density, insect activity, and evidence of disease (see tree evaluation, Appendix C, revised November 2004).

Overall, 609 trees on the site were identified and evaluated, representing 47 species. Existing trees on the site are shown on Figure 3-10. There are 58 trees on the site are in good, very good, or excellent condition and are greater than 24 inches in diameter. Native trees account for 41 percent of trees on the property and include black cottonwood (21 percent), Douglas fir (8 percent), red alder (7 percent), Western red cedar (4 percent), and bitter cherry (1 percent).

Trees were evaluated for their potential to be “exceptional” trees as defined by applicable City of Seattle rules and codes. Tree species and diameter were evaluated for eligibility; no trees were found to be unique in size, rareness, species, or age to qualify for exceptional status. Of the 609 trees evaluated, 177 trees are considered common, short-lived "weedy" trees that never should be designated as “exceptional” as defined in Director's Rule 6-2001. An additional 38 trees were determined to be non-significant due to their small size, while 8 trees had been removed prior to September 2002 and one tree was standing dead. Of the remaining trees 424 trees, approximately 58 trees were determined to be in good, very good or excellent condition and are greater than 24 inches in diameter.

Aquatic Habitat

Lake Washington is located approximately 700 feet from the project site and approximately 1,200 feet from the on-site pond. Drainage from the 72-inch stormwater pipe, a remnant of Yesler Creek, drains the project site to an outfall located approximately 700 feet south of the site in Union Bay on Lake Washington. A wetland is located southwest of the site, across Northeast 41st street, near the University of Washington Horticultural Center. This wetland is connected to the Lake and extends north to approximately 250 feet from the project site. The portion of the wetland closest to the Lake may provide habitat for the painted turtle, the great blue heron, a variety of waterfowl, and juvenile salmonids. Based on City of Seattle stormwater design drawings, the 72-inch drainage outfall from the site to the Lake is not located in this wetland.

Lake Washington contains habitat for a variety of aquatic, semi-aquatic, and terrestrial species. Waterfowl species, the bald eagle, the great blue heron, the kingfisher, and other avian species utilize the Lake as foraging habitat and nest near the Lake. The river otter and other semi-aquatic or terrestrial mammal species also utilize portions of the Lake as foraging habitat.

Lake Washington also provides habitat for a variety of salmonids including Chinook, coho, steelhead, and sockeye salmon. Adult anadromous salmonids primarily use the lake for migration to spawning areas on tributary streams, while juveniles rear and outmigrate to the ocean along the Lake’s shorelines. Federally-listed Chinook salmon primarily use Lake Washington as a migratory path to migrate to and from natal streams. Due to the absence of potential spawning habitat, no populations of bull trout or Dolly Varden are believed to inhabit Lake Washington (WDFW, 1998a). Although no federally-listed bull trout population is believed to occur in Lake Washington, isolated bull trout individuals may be present.

Relevant Regulations

City of Seattle Wetland Regulations. The City of Seattle regulates wetlands according to Chapter 25.09 of the SMC. The Environmentally Critical Areas (ECA) ordinance Section 25.09.160 of the SMC requires a 50-foot buffer from the edge of all wetlands larger than 100 square feet in size. Wetland alteration is not allowed for wetlands of exceptional value.

Grading, filling, draining, and/or development may be considered within wetlands not of exceptional value and their buffers under limited situations and conditions presented in SMC 25.09.160 and 25.09.300. Generally, the alteration (fill) of wetlands not of exceptional value may be considered under SMC 25.09.160(A)(2) if an existing degraded wetland would be restored. Under SMC 25.09.160(B)(2)(b), wetland restoration (over wetland creation) is the preferred mitigation measure to compensate for wetland alterations. However, the proposal for wetland and buffer alteration must also comply with the provisions under SMC 25.09.300 (Environmentally Critical Area Exception). Chapter 25.09.300 establishes the conditions for modification of environmental critical area development standards. An ECA exception is required to develop or use property that abuts or is on designated environmentally critical areas. The review process and procedures for an ECA exception are considered a Type II land use decision and are subject to an administrative open record appeal hearing to the Hearing Examiner (SMC 23.76).

Corps of Engineers Wetland Regulations. Wetland fill may be permitted under Section 404 of the Federal Clean Water Act, provided certain conditions are met. The conditions would include compensatory impact mitigation and a determination by the National Marine Fisheries Service and U.S. Fish and Wildlife Service that the project would not result in a "takings" of any listed species. However, wetlands on the project site are exempt from regulation by the Corps, since these wetlands were determined to be isolated. Isolated wetlands are not regulated under the Clean Water Act.

In December 2001, the Corps verified wetland boundaries on the site and determined that none of the four wetlands nor the on-site, man-made pond are waters of the United States (Appendix B).

Department of Ecology Wetland Regulations. The State Department of Ecology may have regulatory authority over isolated wetlands. Under RCW 90.58, Ecology has authority over "waters of the State" and may implement regulatory authority over isolated wetlands. Ecology reserves authority to use administrative orders to regulate projects involving isolated wetlands.

Wildlife Regulations. The City of Seattle's policy under SMC 25.05.675 is to minimize or prevent the loss of wildlife habitat and other vegetation that has substantial aesthetic, educational, ecological, and/or economic value.

The City considers "special habitats" as high priority for protection and preservation. Special habitat areas include wetlands and associated areas, avian nesting sites, fish spawning areas, and wildlife feeding sites. The City also considers state and federal threatened, endangered, and sensitive species of both plants and animals as high priority for protection and preservation. No special habitats, other than wetlands, occur on the project site.

Drainage Regulations. Under SMC 25.05.675(C), the City defines adverse drainage alteration as pollution, mechanical damage, excessive flows, and other conditions in drainage basins that will increase the rate of down-cutting and/or the degree of turbidity, siltation, habitat destruction, and other forms of pollution in wetlands, riparian corridors, and lakes. Adverse drainage alterations also include low flows or low water levels to a level that endangers aquatic or benthic life within wetlands, riparian corridors and lakes. The aesthetic quality and

educational value of water and watercourses, as well as the suitability of waters for contact recreation and wildlife habitat are also considered under SMC 25.05.675(C).

Applicable Tree Regulations. The Seattle Municipal Code (SMC) and Director's Rule 6-2001 define the City of Seattle's tree regulation framework. The purpose of this rule is to clarify the SEPA Plants and Animals Policy for the purpose of determining the value of outstanding trees on sites undergoing environmental review, in order to establish appropriate tree protection mitigation measures. This rule also establishes a procedure for identifying Exceptional Trees pursuant to SMC Chapter 25.11. Tree removal in environmentally critical areas, such as wetlands, is regulated by SMC section 25.09.320.

3.3.2 Impacts

Alternative 1A: Institute for Advanced Study with Code-required Parking

Construction

Under Alternative 1A, construction activities could result in a number of impacts to wetlands, vegetation, and wildlife. Potential effects during construction of Alternative 1A could include:

Release of suspended sediments and other pollutants into Union Bay of Lake Washington;

Direct and indirect wetland impacts;

Increased temperature of discharge entering the Lake;

Temporary and permanent impacts to urban wildlife habitat, and

The elevated potential for temporary noise and vibration impacts to avian wildlife.

Construction under Alternative 1A would take 15 months for Phase 1 and an additional 15 months for Phase 2. Three existing buildings and two parking lots would be demolished for each phase. Grading and clearing would generally occur during the drier summer months to limit the potential for turbid runoff entering Union Bay.

Wetlands and Buffers

If approved by an ECA exception, under Alternative 1A, Wetland D (376 sf) would be filled and 11,309 sf of buffer would be affected through buffer encroachment. Negligible stormwater and biological functions would be lost, however, because Wetland D is a small, isolated wetland dominated by invasive weed species and degraded by human alterations. Temporary wetland and wetland buffer impacts would occur as the result of clearing and grading within other portions of the wetland and buffer. These temporarily impacted wetland and wetland buffer areas would be restored following construction.

Stormwater

During construction, turbid runoff could enter the on-site pond, temporarily reducing water quality. Turbid runoff potentially could reach Lake Washington through the storm outlet pipe leading to Union Bay, deteriorating aquatic habitat for waterfowl, fish, and semi-aquatic mammals in the Lake through sedimentation and diminished water quality. Implementation of erosion control and water quality best management practices (BMPs) and utilization of temporary stormwater detention and treatment facilities would minimize turbid construction runoff into Union Bay.

Grading and clearing activities generally would be restricted to the drier summer months and to other relatively dry periods during the course of the project to minimize erosion and turbid runoff from exposed soils. As an additional precaution, exposed soils would be covered and/or seeded immediately following grading and clearing activities. Potential for elevated temperatures in storm discharge to Union Bay may occur due to solar warming of turbid water in the on-site detention pond.

City-required erosion control and water quality BMPs would also help to minimize potential impacts to juvenile salmonids from construction runoff entering Union Bay. Juvenile coho salmon are likely to rear in Union Bay year-round, while juvenile Chinook salmon may rest and/or forage in Union Bay during their spring migration out to sea. Since grading and clearing would be limited to the drier summer months and the implementation of water quality and erosion control BMPs would minimize stormwater impacts, no impacts to juvenile Chinook are anticipated. Coho and/or Chinook spawners possibly could enter Union Bay in-route to Sammamish River tributaries. However, because of construction timing and implementation of water quality and erosion control BMPs, impacts to adult Chinook or coho are similarly not likely to occur as the result of construction.

Wildlife Habitat

Under Alternative 1A, code-required parking would eliminate 165,784 sf (3.8 acres) of wildlife habitat, including 55,686 (1.3 acres) in Area 1, 14,523 sf (0.3 acres) of non-landscaped habitat near Building G (Area 3), and 95,575 sf (2.2 acres) of landscaped habitat. An additional 22,485 sf (0.52 acres) of non-landscaped area south of Building B (Area 2) would be eliminated through internal road construction. Habitat features, such as large cottonwood trees, ornamental trees, and understory shrubs would be lost. Landscaped wildlife habitat (Area 4) lost to Phase 1 building construction would total approximately 127,000 sf (2.9 acres) and to Phase 2 building construction would total approximately 163,000 sf (3.7 acres). Total wildlife habitat altered under Alternative 1A would be approximately 455,800 sf (10.5 acres).

Temporary noise increases during construction could disturb migrating waterfowl or perching activities of raptors and other birds in nearby trees. Wildlife species differ in their ability to tolerate disturbance; tolerance also depends on season, type of noise (sporadic or continuous), distance from the noise source, and frequency of occurrence (Adolfson Associates, 1993). It is likely that some species would move away from the site, during construction. These species would likely relocate to similar habitats nearby, if available. Some of these species would return to the site, while others would remain in their new location.

Trees

Alternative 1A would result in the loss of approximately 292 trees (124 for Phase 1 building, 103 for Phase 2 building and 65 for parking lots). None of these trees qualify as "exceptional." Eleven trees are located within Environmentally Critical Areas.

This alternative will require the removal of 32 trees that are greater than 24 inches in diameter (9 for the Phase 1 building, 3 for the Phase 2 building and 20 for the parking lots). Thirteen of these trees are Black Cottonwood, which fall within the category of "common, short-lived 'weedy' species" as defined in Seattle Director's Rule 6-2001. The other 19 trees are Red Oak (13), Western Red Cedar (3), Weeping Willow (2) and Lombardi Poplar (1).

Operation Impacts

Following construction, remaining onsite wetlands could be indirectly impacted by runoff from the site, particularly from nearby paved parking areas. If unmitigated, increased runoff could increase sedimentation and degrade water quality in wetlands, and it could further alter wetland hydrology. However, as previously discussed, existing wetland functions are low, and while impervious portions of the site would continue to drain to the wetlands, stormwater from paved surfaces would be directed away from wetlands and routed to storm drains crossing the site, discharging to Union Bay.

Potential increases in the volume and rate of stormwater discharge through the 72-inch pipe into Union Bay could occur as the result of the creation of approximately 6.2 acres of new impervious surfaces under this alternative. If unmitigated, increased volume of stormwater runoff from new impervious surfaces could amplify the discharge of non-point pollutants, such as oils and metal residues produced by cars, into Union Bay. Increased non-point pollution potentially could impact juvenile salmonid through incremental increases in turbidity or concentrations of metals in nearshore areas of Lake Washington. Increased rate of discharge from the 72-inch pipe could also scour the Lake bottom near the discharge point of release and cause sedimentation in other areas of the nearshore lake environment.

Following construction, reduced open space and increased areas of buildings and pavement on the site would reduce habitat for some songbird and small mammal species. The loss of large cottonwood trees on the site would reduce potential perching habitat for great blue heron, bald eagle, and songbirds. The loss of lawn may reduce foraging habitat used by the American and northwest crow, European starling, Canada goose, American robin, killdeer and other urban-adapted wildlife. Songbird habitat may be lost with the removal of landscaped trees and shrubs. Increased human activity on the site potentially could disturb some wildlife species; however, this disturbance would be minimal because these urban-adapted species are accustomed to human activity.

Alternative 1B: Institute for Advanced Study with Reduced Parking and Design Alternatives to Reduce Bulk and Scale Impacts

Construction

Under Alternative 1B, reduced building footprint (10,000 sf) and surface parking (178,530 sf) would be provided compared to Alternative 1A, saving 188,530 sf (4.1 acres) of wildlife habitat that would be cleared and graded under Alternative 1A. Construction timing under Alternative 1B would be the same as for Alternative 1A.

No direct wetland or buffer alteration would occur under Alternative 1B. All on-site wetlands and their buffers would be preserved.

Stormwater impacts under Alternative 1B, would be similar in nature yet reduced in magnitude compared to Alternative 1A. Under this alternative, a reduction in new impervious surfaces compared to Alternative 1A would substantially reduce the risk of non-point pollution in Union Bay. With 676 fewer surface parking spaces under this alternative, grading and clearing limits would be reduced by 165,784 sf compared to Alternative 1A. A smaller development footprint under Alternative 1B would substantially reduce the risk of stormwater impacts to Union Bay from erosion and sedimentation. The potential risk to juvenile salmonids rearing, resting, or feeding in Union Bay would also be substantially reduced under this alternative.

Impacts to wildlife habitat would be similar to, yet reduced compared to Alternative 1A. With the reduced number of parking spaces under this alternative, 188,530 sf (4.3 acres) of habitat would be retained compared to Alternative 1A. Under Alternative 1B approximately 12,746 sf (0.29 acres) of non-landscaped habitat (Area 2) and approximately 290,000 sf (6.7 acres) of landscaped habitat would be lost through building construction, totaling approximately 7 acres of wildlife habitat lost. The smaller construction footprint would also reduce the risk of temporary noise impacts to wildlife from the development.

Trees

Alternative 1B would result in the removal of fewer trees than the other three “action” alternatives (1A, 2A, and 2B). This alternative would result in the loss of approximately 176 trees. None of these trees qualify as “exceptional.” No trees within Environmentally Critical Areas would be removed. Most of the trees lost would be non-native trees in the vicinity of current buildings and parking lots. This alternative will require the removal of 11 trees that are greater than 24 inches in diameter (8 for Phase 1 and 3 for Phase 2). Ten of these trees are Red Oak and one is a Western Red Cedar.

Operation

Because Alternative 1B would have less impervious surface area than Alternative 1A, stormwater capacity would be reduced and the risk of associated non-point pollutants entering onsite wetlands would be moderated.

Under this alternative, potential runoff impacts to Lake Washington would be similar in nature but reduced in magnitude compared to Alternative 1A. Alternative 1B would result in the

creation of 1.4 acres of new impervious surfaces. Because, under this alternative, total new impervious surfaces would be reduced by approximately 4 acres compared Alternative 1A, the risk of non-point pollution associated with the volume and rate of stormwater runoff from impervious surfaces would be proportionately diminished.

Alternative 1B would produce a substantially less change in open space on the site used as habitat by songbird and small mammal species compared to Alternative 1A. Several large cottonwood trees would be retained on the site, retaining potential perching habitat for great blue heron, bald eagle, and songbirds. The majority of landscaped and non-landscaped wildlife habitat would remain intact under Alternative 1B.

Alternative 2A: Single Family Development with 38th Avenue NE Improvements

Construction

Two wetlands (Wetlands C and D) and associated buffers remaining would be filled under Alternative 2A. Because functions of onsite wetlands are low, negligible loss of stormwater and biological functions would occur. The area of buffer loss is dominated by invasive weeds and is of low value to wildlife. Himalayan blackberry lost through buffer encroachment may provide some foraging habitat for songbirds and rodents. Conversely, foragers of Himalayan blackberry readily spread this invasive weed, and the reduction of Himalayan blackberry would help control the local spread of the invasive weed.

In early 2004, Talasaea Consultants, Inc. evaluated the potential impacts and mitigation requirements associated with the filling of Wetlands C and D (Appendix B). These two wetlands are subject to ECA compliance and an ECA exception would be required. SMC 25.09.160(A)(2)(c)(iv) would require wetland restoration or creation at a 2:1 (mitigation-to-fill) ratio. The areas proposed for wetland fill total 1,107 sf. This includes 731 sf for Wetland C and 376 sf for Wetland D. Adequate mitigation and enhancement opportunities may exist within, and adjacent to, Wetlands A and B to sufficiently replace the area, habitat value and hydrological value of Wetlands C and D. The area available for restoration within Wetlands A and B would encompass the entire area of both wetlands totaling 2,685 sf (972 for Wetland A and 1,713 sf for Wetland B). Buffers would need to be maintained at a minimum of 50 feet in width (Talasaea, 2004).

Similar to Alternative 1A, turbid construction runoff may enter the on-site stormwater pond, reducing water quality in the pond. Impacts would likely be similar in nature but less than Alternative 1A due to the smaller overall area that would require clearing. Potentially, some turbid waters could reach Lake Washington through the 60-inch storm outlet pipe leading to Union Bay. Turbid runoff could deteriorate aquatic habitat for waterfowl, fish, and semi-aquatic mammals. BMPs would be required during construction and would minimize potential impacts.

Similar to Alternative 1A, temporary noise pollution from development could disturb migrating waterfowl or birds perching in nearby trees. Grading activities would also result in the temporary loss of foraging habitat for songbird and small mammal species. The loss of large cottonwood trees and periphery vegetation as the result of road construction and grading would reduce potential perching habitat for great blue heron, bald eagle, and other perching birds.

Trees

This alternative would result in the removal of approximately 583 trees on the site of which approximately 21 are greater than 24 inches in diameter; nine of these trees fall within the category of "common, short-lived 'weedy' species" as defined in Seattle Director's Rule 6-2001 (8 Black Cottonwood and 1 Red Alder). The other species include 7 Lombardi Poplar, 2 Red Oak, 1 Western Red Cedar, 1 Green Ash and 1 Pacific Willow. None of these trees qualify as "exceptional." Eleven trees located within Environmentally Critical Areas would be removed. This loss would include both primary non-native species in the vicinity of existing buildings, and native species primarily located around the periphery of the site. Trees that would remain include a grove of cottonwoods and red alder in the southwest corner of the property, as well as 8 trees around the onsite pond.

Operation

Following construction, negligible loss of stormwater and biological functions would occur with the loss of 1,107 sf of low value wetlands and associated buffers. Because buffer vegetation consists of the invasive weed Himalayan blackberry, the loss of buffer vegetation would help control the local spread of this invasive weed. However, the lost Himalayan blackberry would also reduce foraging habitat for some songbirds and small mammals.

If unmitigated, increased impervious surfaces on the site could intensify the volume of storm runoff to the on-site pond. Increased stormwater runoff from impervious surfaces could amplify non-point pollutants, such as oils and metal residue produced by cars, into Union Bay. If unmitigated, increased non-point pollution potentially could impact juvenile salmonid through incremental increases in turbidity or concentrations of metals in nearshore areas of Lake Washington. While the increased rate of discharge from the 72-inch pipe at the outfall to the Lake could scour the Lake bottom near the discharge point and cause sedimentation in adjacent areas of the nearshore lake environment, such impacts are unlikely due to the probable small contribution of total discharge volumes and rates resulting from redevelopment of the site.

The loss of large cottonwood trees and vegetation on the periphery of the site as the result of road construction and grading would reduce potential perching habitat for great blue heron, bald eagle, and other perching birds. Foraging habitat for some songbirds and mammals would also be reduced with the loss of this vegetation, and vegetation throughout the site.

Alternative 2B: Single Family Development Without 38th Avenue NE Improvements

Construction

Under Alternative 2B, wetland fill would occur resulting in the same impacts as described for Alternative 2A. Filling of wetlands would be subject to ECA review and granting of an exception by DPD. In the event DPD denies the exception, approximately 6 fewer lots could be developed on the site.

Similar to Alternative 2A, turbid construction runoff could potentially enter the on-site stormwater pond, reducing water quality in the pond. Potentially, some turbid waters could

reach Lake Washington through the 60-inch storm outlet pipe leading to Union Bay. Turbid runoff could deteriorate aquatic habitat for waterfowl, fish, and semi-aquatic mammals. Impacts would be similar in nature to Alternative 1A, but reduced in magnitude because fewer lots would be developed.

Temporary noise impacts from the development could disturb migrating waterfowl or birds perching in nearby trees, similar to other alternatives. Impacts would be slightly less compared to Alternative 2A because 2 fewer lots would be developed and 38th Avenue NE would not be developed.

Grading activities would result in the temporary loss of foraging habitat for songbird and small mammal species. Landscaped wildlife habitat would be temporarily lost as the result of road construction and grading, but would be re-established on a lot-by-lot basis following construction.

The number of trees to be removed under Alternative 2B would be similar to that under Alternative 2A (approximately 583 trees). This loss would include both primary non-native species in the vicinity of existing buildings, and native species primarily located around the periphery of the site. Approximately 19 of these trees are greater than 24 inches in diameter; this is slightly less than Alternative 2A due to the difference in the street grid. Of this total, 9 trees are Black Cottonwood, which fall within the category of "common, short-lived 'weedy' species" as defined in Seattle Director's Rule 6-2001. The other species include Lombardi Poplar (5), Red Oak (2), Western Red Cedar (1), Green Ash (1) and Pacific Willow (1).

This Alternative 2B would result in the loss of more trees compared to Alternatives 1A or 1B.

Operation

Under Alternative 2B, no direct loss of stormwater or biological functions would occur in the wetlands or their buffers. Because Alternative 2B would have 0.5 acre less impervious surface area than Alternative 2A, stormwater capacity would be slightly reduced and the risk of associated non-point pollutants would be moderated.

No Action

Under the No Action Alternative, it is assumed that no redevelopment would occur on the project site in the near-term. The project site would likely continue to operate as a conference center in the near future. Other potential reasonably foreseeable uses of the site over the long term may include public schools, public playgrounds, or private parks consistent with City of Seattle Zoning and Comprehensive Plan designations, and with permitted uses in single-family zones. Depending on the type and intensity of development any of these alternatives could result in impacts to wetlands, vegetation, or wildlife habitat.

3.3.3 Cumulative Impacts

While the project would incrementally contribute to the shift to more developed habitats in the Laurelhurst region, the project is proposed to occur in an area almost entirely built out. Much of the land around the project area has been developed since the 1920s. Less stringent land-use

regulations were required for much of the surrounding development than are being applied to the proposed project. A long history of previous land uses, logging, draining, and housing, historically altered the site from its original condition. Future land use, if done responsibly, may continue to provide habitat for urban-adapted wildlife, conserve wetland functions, and continue to protect and improve water quality and habitat in Lake Washington. The proposed project would also not inhibit future efforts to enhance aquatic habitat and restore fish populations in the region.

3.3.4 Mitigation Measures

Alternative 1A

Wetland and buffer functions lost due to filling 376 sf of small, isolated wetland and to altering 11,309 sf of wetland buffer might be replaced and improved through wetland replacement and buffer enhancement.

Alternatives 1A and 1B

A tree preservation plan could be developed to identify trees for preservation and the planting of additional trees to offset tree loss during construction. Periphery trees and large cottonwood trees on the southern portion of the site could be preserved for their habitat value to the extent feasible and consistent with the site plan. Trees in other areas of the site lost through clearing could be replaced through additional plantings around parking areas and buildings, and along the site perimeter to enhance visual screening from adjacent landowners.

Erosion control and water quality BMPs could be implemented to reduce non-point pollution to Union Bay. Flow rates and flow capacity should be minimized by utilizing existing on-site stormwater treatment facilities.

Invasive/exotic plant species in preserved wetlands and buffers could be removed and controlled to enhance wetland functions. Logs, stumps, brush piles, and boulders (if found during site excavation) for wildlife habitat could be incorporated to increase habitat structural diversity.

A variety of sizes of evergreen and deciduous trees and shrubs could be planted to transition a degraded scrub-shrub wetland into a higher quality forested wetland and to improve biological support functions and promote the natural rate of forest succession.

Information signage could be installed along a boardwalk through the created wetland system and along the buffer areas adjacent to development to increase public awareness of adjacent wetland and buffer ecosystems.

Alternatives 2A and 2B

Wetland functions and values lost due to the filling of wetlands might be replaced and improved through wetland creation and buffer enhancement, consistent with applicable City of Seattle regulations.

A tree preservation plan could be developed to identify trees for preservation and the planting of additional trees to offset tree loss during construction. Periphery trees and large cottonwood trees on the southern portion of the site could be preserved for their habitat value to the extent feasible.

Trees in other areas of the site lost through clearing could be replaced through additional plantings around parking areas and buildings, and along the site perimeter to enhance visual screening from adjacent landowners. If development occurs all at once, construction plans could include lot configurations that preserve trees to the extent feasible.

Landowners could be encouraged to retain trees during lot-by-lot design and to use native vegetation in landscaping.

Erosion control and water quality BMPs would be implemented to reduce non-point pollution to Union Bay. Flow rates and flow capacity could be minimized by utilizing existing on-site stormwater treatment facilities.

Invasive/exotic plant species in wetlands could be removed and controlled to further enhance wetland functions. Down logs, stumps, brush piles, and boulders (if found during site excavation) could be incorporated in wetlands and remaining buffers for wildlife habitat.

A variety of sizes of evergreen and deciduous trees and shrubs could be planted in and around wetlands to promote the natural rate of forest succession.

Information signage could be installed along a boardwalk through the created wetland system and along the buffer areas adjacent to development to increase public awareness of the adjacent wetland and buffer ecosystems.

Wetland hydrology could be augmented with clean rooftop runoff slowly released to the wetlands through infiltration trenches placed at the buffer's edge.

3.3.5 Significant Unavoidable Adverse Impacts

Construction on the site would result in the unavoidable loss of wildlife habitat to more developed uses. None of these losses would include threatened, endangered, or sensitive species or identified priority wildlife habitat. Impacts to wetlands and buffers might be offset by mitigation as required by the City, provided the proposals meet ECA exception criteria.

3.4 Transportation

This chapter of the EIS evaluates transportation impacts associated with the project alternatives and the No Action alternative. The analysis of traffic and parking impacts associated with the redevelopment alternatives has been conducted according to City of Seattle procedures for impact review under SEPA. Impacts are defined as the conditions that would occur under the proposed development (Alternatives 1A, 1B, 2A, or 2B) as compared to the conditions without the proposed project (No Action alternative).

Summary Matrix of Impacts By Alternative

Alternative	Summary of Construction Impacts	Summary of Long-Term Impacts
No Action	• None identified	• The intersections of Northeast 45th St/Northeast 45th Pl/Union Bay Pl and SR-520 eastbound ramps/Montlake Blvd would operate at LOS F during the PM peak hour.
Alternative 1A	• Excavation would generate 7,700 truck trips during construction of Phase 1 and another 7,700 truck trips during Phase 2 construction.	• Phase 1 of Alternative 1A would generate a net increase of 1,250 trips per day including 163 in the AM peak hour and 157 in the PM peak hour. • Buildout of Phases 1 and 2 of Alternative 1A would generate a net increase of 1,960 trips per day including 279 in the AM peak hour and 257 in the PM peak hour. • Alternative 1A would increase average delays at the intersection of Northeast 45th St/Northeast 45th Pl/Union Bay Pl, which would operate at LOS F under both the No Action alternative and Alternative 1A. Delays would increase 4 seconds with Phase 1 and 9.9 seconds with Phase 2 during the PM peak hour.
Alternative 1B	• Similar to Alternative 1A	• Similar to Alternative 1A.
Alternative 2A	• Excavation would generate 1,100 truck trips during construction.	• Alternative 2A would generate 350 net new trips per day. Due to changes in travel patterns, AM peak hour trips would be reduced, while PM peak hour trips would slightly increase. • Alternative 2A would decrease PM peak hour average delays by 0.9 seconds at the intersection of Northeast 45th St/Northeast 45th Pl/Union Bay Pl, which would operate at LOS F under both the No Action alternative and Alternative 2A.
Alternative 2B	• Similar to Alternative 2A	• Similar to Alternative 2A except that potential use of 37th and 36th Avenues NE by project traffic would be reduced as a result of not improving the 38th Avenue right-of-way..

3.4.1 Affected Environment

This section documents the existing transportation network and conditions in the vicinity of the project site. The extent of the transportation analysis was coordinated with DCLU staff and includes the following study intersections (Figure 3-12):

1. Northeast 45th Street / 15th Avenue Northeast
2. Northeast 45th Street / 17th Avenue Northeast
3. Northeast 45th Street / Montlake Boulevard Northeast
4. Northeast 45th Street / Northeast 45th Place / Union Bay Pl (Five Corners intersection)
5. Northeast Pacific Place / Montlake Boulevard

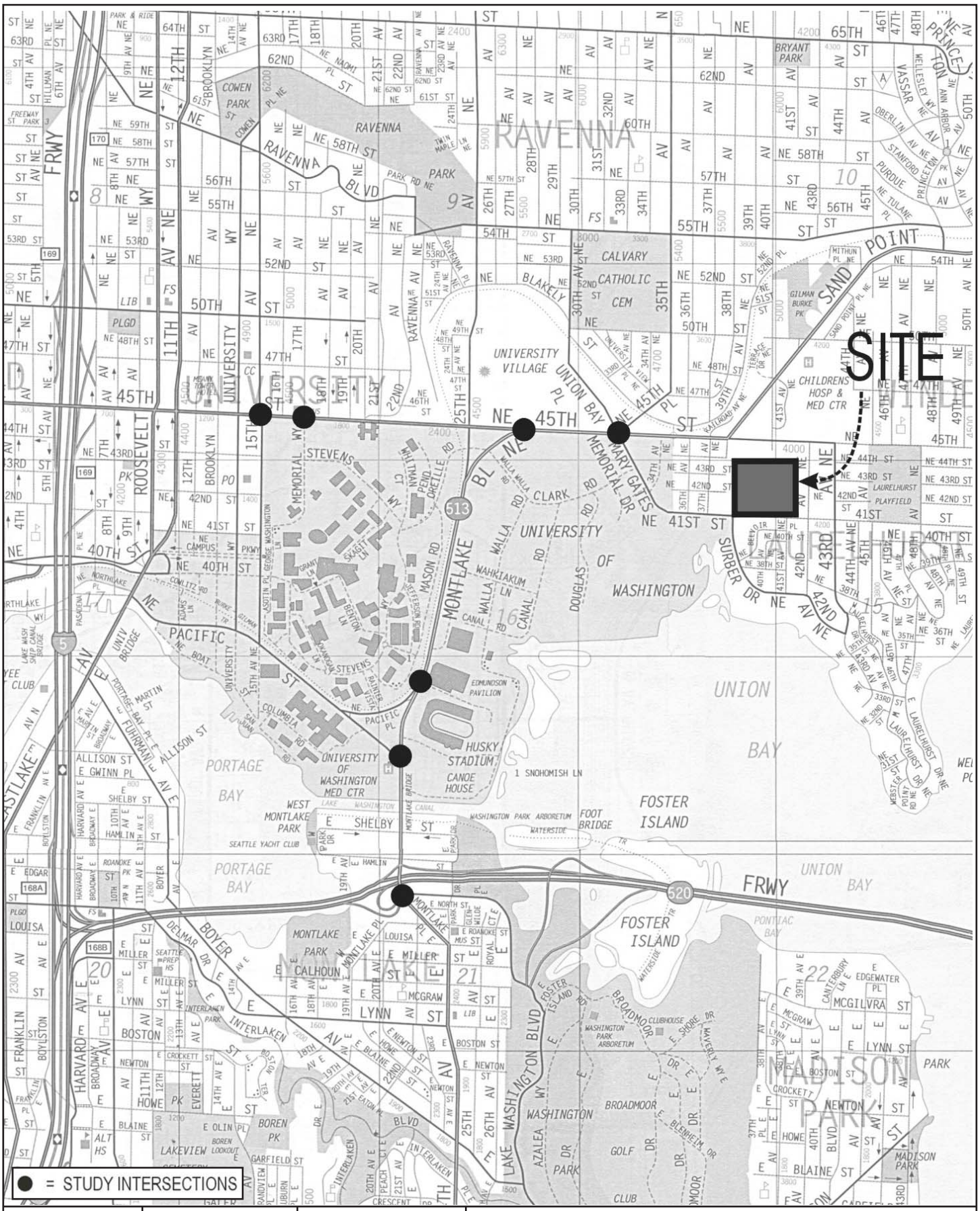


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FIGURE 3-12.
STUDY AREA INTERSECTIONS
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

6. Northeast Pacific Street / Montlake Boulevard
7. SR-520 Eastbound Ramps / Montlake Boulevard

The traffic analysis focuses on the traffic impacts occurring during the peak morning and/or afternoon commute periods, also known as the AM and PM peak hours. These commute period peak hour conditions were selected since they reflect time periods when the combined effect of project and background traffic volumes is highest and thus the impacts are the greatest. Analyses of both the AM and PM peak hours were conducted for the first four intersections listed above. Analysis for the remaining three intersections was conducted for only the PM peak hour as traffic volumes at these locations are lower in AM peak hour. Other area intersections are not included in this analysis because operation of these intersections would be minimally affected due to traffic patterns and intersection geometry.

The following sections describe the existing street system, traffic volumes, traffic operations, transit service and facilities, non-motorized facilities, current safety conditions, and parking conditions in the project site vicinity.

Street System

Arterial streets in the City of Seattle have speed limits of 30 miles per hour (mph) unless posted otherwise. Commercial and residential streets generally are posted at 25 mph. The principal arterials in the site vicinity include Northeast 45th Street, Sandpoint Way Northeast, Montlake Boulevard Northeast, Northeast Pacific Street, and 35th Avenue Northeast. The streets directly adjacent to the site include Northeast 41st Street, Northeast 44th Street, 38th Avenue Northeast, and 42nd Avenue Northeast. Characteristics of the project area roadways, including but not limited to these roadways, are described in detail on the following pages.

15th Avenue Northeast is classified as a north-south minor arterial within the project area. Sidewalks exist on both sides of the street. There are four travel lanes, though just north of Northeast 45th Street, the outer lanes in each direction serve as restricted on-street parking lanes during the peak hours, opposite the direction of peak traffic flow. South of Northeast 45th Street, varying on-street parking restrictions are in effect. Major intersections on 15th Avenue Northeast are signalized.

17th Avenue Northeast is a north-south roadway. The street has two travel lanes north of Northeast 45th Street with a center grass median and parallel on-street parking on both sides of the street. North of Northeast 45th Street, 17th Avenue Northeast is classified as a collector arterial and intersections are mostly stop-controlled. To the south of Northeast 45th Street, 17th Avenue Northeast has four lanes and serves as a major entrance to the University of Washington campus.

Montlake Boulevard Northeast is a four-to-five lane principal arterial in the north-south direction, with a posted speed varying from 30-35 mph. The roadway has sidewalks on both sides of the street, as well as grade-separated pedestrian bridges near the University of Washington athletic facilities. Major intersections are signalized on Montlake Boulevard Northeast, with turn lanes and some channelized turn bays.

Union Bay Place/Mary Gates Memorial Drive is a two lane collector arterial that is oriented in a primarily north-south direction with two travel lanes to the north of Northeast 45th Street, and an east-west orientation with two travel lanes and a center left turn lane to the south of Northeast 45th Street. The road has limited and sporadic sidewalks north of Northeast 45th Street, while they are consistent to the south. North of Northeast 45th Street, a small roadway shoulder exists, which is occupied by a variety of both on-street and private parking. Parallel on-street parking exists on-street to the south of Northeast 45th Street in the project vicinity.

Northeast 45th Place/35th Avenue Northeast is classified as a minor arterial, with two to four travel lanes. On-street parking exists during the non-peak hours in the non-peak flow direction. Sidewalks exist on both sides of the street. Major intersections on 35th Avenue Northeast are signalized and have turn bays, while minor intersections are stop controlled.

Northeast 45th Street is a four to six lane east-west roadway classified as a principal arterial between Interstate 5 to the west and Montlake Boulevard to the east. To the east of Montlake Boulevard the roadway is a state facility (SR-513), which becomes Sand Point Way Northeast. To the east of the intersection with Sand Point Way Northeast, Northeast 45th Street continues as a collector arterial. The posted speed limit in the vicinity of the project site is 35 mph. Limited on-street parallel parking is available along this road east of Union Bay Place. Sidewalks exist on both sides of the street.

Pacific Street/Pacific Place is classified as a principal arterial in the project vicinity and is oriented in a northwest-southeast direction. With four to five travel lanes, Northeast Pacific Street has no on-street parking. Major intersections are signalized with turn storage bays. Sidewalks exist on both sides of the street. An eastbound bus/carpool lane exists east of the University of Washington Hospital main entrance and continues east until Mountlake Boulevard.

SR-520 is a highway of regional significance, operating in an east-west direction from Interstate 5 east to the City of Redmond. There are two travel lanes in each direction between Interstate 5 and the east shore of Lake Washington. Serving as a major route across Lake Washington, SR 520 also serves as a major route for traffic from the University of Washington area to Interstate 5 and downtown Seattle.

Northeast 41st Street runs along the south side of the project site. It is a collector arterial with one travel lane in each direction adjacent to the project site. West of the project site, the two lanes are separated by a landscaped median. There are breaks in the median to allow for left turns to and from cross streets.

Northeast 42nd, 43rd, 44th Streets and 37th and 36th Avenues Northeast are local access streets serving the residential neighborhood to the west of the project site. East of the project site, 42nd and 43rd Avenues Northeast are local access streets serving the residential neighborhood.

Site Access for the existing project site is provided by two driveways on Northeast 41st Street. Additional access is available from the northwest corner of the site to the intersection of Northeast 44th Street and 38th Avenue Northeast. The one-block section of 38th Avenue Northeast is one-way southbound, so site traffic on 38th Avenue Northeast is limited to inbound traffic only. Both inbound and outbound site traffic can use Northeast 44th Street.

Traffic Volumes

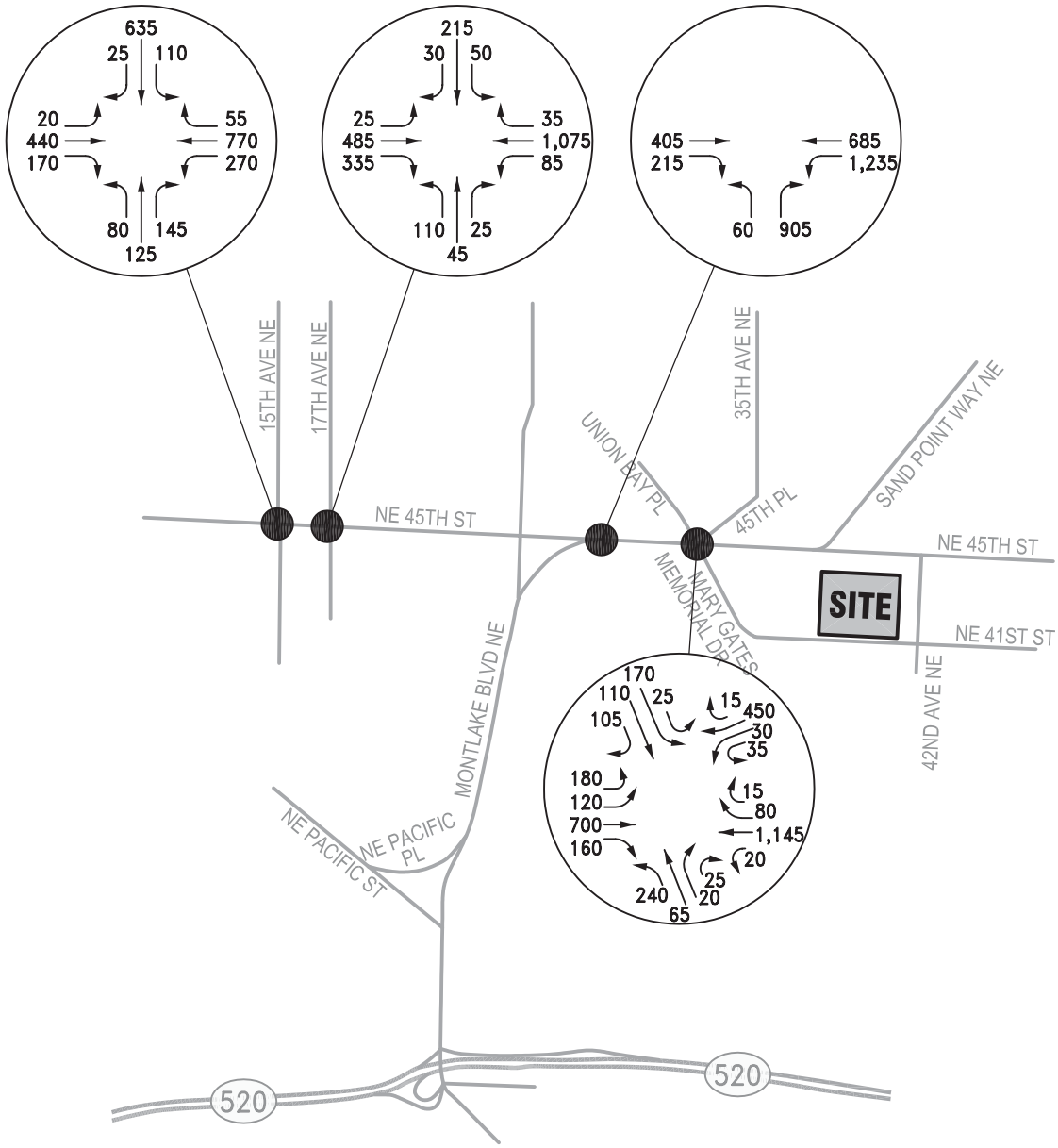
Traffic volume data were compiled for the project area to characterize weekday traffic conditions during the AM and PM peak hours. The peak hours were chosen for review and analysis to document traffic conditions during the hours of highest traffic volume and congestion in the vicinity of the project site. Due to the proximity of the site to SR-520 and University Village, travel patterns vary between the AM and PM peak hours. Thus, the evaluation of both of these time periods provides a complete perspective of peak hour operations within the study area.

Where available, data were obtained from the Seattle Department of Transportation (SDOT) to characterize the affected environment under existing conditions. For those locations where a recent count was not available from the City, new traffic counts were conducted during early December 2001. Those counts that were conducted prior to January 2002 were grown at an annual growth rate of 0.5 percent per year to estimate existing current peak hour volumes. This growth rate is consistent with the historical growth that has occurred on the major roadways in the study area. Figure 3-13 and Figure 3-14 summarize existing weekday AM and PM peak hour traffic volumes within the study area, respectively.

Traffic Operations

The operational characteristics of an intersection are determined by calculating the intersection's level of service (LOS). The intersection as a whole and its individual turning movements can be described with a range of levels of service (LOS A-F), with LOS A indicating free-flowing traffic and LOS F indicating extreme congestion and long vehicle delays. At signalized intersections, level of service is measured in average total delay per vehicle and is typically reported for the intersection as a whole.

Level of service methodology contained in the Highway Capacity Manual (HCM), 2000 Edition, was applied to the study intersections to estimate existing peak hour levels of service. The 2000 HCM represents the most current methodology published and also represents an update of the previous 1997 methodology. Changes were made to account for total vehicle delay, a measure that quantifies several intangible factors, including driver discomfort, frustration, and lost travel time. DCLU transportation review staff recommended the 2000 methodology for use in this EIS



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Original graphic by: JAB
Edits by:
Date: 10/28/04

Source:
The Transpo Group, 2004.

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FIGURE 3-13.
EXISTING AM PEAK HOUR TRAFFIC VOLUMES
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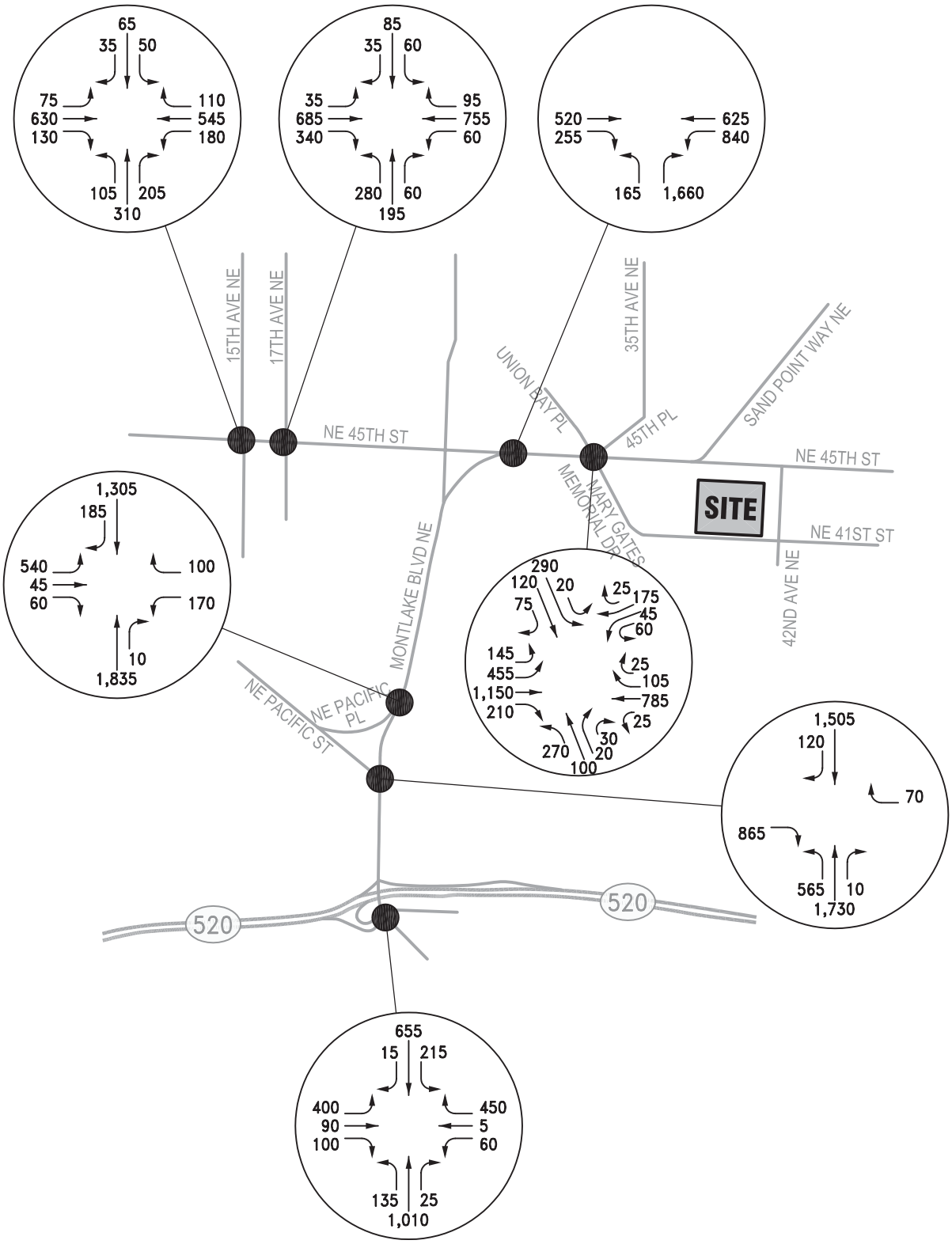
SEATTLE, WASHINGTON



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Date: 10/28/04

Source:
The Transpo Group, 2004.

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FIGURE 3-14.
EXISTING PM PEAK HOUR TRAFFIC VOLUMES
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SEATTLE, WASHINGTON

as the most current methodology available for calculating intersection level of service. Table 3-13 illustrates existing levels of service, average vehicle delays (in seconds) and each intersection's volume-to-capacity (v/c) ratio for the AM and PM peak hours.

The overall LOS results shown in Table 3-13 reinforce the generally recognized character of traffic operations in the University District. Only a few of the study intersections are shown to experience long delays and peak hour traffic congestion; all but three of the study intersections are calculated to operate at LOS D or better during either the AM or PM peak hours. Those limited number of intersections accommodating the majority of regional traffic entering

Table 3-13. Existing Peak-Hour Levels of Service

Study Intersection	Existing		
	LOS	Delay	Volume/Capacity
AM Peak Hour:			
1. Northeast 45th St/15th Ave Northeast	E	73.9	0.81
2. Northeast 45th St/17th Ave Northeast	C	30.0	0.72
3. Northeast 45th St/Montlake Blvd Northeast	B	16.9	0.60
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl	E	71.0	1.17
PM Peak Hour:			
1. Northeast 45th St/15th Ave Northeast	C	30.6	0.65
2. Northeast 45th St/17th Ave Northeast	D	47.3	0.88
3. Northeast 45th St/Montlake Blvd Northeast	B	17.7	0.79
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl1	F	88.3	1.06
5. Northeast Pacific Pl/Montlake Blvd	C	23.7	0.84
6. Northeast Pacific St/Montlake Blvd	C	22.0	0.79
7. SR-520 EB Ramps/Montlake Blvd	F	216.8	1.07

(AM peak hour) or leaving (PM peak hour) the area experience substantially higher congestion and delay levels, which often affect operations at adjacent intersections. The following provides a more descriptive evaluation of these three intersections:

Northeast 45th Street / 15th Avenue Northeast. During the AM peak hour, the delay experienced at this intersection is primarily due to the high traffic volume traveling to the University of Washington Campus and to I-5 and SR-520. This intersection's location and geometry constrain significant widening, re-channelization, or signal improvements necessary to improve its operation.

Northeast 45th Street / Union Bay Place. This intersection operates at LOS E during the AM peak hour and LOS F during the PM peak hour. These conditions are partly due to delay incurred by vehicles traveling eastbound on Northeast 45th Street, and partly due to intersection operations at this location. Due to the orientation of the intersection, which has a total of five approaches, the majority of signal phases operate individually instead of concurrently, as at the other study intersections, which contributes to the poor operations. This intersection's location and geometry constrain significant widening or signal improvements necessary to improve its operation; however a minor rechannelization is planned for this intersection, which will marginally improve operations.

SR-520 EB Ramps/Montlake Blvd. During the PM peak hour, this intersection is of major importance, serving traffic to and from SR-520. This intersection operates LOS F during the PM peak hour. The high delay experienced at this intersection is largely due to capacity restraints for the west to northbound right-turn movement from Lake Washington Boulevard, which experiences high traffic volumes during the PM peak hour.

The City's *Comprehensive Plan* does not define a LOS standard for individual ***intersections***. Instead, operational standards focus on characteristics of the overall transportation system over which the City has some influence and control. Specifically, the City defines ***arterial*** levels of service to be the ratio of traffic volumes to capacity (v/c ratio) at designated screenlines, each of which includes two or more parallel arterial routes (a screenline is an imaginary line drawn across several arterials at a particular place). The operational standard measures the PM peak hour directional traffic volumes on the arterials crossing each screenline to calculate an overall screenline level of service. To evaluate the performance of the arterial system, the calculated level of service for each screenline is compared with the level of service standard for a particular screenline, as defined by the City. The level of service standard is typically a v/c ratio of 1.0 to 1.2 for each screenline. Thus, the intersection LOS reported in Table 3-13 provides an observable frame of reference for reviewing and understanding forecast conditions and potential transportation impacts can then be disclosed. The performance of the transportation system based on the above-noted screenline standards is analyzed in the *Transportation Concurrency* section for the redevelopment alternatives.

Transit

Transit service in the project area is provided by King County Metro however, these routes connect to Sound Transit, Community Transit and Pierce Transit at locations away from the project site.

Currently, King County Metro Route 25 operates within a block of the project site on Northeast 45th Street and on 42nd Avenue Northeast. Two additional routes, 65 and 75, operate within a quarter mile. One-quarter mile, or a five-minute duration assuming average walking time, is generally considered by transit planners to be a maximum threshold for the distance between a destination and a bus stop. Locations beyond this threshold is not expected to attract transit riders. These routes also provide transfer opportunities with many King County Metro and regional routes including, but not limited to, service to the following areas:

- Bellevue
- Redmond
- Woodinville
- Kenmore
- Seattle Center
- Jackson Park
- Magnolia
- Rainier
- Greenlake
- Fremont

Table 3-14 summarizes the existing transit service in the project vicinity. As indicated in Table 3-14, Route 25 only operates during weekdays, while Routes 65 and 75 operates on both weekdays and weekends. During morning and afternoon peak periods, service is provided with between 15 and 30 minute headways. During the weekday off-peak periods and on weekends, service headways are between 30 and 60 minutes.

Table 3-14. Existing Transit Service

Route	Service Times and Frequencies				Major Areas Served
	Peak Hour	Midday/Early Evening	Evening	Weekend	
25	30 mins	60 mins	-	-	Downtown Seattle/Laurelhurst/Montlake
65	15 mins	30 mins	30-60 mins	30-60 mins	U District//Ravenna/Wedgewood/Lake City
75	30 mins	30-60 mins	60 mins	30-60 mins	U District/Sand Point/Northgate/Ballard

Currently, sidewalks are located along Northeast 45th Street, Mary Gates Drive, and Northeast 41st Street. These sidewalks provide an important link between the project site and predominant east-west transit service along Northeast 45th Street.

Regional transit service is provided at the Montlake Freeway Station, from the UW Campus, and from the Northeast 45th Street/University Way intersection. The transit routes operating adjacent to the project site provide direct access to each of these three regional service locations.

Non-Motorized Facilities

Walking and biking are important elements of the City's transportation system, especially as they relate to mode choice and the effort to reduce vehicular travel. The following describes the existing pedestrian and bicycle facilities in the immediate project vicinity.

Pedestrian Facilities

Most of the streets in the immediate vicinity of the project site are lined with sidewalks, most of which are in adequate condition. However, adjacent to the site, there currently are no sidewalks along the project site frontage on the north side of Northeast 41st Street. Sidewalks exist on both sides of the street on Mary Gates Memorial Drive. In the residential neighborhood near the site, there are narrow sidewalks on most of the streets.

Further away from the site, sidewalks do not exist on Union Bay Place north of Northeast 45th Street, where only a small shoulder exists with parking. All major signalized intersections in the project vicinity have pedestrian push buttons, crosswalks, and signal protected crossings. Most of the unsignalized intersections do not have crosswalks. Additional pedestrian facilities exist on Montlake Boulevard in the form of grade-separated crossings near the University of Washington athletic facilities.

Bicycle Facilities

Designated bicycle facilities are limited within the project area. The Burke Gilman Trail runs north of Northeast 45th Street and Sandpoint Way in the vicinity of the project site. The trail extends from Fremont to Kenmore. Near the site, Mary Gates Place, Northeast 41st Street, Sandpoint Way, 40th Avenue Northeast, and 35th Avenue Northeast are identified as arterial streets commonly used by bicyclists; however, these roadways do not currently provide exclusive bike lanes. Typically bicyclists use the vehicle travel lanes for travel in this area.

Safety

A review of current safety conditions near the project site was conducted to document existing known safety issues in the project area. The most recent summary of accident data from SDOT is for the three-year period January 1, 1999 through December 31, 2001. A historical review of the frequency of accidents was conducted at all study intersections. A summary of the total number and average annual accidents at each study intersection is provided in Table 3-15.

The City of Seattle has identified criteria for classifying intersections as High Accident Locations (HAL) where intersections experience above average accident rates. Intersections with this designation would be targeted for future safety improvements in an effort to reduce the accident occurrence at this location. SDOT criteria for identifying an intersection as a HAL are unsignalized intersections with an average of five or more accidents per year, and signalized intersections with 10 or more accidents per year. According to the three-year historic accident data compiled by SDOT, none of the study intersections are classified as HALs (Table 3-15).

Northeast 45th Street/Union Bay Place experienced the highest number of collisions, with approximately five accidents per year, with over 75 percent of the accidents characterized as right-angle type collisions. Right-angle accidents typically consist of two vehicles colliding at a right-angle, either as a result of running a red light or entering the intersection before the green phase. Given the high amount of through traffic on Northeast 45th Street, and the number of movements possible at the intersection, this type of accident occurrence can be expected. The remaining study intersections all experienced an average of three or fewer accidents per year.

Table 3-15. Study Area Accident Summary (1999 – 2001)

Study Intersection #	North/South Street	East/West Street	Total Accidents	
			3-Year Total	Annual Average
1	15th Avenue	Northeast 45th St	9	3
2	17th Avenue	Northeast 45th St	9	3
3	Montlake Blvd	Northeast 45th St	2	0.7
4	Union Bay Place	Northeast 45th St	16	5.3
5	Montlake Blvd	Pacific Place	6	2
6	Montlake Blvd	Pacific Street	5	1.7
7	Montlake Blvd	SR-520 EB Ramps	0	0

Parking

On-Site

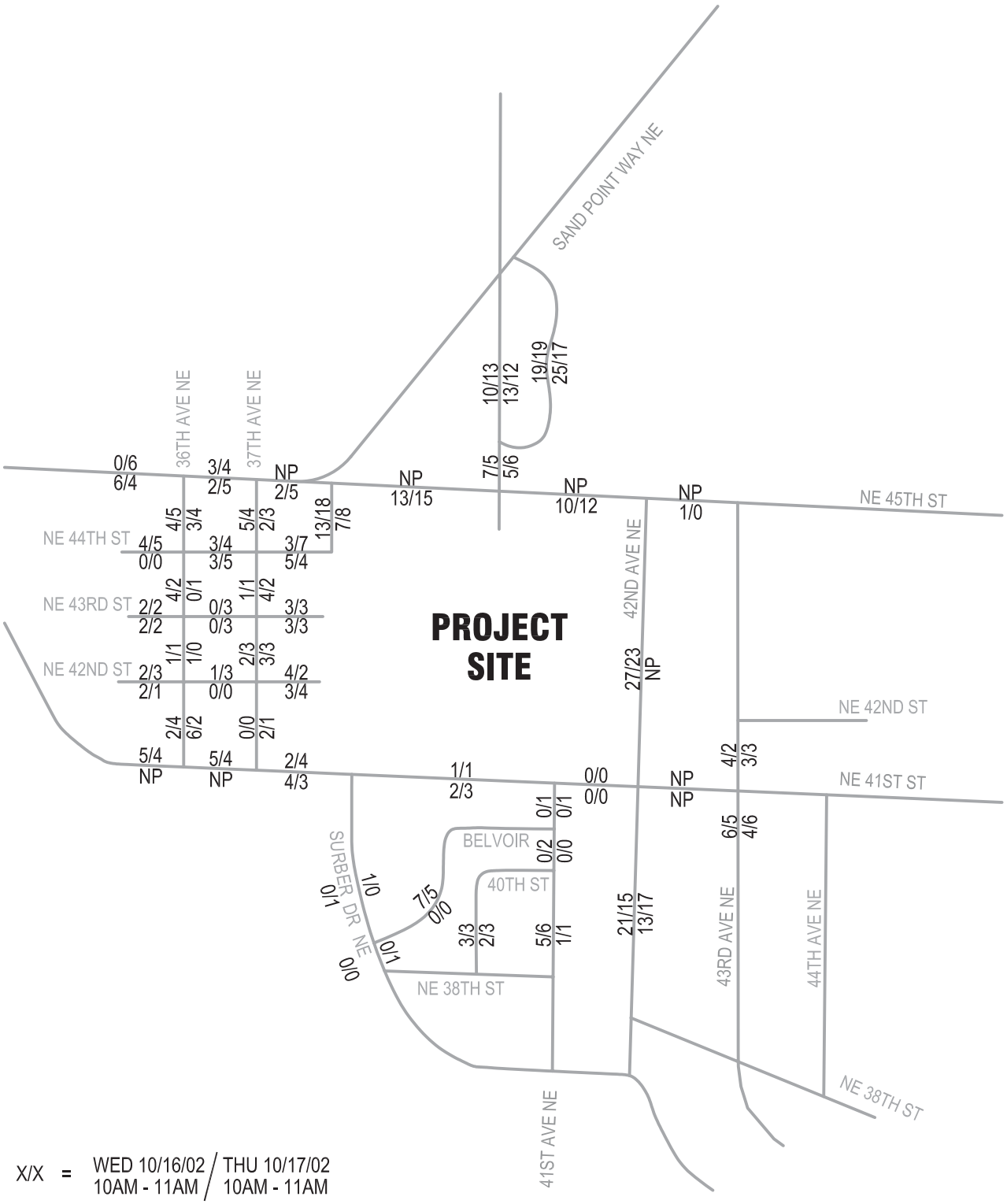
There are 144 marked parking stalls currently located within the project site boundaries. Additional parallel parking (89 spaces) is accommodated along some of the on-site circulation drives (Figure 2-3).

Off-Site

On-street parking is generally allowed in the area around the project site. The principal exceptions where no parking is permitted is on the north side of NE 45th Street adjacent to the project site, the east side of 42nd Avenue between NE 41st and NE 45th Streets, and NE 41st Street between 42nd and 44th Avenues NE.

On-street parking demand in the project site vicinity was surveyed to assess existing utilization levels. The area surveyed included on-street parking that is within approximately 800 feet walking distance of the project site. The 800-foot distance (approximately two to three blocks) is the typical maximum walking distance between parking and ultimate destinations and represents the area that would be impacted by any parking overspill generated by the project. The survey was conducted on October 16th and 17th, 2002 between 10:00 AM and 11:00 AM. Parking demand studies of office and residential developments conducted by the Urban Land Institute indicates that this mid-morning time period is when the combined parking demand of the Talaris site and the surrounding residential neighborhood is likely highest.

The results of the parking demand survey are shown in Figure 3-15. As shown in the figure, parking demand for most of the block segments included in the survey were five cars or less. The demand on these block segments generally represents parking utilization rates of less than 50 percent of the parking supply. Block segments that had higher demand were: Northeast 45th Street between 38th Ave Northeast and 42nd Avenue Northeast; 38th Ave Northeast between Northeast 44th Street and Northeast 45th Street; and 42nd Avenue Northeast between Northeast 38th Street and Northeast 45th Street. Parking demand on these block segments represented utilization rates of 75 percent to 100 percent.



X/X = WED 10/16/02 10AM - 11AM / THU 10/17/02 10AM - 11AM

NP = NO PARKING

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File name: Fig3_15_onstreetpkg.ai
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Source:
The Transpo Group, 2004.

FIGURE 3-15.
ON STREET PARKING DEMAND
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3.4.2 Impacts

No Action Alternative

This section of the EIS describes expected traffic and parking conditions within the project area if no new building construction were to occur on the project site. This alternative is referenced as the No Action alternative, and assumes the existing land use would remain. The No Action alternative is presented first in this section because it provides a baseline for comparison to the development alternatives, by which transportation impacts can be measured, and mitigation measures defined.

The traffic, circulation, and parking analysis for the No Action alternative was conducted for AM and PM peak hour conditions for the horizon years 2005 and 2010. The 2005 horizon year is consistent with the proposed construction and occupancy for Phase 1 of the IAS alternatives (Alternatives 1A and 1B) and with construction of the single-family alternatives (Alternatives 2A and 2B). The 2010 horizon year represents the potential buildout year for Phase 2 of the IAS alternatives.

Planned Improvements

The City of Seattle six-year *2001–2006 Capital Investment Program* (CIP) was reviewed to identify transportation improvement projects planned for the project area. The CIP lists improvement projects that have been approved by the City and for which funding sources have been identified within the next six years. Within the project area limits, there are no improvements listed for implementation.

Several recommended improvements in the area are identified in the University of Washington 2002-2012 Master Plan. Recommended improvements affecting the study intersections for this analysis include the addition of a northbound right-turn lane at the Northeast 45th Street / 15th Avenue Northeast intersection. Another improvement recommended in the Master Plan is the provision for additional queuing capacity along Montlake Boulevard at SR-520. Additional capacity to stack cars accessing SR-520 would improve operations not only at the SR-520 ramps but at other nearby intersections on Montlake Boulevard including the Pacific Avenue and Pacific Place intersections.

Improvements to SR-520 are being evaluated in The Trans-Lake Washington study. The study team has recently selected a preliminary recommended plan consisting of a 6-lane roadway with two general purpose lanes and one HOV lane in each direction. The project is dependent on securing funding. Preliminary schedules call for completion in 2010.

Traffic Volumes

The peak hour traffic volumes used in the analysis of the No Action alternative are comprised of existing traffic, background traffic growth, and traffic generated from specific proposed developments in the project area, also commonly referred to as “pipeline projects.”

The background traffic growth was accounted for by applying an annually compounded growth rate of 0.5 percent to existing 2002 peak hour traffic volumes. The annual average growth rate was derived from historical counts compiled by SDOT at several locations in the project area over the past nine years. The use of a 0.5 percent annual growth rate was based historic traffic count data that indicates traffic volumes in the project area have grown at annual rates ranging from zero to 0.4 percent. The use of a 0.5 percent growth rate provides for a conservative analysis that ensure that impacts are not under estimated.

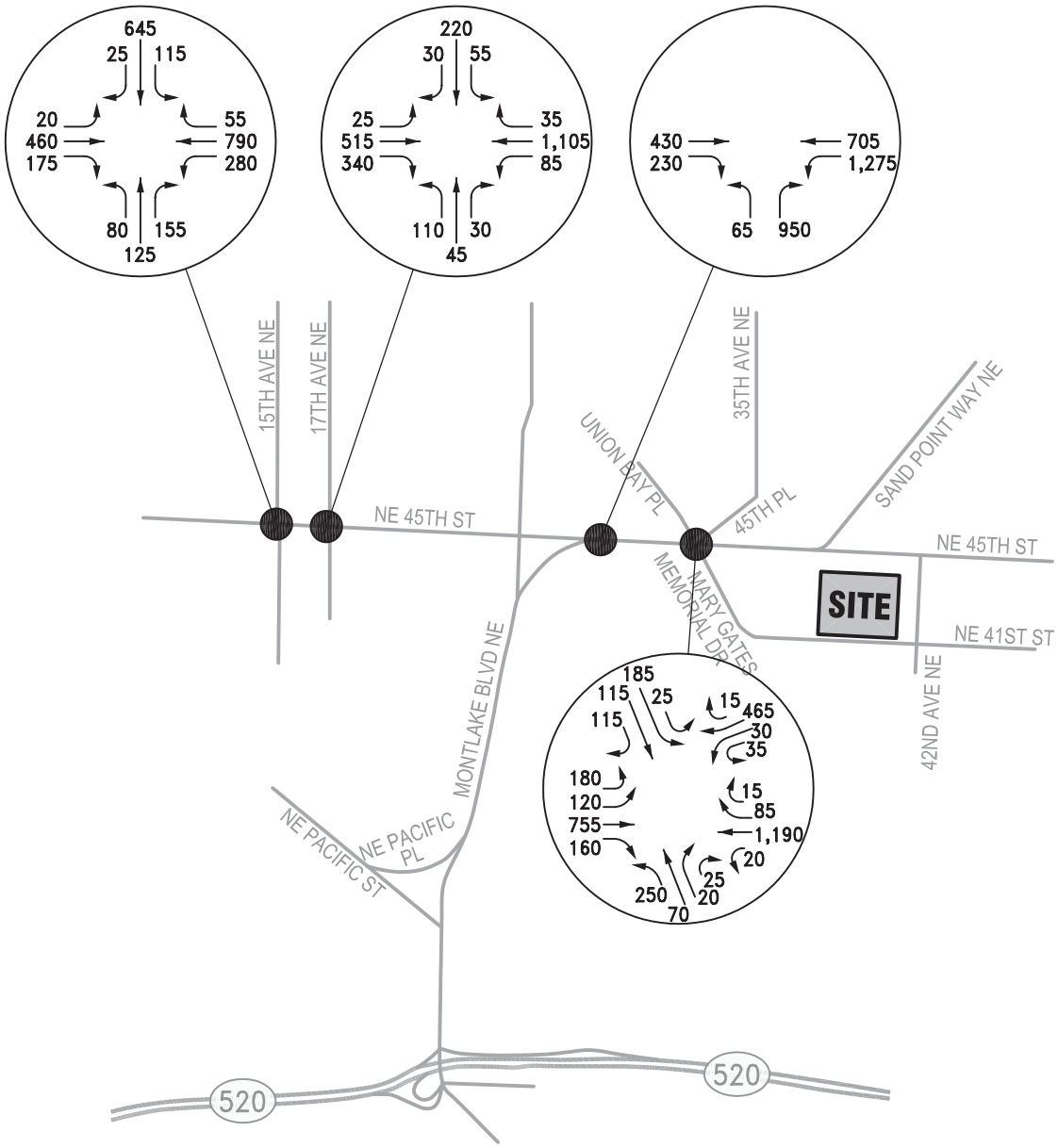
In addition to the background growth described above, traffic volumes that would be generated by proposed projects in the project area were added to the horizon year traffic volume forecasts. The pipeline projects whose specific traffic increases were added to the forecasts are listed in Table 3-16. The list of pipeline projects was identified in coordination with DCLU and includes those projects were known to be in the planning, development, or construction stages, and not yet open and occupied, as of the date this analysis was conducted.

Table 3-16. Pipeline Development Projects

Project	Location	Description
Village North Development	University Village – Northeast 45th St between Union Bay Pl and 25th Ave Northeast	104,000 sf commercial and retail
Childrens Hospital Outpatient Clinic	Sandpoint Way and Northeast 70th St	96,600 sf administrative office
Magnuson Park Redevelopment	Magnuson Park – Sandpoint Way between Northeast 65th St and Northeast 74th St	Playfields and community facilities (Master Plan components scheduled prior to 2005)
UW Medical Center Surgery Pavilion	Montlake Blvd and Northeast Pacific St	160,000 sf short-stay surgery, treatment areas, and 300-car garage
Blakley Mixed Use	Northeast Blakeley St and 30th Ave Northeast	115 residential units and 11,900 sf retail

This approach of using a combination of background traffic growth, coupled with pipeline projects, has been consistently applied in a number of traffic impact studies for Seattle developments that have been reviewed and approved by the City. Applying a 0.5 percent annual traffic growth rate, and specifically including traffic generated by pipeline development results in traffic forecasts that exceed the historic zero to 0.4 traffic growth rates in the project area. This approach provides for a conservative analysis that helps ensure that actual traffic impacts are not underestimated.

Year 2005 and 2010 horizon year peak hour traffic volume forecasts for the No Action Alternative are shown in Figures 3-16 through 3-19.



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Source:
The Transpo Group, 2004.

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FIGURE 3-16.
2005 AM PEAK HOUR TRAFFIC VOLUMES -
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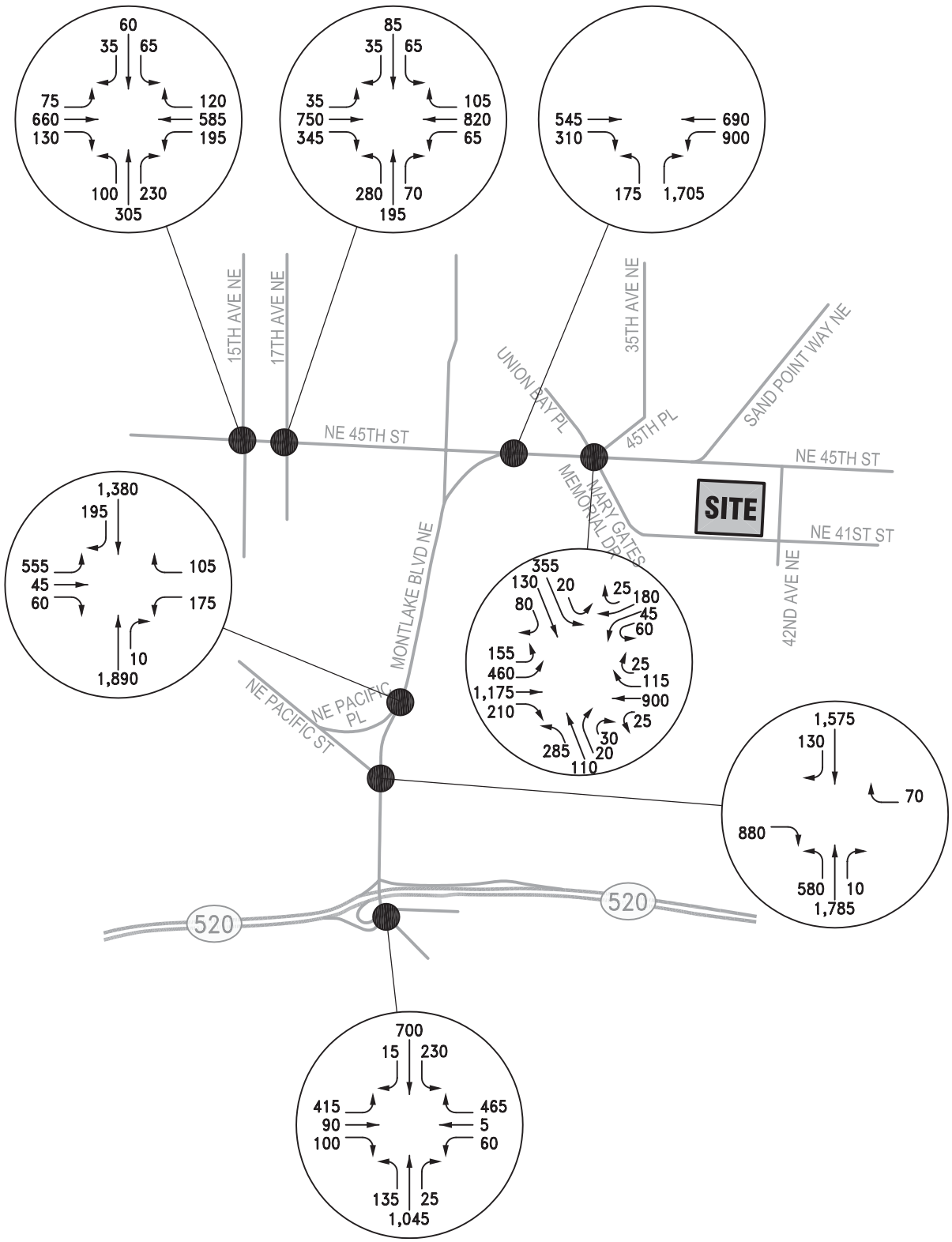

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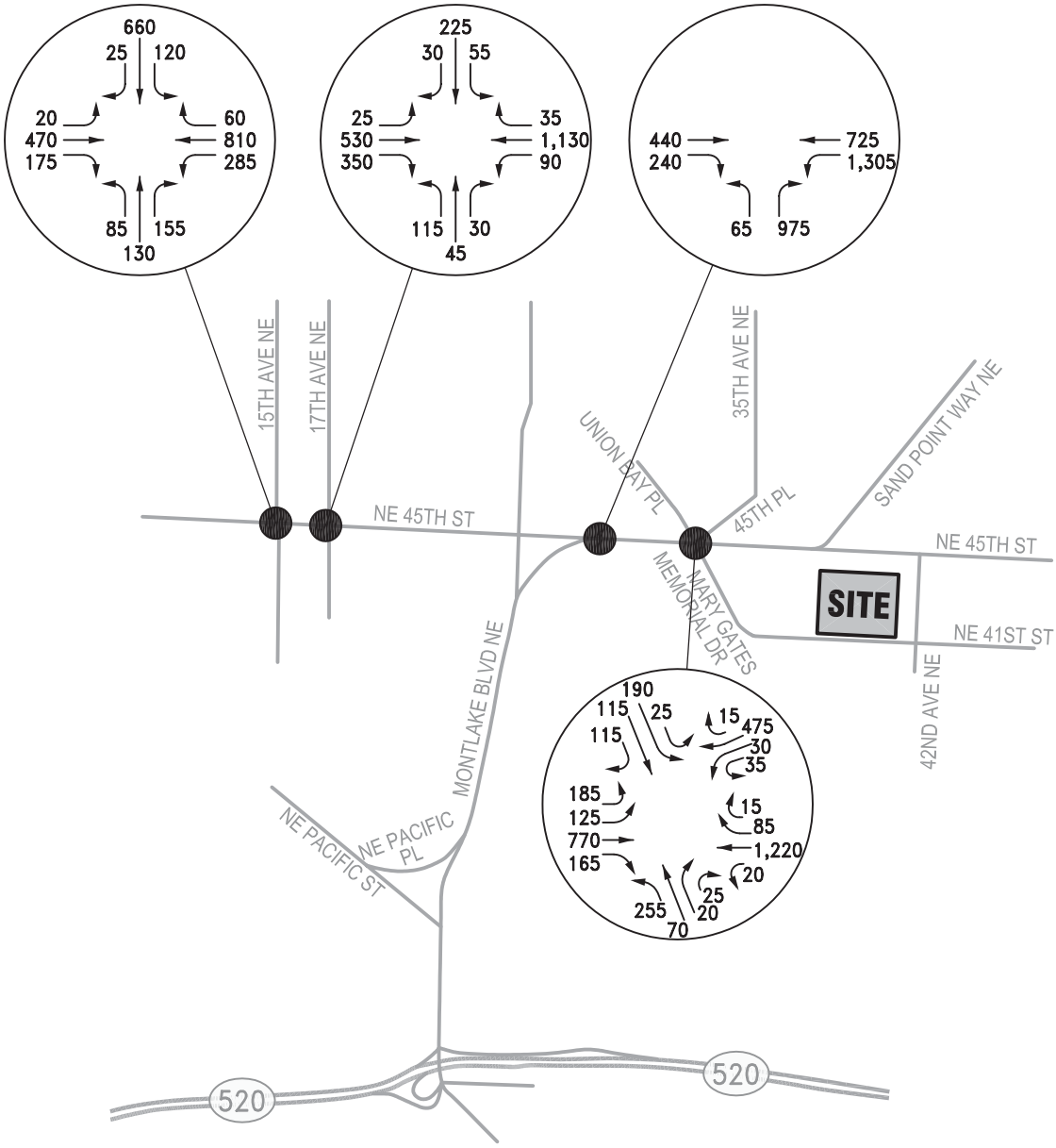
FIGURE 3-17.
2005 PM PEAK HOUR TRAFFIC VOLUMES -
NO ACTION ALTERNATIVE
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON



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Date: 10/28/04

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FIGURE 3-18.
2010 AM PEAK HOUR TRAFFIC VOLUMES -
NO ACTION ALTERNATIVE
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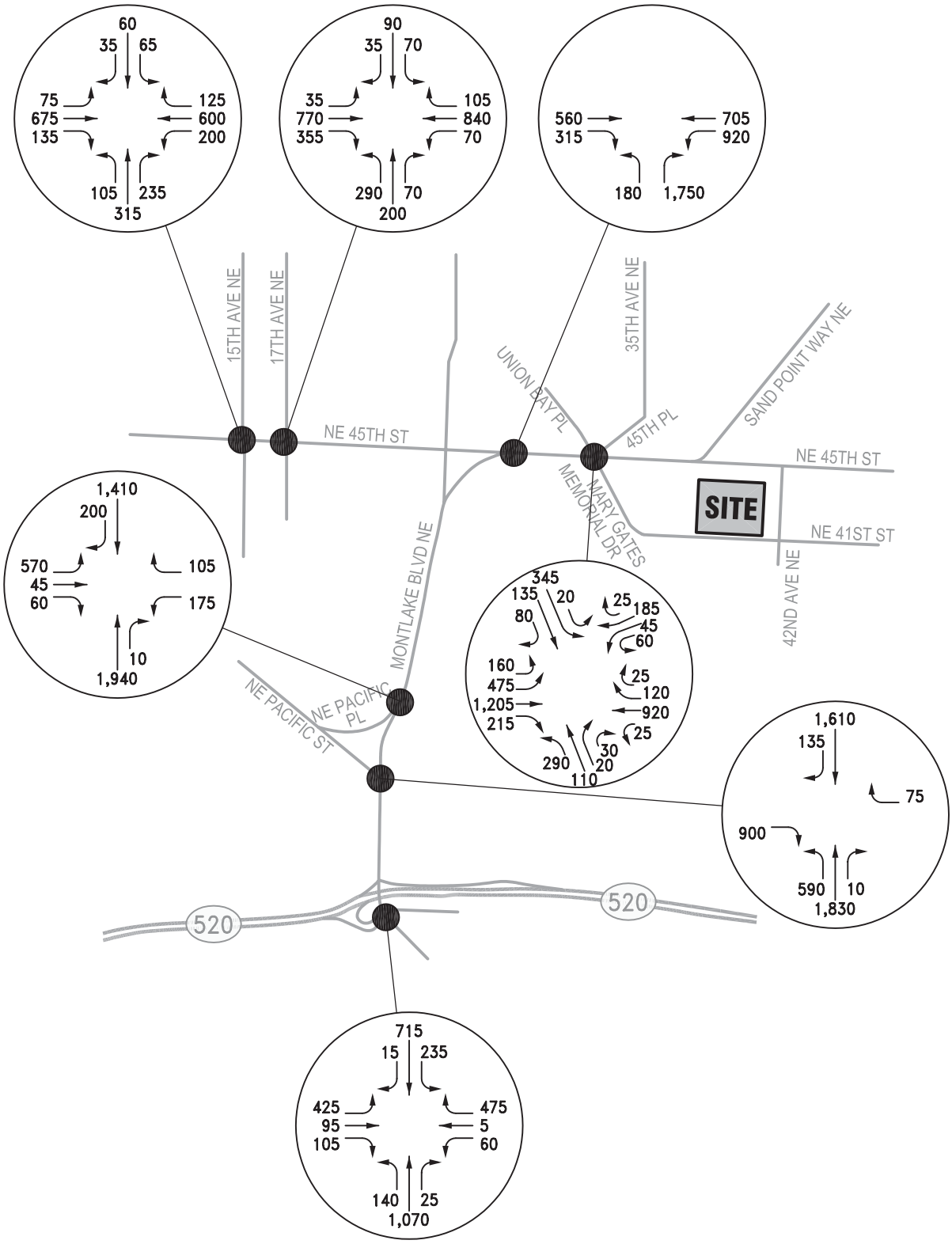

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Original graphic by: JAB
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Date: 10/28/04

Source: The Transpo Group, 2004.

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FIGURE 3-19.
2010 PM PEAK HOUR TRAFFIC VOLUMES - NO ACTION ALTERNATIVE
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SEATTLE, WASHINGTON

Traffic Operations

Weekday peak hour intersection LOS was calculated for each of the study intersections for the No Action alternative. With only one minor planned transportation improvement identified for the project area, the intersection LOS analysis inputs (cycle length, number of lanes, phasing, etc.) remained unchanged from those used for the LOS analysis of existing conditions. Table 3-17 provides a summary of AM and PM peak hour levels of service, delays, and v/c ratios at study intersections for 2005 and 2010 for the No Action alternative.

Table 3-17. Peak-Hour Levels of Service – No Action Alternative

Study Intersection	Existing			2005 No-Action			2010 No-Action		
	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
AM Peak Hour:									
1. Northeast 45th St/15th Ave Northeast	E	73.9	0.81	E	78.6	0.83	F	81.0	0.86
2. Northeast 45th St/17th Ave Northeast	C	30.0	0.72	C	30.9	0.74	C	32.0	0.76
3. Northeast 45th St/Montlake Blvd Northeast	B	16.9	0.60	B	17.7	0.63	B	18.2	0.64
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl1	E	71.0	1.17	E	73.0	1.20	E	76.9	1.23
PM Peak Hour:									
1. Northeast 45th St/15th Ave Northeast	C	30.6	0.65	C	32.0	0.67	C	32.6	0.69
2. Northeast 45th St/17th Ave Northeast	D	47.3	0.88	D	51.7	0.92	E	57.3	0.95
3. Northeast 45th St/Montlake Blvd Northeast	B	17.7	0.79	B	19.2	0.82	B	19.8	0.84
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl1	F	88.3	1.06	F	95.3	1.13	F	101.2	1.17
5. Northeast Pacific Pl/Montlake Blvd	C	23.7	0.84	C	25.2	0.86	C	26.1	0.89
6. Northeast Pacific St/Montlake Blvd	C	22.0	0.79	C	22.3	0.81	C	22.8	0.83
7. SR-520 EB Ramps/Montlake Blvd	F	216.8	1.07	F	224.4	1.11	F	230.2	1.13

In 2005, intersection level of service within the project area is expected to generally remain the same as identified for existing conditions for each of the study intersections during both the AM and PM peak hours. A slight increase in delay at the intersections is expected as a result of background traffic growth and the addition of pipeline project traffic. The NE 45th Street / Union Bay Place intersection and the SR-520 Ramps / Montlake Boulevard intersection would continue to operate at LOS F in the PM peak hour.

In 2010, intersection levels of service at some of the study intersections are expected to generally remain the same as identified for existing conditions. The exceptions to this are the intersection

of Northeast 45th Street/15th Avenue Northeast, which would degrade from LOS E to F during the AM peak hour, and the intersections of Northeast 45th Street/17th Avenue Northeast and Northeast 45th Street/Montlake Boulevard Northeast, which would degrade from LOS D to E and LOS B to C, respectively. The NE 45th Street / Union Bay Place intersection and the SR-520 Ramps / Montlake Boulevard intersection would continue to operate at LOS F in the PM peak hour.

Transit

No specific improvements have been identified for transit operations in the immediate project site vicinity.

Non-Motorized Facilities

As stated in the *Planned Improvements* section, there are no improvements identified in the City of Seattle six-year *2001–2006* CIP in the project site vicinity, including improvements to non-motorized facilities.

Safety

There would be a slight increase in the potential for traffic accidents at the study intersections proportionate to the increase in traffic due to background traffic growth and additional pipeline traffic that would occur by 2005 and 2010.

Parking

Parking supply in the project site vicinity is expected to remain essentially unchanged from the existing conditions under the No Action Alternative. No changes to on-street parking supply are anticipated. Similarly, the No Action alternative would maintain current on-site parking supply for the existing uses.

Alternative 1A: Institute for Advanced Study with Increased Bulk and Scale and Code-Required Parking

Construction

During the construction period, Alternative 1A would generate temporary truck and vehicle traffic associated with excavation and hauling, delivery of materials, and similar types of activity. Potential construction impacts include:

- Arrival, departure, and parking of construction worker vehicles;
- Delivery of construction materials;
- Removal of debris associated with demolition activity;
- Delivery of construction vehicles and machinery; and
- Delivery or removal of material associated with fill or excavation activity.

The major traffic impact during construction would be associated with excavation activities for the proposed subsurface parking. Construction of Phase 1 of the project would require excavation and removal of approximately 77,000 cubic yards of materials from the site. Using 20-cubic yard capacity truck and trailer combinations, the amount of material to be removed would require 3,850 truckloads. Each load would generate two truck trips (one trip traveling to the site and one trip traveling away from the site), resulting in a total of 7,700 truck trips.

Excavation is expected to take approximately 12 weeks. During this time, an average of 1,300 cubic yards of material would be removed from the site on a typical day, generating 130 truck trips to and from the site per day. Assuming an 8 to 10-hour work day, there would be an average of 15 to 20 truck trips per hour during the work day. Most of the truck trips would take place outside of the normal commute times, as there would generally be some setup time after workers arrive and before excavation activity resumed in the morning and some time to shut down operations in the afternoon before workers leave for the day. The number of truck trips on any specific day during the excavation may vary up and down from the average depending on the level of excavation activity on that day.

Temporary access to the construction site would be via the existing site entrance from Northeast 41st Street at the south side of the project site. Northeast 41st Street adjacent to the site is classified as a Collector Arterial.

Similar excavation activity and impacts from truck trips would be generated during construction of Phase 2. This second phase is expected to require similar excavation amounts and construction time.

Trip Generation

Project trip generation under Alternative 1A is summarized in Table 3-18. The trip generation was developed using regression equations published in the Institute of Transportation Engineers' (ITE) publication *Trip Generation* (6th Edition, 1997). The equations are based on case studies compiled by ITE of research and development facilities (ITE Land Use #760) and Daycare facilities (ITE Land Use #565). ITE's Research and Development land use category was used instead of their General Office category as it represents a more specific use that is more consistent with the proposed project's research activities and the lab space that will constitute a significant component of the project facilities.

ITE's trip generation rates for the Research and Development land use category is approximately 70% of that for the General Office land use category. By comparison, employee forecasts for the project indicate that employee density would be approximately 1.5 employees per 1,000 sf of building area, which is less than 50% of the densities of 3 to 4 employees per 1,000 sf that is typically found in general office buildings. Based on the anticipated employee densities, use of the ITE Research and Development trip generation rates for estimating project trip generation provides for a conservative analysis that would not underestimate project impacts.

Table 3-18. Trip Generation - Alternative 1A

		AM Peak Hour		PM Peak Hour	
	Daily	**In**	**Out**	**In**	**Out**
Phase 1:					
Research Office/Labs (114,700sf)	1,140	127	26	22	127
Conference (2,434sf - 100 Attendees)	100	0	0	0	0
Daycare (10,000sf - 50 Children*)	90	13	11	11	12
Less Demolition of Existing Buildings (7,500sf)	-120	-12	-2	-2	-13
Net Increase	1,250	128	35	31	126
Phase 2:					
Research Office/Labs (163,000sf)	1,230	149	30	25	137
Less Demolition of Existing Buildings (44,500sf)	-480	-52	-11	-10	-52
Net Increase	750	97	19	15	85
Total Project Buildout (Phase 1 & 2):					
Research Office/Labs (277,700sf)	2,370	276	56	47	264
Conference (2,434sf - 100 Attendees)	100	0	0	0	0
Daycare (10,000sf - 50 Children*)	90	13	11	11	12
Less Existing (52,000sf)	-600	-64	-13	-12	-65
Net Increase	1,960	225	54	46	211

* 50% of children attending daycare were assumed to belong to on-site employees

There is no similar ITE trip generation data for conference spaces such as the conference center included as part of Alternative 1A. However, a lecture or presentation that fills the proposed 100-seat facility would generate an estimated 100 trips (50 inbound trips and 50 outbound trips) assuming an average car occupancy of 2.0 persons per vehicle. Average car occupancies for conference activities at facilities such as the Washington State Trade and Convention Center range from 1.5 to 2.8 persons per car. The 2.0 average car occupancy used for this analysis falls within the this range. Although conference activities would not occur on a daily basis, the daily trips identified in the table include the 100 trips that would be generated by a lecture or presentation to provide a “worst-case” analysis of project impacts. It is not expected that the auditorium would generate any peak hour trips. Anticipated scheduling of the conference facility calls for conferences generally not to begin any earlier than 9:00 A.M. and to end before 3:00 P.M. based on the anticipated scheduling.

For each phase of the project, current trips associated with existing buildings on the site that would be demolished were subtracted to arrive at the net increase in trips that would be generated under of Alternative 1A.

As shown in Table 3-13, Phase 1 of Alternative 1A would generate a net increase of 1,250 trips per day, including 163 trips during the AM peak hour and 157 trips during the PM peak hour. Phase 2 of the project would generate an additional increase of 750 trips per day, 116 during the AM peak hour and 100 during the PM peak hour. The total net increase in trip generation from the project site with buildout of Phases 1 and 2 would be 1,960 trips per day, including 279 during the AM peak hour and 257 during the PM peak hour.

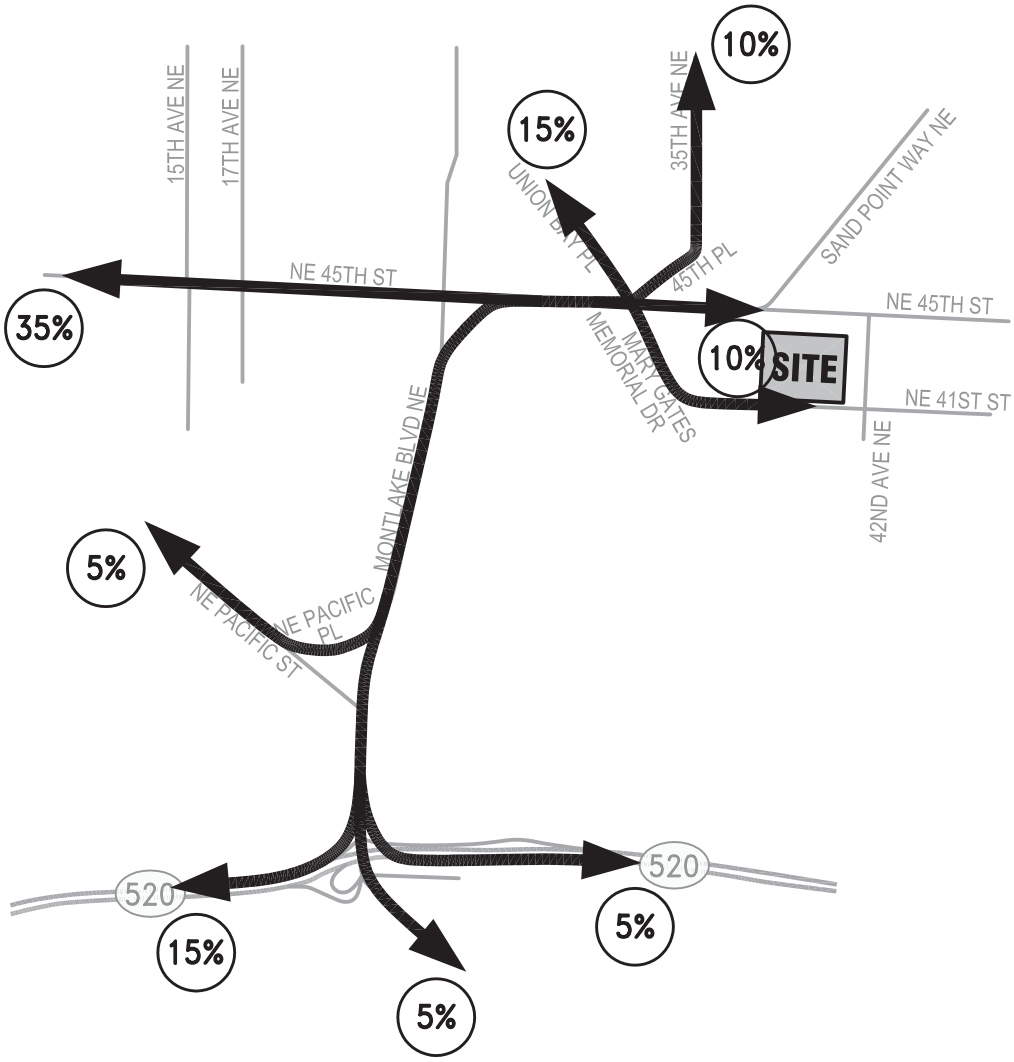
Trip Distribution and Assignment

Project-generated traffic was distributed and assigned to the vicinity street system based on data from the City of Seattle's travel forecast model. Data from the model on trip origin and destination for employment in the Laurelhurst and University District was used. Table 3-19 summarizes the resulting distribution percentages used to assign project-generated trips. The distribution indicates that AM and PM peak hour project traffic would be primarily oriented to the regional transportation facilities in the area, particularly I-5 and SR-520.

Table 3-19. Project Trip Distribution – Alternative 1A

Route (direction)	Percent
I-5 (to and from the north)	35%
SR 520 (to and from the west)	15%
Union Bay Place (to and from the north)	15%
35th Avenue Northeast (to and from the north)	10%
Northeast 45th Street (to and from the east)	10%
Montlake Blvd – south of SR 520 (to and from the south)	5%
SR 520 (to and from the east)	5%
Northeast Pacific Street (to and from the west)	5%
TOTAL	100%

The distribution pattern shown in Figure 3-20 was used to assign AM and PM peak hour project traffic to the project area roadways and intersections. The assignment is generally based on the shortest paths, but it also takes into account other traffic conditions such as travel speeds and traffic control at the intersections. The resulting peak hour assignment of project-generated traffic for Phase 1 is shown in Figures 3-21 and 3-22. The assignment for project buildout (Phases 1 and 2) is shown in Figures 3-23 and 3-24.



LEGEND

X% = PERCENT TRIP DISTRIBUTION

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Original graphic by: JAB
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Date: 10/28/04

Source: The Transpo Group, 2004.

FIGURE 3-20.
PROJECT TRIP DISTRIBUTION - ALTERNATIVE 1A
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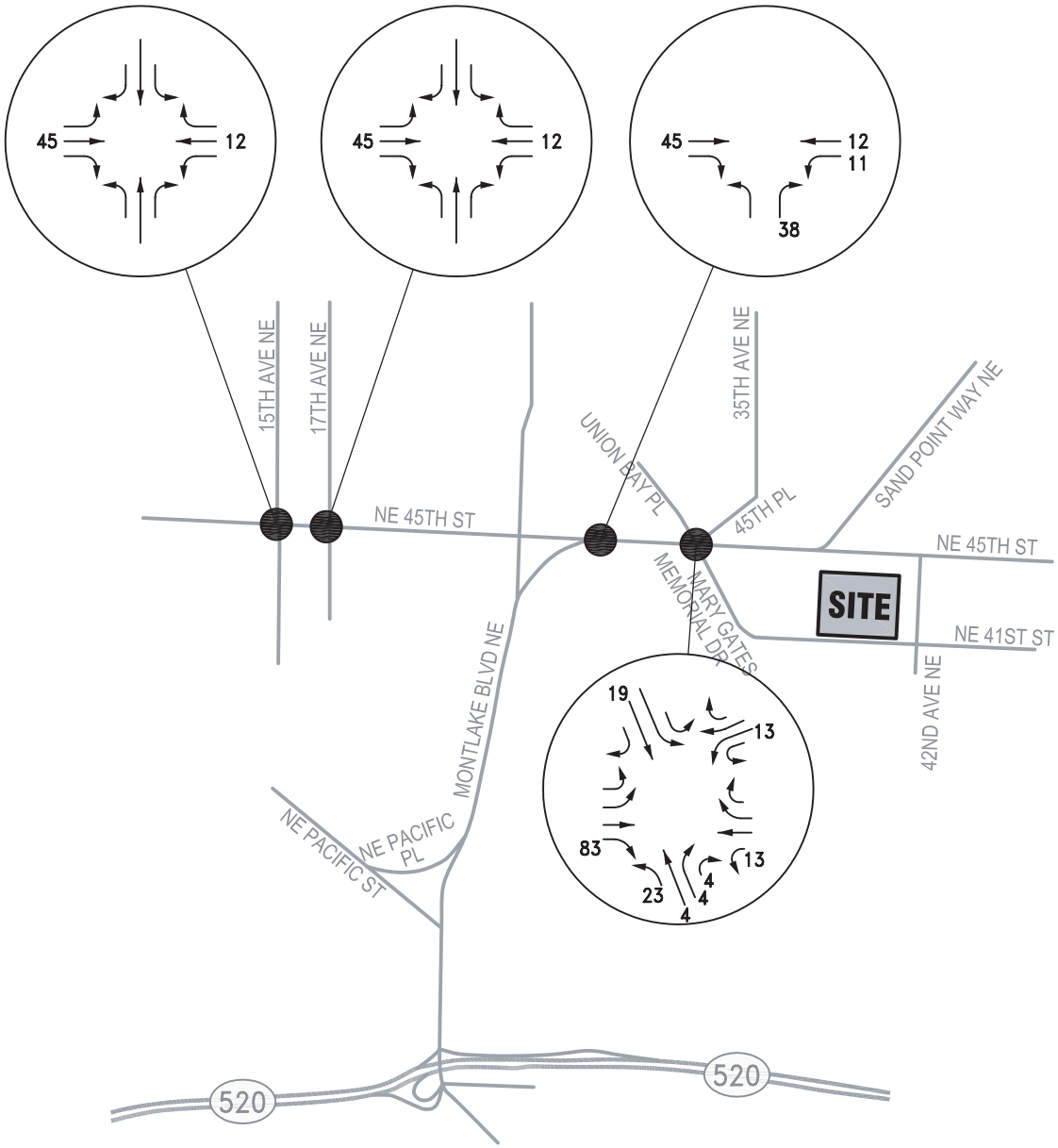

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File name: Fig3_21_AM1A_p1.ai
Original graphic by: JAB
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Date: 10/28/04

Source: The Transpo Group, 2004.

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FIGURE 3-21.
AM PEAK HOUR PROJECT TRIP ASSIGNMENT - ALTERNATIVE 1A - PHASE 1
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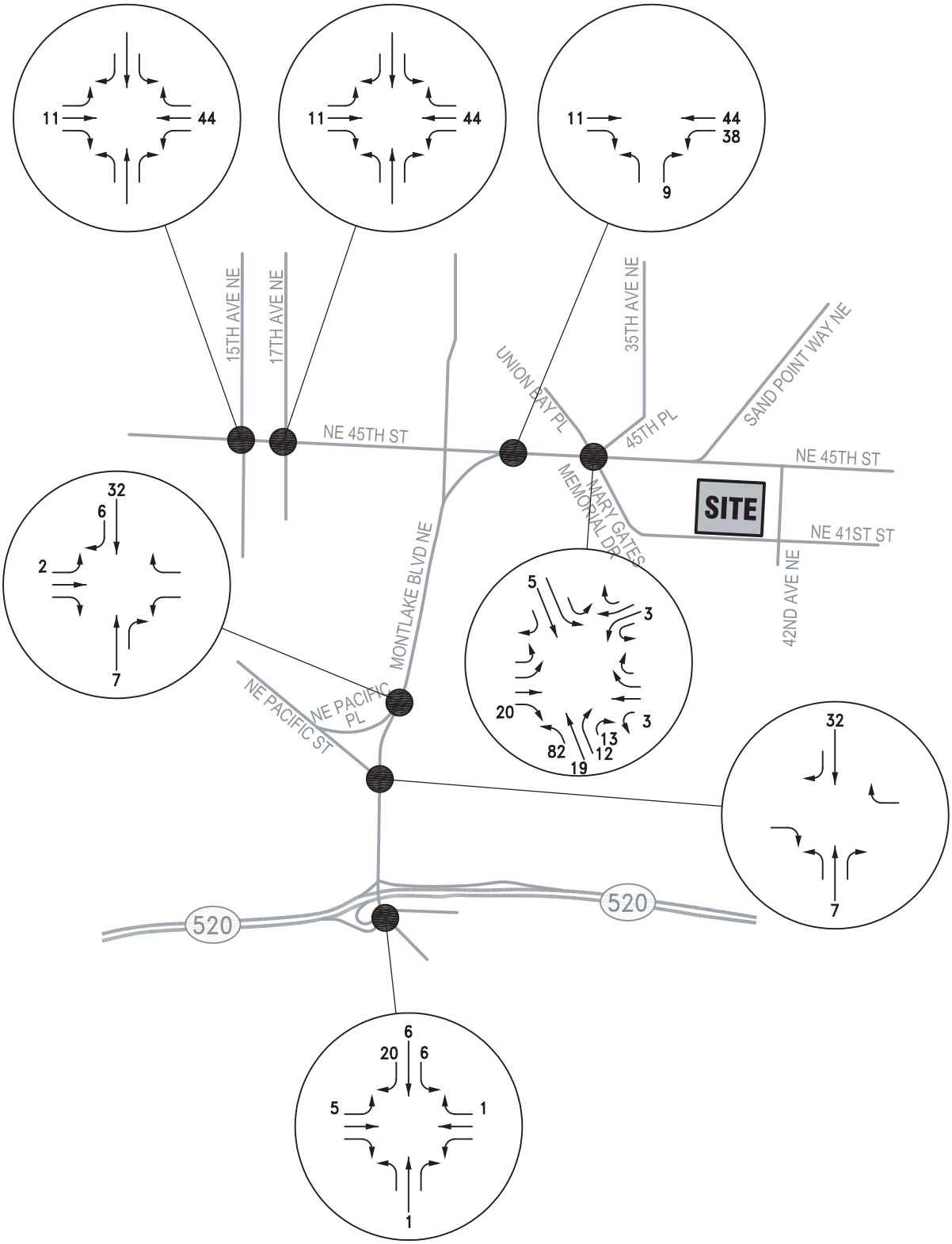

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Date: 10/28/04

Source: The Transpo Group, 2004.

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FIGURE 3-22.
PM PEAK HOUR PROJECT TRIP ASSIGNMENT - ALTERNATIVE 1A - PHASE 1
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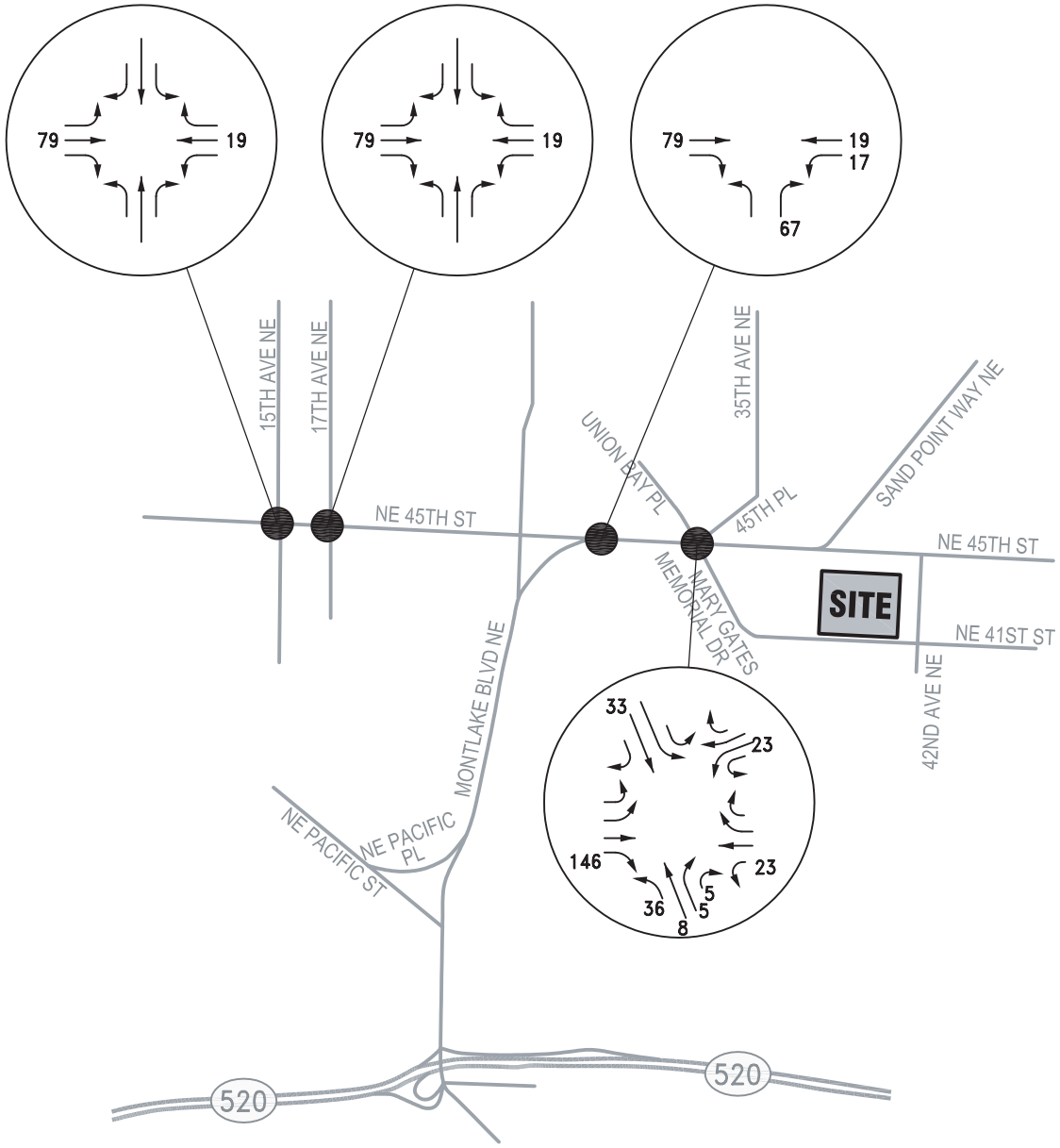

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Date: 10/28/04

Source: The Transpo Group, 2004.

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FIGURE 3-23.
AM PEAK HOUR PROJECT TRIP ASSIGNMENT - ALTERNATIVE 1A - PHASES 1 & 2
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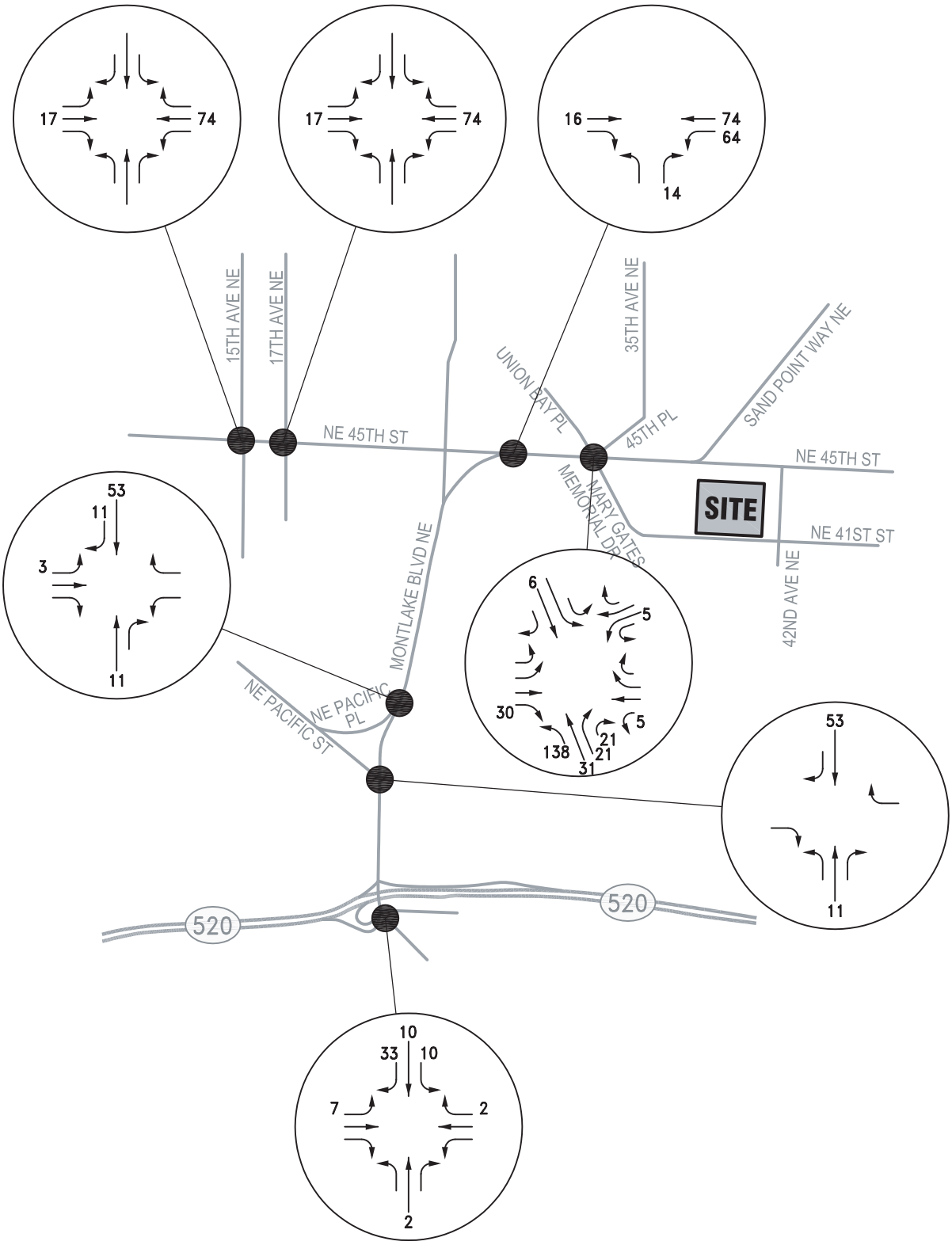

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Original graphic by: JAB
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Date: 10/28/04

Source: The Transpo Group, 2004.

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FIGURE 3-24.
PM PEAK HOUR PROJECT TRIP ASSIGNMENT - ALTERNATIVE 1A - PHASES 1 & 2
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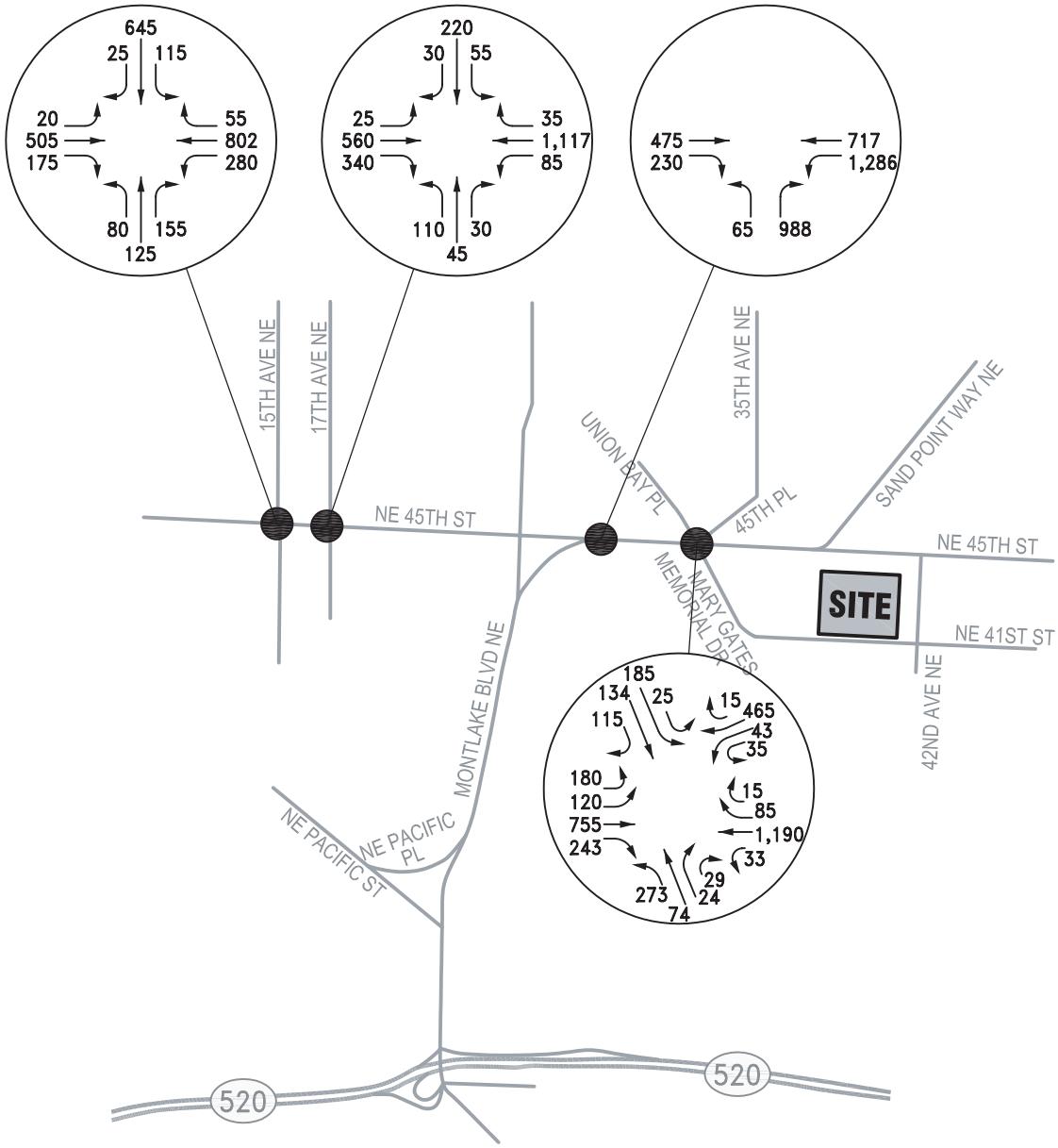
Traffic Volume Impacts

Peak hour traffic volumes under Alternative 1A were developed by adding the net new project-generated trips to the 2005 and 2010 No Action peak hour traffic volumes at the study intersections. The resulting traffic volumes with Phase 1 in 2005 are illustrated in Figures 3-25 and 3-26; traffic volumes and with Phases 1 and 2 in 2010 are illustrated in Figures 3-27 and 3-28. These volumes were then compared with the No Action traffic volumes to identify the traffic volume impacts of Phase 1 in 2005 and Phases 1 and 2 in 2010. Table 3-20 summarizes the percent impact of traffic generated by Alternative 1A at the project area intersections during weekday AM and PM peak hours.

Table 3-20. Peak-Hour Traffic Volume Impacts - Alternative 1A

Intersection	2005				2010			
	No Action	Phase 1 Trips	Total With Project	Percent Increase	No Action	Phases 1+2 Trips	Total With Project	Percent Increase
AM Peak Hour:								
1. Northeast 45th St/15th Ave Northeast	2,925	57	2,982	1.9%	2,995	98	3,093	3.3%
2. Northeast 45th St/17th Ave Northeast	2,595	57	2,652	2.2%	2,660	98	2,758	3.7%
3. Northeast 45th St/Montlake Blvd Northeast	3,655	106	3,761	2.9%	3,750	182	3,932	4.9%
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl1	3,875	163	4,038	4.2%	3,955	279	4,234	7.1%
PM Peak Hour:								
1. Northeast 45th St/15th Ave Northeast	2,560	55	2,615	2.1%	2,625	91	2,716	3.5%
2. Northeast 45th St/17th Ave Northeast	2,850	55	2,905	1.9%	2,930	91	3,021	3.1%
3. Northeast 45th St/Montlake Blvd Northeast	4,325	102	4,427	2.4%	4,430	168	4,598	3.8%
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl1	4,385	157	4,542	3.6%	4,490	257	4,747	5.7%
5. Northeast Pacific Pl/Montlake Blvd	4,415	47	4,462	1.1%	4,515	78	4,593	1.7%
6. Northeast Pacific St/Montlake Blvd	5,030	39	5,069	0.8%	5,150	64	5,214	1.2%
7. SR-520 EB Ramps/Montlake Blvd	3,285	39	3,324	1.2%	3,365	64	3,429	1.9%



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Date: 10/28/04

Source: The Transpo Group, 2004.

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FIGURE 3-25.
2005 AM PEAK HOUR TRAFFIC VOLUMES -
ALTERNATIVE 1A - PHASE 1
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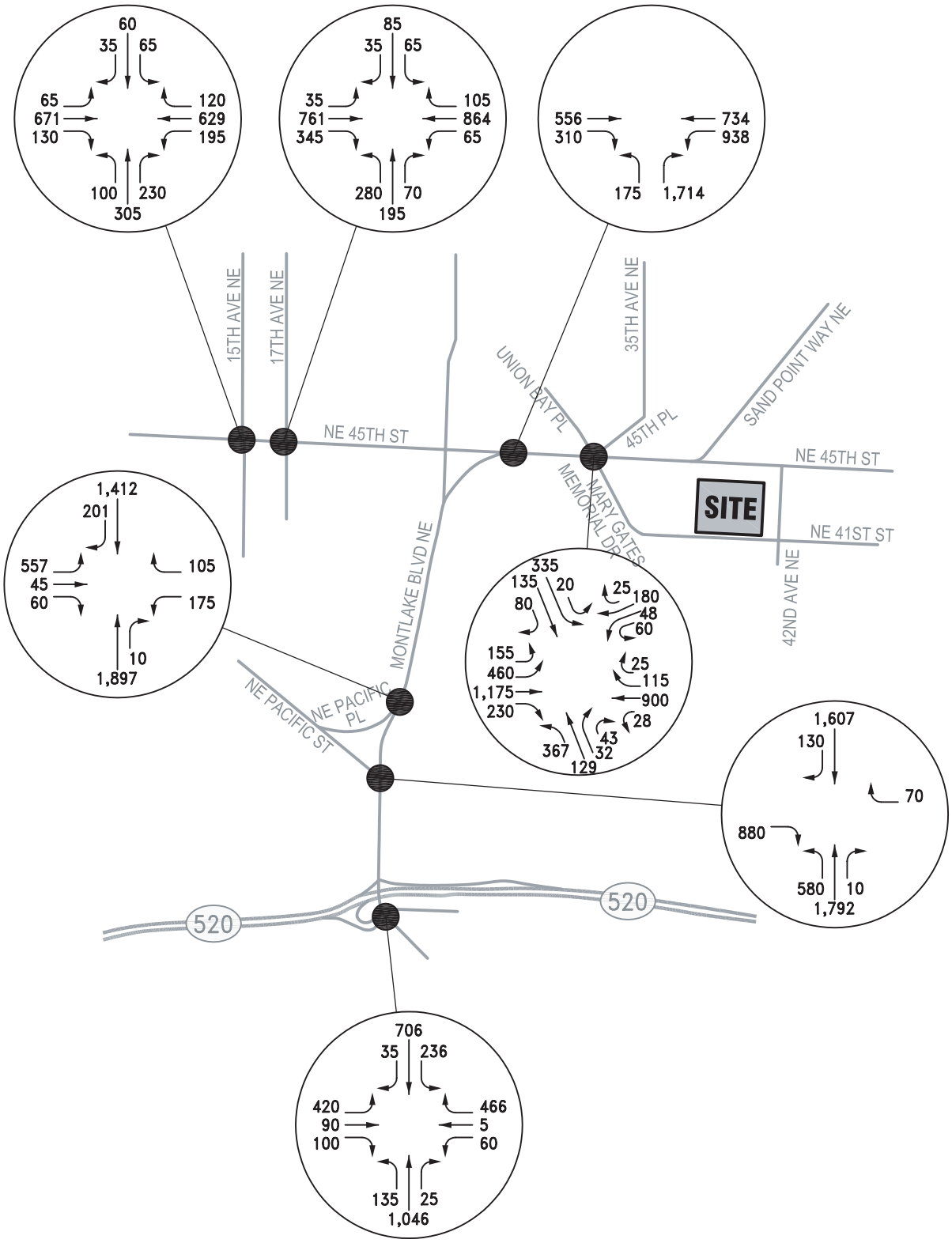

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Date: 10/28/04

Source: The Transpo Group, 2004.

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FIGURE 3-26.
2005 PM PEAK HOUR TRAFFIC VOLUMES - ALTERNATIVE 1A - PHASE 1
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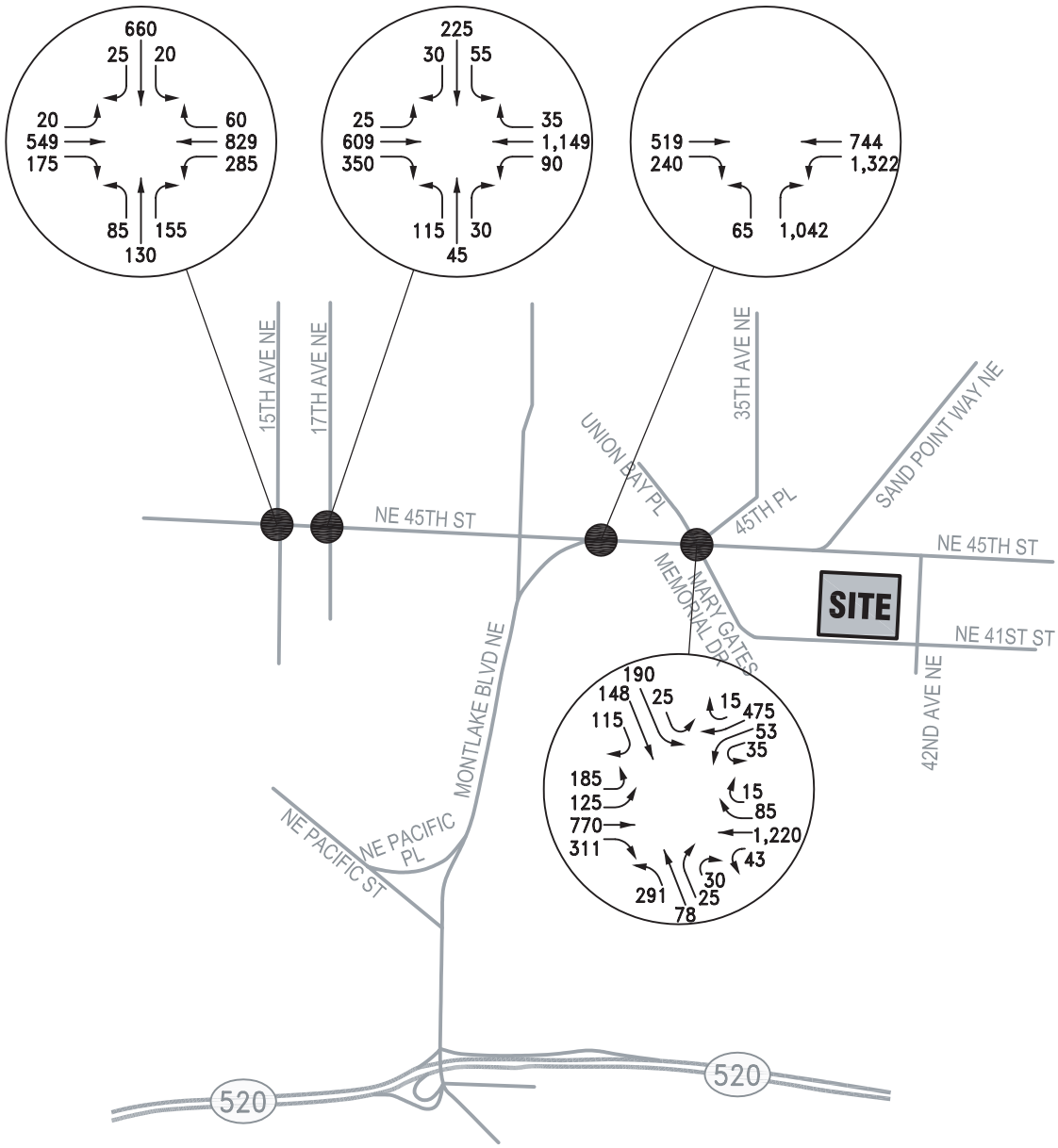

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FIGURE 3-27.
2010 AM PEAK HOUR TRAFFIC VOLUMES -
ALTERNATIVE 1A - PHASES 1 & 2
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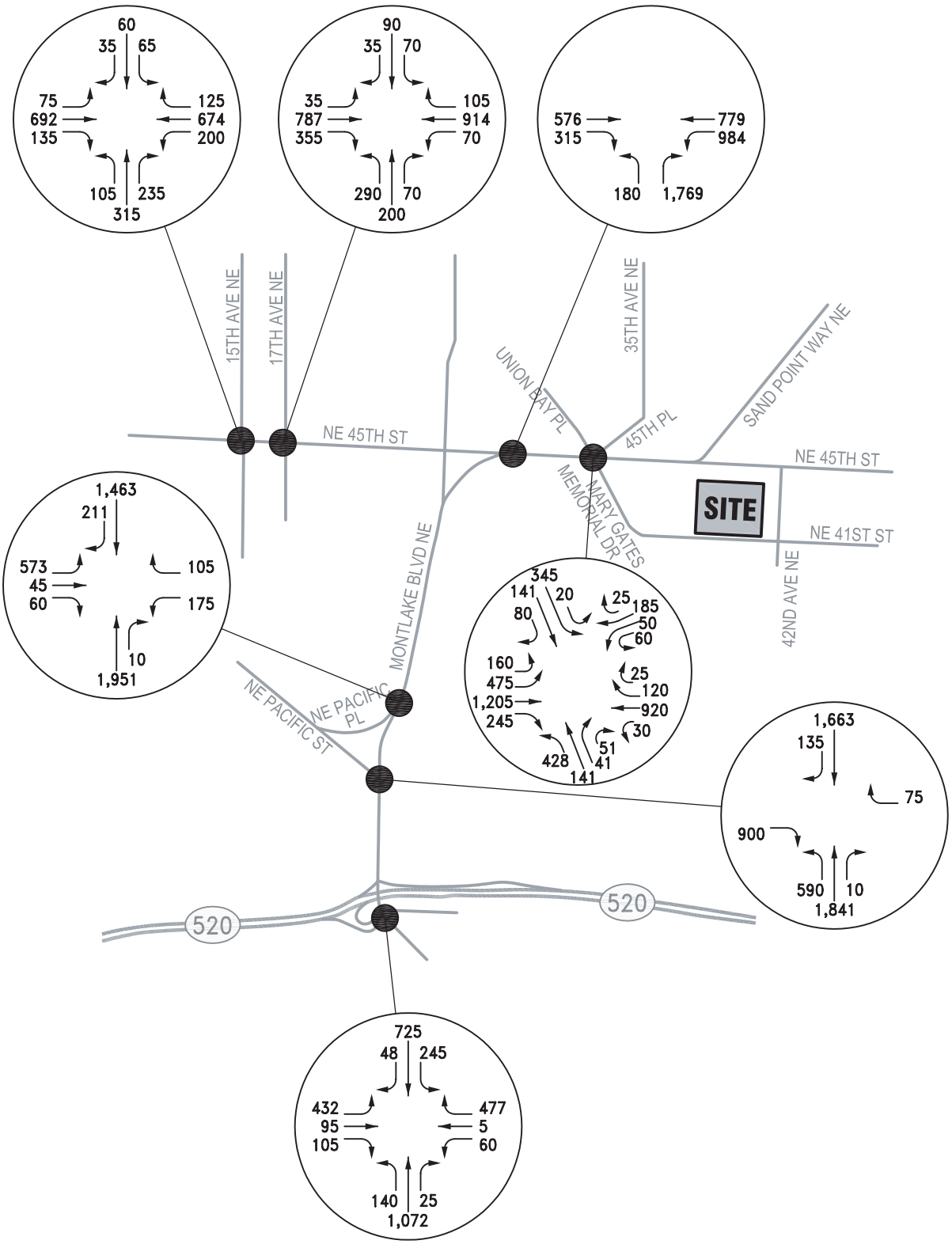

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File name: Fig3_28_10PM1A_p1&2.ai
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FIGURE 3-28.
2010 PM PEAK HOUR TRAFFIC VOLUMES - ALTERNATIVE 1A - PHASES 1 & 2
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Overall, for Phase 1 of Alternative 1A, project traffic would increase volumes at the study intersections by less than 5 percent during the AM and PM peak hours in 2005 compared to the No Action alternative. In 2010, compared to the No Action alternative, buildout of Phases 1 and 2 of the project would increase 2010 traffic volumes by approximately 6 to 7 percent at the Northeast 45th Street / Union Bay Place intersection. Increases at the remaining study intersections would be less than five percent.

Traffic Operation Impacts

Peak hour levels of service under Alternative 1A were calculated and compared to No Action alternative levels of service for each of the study intersections. Table 3-21 provides a summary of Alternative 1A AM and PM peak hour levels of service, respectively. For purposes of comparison, No Action levels of service are also shown in the table.

Vehicular access for the site would be similar to existing site access. Primary access would be provided by two driveways on NE 41st Street, close to the existing driveway locations. A secondary access will be provided at the northwest corner of the site at NE 44th Street and 38th Avenue NE, again similar to the existing access at that location. The northwest access will be used primarily by daycare users as there will be a drop-off/pick-up area for the daycare on the north side of the site. It is anticipated that most employees and visitors would use the main entrances on NE 41st Street since 38th Avenue NE is restricted to one way traffic and there are no traffic signals at the intersections of NE 45th Street with 37th and 36th Avenues NE that could be used to make left-turns to the west on NE 45th Street. Project trips on 38th Avenue NE or NE 44th street are expected to be less than 20 trips in the AM or PM peak hours.

2005 – Phase 1

In 2005 all of the study intersections would continue to operate at the same level of service under either the No Action alternative or Phase 1 of Alternative 1A, except for the intersection of Northeast 45th Street/Montlake Boulevard Northeast, which would degrade from LOS B to C during the PM peak hour.

Two intersections that would operate at LOS F in the PM peak hour under the No Action alternative in 2005 would be impacted by Alternative 1A project traffic. Project traffic would increase average delays at the Northeast 45th Street / Northeast 45th Place / Union Bay Place intersection from 95.3 seconds to 102.0seconds, an increase of 6.7 seconds.

The second LOS F intersection that would be impacted by project traffic is the SR-520 Eastbound Ramps / Montlake Boulevard intersection. The addition of project traffic at this intersection actually results in a decrease in the calculated average delay. This is due to the addition of project traffic to movements that experience lower delays than the intersection average, which is calculated based on delays for all movements at the intersection. By adding traffic to these movements, the calculated average delay for the intersection decreases.

Table 3-21. Peak Hour Levels of Service – Alternative 1A

Study Intersection	2005						2010					
	No Action			Alt 1A - Phase 1			No-Action			Alt 1A – Phases 1+2		
	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
AM Peak Hour:												
1. Northeast 45th St/15th Ave Northeast	E	78.6	0.83	E	77.9	0.84	F	81.0	0.86	E	80.0	0.86
2. Northeast 45th St/17th Ave Northeast	C	30.9	0.74	C	31.2	0.74	C	32.0	0.76	C	32.7	0.76
3. Northeast 45th St/Montlake Blvd Northeast	B	17.7	0.63	B	19.1	0.5	B	18.2	0.64	C	20.4	0.69
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl	E	73.0	1.20	E	73.8	1.22	E	76.9	1.23	E	77.4	1.26
PM Peak Hour:												
1. Northeast 45th St/15th Ave Northeast	C	32.0	0.67	C	31.9	0.68	C	32.6	0.69	C	32.3	0.70
2. Northeast 45th St/17th Ave Northeast	D	51.7	0.92	D	52.1	0.92	E	57.3	0.95	E	58.4	0.95
3. Northeast 45th St/Montlake Blvd Northeast	B	19.2	0.82	C	20.0	0.82	B	19.8	0.84	C	21.7	0.85
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl	F	95.3	1.13	F	102.0	1.19	F	101.2	1.17	F	116.8	1.26
5. Northeast Pacific Pl/Montlake Blvd	C	25.2	0.86	C	25.5	0.87	C	26.1	0.89	C	26.5	0.89
6. Northeast Pacific St/Montlake Blvd	C	22.3	0.81	C	22.3	0.81	C	22.8	0.83	C	22.8	0.83
7. SR-520 EB Ramps/Montlake Blvd	F	224.4	1.11	F	223.4	1.11	F	230.2	1.13	F	228.8	1.14

2010 – Phase 1 and 2

Impacts in 2010 with both Phase 1 and Phase 2 of the project are similar to those described for 2005. All study intersections would continue to operate at the same level of service under either the No Action alternative or Alternative 1A, except for the intersection of Northeast 45th Street/Montlake Boulevard Northeast, which degrades from LOS B to C in the AM as well as the PM peak hour.

In 2010 the relative impact at the LOS F intersection of Northeast 45th Street / Northeast 45th Place / Union Bay Place would be greater than in 2005. In 2010 with Phases 1 and 2, the project would increase delays at the intersection by 15.6 seconds compared to the 6.7-second increase in 2005 with just Phase 1 of the project. Impacts at the second LOS F intersection, the SR-520 Eastbound Ramps / Montlake Boulevard, would be similar to those described for Phase 1 in 2005.

In 2010, a third study intersection at Northeast 45th Street and 15th Avenue Northeast would degrade to LOS F under the No Action alternative. Similar to the SR-520 Eastbound Ramps / Montlake Boulevard intersection, the addition of project traffic would result in a decrease in the calculated average delay for the intersection. Again, this is due to the project adding traffic to a non-critical movement that experiences delays that are less than the average delay for the intersection as a whole, which are calculated based on delays for all movements at the intersection.

Transportation Concurrency

The City has implemented a Transportation Concurrency Project Review System to comply with one of the requirements of the Washington State Growth Management Act (GMA). The system, as described in the DCLU's Directors Rule 4-99 and the City's *Land Use and Zoning Code*, is designed to provide a mechanism that would determine whether adequate transportation facilities would be available "concurrent" with proposed development projects.

Three screenlines from the Concurrency Project Review System were analyzed (a screenline is an imaginary line drawn across several arterials at a particular place). The three screenlines were selected based on their location in relationship to the project site and the estimated influence area of the project. As shown in Table 3-22, the transportation concurrency analysis indicates that with traffic generated by Alternative 1A, the screenlines would have v/c ratios that are less than the City level of service threshold. As a result, the project would meet concurrency requirements under Alternative 1A for Phases 1 and 2.

Table 3-22. Transportation Concurrency - Alternative 1A

Screen-line Number	Location	Direction	Capacity	1998 Volume	LOS Standard	Phase 1 Project Traffic	V/C Ratio with Phase 1	Phase 1+2 Project Traffic	V/C Ratio with Phase 1+2
5.16	Ship Canal	NB	4,300	3,820	1.20	7	0.89	11	0.89
	(Univ. & Montlake Bridges)	SB	4,300	3,630	1.20	31	0.85	54	0.86
6.15	South of Northeast 80th Street	NB	4,300	2,640	1.00	44	0.62	74	0.63
	(20th Ave Northeast to Sand Point Way)	SB	4,300	1,580	1.00	10	0.37	14	0.37
13.13	East of I-5	EB	6,760	3,710	1.00	11	0.55	16	0.55
	(Northeast Pacific St to Northeast Ravenna Blvd)	WB	6,760	4,460	1.00	44	0.67	75	0.67

Transit Impacts

Data compiled for the City's Census Transportation Planning Package model indicates that transit accounts for approximately 10 percent of work-related trips in the area of the project site. This would translate into approximately 20 PM peak hour transit trips for Phase 1 of Alternative 1A and 35 PM peak hour transit trips for buildout of both Phases 1 and 2. The majority of transit trips would be associated with graduate students traveling between the University campus and the project site. It is expected that these project-generated transit trips would be accommodated by existing transit service with no adverse impacts.

Non-Motorized Travel Impacts

The project is not expected to generate significant levels of bicycle or pedestrian trips. However, there likely would be some pedestrian trips between the project site and the Northeast 45th Street commercial and retail area during the day as employees go to lunch or run errands during the day. There would also likely be some employees who commute by bicycle, particularly graduate research students from the University. Existing non-motorized facilities in the area are expected to accommodate any project-generated increase in pedestrian and bicycle trips.

Safety Impacts

By adding traffic volumes to study intersections and roadways, there would likely be a proportionate increase in the potential for traffic accidents as a result of the project. However, it does not appear that this increase in traffic would create an identifiable safety hazard at any of the study intersections, since no unusual existing traffic hazard was identified.

Parking Impacts

Parking Supply

The Phase 1 development of Alternative 1A would provide 734 parking stalls within the project site. A 210-stall garage would be constructed under the Phase 1 building. The remaining 524 stalls would be located in surface parking on the site. Construction of the Phase 2 development would add 352 more stalls. A second garage with 200 stalls would be located under the Phase 2 building and 152 additional stalls in surface parking areas would be provided. Total on-site parking with buildout of Phases 1 and 2 would be 1,086 stalls, of which 410 stalls would be located in the two garages and 676 stalls in surface lots.

Code Requirements. Code requirements for parking are found in Section 23.54.016 of the Seattle Land Use and Zoning Code. The applicable land use categories from the code are "Institute for Advanced Study in Single-Family Zones (existing)" and "Child Care Center" (Table 3-23). It should be noted that the code requirement of 3.5 spaces per 1,000 sf for the "Institute for Advanced Study in Single-Family Zones (existing)" use category differs from the requirement of 1 space per 1,000 sf for the "Institute for Advanced Study" and "Research and Development Laboratory" use categories.

Table 3-23. Parking Code Requirements - Alternative 1A

Use	Code Requirement	Project Quantity	Parking Required
Phase 1:			
Research Office Space	3.5 spaces per 1,000 sf	114,700 sf	401
Conference Space	37 spaces per 100 sf of assembly area	2,434 sf	90
Daycare	1 space per 10 children or 1 space per staff, whichever is greater	50 children/17 staff	17
Remaining Talaris Conference Center			233
Total Phase 1			741
Phase 2:			
Research Office Space	3.5 spaces per 1,000 sf	163,000 sf	571
Less Talaris Conference Center (removed to allow for construction of Phase 2)			(233)
Total Phase 2			338
Total Phases 1 and 2			1,079

The proposed parking supply of 734 stalls for Phase 1 would be slightly under the Land Use and Zoning Code requirements of 741 stalls, falling short by 7 stalls. For project buildout of Phases 1 and 2, the proposed parking supply of 1,086 stalls would slightly exceed the Code requirement of 1,079 stalls.

Parking Demand. Parking code requirements do not always reflect actual parking demand for a specific development. Code requirements for parking are generally intended to be guidelines to ensure that all parking demand is accommodated for a variety of facility types within broader categories of land uses. Code requirements also often reflect policy goals of encouraging alternative transportation modes by limiting the amount of available parking. As a result, it is difficult to assess parking impacts by comparing parking supplied to the parking required by code. In order to assess project impacts, it is often necessary to compare parking supplied to estimates of actual parking demand based on specific characteristics of a proposed development.

An analysis of parking demand was conducted based on the number of employees and visitors anticipated at the site. The resulting parking demand estimates are summarized in Table 3-24.

Table 3-24. Parking Demand Estimates - Alternative 1A

Project Component	People	Parking Demand
Phase 1:		
Permanent Staff & Visiting Researchers	174	131
Subject Parents	25	25
Adult Subjects	4	4
Outreach	5	5
Other Visitors	10	10
Conference	100	50
Day Care	50	20
Existing Talaris Conference Center (average demand from peak hour parking counts)		110
Total Phase 1		355
Phase 2:		
Based on IAS uses proportionally similar to Phase 1		248
Less Talaris Conference Center (removed with Phase 2)		(110)
Total Phase 2		138
Total Phases 1 and 2		493

As indicated in the table, based on the space programming analysis, parking demand would be an estimated 355 stalls for Phase 1 and 493 stalls for Phases 1 and 2. The smaller increase from Phase 1 to Phase 2 is due to elimination of parking demand associated with the Talaris Conference Center, which would be demolished as part of the Phase 2 construction.

The above parking demand estimates were compared to estimates based on parking generation data published by ITE for research centers (ITE Land Use #760). Although the ITE data is limited to just one study and does not reflect project specific programming, it provides a check of the reasonableness of the demand estimates. Based on the ITE data, the project would generate a parking demand of 332 stalls for Phase 1 and 507 stalls for Phases 1 and 2, including removal of

the Talaris Conference Center with Phase 2. The estimates based on the specific Alternative 1A project and the estimates based on ITE data are within ten percent of each other. The similarity of the two estimates indicate that the demand estimates summarized in Table 3-22 are reasonable.

The proposed parking supply of 734 stalls for Phase 1 would exceed the estimated demand of 355 stalls. Similarly, for project buildout of Phases 1 and 2, the proposed parking supply of 1,086 stalls would far exceed the demand estimates of 493 stalls. Prior to construction of Phase 2, parking needs for the Phase 2 project should be reviewed and analyzed based on actual parking experiences for the Phase 1 project.

Alternative 1B: Institute for Advanced Study With Reduced Parking and Design Alternatives to Reduce Bulk and Scale Impacts

Transportation impacts of Alternative 1B would be consistent with those identified for Alternative 1A except for parking impacts. The following describes parking impacts for Alternative 1B.

Parking Impacts

Parking Supply. Under Alternative 1B, the Phase 1 development would provide 640 parking stalls on the project site. A 375-stall garage would be constructed under the Phase 1 building. The remaining 265 stalls would be located in surface parking on the site, including the existing "overflow" parking (that was recognized in the Settlement Agreement, as discussed in Chapter 2, Project Goals and Objectives) of 89 cars on the internal access drives. The overflow parking on the internal drives is currently used to accommodate the increased demand that occurs with larger events at the conference center (existing use that will remain), and would continue to be used in the same manner with construction of the Phase 1 building.

Construction of the Phase 2 development would add a second garage under the Phase 2 building with 400 stalls. Surface parking would be reduced with construction of the Phase 2 building. The parking on the internal access drives to accommodate overflow parking from larger events at the conference center would no longer be provided as the conference center would be removed with Phase 2. Total on-site parking with buildout of Phases 1 and 2 would be 850 stalls, of which 775 stalls would be located in the two garages and 75 stalls in surface lots.

Code Requirements. Parking required by the Seattle Land Use and Zoning Code for Alternative 1B is similar to that described for Alternative 1A. The proposed parking supply under Alternative 1B, Phase 2 would not meet the code requirements based on the "Institute for Advanced Study in Single-Family Zones (existing)" use category listed in the previously referenced Chart A of the Code. As noted previously, however, parking code requirements do not always reflect actual parking demand for a specific development and this could be addressed by an ACU.

Parking Demand. Parking demand estimates for Alternative 1B are the same as those described for Alternative 1A. Under Phase 1 of Alternative 1B, the proposed parking supply of 640 stalls would exceed the estimated parking demand of 355 stalls. For project buildout of Phases 1 and 2, the proposed parking supply of 850 stalls would also exceed the estimated demand of 493 stalls

Alternative 2A: Single-Family Development with 38th Avenue NE Improvements

Construction

Construction of Alternative 2A would generate some truck and vehicle traffic associated with excavation and hauling, delivery of materials, and similar types of activity. The amount of traffic associated with construction would be substantially less than that described for Alternative 1A. There would be less major excavation such as that required for the underground garages of Alternative 1A. Construction of Phase Alternative 2A would require excavation and removal of approximately 11,000 cubic yards of materials from the site. Using 20-cubic yard capacity truck and trailer combinations, the amount of material to be removed would require 550 truckloads. Each load would generate two truck trips (one trip traveling to the site and one trip traveling away from the site), resulting in a total of 1,100 truck trips. Heavy equipment requirements associated with single-family residential construction would also be significantly less than that required for the large buildings of Alternative 1A.

Street System

Under Alternative 2A, the road system in the immediate site vicinity would be modified. A new roadway would be constructed in the existing 38th Avenue Northeast right-of-way to provide access to the site. One of the subdivision streets would intersect with the improved 38th Avenue Northeast roadway at Northeast 44th Street. Site access would also be provided from two locations on Northeast 41st Street. One of the development's internal streets would intersect with Northeast 41st Street at approximately the same location as does the existing western site driveway. A second street from the subdivision would be located opposite 41st Avenue Northeast, just to the west of the existing eastern site driveway. The improvement of 38th Avenue Northeast would allow access to the site from Northeast 45th Street via 37th Avenue Northeast and 36th Avenue Northeast.

Traffic Generation

Project trip generation for Alternative 2A is summarized in Table 3-25. The trip generation was developed using regression equations published in the Institute of Transportation Engineers' (ITE) publication *Trip Generation* (6th Edition, 1997). The equations are based on case studies compiled by ITE of single-family residential developments (ITE Land Use #210).

Table 3-25. Trip Generation - Alternative 2A

	Daily	AM Peak Hour		PM Peak Hour	
		In	Out	In	Out
Residential (91 du's)	950	18	55	63	36
Less Existing (52,000sf)	600	64	13	12	65
Net New	350	-46	42	51	-29

Alternative 2A would generate 350 net new trips per day, including a reduction of 4 trips during the AM peak hour and 22 new trips during the PM peak hour.

Distribution and Assignment

Project-generated traffic was distributed and assigned to the vicinity street system based on data from the City of Seattle's travel forecast model. Data from the model on trip origin and destination for *residential* trips in the Laurelhurst and University District was used, as opposed to data for *employment* trips that was used for Alternatives 1A and 1B. Table 3-26 summarizes the resulting distribution percentages used to assign project-generated trips. The distribution is similar to that for the Institute for Advanced Study Alternatives 1A and 1B, with slightly more project traffic oriented to the downtown area employment base.

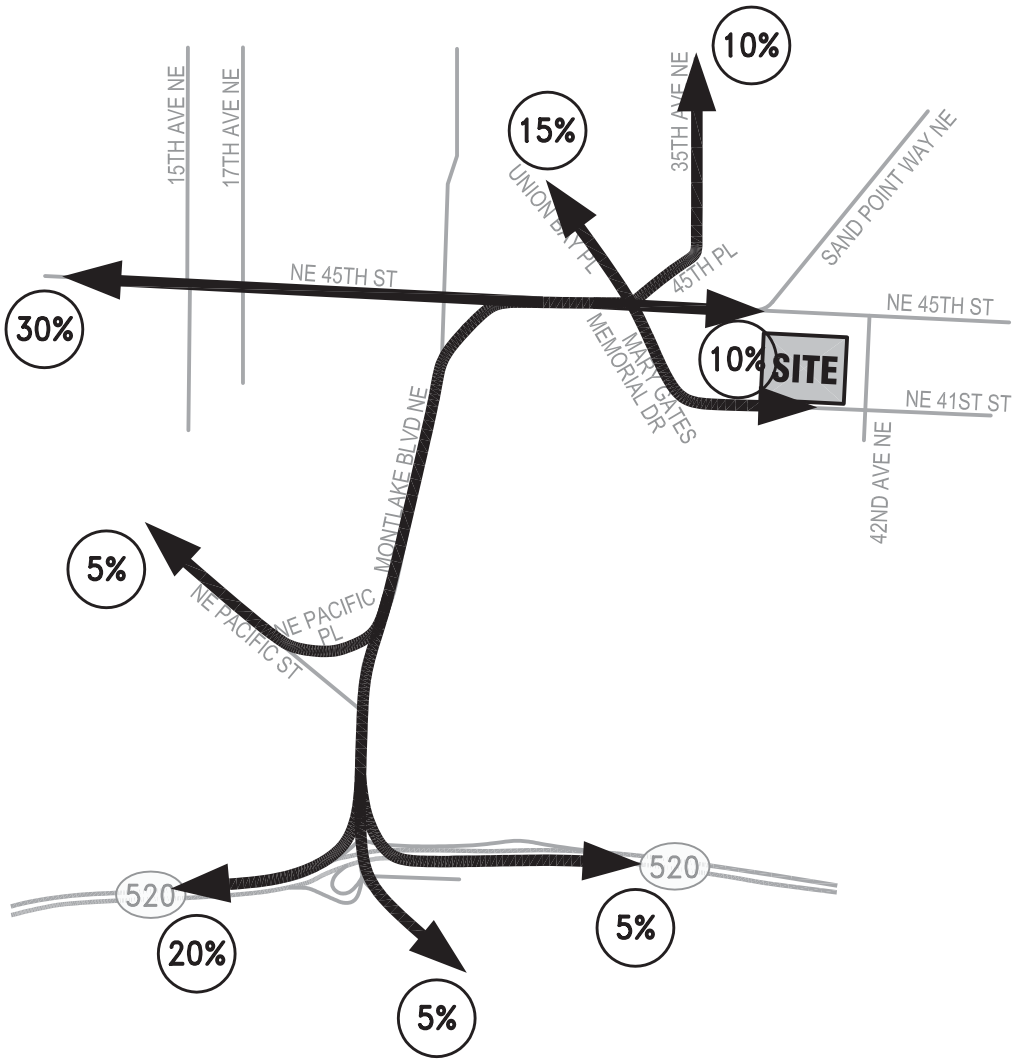
Table 3-26. Project Trip Distribution – Alternative 2A

Route (To / From)	Percent
I-5	30%
SR 520 West	20%
Union Bay Place	15%
35th Avenue Northeast	10%
Northeast 45th Street (East)	10%
Montlake Boulevard	5%
SR 520 East	5%
Pacific Street	5%
TOTAL	100%

The distribution pattern shown in Figure 3-29 was used to assign AM and PM peak hour project traffic to the project area roadways and intersections. The resulting peak hour assignment of project-generated traffic is shown in Figures 3-30 and 3-31.

Traffic Volume Impacts

Peak hour traffic volumes under Alternative 2A were developed by adding the project-generated trips to the No Action alternative peak hour traffic volumes at the study intersections. The resulting traffic volumes under Alternative 2A are shown in Figures 3-32 (AM peak hour) and 3-33 (PM peak hour). These volumes were then compared with the 2005 No Action traffic volumes in order to identify the traffic volume impacts of the project. Table 3-27 summarizes the percent impact of project-generated traffic at the project area intersections during the AM and PM peak hours.



LEGEND

X% = PERCENT TRIP DISTRIBUTION

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FIGURE 3-29.
PROJECT TRIP DISTRIBUTION - ALTERNATIVE 2A
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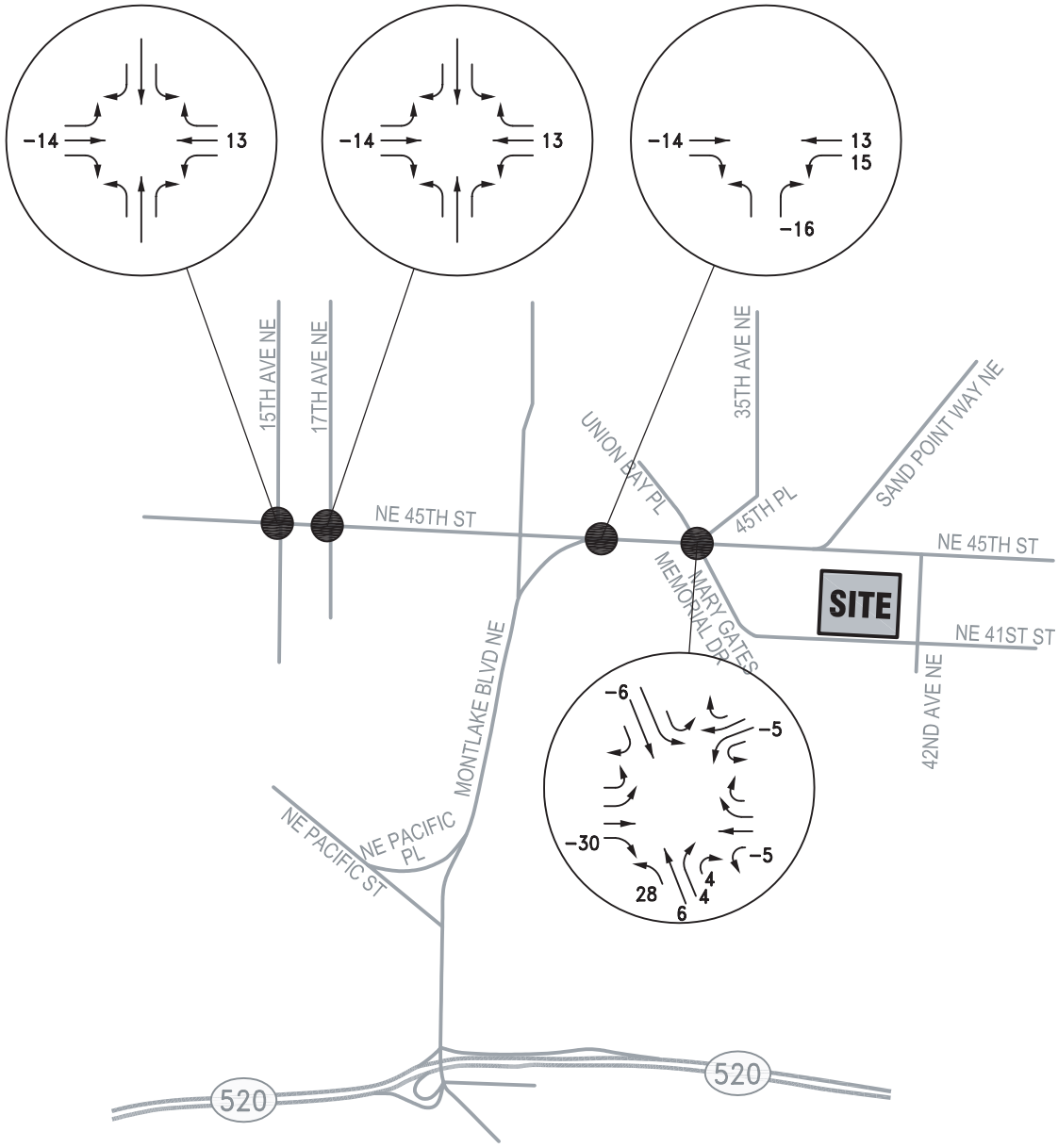

NORTH
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File name: Fig3_30_AMpeak2A.ai
Original graphic by: JAB
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Date: 10/28/04

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FIGURE 3-30.
AM PEAK HOUR PROJECT TRIP ASSIGNMENT - ALTERNATIVE 2A
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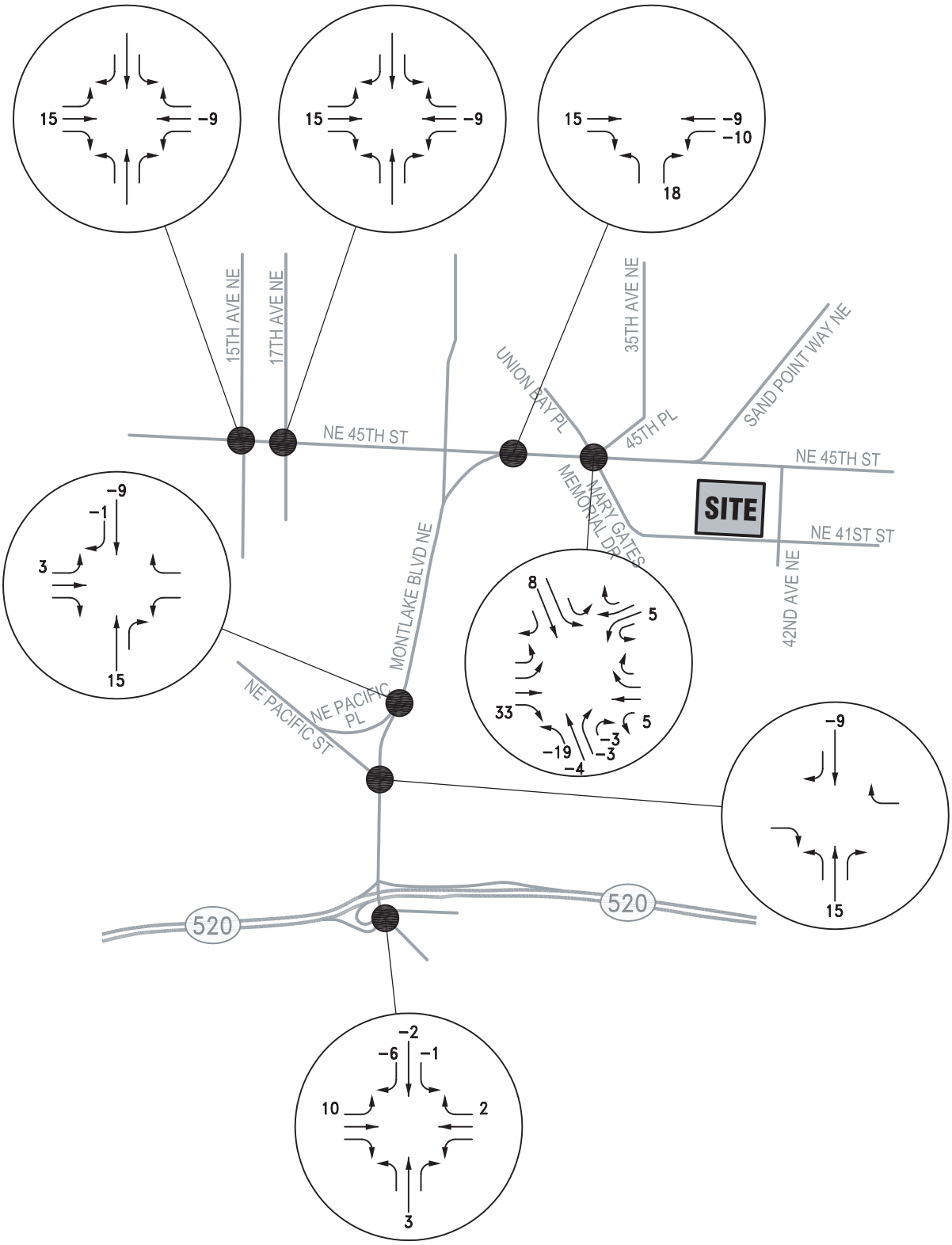

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File name: Fig3_31_PMpeak2A.ai
Original graphic by: JAB
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Date: 10/28/04

Source: The Transpo Group, 2004.

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FIGURE 3-31.
PM PEAK HOUR PROJECT TRIP ASSIGNMENT - ALTERNATIVE 2A
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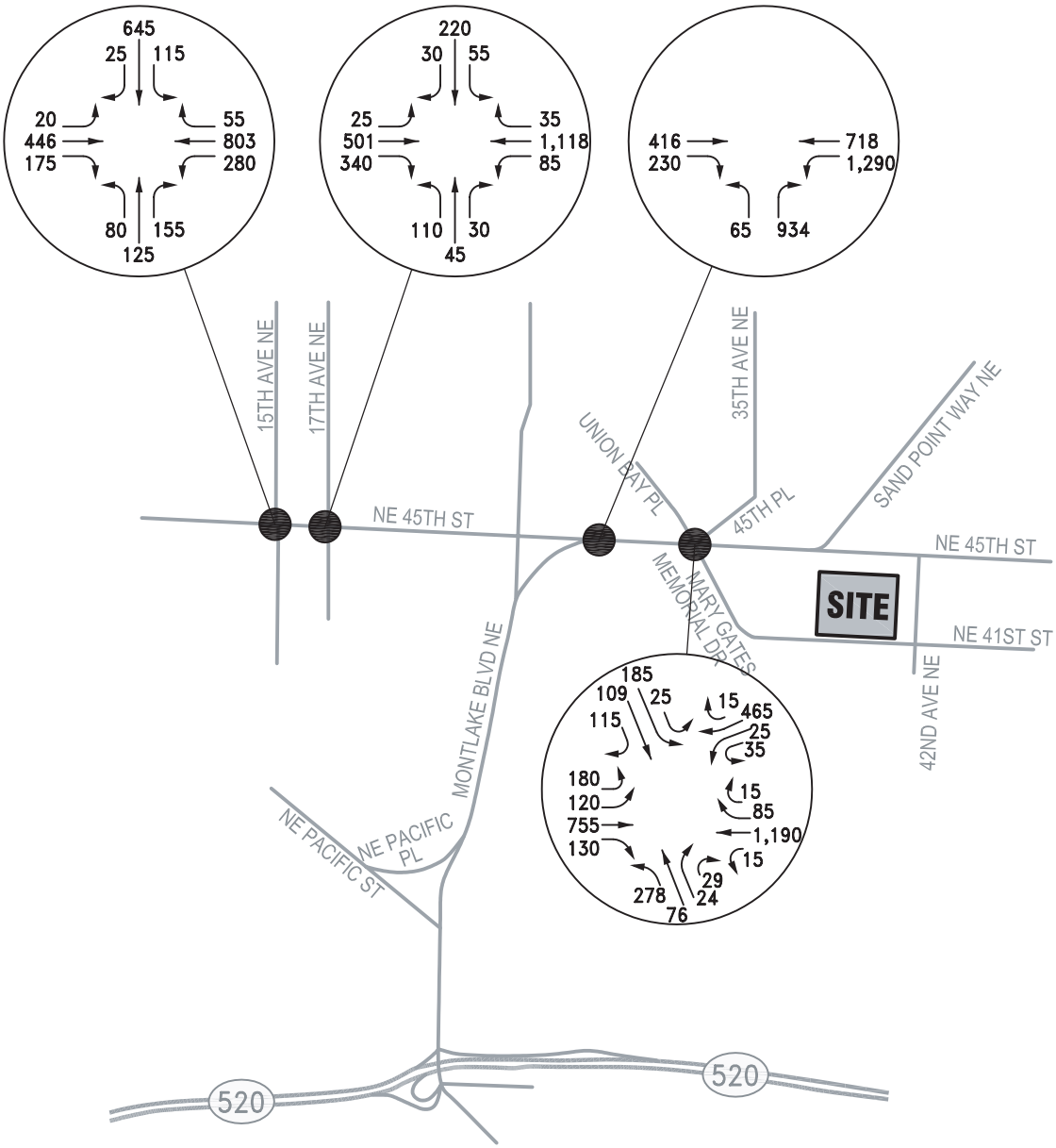

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File name: Fig3_32_2005AMpeak2A.ai
Original graphic by: JAB
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Date: 10/28/04

Source: The Transpo Group, 2004.

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FIGURE 3-32.
2005 AM PEAK HOUR TRAFFIC VOLUMES - ALTERNATIVE 2A
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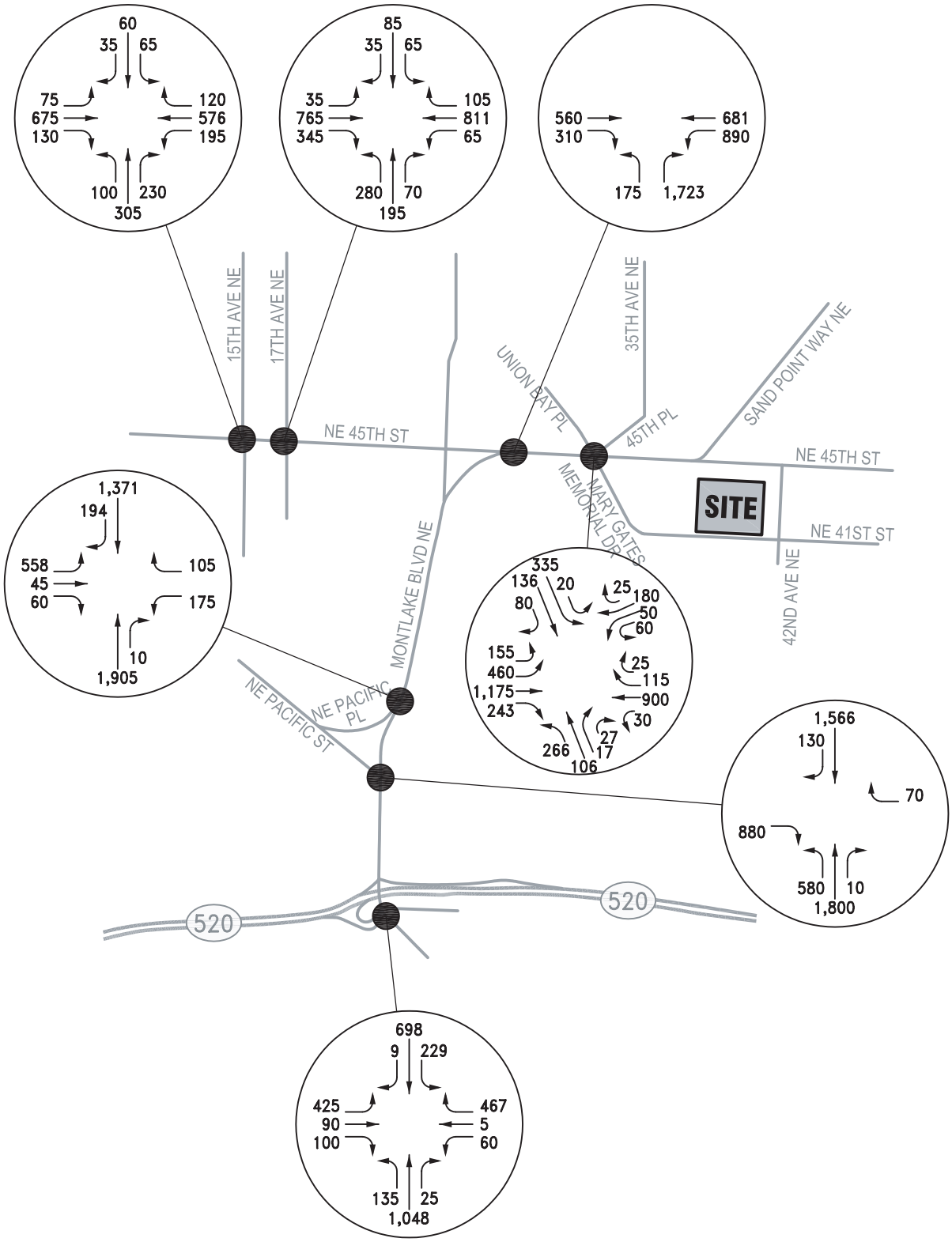

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File name: Fig3_33_2005PMpeak2A.ai
Original graphic by: JAB
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Date: 10/28/04

Source: The Transpo Group, 2004.

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FIGURE 3-33.
2005 PM PEAK HOUR TRAFFIC VOLUMES - ALTERNATIVE 2A
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SEATTLE, WASHINGTON

Table 3-27. Peak hour Traffic Volume Impacts – Alternative 2A

Intersection	2005 No Action	Project Trips	Total With Project	Percent Increase
AM Peak Hour:				
1. Northeast 45th St/15th Ave Northeast	2,925	-1	2,924	0%
2. Northeast 45th St/17th Ave Northeast	2,595	-1	2,594	0%
3. Northeast 45th St/Montlake Blvd Northeast	3,655	-2	3,653	-0.1%
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl1	3,875	--5	3,870	-0.1%
PM Peak Hour:				
1. Northeast 45th St/15th Ave Northeast	2,560	6	2,566	0.2%
2. Northeast 45th St/17th Ave Northeast	2,850	6	2,856	0.2%
3. Northeast 45th St/Montlake Blvd Northeast	4,325	14	4,339	0.3%
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl1	4,385	22	4,407	0.5%
5. Northeast Pacific Pl/Montlake Blvd	4,415	8	4,423	0.2%
6. Northeast Pacific St/Montlake Blvd	5,030	6	5,036	0.1%
7. SR-520 EB Ramps/Montlake Blvd	3,285	6	3,291	0.2%

Beyond the immediate project area, traffic generated by the project would account for less than one percent of the total entering traffic during the AM and PM peak hours. During the AM peak hour, Alternative 2A would actually reduce traffic volumes at the study intersections. This is a combination of the high traffic volumes through study intersections without the project, and the relatively low trip generation associated with Alternative 2A.

Traffic Operations Impacts

Peak hour levels of service under Alternative 2A were calculated and compared to 2005 No Action levels of service for each of the project area intersections. Table 3-28 provides a summary of Alternative 2A AM and PM peak hour levels of service, delay, and v/c ratios. For purposes of comparison, No Action levels of service are also provided.

Table 3-28. Peak-Hour Levels of Service – Alternative 2A

Study Intersection	No-Action (2005)			Alternative 2A		
	LOS	Delay	V/C	LOS	Delay	V/C
AM Peak Hour:						
1. Northeast 45th St/15th Ave Northeast	E	78.6	0.83	E	78.6	0.84
2. Northeast 45th St/17th Ave Northeast	C	30.9	0.74	C	30.9	0.74
3. Northeast 45th St/Montlake Blvd Northeast	B	17.7	0.63	B	17.4	0.63
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl	E	73.0	1.20	E	75.3	1.21
PM Peak Hour:						
1. Northeast 45th St/15th Ave Northeast	C	32.0	0.67	C	32.1	0.68
2. Northeast 45th St/17th Ave Northeast	D	51.7	0.92	D	52.6	0.92
3. Northeast 45th St/Montlake Blvd Northeast	B	19.2	0.82	B	19.3	0.83
4. Northeast 45th St/Northeast 45th Pl/Union Bay Pl	F	95.3	1.13	F	94.2	1.13
5. Northeast Pacific Pl/Montlake Blvd	C	25.2	0.86	C	25.3	0.87
6. Northeast Pacific St/Montlake Blvd	C	22.3	0.81	C	22.3	0.81
7. SR-520 EB Ramps/Montlake Blvd	F	224.4	1.11	F	226.0	1.11

In 2005, levels of service at all of the study intersections under Alternative 2A would remain unchanged from those under the No Action alternative. Two intersections that would operate at LOS F in the PM peak hour under the No Action alternative in 2005 would be impacted by project traffic. Project traffic would actually result in a slight reduction in average delays at the Northeast 45th Street / Northeast 45th Place / Union Bay Place intersection. This is due to the addition of project traffic to movements that experience lower delays than the intersection average, which is calculated based on delays for all movements at the intersection. By adding traffic to these movements, the calculated average delay for the intersection decreases.

The second LOS F intersection that would be impacted by Phase 1 project traffic is the SR-520 Eastbound Ramps/Montlake Boulevard intersection. Unlike Alternatives 1A and 1B, the addition of project traffic would increase average delays at the intersection. This is due to the fact that the traffic pattern for Alternative 2A is primarily is inbound from SR-520 during the PM peak hour, adding traffic to the eastbound left-turn movement at the intersection. This is in contrast to the traffic patterns for Alternatives 1A and 1B, which are primarily outbound and add traffic to the southbound right-turn movement. However, the increase in delay is relatively minor, from 224.4 seconds to 226.0 seconds.

Transportation Concurrency

As described under Alternative 1A, three screenlines from the Concurrency Project Review System were selected to analyze the various alternatives. The three screenlines were selected based on their location in relationship to the project site and the estimated influence area of the project. As shown in Table 3-29, the transportation concurrency analysis indicates that with traffic generated by Alternative 2A, the screenlines would have v/c ratios that are less than the City level of service threshold. As a result, Alternative 2A would meet concurrency requirements.

Table 3-29. Transportation Concurrency – Alternative 2A

Screenline Number	Location	Direction	Capacity	1998 Volume	LOS Standard	Project Traffic	V/C with Project
5.16	Ship Canal	NB	4,300	3,820	1.20	15	0.89
	(Univ. & Montlake Bridges)	SB	4,300	3,630	1.20	-9	0.84
6.15	South of Northeast 80th Street	NB	4,300	2,640	1.00	-10	0.61
	(20th Ave Northeast to Sand Point Way)	SB	4,300	1,580	1.00	18	0.37
13.13	East of I-5	EB	6,760	3,710	1.00	16	0.55
	(Northeast Pacific St to Northeast Ravenna Blvd)	WB	6,760	4,460	1.00	-9	0.66

Transit Impacts

Based on data for the project area compiled for the City's Census Transportation Planning Package model, it is expected that less than 10 percent of peak hour trips associated with residential uses would be transit trips. Based on the project's trip generation of 66 AM peak hour trips and 89 PM peak hour trips, the project would generate less than 10 transit trips during the peak hours. These project-generated transit trips would be accommodated by existing transit service with no adverse impacts.

Non-Motorized Travel Impacts

Under Alternative 2A, the project is likely to generate some pedestrian and bicycle trips between the project site and the Northeast 45th Street commercial and retail area and also between the site and the Laurelhurst playfield a few blocks east of the site. The proposed 50-foot right-of-ways for the subdivision streets would be sufficient to accommodate sidewalks on one or both sides of

the street. Off-site, existing non-motorized facilities in the area are expected to be able to accommodate project-generated bicycle and pedestrian activity.

Safety Impacts

By adding traffic volumes to study intersections and roadways, there would likely be a proportionate increase in the potential for traffic accidents as a result of the project. However, it does not appear that this increase in traffic would create an identifiable safety hazard at any of the study intersections, since no unusual existing traffic hazard was identified.

Parking Impacts

Single-family residential developments with garages and driveways to accommodate parking do not generally generate any significant off-site parking impacts. The 50-foot right-of-ways proposed for the on-site streets would provide sufficient street widths to accommodate additional parking on one or both sides of the street.

Alternative 2B: Single-Family Development without 38th Avenue NE Improvements

Alternative 2B would generally be similar to Alternative 2A with respect to transportation impacts. Trip generation for the 90 lots under Alternative 2B would not be noticeably different from that for the 91 lots under Alternative 2A. Impacts to levels of service at the study intersections would also not be noticeably different.

A difference with respect to transportation between Alternative 2A and 2B is the 38th Avenue Northeast right-of-way. As noted previously, under Alternative 1A the right-of-way would be improved to provide access to the site. Under Alternative 2B, the right-of-way would not be improved. With the elimination of access on 38th Avenue Northeast, potential use of 37th and 36th Avenues by project traffic to access Northeast 45th Street would be reduced compared to Alternative 2A.

3.4.3 Mitigation Measures

This section identifies measures that could offset or reduce transportation impacts of the proposed project.

Construction Traffic

The following measures could serve to reduce traffic impacts during construction of the four build alternatives (1A, 1B, 2A, 2B).

All construction worker vehicles could be required parked in a temporary on-site parking area or in a remote off-site parking lot such that the on-site and on-street parking supply in and around the project site is not impacted by construction worker vehicles.

Construction material deliveries could be scheduled and coordinated to and from the site to minimize congestion during peak travel times.

Safe pedestrian and vehicular circulation could be provided adjacent to the construction site through the use of temporary walkways, signs, and manual traffic control.

Trucks could be staged within the construction site.

A flagger could be stationed at the site entrances on Northeast 41st Street to direct and control traffic.

Off-Site Mitigation

Project traffic would increase average delays at the Northeast 45th Street / Northeast 45th Place / Union Bay Place intersection. The intersection currently operates at LOS F in the PM peak hour and is forecast to continue to operate at LOS F under the No Action and the four build alternatives.

It is recommended that channelization modifications be made to reduce average delays and project impacts at the intersection. The three lanes on the northbound approach on Union Bay Place are currently striped to provide one left-turn only lane, one shared left-turn/thru lane and one shared right-turn/thru lane. Modifying the channelization to convert the center lane from a shared left-turn/thru lane to a left-turn only lane would provide more capacity for left-turns, which is the highest volume movement in the PM peak hour. The resulting configuration of two left-turn only lanes and one shared right-turn/thru lane would reduce delays at the intersection. Table 3-30 summarizes the reduction in PM peak hour delays that would result. With the signal modifications, increases to PM peak hour average delays at the intersections as a result of the project would be less than one second for Phase 1 of Alternatives 1A and 1B and a slightly more than six seconds for Phase 2. Any reductions in employee use of Single Occupant Vehicles (SOV) resulting from the proposed TMP (see following section) would likely reduce the project-generated increase in delays at the intersection to less than five seconds.

Table 3-30. Northeast 45th Street/Northeast 45th Place/Union Bay Place Mitigation

Alternatives	Average Delays – PM Peak Hour		
	No Action	With Project Unmitigated	With Project & Channelization Modifications
Alternatives 1A & 1B Phase 1 (2005)	95.3	102.0	95.7
Alternatives 1A & 1B Phases 1 and 2 (2010)	101.2	116.8	107.5
Alternatives 2A & 2B – (2005)	95.3	94.2	n/a1

1. Mitigation not recommended for Alternatives 2A or 2B. Project would reduce average delay at the intersection (see explanation in text).

Transportation Management Program

DCLU Director's Rule 2-94 and SDOT Director's Rule 3-94 note that mitigation of traffic and parking impacts associated with development may by accomplished by requiring, among other things, a Transportation Management Program (TMP). TMPs are generally focused on employment based developments such as under Alternatives 1A and 1B. They are less effective for residential developments, particularly single-family developments such as Alternatives 2A and 2B where there are few options for implementing and enforcing TMP measures.

The TMP consists of the following elements: TMP Goal, Standard Implementation Requirements, and Evaluation Criteria, all of which are described in the following paragraphs.

TMP Goal. The goal of this program is to reduce employee Single Occupant Vehicle (SOV) travel to the site by a percentage consistent with the intent of SEPA and City practice for similar TMP goals. Recently approved downtown office buildings have included as a goal, an single occupant vehicle (SOV) percentage of 50 percent. Because transit service to the vicinity area is not as significant as in the downtown, a less aggressive SOV goal would be appropriate in this case.

Standard Implementation Requirements. The standard implementation requirements for the TMP are defined by the Director's Rule. The standard implementation requirements that apply include:

Appointing a Building Transportation Coordinator (BTC);

Holding periodic promotional events;

Installing and maintaining a Commuter Information Center;

Coordinating a ridematch program with Metro's ridematching service;

Performing building occupancy surveys; and

Preparing annual reports and submitting to the SDOT.

Supplemental Implementation Requirements. Measures to reduce long-term parking demand would focus on increasing transit and carpool mode splits. Since the purpose of this Draft EIS is to disclose traffic impacts, and identify potential mitigating measures, no specific commitment as to number of stalls set aside for carpools, or amount of bus pass subsidy is reflected herein. It is anticipated that commitments will be made through subsequent documentation, as part of the MUP process. In addition to the standard implementation requirements, the following supplemental measures could be implemented to provide incentives for meeting the goals of the TMP:

Transit Subsidy: Provide monthly transit pass subsidies to reduce the cost of a one-month bus pass -- to the extent that transit subsidies are part of the TMP.

Preferential Parking for Carpools and Vanpools: Designate a percentage of the long-term parking stalls for preferential carpool or vanpool use.

Bicycle Racks: Install bicycle racks for use by both employees and visitors to the site.

Evaluation Criteria: The evaluation of the TMP would be in accordance with the evaluation procedures outlined in Director's Rule 2-94. The long-term monitoring for TMP compliance would be the responsibility of the SDOT. Monitoring would be based on the surveys and reports required as Standard Implementation Requirements.

3.4.4 Significant Unavoidable Adverse Impacts

Alternatives 1A and 1B would increase traffic at the intersection of NE 45th Place and Union Bay Place. However, increases in average delays for Phase 1 would be less than five seconds with the identified mitigation measures and no unavoidable adverse impacts would be expected. Significant increases in delay at this intersection still would occur following Phase 2, although the increase in delay would be less following implementation of the identified mitigation measures.

CHAPTER 4.0
OTHER POTENTIAL IMPACTS AND MITIGATION MEASURES

4.1 Air and Noise

4.1.1 Affected Environment

Air Quality

The project site lies within the Puget Sound airshed, an area where air quality is greatly influenced by urban development, the Pacific Ocean, the mountains, and weather patterns. The Puget Sound basin has a mild, modified marine climate characterized by cloudy, cool, and wet winters, and relatively dry and mild summers. The average total precipitation for the area is approximately 38 inches. Temperatures range from approximately 69° to 75° F in the summer and from approximately 44° to 50° F in the winter (Western Regional Climate Center, 2001). Temperatures are generally moderate with few extremely cold or hot days throughout the year. When onshore airflow to the area is interrupted, the combination of urban activities, weather, and topography can lead to air stagnation and rising air pollution.

Existing air quality at the project site and in the vicinity is typical of urban residential areas. The project site is located one block south of Northeast 45th Street, a major arterial in the area, and is bordered on three sides by predominantly residential neighborhoods, with a small area of multi-family development and commercial businesses on the north side of the site. As a result, the main source of air pollution in the project area is from automobiles. The project area, particularly Northeast 45th Street, experiences high traffic volumes, resulting in peaks of automobile emissions (primarily during morning and evening rush hours). Other sources of air pollutants include wood smoke from fireplaces and emissions from yard maintenance equipment (PSCAA, 1999).

The six "primary pollutants" related to air quality include particulate matter ($PM_{10}/PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), and lead (Pb). These pollutants are regulated through federal, state, and local standards. The Puget Sound region is currently meeting federal standards for PM_{10}, $PM_{2.5}$, CO, and O_3 (Kirchner, personal communication, 2002). These pollutants are monitored by the Puget Sound Clean Air Agency, which enforces local, state, and federal air quality laws and regulations. The central Puget Sound Region is currently designated by the U.S. Environmental Protection Agency as a maintenance area for PM_{10}, CO, and O_3, meaning that the region is meeting the federal standards for these pollutants and is designated as in attainment (PSRC, 2001). The City of Seattle has exceeded the ozone standard on occasion, but it has not been exceeded up to the violation limit.

Monitoring data for stations in Seattle collected in October/November 2001 and May/June 2002 (PSCAA, 2001, 2002) were selected to demonstrate recent air quality conditions in the Seattle area during two different seasons. These data show that carbon monoxide 8-hour concentrations,

measured at the University District (Seattle) monitoring station, the closest station to the project site, for October and November 2001 and May and June 2002 did not exceed the federal standard. This station is located approximately 1.5 miles west of the project site. PM10 concentrations also did not exceed the federal standard for the same time periods, but in November 2001, exceeded the Washington State Clean Air standard at a monitoring station in the Duwamish Valley, located several miles south of the project site. At the same Duwamish monitoring station, PM2.5 concentrations reached the "unhealthy for sensitive groups" level in November 2001, but they did not reach the overall "unhealthy" level for October and November 2001 and May and June 2002 (PSCAA, 2001, 2002).

In addition to the pollutants described above, asbestos-containing steam pipe insulation as well as other asbestos-containing building materials are present in the existing buildings on the project site.

Relevant Local, State, and Federal Standards and Guidelines

In addition to state and federal air quality standards, there are two other local and regional regulations applicable to air quality. The Seattle Municipal Code (SMC) section 25.05.675, Specific Environmental Policies, would apply to construction and operation of the proposed Talaris Research Institute. SMC 25.05.675.2.d describes mitigation measures for air quality impacts that may be required by the City prior to project approval.

Puget Sound Clean Air Authority (PSCAA) Regulation I (9.11) would apply to construction activities for Phases 1 and 2. The regulation prohibits emissions of air pollutants and odor-bearing air contaminants sufficient to interfere with the “reasonable enjoyment” of life or property. PSCAA Regulation III, Article 4: Asbestos Control Standards would also apply. This regulation specifies notification procedures, and demolition and disposal requirements and procedures.

Noise

The human ear responds to a wide range of sound intensities. The decibel scale used to measure sound is a logarithmic rating system that accounts for the large differences in audible sound intensities. This scale accounts for the human perception of a doubling of loudness as an increase of 10 decibels. A 70-decibel sound level will sound twice as loud as a 60-decibel sound level. People generally cannot detect differences of 1 decibel; under ideal laboratory conditions, differences of 2 or 3 decibel can be detected, while a 5-decibel change could be perceived under normal conditions. Table 4-1 shows representative sounds and corresponding noise levels produced in decibels.

When addressing the effects of noise on people, it is necessary to consider the frequency response of the human ear. The frequency weighting most often used is A-weighting; measurements from instruments using this system are reported in “A-weighted decibels” or dBA. All sounds in this discussion are reported in dBA.

Factors affecting the impact that a given noise will have on a person include frequency and duration of the noise, the absorbency of the ground and surroundings, and the distance of the

receptor from the noise source. The receptor and the usual background noise levels also determine the degree of impact.

Table 4-1. Sound Levels Produced by Common Noise Sources

Thresholds/Noise Sources	Sound Level (dBA)	Subjective Evaluations	Possible Effects on Humans
Human Threshold of Pain Carrier jet takeoff (50 ft)	140	Deafening	Continuous exposure can cause hearing damage
Siren (100 ft) Loud rock band	130		
Jet takeoff (200 ft) Auto horn (3 ft)	120		
Chain saw Noisy snowmobile	110		
Lawn mower (3 ft) Noisy motorcycle (50 ft)	100	Very Loud	
Heavy truck (50 ft)	90		
Pneumatic drill (50 ft) Busy urban street, daytime	80	Loud	
Normal automobile at 50 mph Vacuum cleaner (3 ft)	70		Possible Speech Interference
Large air conditioning unit (20 ft) Conversation (3 ft)	60	Moderate	
Quiet residential area Light auto traffic (100 ft)	50		Possible Sleep Interference
Library Quiet home	40	Faint	
Soft whisper (15 ft)	30		Minimal Effects
Slight Rustling of Leaves	20	Very Faint	
Broadcasting Studio	10		
Threshold of Human Hearing	0		

Source: US Environmental Protection Agency, 1971.

There are presently few substantial noise sources on the site. The main sources of on-site noise are vehicles entering and leaving the property. Other on-site noise sources include periodic engine noise from grounds maintenance equipment (e.g., mowers, leaf blowers), mechanical equipment, garbage trucks and dumpsters, slamming of car doors, and voices, particularly during conference gatherings.

The main off-site source of noise at the project site is traffic using Northeast 45th Street and Sandpoint Way, located two blocks north of the project site (Figure 2-2). The project site is located approximately one mile from University Village shopping center, approximately one mile from the main campus of the University of Washington, and approximately 0.10 mile from Children's Hospital. These major land uses generate a large amount of traffic that use Northeast 45th Street and Sandpoint Way (see Chapter 3, Transportation, for more detail). Traffic

associated with each facility has a different traffic pattern that uses area roadways at various times throughout the day and week, contributing to traffic noise on Sandpoint Way.

Other off-site sources of noise include airplane traffic, occasional helicopter landings at the Children's Hospital emergency landing facility, and noise typical of residential areas including slamming of car doors, voices, and yard maintenance equipment.

Relevant Local, State, and Federal Noise Standards and Guidelines

City of Seattle's Municipal Code, SMC 25.08.410, establishes maximum permissible sound levels. These noise limit levels are shown in Table 4-2. Between the hours of 10:00 p.m. and 7:00 a.m. during weekdays, the levels shown in Table 4-2 are reduced by 10 dBA where the receiving property is located in a residential neighborhood of the City.

Table 4-2. Maximum Permissible Sound Levels for City of Seattle

Land Use of Noise Source	Land Use of Receiving Property (dBA)		
	Residential	Commercial	Industrial
Rural	52	55	57
Residential	55	57	60
Commercial	57	60	65
Industrial	60	65	70

Source: SMC 25.08.410

The City of Seattle has also established noise parameters for construction and equipment operations. Between the hours of 7:00 a.m. and 10:00 p.m. on weekdays, noise levels as described above and listed in Table 4-2, may be exceeded. Specific permissible dBA levels may be exceeded for construction and equipment operations; these are outlined in SMC 25.08.425 and summarized in Table 4-3. When noisy construction activities occur, potential impacts to adjacent sensitive receptors may require mitigation.

Table 4-3. Permissible dBA Levels for Construction Activities

Noise Type	Allowable Time Period (weekdays)	Allowable Noise Increase Above Standard1
Equipment on Construction Sites	7:00 a.m. and 10:00 p.m.	25 dBA
Portable Powered Equipment	7:00 a.m. and 10:00 p.m.	20 dBA
Powered Equipment Used in Temporary or Periodic Maintenance or Repair of Residential Property	7:00 a.m. and 10:00 p.m.	15 dBA
Impact Construction Equipment	Any one-hour period between 8:00 a.m. and 5:00 p.m.	Not to exceed: 90 dBA continuously 93 dBA for 30 minutes 96 dBA for 15 minutes 99 dBA for 7.5 minutes

Source: SMC 25.08.425

1. Measured at 50 feet or at the complainant's property line, whichever is further.

In addition to the allowable noise levels and time periods described in SMC 25.08.425, SMC 25.05.675, Specific Environmental Policies, (specifically subsections 25.05.675.B.d and 25.05.675.L) describes the City's policies and potentially required mitigation measures for construction and operation noise.

4.1.2 Impacts

Alternative 1A: Institute for Advanced Study with Increased Bulk and Scale and Code-Required Parking

Construction

Construction activities would result in periodic short-term air quality and noise impacts on-site and in the vicinity of the project site for the duration of construction. Phase 1 construction is estimated to last approximately 15 months with operation of the facility to begin in late 2006. Phase 2 construction is expected to begin in 2008 and last approximately 15 months as well, with operation of this facility to begin in 2010.

Air. Building demolition, land clearing, earth moving, and excavation activities would generate dust during the initial phases of the estimated 15 months of construction for Phase 1. Approximately 77,200 cubic yards of soil would be removed for construction of the Phase 1 building. Some soil would be transported off-site for disposal, while other excavated soil would likely be re-used onsite. Dust could be generated by loose soil blowing out of haul truck beds as they haul excavated material off-site. However, because loads would be covered or wetted down, no substantial impacts from blowing dust are expected to occur. Dust could also be generated on-site during excavation and earth-moving phases in excavation areas, vehicle access areas, and the construction staging areas that would be located east of the Phase I building. Dust could drift into residential and retail/commercial areas adjacent to the project site, particularly areas closest to the project site on the north and west sides of the property, during construction activities. With implementation of appropriate mitigation measures, however, impacts from drifting dust are not expected to be significant.

Asbestos-containing materials in the existing Talaris Conference Center buildings present an air quality hazard during demolition and debris removal. Under Alternative 1A, three buildings (Apartments A, B, and C) would be demolished. Demolition activities would include proper removal and disposal of this material off-site per Puget Sound Clean Air Agency (PSCAA) Regulation III, Article 4: Asbestos Control Standards. With the adherence to proper removal and disposal techniques, the potential for fugitive asbestos-containing dust to be dispersed by demolition activities would likely be small.

Paving operations for surface parking would result in temporary odors from asphalt mix as it is being placed on the site. Paving activities should last approximately 5days. These odors could negatively affect nearby properties, but would be short in duration and would cease upon paving completion.

While there is presently no design for Phase 2, construction of the Phase 2 building would produce approximately the same impacts as those described for the Phase 1 building due to the

similar types of buildings that would be demolished, amounts of excavation that would be required, and the similar length of construction. Phase 2 construction is more likely to create the potential for some impact to residential areas located to the north and east of the project site. Additional dust could be generated for land clearing and earth moving associated with construction of surface parking on the site. While no hauling of earth is anticipated to be required for construction of surface parking, earth-moving activities could locally generate dust that could temporarily impact surrounding residential areas.

In addition to dust, construction vehicles, equipment, and worker's vehicles could generate engine emissions and odors throughout the project period. Periodically, adjacent property owners or people at the adjacent retail/commercial businesses could be exposed to exhaust odors. However, because impacts would be temporary and periodic in nature, impacts from exhaust on adjacent property owners are not expected to be substantial with implementation of appropriate mitigation measures.

Paving of parking areas and driveways following building construction would also produce odors detectable to nearby residents and people at the businesses. Paving activities would likely last several days, and odors would cease upon completion of paving.

Noise. Construction-related noise would occur throughout the 15-month construction period of Phase 1, but vary would vary in intensity over the period depending on the phase of construction and specific activities. It is expected that the greatest amount of noise would be produced during the demolition, earth moving, and excavation phases of construction, when heavy equipment (dozers, backhoes, etc.) and heavy trucks would be used. Diesel-powered construction equipment typically makes more noise compared to gasoline-powered vehicles. The low frequency of diesel engines travel farther and can impact older homes with less insulation and single-pane windows. Chains, metal truck beds, and vehicle rattling may temporarily create metal-to-metal noise. Residences and businesses to the north and west of the project site would be most affected by construction noise. Residences located up to a few blocks away from the project area would also likely temporarily impacted by demolition and construction activities, engine noise, and backup alarms, but noise levels would be lower due to distance and buffering by other homes and buildings.

The remainder of the construction period would consist of building construction, paving of parking areas, and addition of landscaping. Noise sources during this period of construction would include worker vehicle engines; heavy trucks delivering construction materials; small equipment such as drills, saws, and hammers; and voices. Residences and businesses immediately adjacent to the north and west of Phase 1 would likely be most affected by construction noise.

Construction noise would be limited to the period between 7:00 a.m. and 5:00 p.m. and would comply with the City of Seattle noise parameters (SMC 25.08.425).

Noise impacts related to construction activities for the Phase 2 building would generally be the same as described above for the Phase 1 building, with the residences along the east and north property boundary being the most affected by construction noise.

Operation

Air. Following construction, air quality impacts would be similar to existing conditions, with visitor and employee vehicles being the predominant source of air emissions from the project. The proposed Talaris Research Institute would be an active research facility, resulting in more vehicle traffic entering and exiting the project site on a regular basis than currently occurs (refer to Chapter 3, Transportation, for a detailed description of traffic impacts). Most vehicle trips are expected to occur at the start and finish of the regular workday, which would generate the greatest amount of vehicle exhaust from the site. Truck loading bays would be located underground to minimize disruption to nearby residents from delivery truck exhaust odors.

Once operational, Alternative 1A would generate an estimated net increase of 1,250 daily trips during Phase 1. Phase 2 would generate an estimated net increase of 710 trips. At buildout, the Talaris Research Institute would generate a net increase of 1,960 trips per day – approximately 980 inbound and 980 outbound daily trips. According to the analyses performed for daily motor vehicle emissions budgets for the Puget Sound area, emissions levels are projected to remain below the established emissions budgets for the Puget Sound area through 2030 (PSRC, 2001). The additional car trips generated by the proposed Talaris Institute would add incrementally to the overall ambient pollutant levels in the project area but would not contribute an amount that would cause the exceedance of established emissions budgets.

In addition to the daily research activities at the proposed Talaris Institute, conferences are expected to be held occasionally at the Talaris Research Institute. Attendees would use various modes of transportation, including shuttles, taxis, and personal vehicles, creating periods of additional vehicle exhaust in the project area. Given current air quality and traffic conditions on NE 45th Street / Sandpoint Way, a busy urban arterial, this additional exhaust is not expected to make a detectable difference to local air quality.

Dumpsters for the facility would be located in the garage near the truck loading area to minimize odors. Dumpster odors would likely be removed from the building through the building's ventilation system that would expel exhaust away from the residential area. Impacts to air quality from such odors are not expected to be noticeable to adjacent residents or people at the adjacent businesses.

The Phase 2 building would generally result in the same air quality impacts as described for the Phase I building above. The additional air quality impacts, mainly in the form of additional vehicle trips, is not expected to be substantial given the existing urban development in the area and the expected level of traffic on surrounding arterials and streets.

Noise. Following construction, noise levels would be similar to existing conditions, with personal vehicles, voices, truck deliveries, mechanical and HVAC equipment, and landscape maintenance equipment being the main sources of noise from the site. Because of the Phase 1 building’s proximity to Northeast 45th Street and an existing commercial area, this portion of the site would have the highest ambient noise levels. The primary sources of noise on the Talaris Research Institute property are indicated in Table 4-4.

Table 4-4. Primary Noise Sources

Equipment	Location
Loading dock	Southwest corner of building.
Fans, Air Handling Equipment	Mechanical rooms Inside building.
Cooling Tower	East side of building.
Garage Fans	In garage, near ventilation shafts. Ventilation shafts are located in northern-most and southern-most portions of garage.
Electrical Transformer	NE corner of building.

Source: Michael Yantis, Noise Memorandum, June 21, 2004

Noise sources operating on the Talaris Research Institute property, and received by adjacent property are subject to the Seattle Noise Ordinance, Chapter 25.08 of the City of Seattle Municipal Code. Maximum permissible levels received on the adjacent property are limited to 55 dBA during daytime hours, between 7 am and 10 pm, and 45 dBA between the hours of 10 pm and 7 am. Noise sources that have a strong tonal aspect to the character of their noise have maximum permissible levels that are 5 dBA less: 50 dBA and 40 dBA for the daytime and nighttime periods (Yantis, 2004).

All noise sources operating on the property would be designed to be less than the Seattle Noise Code maximum limits at adjacent residential property with an adequate margin of safety (typically 5 dBA). Measurements of existing noise levels in neighborhoods surrounding the project site would be conducted at the onset of the building design. These noise levels would be used as the design noise levels, if they are less than the Seattle Noise Ordinance. Specific mitigation measures for each of the noise sources are summarized in Table 4-5.

Table 4-5. Specific Design Mitigation for Noise Sources

Equipment	Design Mitigation
Loading dock	Retaining walls would be substantially higher than the level of the loading dock, and staggered to prevent noise build-up in the receiving area.
Fans, Air Handling Equipment	Silencers would be added to the ductwork between the fans and the exterior louvers, as necessary.
Cooling Tower	Intake and discharge silencers are available from the cooling tower manufacturer, and would be included with the tower. The tower would be located not closer than 75‘ to the closest adjacent property line.
Garage Fans	Ventilation shafts would be designed to reduce noise levels. If necessary, the fan type would be changed to allow insertion of duct silencers between the fan and the ventilation shaft.
Electrical Transformer	Electrical Transformers would reside inside an enclosed electrical vault.

Source: Michael Yantis, Noise Memorandum, June 21, 2004

Preliminary designs for the facility indicate that there is sufficient space to accept the noise reduction measures. In addition to the design measures identified above, truck loading bays would be located underground to minimize disruption to nearby residents from truck delivery engine noise and backup alarms. Delivery hours would be established to minimize adverse noise impacts to nearby residents.

In addition to building system operations, the proposed facility under Alternative 1A would be an active research facility and would result in more vehicle traffic entering and exiting the project site on a regular basis than currently occurs (refer to Chapter 3, Transportation, for a detailed description of traffic impacts). Most trips are expected to occur at the start and finish of the regular workday. Parking for the Phase 1 building would be both underground and in a lot along the north property boundary and east of the Phase 1 building (Figure 2-4).

As discussed above, Alternative 1A would generate a net increase of 1,250 trips for Phase 1, and 740 trips at buildout of Phase 2 for a net increase of 1,960 trips per day. These additional car trips would add incrementally to the overall ambient noise levels in the project area. Conferences would be held occasionally, and attendees would use various modes of transportation, including shuttles, taxis, and personal vehicles, creating periods of additional noise in the area. This additional vehicle noise is not expected to make a detectable difference to project vicinity ambient noise levels, given the project site's location near commercial areas and traffic along NE 45th Street / Sandpoint Way, a busy urban arterial.

The Phase 2 building would have generally the same impacts to noise as described for the Phase 1 building above. The additional operational noise, mainly in the form of additional vehicle trips, would be more likely to affect residents located to the north and east of the project site.

Alternative 1B: Institute for Advanced Study with Reduced Parking and Design Alternatives to Reduce Bulk and Scale Impacts

Construction

Air. Impacts to air quality resulting from construction activities would be generally the same as described above for Alternative 1A. Under Alternative 1B, construction-related air quality impacts would be reduced compared to Alternative 1A due to the reduced amount of surface parking proposed (approximately 601 spaces). This reduced parking area would reduce the amount of clearing and grading that would occur as well as reduce the amount of asphalt required on the site.

Noise. Construction-related noise impacts for Alternative 1B would be similar to those described above for Alternative 1A. Under Alternative 1B, construction-related noise impacts would be reduced compared to Alternative 1A due to the reduced amount of surface parking proposed (approximately 601 spaces). This reduction in parking area would require less clearing and grading and less time for paving operations, thereby reducing the duration of noise generated by these activities.

Operation

Air. Air quality impacts related to operation of the proposed Talaris Research Institute would be generally the same as those described above for Alternative 1A. Alternative 1B would include approximately 236 fewer parking spaces than Alternative 1A, but the same number of staff and visitor vehicle trips as well as deliveries would occur under Alternative 1B as described for Alternative 1A. However, under Alternative 1B fewer surface parking spaces would be available thus fewer vehicles using surface spaces. This reduction in surface parking would reduce vehicle emissions directly to the environment, potentially reducing impacts to local air quality relative to Alternative 1A.

Noise. Operation-related noise impacts for Alternative 1B would be generally the same as described above for Alternative 1A. Alternative 1B would include approximately 236 fewer parking spaces than Alternative 1A but the same number of staff and visitor vehicle trips as well as deliveries would occur under Alternative 1B as described for Alternative 1A. However, under Alternative 1B fewer surface parking spaces would be available with fewer vehicles using surface spaces. This reduction in surface parking would reduce vehicle noise (i.e., engine starting, doors slamming), reducing impacts to nearby receivers relative to Alternative 1A.

Alternative 2A: Single Family Development with 38th Avenue NE Improvements

Construction

Air. Construction-related impacts to air quality would be similar in nature to those described above for Alternative 1A, but greater in magnitude due to the larger area of total land that would be cleared for construction of homes and internal roads. Under Alternative 2A, approximately 6 acres of the site would be cleared and graded to accommodate the 91 single-family residential lots. Impacts would include dust from clearing and grading activities, and exhaust from worker and construction vehicles and construction equipment. Adjacent residents and businesses to the west, east, and north boundaries would be the most affected by these activities. Residences to the south are separated by Northeast 41st Street, which would provide some buffer from dust and exhaust. While this analysis assumes a “worst-case” development of the site all at once, it is possible that individual lots would instead be developed incrementally over time.

Asbestos-containing materials in the existing Talaris Conference Center buildings present an air quality hazard during demolition and debris removal. Under Alternative 2A, all existing buildings on the project site would be demolished, resulting in a greater overall potential impact from asbestos that under Alternatives 1A or 1B. Demolition activities would include proper removal and disposal of this material off-site per Puget Sound Clean Air Agency (PSCAA) Regulation III, Article 4: Asbestos Control Standards. With the adherence to proper removal and disposal techniques, the potential for fugitive asbestos-containing dust to be dispersed by demolition activities would likely be small.

Noise. Construction-related noise impacts would be similar to those described above for Alternative 1A but potentially greater in magnitude due to the larger area of land clearing and

greater distribution of construction activities across the site. Noise from construction vehicles and equipment and heavy trucks used for supply delivery (including backup alarms) would be the greatest source of construction noise. Other sources of noise would include building-related sounds such as saws and hammers, and worker's voices.

If the site were developed all at once, adjacent residences and businesses would experience a greater amount of noise over a shorter period or time. Under the incremental option, adjacent residences and businesses would periodically experience noise from vehicles and heavy equipment along with building noises over a several year period, resulting in periodic disruption to ambient residential noise conditions in the area.

Operation

Air. Increases in vehicle trips would be the primary source of operation-related impacts to air quality under this alternative. Buildout of Alternative 2A would generate an estimated net increase of 350 trips per day. The AM peak hour trips could slightly decline, while there would be only slight increases in PM peak hour trips.

Other sources of odors or pollutants could include periodic use of yard maintenance equipment and wood-burning fireplaces. However, impacts to air quality are not expected to be substantial following the change from the existing Talaris Conference Center to a single-family residential development because of the similarity in number of vehicle trips currently generated by the site.

Noise. As described above for air, the number of vehicle trips expected to occur following buildout of Alternative 2A would increase by approximately 350 trips over the course of a day. Noise from vehicle engines is therefore not expected to be a substantial impact to surrounding properties because of the similarity in number of vehicle trips and existing traffic noise from Sandpoint Way and surrounding residential streets.

Operation-related noise impacts under Alternative 2A would be similar to existing noise conditions in the surrounding single-family neighborhood. Noises produced by these single-family residences would include sources such as vehicle engines, yard maintenance equipment, barking dogs, and human voices. These new noise sources on the proposed project site would have the greatest impact on adjacent residents and businesses that would be near enough to hear these sounds. Alternative 2A would result in single-family homes near the site boundaries, bringing more people in proximity to neighboring properties than current conditions. Noise resulting from this alternative would be dispersed across the property, but would likely be greater along project boundaries than existing conditions.

Alternative 2B: Single-Family Development without 38th Avenue NE Improvements

Construction

Air. Construction-related air quality impacts resulting from Alternative 2B would be similar to those described above for Alternative 2A. Alternative 2B would have 2 fewer homes

than Alternative 2A. Without the 38th Avenue NE improvements, a slight reduction in dust and vehicle and equipment exhaust resulting from construction activities could be expected.

Noise. Construction-related noise impacts would be the same for Alternative 2B as described above for Alternative 2A. Because the 38th Avenue NE would not be developed, a slight reduction in vehicle and equipment noise resulting from construction activities.

Operation

Air. Operation-related air quality impacts would be generally the same for Alternative 2B as described above for Alternative 2A.

Noise. Operation-related noise impacts would be generally the same for Alternative 2B as described above for Alternative 2A.

No Action Alternative

Construction

Under the No Action Alternative, no air quality or noise impacts would occur, as no construction would take place over the near-term on the project site.

Operation

Under the No Action Alternative, no operation-related air quality or noise impacts would occur as no changes to site usage would occur over the near-term on the project site.

Cumulative Impacts

Over the long-term, all of the alternatives have the potential to contribute additional pollutants, primarily from vehicles, to the project area in conjunction with other proposed development projects. Similarly, all of the alternatives would, in conjunction with continuing growth in the area, likely contribute to an incremental increase in ambient noise levels generated by greater population densities and increased traffic.

4.1.3 Mitigation Measures

Measures Required by Regulations

Air

- Controlling dust sources following construction with paving, landscaping, or other means;

Noise

- Limiting construction to hours between 7:00 a.m. and 10:00 p.m.;
- Specifying time and duration of loudest noise;
- Specifying a preferred type of construction equipment;
- Requiring sound buffering and/or barriers; and
- Limiting the time and/or duration of operation

Additional Mitigation Measures

Air

- Control dust during construction activities by wetting exposed surfaces;
- Require contractor to maintain equipment and vehicles in good working order to minimize exhaust pollutants;
- Require contractor to shut off construction vehicle and equipment engines when not in use, and not allowing them to idle.
- Enclose garbage receptacles to minimize detectable odors (for IAS alternatives).
- Encourage developer to restrict fireplaces to non-polluting devices such as natural gas fireplaces (single family alternatives)

Noise

- Limit construction to hours between 7:00 a.m. and 5:00 p.m. with no work on Sundays;
- Inform neighbors of monthly construction schedule by posting on a website or sending out mailers;
- Limit use of loading bays to the hours of 7:00 a.m. and 10:00 p.m., and deliveries to the hours of 9:00 a.m. and 10:00 p.m.;
- Implement identified design measures to reduce operational noise impacts; and
- Existing noise levels in neighborhoods surrounding the project site would be measured at the onset of the building design. These noise levels would be used as the design noise levels, if they are less than the Seattle Noise Ordinance.

4.1.4 Significant Avoidable Adverse Impacts

None identified.

4.2 Light and Glare

4.2.1 Affected Environment

A variety of sources currently provide exterior lighting around the project site. Pathways on the site are lit by approximately 3-foot high light standards that generally illuminate an area of approximately a few feet around each standard. The site's entrance off of Northeast 41st Street as well as internal roads and parking areas are lit by 49 15- to 20-foot-high light standards. Parking areas around the perimeter of the site are lit by standards placed approximately every 30 feet, while light standards along the site's internal circulation roads are placed approximately every 30 to 50 feet on alternating sides of the road (O'Brien, personal communication, 2002). These light standards contain either 175-watt or 300-watt bulbs, slightly less light than a typical arterial light in Seattle, which typically contains 250-watt bulbs at mid-block and 400-watt bulbs at intersections (Smith, personal communication).

Buildings at the Talaris Conference Center are presently infrequently used during after-dark evening hours. Most conferences taking place on the site presently do not extend past 7 p.m.; as a result, interior lighting on the site after dark is minimal. Only one building, Building D, located on the west side of the property, is frequently lighted at night; it is used by Battelle research staff 24 hours per day, seven days per week (O'Brien, personal communication, 2002). Other intermittent evening lighting is produced by lodging on the site. Existing buildings on the project site have numerous windows of average size; the lodge facility conference area is mostly glass and faces east on the site. The building serving as the dining room is nearly entirely glass on its south and west sides and overlooks the ponds. Due to the site's existing topography and vegetation, glare exposure to much of the surrounding neighborhood, particularly on the south, west, and east sides of the site is blocked. In addition, the height of the buildings and extended building rooflines help to block glare and focus any reflected light downward. Buildings are constructed of dark, non-reflective materials, also minimizing sources of glare on the site.

Relevant City of Seattle Standards

The City of Seattle Municipal Code (SMC) establishes specific policies and guidelines regarding the aesthetics of development projects. These standards and guidelines serve as the basis for minimizing or preventing adverse impacts and provide mitigating measures. The following sections of the SMC are relevant to the Talaris Research Center:

- SMC 25.05.675.K, Light and Glare: This portion of the Code, contained in the City's SEPA environmental policies, articulates the City's policy to minimize or prevent hazards and other adverse impacts created by light and glare. Mitigation measures may include limiting reflective qualities of surface materials, or limiting the area and intensity, location and angle, or hours of illumination. Landscaping may also be used to minimize impacts.
- SMC 23.45.100.C, Light and Glare, Institutions and SMC 23.44.008, Light and Glare, Single-Family Zones: These code sections provide light and glare regulations for institution uses, including Institutes for Advanced Study and for single-family residential development, respectively. The regulations call for shielding or directing lighting away

from adjacent residential lots. Additionally, light poles may not exceed a height of 30 feet for institution uses.

4.2.2 Impacts

Alternative 1A: Institute for Advanced Study with Increased Bulk and Scale and Code-Required Parking

Construction

Construction activities are not expected to occur during evening hours, therefore no construction-related lighting would be required. No construction-related light and glare impacts would occur.

Operation

Under Alternative 1A, the Institute for Advanced Study would provide exterior lighting for evening visibility and safety and security purposes. The lighting concept for the project addresses the importance of retaining the neighborhood character and residential street lighting levels at night. All highlight and focus will be placed away from the perimeter of the site creating a lighted center of the project at the lower graded areas. In addition, a 'necklace' of low level lighting will connect project buildings providing a cohesive site campus.

Carefully modulated light levels will help reveal entrances and drop-off areas without lighting all areas to the same level. Paths will be minimally lighted to provide task lighting on the path surface. Parking areas will be lit to provide a good level of safety light while using full cut-off light fixtures mounted on low poles. All light fixtures will utilize direct light distribution and will be well-shielded to minimize light trespass from the site.

Lighting for the site would utilize full cutoff, forward-throw lights, limited pole heights, and/or shielding on light fixtures to direct lighting away from adjacent land uses around the site. Pathways and exterior plaza areas would be lit with bollard-style light fixtures that would illuminate an approximate 3- to 4-foot area beneath the fixture. These fixtures would direct light to the pathway and would not produce glare noticeable at adjacent properties. In addition, landscaping would be provided around the perimeters of the site to limit the spillover of light into adjacent areas. Overall, light and glare from the proposed Phase I building is not expected to be substantially different than existing conditions.

Impacts associated with the Phase 2 building would be generally the same as described above for Phase 1. Construction would consist of similar lighting technologies, and lighting would be shielded and directed away from adjacent properties, particularly residential properties on the north and east boundaries of the site.

Under this alternative, building facades could provide some source of glare and nighttime spillover of interior light to adjacent properties, particularly along northwest, northeast, and north portions of the site. Facades would generally consist of un-modulated concrete walls, which could generate some glare; however, any glare impacts would likely be minimized by providing landscaping to screen buildings from adjacent land uses.

Alternative 1B: Institute for Advanced Study with Reduced Parking and Design Alternatives to Reduce Bulk and Scale Impacts

Construction

Construction activities are not expected to occur during evening hours, therefore no construction-related lighting would be required. No construction-related light and glare impacts would occur.

Operation

Impacts from light and glare under Alternative 1B would be similar in nature but reduced in magnitude compared to Alternative 1A. Figure 4-1 illustrates the proposed lighting concept as applied to the Alternative 1B. Impacts to adjacent residences and businesses would likely be reduced under this alternative due to the substantial reduction in surface parking compared to Alternative 1A (601 fewer surface parking stalls). In addition, reorientation of the building combined with the "stepped-back" facade, and rooftop landscaping and the proposed additional façade treatments, the facility design would break up blocks of windows in the buildings, reducing the expanse of reflective surface. Rooftop landscaping would serve to absorb sunlight and minimize or eliminate glare from rooftops. Façade treatments would help to shield adjacent residents from nighttime light from interior lighting, and they would reduce glare compared to the untreated, flat-surfaced facades proposed under Alternative 1A. During evening hours, landscaping could also reduce light spill from windows and provide additional privacy screening.

The proposed Phase I building may include windows on the west side of the building, with sunshades and/or privacy screens outside of the glass. These screens would block glare from these windows and would reduce the amount of light spill from windows during evening hours.

Alternative 2A: Single-Family Development with 38th Avenue NE Improvements

Construction

Construction activities are not expected to occur during evening hours, therefore no construction-related lighting would be required. No construction-related light and glare impacts would occur.

Operation

Light and glare impacts under Alternative 2A would be typical of single-family residential subdivisions. New streets would be lit by light standards of typical height and illumination, as specified in the City's Street Improvement Manual. Light standards would be placed at intersections and at regular intervals per applicable codes and standards.

Homes within the development would likely have exterior security lighting at front and back entryways, and possibly pathway lighting. Exterior light fixtures would be bright enough to illuminate a front or back yard, or porch/entryway, or other areas where security lighting is needed. These types of fixtures are generally not glare producing, do not throw light beyond

ADOLFSON

NORTH
No Scale

File name: Fig4_01_lighting.ai
Original graphic by: JAB
Edits by:
Date: 10/27/04

Source: NBBJ, 2004.

FIGURE 4-1.
ALTERNATIVE 1B LIGHTING CONCEPT
TALARIS INSTITUTE EIS
SEATTLE, WASHINGTON

property boundaries, and would likely be similar to lighting used in existing neighborhoods around the site. Fixtures could be required to be shielded and directed away from property boundaries, to minimize glare impacts to both existing and future adjacent residences, as well as motorists traveling on adjacent streets.

Alternative 2B: Single-Family Development without 38th Avenue NE Improvements

Construction

Construction activities are not expected to occur during evening hours, therefore no construction-related lighting would be required. No construction-related light and glare impacts would occur.

Operation

The types of impacts to adjacent residences and businesses from light and glare would be generally the same as described above for Alternative 2A. Under Alternative 2B, 38th Avenue NE would not be developed and would remain as vegetated public right-of-way. This would result is a slight reduction in light and glare from street lighting.

No Action Alternative

Construction

No impacts from light or glare would occur under the No Action Alternative, as no construction would take place over the near-term on the project site.

Operation

No impacts from light or glare would occur under the No Action Alternative, as no new facilities would be constructed on the project site in the near term. In the longer-term, it is possible that facilities permitted under current zoning could result in greater, or different, impacts from light and glare than currently exist on the site.

4.2.3 Mitigation Measures

Mitigation measures to reduce light and glare could include the following:

Alternative 1A and Alternative 1B

Measures Required By Regulations

- Limiting reflective qualities of surface materials that can be used in the development;
- Limiting the area and intensity of illumination;

- Limiting heights of light fixtures, and/or use of shielding on light fixtures to control the angle of illumination and reduce glare;
- Limiting the hours of illumination;
- Installing code-required landscaping that will also help to minimize light and glare on neighboring properties.

Additional Mitigation Measures

- Full cutoff forward-throw lights could be used.

Alternative 2A and Alternative 2B

Measures Required By Regulations

- There are no specific regulations pertaining to light and glare in single-family residential developments.

Additional Mitigation Measures

- The latest street-lighting technology could be used to minimize light and glare.

4.2.4 Significant Unavoidable Adverse Impacts

None identified.

4.3 Public Services and Utilities

4.3.1 Affected Environment

Stormwater

Seattle Public Utilities maintains the stormwater collection and disposal system within the City of Seattle. This system includes an extensive network of storm drainpipes conveying stormwater to water bodies throughout the City of Seattle. Seattle Public Utilities (SPU) operates and maintains these drainage systems and also constructs new trunk lines and detention facilities to alleviate flooding problems.

Stormwater from the project site is directed to the two onsite ponds and on to an existing 60-inch concrete pipe draining the ponds, controlled by a valve and weir structure on the west end of the ponds. Drainage from the onsite 60-inch pipe is conveyed to a 72-inch storm drain owned and maintained by the City of Seattle. This storm drain provides conveyance for the drainage basin upstream of the project site and crosses the site from the north to the southwest, connecting to an existing 60-inch storm drain that outfalls to Union Bay in Lake Washington south of the project site.

The City of Seattle Stormwater, Grading and Drainage Control Code (SMC Ch.22.800 to 22.808) regulates stormwater management for the redevelopment of the project site, including runoff during construction and post-construction drainage. The Code contains four Director's Rules related to stormwater management. The purpose, intent, and applicability to the proposed project alternatives are described below.

- Director's Rule 16-2000, Construction Stormwater Control Technical Requirements Manual, details temporary erosion and sediment control technical requirements and plan submittal requirements to help ensure controls are implemented. Construction stormwater controls are defined as physical, structural and/or managerial practices that, when used singly or in combination, prevent or reduce water pollution during construction.
- Director's Rule 17-2000, Source Control Technical Requirements Manual, is a technical document that is intended to clarify the application of the source control requirements prescribed in the Stormwater, Grading and Drainage Code. Source control requirements are designed to control pollution at the source and prevent contamination of stormwater for all discharges and new development.

Operational source controls required for the project include maintaining drainage control systems; maintaining streets, driveways, parking lots and sidewalks; and identifying and eliminating illicit connections to the drainage control system.

- Director's Rule 26-2000, Flow Control Technical Requirements Manual, provides the technical requirements and guidance necessary for complying with the flow control requirements prescribed in the Stormwater Code. Projects meeting the thresholds described in this Rule must install flow control facilities to meet the discharge rate requirements prescribed in the Stormwater Code, unless otherwise approved by the Director of Seattle Public Utilities.
- Flow control would not be required for any of the alternatives, as stormwater runoff from the site would be conveyed in a public storm drain and discharged directly to Lake Washington.
- Director's Rule 27-2000, Stormwater Treatment Technical Requirements Manual, is a technical document that is intended to provide technical requirements for designing, constructing and maintaining water quality treatment facilities prescribed in the Stormwater, Grading and Drainage Code. Treatment requirements are designed to control non-point source pollutants in stormwater runoff before they enter a receiving water body, such as a stream, lake, bay or river.
- The alternatives would require treatment of the stormwater runoff from pollution generating impervious surfaces such as areas of vehicular use, parking lots and drive areas.

Wastewater

Seattle Public Utilities provides sanitary sewer service to the project site. Wastewater is collected on the project site by a series of four- to eight-inch pipes and conveyed off-site through

a 30-inch partially separated sanitary sewer line. This line crosses the project site from the northeast to the southwest, north of the existing 72-inch stormwater conveyance line. Wastewater from the existing buildings in the northwest corner of the property and from the main research and conference center is conveyed through four-inch pipes connecting to the 30 inch main on the property. One sewage pumping station is located on the southeast portion of the site, between the dining hall and the existing east parking strip. Wastewater from the northeast lodge building and the dining hall is conveyed to the pumping station. Wastewater then flows through a four-inch force line to the lodge building in the southeast corner of the property. Wastewater from this building connects to this line and is conveyed across the south portion of the property, connecting to the 30-inch sewer line near the southwest corner of the property, within the 38th Avenue NE right-of-way. The City system collects residential, commercial, and industrial wastewater from the surrounding area and conveys it to interceptor lines operated by King County. Wastewater from the Laurelhurst area is conveyed and treated at the King County West Point Treatment Plant in Magnolia. Treated effluent is discharged to Puget Sound.

Water Supply

Water supply is provided to the project site by Seattle Public Utilities. Water supply to the Laurelhurst area originates from the South Fork of the Tolt River Watershed and is conveyed to the City through large (24 inches or larger) transmission pipelines to various reservoirs, standpipes, and tanks for further distribution. Seattle Public Utilities maintains a water supply reservoir north of the project site in the Windermere neighborhood. Water supply lines on the project site include a series of four- to six-inch lines, connected to an eight-inch water line located in 38th Avenue Northeast right-of-way.

Gas and Electricity

Natural gas supply is provided on the project site by Puget Sound Energy. Gas is provided to the Laurelhurst area by an underground high pressure main along Northeast 45th Street, terminating at Union Bay Place Northeast. Gas is transmitted to the property via a two-inch gas line, from the 38th Avenue Northeast right-of-way. Two gas vaults are located on the property, one near the southwest corner of Research Building D, the other near the northeast corner of the dining hall. Additionally, an above ground propane tank is located near the northwest corner of the property, near Apartment Building A.

Electrical power is provided to the project site by Seattle City Light. The University principal substation is located near the north end of Lake Union. Power is distributed from principal substations via high voltage feeder lines to numerous smaller distribution substations and pole transformers. Electrical conduits are located throughout the project site. A pad-mounted electric transformer is located on the east side of the property, between Lodge Building E and the dining hall.

Parks and Recreation

The Seattle Department of Parks and Recreation maintains a system of parks, trails, and recreational facilities throughout the City of Seattle. The 13.5-acre Laurelhurst Playfield is located approximately four blocks from the project site at 4544 Northeast 41st Street and

includes unlighted ball fields, tennis courts, a children's play area, and open lawn. The Laurelhurst Community Center is also located at this park facility. Belvoir Place Park, a small 0.40-acre waterfront park, is located approximately five blocks from the project site at 3659 42nd Avenue NE near Surber Drive. The park contains open lawn, undeveloped areas, and a dock on Lake Union.

The Burke-Gilman Trail runs east-west along the north side of Sand Point Way NE near the project site. The trail is used for walking, jogging, bicycling, and roller-blading. Approximately one-half mile north of the project site, along the Burke-Gilman Trail is the Burke-Gilman Playground, located at 5201 Sand Point Way NE. The Burke-Gilman Playground is approximately seven acres.

Although the project site is not a sanctioned park or recreational area, neighborhood residents informally use the project site for walking, jogging, dog walking, and picnicking.

Public Schools

The Seattle Public School District maintains several public schools in the Laurelhurst area ranging from elementary to high school. The following schools are located within two miles of the project site:

- Laurelhurst Elementary – Grades K-5 - 4530 46th Avenue NE
- Bryant Elementary – Grades K-5 - 3311 NE 60th Street
- Viewridge Elementary – Grades K-5 - 7047 50th Avenue NE
- John Stanford International School – Grades K-5 – 4057 5th Avenue NE
- Eckstein Middle School – Grades 6-8 - 3003 NE 75th Street
- Roosevelt High School – Grades 9-12 - 1410 NE 66th Street
- Various private schools are also located in the Laurelhurst area.

Police, Fire, Ambulance

The Seattle Fire Department provides fire fighting and emergency medical response from 33 fire stations distributed throughout the City, as well as from Harborview Medical Center. The Laurelhurst area is served by Fire Station 38, located at 5503 33rd Avenue Northeast, and Fire Station 40, located at 9401 35th Avenue Northeast.

The Seattle Police Department provides law enforcement patrol services from four precincts. The Laurelhurst area is served by the North Precinct, located at 10049 College Way North.

4.3.2 Impacts

Overall, anticipated impacts to public services and utilities would be minimal for any of the proposed redevelopment alternatives. Potential disruption of utility services and impacts to

emergency response capabilities due to construction traffic would be temporary in nature, confined to periods of construction ranging from 15 months, for each phase of Alternatives 1A and 1B, to spread out over two to five years (depending on market conditions) for Alternatives 2A and 2B.

Impacts to stormwater conveyance would vary based on the level of ground disturbance during construction and the amount of impervious surface created by each alternative. Alternative 1B would have the least amount of construction-related ground disturbance and post-construction impervious surface. Alternative 1A would result in the greatest amount of impervious surface area at the completion of the project (Phases 1 and 2). In general the single-family development alternatives (2A and 2B) would result in more construction-related ground disturbance and but about half the impervious surface area compared to Alternative 1A and twice the area compared to Alternative 1B. During construction, all alternatives would be required to comply with erosion and runoff-control best management practices as specified in SMC Section 22.802.15. Following construction, operational stormwater treatment would be required for pollution generating impervious surfaces such as driveways and parking lots, and potentially from building roof runoff. Stormwater from all alternatives would be treated onsite and conveyed via existing infrastructure on the site to an outfall in Union Bay on Lake Washington (see Biology/Wetlands for additional discussion of impacts). On-site treatment options that could be used, consistent with the Seattle Stormwater Treatment Technical Requirements Manual include biofiltration swales, filter strips, wetponds, wetvaults, stormwater wetlands, or media filters. This system currently contains ample capacity to accommodate redevelopment on the site. The additional increased peak flow generated by Alternatives 1A would be less than 0.4 % of the amount of stormwater runoff conveyed by the existing stormwater conveyance system for the 25 year frequency storm, and less than 0.09% for Alternative 1B. The additional increased peak flow for Alternative2A would be approximately 1% of the amount of stormwater runoff conveyed by the existing stormwater conveyance system for the 25 year frequency storm, and a slightly less amount for Alternative 2B (SWMB, 2002).

Impacts to wastewater and water supply capacity, as well as gas and electricity supply, would be the same for each of the four alternatives. Generally, the utility facilities in Seattle have been planned and sized to serve the maximum or buildout conditions to serve the level of increased growth proposed in the City of Seattle Comprehensive Plan. Though capacity demands would vary among alternatives, according to the City of Seattle Comprehensive Plan and various utility facility plans, there would be ample supply and utility capacity to serve any of the four alternatives (King County, 1998; Seattle, 2001a; Seattle, 2001).

Impacts to parks and schools would vary between the institute for advanced study alternatives and the single-family alternatives. Because they do not entail creating new dwelling units or increasing neighborhood population, impacts to parks and schools resulting from Alternatives 1A and 1B would be minimal. However, the single-family alternatives could result in an increase in population of 221 to 226 assuming an average occupancy of 2.48 persons per household based on the 2000 Census Average Household Size data for Census Tract 41. While this would result in increased demand at local parks and schools, the increase would not be considered as a significant impact to these facility types. The Seattle Parks and Recreation Plan 2000 (an update to the 1993 Parks Comprehensive Plan) indicates that the desirable level of “breathing room” or total open space is one acre per 100 residents of population. The acceptable level of total open space is defined as one-third acre per 100 resident population (City of Seattle, 2000b). The

single-family alternatives could generate additional demand of up to 2.3 acres of open space in the Laurelhurst area. Based on 1990 census population and 1999 population estimates by the Puget Sound Regional Council, the City of Seattle calculated the area encompassing Census Tract 41 (which includes the Talaris site) as having less than one-third acre of open space per 100 residents (City of Seattle, 2001c). However, an assessment of gaps in Seattle's open space network identified only a small portion of Laurelhurst, north of Webster Point, as having a gap in both breathing room and usable open space (City of Seattle, 2001c). Also, a 2.5 million dollar Seattle Pro Parks Levy Development Project has been identified for expansion and upgrading of the Laurelhurst Community Center with planning work scheduled to start in 2004 (City of Seattle, 2000b). The Seattle School District Facilities Master Plan indicates that there is excess capacity in the Northeast cluster, which includes the Laurelhurst neighborhood (Seattle School District, 1999).

Finally, impacts to emergency response capacity would be minimal under all alternatives. Traditionally, the Laurelhurst area has had few problems in terms of police response capacity or demand for police response services. The development of either a research facility or single-family homes would not create a significant increase in demand for police response in the neighborhood (D. Horswill, personal communication, 2002), though the population increase under Alternatives 2A and 2B would be expected to generate increased police activity. Likewise, emergency response to the area provided by the Seattle Fire Department (Stations 38 and 40) is approximately four to six minutes. There are no current fire response issues in the area, and development of any alternative would not create a significant increase in demand for these services (Lt. Claiborne, personal communication, 2002). Under Alternative 2A, the development of 38th Avenue Northeast, providing access to the subdivision from two arterials rather than one, would generally be preferred in terms of fire emergency response capability (Lt. Claiborne, personal communication, 2002). Both of the institute alternatives would retain the existing access points to the site, providing ample access for emergency response.

Specific impacts to public services and utilities associated with each alternative are summarized in Table 4-6 below.

4.3.3 Mitigation Measures

No significant long-term impacts to public services and utilities would be expected with the development of any of the proposed alternatives. Mitigation measures identified below would address temporary impacts associated with construction activities. The mitigation measures described below are common to all alternatives, unless specifically noted otherwise.

- Utility owners and operators, property owners, and building tenants affected by utility relocation or removal could be notified in advance and any potential disruption would be coordinated to address impact.
- New utility service systems could be installed and activated prior to removing existing systems.
- Emergency procedures could be developed for unanticipated utility disruption.

- Vehicular access to the surrounding area for emergency response services could be maintained by routing or detours established in a construction routing and parking plan.
- Vehicular access to the site for emergency response services could be maintained consistent with Seattle Fire Code requirements.
- Water capacity at hydrants serving the site could be provided consistent with Seattle Fire Code requirements.

4.3.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to public services and utilities would be expected with development of any of the proposed alternatives.

Table 4-6. Summary of Public Services and Utilities Impacts

Alternative	Stormwater	Wastewater and Water Supply	Gas and Electricity	Parks and Schools	Fire and Police
Alternative 1A	• 11 acres of impervious surface • Best Management Practices (BMPs) would be implemented for construction erosion and sediment control • BMPs would be employed post construction to comply with stormwater operational source control and treatment requirements.	• Impacts to wastewater and water supply capacity would be minimal. • Temporary disruption of services in the area during construction is unlikely.	• Impacts to gas and electrical supply capacity would be minimal. • Temporary disruption of services in the area during construction is unlikely.	• No direct or indirect impacts to parks and recreational facilities or public schools are anticipated.	• Access to site would be maintained at three existing points • Temporary impacts to emergency response access in the project vicinity could occur due to construction traffic.
Alternative 1B	• 2.7 acres of impervious surface. • BMPs for erosion and sediment control would be required for smaller area of disturbance. • BMPs for operational source control and stormwater treatment efforts would be less than Alternative 1A.	• Same as described for Alternative 1A.	• Same as described for Alternative 1A.	• Same as described for Alternative 1A.	• Same as described for Alternative 1A.
Alternative 2A	• 6 acres of impervious surface. • BMPs for erosion and sediment control during construction would be required for larger area than any other alternative. • Expanded collection system for roads and individual lots would require greater source control and stormwater treatment efforts than any other alternative. • Impacts to drainage system capacity overall would be minimal, but greater than any other alternative.	• Impacts to wastewater and water supply capacity overall would be minimal. • Service for 91residential lots would place greater demand on system capacity during peak demand hours than Alternatives 1A and 1B.	• Impacts to gas and electrical supply capacity overall would be minimal. • Service for 91residential lots would place greater demand on system capacity during peak demand hours than Alternatives 1A and 1B.	• Increased residential population would have minimal impact overall on parks, recreational facilities, and public schools. • Increased demand on these resources would be greater than any other alternative.	• Impacts to emergency response capacity would be minimal overall, but slightly greater than Alternatives 1A and 1B. • Emergency response access to the subdivision would be developed at four locations, two along NE 41st Street and one along 38th Ave. NE, requiring the

Alternative	Stormwater	Wastewater and Water Supply	Gas and Electricity	Parks and Schools	Fire and Police
		• Temporary disruption to services in the area could occur, particularly with development of 38th Ave. NE.	• Temporary disruption to services in the area could occur, particularly with development of 38th Ave. NE.		improvement of 38th Ave. NE between NE 41st St. and NE 44th St. • Temporary impacts to emergency response access in the area could occur during construction.
Alternative 2B	• 5.9 acres of impervious surface. • BMPs for construction control, source control, and treatment efforts would be less than Alternative 2A, but greater than Alternatives 1A and 1B. • Impacts to drainage system capacity overall would be minimal, but greater than Alternatives 1A and 1B.	• Impacts to wastewater and water supply capacity overall would be minimal. • Service for 90 residential lots would place greater demand on system capacity than Alternatives 1A and 1B, but would be the same as Alternative 2A. • Temporary disruption of services during construction is less likely as 38th Ave. NE would remain undeveloped.	• Impacts to gas and electrical supply capacity overall would be minimal. • Service for 90residential lots would place greater demand on system capacity than Alternatives 1A and 1B, but would the same as Alternative 2A. • Temporary disruption of services during construction is less likely as 38th Ave. NE would remain undeveloped.	• Increased residential population would have minimal impact overall on parks, recreational facilities, and public schools. • Increased demand on these resources would be greater than Alternative 1A and 1B, but the same as Alternative 2A.	• Impacts would be similar to those described for Alternative 2A. • Access to the subdivision would likely be at three locations, two along NE 41st St. and one along the developed portion of 38th Ave NE.
No Action Alternative	• No impacts would occur.	• No impacts would occur.	• No impacts would occur.	• No impacts would occur.	• No impacts would occur.

CHAPTER 5.0 PUBLIC COMMENTS AND RESPONSES TO COMMENTS

COMMENT LETTER #1

PUGET SOUND
Clean Air Agency

Working Together For Clean Air

www.pscleanair.org

Ph 206.343.8800
1.800.552.3565
Fax 206.343.7522

110 Union Street
Suite 500
Seattle, WA 98101-2038

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Janet Chalupnik

December 3, 2002

RECEIVED
DEC - 4 2002
Dept. of Design Construction
& Land Use

Department of Design, Construction and Land Use
Attn: Marina Haufschild, Land Use Planner
700 5th Ave, #2000
Seattle, WA 98104-5070

Project #2104047
DEIS – Talaris Research Institute

Puget Sound Clean Air Agency appreciates the opportunity to comment on the proposed alternatives for this site. The Agency has 2 primary air pollution concerns:

(1) dust and diesel emissions from construction equipment activities, and

(2) woodsmoke emissions from potential installation of solid fuel burning devices (i.e., woodstoves and fireplaces) in residential dwellings. 1-1

The city should consider employing the following emission reduction options:

(1) Construction Emissions

- Install a wheel-washer at the site exit to reduce mud and dirt track-out onto paved public roadways,
- Require that all trucks transporting excavation materials leave adequate freeboard in the truck bed to minimize material spills and have all loads covered during transport, and
- Structure construction contracts to reward contractors using equipment powered by cleaner fuels such as compressed natural gas, biodiesel blends, and ultra-low sulfur diesel as well as those using advanced after-treatment technology such as oxidation catalysts and/or particulate filters to help control emissions. 1-2

(2) Woodsmoke Emissions

Prohibit the installation of solid fuel burning devises in any residential buildings. 1-3

Please call me at (206) 689-4025 or e-mail to tomh@pscleanair.org if you need any additional information or assistance in these areas. Thank you again for the opportunity to comment.

Sincerely,

Thomas J. Hudson
Air Resource Specialist

TJH/lh

COMMENT LETTER #1, PSCAA

1-1. Comment noted. The Air and Noise section in Chapter 4 of the Draft and Final EIS includes a discussion potential air quality impacts from construction and operation of the Talaris Research Institute, including dust and diesel emissions from construction equipment and activities. Wood-burning fireplaces were identified as a potential source of air quality impacts. The inclusion of solid fuel burning devices (i.e., wood-burning fireplaces) has not been evaluated at the design level at this stage of the process for Alternatives 2A and 2B. The developer could choose to restrict fireplaces to non-polluting devices such as natural gas fireplaces. This measure has been added to the Final EIS as a possible mitigation.

1-2. Refer to mitigation portion of the Air and Noise section of Chapter 4 of the EIS. Additional mitigation measures could be required of selected contractor at the time of contract issuance.

1-3. Refer to the response to Puget Sound Clean Area Agency, Comment 1-1. Your suggestion to "prohibit the installation of solid fuel burning devises in residential buildings" has been added as a potential mitigation measure in the Air and Noise section in Chapter 4 of the Final EIS.

CITY LIGHT

Date: December 30, 2002

To: Marina Haufschild

From: Laurie Geissinger

Subject: Talaris Research Center DEIS Comments

The Draft Environmental Impact Statement does not address energy conservation and resource efficiency. We suggest the following:

* Energy management and conservation strategies should be discussed in the Draft EIS.

* SCL offers energy management programs including early design assistance and financial incentives. Energy Smart Services are available for specific design development, implementation and building commissioning. Consideration of these programs could be beneficial in reducing potential energy impacts. 2-1

* Consideration should be given to designing the building to be at least 10% more efficient than required by the Seattle Energy Code.

* Consideration should be given to obtaining a LEED (Leadership in Energy and Environmental Design) Building Rating System standard. Meeting LEED standards can improve a building's financial, environmental and social performance.

* We encourage the project design team to meet with SCL Energy Management staff to discuss use of the LEED standards and Energy Smart Services that can benefit them.

For general inquiries about energy programs and services, SCL Energy Management Services may be reached by calling (206) 684-3254. For more information pertaining to these comments contact S. Javad Maadanian, Senior Energy Management Engineer Supervisor with SCL Energy Management Services at 684-3786.

Thank you for the opportunity to comment.

cc: Geissinger
Maadanian

COMMENT LETTER #2, Seattle City Light

2-1. Comments noted. Please refer to the Scope of the EIS determined by DPD prior to development of this EIS. Issues identified during the scoping process included construction impacts; drainage; height, bulk and scale; parking; plants and animals; traffic and transportation; noise; light and glare; public services and facilities; as well as impacts to the surrounding neighborhood and the relationship of the proposed Institute for Advanced Study to the University of Washington. Energy was not identified as a significant issue by DPD and was therefore not included in this EIS.

ROBERT BERNSTEIN, P.E.
Consulting Transportation Engineer/Planner

RECEIVED
DEC 27 2002
HELSELL FETTERMAN, LLP

December 26, 2002

Ms. Marina Haufschild, Land Use Planner
Dept of Design, Construction and Land Use
City of Seattle
700 - 5th Ave, Ste 2000
Seattle, WA 98104

Subject: Comments on Talaris Research Institute DEIS (City of Seattle MUP 2104047)

Dear Ms. Haufschild,

This letter is written on behalf of the Laurelhurst Community Club (LCC). At the request of LCC's Attorney and Land Use consultant, I have reviewed the November 14, 2002, *Draft Environmental Impact Statement for the Talaris Research Institute* (the DEIS), I have visited the site, and I have prepared the following set of transportation-related comments on the proposed project and the DEIS. My qualifications as a professional transportation planner and engineer are summarized below and set out in detail in the attached curriculum vitae which is incorporated into my letter by reference.

Traffic Generation

The DEIS underestimates the potential traffic generation of the proposed development, and therefore underestimates the potential traffic impacts. The traffic generation estimate and traffic analyses in the DEIS are based on ITE Trip Generation Manual traffic generation rates for "research and development facilities." However, the proposed development, once built, can function like a "general office building" or an "office park," both of which have significantly higher traffic generation rates than does a "research and development facility" (see **Table 1**, below). The DEIS should analyze the impacts associated with these higher levels of potential traffic generation.

3-1

TABLE 1: Traffic Generation for 290,000 gross sq ft

	DAILY	AM PEAK	PM PEAK
Research/Development Facility (ITE Code 760)	2,460	345	323
General Office Bldg (ITE Code 710)	3,006	436	404
Office Park (ITE Code 750)	3,430	534	457

Source: Trip Generation, 6th Edition, Institute of Transportation Engineers, 1997 ("Trip Generation Manual")

507 - 18th Avenue East
Seattle, Washington 98112
RDB2nd@aol.com
(206) 325-4320
fax (206) 325-4318

Traffic Access and Circulation

Site-generated traffic affects not only the major arterial intersections in the site vicinity, but also the local streets that provide access to site parking lots. The DEIS has ignored traffic access and circulation impacts on local streets, particularly those affecting NE 44th St and 38th Ave NE, which provide direct access to the northwest corner of the site. Despite the fact that much of the site parking is most conveniently reached via the northwest entry, the DEIS assumes that no site traffic will use 44th St and 38th Ave (assuming instead that all site access is via the driveways on Mary Gates Memorial Dr, on the south side of the site). Clearly, site traffic will use these local streets, and the site traffic will have safety and neighborhood access impacts. In order to address the impacts on local streets, the DEIS should respond to the issues raised in our September, 2001, scoping comments: 3-2

- Identify the local streets and collectors that will be used as site access routes, and estimate the daily, peak, and mid-day site-generated traffic volumes on those streets for capacity use of site, for typical daily use of site, and for other use scenarios as appropriate.
- Specify measures necessary or useful for protecting the surrounding neighborhood from site traffic

Parking Demand

As with traffic generation, the DEIS underestimates the potential parking demand of the proposed development, and therefore underestimates the potential impacts. The parking demand estimate and impact analyses in the DEIS are based on ITE Parking Generation Manual parking demand rates for "research and development facilities." However, as stated previously the proposed development can function like a "general office building" or an "office park," both of which have significantly higher parking generation rates than does a research and development facility (see **Table 2**, below). The DEIS should analyze the impacts associated with these higher levels of potential parking demand. 3-3

TABLE 2: Parking Demand for 290,000 gross sq ft

	Weekday
DEIS Parking Demand Estimate	493
General Office Bldg (ITE Code 710)	682
Office Park (ITE Code 750)	734

Source: Parking Generation, 2nd Edition, Institute of Transportation Engineers ("Parking Generation Manual")

Parking Spillover

The DEIS analysis of parking spillover impacts is inadequate, as are the proposed mitigation measures. The DEIS goes to some length to document the availability of on-street parking for any spillover from the site (see DEIS Figure 13A), and the DEIS also discusses the potential for spillover parking (see DEIS "Parking Impacts" section, pp. 3-72). Proposed mitigation for spillover parking impacts is a Transportation Demand Management Program (TMP), which theoretically would reduce parking demand.

Because the DEIS understimates potential parking demand (as described in the previous section), the potential extent and frequency of parking spillover is underestimated. More importantly, however, the DEIS ignores the impacts of parking spillover: pedestrian and traffic safety impacts are created and local access is impaired on surrounding neighborhood streets as site traffic circulates/recirculates on adjacent streets and parks on-street. 3-4

In addition to ignoring the impacts of parking spillover, the DEIS offers no mitigation for the ignored parking spillover impacts. In reality, even an effective, successful TMP will do little to prevent spillover parking – if anything the TMP could marginally reduce the frequency and extent of spillover – and the TMP does nothing to address the local access and safety impacts of spillover parking. As stated in our September, 2001, scoping comments, the measures necessary for protecting the surrounding neighborhood from spillover parking need to be specified. 3-5

Pedestrian and Bicycle Access and Circulation

The DEIS has ignored pedestrian and bicycle access and circulation issues, including those raised in our September, 2001, scoping comments:

- Identify convenient pedestrian and bicycle access routes into, out of, and within the site, and specify the improvements necessary to maximize their attractiveness and use.
- Identify convenient pedestrian access routes to/from all site vicinity bus stops, and specify the improvements necessary to maximize their attractiveness and use.

These issues need to be addressed if transit, pedestrian, and bicycle access to the site is to be increased/maximized. If these issues are not addressed, site access via non-automobile modes will be limited and the proposed TMP will be ineffective. 3-6

If you have questions or if you need further information, please contact me.

Sincerely,

Robert Bernstein, P.E.

Summary of Qualifications: I have Bachelor's and Master's degrees in Civil Engineering (from Georgia Tech and Northwestern University, respectively), and I am a registered professional engineer in Oregon, Washington, California, and New Jersey. I have 26 years of transportation planning and traffic engineering experience, including five years with the City of Portland and seven years as Senior Transportation Engineer with the Puget Sound Council of Governments. In these positions and as a private consultant, I have prepared the transportation element for nearly a dozen city and county comprehensive plans, and I have conducted numerous regional and subregional travel demand forecasting studies, traffic operations and safety analyses, and neighborhood traffic management studies; I also served as transportation consultant for nine of the City of Seattle's Phase II Neighborhood Plans. Over the last 15+ years I have provided expert assistance on development-related traffic issues to over 50 community/neighborhood groups in Washington and Oregon. In addition, I have prepared traffic studies for developers and I have provided on-call development review services for local governments in Oregon, Washington, and California.

Attachment

Text of September 28, 2001, Scoping Comments Letter for Talaris Institute Project (City of Seattle MUP 2104047)

(from Robert Bernstein, P.E., addressed to Ms. Stephanie Haines, Senior Land Use Planner, City of Seattle Dept of Design, Construction and Land Use)

This letter is written on behalf of the Laurelhurst Community Club (LCC). I have reviewed the "Analysis and Decision of the Director of the Department of Design, Construction and Land Use" regarding the subject project. I have visited the site and I have discussed the project with LCC's Attorney and Land Use consultant. (I have summarized my qualifications at the end of this letter.) Per LCC's request, I have prepared the following set of transportation-related comments regarding the proposed project and the impact analysis that is to be prepared for it. My comments are organized in four sections: 1) parking, 2) traffic access and circulation, 3) pedestrian and bicycle access and circulation, and 4) interaction with other area developments.

Parking

Any time individual on-site parking lots begin to reach their effective capacity (~90% of spaces occupied), there will be congestion in the lots. Lot congestion and an inadequate supply of parking to meet demand – on a lot-by-lot basis or for the site as a whole – will create significant spillover impacts on the surrounding neighborhood streets as site traffic circulates/recirculates on adjacent streets and parks on-street. These impacts also can occur even if there is adequate parking on-site, if that on-site parking is inconveniently located for its anticipated users. For these reasons, the Applicant should address the following issues:

- Determine parking demand for capacity use of the specific facilities incorporated in the proposed project and the specific activities accommodated by the proposed project (e.g., general office space, meeting rooms used for conferences or training sessions that bring in attendees from the "outside," etc).

- Specify how the parking demand is to be accommodated for capacity use, for typical daily use, and for other use scenarios as appropriate: specify number and location of on-site spaces serving the demand, and as appropriate and necessary, identify off-site parking locations (and any kind of transfer/shuttle services that may be necessary)

- Specify measures necessary or useful for protecting the surrounding neighborhood from spillover parking

Traffic Access and Circulation

Site-generated traffic includes employees commuting daily and a potentially wide range of "visitors" attending individual and group meetings, conferences, lectures, and training sessions. This traffic affects not only the major arterial intersections in the site vicinity, but also the collector and local streets that provide access to site parking lots. In order to ensure that site traffic is adequately accommodated, the Applicant should address the following traffic access and circulation issues:

- Determine traffic generation (volume and time-of-day) for capacity use of the specific facilities incorporated in and activities accommodated by the proposed project.
- Determine impacts of site traffic on arterial streets and intersections (as required by City of Seattle)
- Identify the local streets and collectors that will be used as site access routes, and estimate the daily, peak, and mid-day site-generated traffic volumes on those streets for capacity use of site, for typical daily use of site, and for other use scenarios as appropriate.
- Specify measures necessary or useful for protecting the surrounding neighborhood from site traffic infiltration.

Pedestrian and Bicycle Access and Circulation

Traffic and parking demands generated by the site – and their impacts on the surrounding neighborhoods – can be reduced by increasing the use of non-automobile modes of site access. In order to facilitate and maximize the use transit, walking, and bicycles for access to/from the site and circulation within the site, the Applicant should address the following pedestrian and bicycle issues:

- Identify convenient pedestrian and bicycle access routes into, out of, and within the site, and specify the improvements necessary to maximize their attractiveness and use.
- Identify convenient pedestrian access routes to/from all site vicinity bus stops, and specify the improvements necessary to maximize their attractiveness and use.

Interaction with Other Area Developments

There is a significant volume of development occurring in and around the Talaris site vicinity. Because the traffic generated by these developments will "compete" with site-generated traffic for finite street capacity, the impacts of Talaris traffic (and parking) demands should be analyzed in a

context that recognizes and includes the other developments' traffic. In order to incorporate the effects of other developments, the Applicant should address the following issues:

- Identify all planned and proposed development in the neighborhood, the surrounding areas, and the 45thSt–Sandpoint Wy "trafficshed," including but not limited to development at the University of Washington, at and around University Village, and in the Magnuson Park area.
- Prepare a cumulative impacts analysis that addresses the impacts of Talaris-generated parking and traffic demand when it occurs in conjunction with the added demands of the other area developments.

COMMENT LETTER #3, Robert Bernstein

3-1 The Institute for Transportation Engineers (ITE) Research/Development land use category that was used as the basis for identifying project trip generation for the Draft EIS is the category that most closely represents the proposed project. Estimates of trip generation based on the Research/Development land use category provide the most accurate identification of probable traffic impacts for the project as proposed. Extensive programming has been conducted in designing the spaces within the facility specifically to accommodate the Talaris research activities. The facility has not been designed to accommodate general spec office use and would likely require significant remodeling in order to do so.

3-2 A description of the potential use of the access at the northwest corner of the site and the associated potential impacts to the adjacent streets has been added under Traffic Operations Impacts in the Transportation section in Chapter 3 of the Final EIS.

3-3 Refer to the response to Comment Letter #3 (Robert Bernstein), Comment 3-1.

3-4 The potential for spillover parking discussed in the Draft EIS was in acknowledgement that under Alternative 1B, the estimated parking demand would be 96 percent of the proposed parking supply. Given day-to-day fluctuations in parking demand, it was acknowledged in the Draft EIS that occasional spillover would be a potential. Since publication of the Draft EIS, the proposed parking supply for Alternative 1B has been increased substantially. Parking supply for both Alternatives 1A and 1B would exceed anticipated parking demand. As a result, no parking spillover is anticipated (see Parking Impacts in the Transportation section in Chapter 3 of the Final EIS).

3-5 No parking spillover is anticipated as the proposed parking supply exceeds the project parking demand. Refer to the response to Comment Letter #3 (Robert Bernstein), Comment 3-4.

3-6 The Non-Motorized Travel Impacts section of the Draft EIS notes that existing non-motorized facilities in the area are expected to be able to accommodate any project-generated increase in pedestrian and bicycle trips. Site plans for the project do not include anything that would present an unusual barrier to pedestrians or bicycles access.

Carol Eychaner
Land Use and Community Planner

December 30, 2002

Marina Haufschild
Department of Design, Construction and Land Use
700 Fifth Avenue, Suite 2000
Seattle, WA 98104

Re: Comments on DEIS for MUP No. 2104047 (Talaris Project); 4000 NE 41st Street

Dear Marina:

I have been asked by the Laurelhurst Community Club to review and comment on the November 14, 2002 draft environmental impact statement (DEIS) published by the Department of Design, Construction and Land Use (DCLU) for the Talaris Research Institute project that is located at 4000 NE 41st Street (MUP No. 2104047).

In preparation for my comments, I reviewed the DEIS, the July 2001 Master Use Permit (MUP) application plans submitted for the Talaris Research Institute project (Talaris Project), and other documents in the DCLU project file. I have visited the site and am familiar with its context, and have provided comments during the EIS scoping periods for the Talaris Project and for the single family alternative. At the December 11, 2002 public hearing on the DEIS, I provided detailed oral comments on the DEIS alternatives; an expanded discussion of the DEIS alternatives, which includes information from my oral comments, is provided in this letter.[1] 4-1

My review was primarily focused on Chapter 2 of the DEIS, and on the Land Use and Height, Bulk and Scale sections of Chapter 3. However, I have also provided selected comments related to other sections of the DEIS. Rather than provide a litany of page-by-page comments, minor and major, I have instead focused my comments on selected key DEIS issues:

- Alternatives

[1] During the approximately 1 year period that lapsed between the initial EIS scoping meeting and the publication of the DEIS, the Talaris Project was assigned to three different DCLU land use planners. The first re-assignment and the untimely publication of the DEIS concurrent with the latest re-assignment (which resulted in the DEIS designation of a lead agency contact person who had not even reviewed the DEIS) were well within DCLU's control, and could/should have been avoided. Such changes undermine the EIS process and the public's communication with DCLU staff, and may have contributed to the Talaris DEIS' fundamental problems. The complexities of the Talaris Project, the sensitivity of the site and context, and the high level of neighborhood concern all warranted more careful administration by DCLU.

2348 Franklin Avenue East, Seattle, Washington 98102 • 206-324-1716 (phone) • 206-861-8177 (fax)

4-1

- Height, Bulk and Scale
- Land use
- Drainage
- Required Parking
- Mitigation for Land Use and Height, Bulk and Scale Impacts
- Noncompliance with Settlement Agreement

KEY DEIS ISSUES

1. Alternatives

4-2

The following discussion is based on the descriptions of alternatives in the DEIS, but in many substantive ways these descriptions were incomplete, had inconsistencies between the text and the figures, and/or were otherwise unclear, and required an unusual and unacceptable amount of subjective interpretation, speculation and guesswork by the reviewer. This was mostly true with regard to aspects of the Talaris use alternatives that related to facade design (and corresponding height, bulk and scale/character and light/glare impacts), and to the single family subdivision proposal. I have reviewed many EISs and have rarely encountered so much uncertainty in a SEPA document about the nature of the alternatives, the distinctions between them, and their respective effects on the environment.

The alternatives in the DEIS fail to inform the public and decision makers of reasonable, less impacting development options for the site and are fundamentally deficient in several respects:

4-3

- They fail to meet SEPA's primary purpose for including alternatives in an EIS -- that is, to explore options to the proposed development that would result in less environmental degradation than the proposal. For some elements of the environment, alternatives that were crafted for the EIS would result in even more -- not fewer -- significant environmental impacts than the Talaris Project MUP proposal and the applicant's preferred single family development alternative.

4-4

- Basic, essential information about significant features of the alternatives is either not provided or is otherwise insufficient for analysis and commenting.

4-5

- The DEIS presents two Talaris use alternatives that are supposed to be different with respect to building appearance (affecting the height, bulk and scale, character and neighborhood compatibility of each), but fails to convey these differences in a way that can be understood and commented on.

4-6

It is understood that DEISs are preliminary documents that are offered for public review as a way of making the final EIS more complete and accurate. The DEIS is also "intended ... to encourage resolution of potential concerns or problems prior to issuing a final statement" (WAC 197-11-400(4); emphasis added). In order for the two-phased DEIS/FEIS process to work

effectively as intended by SEPA, the DEIS (not just the FEIS) must include alternatives to the proposal that explore different ways of reducing impacts and that have enough basic information to be understood and analyzed by the public. The Talaris DEIS alternatives fail to do both with respect to certain significant impacts, and as a result the public's role in the EIS process is seriously compromised. 4-6

For the reasons described above and addressed in more detail below, DCLU should modify and provide more information on the DEIS alternatives, and present the modified, impact-reducing alternatives and information in a **supplemental DEIS** to allow the public a meaningful opportunity for analysis and comment, as permitted and required by SEPA (WAC 197-11-405(4)).

A. EIS Alternatives Must Reduce, Not Increase, Impacts. The purpose of including alternatives to a development proposal in an EIS is "to inform decision makers and the public of reasonable alternatives, including mitigation measures, that would avoid or minimize adverse impacts or enhance environmental quality" (WAC 197-11-400(2); emphasis added). The EIS is to present development options "that could feasibly attain or approximate a proposal's objectives, but at a lower environmental cost or decreased level of environmental degradation" than the proposal (WAC 197-11-440(5)(b); emphasis added). 4-7

In this case, a MUP application and plans for the Talaris Project were submitted to DCLU in July, 2001. Phases 1 and 2 would increase the square footage of non-single family development on the site from about 44,000 to 290,000, and nearly half the site would still be potentially available for future substantial development. The lengths of building facades that are proposed opposite single family zoned and developed properties are approximately 283 to 350 feet -- far greater than a typical single family house. DCLU correctly determined that the Talaris Project as proposed may have significant environmental impacts with respect to numerous elements of the environment, including land use and height, bulk and scale, and issued a Determination of Significance on September 10, 2001 (DS). 4-8

However, contrary to SEPA's requirement for EIS alternatives with fewer impacts, alternatives to the Talaris Project that DCLU subsequently identified for the DEIS were deliberately designed to be more -- not less -- impacting than the proposal on sensitive elements of the environment. The following chronologies show how the alternatives for both the Talaris use and the single-family use evolved from appropriate impact-reducing alternatives to ones that created more impacts.

Evolution of alternatives for the Talaris use. In an effort to look at development options that would reduce the bulk and scale impacts of the proposed Talaris Project, DCLU's DS required that EIS alternatives "shall include but not be limited to the proposal, one or more design alternatives, and no action." DCLU initially considered an alternative that would "break down the proposed Talaris Research Institute facility into smaller buildings on the site in order to mitigate the bulk and scale of this facility" (November 12, 2001 letter to Stephanie Haines of 4-9

DCLU from Charles Hill of 4000 Properties LLC). Such an alternative would have been consistent with SEPA's purpose of identifying alternatives that have less environmental degradation than the proposal.

The applicant rejected DCLU's requested alternative, stating 1) it was not consistent with programmatic objectives for the Talaris use, although no specific information was provided to support the claimed inconsistency, and 2) that the design already had some built-in mitigation to reduce impacts. DCLU then formalized the scope of the EIS in a letter to the applicant, and still required an alternative to the proposal that included "design alternatives to reduce bulk and scale impacts of the new building on adjacent properties" (December 3, 2001 letter to Bob Wicklein of Seneca Real Estate Group from Haines). Clearly, this intent to "reduce the bulk and scale impacts of the new building" could be achieved through increased setbacks, additional attention to facade materials and fenestration design, facade length reduction, smaller buildings, or alternative placement of buildings on the site -- all of which would be generally consistent with SEPA's requirement for alternatives with fewer impacts than the proposal. 4-9

Had this been the final word on EIS alternatives, the DEIS may well have included an alternative to the Talaris Project that explored additional means of reducing bulk and scale impacts. However, after DCLU concluded a later scoping process for potential single family development of the site, it revised the EIS scope not only to add single family alternatives (see discussion under "Evolution of alternatives for the single family subdivision", below) but also to modify the alternatives for the Talaris use. It did so even though even though the second scoping process was wholly focused on single family use of the site, and not on the Talaris use. Instead of developing more options to reduce impacts, as required by SEPA, the modified alternative for the Talaris use was to "represent the maximum bulk and scale" for an expanded institute for advanced study (July 23, 2002 letter to Dave Wortman of Adolfson Associates from David Van Skike of DCLU; emphasis added). DCLU still called for an alternative for the Talaris use that included design options "to reduce bulk and scale impacts" on adjacent properties. However, in the DEIS, this reduced impact alternative is actually the original, essentially unmodified Talaris Project -- that is, the very project which, due to its significant bulk and scale impacts, triggered the need for an EIS and prompted DCLU's call for a reduced impact alternative.[2] 4-10

The result of this rather convoluted evolution of alternatives is that the DEIS contains no alternative to the original MUP proposal that explores design options for reducing significant bulk and scale impacts. SEPA's fundamental purpose of requiring less impacting alternatives has been wholly ignored.

[2] As described elsewhere in this Section, the DEIS fails to provide sufficient information to clearly understand the differences between the two DEIS Talaris use alternatives with respect to bulk, scale and building character/design, and there appears to be no difference in the actual building envelopes. However, from the general DEIS description of the two alternatives, Alternative 1A is intended to have maximum bulk and scale and Alternative 1B -- the original MUP proposal -- is offered as the alternative with reduced bulk and scale impacts.

Evolution of alternatives for the single family subdivision. Single family development on the Talaris site was not contemplated during the first scoping process for the Talaris Project. The applicant subsequently asked DCLU to include two single family development options in the EIS: a preferred alternative consisting of approximately 65 units (or lots) and a reduced-density alternative with approximately 50 units (December 20, 2001 letter to Haines from Wicklein). DCLU later held a scoping process for the single family alternative and the applicant prepared for public review a conceptual, single family subdivision plan -- however, the plan created 81 lots, substantially more than the 65- and 50-lot scenarios initially requested by the applicant. This 81-lot plan proved to be largely illusory and unachievable, because many of the lots were constrained by environmentally critical area (ECA) buffers and easements, and the layout reflected little consideration of and compliance with subdivision requirements for open space and tree retention and other design parameters (all of which were the subject of public comment). 4-11

In its final scoping letter to the applicant, DCLU required two single family development alternatives for the EIS: an alternative representing the "maximum potential single family development of the site that is consistent with Full Subdivision, Environmentally Critical Areas and Single Family 5000 zone regulations" (emphasis added), and an alternative "that would reasonably approximate the proponent's objective at a reduced environmental cost to drainage systems on and off site, fish and wildlife habitat and environmentally critical areas" (July 23, 2003 letter to Wortman from Van Skike). The reduced-impact alternative was also to "consider leaving 38th Avenue in its current unopened state to preserve this habitat area" (Ibid.). No lot counts were indicated for either alternative. 4-12

The basic intent of DCLU's two single family alternatives is clear: the maximum development alternative was to be consistent with applicable regulations (not an inflated, unachievable development scenario), and the second single family alternative should leave 38th Avenue undeveloped and otherwise result in less environmental degradation, especially with respect to drainage, fish and wildlife habitat and ECAs, than the maximum development scenario. This approach is generally consistent with SEPA's requirement to look at reasonable alternatives with reduced environmental impacts.

The single family alternatives that are in the DEIS, however, are far from consistent with SEPA and DCLU's scoping direction. The same 81-lot subdivision that was rejected at the public scoping meeting is presented in the DEIS as the "maximum" development alternative, even though it could not be constructed under current Seattle regulations. Even the DEIS states that the 81-lot alternative is "inconsistent with certain provisions of Seattle's subdivision design requirements (SMC 23.22.058) and regulations for environmental critical areas (SMC 25.09.240)", and provides examples of the inconsistencies -- impacts to wetland and steep slope buffers, failure to provide open spaces, parks and playgrounds, and failure to maximize retention of existing trees (DEIS, p.3-17). DCLU's scoping letter explicitly required that the maximum development alternative must comply with applicable regulations, and the public and EIS preparers apparently agree that the 81-lot alternative does not comply and is illusory. The DEIS is fatally flawed then in including this "alternative". 4-13

The only other single family alternative in the DEIS consists of a 60- to 68-lot subdivision (according to the DEIS text, the site's ECA buffers and 38th Avenue would not be developed).[3] This 60/68-lot DEIS alternative is consistent with the applicant's initial assessment of the site's single family development potential: as previously discussed, the applicant requested a preferred single family EIS alternative with approximately 65 units and a reduced-density EIS alternative with approximately 50 units. This 60/68-lot alternative -- not the 81-lot alternative -- is a more realistic representation of the maximum development that would be permitted by codes for a standard, single family subdivision.[4] What is missing is any presentation and analysis of the single family alternative required by DCLU (and by SEPA) that would have "reduced environmental costs" to drainage systems, habitat and ECAs. 4-14

The DEIS presents only one real alternative for single family development of the Talaris site -- that is, an alternative for maximum development that is generally consistent with minimum, applicable code regulations.[5] There is no impact-reducing alternative to maximum single family development, as required by DCLU's July 2002 EIS scoping letter. By presenting only a throw-away alternative (81 lots) and a maximum development alternative (60 to 68 lots), SEPA's fundamental purpose of exploring less impacting alternatives is once again wholly ignored. 4-15

The above evolutions of DEIS alternatives for the Talaris use and single family use have several common themes:

- Alternatives that appeared in the DEIS for both uses are not responsive to potential significant impacts identified in DCLU's initial DS, which is the basis for DCLU's subsequent scoping letters.

- Instead of developing alternatives that could thoughtfully explore options for reducing significant impacts, unrealistic worst case or maximum development scenarios were fabricated for the DEIS.

- In general, the DEIS contains no alternative that is less impacting than the applicant's preferred development: 1) the applicant's MUP proposal for the Talaris use (the Talaris Project) is presented as the DCLU-required development option with "design alternatives to reduce bulk and scale impacts", and no other design options to further

4-16

[3] There is very little additional information in the DEIS about the configuration and other features of the 60/68-lot subdivision.

[4] DCLU required that the alternative for maximum single family development must comply with applicable regulations. DEIS information about the 60/68-lot alternative is scant, and is certainly insufficient for a more certain determination about the alternative's compliance with applicable development standards.

[5] See Footnote 4.

reduce the proposal's bulk and scale are explored; and 2) the applicant's preferred, 65-lot, maximum density subdivision is the "lesser" of the two DEIS subdivision densities, and no true impact reducing, single family alternative is explored (not even the 50-lot subdivision initially requested by the applicant. 4-16

- The failure to identify reasonable impact-reducing alternatives was not due to a lack of solutions. For both the Talaris and single family uses, there is a vast array of site and architectural design tools and site enhancements (some of which I have already listed above) that could potentially address identified significant impacts.

For both the Talaris and single family uses, DCLU must follow through in compliance with its own and SEPA's directives, and develop true impact-reducing alternatives to the Talaris Project MUP proposal and to the 60/68-lot maximum density subdivision proposal. Because these impact-reducing alternatives are missing from the current DEIS, the public should be given an opportunity to comment on them through a supplemental draft EIS before a final EIS is prepared. 4-17

B. Essential Information about the Alternatives Is Missing from the DEIS and Must BE Provided for Public Review and Comment. As previously stated, it is understood that a draft EIS is a document in progress, put out for public review as a way to improve development plans and decisions, and to resolve potential concerns or problems prior to the final EIS (WAC 197-11-400(4). It is also understood that the level of detail provided in an EIS varies depending on the complexity of the project and its significant impacts. 4-18

That being said, there is nonetheless a minimum level of information that must be provided in a draft EIS so that the public can clearly understand the basic features of the alternatives and the affected environment, especially with respect to identified significant impacts. While the Talaris DEIS may have numerous informational deficiencies that can be addressed in the FEIS, there are several fundamental DEIS omissions that prevent timely public review of critical issues and which must be addressed in a supplemental DEIS.

The following essential, basic information is missing from the DEIS alternatives and is particularly problematic for the public:

- **Neither the DEIS nor the MUP plans have sufficient information regarding the design of the Talaris building facades to assess significant bulk and scale impacts.** Facade design is a critical consideration in <u>any</u> discretionary review of bulk, scale and neighborhood character/compatibility issues, even more so when such issues are the subject of an EIS. Materials, color and fenestration all contribute to the bulk, scale and character of a building, and are especially important when proposing a massive institutional type structure in a single family context. 4-19

The DEIS and Talaris Project plans are uniquely silent and noncommittal with regard 4-20

to all aspects of the facade design. Only basic outlines of the facades, drawn at an inappropriately small and uninformative scale (1" = 32'), are shown on MUP plan elevations. Because of the small scale, the walls of the proposed buildings are at most about 1 inch high, and preclude a meaningful depiction of facade windows, materials and other details. There are no character sketches or area details showing how the most sensitive facades could be treated. The only hint of materials is given in very general DEIS references to the potential use of stone on the foundation base of one of the alternatives (#1B; there is no mention of the materials that would be used above the base), and to the potential use of concrete and brick on the other alternative (#1A), with no indication of how they might be applied in conjunction with each other and with window treatments.[6] By comparison, all Seattle design review projects -- the vast majority of which are significantly smaller and less impacting than the Talaris Project and are not the subject of an EIS -- are required to provide substantially more facade information than has so far been provided for the Talaris use alternatives. 4-20

- **The DEIS does not have sufficient information about the configuration of the 60/68-lot single family subdivision alternative to assess numerous impacts and subdivision issues (including those related to open space, tree preservation, wetlands and circulation) nor the DEIS' conclusions about such impacts and issues.** There is no conceptual site plan/lot layout for the 60/68-lot subdivision alternative, making it impossible for the public to visualize and evaluate the effect of the lot and road configuration on wetlands, trees, open space and vehicle/pedestrian circulation. A layout for a more dense subdivision alternative is provided in the DEIS but, as pointed out during the EIS scoping process, this layout was not viable from a practical and Code perspective and is essentially a throw-away alternative; it is not a suitable template for the lower density subdivision layout. 4-21

The absence of the above information requires an unacceptable degree of speculation by the public as to the features of the alternatives and their respective impacts.

C. The Differences between the Buildings in the Two Talaris Alternatives Must Be Clearly Conveyed and Provided for Public Review and Comment. As already described, there are fundamental problems with the Talaris use alternatives: there is no alternative that further reduces, through design/siting techniques, the bulk and scale impacts of the original Talaris Project proposal; and information about the architectural treatment of the building facades is scant to nonexistent. The DEIS is equally deficient in its explanation of the differences between the two DEIS Talaris use alternatives with respect to bulk, scale and character issues. 4-22

[6] Ironically, the DEIS does show rendered building facades superimposed in a series of site photos, but the DEIS clearly states that the rendered sketches are intended only for building height and facade length and are not intended to depict exterior design details (DEIS, p.3-26).

The DEIS appears to present two versions of the Talaris use buildings: one that does not include modulation or facade treatments (Alternative 1A; DEIS p. 2-6) and one that does (Alternative 1B). Above-ground floors in #1B would be modulated or stepped back, there would be large terraces and roof gardens, and other facade treatments (DEIS p. 2-8). Yet, the buildings shown on the site plans for the two alternatives appear to have an identical configuration of modulations and terraces, and both of these seem to be the same as the Talaris Project in the original MUP application and plans. Similarly, the heights, footprints, setbacks, facade lengths, interior spaces and square footages of the buildings in the two alternatives also appear to be identical (which would not be possible if one has substantial terracing and modulation and the other does not). 4-23

Based on this conflicting information, it is unclear whether Alternative 1A, which is not supposed to have any modulation or terracing, is actually bulkier and bigger, with more square footage, than Alternative 1B, or whether the two alternatives really have the same envelope. If they do have the same envelope, then are the differences between the alternatives (related to bulk, scale and character issues) limited to sun and privacy screens, stone along the foundation walls, and plantings on the rooftops? Together with the overall lack of facade information described in Section 1.B, above, these confusing contradictions make any evaluation of height, bulk and scale impacts problematic, at best. 4-24

D. Alternatives Summary. The Talaris EIS process provided an excellent opportunity to inform the public about the Talaris Project proposal, and to genuinely and objectively explore reasonable development options that would reduce the proposal's significant environmental impacts. Both opportunities have been lost in this DEIS. 4-25

The overall impression is that very little thought or effort went into the development of alternatives to the Talaris Project and to the applicant's preferred 65-lot subdivision -- even then, the focus was on developing two alternatives that were <u>more, not less impacting</u> than the applicant's original MUP proposal and preferred subdivision.

Essential DEIS information about some critical aspects of the alternatives is either wholly missing, contradictory, confusing or vague, further indicating a lack of commitment to explore genuine development alternatives and evaluate significant neighborhood and environmental concerns. Why is it that a conceptual layout was prepared for a throw-away, 81-lot subdivision alternative that carved up the site without regard to its natural features, but there was no layout for a single family option that protected wetlands and steep slopes (and their buffers), important existing trees and tree groupings, and other open space areas? And why has DCLU allowed this very sensitive Talaris project -- the subject of an EIS -- to proceed through the DEIS phase without the basic facade information that is so routinely required <u>at application</u> for significantly less-impacting, Type II MUP projects? The facade outlines in the plan elevations must be modified at a more informative and useful scale than 1"=32', with alternative character sketches for the sensitive facades (and without the disclaimer that they are not intended to depict exterior design details). 4-26

The DEIS' failure to identify SEPA-required, impact-reducing alternatives and to clearly convey essential information regarding critical aspects of the alternatives, undermines some of the most fundamental purposes of the EIS process. These are not minor oversights or inaccuracies that can be deferred for correction in the final EIS. They are significant issues that should be addressed in a supplemental DEIS for public review and comment before the EIS is made final. 4-27

2. Height, Bulk and Scale

The height, bulk, scale and character of the Talaris use buildings are among the most important aspects of the development project and EIS. However, because of the complete lack of information regarding facade design, a reviewer is unable to comment on these issues or even identify answers to basic questions about what the buildings' facades will look like and how they will interact with the surrounding environment. Yet, these are key questions for consideration under the City's SEPA policies. Not all details must be disclosed, but there must be sufficient disclosure of the elements of design that together create a building's character and height, bulk and scale so that an informed assessment can be made. Nearly all the outstanding questions could be answered simply by developing Talaris' architectural design scheme to the level normally required for Type II MUP plans (including design review projects). 4-28

3. Land Use

Establishment and expansion of the Talaris use on the 18-acre single family zoned site raises several significant land use issues regarding the Talaris use, other uses on the site (including the University of Washington's Center for Mind, Brain and Learning, or CMBL) and nearby single family zoned and developed properties. Although "land use" is correctly included as an element of the environment that was studied in the DEIS, the information and analysis do not address key land use concerns. 4-29

A. Talaris Use. Very little information about the Talaris Institute is provided in the DEIS. The entity seeks to develop a two phased, 290,000 square foot facility, yet there is no description of the daily activities on the site (now and in the future), the types of research that would be done and how the research would be used, the number of current and future Talaris employees, and Talaris' actual need for such a large facility. This information is more than just a matter of mere curiosity -- it is all pertinent to Talaris' land use classification, and whether such significant intensification of a non-single family use in a single family zone (a use which, at best, is not even permitted outright in the zone) is appropriate and even necessary.

In order to more fully understand the development proposal, and its consistency with land use regulations and policies, more EIS information and analysis is needed about the nature and size of Talaris, the work it is currently doing on the site and the work it would do under the proposed development. This would include answers to the following basic questions: 4-30

- How many people are currently part of (directly employed by, participate in, etc.) the

Talaris use (not including people who are part of CMBL or other entities that are proposed to use the site)?

- How many people will be part of Talaris under the proposed expansion (again, not including people who are part of CMBL or other non-Talaris entities that are proposed to use the site)? What are Talaris' growth goals (and how can DCLU issue a DEIS on Talaris' plans without disclosing this information in the document)? 4-30
- Of the 174 people estimated to occupy the building (DEIS, p. 3-71), how many are part of Talaris? How was the occupancy of 174 people determined?
- Describe Talaris' daily activities, now and under the proposed development.
- How will the Talaris research be used, and what types of research products might be produced? Will any marketing occur with regard to products or other site functions?
- Describe the different types and general quantities of spaces in the buildings that comprise "office space" in Table 3-17 for parking requirements (such as laboratory, office, storage, etc.); it would be helpful to know the total square feet for different types of uses (such as offices, laboratories and the like) as well as the number of individual offices, laboratories, conference areas and other primary spaces. 4-31
- Talaris was formed only a few years ago, it is relatively small and is still developing as an organization. Yet the amount of Phase I expansion is exceptionally large for this entity and is likely well beyond its actual needs; Phase II is even more so. The Talaris use is not permitted outright in single family zones and it is not a preferred, priority use in the Comprehensive plan. Talaris' proposed development would perhaps needlessly commit single family zoned land to a very intensive, non-single family use, permanently foreclosing any opportunity to develop the property with the preferred single family use. The EIS must evaluate (not just reiterate) Talaris' actual need for the requested expansion in the context of adopted City codes, policies and plans. As required by SEPA's land use policy (SMC 25.05.675.J), the EIS must more critically analyze the intensification of this single family site with non-single family use and the resulting permanent foreclosure of future single family development. 4-32
- Talaris consistently characterizes itself as a research and development laboratory (such as in the Transportation section of the DEIS), but research and development laboratories are prohibited in single family zones. They are more appropriately located in areas like South Lake Union. Although the DEIS correctly acknowledges that single family use of the Talaris property is more consistent with zoning and the comprehensive plan than the Talaris use, it wholly ignores the more serious implications of Talaris' self-characterization as an R & D lab. It is too late now (and 4-33

has been for some time) for this issue to be swept under the rug: it must be dealt with thoroughly and forthrightly in the DEIS, particularly because, once again, it suggests that a rezone or text amendment is implicitly part of Talaris' proposal. 4-33

- According to the Land Use Code, only existing institutes for advanced study are permitted as an administrative conditional use in single family zones. The term "existing" applies to the time when the Code was amended to permit the use, not to current time. The DEIS describes three existing uses on the Talaris property: Aljoya Conference Center, Battelle Institute and Talaris Institute (pgs. 1-1, 2-1, 3-2, others). However, this characterization of "existing uses" is misleading with respect to the Code's use of the term to define IAS uses that are conditionally permitted. Talaris was not an existing use on the property (then owned by Battelle) at the time the Code was amended. This fact might be of less consequence if the Talaris use was a close match with the existing conference center/IAS use that is permitted on and currently occupies parts of the property. But the Talaris use is not a close match (as evidenced in part by the entity's ongoing self-characterization as an R & D lab), and it has been struggling throughout the MUP process to fit its activities (mostly R & D labs and administrative offices) into the conference center/IAS activities that are described in the Code and Settlement Agreement. The introduction of Talaris' proposed use on the site is not a seamless transfer of proprietorship for a continuously operating conference center/IAS use. It is instead a new type of use with parking, space and operational characteristics that are distinct from the existing permitted conference center/IAS use, and should be addressed as such in the EIS' land use analysis. 4-34

B. Other Potential Uses in Talaris Development. The DEIS acknowledges that Talaris may not be the only occupant of its proposed buildings (p. 1-3). Given the large size of the proposed structures and the relatively small size of Talaris, it is doubtful that Talaris alone could fill up 290,000 square feet of space. Talaris could, in practice (and ignoring illegalities), play host to a multitude of uses within its buildings, allocating lab and office space much like a landlord leases space to tenants in a general office building. This very real possibility raises serious land use questions and concerns about how the proposed buildings will be operated and the legality of future uses on the site, but the DEIS is essentially silent on this issue. Much more EIS information and analysis is needed to understand the future uses in the project and their land use implications. 4-35

- What percentage of the new buildings will be used by entities other than Talaris? Will Talaris lease, sell or donate the space to the other entities? Do Talaris' budgets include/rely on rent from other entities and, if so, how much?

- CMBL has been identified as an entity that will use/have space in the Talaris buildings. What other entities might have space in the buildings? 4-36

- How much space in the Talaris buildings will be used exclusively by or shared with CMBL faculty, staff and other personnel? How many CMBL people (including faculty, staff and other personnel) will be using the Talaris facility part- and full-time? What are the financial arrangements between Talaris and CMBL which affect in any way Talaris' growth projections and development plans. (I asked for this some of this information in my scoping comments but nothing was provided in the DEIS.) 4-36

- According to an agreement between Talaris and CMBL, Talaris will be providing research space and equipment in its buildings for long-term CMBL use. CMBL is a University of Washington (UW) interdisciplinary center that is placed directly within the UW's Office of the Provost. It has a Board of Deans and faculty. The official UW seal marks CMBL's web site. University uses are prohibited in single family zones (SMC 23.44.022.A). Talaris cannot front building space for prohibited uses. The DEIS must be revised to address this issue and to disclose the implications of Talaris' plans with CMBL, which is a prohibited use.

- Talaris cannot front space for any other non-permitted uses, including new IAS uses. The Code provision that conditionally allows existing IAS uses in single family zones is a very narrowly construed and severe limitation -- one intended only to allow the existing, established IAS use on the then-Battelle property to continue as a conditional use instead of a nonconforming use. This provision is a closed door for new IAS uses, such as Talaris or any other IAS uses that are more akin to R & D lab use. The DEIS land use analysis needs to acknowledge this potential fatal flaw in the Talaris proposal. 4-37

C. Cumulative Land Use Impacts and Indirect, Growth Inducing Impacts. Seattle's SEPA Policies acknowledge that "adverse cumulative land use impacts may result when a particular use or uses permitted under the Zoning Code occur in an area to such an extent that they foreclose opportunities for higher-priority, preferred uses called for in Section C of the land use element of the comprehensive plan..." (SMC 25.05.675.J.1.a). Given the substantial likelihood for the near- and long-term foreclosure of single family development on and adjacent to the Talaris site, a careful analysis of cumulative and growth inducing land use impacts should be an essential component of the Talaris EIS. 4-38

Although the DEIS has some discussion about cumulative and growth inducing land use impacts, its off-point analysis and conclusions are erroneously dismissive of concerns about institutional encroachment into single family areas. Because Talaris does not propose to expand beyond its property boundaries, the DEIS declares that "the general intensity of development that characterizes the project area would be maintained" (p. 3-13) and the only growth inducing impact from the development would be some additional commercial/retail demand, such as at the hotels and coffee shops (p. 3-15).

One wonders if the preparers of the DEIS are very familiar with the expansion-oriented

and land-consumptive nature of most institutions, and whether they even bothered to look at their own illustrative land use map for the area (DEIS, Figure 7). This map depicts comprehensive plan land use designations for the Talaris site and nearby properties and, except for the Talaris site, the designations closely follow the actual on-the-ground land uses that have been established. It clearly demonstrates several characteristics that should have been a beacon and a basis for more serious and thoughtful EIS analysis of cumulative and growth inducing land use impacts:

- The western edge of the single family area is dominated by two major institutions and the Talaris use, which form a nearly continuous wall of ownership along the edge. 4-38
- Two increasingly isolated pockets of single family development are adjacent to the Talaris site (on the north and west) and are surrounded by Talaris, institutional and other more intense uses.
- The Talaris property is not within any urban village (and not even in a neighborhood anchor); is this where City planning and environmental policies support significant intensities of non-single family development?
- The Talaris property is about equal in size to the neighborhood's entire commercial land area (it might also be useful to compare the square footage of development in the commercial area with that proposed for Talaris).

There are other factors that should be considered in the EIS cumulative and growth inducing impact analysis. Institutional uses are already a significant presence in this area. Institutions tend to be symbiotic (they attract and support one another). They are typically growth-oriented and, unlike many other uses, they are more likely to absorb surrounding land to meet their expansion needs, rather than move to another site. The more than seven-fold intensification of non-single family development on the Talaris property will further isolate the two pockets of single family houses. Over time, the Talaris development together with the activities of the area's other institutions and non-single family uses, could potentially destabilize the pockets (contrary to assertions in the DEIS, expansion beyond property boundaries is not a prerequisite for upsetting the balance between competing land use). 4-39

4. Drainage.

The Talaris use would create approximately 3.3 to 7 acres of additional impervious surface on the site, and a corresponding increase in stormwater runoff. After the initial scoping period was concluded, DCLU correctly identified "drainage" as an element of the environment that should be evaluated in the EIS for probable significant adverse impacts.

The DEIS includes a limited description of the site's existing drainage and similarly limited analysis of stormwater runoff in the Wetlands section. It concludes that "if unmitigated, increased volumes of stormwater runoff from new impervious surfaces could amplify the 4-40

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discharge of non-point pollutants, such as oils and metal residues produced by cars, into Union Bay", potentially impacting juvenile salmon, scouring the Lake bottom near the discharge point and causing sedimentation in other areas (DEIS, p.3-44). Mitigation for the increased stormwater runoff (both quality and quantity) is overly general: water quality BMPs should be implemented to reduce non-point pollution, and flow rates and flow capacity should be minimized by utilizing existing on-site stormwater treatment facilities (DEIS, p.3-49).

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There is no specific information in the DEIS about how the new runoff will be conveyed to Lake Washington (in pipes or swales), whether and how it will be detained on site, whether and how it can be integrated with the existing ponds and other existing drainage features and systems, and whether and how water quality can be improved. Because the Talaris property is such a large and currently under-developed site in an otherwise urban area, it offers a rather unique opportunity and obligation for comprehensive drainage enhancements to improve the function of the existing ponds and provide for future drainage needs, while also enhancing habitat and the site's aesthetics. The DEIS needs to provide more information on and analysis of such potential comprehensive site drainage enhancements.

5. Required Parking

The amount of parking required for the expansion of an existing IAS on the Talaris property is determined by the Land Use Code and a October 23, 1991 Settlement Agreement (later amended on April 6, 1992), which can only be amended upon written consent of the parties to the Agreement. The parking ratios and formulae in the Code and the Agreement are identical and somewhat complex (SMC 23.54.015, Chart A):

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- Parking for office space is provided at3.5 spaces per 1000 square feet;
- Additional parking must be provided for conference activities based on either 1) the building footprint which houses and supports the conference center activities (10 spaces for each 1000 square feet of additional building footprint), or 2) the square footage of the actual conference rooms to be constructed (37 spaces for each 1000 square feet of conference rooms), <u>whichever is greater</u>.

Additionally, the Agreement documents the amount of existing parking and office space on the site, as well as the existing square footage and building footprints for conference center activities, so that parking for the existing level of development can be determined and maintained when new development is added and/or credited toward new development when certain uses and buildings are discontinued and demolished.

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The amount of Code-required parking calculated for the Talaris use is shown on Table 3-17 in the DEIS (p. 3-71). Most of the information in this table is fairly straightforward, but three clarifications are required:

- Please explain how the 212 spaces for the Aljoya Conference Center were calculated;
- Please describe how the existing parking spaces and development were addressed by/incorporated into the parking calculations; 4-42
- For the conference space, parking spaces were calculated using the ratio of 37 spaces per 1000 square feet of conference rooms (note that there is a typo in the table). However, conference space is supposed to be calculated according to the ratio that provides the greatest number of spaces, using either the building footprint or the conference rooms ratio. The Phase I building footprint that houses the conference space is quite large (68, 462 square feet). Please explain which ratio was used for the conference space calculation and why.

6. Mitigation for Land Use and Height. Bulk and Scale Impacts

It is difficult to understand the DEIS' mitigation of critical land use and height, bulk and scale impacts when so much of the mitigation is purported to be in development features and designs for which there is no or only very confusing information. Nonetheless, it is apparent that the DEIS' analysis of mitigation is substantially deficient in several ways:

- **Land Use/Single Family Use.** The DEIS should analyze and develop land use mitigation to ensure the retention of open spaces and trees in the single family development alternatives. The DEIS claims that no such land use mitigation is necessary because compliance with codes will reduce any land use impacts. However, the Code's subdivision provisions requiring open space and tree retention are not proscriptive, and mitigating conditions that identify specific areas of the site for long term open space preservation are required. As a prerequisite to developing the mitigation, a conceptual site plan/lot layout should be prepared that identifies residential clustering and open space areas. (This mitigation measure is also related to impacts on plants and animals, and to height, bulk and scale impacts.) 4-43
- **Land Use/Talaris Use.** The land use mitigation analysis for the Talaris use seems to be focused more on character and aesthetic issues, and wholly misses the significance of Talaris' cumulative and growth inducing land use impacts. In addition to expanding the land use impact analysis as described in Section 3, above, the DEIS should explore mitigation measures to curtail IAS expansion on the site and to minimize operational encroachments on the pockets of single family development that are most threatened by non-single family development of the Talaris site. Such measures could include but are not at all limited to a lid on the square footage of non-single family use on the site (set at or below Talaris' requested development), prerequisites that must be met before Phase 2 could be developed, and permanent protections for the open spaces in Alternative 1B to ensure they would not be threatened by a future phase of development. 4-44

- **Height, Bulk and Scale/Talaris Use.** Much of the DEIS mitigation for height, bulk and scale impacts is focused on landscaping, which can be effective but is by no means sufficient by itself. "Additional facade treatments" are suggested as mitigation for Alternative 1A but there is no more information as so what those "treatments" might be. The DEIS proposes no additional mitigation for Alternative 1B (the Talaris Project MUP proposal) on the basis that sufficient mitigation is already incorporated into the design. However, in the absence of fundamental information about the facade design, it does seem possible that the DEIS can make this determination -- moreover, this already-mitigated alternative was the very one that triggered the need for the DEIS on height, bulk and scale issues. In either case, attempting to comment on or develop height, bulk and scale mitigation for either of these alternatives is moot until more information about the facades is made available for public review. 4-45

7. Noncompliance with Settlement Agreement

The Settlement Agreement does not control single family development on the Talaris property, and only applies to DEIS Alternatives 1A and 1B for the Talaris use. The following elements of the Talaris alternatives do not comply with the terms in the Agreement (some of these issues have already been described in more detail in my October 2, 2001 scoping comments):

- Parking: As acknowledged in the DEIS, Alternative 1B does not comply with parking requirements in the Agreement.
- North Roadway Realignment: The Agreement prohibits the proposed realignment of the roadway leading to the northwest entrance (both Alternatives 1A and 1B).
- North Property Line Landscape Plan: The north roadway realignment would destroy trees that are required to be retained in the Agreement's landscape plan (both Alternatives 1A and 1B). 4-46

The following elements of the Talaris alternatives may not comply with the terms in the Agreement:

- Use: Issues raised earlier in this letter about whether the Talaris use is an IAS under the Code are also applicable to the Settlement Agreement (both Alternatives 1A and 1B).
- Use: CMBL may not be permitted under the Settlement Agreement (in addition to being prohibited by Code; both Alternatives 1A and 1B).
- Parking: Alternative 1A may also not comply with the parking requirements (information requested in my comment letter about the figures in Table 3-17 may help to clarify and resolve this).

- Height: The Talaris buildings may not comply with the 2-story height limit in the Agreement (both Alternatives 1A and 1B). 4-46

Thank you for your careful consideration of the above comments. Please call me if you have any questions or need any information about the comments.

Sincerely,

[signature provided on original]
Carol Eychaner

cc: Peter Eglick
Jeannie Hale

COMMENT LETTER #4, Carol Eychaner

4-1. Comments noted.

4-2 Since the publication of the Draft EIS, additional site analysis and refinement of the EIS alternatives and analysis has occurred to provide more specificity, and respond to comments received on the Draft EIS. Work included changes in the design and layout of one of the Institute for Advanced Study alternatives (Alternative 1B) and changes to the single-family residential alternatives (Alternatives 2A and 2B). Site plans have been developed/revised for some of the alternatives. Changes to Alternative 1B include a reduced building footprint, reorientation of the building on the site, facade modulation and treatments, and an added floor of underground parking to reduce the amount of surface parking. The single-family alternatives were also modified to account for code-required setbacks for buildings and critical areas. These changes provide greater distinction between the project alternatives. The Final EIS analysis has been revised to reflect these changes and to provide additional analysis of potential impacts. Refer to Chapter 2 of the Final EIS for a detailed description of the EIS alternatives.

4-3 Both the Draft and Final EIS include an appropriate range of alternatives. The EIS deals with a range of environmental issues such as code compliance, bulk and scale, wetlands and steep slopes. The alternatives evaluated were designed to address these issues in a variety of ways.

As stated in Chapter 2 of the Draft and Final EIS, the applicant's goal is to redevelop and expand the existing institute uses on the site. Two alternatives that relate to the proposed redevelopment and expansion of the Talaris Research Institute (Alternatives 1A and 1B) have been included that meet the applicant's objectives. Alternative 1A demonstrates the maximum bulk and scale allowed by code, including code-required parking, while Alternative 1B provides design features intended to reduce bulk, scale, parking and critical area impacts. In addition, two single-family alternatives were included in the Draft EIS (Alternatives 2A and 2B) to show how the site could develop consistent with the underlying Single Family zoning (SF-5000), thus demonstrating a reduced bulk and scale option that is more consistent with the adjacent single-family residential densities and neighborhood character. The No Action Alternative evaluates the potential impacts of not constructing the proposed Talaris Research Institute.

In planning for the Talaris Research Institute facilities, the design team first analyzed the site in relation to both the Seattle Land Use Code and the 1991 Settlement Agreement between Battelle and the Laurelhurst Community Club. It is acknowledged that the Laurelhurst Community values the park-like appearance of the site and the community’s access to the large relatively flat lawn along Northeast 41st Street. These factors were incorporated into planning design options using the setbacks agreed upon in the settlement agreement, while

preserving the maximum park area and not disturbing the large lawn.

The majority of the wetlands and the steep slopes, are located in a line running from the southwest corner to the middle eastern portion of the site, just north of the large lawn. Recognition of these critical areas focused the site planning in the northern side of the site.

As the programming and planning proceeded, it became clear that the parking area would be larger than the building footprint. In order to preserve the quality of the site, the project proponent plans to build two levels of underground parking under the footprint of the Talaris Research Institute facilities; this structured parking is a component of Alternative 1B.

The first phase of the Talaris facilities would be located in the northwest corner of the site to allow the existing Talaris Conference Center to remain intact and operational. This location also seemed more appropriate because the northern edge of the site is adjacent to commercial zoning along the southern edge of 45th Street. By planning for the facilities to be built in the northwest corner of the site, in accord with the agreed upon setbacks, the maximum area and character of the park-like grounds can be preserved. With more detailed planning, it became clear that the first phase solution presented in the EIS allows the building to be built in accord with the agreed upon setbacks, while not disturbing the 72-inch-diameter storm sewer that crosses the site. This siting also conforms to the agreement in maintaining the three existing vehicular entrances to the site without adding any new access roads.

In response to concerns raised in comments on the Draft EIS related to height, bulk and scale impacts, additional design work was performed and resulted in modifications to one of the Institute for Advanced Study alternatives (Alternative 1B). Refinements to both of the single-family development alternatives were made in response to comments about wetlands and critical area impacts. This work helped to provide greater distinction between the project alternatives. Refer to Chapter 2 of the Final EIS for a detailed description of the alternatives and the revised site plan drawings.

4-4 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-3.

4-5 Refer to the response to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-3. The Final EIS has been revised to provide greater distinction between the two Institute for Advanced Study (IAS) alternatives (Alternatives 1A and 1B). The site plan for Alternative 1B and related EIS analysis has been revised to provide more detail regarding the facility's orientation on the site, façade treatments, building modulation and building materials/treatments. In addition, site profile drawings have been provided to show how the IAS would look from views looking toward the site. These changes further mitigate the impacts of the proposed Institute for Advanced Study and may result in reduced environmental

impacts. This information is discussed in the Height, Bulk and Scale section of Chapter 3 in the Final EIS.

4-6 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3. The refinements to the alternatives and analysis in the Final EIS do not result in significant changes to the conclusions in the EIS or result in new significant adverse impacts; therefore, a supplemental EIS is not required.

4-7 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3.

4-8 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-3.

4-9 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3.

4-10 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3.

4-11 The referenced December 20, 2001 letter did request two single-family development options in the EIS, approximately 65 units and 50 units. These numbers were derived withoutdevelopment of 38th Avenue NE right-of-way, and prior to the design of any housing layouts. With DPD's decision to allow the development of the 38th Avenue NE right-of-way in the higher density plan, and the initial design of a housing layout, the number of lots for the higher density plan increased to 90 and 91.

Single-family development alternatives (Alternatives 2A and 2B) were included in the EIS to demonstrate how the site could develop consistent with the underlying single-family zoning (SF-5000). The lot sizes of the adjacent single-family neighborhoods range from 4,800 to 6,000 square feet (sf) with the average lot size being 5,000 sf. For the Draft EIS, both a maximum single-family development alternative and a reduced single-family development alternative were included to show a range of development under existing zoning. The maximum single-family development alternative assumed code-required setbacks and filling of wetlands, while the reduced single-family development alternative looked at how many lots could be developed on the site while complying with wetland and steep slope areas and their buffers. The estimates on the number of lots that could be accommodated on the site were based on preliminary site analysis.

Since the publication of the Draft EIS, additional site analysis and refinement of the single-family alternatives has occurred. This analysis determined that up to 29 more lots could be developed on the site while still maintaining appropriate setbacks (building, steep slope and wetlands). This might be achieved through the consolidation of wetland areas on the site (wetland fill and mitigation/enhancement) and relocating an existing stormwater pipeline into the street right-of-way. In addition, one of the alternatives (Alternative 2B) assumes that the 38th Avenue NE right-of-way would not be developed, thereby

preserving that area as habitat. Under Alternatives 2A and 2B, all of the lots are a minimum of 5,000 square feet as required by the zoning. There are some lots that are larger due to the layout of streets, steep slopes and wetlands, etc. Some of the lots are in the 8,000 to 9,000 square-foot range. See Chapter 2 and the Land Use and Height, Bulk and Scale sections in Chapter 3 of the Final EIS for further analysis of the revised alternatives. Revised site plans are located in Chapter 2.

Alternative 1A and the housing alternatives (Alternatives 2A and 2B), as proposed, would require review under the provisions of the Environmentally Critical Areas portion of the Land Use Code. All three are dependent upon the granting of an Environmental Critical Areas (ECA) exception. On a preliminary basis, these alternatives may not meet the code's criteria for granting an ECA exception. Therefore, they may prove infeasible or require modifications to meet ECA requirements or the sponsor's objectives.

4-12 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-11.

4-13 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-11.

4-14 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-11.

4-15 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-3.

4-16 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2, 4-3 and 4-11.

4-17 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-6.

4-18 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-6.

4-19 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2.

4-20 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2.

4-21 Refer to the response to Comment Letter #3 (Carol Eychaner), Comment 4-11. Since the publication of the Draft EIS, additional site analysis and refinement of the single-family alternatives has occurred. This analysis determined that up to 29 more lots could potentially be developed on the site while still maintaining appropriate setbacks (building, steep slope and wetlands). This was achieved through the consolidation of wetland areas on the site (wetland fill and mitigation/enhancement) and relocating an existing stormwater pipeline into the street right-of-way. In addition, one of the alternatives (Alternative 2B) assumes that the 38th Avenue NE right-of-way would not be developed, thereby preserving that area as habitat. Under Alternatives 2A and 2B, all of the lots are a minimum of 5,000 square feet as required by the zoning. There are some lots that are larger due to the layout of streets, steep slopes and wetlands, etc. Some of the lots are in the range of 8,000 to 9,000 square feet. Modifications to the site plan

drawing for Alternative 2A and inclusion of a site plan for Alternative 2B are provided Chapter 2 of the Final EIS. The site plans show wetland areas, steep slope and wetland buffers, proposed utilities and street rights-of-way and the stormwater pipeline relocated into the street right-of-way. Both Alternatives 2A and 2B (as well as Alternative 1A), as proposed, would require review under the provisions of the Environmentally Critical Areas portion of the Land Use Code and are dependent upon the granting of an Environmental Critical Areas (ECA) exception. On a preliminary basis, these alternatives may not meet the code's criteria for granting an ECA exception. Therefore, they may prove infeasible or require modifications to meet ECA requirements or the sponsor's objectives.

4-22 Refer to Chapters 2, 3 and 4 of the Final EIS for further analysis of the revised alternatives.

4-23 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2, 4-3 and 4-5.

4-24 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-5.

4-25 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-5.

4-26 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2, 4-3 and 4-5.

4-27 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2, 4-3, 4-5 and 4-21.

4-28 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-3 and 4-6.

4-29 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-5.

4-30 Refer to the Land Use and Height, Bulk and Scale sections in Chapter 3 of the Final EIS for a discussion of land use and neighborhood impacts. This includes a discussion of direct impacts associated with the construction and operation of the Talaris Research Institute. The Height, Bulk and Scale section discusses how the proposed facility relates to surrounding land use.

4-31 A table indicating the number of employees associated with the existing site uses has been added to the Land Use section in Chapter 3. Table 2-1 in Chapter 2 of the Draft and Final EIS indicates the proposed uses for the Talaris Research Institute. In addition, Table 2-2 indicates the approximate number of daily users (by user type) that are associated with the Institute. Tables 3-18 and 3-19 in the Transportation section of the Final EIS show the square footage and number of people associated with the proposed facility.

The only research currently being done on site is the "Bringing Baby Home

Project" with John Gottman. The Bringing Baby Home Project seeks to learn more about the changes couples go through as they become parents and test interventions designed to help parents make this transition with greater ease and success.

The Talaris Research Institute is being planned and built as an interdisciplinary research center bringing together researchers from developmental psychology, speech and language science, neuroscience, computer science, education, and genetics into an environment planned to foster daily interdisciplinary communication and work. This institute's purpose is to foster close relationships between disciplines that are usually located in entirely separate laboratories and often separate buildings. It is therefore proposed that the full range of disciplines is housed in a single building, and in fact the majority of researchers will be housed on a single floor of the institute's building.

Current activities at the existing on-site facilities include: nonprofit administration, sponsoring research performed by others, translating research into web based information center, disseminating information to parents and caregivers, creating publications and web based information center, and convening groups (conferences) to exchange and disseminate information. Future activities will include all of the current activities plus research in five different laboratories and provision of childcare.

4-32 Currently the level of design for this project does not include the information you requested on the number of individual offices, laboratories, conference and other primary areas. More detailed calculations have been included in the revised MUP drawings set (Alternative 1B).

4-33 The Land Use section in Chapter 3 of the Draft and Final EIS discusses the consistency of the project with applicable land use policies and code requirements. Additional text has been added to this section to clarify the cumulative impacts of the project.

4-34 The current and proposed use for the site is an institute for advanced study (IAS) and not research and development. For purposes of analyzing traffic and parking impacts, the Land Use Code and ITE Manual focus on the specific character of the IAS use (conference, office and research and development). Thus, the EIS refers to “research and development use” for the purpose of assessing these impacts. From the perspective of the Land Use Code, the use is clearly IAS.

4-35 The Land Use Code regulates uses of land, not users of land. That is, the Code can legalize an existing “use” – as it does in this case with the IAS use that has existing on the Battelle site for many years – but the Code cannot confer special rights *on a particular entity* (such as Battelle) that are not enjoyed by others. So the IAS use of the site that existed on the date of Code adoption continues, even though the user has changed. What the Code prohibits is the development of a *new IAS use* (not user) on a site in the City.

This is analogous to the City's experience in administering the Major Institutions Code for schools and hospitals. In some cases there, the user or owner of a major institution site has changed (e.g., Swedish Hospital's purchase of the Providence campus several years ago); this, however, does not diminish or impair the right of the new user to maintain the approved institutional use.

4-36 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-30.

4-37 Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-30. CMBL will be one of several research groups that will work with the Talaris Research Institute. The Land Use Code (at Section 23.44.022.A) allows existing institutes for advanced study to be permitted as conditional uses in single-family zones in the City of Seattle. The institute for advanced study use located on the Talaris site has existed for 35 years (including in 1990 when this provision of the Land Use Code was adopted) and is an "existing institute for advanced study" for purposes of the Land Use Code. Just as the Battelle Research Institute did for many years, Talaris, as part of its institutional activities, will collaborate with and host various researchers from the region, the nation and from other countries at this site. Some hosted researchers are likely to be from local research institutions, including the University of Washington. These researchers will be conducting work in furtherance of Talaris' advanced study mission. The number of researchers at Talaris, and the institutions from which they come, will vary from time to time over the life of the facility. Talaris will sponsor researchers from universities and other institutions around the country who would use the institute's facilities to conduct research. Potentially this could include researchers from the University of Washington. Talaris will not be operating a "college or university" on its site, which uses are prohibited from locating in single-family zones under Section 23.44.022.A.

4-38 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-33, 4-34 and 4-36.

4-39 The indirect growth-inducing impacts associated with the development of the site with single-family residential uses were evaluated as part of *Seattle's Comprehensive Plan: Toward a Sustainable Seattle – A Plan for Managing Growth 1994-2014* and associated SEPA documentation to meet the mandates of the Washington State Growth Management Act. As part of its planning effort, the City of Seattle evaluated both the existing and zoned development capacity within the city. The development capacity was defined as "an amount of residential development (number of dwelling units) and non-residential development (building floor area) that could be built based on the zoning of the land and other factors limiting development." The evaluation concluded that 12 percent of the City's total estimated residential zoned development capacity could be accommodated in single-family zones. This analysis is detailed in the *Land Use Appendix E: Existing and Proposed Zoned Development Capacity*, which is part

of the Comprehensive Plan. Based on its 20-year growth goal of 50,000 to 60,000 households, the City of Seattle allocated 25 percent of its residential growth (12,500 to 15,300 households) to areas outside of designated Urban Centers, Hub and Residential Urban Villages and Manufacturing and Industrial Centers.

In response to comments related to the site's location outside of an Urban Village or neighborhood anchor, the Comprehensive Plan allows for "limited amounts of development in areas of the city outside centers and urban villages to maintain the general intensity of development that already characterizes these areas and to promote the targeted level of growth in village and center locations" (Land Use Goal 27). In addition, areas outside of villages and centers are to share some portion of the 146,660 jobs that are not estimated for center or hub urban villages, at appropriate development intensities, where current zoning allows.

4-40 Land Use Goal L74 of Seattle's Comprehensive Plan states, "Limit the number and type of non-residential uses permitted in single family residential areas to protect those areas from the negative impacts of incompatible uses." As indicated in the Draft and Final EIS, the proposed Talaris Research Institute would not expand outside existing boundaries of the site. The applicant proposes redevelopment of an existing Institute for Advanced Studies (IAS) and not a new IAS development. The Talaris Research Institute is a growing organization and over time will occupy all of the Phase I building. Any growth would be accommodated within the future Phase 2 building. Although the occupants for the Phase 2 building have not been identified, the facility could be an expansion of Talaris or another IAS user.

The presumption that the Talaris Research Institute in combination with the other institutional uses in the area could destabilize adjacent single-family neighborhoods is speculative. Since the publication of the Draft EIS, the site plan for Alternative 1B has been revised to provide more detail regarding façade treatments, building modulation and building materials/treatments. Changes include a reduced building footprint, reorientation of the building on the site, facade modulation and treatments, and an added floor of underground parking to reduce the amount of surface parking. These changes help to further mitigate the impacts of the proposed Institute for Advanced Study on adjacent land uses and result in fewer environmental impacts.

4-41 Stormwater treatment and conveyance associated with the site development is discussed in the Public Services and Utilities section of Chapter 4 in the Draft and Final EIS.

4-42 Comment noted.

4-43 The 233-space requirement for the Talaris Conference Center were calculated based on the following:

Office:	23,888 sf x 3.5 spaces per 1,000 sf =	83 spaces
Conference:	9,008 sf x 10 spaces per 1,000 sf =	90 spaces
Dining Facility:	5,985 sf x 5 spaces per 1,000 sf =	60 spaces
		233 spaces

Parking requirements for the existing Talaris Conference Center that would remain with Phase 1 of the project were added to the parking requirements calculated for the new construction to identify total parking requirements for the project site (refer to the tables showing Parking Code Requirements and Parking Demand Estimates for Alternative 1A in the Transportation section of Chapter 3 in the Final EIS).

The typographical error in the table has been corrected. The building footprint referred to in Seattle Land Use Code is that which houses and supports the conference center activities. Most of the 68,462 sf Phase 1 building footprint would house office and lab activities. Other than the actual 2,434 sf conference assembly area, there is no additional space in the building that would be dedicated to support conference activities. The calculation of parking requirement using the ratio of 37 spaces per 1,000 sf of conference space is greater than would result from using the ratio of 10 spaces per 1,000 sf of building footprint housing and supporting conference activities.

Since the publication of the Draft EIS, additional site analysis and refinement of the EIS alternatives has occurred. In response to concerns raised in comments on the Draft EIS related to development setbacks and impacts to wetlands and critical areas, refinements to both of the single-family development alternatives were made. Based on this analysis, it was determined that more lots could potentially be developed while maintaining code-required setbacks, lot coverage, preserving critical areas and steep slopes. Where wetland fill is proposed, mitigation measures have been identified for wetland replacement and enhancement. Alternative 1A and the housing alternatives (Alternatives 2A and 2B), as proposed, would require review under the provisions of the Environmentally Critical Areas portion of the Land Use Code. All three are dependent upon the granting of an Environmental Critical Areas (ECA) exception. On a preliminary basis, these alternatives may not meet the code's criteria for granting an ECA exception. Therefore, they may prove infeasible or require modifications to meet ECA requirements or the sponsor's objectives.

4-44 In addition, mitigation includes recommendations for preservation of trees. Refer to Chapter 2 of the Final EIS for a detailed description of the alternatives and the revised site plan drawings.

4-45 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-3 and 4-38.

4-46 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-5.

4-47 Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-3, 4-33 and 4-34.

HAWTHORNE HILLS COMMUNITY COUNCIL
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DEC 31 2002
Dept. of Design Construction & Land Use

December 27, 2002

Department of Design, Construction and Land Use
Marina Haufschild, Planner
Public Resource Center
700 5th Ave, Suite 2000
Seattle, Washington 98104

RE: Project #2104047, 4000 NE 41st Street

Dear Ms. Haufschild:

The recently unveiled plans for the Talaris Research Institution on this property are of great concern to our neighbors. After combing the pages of the Draft Environmental Impact Statement, we request that DCLU conduct a supplemental DEIS. We find that the current DEIS is lacking in completion and in answering some of the basic concerns which would normally be addressed in a DEIS. 5-1

- The Seattle Comprehensive Plan's goal to limit the number and types of non-residential uses permitted in single-family residential areas to protect those areas from the negative impacts of incompatible uses has not been justified. 5-2
- The relevant Corps of Engineers Wetland Regulatory Considerations seemed to have "missed" the connection of the property with the Yesler Creek Headwaters located in this area. Development in the City has "isolated" many of our wetlands and creeks. This man-made isolation does not mean that the wetlands are truly isolated. Any proposed construction on this site should consider the importance of the intermittent creeks and wetlands in the area. 5-3
- Wildlife Regulatory Considerations are found in SMC 25.05.675. In this Code, the City considers "special habitats" as high priority for protection and preservation. The DEIS states that "No special habitats, other than wetlands, occur on the project site." We would like to know the authority, other than the hired consultants of the project developer, who made that determination. 5-4
- The current DEIS, on page 3-44, addresses Wildlife Habitat. In addressing the impact of "temporary noise", the DEIS actually admits that some species would relocate to similar habitats nearby, if available. This admission would suggest that there are, indeed, "special habitats" within the project site. 5-5
- The loss of the minimum of 292 significant trees is unacceptable. 5-6
- Single-family alternatives are simply not realistic. Lots are located on the major utility lines and would not be buildable. Lots located on the site of the wetlands 5-7

would likewise be unbuildable. We feel that the plans for single-family housing were done without addressing the Seattle Municipal Code and without addressing the true impacts on the environment. This is hardly a complete Draft Environmental Impact Statement. The City has shown an interest and has allowed clustered housing development in other areas of the city. Since this area is an important open space, as much of the natural area and trees should be retained as possible. Consideration of clustered housing should have been an alternative in order to demonstrate how much of the natural area and pervious surfaces can be retained. 5-8

- An alternative to the planned development should have considered significant attention to mitigating the height, bulk, and scale of the proposed development. Smaller buildings, more underground parking, and retention of the trees on the property could have been part of an alternative design. 5-9
- The designs for the Institutional Buildings were successful in showing how the developer can cover as much of the site with impervious material as possible. What about an alternative design that would should the least impact on the environment at this site? 5-10

Certainly, after reading the Draft Environmental Impact Statement, the Department of Design, Construction and Land Use will find the document woefully inadequate in addressing the impacts of the presented alternative development for the site and should request a Supplementary Draft Environmental Impact Statement.

Sincerely,

Bonnie E. Miller, President

George Holzapfel, Vice-President

COMMENT LETTER #5, Hawthorne Hills Community Council, Bonnie E. Miller and George Holzapfel

5-1. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-6.

5-2. Land Use Goal L74 of Seattle's Comprehensive Plan states that "Limit the number and type of non-residential uses permitted in single family residential areas to protect those areas from the negative impacts of incompatible uses." The proposed Talaris Research Institute would not expand outside existing boundaries of the site and is the redevelopment of an existing Institute for Advanced Studies (IAS) and not a new IAS development.

5-3. Please refer to the Habitat/Wetlands section of Chapter 3 of this EIS. The identified wetlands in the southwestern corner of the project site are not hydrologically connected to the headwaters of Yesler Creek. A remnant of historic Yesler Creek is contained in a 60-inch stormwater pipe that drains to an outfall located approximately 700 feet south of the site in Union Bay, Lake Washington. Due to a number of events on and around the project site, surface and shallow groundwater hydrology at the site has been reduced. In addition, the Corps of Engineers verified wetland boundaries in October 2001 and determined that wetlands (as well as the pond) located on-site are not waters of the United States and thereby not regulated under the Clean Water Act and not regulated under Corps jurisdiction.

5-4. SMC 25.05.675 defines "special habitats" as those that "include, but are not limited to, wetlands and associated areas (such as upland nesting areas), and spawning, feeding, or nesting sites." Other than the wetlands noted in the EIS, no other "special habitats" were identified by project consultants or other relevant authorities (such as the City of Seattle Critical Areas Folio) and the Corps of Engineers in a letter dated October 29, 2001. All work performed by the developer's consultants was reviewed by the City's habitat biologist.

5-5. Comment noted. Refer to the discussion of Operation Impacts in the Habitat/Wetlands section in Chapter 3 of the Draft and Final EIS for a discussion of wildlife and habitat. Also, refer to the response to Comment Letter #5, Hawthorne Hills Community Council, Comment 5-4. It is true that some species would relocate to similar habitats nearby due to construction. The subsection on Wildlife Habitat section also states that some species would return to the site following construction, while others would remain in their new location.

5-6. The term “SEPA Significant Trees” is not defined by or contained in the Seattle Municipal Code. The tree evaluation that was completed for the Draft EIS has been revised to correctly reflect the City of Seattle’s policies and regulations related to the classification and protection of trees. A tree preservation plan is

proposed to identify trees for preservation and the planting of additional trees to offset tree loss resulting from construction. Refer to the Habitat/Wetlands section in Chapter 3 of the Final EIS for a revised discussion of the trees on the site and the potential impacts and proposed mitigation associated with the EIS alternatives.

5-7. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-21. In addition, one of the alternatives (Alternative 2B) assumes that the 38th Avenue NE right-of-way would not be developed, thereby preserving the existing habitat area. See Chapter 2, Description of Alternatives and EIS Scope and the Land Use and Height, Bulk and Scale sections in Chapter 3 of the Final EIS for further analysis of the revised alternatives.

5-8. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-43.

5-9. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2.

5-10. This EIS considers a full range of options from the No Action Alternative that would leave the project site as it currently exists, to Alternative 1A that would have the greatest amount of impact due to the amount of surface parking required per City of Seattle code. Alternative 1B would reduce impervious cover as compared to Alternative 1A. The single-family alternatives (Alternatives 2A and 2B would have more impervious surface cover than Alternative 1B but less than 1A.

Comments to: DEIS for the Talaris Research Institute, Seattle DCLU, Nov. 14, 2002
From: Richard Ellison, Save Seattle's Trees!, 4418 Latona Ave. NE, Seattle, WA 98105
Date: December 15, 2002

A. Save Seattle's Trees protests the proposed removal of hundreds of trees in all action alternatives.

1. Seattle is short of forested public and private space, and this property should be purchased by the City or another jurisdiction to preserve and enhance existing habitats. 6-1
2. Short of direct protection of all SEPA Substantial trees, development should be allowed only in areas with existing footprints of structures. This allows Alternative 1B to have the least impacts to significant trees. However, Alternative 1B still allows for the removal of too many SEPA significant trees. 6-2
3. To allow other large areas of wetland and upland to be paved for parking is inconsistent with SEPA, due to the significant losses of habitat and SEPA vegetation. Alternative 1A, 2A and 2B are poor choices to preserve trees and habitats. 6-3
4. Mitigation's should include restoration of the existing wetlands including removal of invasive non-native species and planting a diversity of native species. 6-4
5. There is no alternative that allows for retention of the majority of SEPA significant trees. Removing 100's of trees for any project is in violation of the spirit of Seattle's Comp Plan. By moving the footprints of new buildings to locations with fewer trees, and minimizing utility and roadway impacts more trees could be preserved. Directors Rule 6-2001 encourages modification of the location and design of structures to preserve trees. SEPA allows for the modification of development to preserve SEPA significant vegetation.

SMC 25.05.675 N.2a. "It is the City's policy to minimize or prevent the loss of wildlife habitat and other vegetation which have substantial aesthetic, educational, and/or economic value... the decisionmaker may condition or deny the project to mitigate its adverse impacts... **N.2d.** mitigating measures may include but are not limited to... ii. Reducing the size or scale of the project; iii. Preservation of specific on-site habitats, such as trees... vi. Landscaping and/or retention of existing vegetation." 6-5

Seattle's 1994-2014 Comprehensive Plan calls for:

1) Preservation. "Environmental Stewardship. The natural and built environment are precious resources that should be preserved, protected and enhanced (pg. vii)."

2) Environmental Leadership. "The Comprehensive Plan calls for Seattle to continue to be a national leader in environmental stewardship. The City will strive to... protect and improve the quality of the .. local environment;"

3) A Role Model. "Maintain and enhance conditions necessary to a healthy environment; ... Provide a role model for individuals and businesses in environmental management and preservation practices"

4) Sustainability. "The plan's four core values -- community, environmental stewardship .... are key components of sustainability."

B. WETLANDS

Wetlands surveys in the DEIS include field notes of the 3 parameter approach encouraged by the US Army Corps of Engineers. However, a location map of each sampling point is not included in the DEIS. It seems likely that the wetland is significantly larger than is indicated in DEIS project maps.

It seems likely that the wetland includes the majority of the area west of the ponds, including areas of the grass field west of the pond. It is reasonable the man-made lakes are also modifying the hydrology of the site area, draining waters away from the natural wetlands. Soil colors indicate wetland type soils outside of the designated DEIS wetlands. Soil colors generally indicate long term hydrology. Considering the thick growth of Himalayan blackberry, and the limited areas of sampling stakes seen in this area, it seems likely the sampling was very limited. A site map indicating sampling points seems a reasonable way for community members to understand wetland boundary justifications. 6-6

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C. WETLAND SURVEY
A site visit on Dec 15, 2002 confirmed that many sample holes do have 10YR 2/1 soil color, with a vegetative mix of wetland and upland species, mostly invasive non-native species.

Sample 1. Within the forested buffer area south of the driveway and north of NE 41st St., in an area south and outside of designated Wetland A and Wetland B:

Soils: 0 – 6 inches 10YR 2-1 loam
6 – 10 inches 2.5 Y 3/2 silty clay
10 – 18 inchesunknown

Vegetation: Cottonwoods, English ivy, Himalayan blackberry, holly, trailing blackberry, buttercup, nettles

This area is appears to have the characteristics of a wetland, but is outside areas designated wetland on project maps.

Sample 2. 1 meter west of rebar marker B2 pink tape appears north of Wetland B:

Soils: 0 – 8 inches 10YR 2-1 loam
8 – 18 inches unknown

Vegetation: Himalayan blackberry

This area is appears to have the characteristics of a wetland, but is outside areas designated wetland on project maps.

Sample 3. 2 meters north of Josef Ludwig plaque in the grass field west of pond

Soils: 0 – 6 inches 7.5 YR 3/2
6 – 10 inches 10 YR 3/2 with mottles; mottles = 2.5 YR ¾
10 – 18 inchesunknown

Vegetation: lawn grasses, buttercups

This area is appears to have the characteristics of a wetland, but is outside areas designated wetland on project maps.

Sample 4. Forest edge off field west of pond

Soils: 0 – 10 inches 10YR 3/3 sandy loam
10 – 18 inchesunknown

Vegetation: cottonwood, Himalayan blackberry, buttercups, nettles

This area is appears to have upland characteristics, and confirms some areas with cottonwoods have upland type soils.

6-6

D. WETLAND DISCUSSION:
Cottonwoods generally grow where soil moisture is high, and can be good indicators of wetland type conditions. Wetland conditions can be tested with further sampling. Wetlands are generally important for both hydrological and habitat reasons. Misidentification of wetland boundaries can minimize their value and thus opportunities for mitigation may be missed.

It is recommended that further wetland studies be done to confirm the wetland boundries. As the historical wetland was larger than currently delineated, an understanding of the hydrology on site would be useful.

6-7

COMMENT LETTER #6, Save Seattle's Trees, Richard Ellison

6-1. Comment noted. Please refer this issue to City of Seattle decision makers.

6-2. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comment 4-2 and Comment Letter #5 (Hawthorne Hills Community Council), Comment 5-6. Limiting footprints of the proposed buildings to the existing building footprints was not feasible. Due to the size of the proposed buildings, measures have been taken to reduce impacts to open space and trees through underground parking and building location, and critical area setbacks. A tree preservation plan is proposed to identify trees for preservation and the planting of additional trees to offset tree loss during construction (refer to the mitigation portion of the Habitat/Wetlands section of Chapter 3 of the Final EIS).

6-3. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comment 4-3.

6-4. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comment 4-2 and 4-21. As described in the DEIS, mitigation involves wetlands avoidance, wetlands restoration and enhancement, and buffer enhancement and restoration. Under Seattle Municipal Code (SMC 25.05.675) mitigation measures for wetland impacts must be proportional to the extent of impact. Refer to SMC 25.05.675 section *N. Plants and Animals* and section *S. Water Quality*; "the decision maker shall assess the probable effect of the impact and the need for mitigating measures."

6-5. Refer to the response to Comment Letter #5 (Hawthorne Hills Community Council), Comment 5-6. The No Action Alternative allows for the greatest retention of trees. A number of environmental issues were evaluated in this EIS and site plans were developed to take these various issues into consideration, including tree retention. As stated in your comment, Director's Rule 6-2001 *encourages* the modification of location and design, but does not *require* it.

6-6. Sample locations for the wetlands delineation are presented on Figure 4 of "Wetland and Wildlife Study Report – Talaris Research Institute." Both the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Washington State Wetlands Identification and Delineation Manual were used to identify and delineate wetlands on the subject property. In a letter dated January 3, 2002, the Corps of Engineers, Seattle District, stated, "…we did inspect the delineated wetlands. While we believe the wetlands are smaller than delineated, the delineation generally appears to be accurate." Nine three - parameter sample points were located in the areas containing wetlands, five within wetlands, and four outside of the wetlands. Review of previous wetlands assessments (Raedeke 1992 and 1996) suggest that the hydrology of the project area had been substantially altered by 1970, including the disposal of dredge spoils from pond cleaning in areas southwest and west of the pond. This alteration resulted in the loss of wetland hydrology across the site, which became the normal circumstance. Only Wetlands A, B, C, and D remain today as vestiges

of the previous wetland. These areas occupy topographic depressions that marginally experience wetland hydrology. The surrounding areas occur at higher positions on the landscape and do not have wetland hydrology as verified by the COE.

6-7. Black cottonwood has an indicator status of FAC, which suggests a probability of occurrence in wetlands of between 34 and 66 percent. Cottonwood trees have the ability to send their roots down to depths below 18 inches to find the saturated zone, well below the depth required for wetland hydrology. As such, cottonwood trees are not strongly indicative of wetlands. Wetland boundaries were verified by the Corps of Engineers (COE) and by Shapiro and Associates, the City's peer review wetland consultant. Additional wetland boundary verification is not necessary.

Sheldon &
Associates, Inc.

5031 University Way NE #204 • Seattle, Washington 98105-4341
206-522-1214 • Fax 206-522-3507
Dyanne@bogstomper.com

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DEC 30 2002
Dept. of Design Construction
& Land Use

Ms. Marina Haufschild
DCLU
700 5th Avenue, Suite 2000
Seattle, WA 98104

RE: Comments on DEIS: Talaris Research Institute

Ms. Haufschild;

At the request of the Laurelhurst Community Club, I have reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Talaris Research Institute (November 14, 2002), as well as the following documents:

- Wetland Assessment Summary Report. 1992. Raedeke Associates
- Response to Comments/Wetland Reconnaissance. 1996. Raedeke Associates
- Talaris Research Institute Wetland Delineation and Study Report. 2001. Talasaea Consultants
- U.S. Army Corps of Engineers Regulatory Branch Letter #2001-4-00980. Oct., 2001
- Wetland Delineation Verification for 4000 NE 41st. St. Property. January, 2002. Shapiro & Assoc.

I have also conducted a site assessment of the project area in December of this year. Based on this information, as well as knowledge of various applicable codes and policies relative to the proposed project, I have the following comments on the DEIS. My comments are not listed in a prioritized manner, but are numbered to assure that they are acknowledged during the SEPA process.

1. The applicant's consultant conducted the wetland delineation on the site in winter conditions, which is appropriate, given the site conditions. The delineation effort identified four distinct wetlands within the low closed depression area located in the southwest portion of the proposed project site. The January 2002 letter from Shapiro Associates, confirms for the City of Seattle, the findings of the 2001 Talasaea delineation report. However, what are missing from both the delineation report and the City's confirmation report are the results from data plots for locations *between* the small wetlands. The four small distinct wetland areas are located within a closed depression, which many have acknowledged was historically wetland. What is missing from the technical analysis is any substantiation for why this entire lowland does not meet the criteria for wetland. The applicant should provide what the characteristics were in the areas between the distinct wetlands to conclude that the entire lowland is not wetland. Vegetation is rather consistent throughout the area in question and the soils are variable, but there are no highly distinctive upland soils to be readily found in the area in question. In addition, some of the areas flagged as wetland (e.g., wetland C) contain topographic relief of over 18 inches from the 'bottom' to the outer margins of the flagged wetland. Such elevation change implies that small closed topographic depressions within the larger closed basin are not the defining characteristic for these discrete delineation conclusions. No data plot map is provided in the Talasaea report to identify where the upland plots are located relative to the wetland plots on site. An analysis should be provided which identifies the conditions and characteristics for differentiating between upland and all wetlands on the site. 7-1
2. Wetland areas were identified and confirmed on the site based predominantly on soil and hydrology conditions. Using these same criteria consistently then, the applicant should provide an analysis for the area immediately SW of the existing pond (between the pond and the forested cottonwood 7-2

depression) where fieldwork in December, 2002 found dark soils (10YR2/1) saturated within 12 inches of the surface. 7-2

3. The DEIS text does not adequately describe the historic alterations that have occurred on this site that has resulted in the severely altered current wetland conditions. It is not clear from the DEIS text that the excavated pond and the closed depression in the southwest corner of the site were all once part of large wetland complex that was directly associated with Lake Washington when the lake elevation was 9 feet higher, prior to construction of the Chittendon Locks. Nor does the wetland text identify the presence of the remaining high water table that is present across the site (see page 3-16, second to last paragraph). The relevance of the historic conditions to the existing and proposed conditions is that any proposal to construct extensive parking and commercial/research structures or to construct single family residences should be required by the City to analyze geologic conditions of soil suitability and groundwater, and to discuss those elements in the DEIS. There are slight references to the 'removal of peat' from the site in the 1960's and 1970's, yet wetland conditions and high water tables persist throughout the central and lower portions of the site, with no analysis of construction suitability provided in the DEIS text. Given that portions of the site may have to be dewatered to render it useable, the applicant should identify how that would be undertaken and what would be the consequences of such actions on the wetlands. 7-3
4. There is no adequate analysis and extremely limited mention of the potential water quality impacts from the proposed actions. The summary table on page 3-31 notes that runoff from 7.3 acres of *new* impervious surfaces from the project, "...could amplify non-point source pollution in Union Bay". There is no other location within the Habitat/Wetland Section (nor other impact sections) of the DEIS where potential water quality affects from stormwater is identified thoroughly, or discussed adequately. There is brief mention that runoff from roads and parking lots would not need to be detained, as the site is so close to Union Bay. Stormwater volumes and rates would be designed per the City Surface Water Manual. Although the text of the DEIS identifies that the City SWM manual will be followed, the text of the DEIS should provide a more thorough analysis of existing water quality treatment trains and proposed water quality treatment trains for each Alternative. It should also identify the water quality conditions within Union Bay, relative to aquatic organisms (e.g., anadramous fish and the aquatic biota they are dependent upon). The DEIS should discuss, with substantiating data, how the runoff from all proposed Alternatives might influence the biotic thresholds within the receiving waters. There is a brief mention that the excavated pond on site provides stormwater detention. The DEIS should discuss how the excavated pond is providing water quality improvement, given the broad unconstrained condition of the pond outlet and the total lack of vegetation. 7-4
5. The language within the DEIS tends towards broad generalizations and in some key instances, unsubstantiated statements that need to be backed up with references or sources. For example, the first paragraph of the general property description under the Habitat/Wetlands Affected Environment (pg.3-32) states that weeds dominate the non-landscaped southwest portion of the site, and "some" black cottonwood trees are present. This description ignores that it is the very large, very mature black cottonwood trees (most of which are greater than 30 inches diameter at breast height) that dominate that area, both visually and functionally. There is another statement in the following paragraph that states that most of the runoff from the site is routed through the pond: if that is the case, it should be accurately documented or a reference provided. Water quality could be vastly improved in the pond with minor modifications prior to stormwater being routed into Lake Washington. On page 3-39, "extensive algae blooms in summer" are mentioned...but the wetland ecologists did their fieldwork in December, therefore, they should substantiate the source of the statement about algae blooms. The overall effect of the text is to dismiss and minimize the existing habitat conditions on the site or the potential for its improvement, and imply that degraded conditions have been documented. 7-5
6. The discussion of wildlife habitat potential onsite correctly identifies the range of likely uses within urban habitat settings. What the discussion overlooks is that this site retains the one key element most often missing from urban habitat: large mature forest. The presence of extensive non-native blackberry on the site is something that can be remedied rather easily compared with 'fixing' low functioning habitat in typical urban settings which is caused by the lack of huge mature trees. From a wildlife habitat perspective, this site has a tremendous potential for providing excellent habitat diversity less than 1000 feet from Lake Washington and less than 250 feet away from wetlands associated directly with the Lake. In only one field visit to the site I noted the presence of a large raptor flying through the site, as well as a great horned owl perched in the black cottonwoods, that set off at dusk 7-6

across the open grasslands of the site. The DEIS should accurately describe existing conditions relative to habitat structure, complexity, and species richness and diversity, and describe proposed conditions for each Alternative. The site contains 609 trees, of which, 92% are "significant trees" under the City's rules and regulations. The potential loss of that forest canopy is something that should be strongly emphasized in the discussions of unavoidable significant adverse effects. Also, a discussion of potential significant adverse effects should include the loss, from some alternatives, of the potential to restore adequate hydrology to the closed depression onsite, to restore/enhance the wetland functions that are marginal in existing conditions. 7-6

7. Within the "discussions" of potential impacts, by Alternative (starting on page 3-42), the document needs to be more specific as to square footages of wetland impact, buffer impacts, and potential for changes to the source of water to the wetlands for each Alternative. No mention is made of the potential to increase or decrease available water supply to the wetlands for any Alternative. This is a significant oversight of the existing DEIS text and it should be provided. 7-7
8. As noted in a different context previously, there is no substantiated analysis of existing stormwater management methods on the project site, nor does the DEIS clearly identify how future Alternatives would treat stormwater for water quality concerns. A conceptual approach to treating stormwater for water quality should be provided and referenced within the wetland section of the DEIS. Key toxic water quality parameters that may influence the aquatic biota in Lake Washington and the wetland located between the site and the lake, should also be identified. Treatment methods for removing targeted toxics and sediments from the site, in its operational stage should be described in detail. 7-8
9. The Mitigation Measures (pg.3-48) of the DEIS are disappointing but not unexpected. The City has allowed the applicant to craft a DEIS with mitigation measures that are listed but are not committed to. Any action is identified as "could" or "should": not a single idea or concept is presented as a committed action by the applicant if the proposal is approved. This site has incredible ecological possibilities. Contrary to the dismissive descriptions contained with the DEIS text, the landscape location of this site (in close proximity to the lake and associated wetlands), the presence of a large contiguous stand of very mature native trees, plus the opportunity for relatively easy wetland restoration all provide excellent potential for a wildlife benefit that is rare within the City of Seattle. The applicant should be encouraged to commit to appropriate actions, and the City should be reminded of their regulatory responsibility to hold the applicant accountable for measurable compensation on site. 7-9

Sincerely,

(submitted electronically without original signature)

Dyanne Sheldon, Principal
Sheldon & Associates, Inc.

COMMENT LETTER #7, Sheldon & Associates, Inc.

7-1. The wetland delineation was conducted on March 22, 2001, during the early portion of the growing season. This time would be expected to be about the wettest time of the year and ideal for directly observing wetland hydrology. Review of previous wetlands assessments (Raedeke 1992 and 1996) suggest that the hydrology of the project area had been substantially altered by 1970. This alteration resulted in the loss of wetland hydrology across the site, which became the normal circumstance. Only Wetlands A, B, C, and D remain today as vestiges of the previous wetland. These areas occupy topographic depressions that marginally experience wetland hydrology. The surrounding areas occur at higher positions on the landscape and do not have wetland hydrology as verified by the COE. Wetland boundaries were verified by the COE and by Shapiro and Associates. Additional wetland boundary verification is not necessary. The data sheets show there is slight difference between wetland and upland vegetation; however, vegetation is just one of three parameters that must be considered when making a wetland determination. Figure 4 of the Talasaea report (2001) shows both the wetland and upland data points. Nine three-parameter sample points were located in the areas containing wetlands, five within wetlands, and four outside of the wetlands.

7-2. No additional field investigation is necessary. Raedeke Associates (Raedeke 1992 and 1996) provided very effective analysis and explanation that the site was effectively drained due to lowering the level of Lake Washington, placement of a storm drain sewer on the property, and other site disturbances that further removed wetland hydrology - all before 1970. Dredge spoils from pond cleaning were disposed of in areas southwest and west of the pond. Hydric soil indicators do not disappear immediately upon the loss of wetland hydrology. Saturation within 12 inches of the soil surface is only an indicator of wetland hydrology, but does not necessarily meet the wetland hydrology criteria.

7-3. The Draft and Final EIS summarizes the more detailed information provided in the Talasaea wetlands report (Talasaea 2002). It would be inappropriate to include all of the detailed analysis conducted for the project in the EIS. See the Talasaea report and the Raedeke reports for more detail on the hydrologic change that occurred in the project area prior to 1970. The Talasaea and the Raedeke studies found no such high water table across the site that is sufficiently high to provide wetland hydrology across a larger area than that shown on Figure 4 of the Talasaea report.

7-4. A stormwater analysis could be conducted to evaluate potential impacts to surface and subsurface hydrology for each alternative. However, BMPs will be implemented to minimize or avoid off-site water quality impacts regardless of which alternative is selected. More detailed design information, beyond the scope

of the DEIS, would be required to evaluate differences in stormwater generation between alternatives.

7-5. Regarding your comment about the cottonwood trees, refer to the responses to Comment Letter #5 (Hawthorne Hills Community Council), Comment 5-6, Comment Letter #6, (Save Seattle's Trees, R. Ellison), Comment 6-2, and Comment Letter #7 (Sheldon & Associates, Inc.) Comment 7-4. The algae blooms referenced are a component of the existing environment. No off-site impacts on water quality in Union Bay are expected, as BMPs for erosion control and water quality protection will be implemented both during and following construction.

7-6. In response to your comment about significant trees, refer to the response to Comment Letter #5 (Hawthorne Hills Community Council), Comment 5-6. Appendix C of the Draft EIS included a survey of the trees on the subject property and is referenced in the wetlands sections of the DEIS. Information and data contained in both Appendix B and C of the Draft EIS provide characterization of the existing vegetation in regard to habitat structure, complexity, species richness and diversity. Wetland mitigation would involve eradicating Himalayan blackberry and other undesirable exotic plant species from wetlands and surrounding buffers and planting native trees, shrubs, grasses and forbs.

7-7. The Draft and Final EIS incorporates by reference the 2002 Talasaea wetlands and wildlife study report. The wetlands report presents quantification of wetland and buffer impact and mitigation areas. Further, the “Summary Matrix of Impacts by Alternative”, at the beginning of the Habitat/Wetlands section in the Chapter 3 of the Final EIS presents the revised area of impacts to wetlands and buffers for each alternative. Mitigation would involve removal of exotic plant species from protected wetlands and planting these areas with native trees, shrubs, grasses, and forbs. Existing wetland hydrology would be maintained in the protected wetlands that are enhanced as identified above. Wetland creation is not envisioned.

7-8. Water quality protection BMPs are presented in the Talasaea wetlands report as incorporated by reference in the Draft and Final EIS.

7-9. The Final EIS and record of decision will identify the authorized alternative, mitigation required by the permitting agencies, and the mitigation committed to by the applicant.

Marina Haufschild - Talaris project # 2104047

From: Jean Amick <jeanseattle@earthlink.net>
To: <prc@seattle.gov>
Date: 12/13/2002 4:09 PM
Subject: Talaris project # 2104047
CC: Jeannie Hale <jeannieh@serv.net>, "Newman, Heather" <NewmanH@LanePowell.com>

Comment to Draft EIS

RE: Traffic generated by Alternative 1A

Table 3-13:
These numbers do not accurately reflect the true picture. Montlake Blvd is listed as 5% increase in trips.

In reality, Montlake Blvd is a total of Pacific Street and 520 E and 520 W (some) as those distributions are via Montlake Blvd. Thus Montlake Blvd should read at least 25%. Montlake Blvd, and NE45th St, are above capacity right now so please do not give a development permit or variance to exceed capacity of this arterial any more. 8-1

Talaris Institute should operate in South Lake Union area or the University District where there is plenty of empty space and better public transit. 8-2

Sincerely,

Jean G. Amick
3008 E. Laurelhurst Dr NE
Seattle WA 98105
Ph 206-525-7065
Fx 206-524-8260
jeanseattle@earthlink.net

COMMENT LETTER #8, Jean G. Amick

8-1. The percentages shown in the table reflect directional distribution of project trips at the boundary of the study area. As noted in the DEIS table, the five percent referred to in the comment is the percentage of project trips that would be oriented to and from the south on Montlake Boulevard south of SR 520. The comment is accurate in that project trips to and from 520 would also be on Montlake Boulevard north of SR 520. Project traffic volumes for that section of Montlake Boulevard north of SR 520 include all project traffic that would use that section of roadway, not just the 5 percent distribution shown in the table for the study area boundaries.

8-2. Comment noted. SEPA does not require the examination of off-site alternatives. Per WAC 197-11-440(5)(d), "when a proposal is for a private project on a specific site, the lead agency shall be required to evaluate only the no action alternative plus other reasonable alternatives for achieving the proposal's objective on the same site."

If you wish to file written comments and/or receive a notice of the decision, please return this completed form with any written comments you have to: Seattle Department of Design, Construction and Land Use, 700 Fifth Avenue, Suite 2000, Seattle Washington 98104-5070

NAME: CHRISTINE BARRETT PROJECT # 2104047

ADDRESS: 4643 41 AVE NE

SEATTLE WA ZIP 98105

COMMENTS: TALAIS MUST PROVIDE THE REQUIRED PARKING (734). To do LESS WOULD NEGATIVELY IMPACT THE SURROUNDING STREET PARKING WHICH IS ALREADY SCARCE. PLEASE DO NOT GRANT A VARIANCE. 9-1

Christine Barrett
11-20-07

COMMENT LETTER #9, Christine Barrett

9-1. Comment noted. Please refer to the Impacts portion of the Transportation section of Chapter 3 of this EIS.

COMMENT LETTER NO. 10

Molly Black
4407 43rd Avenue NE
Seattle, Washington
98105

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Dept. of Design Construction & Land Use

December 16, 2002

Marina Haufschild
Land Use Planner
Department of Design, Construction and Land Use (DCLU)
700 Fifth Avenue, Suite 2000
Seattle, WA 98104-5070

Dear Ms. Haufschild,

I am writing to submit comments on the proposed redevelopment of the Battelle Site for the Talaris Research Institute. Talaris is a positive addition to the neighborhood as the research nature of the work matches the community's expectation for how the property should be utilized.

As a resident of the Laurelhurst community, I am familiar with the site and am in favor of Alternative 1B in the Draft EIS. This alternative is preferable as it maximizes the amount of open space that will be preserved, thus maintaining the park-like character of the site. This alternative has a reduced number of parking stalls, encouraging utilization of alternative methods of transportation and resulting in less neighborhood traffic. 10-1

Being the parent of a toddler, I am especially pleased that the research Talaris is doing will benefit all of us by deepening our understanding of how our brains develop, how we learn, and how we can all better support the critically important years of early childhood.

Sincerely,

Molly Black

COMMENT LETTER #10, Molly Black

10-1. Comment noted.

December 4, 2002

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DEC - 5 2002
Dept. of Design Construction
& Land Use

Elizabeth Castleberry
4812 Terrace Drive NE
Seattle, WA 98105

Marina Haufschild, Land Use Planner
Department of Design, Construction and Land Use
700 Fifth Avenue, Suite 2000
Seattle, WA 98104-5070

Dear Ms. Haufschild,

As a resident of the Laurelhurst community I am familiar with the proposed development of the Talaris Research Institute facility on the Battelle Site. I have reviewed the four redevelopment alternatives and am writing to support **Alternative 1B.**

Alternative 1B is most favorable as it:

- **Preserves the wetlands and park like atmosphere of the site.** As a pet owner and avid walker, I visit this space weekly, if not daily, and enjoy the expansive green space that the lot currently affords.

- **Reduces parking, thereby reducing traffic and encourages mass transit.** Metro routes to this area are limited. Perhaps if more metro riders requested service the bus schedules could be improved and service to the community could be expanded.

11-1

Talaris will be a welcome addition to our neighborhood. Research on brain development in early childhood is essential to improving the health and well-being of children and adults. I am proud that we have the capacity to support such an institute in Seattle; it is a testament to the human and financial resources in our community.

Please feel free to contact me with any questions or if you would like additional feedback.

Sincerely,

Elizabeth Castleberry
(206) 729-2559
Elizabeth.Castleberry@spl.org

COMMENT LETTER #11, Elizabeth Castelberry

11-1. Comment noted.

A. Reeve Geary
3717 NE 42nd Street
Seattle, Washington 98105

Marina Haufschild
DCLU
700 5th Ave, Suite 2000
Seattle, WA 98104
marina.haufschild@seattle.gov

Re: Comments on Talaris Draft Environmental Impact Statement

January 2, 2003

Dear Ms. Haufschild:

We are writing to comment on the Draft Environmental Impact Statement for the Talaris project proposed for the Battelle Property in the Laurelhurst neighborhood.

Although the 45-day comment period ended December 30, you confirmed in a telephone conversation that late comments will still be considered as part of the administrative record. 12-1

As neighbors of the Battelle Property, we are interested in the plans for the site. We obtained a copy of the Draft EIS and reviewed the document in order to make comments on the various alternatives being proposed for the site. We find that the DEIS is inadequate to make an informed decision on the matter.

In general, the DEIS does not evaluate the alternatives thoroughly and fails to adequately compare the impacts of each alternative. Thus, the DEIS fails its intended purpose under SEPA. We are not opposed to development of the property, but find that each of the proposed alternatives are not described in enough detail to determine which alternative might be best for the property. We feel that the potential impacts are being treated lightly so that the project proponents can get away with a project that would not be allowed if the true impacts of the development were known. 12-2

We moved into the neighborhood in September 2001, and have attended several of the meetings since then, including the Scoping Meeting in May 2002 and the DEIS comment meeting on December 11. It is difficult to determine the majority position on the presented alternatives. Some are opposed to a large institutional facility, while others are opposed to residential development of such a large open space. 12-3

What has been missing is the consensus that all are opposed to change from the property's current state. Aljoya and the other current tenants have been wonderful neighbors and manage the property so that it is a real asset to the community. Please consider that while some may comment on an alternative that they prefer, what everyone would really prefer is for the property

to remain as-is.

3

Alternative 1A and 1B

Alternative 1A appears to be a research facility designed around a parking lot. The DEIS claims one of the project's goals is to preserve the existing open spaces. (Page 2-2) Any proposal that paves roughly half of the site for parking fails miserably at this goal. 12-4

Alternative 1B appears to lack adequate parking for the proposed facility. Parking on the west side of the Talaris Property is already tight in the neighborhood. The neighborhood bears the burden of overflow parking at events at the Center for Urban Horticulture and Husky Stadium on an infrequent basis. ProRobics and the retail shops along 45th St. add to parking burdens on a daily basis. The homes in these neighborhoods are on small lots. Almost all have a single-car driveway, if any, and most families have a second or third car that is used on a daily basis and is parked on the street. *All overflow parking for the Talaris project will be to the west of the project.* Site access from the east is restricted by the fenced yards on 42nd Ave. There is little available to the north. The neighborhood to the south is unlikely to see many overflow parkers because the facility is located on the north parts of the property,. The neighborhood to the west does not need the burden of the 500 or so cars that Alternative 1A and 1B will generate. 12-5

The DEIS fails to describe how Alternative 1A differs from Alternative 1B in addressing issues of bulk and scale. It mentions the design differences, but does not illustrate how it is improved. 12-6

The DEIS fails to describe the typical uses of Alternative 1A and 1B. How does the smaller building of 1B fail to meet the goals of the Talaris facility. 12-7

The DEIS mentions that Talaris will not be the only tenant of the facility. Why does Talaris require such a large facility if there is room for other tenants? Is Talaris just a front for expansionist plans of the University or other developments that would otherwise be prohibited? 12-8

Talaris claims to have no affiliations with the University of Washington, yet there are plans to have 84 graduate students working in the facility. Where are these graduate students expected to be from? Notre Dame? This seems like an attempt to subvert the growth limits of the Major Institution Overlay. 12-9

If there are just 194 employees expected at Talaris, why is such a large facility needed? There is no indication of the facility's uses. 12-10

Why does the Talaris Facility require an auditorium? There is no real statement of need in the DEIS. There are other facilities available locally that will be closer to conference attendees, hotels, and other services. If Alternative 1B is developed, why should the neighborhood bear the impacts of parking overflow. Why build an auditorium if there is not the parking and transportation available to support the demand. 12-11

The 5 photo locations selected to illustrate height, bulk, and scale seem to be selected to minimize the impacts of the project. 12-12

There is no discussion of mitigation measures for stormwater and non-point pollution from the site. There is no information on the required size and location of stormwater treatment facilities for the massive parking areas for Alternative 1A. 12-13

Alternative 2A and 2B

Both Alternative 2A and 2B miss one of the stated project goals: the preservation of existing open space. Blanketing the current open spaces with 81 homes, driveways, roads, and fences does not preserve open space. Alternative 2B is poorly described, but seems to be similar to 2A, with roughly 20 fewer lots. Unless radical clustering plans are taken, sixty lots will not preserve the existing open spaces. 12-14

There is no discussion of mitigation measures for stormwater and non-point pollution from the site. There is no information on the required size and location of stormwater treatment facilities for the homes, driveways, sidewalks, and roadways of Alternative 2A and 2B. 12-15

There is no mention of the transportation impacts of opening 38th Ave. NE between NE 41st St. and NE 45th St., or of opening any of the streets that are currently dead ends on the west side of the project site. Alternative 2A as shown will open 38th Ave. NE between NE 41st St. and NE 45th St. and will extend NE 42nd St. and NE 44th St. to the east into the project site. 12-16

There is not enough information to determine what the street layout for Alternative 2B will be, other than 38th Ave. NE will not be opened. Will Alternative 2B open NE 42nd St. and NE 44th St.? What will the traffic impacts on the immediate neighborhood be?

There is almost no information on Alternative 2B, only that it will be somewhat lesser in scale than 2A, disturb fewer trees, and will not open 38th Ave. NE. Plans are included for the other Alternatives, but 2B seems to be unready for publication. 12-17

Generally

We find the DEIS to be very poorly organized and laid out. Subchapters like Land Use, Habitat/Wetlands, and Transportation are not numbered or clearly set off by type set or identified in the header or footer. After the the initial header, there is no indication of which alternative is being discussed. Some of the discussions under each alternatives are many pages long. The authors fail to realize that this document is usually read in a non-linear fashion and have made it difficult to find information. Similarly, the text sections are broken up by numerous pages of technical information that is better located in an appendix – trip distribution charts and photos. 12-18

The DEIS adequately describes the purpose of the DEIS, but fails to describe the purpose and need of the project or any of the alternatives. There is no mention of *why* any of the alternatives should be pursued at all. Why does Talaris need a new facility? Why should new homes be built on the property? 12-19

The wildlife survey fails to mention a pair of peregrine falcons that frequent the tall trees of the 12-20

southern portion of the site. Similarly, woodpeckers and raccoons were not listed in the species lists in the appendix. 12-20

The existing conditions described in the trip generation data in the DEIS seem incredibly high. (Pages 3-65, 3-74, 3-79) They give the project a "discount" of 600 daily trips based on regression equations for a category that may or may not fit the actual trip generation of the current uses. 600 daily trips means over 50 trips an hour over a 12 hour period. I would guess that at the current uses, the peak trip generation rates might be closer to 30 an hour, with most of the day at something like 10 per hour. Given 4 hours at 30 per hour and 8 at 10 per hour, a generous estimate for the current uses of the facility should be in the range of 200 trips per day, not the 600 that is asserted in the DEIS. This figure is misleading and hides the increases in trip generation that will be created by Alternative 1A, 1B, 2A, and 2B. 12-21

Summary

In summary, we are generally opposed to the alternatives laid out in the DEIS. The Talaris Project as described in 1A and 1B seems like too much facility for the project site. Impacts to traffic, parking, stormwater, wetlands and vegetation, and the surrounding neighborhood in the form of height, bulk, and scale. Similarly, 81 homes are too many for the property, and information on less intense development is sketchy at best. 12-22

We feel that there is nothing inherently objectionable to either a research facility or additional neighbors, but the DEIS describes alternatives that will impact the surrounding environment to an unacceptable degree. The description for the alternatives is inaccurate, misleading, or incomplete. It fails to create an adequate description of the proposed projects for an informed decision.

Sincerely,

Reeve and Jill Geary
3717 NE 42nd St.
Seattle, WA 98105

In Agreement:

Mark and Trent Bullis
4212 37th Ave NE
Seattle, WA 98105

COMMENT LETTER #12, A. Reeve Geary

12-1. Comment noted.

12-2. Refer to responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-3.

12-3. Comment noted. The EIS evaluates a No Action Alternative as required by SEPA.

12-4. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3. The various alternatives are designed to meet project goals in a variety of ways. All issues of concern identified during the scoping process are addressed by at least one alternative. Alternative 1A is proposed to comply with the parking requirements of the Seattle Municipal Code and the Settlement Agreement for the number of spaces.

12-5. Refer to the response to Comment Letter #3 (Robert Bernstein), Comment 3-4.

12-6. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2.

12-7. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-30. The smaller footprint and building size for the new Alternate 1B will meet the goals of the Talaris Facility.

12-8. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-30.

12-9. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comment 4-30 and 4-36. The EIS clearly states that Talaris will not be an arm of the University of Washington (UW). It is unknown at this time what schools the grad students working in the IAS facility may come from. They are likely to come from many different schools over the life of the facility, including some from the UW. There is, however, no affiliation with the UW in this regard.

12-10. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-30.

12-11. The proposed number of parking spaces for Alternative 1B is expected to accommodate the estimated parking demand; therefore, no change in overflow parking is expected. The estimated parking demand would be less than 90 percent of the proposed parking supply, providing excess parking for meeting or conference attendees. Refer to the parking portions of the Transportation section of Chapter 3 of the Final EIS for additional details regarding estimated parking demand and proposed number of parking spaces for each alternative.

The Talaris Research Center auditorium is included in the building design to foster collaboration between researchers at the Talaris Research Center.

12-12. The five photo locations selected to illustrate height, bulk, and scale were chosen to show a reasonable range of viewpoints around the site. These photo locations were taken from publicly accessible locations.

12-13. According to DPD Director's Rule 27-2000, Alternatives 1A and 1B would require treatment of the stormwater runoff from pollution-generating impervious surfaces such as areas of vehicular use, parking lots, and drive areas. Refer to the stormwater portion of the Public Services and Utilities section of Chapter 4 of this Final EIS. Potential onsite stormwater treatment facilities could include biofiltration swales, filter strips, wetponds, wetvaults, stormwater wetlands, or media filters. SMC 22.802.013 requires the implementation and maintenance of operational source controls for streets, driveways, parking lots, and sidewalks.

12-14. The goal of preserving existing open space is addressed by Alternative 1B that proposes a reduced number of surface parking spaces. Additional tables and text addressing impervious surface area and lot coverage have been added to the Land Use section in Chapter 3 of the Final EIS. The reduction in surface parking preserves approximately 4.1 more acres of existing open space than Alternative 1A. Compared to Alternatives 2A and 2B, Alternative 1B would provide between 1.8 to 2.3 more acres of open space. Refer to response 12-13 above.

12-15. Refer to the Transportation section in Chapter 3 of the Final EIS for a discussion of traffic impacts associated with the development of 38th Avenue NE under Alternative 2A. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-11. The purpose of this EIS is to evaluate the potential impacts associated with each of the identified alternatives and identify measures to mitigate impacts. The City of Seattle would be responsible for permitting the final layout of either of the single-family development alternatives (Alternative 2A or 2B).

12-16. It is anticipated that most residences would use NE 41st Street since there is no access to the west on 45th Street from 38th Avenue NE. Additionally, there are no traffic signals at the intersections of NE 45th Street with 37th and 36th Avenues NE that could be used to make left-turns to the west on NE 45th Street.

12-17. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-21.

12-18. Comment noted. Appropriate headings were included in the document and a complete table of contents was included at the beginning of the document. The formatting of the Final EIS has been revised to improve navigation of the document.

12-19. The project is described under “Nature of the Project” in the Fact Sheet and under Project Goals and Objectives in Chapter 2 of the EIS. The owner of the property has the right to develop the property as they choose as long as it conforms to existing land use policies and development regulations. Also governing development of the site is the 1991 Settlement Agreement between Battelle, the

Laurelhurst Community Club, and the City of Seattle. Talaris Research Center is a new research institute that currently does not have a single physical location. Also, refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3.

12-20. The wildlife surveys systematically inspected the area for indications of raptor and woodpecker activity (e.g., nests, droppings, feeding stations). The occasional presence of peregrine falcons and/or woodpeckers does not indicate the presence of priority habitat for these species. While raccoons were not observed on the site during wildlife surveys, the EIS indicates that small mammals (e.g., raccoons) would be expected to use some of the habitats present on site. Refer to the Habitat and Wetland section of Chapter 3 of this EIS for a detailed description of habitats and species expected to use them.

12-21. Trip generation for both existing and proposed uses, which are similar, were based on Institute of Transportation Engineers' Research/Development land use category as this category most closely represents the existing uses and the proposed project. However, if the resulting trip generation overstates existing trip generation, then trip generation for the proposed project would also be overstated, offsetting any overestimation of existing trip generation for the site.

12-22. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3.

If you wish to file written comments and/or receive a notice of the decision, please return this completed form with any written comments you have to: Seattle Department of Design, Construction and Land Use, 700 Fifth Avenue, Suite 2000, Seattle Washington 98104-5070

RECEIVED

NAME: DAVID L. HILL PROJECT # 2104047

ADDRESS: 4149 37th N.E.

SEATTLE ZIP 98105

COMMENTS: We think that the reduce parking requirements should be allowed for Talaris. This project provides many positive benefits and needs to move forward 13-1

COMMENT LETTER #13, David L. Hill

13-1. Comment noted.

December 10, 2002

RECEIVED
DEC 11 2002
Dept. of Design Construction & Land Use

Ms. Marina Haufschild
Land Use Planning
700 5th Ave, Suite 2000
Seattle, WA 98104

Dear Ms. Haufschild,

I am writing as a resident of the Laurelhurst neighborhood concerned about the land-use planning efforts at the former Batelle institute site (4000 NE 41st Street). I have lived in Laurelhurst for 16 years. It is a wonderful neighborhood, virtually exempt from any intensive land use. Of course there is the nearby Children's Hospital and UW, but both institutions have been careful to avoid any negative impacts upon our neighborhood. We are close to the best shopping center in the state, the University Village.

The other day my next door neighbor was bemoaning the fact that he could not always park both of his SUVs directly in front of his house because another neighbor had parked in one of "his" spots. He also gripes about having to circle around the University Village parking lots to find a spot. Myself, I have never had to circle for more than 2 minutes there, not bad for an old New Yorker like myself. Perhaps, in that context, I am a strong supporter of the proposed construction of a large building on the northwest corner of the old Batelle site. I looked over the plans; it looks very reasonable and would serve a useful purpose. 14-1

I would caution you that the old biddies and codgers like me in Laurelhurst will stop at nothing to protect their property rights from threats real and imaginary. They have no shame arguing that the proposed building will produce ecological damage (this neighborhood produces the highest runoff per capita of pesticide, fertilizer, and auto toxins into Lake Washington of any area, to say nothing of the low gas efficiency). You will hear arguments about noise pollution (from people too selfish to rake their leaves instead of using ear-piercing, toxic leaf blowers).

This is a wonderful neighborhood. I wish it had even the slightest amount of social consciousness.

Thank you for your consideration.

Yours truly,

Emory Hill
3511 46th Avenue NE
Seattle

COMMENT LETTER #14, Emory Hill

14-1. Comment noted.

Marina Haufschild - Talaris DEIS

From: "Kate Lloyd" <katelloyd@myhealthcheck.net>
To: <marina.haufschild@seattle.gov>
Date: 12/12/2002 4:40 PM
Subject: Talaris DEIS

Dear Marina,
I attended the Talaris Research Institute DEIS meeting last night and was interested to hear comments of citizens, who, like I, wonder why Talaris refuses to sit down and talk facts. Is their DEIS intentionally vague or are their omissions of details gross oversights? In any case, The DCLU would serve our community by asking Talaris to provide more information so we can make intelligent responses. 15-1
I have not heard sufficient reasons for a variance on the required parking for a building the scale suggested for a research center. Talaris has given the neighborhood no assurance the other half of the property, a site for second building, will not be sold or become integrated with the University of Washington. 15-2
This community would like to see behind Talaris's smoke screen. We are nice folks and would like to work with them, but they remain elusive. This property was purchased with land use conditions, which they seem to ignore. Please encourage Talaris to keep their commitments and be a good neighbor. 15-3
Sincerely,
Kate Lloyd
4303 NE 35th St
Seattle, Wa 98105

COMMENT LETTER #15, Kate Lloyd

15-1. Comment noted. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-3.

15-2. Comment noted. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-3.

15-3. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3.

Marina Haufschild - MUP 2104047

From: Mark Nagle <mark_nagle@yahoo.com>
To: <PRC@Seattle.Gov>, <marina.haufschild@seattle.gov>
Date: 12/17/2002 9:54 AM
Subject: MUP 2104047
CC: <jeanseattle@earthlink.net>

MUP 2104047

For public comment on the Draft EIS Dated November 15, 2002

General Comments:

I have communicated a few observations prior to this. What I find important when reviewing the draft EIS is that Seattle, in general, is presently overbuilt and commercial vacancy rates are high. Immunex and several Eastlake buildings, planned or under construction, should be considered as viable alternatives before the institute decides to pursue this area. Why? Because, by taking advantage of the present real estate market, significant sums can be saved, which can then be put towards the research this group is planning to do in this area. At least it's worth consideration. Available properties include: 16-1

300,000 SF of empty space a Immunex's former HQ site.
1616 Eastlake - Lowe Proeprties/Washigton Holdings - has 164,000 SF of high tech built space

Interurban Exchange - 500,000 SF

1100 Eastlake

Bargreen and Ellingson

Specifically:

Page 3-7 –LG27
..."to promote the targeted level of growth in village and center locations" is not being followed here. The above alternatives – and vacant – locations mentioned fit that description better. 16-2

Page 3-45
A "smaller footprint would substantially reduce the risk of storm water impacts to Union Bay...:" Has a smaller footprint been presented? Considered? Has any authority directed Talaris to consider this? Of interest, Talaris is asking the City to reconsider parking requirements. If their footprint was smaller, they could reduce parking requirements and still be within the code. Has this been pursued? 16-3

3-54 – 3-55
The grade system apparently takes into account the UVillage Expansion, as well as San Point area, Blakely Commons and UW expansion plans. An interesting note is that these are already very low grades that will 16-4

become much worse. Why is the city allowing this in the first place? Why is the City watching as E grades become F grades – without any responsibility of the developer to contribute to the infrastructure they are adding a significant burden to? Did your study take into account the new development at 65th and 25th? And the Children's Hospital administrative offices on Sand Point Way (recently built)? Is the increase in traffic on Sand Point actually known? Is the Sand Point plan final? Are the latest Children's Hospital and UW Expansion plans final? Is the UW long term growth plan taken into account here? 16-4

3-56
You refer to a "re-characterization of NE 45th/Union Bay traffic. Is this designed to alleviate the additional traffic generated by the Talaris project? You note that it is a result of the Village North addition. Note that the blinking yellow on 35th to 45th – LH turn is already a hazard that requires a green arrow turn lane in its present state – which will slow 5 corners. Will the re-characterization further slow 5 corners? Did your study take this into account? 16-5

3-56
Public transportation is presently inadequate. The route 25 is empty presently – greatly attributable to the winding route the bus takes – approx 1 hour to get to DT Seattle from Laurelhurst. The 65 and 75 are similarly non popular routes. I would not take these into consideration when viewing transportation alternatives. Public transportation is not a viable manner in which to get to this area. I've tried it many ways. Montlake is a very effective stop, however, it is a 30-45 minute walk to the Talaris site. 16-6

3-58
You analyzed parking for 2 days for one hour each. Is this sufficient? Isn't it likely that the residents will require 2 hours permit parking areas after parking becomes a problem, should there not be adequate parking at Talaris? Then what alternative will there be? And won't traffic slow down more as Talaris employees/guests are forced to look further for parking? 16-7

3-61
Traffic Volumes – Your study indicates that it is representative of the past 9 years. Has this area experienced the same amount of growth in past 3 years over the past 9 years? If you focused on the last 3 years and applied that growth to the next 5 years, wouldn't this be more representative? 16-8

I also got the sense that traffic increases were not viewed as a negative as they were in the "opposite" commute direction. Did your traffic study use statistics from different times of the year? Take into account the Montlake bridge and boat traffic? University events? Sports events? Have you included an analysis of the effect of oncoming traffic's contribution to traffic problems – i.e. accidents? Trucks hitting the Hec Ed bridge due to their clearances? Students attempting to merge onto Montlake from the UW parking lots? UW hospital traffic? 16-9

3-60
There are no improvements listed for the next 6 years in the CIP. If there is nothing to support even the 16-10

re-characterization referred to earlier, how can the infrastructure keep up with this additional project? 16-10

3-63
What requires Talaris to abide by traffic as projected? What if it turns out that estimates you used were based on faulty information? Once the project is approved, what redress is available? 16-11

3-68
I did not understand how the project traffic results in a decrease. Can you please explain this in better detail? 16-12

3-70
Safety impacts – presently it is impossible to turn left from 36th or 37th onto 45th going West due to traffic – any time of day. Did you analyze this as a part of your study? By increasing traffic at certain times, this will become worse. ADditional stop lights will be needed and demanded. Does your study take into account the need for additional stop lights on 45th? and additional stop signs and/or left turn lanes on 41st? Modifications around the site will be necessary to handle increased traficc while supporting the present outgoing traffic that occurs during the AM hours on 41st. 16-13

3-72
The EIS is based on space planning provided by the applicant. Have you verified that this space planning is accurate given the use contemplated? Were other Talaris locations used? Other research locations used? What standards did you require Talaris use in order to prepare the best EIS possible?

What are the consequences should Talaris not abide by this plan? 16-14

3-74
Why is the 2A 38th ave right of way required to be opened? Who has blessed the 2A alternative? Are 80 lots possible? Will the City allow this plan to be permitted as presently drawn? If further information is required for the City to allow the 80 SFR alternative, shouldn't that be provided before the EIS is final? 16-15

3-75
As someone has already pointed out, the table 3-20 is inaccurate as it does not identify cumulative traffic increases – as you must use some routes to get to others – thus, both routes are affected. 16-16

3-81
I have seen TMP implemented at my company. Unfortunately this is a poorly implemented and non-effective program. While corporations are forced to comply, few employees participate. Even a free bus pass is not incentive to use a system that takes someone twice as long to get to their destination. All will take the pass – few will use it. The TMP is not an accurate way to prefer impacts of one alternative over another unless the City can show how the TMP has worked, which in my experience will be difficult, if not impossible to do. 16-17

Trees- Do the photo mock-ups completed by the applicant show the trees that will be removed? Are 16-18

accurate represenatations of the project being presented? 16-18

3-61
The .5 percent annual growth rate is in my mind, a poor measure of the overall effects of the project, given that the infrastructure is already impacted and unable to support the past developments approved by the DCLU. Can you further explain how you arrived at this figure? Does it contemplate that the present peak hour traffic volume is acceptable? Or that it works well? That is not my experience. 5% over what? 16-19

I would ask that the EIS incorporate long term planning for the area, and only claim that something is of small or minimal impact given that the infrastructure can support it. I don't think this EIS has shown this.

I do think that the residential alternative, given the EIS, is shown to be a better alternative. It is of the least impact. However, alternatives 1A and 1B are not condemned in the EIS. I believe the residential plan needs to be studied further – and there is little information on this alternative. (Primarily, I'm guessing b/c Talaris is in the business of building an institute – not housing). 16-20

I ask that the residential plans be explored and explained further in terms of what is permit-able. Only then will an analysis between the two be of real value. I would also ask that the existing state of inadequate infrastructure be incorporated into the project or better represented in the EIS.

Mark Nagle
3612 NE 43rd Street
Seattle, WA 98105

mark_nagle@yahoo.com

Do you Yahoo!?
Yahoo! Mail Plus - Powerful. Affordable. Sign up now.
http://mailplus.yahoo.com

COMMENT LETTER #16, Mark Nagle

16-1. Comment noted. Please refer to the response to Comment Letter #8 (J.G. Amick), Comment 8-2 regarding consideration of off-site alternatives.

16-2. Alternatives 2A and 2B address the intent of LG27. Refer to alternatives descriptions in Chapter 2.

16-3. Since the publication of the Draft EIS, additional site analysis and refinement of the EIS alternatives has occurred to respond to comments received on the Draft EIS. Work included changes in the design and layout of one of the Institute for Advanced Study alternatives (Alternative 1B). Changes to Alternative 1B included a reduced building footprint and an added floor of underground parking to reduce surface parking. The smaller building footprint and reduced surface parking would substantially reduce the impervious surface area and associated risk of stormwater impacts to Union Bay.

16-4. Table 3-15 (Pipeline Development Projects) in the Final EIS lists the other planned developments in the area that were known at the time the traffic analysis for the EIS was being prepared. Traffic that would be generated by these developments is included in the 2005 and 2010 traffic forecasts for the analysis.

16-5. Analysis of the intersection in the Draft EIS takes into account the signal phasing, including the blinking yellow phase. As shown in the level of service tables, the changes to the intersection for the Village North project would reduce average delays even with traffic that would be generated by Talaris when compared to conditions before the changes.

16-6. Comment noted. Estimates of project trip generation did not assume any noticeable level of transit use.

16-7. Refer to the response to Comment Letter #3 (Robert Bernstein), Comment 3-4.

16-8. A review of 1999 and 2002 traffic data (the most current available) from Seattle Department of Transportation shows that average annual growth rates for traffic volumes on NE 45th Street, Montlake Blvd, and 25th Avenue in the vicinity of the project site were less than the 0.5% used in the EIS traffic analysis.

16-9. The analysis focuses on conditions during the peak morning and afternoon commute periods. Sports and other special events generally take place on weekends when the project traffic would be minimal. With respect to accidents, the EIS notes the potential for a proportional increase in accidents because of the addition of project traffic.

16-10. Although the improvements at the NE 45th St / Union Bay intersection are not included as part of the City's Improvement Program, they will be constructed as part of the off-site mitigation for the Village North project.

16-11. Trip generation estimates for the project are based on trip generation rates for similar developments compiled by the Institute of Transportation Engineers (ITE). The ITE rates are nationally acknowledged standards and are expected to provide reasonably accurate estimates of project traffic.

16-12. The delays shown in the Level of Service tables represent the average of delays experienced by all vehicles traveling through the intersection. Delays will be higher than the average for some vehicles and lower than the average for others. At the Montlake Blvd / SR-520 intersection, the project will add traffic primarily to the right turn movement from southbound Montlake Blvd to westbound SR-520. Vehicles making this right turn experience delays that are less than the average delay experienced by all vehicles at the intersection. By adding traffic to a movement at the intersection that experiences lower delays than the intersection average, the additional project traffic will actually result in a slightly lower average delay for the entire intersection.

16-13. Installation of a traffic signal at an intersection requires that traffic conditions at the intersection meet one or more of the traffic signal warrants listed in the Manual on Uniform Traffic Control Devices (MUTCD). Meeting the warrants ensures that advantages as well as disadvantages of installing a signal are taken into account. Disadvantages of installing a signal may include increasing delays on the main street and increased use of the local cross street. The intersections of 36th and 37th Avenues with NE 45th Street would likely not meet the MUTCD signal warrants due to the relatively low traffic volumes on 36th and 37th. Although it is difficult to turn left onto 45th from these local streets, drivers can use NE 41st Street, an arterial, to get to the signalized intersection at Mary Gates Memorial Drive to make the left turn onto NE 45th Street.

16-14. The design/space programming of the proposed Talaris Research Center is based on similar research facilities. Refer to the response to Comment Letter #8 (Jean Amick), Comment 8-2 regarding consideration of off-site alternatives. Estimates of traffic and parking for the project were based on the project description and plans as presented by the proponent, and on nationally accepted trip generation and parking rates for similar uses published by the Institute of Transportation Engineers.

16-15. Alternative 2A may be a viable alternative that was developed, with City input, prior to inclusion in the EIS. The opening of 38th Avenue was proposed to provide adequate access to the site under Alternative 2A conditions. Since the publication of the Draft EIS, additional analysis of the single-family alternatives has determined that more lots might be accommodated on the site, while at the same time accounting for critical areas and steep slopes (up to 18 lots more than the 90 to 91 lots proposed in the Final EIS). Both Alternatives 2A and 2B (as well as Alternative 1A), as proposed, would require review under the provisions of the Environmentally Critical Areas portion of the Land Use Code and are dependent upon the granting of an Environmental Critical Areas (ECA) exception. On a preliminary basis, these alternatives may not meet the code's

criteria for granting an ECA exception. Therefore, they may prove infeasible or require modifications to meet ECA requirements or the sponsor's objectives.

16-16. Refer to the response to Comment Letter #8 (Jean Amick), Comment 8-1.

16-17. Comment noted. The Transportation Management Program (TMP) is included as a mitigation measure per DPD's requirements. However, the project impacts identified in the EIS do not assume implementation of a TMP. Any reduction in single-occupant vehicle travel by employees or visitors of the project would reduce the impacts identified in the EIS.

16-18. The photo mock-ups are an approximate representation of the post-construction appearance of the project site. As many existing trees as possible will be retained in an effort to screen the development from surrounding land uses; some new trees will be planted as replacements for some of the trees that are removed.

16-19. The 0.5 percent annual growth rate is not a measure of project impacts. The annual growth rate is a component of the forecast of future background traffic volumes in the study area without the project. Project-generated traffic is added to these background traffic forecasts to determine project impacts. Percent increases in traffic volumes due to the project can be found in Tables 3-19 and 3-26 (Peak-Hour Traffic Volume Impacts – Alternative 1A and 2A, respectively).

16-20. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-21.

Marina Haufschild - Talaris EIS

From: "Mark Nagle" <mnagle@expedia.com>
To: <marina.haufschild@seattle.gov>
Date: 12/12/2002 1:53 PM
Subject: Talaris EIS

Dear Marina- I attended the meeting last night. I was disappointed to learn that there is no further public comment allowed after the EIS draft becomes final. I find difficultly understanding what incentive the drafter has, to change anything, or provide more information based on the public's comments and questions last night, given that the DCLU has accepted the draft in its draft form. What further questions is the DCLU expecting to have answered? And to what level of satisfaction? That being said, I know this was an open issue last night – so if there is a resolution – please advise! 17-1

Below is a mail I sent following the project scoping meeting for your reference. I never received an acknowledgement that this was received.

I would like to restate my concerns with the initial scoping of the residential alternative and it's later description in the EIS. The housing alternative started at 80 SFR houses. It has now been reduced to 60 SFR. What thought has gone into this? Is this an "approvable" "permit-able" plan? Has anyone in planning looked at this in detail or in general? The residential plan submitted by Talaris, from my view has numerous challenging lot lines that the City may/should question. In the event the allowed SFR # is further reduced, won't the associated impacts also be reduced further? And if so, doesn't this make the SFR option far more superior? (It is already superior from an impact perspective as it stands). 17-2

No detailed work was pursued on the residential alternative – it appears to be a red herring – the real focus is the institute- and the residential development appears to be a "threat." The hope seems to be that Talaris will gain support from those who may loose their side lots in the town of Yesler– an idea set out by the Talaris people and the plot plan provided at the meetings, but not confirmed by anyone form the DCLU. 17-3

The traffic increases are paramount in my mind. Traffic increases are far less for the SFR option. Provided the EIS takes traffic increases (correctly) into account, I don't see how the EIS could be approved for the first option – Talaris Institute. I also hope the EIS study reduced any public transportation alternatives – as there are not many, and no effective bus routes serving that area. I know, I try to use public transportation in that area. I am also concerned about the parking and the inability of the institute option to provide adequate parking. Not only will traffic increase, but it will be further slowed as the areas surrounding will be impacted by those looking for parking. Does the EIS have a way to measure this? 17-4

I also have not received any formal notice for any of these meetings – I have signed in to each meeting. As I requested in my last mail – Can you please add me to the notice list? I live in the neighborhood – isn't notice being sent to all occupants of the " town of yesler"? Or do I not live close enough to the project? Thanks very much. 17-5

Mark Nagle

3612 NE 43rd Street

Seattle, WA 98105

206-529-9296

<<Talaris Project Scoping Meeting Project # 2104047>>

David - thank you very much for the informative meeting last week. Unfortunately I had to leave prior to public comment as I had understood the meeting was to begin at 6:30 -as opposed to after 7PM , and I needed to pick up my child by 7:30PM. I will try to attend the next meeting - but am submitting these written comments in the event I have a conflict.

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The Major environmental impacts to this property from a housing development (and research institute) will be the increased traffic. I trust that you are working with traffic engineers with recent data to support their conclusions for the EIS? Does the 2001 Peak Hour Report - http://www.wsdot.wa.gov/mapsdata/tdo/PDF%20and%20ZIP%20Files/Peak%20Hour%20Report%202001.pdf - include this specific area - 5 Corners, Montlake, Sand Point Way/NE45th, 25th NE? Do you use data collected from the planning of the new COH facility on Sand Point and Magnusson Park and Facilities projections, as well as U Village Expansion? In my mind it seems that there is probably a wealth of recent data due to the many recent projects (and their effects) in these close by areas.

Given that all data points are being considered, my view (without considering the specific data points!) is that any further development, without major restructuring of the roads leading to/from the project, will have a considerable impact during commute - or peak- hours. I don't know how any type of mitigation could be accomplished in a short amount of time - if at all. Widen Montlake Bridge and Montlake - not likely? Rebuild the viaduct and widen 45th - not likely? Widen NE 25th?

From this perspective, the 80 SFR plats appear to be the ***better alternative*** to the research institute. Given that 80 could be approved, there is a potential for ~160 cars. This is much less than the initial Talaris requirement -

which, as I recall is ~740 parking spaces. (Phase I of the project) I (the layman) believe that ~160 cars added to the commute will have a less adverse impact than the daily commute of ~740 cars. (and any consideration of a variance to only require ~400 parking spaces will add to traffic issues as daily Talaris commuters will need to find parking in the surrounding areas - which will add to their drive times).

I understand that a use of the property is important to realize the investment made in the project. I am not opposed to development - I am opposed to further burdening inadequate infrastructure - - driving each day to and from work is a constant reminder of the inadequate infrastructure which is burdened by the many developments along 45th/Sand Point Way. I would also note that there are several vacant projects in DT Seattle that could house this function. (these are biotech buildings- built with similar electrical, HVAC -- etc - requirements that Talaris may looking to accomplish. (1100 Eastlake Building, 1616 Eastlake Building, Bargreen Ellingson, Interurban Exchange to name a few). It appears, to me, that another ~125K SF of office space is not a wise move given the vacant space saturation in the Seattle area.

Thank you for your time last week- and I hope more people attend your upcoming meeting.

I am curious as to how you notice folks - I found out via the LCC. Do you not mail within a certain distance of the project? If so, I did not receive notice and would appreciate being added to the list.

Mark and Christi Nagle

3612 NE 43rd St

Seattle, WA 98115

206-529-9296

COMMENT LETTER #17, Mark Nagle

17-1. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-3.

17-2. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-11. Should a single-family development occur on this site, exact lot configurations, sizes, etc. would be refined as the project design moved forward.

17-3. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-11.

17-4. Comment noted. No parking spillover is anticipated as the proposed parking supply exceeds the project parking demand. Refer to the response to Comment Letter #3 (Robert Bernstein), Comment 3-4.

17-5. Comment noted. Your name will be added to the mailing list.

Marina Haufschild - RE: Talaris EIS

From: "Mark Nagle" <mnagle@expedia.com>
To: <marina.haufschild@seattle.gov>
Date: 12/13/2002 10:47 AM
Subject: RE: Talaris EIS

I would also add that there is 300,000 SF of empty space a Immunex's former HQ site.
1616 Eastlake - Lowe Proeprties/Washigton Holdings - has 164,000 SF of high tech built space
Interurban Exchange - 500,000 SF
1100 Eastlake
Bargreen and Ellingson

Many many **existing** alternatives which could be utilized - at extremely competitive rates. I have only mentioned R&D, Biotech type space available - where the DCLU has approved development and studied the surrounding environmental effects. 18-1

Thanks- Mark

-----Original Message-----
From: Mark Nagle
Sent: Thursday, December 12, 2002 1:53 PM
To: 'marina.haufschild@seattle.gov'
Subject: Talaris EIS

Dear Marina- I attended the meeting last night. I was disappointed to learn that there is no further public comment allowed after the EIS draft becomes final. I find difficultly understanding what incentive the drafter has, to change anything, or provide more information based on the public's comments and questions last night, given that the DCLU has accepted the draft in its draft form. What further questions is the DCLU expecting to have answered? And to what level of satisfaction? That being said, I know this was an open issue last night – so if there is a resolution – please advise!

Below is a mail I sent following the project scoping meeting for your reference. I never received an acknowledgement that this was received.

I would like to restate my concerns with the initial scoping of the residential alternative and it's later description in the EIS. The housing alternative started at 80 SFR houses. It has now been reduced to 60 SFR. What thought has gone into this? Is this an "approvable" "permit-able" plan? Has anyone in planning looked at this in detail or in general? The residential plan submitted by Talaris, from my view has numerous challenging lot lines that the City may/should question. In the event the allowed SFR # is further reduced, won't the associated impacts also be reduced further? And if so, doesn't this make the SFR option far more superior? (It is already superior

from an impact perspective as it stands).

No detailed work was pursued on the residential alternative – it appears to be a red herring – the real focus is the institute- and the residential development appears to be a "threat." The hope seems to be that Talaris will gain support from those who may loose their side lots in the town of Yesler– an idea set out by the Talaris people and the plot plan provided at the meetings, but not confirmed by anyone form the DCLU.

The traffic increases are paramount in my mind. Traffic increases are far less for the SFR option. Provided the EIS takes traffic increases (correctly) into account, I don't see how the EIS could be approved for the first option – Talaris Institute. I also hope the EIS study reduced any public transportation alternatives – as there are not many, and no effective bus routes serving that area. I know, I try to use public transportation in that area. I am also concerned about the parking and the inability of the institute option to provide adequate parking. Not only will traffic increase, but it will be further slowed as the areas surrounding will be impacted by those looking for parking. Does the EIS have a way to measure this?

I also have not received any formal notice for any of these meetings – I have signed in to each meeting. As I requested in my last mail – Can you please add me to the notice list? I live in the neighborhood – isn't notice being sent to all occupants of the " town of yesler"? Or do I not live close enough to the project? Thanks very much.

Mark Nagle
3612 NE 43rd Street
Seattle, WA 98105

206-529-9296

<< Message: Talaris Project Scoping Meeting Project # 2104047 >>

David - thank you very much for the informative meeting last week. Unfortunately I had to leave prior to public comment as I had understood the meeting was to begin at 6:30 -as opposed to after 7PM , and I needed to pick up my child by 7:30PM. I will try to attend the next meeting - but am submitting these written comments in the event I have a conflict.

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conclusions for the EIS? Does the 2001 Peak Hour Report - http://www.wsdot.wa.gov/mapsdata/tdo/PDF%20and%20ZIP%20Files/Peak%20Hour%20Report%202001.pdf - include this specific area - 5 Corners, Montlake, Sand Point Way/NE45th, 25th NE? Do you use data collected from the planning of the new COH facility on Sand Point and Magnusson Park and Facilities projections, as well as U Village Expansion? In my mind it seems that there is probably a wealth of recent data due to the many recent projects (and their effects) in these close by areas.

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Thank you for your time last week- and I hope more people attend your upcoming meeting.

I am curious as to how you notice folks - I found out via the LCC. Do you not mail within a certain distance of the project? If so, I did not receive notice and would appreciate being added to the list.

Mark and Christi Nagle
3612 NE 43rd St
Seattle, WA 98115

206-529-9296

COMMENT LETTER #18, Mark Nagle

18-1. Comment noted. Please refer to the response to Comment Letter #8 (J.G. Amick), Comment 8-2 regarding consideration of off-site alternatives.

RECEIVED
DEC 16 2002
Dept. of Design Construction
& Land Use

PUBLIC HEARING
December 11, 2002, 7:00 pm - Center for Urban Horticulture

Comments on Talaris Research Institute DEIS
(DCLU Project #2104047 – 4000 NE 41st Street)

NAME Heather Newman

ADDRESS 3503 NE 44 St

COMMENT

① Not enough detail to provide basis for comment. Please revise draft EIS to include detail on realistic single family housing option (ie., not building on wetlands, slope, etc.) 19-1

Talaris Research Institute
Draft Environmental Impact Statement
December 11, 2002 – 7:00 pm to 9:00 pm

Public Hearing Comment Form

Name/Affiliation: Heather Newman - neighbor
Address: 3503 NE 44 St

Please provide us with your comments on the Draft EIS:

(1) Not enough information in which to provide comments

(2) Having businesses and single family housing is not equal. Families who actually live in a neighborhood are up for the better neighbors than the nicest business owner. 19-2

(3) need more detail on 2B please. 19-3

COMMENT LETTER #19, Heather Newman

19-1. Comment noted. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-21.

19-2. Comment noted.

19-3. Comment noted. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-21.

COMMENT LETTER #20

December 10, 2002

Ms. Marina Haufschild
Land Use Planner
DCLU
700 5th Ave., Ste. 2000
Seattle, WA 98104-5070

Dear Ms. Haufschild,

We are writing in support of the Talaris Research Institute and its efforts to redevelop the former Battelle site in Laurelhurst.

We would prefer to see Alternative 1B from the Draft EIS become the selected option for the site. Some of the reasons for this position are as follows:

a) The project as designed (with reduced parking) provides adequate parking for its use while maintaining the feel of a park with more open space.
b) There will be no impact on the existing wetlands.
c) We recognize that the site will be redeveloped someday, as something, and consider ourselves fortunate to have an owner as committed to sensitive redevelopment as this owner is.
d) We firmly believe in Talaris' goals, wishing to be as supportive of them as possible.

20-1

The "greater good" is best served by Alternative 1B. We welcome Talaris to the neighborhood.

Sincerely,

Tina and Chip Ragen
4104 50th Ave. NE

Roberta and Erik Torgerson
3935 51st AVE NE

LEE + KIMBERLEE BRILLHART
3326 43rd AVE NE

Steve + Alison Alexnikoff
4303 NE 33rd St
Seattle, WA 98105

(over →)

Jane: Jon Hongladarom
3831 44th Ave NE
Seattle, WA 98105

John + Lee Hults
4115 50th Ave NE
Seattle. WA
98105

COMMENT LETTER #20, Tina & Chip Ragen; Roberta & Erik Torgerson; Lee and Kimberlee Brilhart; Steve and Allison Alenikopf; Jane and Jon Hongladarom; John and Lee Hults

20-1. Comment noted.

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

If you wish to file written comments and/or receive a notice of the decision, please return this completed form with any written comments you have to: Seattle Department of Design, Construction and Land Use, 700 Fifth Avenue, Suite 2000, Seattle Washington 98104-5070

NAME: Dorothy E. Schmitz PROJECT # Talaris 2104042

ADDRESS: 3843-46th N.E.

Seattle, Wa. ZIP 98105

COMMENTS: I have lived in this house for 48 years. As a family we have enjoyed all the amenities of the area. It has been a great family neighborhood. I am against any large commercial development of the Battelle property. If necessary I would prefer a small scale project of single family homes. 21-1

COMMENT LETTER #21, Dorothy E. Schmitz

21-1. Comment noted.

Marina Haufschild - Comments on Talaris draft EIS - project 2104047

From: Stan Sorscher <sorscher@attbi.com>
To: Marina Haufschild <marina.haufschild@seattle.gov>
Date: 12/29/2002 11:08 PM
Subject: Comments on Talaris draft EIS - project 2104047
CC: Jeannie Hale <jeannieh@serv.net>

Ms. Haufschild

Please consider the following comments regarding

Project number 2104047
Project name: Talaris
Address 4000 Northeast 41st St

First, thank you for conducting the public hearing on the evening of December 11. I realize these events can be stressful, but I thought you managed various competing interests in a thoughtful and business-like manner.

Regarding the draft environmental impact statement, I think the draft EIS is inadequate for its purpose. Severe functional weaknesses in the prepared materials justify a required redrafting of the EIS.

The scoping process identified several key issues height bulk and scale, parking, traffic, effect on wetlands, landscaping, noise and lighting to name a few. The four alternatives in the draft EIS are unusually vague in terms of the actual developments, and completely unresponsive to issues of mitigation for neighbors and the environment. 22-1

Height bulk and scale

At one time, DCLU determined that the proposed building clashed with surrounding residential housing in terms of height bulk and scale. Indeed, if height bulk and scale are to have any meaning, then limits should apply to this case a 125,000 square foot multi-story building with a wall more than 300 feet in length, within 75 feet of surrounding residential housing. In the draft EIS, images suggest an essentially transparent design with nearly invisible visual impact. Other images have suggested that adjacent single-family houses would actually dominate sight lines of the new construction. The developers must be more forthcoming with details of the design, materials, colors, landscaping, and other features of the construction that will affect visual impact. Since no such details are provided, no conclusions can be drawn regarding this central issue in the proposed development. 22-2

This criticism applies to all four proposed developments. The single-family alternatives are ill-defined. The draft includes only one single-family plan, and even that is not realistic regarding lot layout, street locations or traffic. 22-3

Landscaping

Any serious effort to mitigate the impact of the IAS alternatives must address landscaping of the site. The draft EIS fails to recognize this issue in any meaningful way. The single family alternative proposals focus on removal of over 500 trees, suggesting a virtual clear-cutting of the site. No indication is given of other landscaping treatments. 22-4

Parking

City Code and the Settlement Agreement (negotiated over ten years ago by DCLU, neighbors, and the owners of the site) both provide minimum parking 22-5

requirements. Reduced parking, in conflict with those limits, is presented in one alternative. More or less parking will not address the parking issue, and has not bearing on architectural features the footprint, usage requirements and siting are identical in the two IAS proposals. 22-5

Future use

At the meeting, neighbors repeatedly emphasized the relentless growth of other institutions[1] developments in the neighborhood. Uncertainties about future use of the Talaris property are implicit in the draft EIS Phase 2 is presented with no details, other than its substantial size.

The Settlement Agreement specifies that permitted use is limited to Institute for Advanced Study. However, neighbors suspect any number of possible future uses. Sustainable funding, sponsorship and future involvement by the University of Washington are all unpredictable and potentially worrisome. Five or ten years from now, operation of the site could be significantly different from the current proposal. Many major elements of the Settlement Agreement will be compromised by this development. The unique character of the site will be eroded by traffic, noise, future construction, and influence from major institutions. 22-6

Settlement Agreement

Talaris[1] proposal fails to comply with the Settlement Agreement in several important respects. Roads are modified, the University of Washington will exercise practical control of the use of the site and the landscaping amendment will be modified. None of these items are permitted under the Settlement Agreement. To be sure, the draft EIS need not address terms of the Settlement Agreement. 22-7

Process Requirements

HOWEVER, the developers[1] disregard for the contractual requirements of the Settlement Agreement, and cast a shadow on their respect for process, in general. The proposed IAS developments conflict with the Settlement Agreement. Similarly, the draft EIS shows little respect for the spirit of the EIS process. The lack of detail and the refusal to meet the scoping issues head-on represent a failure to appreciate and address the interests of the community in this development. 22-8

Conclusion

The draft EIS is inadequate for its stated purpose of dealing with legitimate and significant impacts on the neighborhood and environment. The behavior of the developers to date has been indifferent or adverse to the interests of the community. DCLU should require a redrafting of the EIS to present proper detailed alternatives to the baseline proposal that honor the spirit and letter of the EIS process. 22-9

COMMENT LETTER #22, Stan Sorscher

22-1. Comment noted.

22-2. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-5. Additional detail on building materials/surface treatments and how they visually soften the building has been added to the Height, Bulk and Scale section in Chapter 3 of the Final EIS. Details of the materials, colors, and landscaping will not be completed until the design phase of the project; therefore, a detailed discussion of landscaping is not possible at this time.

22-3. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-21.

22-4. Mitigation measures included in the Height, Bulk, and Scale section of Chapter 3 of this EIS discuss the inclusion of landscaping to soften the appearance of the proposed buildings. Final landscape plans would not be completed until the final building design is chosen and completed; therefore, a detailed discussion of landscaping is not possible at this time. However, the grounds would be landscaped in a manner similar to the existing Talaris Conference Center with special sensitivity to reducing height, bulk, and scale impacts associated with the associated buildings proposed under Alternatives 1A and 1B.

22-5. Alternative 1A includes code- and Settlement Agreement-required parking space numbers. Alternative 1B includes a reduced number of parking spaces that allows for the retention of more open space on the project site. Both Alternative 1A and Alternative 1B proposed parking numbers were shown to be adequate to handle projected demand for both Alternatives. Please refer to the Parking discussion of the Transportation section of Chapter 3 of this EIS for a full discussion of proposed parking supply and demand.

22-6. The University of Washington will not have control over the project site in any manner. The Talaris Research Institute is a private research institute independent of University of Washington control.

22-7. Comment noted. Refer to the response to Comment Letter #22, (Stan Sorscher), Comment 22-6.

22-8. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-3 and 4-33.

22-9. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2.

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DEC 31 2002
Dept. of Design Construction
& Land Use

December 24, 2002

Seattle Department of Design,
Construction and Land Use
700 5th Avenue, Suite 2000
Seattle, Washington 98104-5070

Attn: Marina Haufschild

Re: Project Number 2104047

To Whom it May Concern,

The DEIS information presented at the Public Hearing was incomplete as to the REAL impact the proposed Talaris development would have on the environment. Since plans 1B and 2B were unavailable for review it becomes impossible to fairly assess them for comment. 23-1

The community expects the developer to abide by the settlement agreement.
The community expects that the required number of parking spaces be enforced whatever is approved.
The community expects that the buffer in place be retained including all the trees.
The community expects that no further encroachments on the wetlands be approved.
The community expects that the rehabilitation of Yesler Creek will be supported.
The community requests further study of the impact on the narrow side streets that serve the residences, particularly 44th NE which is currently abused as a by pass to the arterials.
The community expects that 38th Avenue will not be opened as a thoroughfare, which would further impact the impossible traffic issues.
The community expects that compensation be given to the homeowners for any devaluation of their property. 23-2

Frankly, this whole process seems to be a game by Talaris since the response to disagreement with their proposals is to present plans perceived as MORE intrusive.

Thank you for your consideration of these issues.

Eleanor R. Worsham

Eleanor R. Worsham
3711 NE 44th Street
Seattle, Washington 98105

COMMENT LETTER #23, Eleanor R. Worsham

23-1. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2.

23-2. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3.

DEPARTMENT OF DESIGN CONSTRUCTION AND LAND USE
DEC 30 2002
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1

12-27-02

Marina Haufschild
City of Seattle
Department of Design, Construction and Land Use
700 - Fifth Avenue, Suite 2000
Seattle, Washington 98104-5070

Re: Talaris Research Institute
Project No. 2104047

Dear Ms Haufschild:

I write this letter in response to the Draft EIS prepared by (or for) the Talaris Research Institute. I am an adjacent land-owner to the site. The site is zoned Single Family Residential. The Battelle Memorial Institute, Talaris' predecessor, obtained designation as an Institute For Advanced Study, a conditional allowed use on the site. 24-1

Talaris Draft EIS does not clear the first hurdle to development: Does Talaris meet the definition of an Institute For Advanced 24-2

Study? I suggest it does not; it is in fact, a Major Institution, which is not allowed on the site. 24-2

Batelle entered into a binding Settlement Agreement with the neighbors. I was a party of the negotiations. The Settlement Agreement contains covenants, which run with the land, limiting development of the site. The Settlement Agreement also incorporates landscaping amendments to prevent exactly what is now proposed by Talaris - basically, clear cutting the site. 24-3

The proposed development does not comply with the goal of the City of Seattle Comprehensive Plan, particularly LG 27; LG 57; L74 and L77. The City of Seattle is also a party to the Settlement Agreement and its Landscaping amendments. The Agreement 24-4

controls many facets of development. The parking requirements, which Talaris seeks to avoid (Alternative 1B) were well thought out and were designed to prevent the type of development sought by Talaris due to the significant adverse impacts on the neighborhood. Not only does proposed Alternative 1B fly in the face of the binding settlement agreement, but to entice one to overlook height, bulk, scale and density "difficulties", mitigation by way of a "prettier" building is offered. If forced to comply, 1A will offer fewer "amenities" and 2A and 2B will offer devastation of the site, including environmentally critical areas. 24-4

Common sense yields the knowledge that development under alternatives 1A, 1B, 2A or 2B 24-5

would cause significant adverse environmental impacts including but not limited to irreparable devastation of the site for which there is no mitigation. 24-5

1. Lights and glare

At pp 4-13 - 4-15 the DraftEIS states "Construction activities are not expected to occur during evening hours, therefore no construction-related lights and glare impacts would occur." However, this is preceded by at p. 4-7, under Noise, "Construction noise would be limited to the period between 7:00 AM and 10:00 PM. Existing landscaping minimizes the effect; proposed landscaping does not. 24-6

2. Noise

There are presently few substantial noise sources on the site. Alternatives 1A, 1B, 2A, 2B anticipate a minimum of 15 month construction. Building demolition, land-clearing, earth-moving and excavation (between the 24-7

hours of 7 AM - 10 pm)
would include operation of
chain saws, heavy equipment,
heavy trucks, pneumatic drills,
15 hours a day, 5 days
a week, over a 15 month
minimum time frame at
decibels greater than those
allowed in residential areas.
resulting in significant adverse
3. impacts to the health of
nearby residents. Specifying time and
duration of loudest noise or preferred type of equipment does not constitute mitigation. 24-7

3. Air Quality

The site contains asbestos,
lead-based paint and
PCPs. Demolition of existing
buildings will present an air-
quality hazard during demolition
and debris removal under
proposed Alternatives 1A, 1B, 24-8
2A or 2B. Adjacent
residents would be most affected
as these emissions of air
pollutants and contaminants would
interfere with the reasonable
enjoyment of life or property for
which there is no mitigation.

4. SEPA Tree Evaluation

Despite the assignment "to provide a qualitative discussion of general tree health, significance and the impacts due to clearing,"

the Draft EIS contains no discussion of the impacts due to clearing. The majority of the trees are in good, very good or excellent condition. Of the 609 trees evaluated, 563 trees or 92.4% are SEPA significant. 24-9

Alternatives 1A, 1B, 2A and 2B provide for the removal of 195 - 524 SEPA significant trees in violation of Seattle Municipal Code Chapter 25.11 in all cases and the binding Settlement Agreement and its Landscaping amendments.

In addition, the loss of trees adversely affects native wildlife including the great blue heron, bald eagle, song birds and allow 24-10

storm run-off to intensify which adversely affects the salmon habitat and destroys native vegetation. The "mitigation measures" p. 18 of the SEPA tree review consist of this statement "Replanting 527 trees on the site after re-development is unrealistic. . . Even replanting 163 trees on the site are (sic) unrealistic due to the amount of open space available 24-10

5. Despite this statement, the mitigation measures on p. 3-49 call for replanting.

Salmon

As you may be aware, the Seattle City Council is reviewing Initiative 80, which seeks to restore creeks or streams where salmon spawn or could swim. It seeks to "daylight" creeks that have been buried in pipes (as on the Talaris site) establish 50 foot buffer zones and plant native vegetation. Yesler Creek was diverted into an underground pipe. Talaris draft EIS is silent as to daylighting the creek that is buried on the site and destroys both buffer zones and native vegetation on the site. 24-11

6. Traffic

The Northeast 45th Street Northeast 45th Place - Union Bay Place intersection already operates at LOS F. Alternatives 1 A & B increase traffic at this intersection by 1,310 trips per day Excavation would generate 7,700 truck trips during construction of Phase I (15 months). This does not include the expansions at University Village; Blakely Mixed-Use; Children's Hospital; UW Medical Surgery Pavilion; Sandpoint Magnuson Park. 24-12

The cumulative effects of this development results in gridlock and is a recipe for disaster. Residents of Northeast Seattle live daily with the short-sighted, project by project decisions previously made: dry turning into QFC off of NE 45th Street - it requires one have a death wish be one a driver, bicyclist or pedestrian University Village being considered pedestrian friendly defies reason. 24-13

7. Height, Bulk, Scale, Density

Once it's gone, we do not get it back. Once the project proves to be economically not feasible, who then takes over the research center, laboratory, auditorium? 24-14

This project is located OUTSIDE of an Urban Village. The City of Seattle's Comprehensive Plan states for areas OUTSIDE of Urban Villages "Allow limited amounts of development in areas outside centers and urban villages to maintain the general intensity of development that already characterizes these areas ..." 24-15

A stated goal for areas zoned single family is to control the location, scale, uses and development standards of institution in single family areas in order to reduce negative impacts such as noise, traffic and parking problems to protect Seattle's single family housing stock. 24-16

The Settlement Agreement limits density on the site. SCLU previously requested Talaris consider several smaller buildings on the site to comply with the Settlement Agreement and to reduce the adverse impacts of its proposed development. None of the alternatives discussed in the Draft EIS considers this option BUT FOR the No Action Alternative. 24-17

Phase 1 of the proposed project is 283 feet long on the west and 350 feet long on the north. This is completely incompatible with the existing neighborhood. SMC 23.44.022K speaks directly to a facade greater than 30 feet in length – the project proposal is 10 times this length on 2 sides – requiring design features to minimize the appearance of bulk. SEE PHOTO POINT 3-1B 24-18

and envision the light, glare, and bulk of the transparent building continuing for 283 feet – Under 1A, the facade consists of flat brick and/or concrete walls. Of course, the PHOTO POINTS do not show the building with 195 or 263 SEPA significant trees removed as proposed. 24-18

Please consider this response a strong request for the No Action Alternative. 24-19

Respectfully,

M Simpf
3717 NE 44th
Seattle, Wa
98105

COMMENT LETTER #24

24-1. Comment noted. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-33 and 4-34.

24-2. Comment noted. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-33 and 4-34.

24-3. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comments 4-3. The EIS discusses the Settlement Agreement and its contents, as well as the fact that it regulates certain use and development of the site. Nothing more is required. The Settlement Agreement (at Section 11) specifies that the City's obligation is to enforce its Land Use Code, not the Settlement Agreement. The EIS does not need to address the Settlement Agreement in any further way.

24-4. Comment noted. Comment noted. Refer to the response to Comment 24-3 above and to Comment Letter #4 (Carol Eychaner), Comments 4-3.

24-5. Comment noted.

24-6. Per SMC 25.08.425, construction activities are exempt from noise requirements between the hours of 7:00 a.m. and 10:00 p.m., thus the statement in the Noise section that construction would be limited to the period between 7:00 a.m. and 10:00 p.m. Construction activities would take place between the hours of 7:00 a.m. and 5:00 p.m. Because constructed activities are not proposed to extend into the evening hours (between dust and 10:00 p.m.), no construction light and glare impacts would occur.

24-7. Comment noted.

24-8. Demolition would occur in accordance with appropriate federal and regional regulations, including identification and remediation of hazardous materials such as PCBs, lead-based paints, asbestos and asbestos dust containment. Please refer to the Air and Noise section of Chapter 4 where Relevant Local, State, and Federal Standards and Guidelines are described for air quality.

24-9. Refer to the response to Comment Letter #5 (Hawthorne Hills Community Council), Comment 5-6.

24-10. Refer to the response to Comment Letter #5 (Hawthorne Hills Community Council), Comment 5-6.

24-11. Refer to the response to Comment Letter #5, Hawthorne Hills Community Council, Comment 5-3. Daylighting Yesler Creek is not being proposed as part of this project.

24-12. Traffic generated by the Village North project was included in the traffic forecasts for the analysis. Refer to the response to Comment Letter #16 (Mark Nagle), Comment 16-4.

24-13. Comment noted.

24-14. Comment noted.

24-15. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-3.

24-16. According to the applicant, the Talaris Research Institute is being planned and built as an interdisciplinary research center bringing together researchers from developmental psychology, speech and language science, neuroscience, computer science, education, and genetics into an environment planned to foster daily interdisciplinary communication and work. This institute's purpose for being is the close relationships between disciplines that are usually located in entirely separate laboratories and often separate buildings. It is therefore crucial that the full range of disciplines is housed in a single building, and in fact the majority of researchers will be housed on a single floor of the institute's building.

24-17. Refer to the response to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-3.

24-18. Refer to the response to Comment Letter #4 (Carol Eychaner), Comments 4-3.

24-19. Comment noted.

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4 IN RE: TALARIS RESEARCH INSTITUTE PROJECT
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7 ----------
8 Public Hearing before
9 Marina Haufschild, Land Use Planner
10 City of Seattle
11 Department of Design, Construction and Land Use
12 ----------
13 Center for Urban Horticulture
14 3501 NE 41st Street
15 Seattle, Washington
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17 COPY
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22
23
24 DATE: December 11, 2002
25 REPORTED BY: Christina Atencio, CCR #2749

1

2 Seattle, Washington; December 11, 2002

3 7:11 p.m.

4 ----------

5 MS. HAUFSCHILD: Good evening. Welcome to this

6 meeting. My name is Marina Haufschild. I'm the Land Use

7 Planner for this project.

8 In the back on the table is an agenda for this

9 meeting. I will say a few words about the project and

10 then we will invite everyone who wants to speak to either

11 provide comments or questions about the published draft

12 EIS for the project.

13 On the agenda is my name, my phone number, my fax

14 number, and e-mail address. You also have this

15 information on the notice for today's meeting. If you

16 wish to contact me after the meeting, you're welcome to do

17 that by phone, fax, or e-mail.

18 UNIDENTIFIED SPEAKER: There's only one agenda.

19 MS. HAUFSCHILD: Yes, there's only one. I'm sorry,

20 but you have my name and my phone number in the notice.

21 Also on the table in the back there is a summary of

22 the draft EIS provided by the applicant with some

23 information on the other side that lays out our comment

24 sheet. If you prefer not to talk today but you have some

25 questions or comments, you are welcome to write down your

1 questions or comments and I will collect those at the end
2 of the meeting. You're also welcome to ask me questions
3 after the meeting is over.
4 We have this room reserved from seven to nine
5 o'clock, so hopefully everyone will have enough time to
6 speak. If, again, someone doesn't have an opportunity to
7 talk today, please contact me after this meeting.
8 The purpose of this meeting is to collect your
9 comments and questions about the published document. The
10 applicant is here, representative of the applicant is
11 here, to listen to your comments and I'm here with my
12 supervisor, Cheryl Waldman, to take notes on the comments.
13 I'd like to say a few words about the process. We
14 got this master use permit in August of 2001. The DCLU's
15 issue of the determination of significance in September of
16 2001. We had the first scoping period running from August
17 to early October 2001 and with the first scoping meeting
18 held in September of 2001.
19 Based on the comments that we received and further
20 discussion, DCLU and Adolfson agreed to add a
21 single-family alternative to the document.
22 Our second focus here is resulting from May, June
23 2002 to collect the comments for this new additional
24 alternative. Then we had two meetings held in June of
25 2002 to collect comments on the single-family alternative.

1 As you know, the draft document was issued in
2 November, on November 14th. The comment period for the
3 draft document has been extended from 30 to 45 days, and
4 the end of the comment period is December 30th of this
5 year. So we expect to get all the comments, to receive
6 the comments by December 30th. If there are any comments
7 submitted after this day, we will take those into account
8 as much as will be possible in the process.
9 The applicant, I suspect, will prepare the final EIS
10 in the first quarter of 2002. After the final document is
11 prepared, the DCLU will review the application and will
12 make a decision to approve appropriate conditions or deny
13 the project.
14 If you put your name on the mailing list and put it
15 down by written comments, calling me, or putting your name
16 and your address on the sign-up sheet in the back there,
17 you will receive the notice or the decision by DCLU. This
18 decision will have an appeal period which normally is two
19 weeks after the date of the final decision.
20 If you have any questions, I will stay after the
21 meeting and will try to answer questions on the process.
22 Now I would like to open the meeting for public
23 comments for the document. When you speak, please
24 introduce yourself by giving your name and give your
25 address for the record before you make your comments.

1 Thank you.

2 DALE BOLTON: Dale Bolton, 3803 48th Northeast. You

3 mentioned a decision. Who will make that decision and on

4 what basis?

5 MS. HAUFSCHILD: As I said, it will be better if I

6 answer a question on the process after the meeting then we

7 can go through the process of reviewing this application

8 then I could be more helpful after the meeting. The

9 purpose of this meeting is to collect comments on the

10 document that was published a few weeks ago.

11 DALE BOLTON: I understand it, but it's not a very

12 satisfactory answer. But I understand it.

13 MS. HAUFSCHILD: Okay. Thank you.

14 JEANNIE HALE: Marina, my name is Jeannie Hale and

15 I'm the president of the community club. And so many of

16 our neighbors don't really understand this process. And I

17 think it might make for better comments later on in the

18 evening if you're able to answer the substantive questions

19 about -- just as the question from Dale a moment ago.

20 Because I'm sure if one person asks it, ten other people

21 here have the same question and I don't know; what do you

22 think? Do you want your questions answered?

23 GROUP RESPONSE: Yes.

24 JEANNIE HALE: It seems like that's the consensus of

25 the group.

MS. HAUFSCHILD: The decision on this master use permit application will be made by the director of the Department of Design, Construction and Land Use. This is a discretional decision which is appealable. There will be an appeal period after the decision is published. The decision will be based on the proposal and on the identified impact on the environment that this proposal will result in.

DALE BOLTON: You didn't mention any of the comments that you've invited us to submit in the answer to the question of how the decision would be made, so it sounds like you're short-circuiting any comments that might be produced tonight.

MS. HAUFSCHILD: All the comments will be taken into consideration in evaluating the document today.

DALE BOLTON: Okay. But let me remind you that's not what you said a minute ago. You said it would be based on the decision by a person, based on the proposal. You left out the comments.

MS. HAUFSCHILD: And the impacts of this proposal. And in order to identify impact, we will take into consideration all the comments that are submitted to us.

BONNIE MILLER: My name is Bonnie Miller. I live at 6057 Ann Arbor Avenue Northeast. **H1**

I think I was struck with a draft EIS by first of H1-1

all not seeing any major differences between the research development and the single-family development. They looked so much alike that it was hard to find differences. So I think the draft EIS didn't really present significant alternatives. H1-1

The other thing that struck me as -- it looks like a clear cut and where are the visions? This is 2002. We're going into 2003 and we're talking about making our life better for us, the quality that we have. I worked with neighbors, doing the Yesler Creek headwaters project which is the headwaters of the former Yesler Creek. This is an opportunity to go ahead and open up the creek through the property, make it a beautiful research center. Thank you. I'll add some supplemental comments after. H1-2 H1-3

UNIDENTIFIED SPEAKER: Why don't you just go through the list. Some people signed up.

MS. HAUFSCHILD: Dick Barnum. **H-2**

DICK BARNUM: My name is Dick Barnum. I live at 3606 Northeast 41st Street, right across the street. I lived in the neighborhood for 25 years, and I've been active in neighborhood affairs for at least 24 of those.

I would like to say that in my line of work, as Cheryl can testify, I spent a lot of time with community issues and development and I have some serious concerns about where we are at this point in this proposed project.

I've been to most of the meetings that have been associated with the development of the EIS and the meetings prior to that point and scoping it. And I've heard, I think, most of the arguments and proposals and statements from most of the people that have been active in this process. I've kept an open mind, I feel, and trying to weigh risk versus reward for the neighborhood and for the community. And finally two or three days ago something went click in my head and I've finally come to that balance in my mind, for my purposes anyway, has come into focus.

I want to go on the record to say that I don't feel that the draft EIS works in enough detail with exploring the housing proposal 2A and 2B, especially 2B. And I was really surprised in the draft EIS that there was not a graphic of 2B; in other words, the 60 to 68 residential units. There was one which is on the back wall there for 2A, which is kind of worst case. I find 2B to be at least worthy of a detailed EIS look and flushed out to the same degree that 1B has been flushed out, which I suspect is perhaps the favored one by the proponents of this project. H2-1

I'm worried about institutions, and I think for every good reason. The University has had a reputation in the past of sometimes attempting to act somewhat unilaterally without perhaps enough attention with the

1 impact of what they're doing. The University property
2 which we're on right now is 100 feet from the southwest
3 corner of the Battelle property so that's -- this is zoned
4 institutional. On the northeast end of the Battelle
5 property is about 200 feet from Children's. Children's
6 Hospital was zoned single-family plot, 5,000 roughly. Now
7 it has an overlay and so they're continuing -- you can
8 tell where it is because they put cranes out there about
9 every other year.
10 My concern is that once an institutional-like
11 activity builds large structures on that property, that
12 there will be no end to it and maybe in 10 years, maybe in
13 15 years. I'm not sure, but it seems to happen
14 everywhere. University Village is one example of that.
15 So I would really encourage the city and the
16 consultants and the proponents of the project to evaluate
17 for real the possibility of developing that property for
18 perhaps 60 to 65 single-family units. Show the
19 circulation. Show the impact and talk about the
20 distinction between that and 2A back there and 2B which
21 is, in my mind, is a much more reasonable approach, then
22 the community could make and the city can make an adequate
23 judgment about which might be the preferable way to go.
24 Thank you.
25 MS. HAUFSCHILD: Thank you. Paul Klemond

H2-2

H2-3

PAUL KLEMOND: I've decided to submit my comments in writing.

MS. HAUFSCHILD: Thank you. I'm sorry if I mispronounce the name. Mark Hoban.

MARK HOLDEN: Mark Holden, 4173 42nd Avenue, Northeast. I'm a neighbor on the east side of the property of the Talaris project. **H3**

I just have a couple of comments that I have concerning the property where I have submitted each time in writing concerning the alley access that is there and H3-1

the buffer zones between the property and the neighbors of the development of phase 1 and phase 2 and what that will H3-2

be and the impact to the neighbors, on the trees, and all the different activities and lighting and everything of H3-3 H3-4

the structures if phase 1 and phase 2 go forth.

On the model stated over there -- I seen another model -- it did have the alley there at first. So looking at this one, one of the easements -- I was just concerned about it, but it shows -- I've seen that there, so I just wanted to state that. H3-5

What kind of buffer and barrier is the property looking at because reading the draft, there's so many trees that are going to be cut down and with any project that goes forth and I just wanted to make sure that the neighbors have that buffer there, that's presently there. H3-6

I just want to make sure that, you know, there's some different zoning laws and land use laws that it has followed to what that area is supposed to be and that is for single-family housing. That's what I wanted to make sure that it is set forth for single-family housing, looking at ways to development the property that has the least impact on the neighborhood and the communities so you can protect the environment, protect the trees and possibly opening up the creek there. I think it is important that we look at open spaces even in the housing. H3-7 H3-8

In the one plan for the housing it states there's 81 homes. Well, the impact to that area is so great with those 81 homes that you're looking at another -- it may be 60 homes and how the wetlands and the ponds can be protected. H3-9

And then the other concern I have is with any project that goes forth, whether it's the Talaris phase 1 and 2 or the single-family housing, is how the neighborhood and the community is going to be affected by the traffic and how that can be mitigated in preventing that. So maybe there would be parking on the neighborhood and on the Montlake and 45th. Thank you. H3-10 H3-11

MS. HAUFSCHILD: Okay. Bonnie Miller.

BONNIE MILLER: I'll submit in writing.

MS. HAUFSCHILD: Carol Eychaner.

H4

CAROL EYCHANER: Carol Eychaner. My address is 2348 Franklin Avenue East, Seattle, 98102.

I'm a land use planner. I've been asked by the Laurelhurst Community Club to review and comment on the draft EIS for the Talaris project. And I will be submitting my detailed written comments by the end of the comment period.

But tonight I just wanted to focus on the alternative aspect of the draft EIS and I was looking at them in three respects: One was whether the alternatives meet the alternative in SEPA and that is, looking at development options that would reduce significant impacts or have lower environmental degradation; the second I was looking at the alternatives whether there was any real distinctions between the alternatives; and the third was whether there was sufficient information in the draft EIS and the master use application to analyze and comment on the alternatives.

H4-1

And I would like to first focus on the alternatives for the Talaris project and review a little bit how the scoping for alternatives have evolved over time. Initially, there was a master use permit application submitted for the Talaris project and that included plans. And DCLU, after reviewing those plans, there was a determination that an environmental impact statement be

H4-2

needed and that one of the significant impacts was related to bulk and scale. And DCLU initially was suggesting that the EIS include smaller buildings on the site to mitigate the bulk and scale of the proposed project.

The applicant then responded by saying that it absolutely had to have all the different disciplines in one building. And that to have smaller multiple buildings or just smaller buildings, would be contrary to the applicant's objectives and would actually put it out without providing a real problematic need for the institutional project.

H4-2

After that, DCLU issued an EIS scope requiring that design alternatives to reduce bulk and scale of the proposed project, but it didn't specify what these alternatives should consist of or what the design alternatives or design features should be.

After that, then there was a scoping process for the single-family portion of the project and that was focused on single family. And in a letter that came out from DCLU after the single-family scoping process, there was a kind of new take on what the alternative should be for the institute. And instead of requiring an alternative that reduced the bulk and scale impacts for the proposal that was submitted, this new alternative was instead supposed to ask for an alternative that represented a maximum bulk

1 and scale for the Talaris use.

2 So here we have where the project that came in, SEPA
3 says that alternatives are supposed to be looked at that
4 would reduce environmental impacts. DCLU determines if
5 there are bulk and scale impacts that first says to
6 provide alternatives that design features that would
7 reduce those bulk and scale impacts and then turns around
8 and says no; actually, give us an alternative that maxes
9 out the bulk and scale of the Talaris use.

H4-2

10 This whole evolution of one alternative is supposed
11 to be all about is totally contrary to the purpose of SEPA
12 and it will do nothing to provide alternatives that help
13 with the meaningful evaluation of bulk and scale impact.

14 After that was done, we did get a draft
15 environmental impact statement and there are two
16 alternatives for the institute: alternative 1A and 1B.
17 And from looking at the mock plans and looking at the
18 draft EIS, I really can't find any real distinction
19 between 1A and 1B, at least one that I can understand and
20 relate to my clients, Laurelhurst Community Club in trying
21 to explain to them the differences between alternatives.
22 I couldn't do it Monday night because the information
23 wasn't there.

H4-3

24 Phases, one for each alternative, consist of the
25 phase 1 and phase 2. If you compare those options in the

1 DEIS, they both have identical footprints, identical
2 heights, identical square footage. They have identical
3 setbacks in neighboring residences. And to the extent
4 that there's any information on a floor plan, they're
5 identical as well. So as far as those features, there's
6 no distinction between them.

H4-3

7 In the text of the draft EIS there are some very
8 vague, overly generalized statements that 1B might have
9 terraces and modulation to reduce impacts, but it doesn't
10 provide any information about where these terraces or
11 modulations would be applied or how they would be applied.
12 There's also no mention or description of materials,
13 color, or use of windows and other design features that
14 help to break up the very long facades.
15 For alternative A the only description about the
16 exterior of the facade is that it could be of concrete or
17 brick; but again, no description or drawing about how that
18 concrete or brick might be applied.
19 So really there aren't two alternatives for
20 mitigating bulk and scale impacts. It looks like there's
21 only one. And even if you only had one to look at,
22 there's not enough -- I didn't feel I had enough
23 information either in the master use permit application
24 plan or in the draft EIS to analyze the bulk and scale
25 impacts of the project.

H4-4

1 In the draft EIS I didn't see any elevations. And
2 in the mock, they do have elevations of the project. This
3 is a building that on one side of the facade the length is
4 going to be 280-some-odd feet. On the other side it's
5 going to exceed 300 feet. Phase 2 will be the same. And
6 yet the elevations are about an inch high for this
7 building with absolutely no detail whatsoever and that it
8 just shows outlines of it. It doesn't give any idea about
9 how that facade would look and how the plane would be
10 broken up by either materials or placement of windows or
11 other features. There's no description in the EIS of a
12 potential color or materials.
13 The closest depiction in the draft EIS of what the H4-4
14 institute buildings might look like is in figures 3 and 5
15 of the draft; but there's no discussion of the facade
16 surfaces, so I can only interpret or guess for myself what
17 those materials might be, which looks like it might be a
18 real transparent facade like glass. But the DEIS
19 specifically states that these renderings aren't for the
20 purposes of providing detail, only for providing an idea
21 of a height, of the width of the facade or the length of
22 the facade. So they're not to be used, what this building
23 is really going to look like.
24 So considering that this is a project that is an
25 extraordinary circumstance, an incredibly large project in

1 terms of square footage, very long or wide facade in a
2 single-family neighborhood, and that bulk and scale has
3 been identified as a significant impact and it has been
4 raised in terms of level of review and scrutiny, more than
5 almost all projects of the city, there's not that many
6 projects that get EISs. Considering all of this, this
7 project has so much less information for the public to
8 understand what is with the design of the building. And I
9 have a basement full of master use permit application
10 plans that are for much smaller buildings with much less
11 concern about bulk and scale impacts and yet so much more
12 information has been provided.
13 So if DCLU is right in requiring and indicating that H4-4
14 bulk and scale wouldn't be a significant impact -- but we
15 are a year and a half into this process with absolutely no
16 more information about what the facade of even one
17 alternative looks like, much less the second alternative
18 that could reduce impacts even more and this is a very
19 large deficiency that's been apparent in the process all
20 along. But here we are in the last commenting phase of
21 the EIS and we still don't even know what to even comment
22 on, to say something looks good or not.
23 I think I'm just going to repeat comments about
24 alternatives that I mentioned in the past and I think
25 they're still valid. And that is, I think there needs to

be -- I think there's a proposed alternative which is fine and more information needs to be provided on that so that people can understand it and understand that if they think it's good or if they think it's bad, they know what they're commenting on. Or if they think there's things that work or don't work, they need to know what they're commenting on. H4-4

I also think that there needs to be a real alternative in terms of reduced bulk and scale and one that would actually reduce the footprint or facade lengths that could include setbacks, it could include more smaller buildings with reduced lengths. There are all kinds of things that could be considered for that, but it should be something that of real reductions and not just perceived and then those could be compared in the EIS. H4-5

I just have a couple of comments involving single-family alternatives and I just want to go through the chronology of how this evolved. First, DCLU had indicated that there wouldn't be any alternative in the EIS for single-family use and then the applicant wrote saying that there were reasons why single-family alternatives should be in the EIS and that there would be two. One would be a preferred single-family alternative with 55 dwelling units and the other would have a reduced density of 50 dwelling units for lots. H4-6

1 DCLU then held a scoping meeting for the public to
2 comment and for that meeting there had been developed a
3 lot layout with about 81 lots, not 55 or 50 as Talaris had
4 indicated or the applicant had indicated in its letter.
5 During the scoping meeting we commented on this
6 81-lot configuration because it was pretty clear that more
7 than one or two lots were constrained by either critical
8 area buffers for pretty significant easements that were
9 bisecting the building sites from these lots and not
10 really leaving much in the way of very usable building
11 sites. And although it seemed to be something that you
12 could draw on paper, it didn't seem to have a whole lot of
13 relationship to the lay of the land and what somebody
14 would really lay out if they wanted to do a subdivision
15 with sellable lots.
16 Nonetheless, when the draft EIS came out, there was
17 -- the EIS said that there were two alternatives. But
18 what we got were the same old 81-lot configuration,
19 unchanged from the public scoping period with all the lots
20 including all of those that didn't look very viable and
21 presented it as if it were a viable option.
22 Other things that could be raised about that lot
23 layout was a lack of consideration for other requirements
24 as opposed for subdividing which includes the tree
25 retention, making sure that there's enough open space and

H4-6

H4-7

other features like that.

There is mention in the draft EIS about another single-family lot layout and that's supposed to have 62 or 68 lots -- I'm going from memory here. Yeah, 68 lots. And it's talked about there's, as people have already commented, I was looking through the EIS and I saw the plan for alternative 1A and 1B and 2A the 81-lot subdivision. And I was looking around for the reduced lot subdivision layout and it's not there. And maybe I guess we can all look at the 81 lot and kind of pick our 20 lots that we want to eliminate from that 81-lot configuration, but that's now how you're supposed to be commenting on an alternative for an EIS, and especially because I think if you went to a configuration that was 60 or 68 lots that might really be the realistic potential of that site. And I think it also had a different roadway configuration because with that alternative there was no development on 38th on the west.

And when you don't have that developed as a street, you're likely to have a different roadway configuration so you've got a little more looping going on in case one entrance point or the other is blocked. So I think not only what you would have would be lots configured in a different way so that they avoided steep slopes, reflectance to the topography, you'd also have a different

H4-8

1 roadway circulation. And I guess it's up to our H4-8
2 imagination on how that might work.
3 But, once again, I don't think that's what you're
4 supposed to be doing on the EIS is to guess. So on that H4-9
5 alternative, I do think that the 81-lot alternative should
6 be dumped. The conceptual configuration for the 60-to-68 H4-10
7 lot alternative should be developed. And I also think
8 it's meaningful and reasonable to look at an alternative
9 that dealt with clustering, used the clustering provisions
10 in the code to actually cluster some of these lots and I H4-11
11 think we can do that with smaller square footage of lots
12 by creating open spaces and to preserve important features
13 of the site.
14 And my comments with that on the alternatives and we
15 will be submitting other aspects on the EIS as well.
16 Thank you for the time.
17 MS. HAUFSCHILD: Thank you.
18 STAN SORSCHER: My name is Stan Sorscher. Last H-5
19 name, S-O-R-S-C-H-E-R. I live at 3716 Northeast 43rd
20 Street.
21 There were a couple of things I wanted to say. I
22 think in public and private meetings about this
23 development I've always opened my discussion, I think or
24 meant to, with the statement that the development in and
25 of itself I don't think is so objectionable to the

1 community. And, in fact, it would take very little to
2 please most of the neighbors with the development. And I
3 think it's one of the things that Dick was getting at.
4 Over the course of time here, we've been waiting for
5 these minor concessions or these interactions,
6 establishment of the kind of relationship you would expect
7 in a development like this which would satisfy most of the
8 neighbors' concerns and we're surprised at how
9 unforthcoming the developer have been in this respect.
10 The EIS I think is a case and point that the theme
11 if I were to try and draw a theme from the particularize
12 comments, is that it's very difficult to comment on the
13 EIS when there's so little detail in the EIS. And, in
14 fact, the displays that we've seen up to now and at all
15 the meetings, the discussion we have had, is much more
16 useful in terms of making a comment that is missing in the
17 EIS, so the EIS actually represents a step backwards.
18 Now, another theme that I'm seeing here is, is that
19 the frustration in the community, the impatience with the
20 lack of detail and the lack of development is starting to
21 get on people's nerves is the sense I get. And so let's
22 kind of look through this in a couple of ways.
23 One thing that's not an element of the EIS but part
24 of the environment is that none of the -- alternatives 1A
25 and 1B do not comply with the settlement agreement. There

H5-1

H5-2

2

are three significant issues here. One is that the roads are modified which is not pulled out in the settlement agreement; the landscaping event will have to be modified; and the influence at the University of Washington as a major institution is certainly arguable. H5-2

So we start with the developers announcing their intent to comply with the settlement agreement; but, in fact, the development does not comply with the settlement agreement. So this kind of clouds the issue of what exactly is the relationship between the developers and the neighborhood. H5-3

Another issue that a lot of people have commented on is this question of height, bulk and scale and Carol's been very careful to, you know, exclude height. But I'll go ahead because I think height, bulk and scale always interact with each another and height, bulk and scale is one of the big issues here. And as Carol pointed out, the point of the alternatives in the EIS was to show mitigation of the base line design of the height, bulk and scale impacts to the base line design. H5-4

Now instead what we see is that the base line design, as I've understood it from the community to be accepted, has always included from the beginning, planted roofs and then somewhat after that the text roof and the window treatments. That was the base line design so the

mitigation actually removes those. I mean, the alternative, though -- the second design actually removes the mitigation; is a step back. Again, doesn't exactly reinforce the sense of confidence or a working relationship with the developers to see the base line design which we're already objecting to on the base of height, base and scale and the alternative as the mitigation whatever, mitigation we understood to be removed.

H5-4

Again, getting back to this question of height, bulk and scale, I don't participate in a lot of these development issues. But if height, bulk and scale would have any meaning at all, it would apply in a case where you have 125,000 square foot multi-story building within 75 feet of a residential area. And this is a question of, right, I mean, how do you mitigate height, bulk and scale? So we look to the environmental impact statement or the resolution to this and we see a transparent building illustrated.

Our issues had to do with the textured surfaces and the window treatments and the landscaping. These, I assume, are the architectural and design elements that will mitigate height, bulk and scale. Instead we see a transparent building, right, which we're supposed to interpret only for the purposes of the height and width.

H5-5

Where is the impact, right, that we're supposed to understand from the draft statement?

So I don't know what the intent was of putting a transparent building in the EIS, and I can only imagine, but it certainly doesn't reinforce my sense of confidence or trust in the intent of the developers. H5-5

Now, again, we get to another point and this is something that has come up in a lot of discussions with the community and affects our comments on environmental impact and that is future use. We all assume from our experience with other developments in the neighborhood and that is University Village, Children's Hospital, the University of the Washington, that future use is something that we always have to imagine we can never count on. Even with the settlement agreement, right, the settlement agreement didn't constrain the developer in this case in the sense that they violated at least two or possibly three conditions of it. H5-6

So future use in this case could have involved the University of Washington, the budget of the IAS I assume to be roughly 20 million dollars a year. As I understand it, Talaris is not going to rely on funding from the University of Washington. Where is 20 million dollars going to come from if you exclude the largest research institution in the area of Western Washington?

I think it's reasonable to ask what will be the use of this property in 5 years? in 10 years. Phase 2 of the development doubles the facility. All of it, according to the settlement agreement, would have to be used by the institute to be used for advanced study. So now we have a 40-million-dollar budget of study going on. It's inconceivable to me that the University of Washington would not have a significant participation in that scale of use of the area. H5-6

So what is the environmental impact of that in terms of traffic and use and development? I mean, all these questions depend on presumption of a working relationship with the developers that they would do what they said they would do. I guess if there's a theme to this environmental impact statement, it's that there's a lack of detail, a lack of specifics and a lack of a sense of a working relationship here; in fact, a step backward because I think we had more of a sense of what was going on from the drawings and some of the other illustrations we've seen. H5-7

MS. HAUFSCHILD: Thank you.

H6

GROVER ELLIS: My name is Grover Ellis. I live in a house that backs on the hill at 4155 42nd Avenue.

I just want to put in I want to second what Dick said and I believe Stan said too. And I think there's

1 something we should really consider here and that has to
2 do with the institution moving in, Battelle and developing
3 the property. I lived in my house since 1988 and there
4 has been no end of a contentious relationship between
5 Battelle and the surrounding community when ERA Care came
6 in and now Talaris. And all I really want to say is I
7 think we should really think what's the difference between
8 having an institution move in with its concerns, people
9 that come into the neighborhood for the day, leave at
10 night, and having neighbors.
11 Neighbors have a stake in getting along with
12 neighbors and living together. We may have differences
13 but, we can mainly iron them out; that's the thing I think H6-1
14 we should really consider. Because I don't think I agree
15 with what I think was what Stan was implying and what Dick
16 more less said that if we invite an institution into that
17 area, there will be no end of contention.
18 And there may be problems with single-family
19 dwellings but we can come up with a solution there and
20 then we can deal with the people that live there and they
21 will be neighbors and we will be altogether in a big
22 suite. We won't be two waring parties with different
23 interests. That's really all I have to say.
24 TINA REGAN: My name is Tina Regan, 4104 50th H7
25 Northeast.

1 And I really just have some general comments to
2 make. I came late to this process of studies where I
3 understand its impact and what's going on in the
4 neighborhood. Though I have lived here since birth, left
5 for a few years for college and then came running back.
6 And I have a two and a half year old and I have a long
7 standing vested interest in this neighborhood. I've seen
8 the changes. I hate the traffic and all the other things
9 that we all hate.
10 But I also, having been raised by my parents in this
11 diverse open neighborhood, try to maintain a sense of the
12 greater good. And though I understand the distaste for
13 creeping institutional encroachment on our neighborhood
14 and the changes that come with progress, it's inevitable.
15 And I also have a sense of the economical
16 developments. I had some experiences working with it.
17 And I know that if it doesn't pencil out economically, it
18 ain't going to happen. And I haven't studied the
19 specifics of the draft EIS and I haven't studied the
20 Talaris documents for the last two and a half years
21 because I came late to this process.
22 But my general sense is that the greater good is
23 really well served, my greater good, Laurelhurst's greater
24 good, and Seattle's greater good is well served by the
25 University of Washington and by Children's Hospital. And

1 I think my property value is a lot higher. I moved back
2 after college because I wanted to raise a family where I
3 could send my kids to public school and run as close to
4 Children's.
5 I feel well served by these institutions, even if
6 they encroach and even if they make my commute down
7 Montlake so much longer and even if my in-laws don't want
8 to schlep north because of the problems, it's where I
9 chose to live for reasons and the U and Children's are
10 part of it and I think Talaris would be too.
11 And I'm not the only person in my neighborhood that
12 feels that way. I've got some other signatures on this
13 comment letter. But it's so much easier not to speak out
14 when you're for something and it's so much easier to speak
15 out when you're against it. And not everybody is against
16 it, but it's just easier to take.
17 I think that the owner of this project is not going
18 to do it on a shoe string budget. I do think they're
19 concerned about their image in the public, including in
20 this neighborhood. It's obviously a well connected
21 neighborhood and I commend all of you who have been
22 involved in this process for making a better project and I
23 think it's a project that I'm going to support because of
24 the greater good and because I strongly believe in the
25 need for more research and how my kids are going to grow

H7-1

1 up, how the brain develops, and all that great stuff. And
2 so I'm speaking in support of it and have other names here
3 and will continue to encourage them to say so.
4 And all of you who are involved in traffic
5 mitigation and landscape buffering and bulk and scale and
6 all of that, I'm grateful for it. But I don't want to H7-1
7 lose site to that a lot of us support this project in
8 whatever way we can to make it happen and not have another
9 10 years go by with nothing being done, more
10 contentiousness, and that's a valuable piece of property
11 that some day it's going to become something.
12 And the more cooperation we can engender between
13 whomever develops it and ourselves, will perhaps eliminate
14 that war of competing interests. And I'd like to be a
15 good neighbor with my institution and have them want to be
16 a good neighbor to me; rather than the other way around,
17 having to be at war. Maybe it's impossible, but, hey, I
18 guess I'm an optimist.
19 MS. HAUFSCHILD: Next.
20 MIMI LEVIN: Mimi Levin, 3711 Northeast 43nd H8
21 Street.
22 I would like to thank the city and the EIS people
23 for making this an open forum and we appreciate that and
24 the information and the opportunity to be able to comment.
25 I guess I'm disappointed and like some people have

said, as a neighbor, I feel like my comments are being solicited, but yet I don't feel like I'm being given enough information to make an informed comment nor an informed decision. H8-1

I think there are a lot of people who are in favor of the development. I think the development is for a great cause and I think, like Stan said, I think it would take very little to make us enjoy the property as it stands today. I think a lot of us moved here or appreciate the development as it stands today as a big part of our value in our real estate and our way of life.

That being said, I think there isn't enough being done to mitigate the impact to the environment. I think it's being short-sighted in terms of looking at "build it and then figure it out later." The issues about lighting, the issues about scale, the issue about trees being cut, the issues about the fact that out of our living room we're now going to see the third floor of a research institute which wasn't in the neighborhood I moved into. That wasn't the house I purchased. H8-2

I'm a little concerned of the time frame of this project. I know that projects involving city applications take some time. My knowledge of this project is now over three years. I think it's starting to impede the liquidity of our real estate. H8-3

There have been neighbors who have put their houses up for sale and that have had to pull their houses off the market because there was uncertainty involved with the development behind their house. I think that that uncertainty is hard in a real estate market. H8-3

I think the certainty of the building once it's there will have a negative impact on the real estate market in our house. That means that I think that 81 houses jammed together would have a negative impact as well, but I don't think we know that information because we haven't been given the information of what those houses look like, how many there really would be, where they would fit, etc. H8-4

So I guess as a neighbor in this community, I would like more information that I think was not provided in the EIS.

MS. HAUFSCHILD: Thank you.

GROVER WILLIS: Yeah. I have one last statement and it goes to the point that the woman who spoke before the one that just spoke and that is this, I have lived here long enough to know that one sure way for our neighborhood to get a black eye is for our neighborhood to put itself in a position where we're Laurelhurst against kids. Guess what? Most of us have kids. You know, we aren't against kids, but we have an argument for putting in a institute **H9**

like Talaris. It's going to be pro-kids like Children's hospital is pro-kids.

Children's Hospital has been under construction since the day I moved into my house, 12 years ago. And I have no faith that this piece of property won't be under construction for the rest of the time that I live in Laurelhurst.

And also I have absolute certainty that in the public's eye Laurelhurst will get a black eye if we try to stand against the interest of little children. We were all little children once. You know, it's not like -- if you look at politics in America, it's always kids that we're out rescuing, as though we weren't all kids and we weren't also human beings who have needs and live in family houses and neighborhoods that we want to be happy in and we don't want to have the ongoing anxiety of never knowing where we stand, these would be some ever-mushrooming institution. H9-1

JEAN AMICK: Hi I'm Jean Amick and I live on 3008 Northeast Laurelhurst Drive and I'm a friend of Tina's at least until tonight. **H10**

My husband and I want to go on record opposing any variance for the Talaris new construction. We are in favor of housing. Talaris will do wonderful research, but it you should not be in a residential, especially in this H10-1

1 case because it is so closely connected to the University
2 of Washington. H10-1
3 To quote from a recent major donor report of the UW:
4 Talaris Research Institute, which made a visionary gift to
5 the UW, dot, dot, dot, sparked the creation of the Center
6 for Mind, Brain and Learning. And CMBL, as it will be
7 know, with the financial support from Talaris dot, dot,
8 dot, the McCaw's tremendous generosity creates the
9 potential to revolutionize parenting and education while
10 placing the UW at the forefront of exploration in the
11 developing mind. Their generous giving also extends to a
12 wide range of areas across campus and reveals a deep
13 commitment to the University of Washington, end of quote.
14 We Laurelhurst residents do not need another growing
15 major institution eating up our neighborhood. The City of H10-2
16 Seattle should make this institute build, buy or lease in
17 the U District or South Lake Union where there is plenty
18 of office space with better public transit.
19 If the land is used for new housing, those
20 residents would be families who care about what we present H10-3
21 residents think so important: a safe, friendly Seattle
22 city neighborhood where there are good schools and a park.
23 May I make another comment before she gets up here?
24 I was noticing at table 366 about project distribution how H10-4
25 Montlake Boulevard says 5 percent; 520 East, 5 percent;

Northeast Pacific, 5 percent; 520 West, 15 percent. So thus Montlake Boulevard is really a 30 percent traffic increase because you got to go Montlake Boulevard to get to those others. That's table 366. H10-4

JEAN COLLEY: My name is Jean Colley and some of you know me. I am a neighbor and I lived in Laurelhurst for 28 years and I live on Northeast 41st. But I live across from the contemplated development and I'm just here to make a couple of brief remarks on the draft environmental impact statement that we have before us and are discussing tonight. **H11**

I think it would be very helpful if Talaris and the architect would give us much more detail on the look and feel of the building.

We had a meeting last spring that was represented and we had a conceptual model of the building. I don't know, I hope most of you were there but it showed it. And then since then, there has been no change, as far as I could tell, from the description of the document and I think it would help us allay some of the fears of what the building is going to look like if we had much more detail and that the developer, the owner, and the architect responded to the need for lessening the bulk and the height and scale so it fits better into the site. I think that that would improve the look of it and make it more H11-1

H11-1

compatible with the community.

Because the truth of the matter is there's series of pretty good size buildings on site and yet there's a huge amount of open space. And to their credit, the architect and the developer, has actually preserved a huge amount of open space, have not given us written assurance, but we haven't directly asked for it, to ensure that the community, and I'm in a part of that community, is very aware of what the site feels and looks like day and night but to assure that we continue to have access.

I mean, right now we have what is in essence a park, but we're not paying for any of it. And, you know, it would be certainly pleasing to me to continue to have that park and I think that's a huge benefit. But we have to kind of keep in mind as we move through this process, but I would definitely ask for more detail on the plan and assurances in writing as we move along so that the community ends up with something that's a real asset and continues to have that wonderful open-park-like feel.

H11-2

We don't want to end up with a gated community. I mean, that would be just terrible, that would be a real hinderance and a real to detriment this neighborhood and if -- I know that we're not here to vote for one alternative or the other; but I just wanted to a remind you that if the developer chooses to go away and give up

on this process and it is converted to single-family housing zoning, then we lose all say in the matter then. And it would be just like me deciding that I'm going build a Victorian or a modern or anything on my property. Basically, that's what we do as property owners. H11-2

And once it's in that kind of zoning, we have no say, zero, and they could build a fence around the whole thing with a gate. So I think that we want to preserve the best of what we have and maybe get something even better. Thank you very much.

MS. HAUFSCHILD: Thank you.

ANDREW KIRSH: My name is Andrew Kirsh. I live at 1414 East Harrison Street. **H12**

I just wanted to ask you if the preservation to save as many trees as possible to be maintained as a goal of the project; and if it's single family, will the houses be clustered and so on? The question was in the bound copy of the EIS that I saw, the tree map that was supposed to be in the arborist report was missing and there were actually two copies of the composition graft. Is there actually a map available? H12-1

MS. HAUFSCHILD: More comments? Questions.

JEANNIE HALE: Good evening, neighbors, I'm Jeannie Hale. I'm president of the Laurelhurst community club. **H13**

And I just wanted to say a few things because there

1 seems to be some misperceptions.

2 When the owners purchased the property in July of

3 2000, we were the first to welcome them to the

4 neighborhood. We wanted to work with them. Whatever they

5 wanted to do, we wanted to support their efforts, work

6 with them in a positive way to have the best project ever

7 for our neighborhood.

8 And why is that? Because we love our neighborhood

9 and that is because of all of you, the sense of community

10 we have here and we want them to be a part of it. So

11 having comments that they're not really neighbors because

12 they leave at night, well, they are our neighbors and we

13 want to have a good project and I know you all want that

14 to happen too.

15 And we were delighted in July of 2000 when they said

16 we want to be good neighbors and our goal is to comply

17 with the settlement agreement and we will do that. We

18 have the same values you have. We want a peaceful quiet

19 environment and we promise you we will comply with the

20 settlement agreement.

21 And some of you might not know what this is, the

22 settlement agreement. Well, there are many protections

23 for our neighborhood: the big buffer areas, open space

24 areas, there's a limitation on how much can be developed,

25 lot coverage and these were trade-offs that Battelle got

in exchange, an opportunity to expand on the site and it was a mutual deal. So both the neighborhood and the developer received benefits.

Anyway, the alternatives before you, the two institute for advance study alternatives. The one that seems to be the preferred option does not comply with the settlement agreement nor does it comply with the code. It doesn't provide all the parking that's required. And the number one concern we hear from neighbors, what do you think that would be? Parking. Parking and traffic. So that is a major, major concern. H13-1

We have a transportation consultant and we will be submitting detailed comments on the failure to comply with both the code and the settlement agreement on the parking requirement. And the developer has requested a administrative conditional use so that they don't have to provide the parking that all other developers would be required to provide, so that's a big concern to us. And we think that in July of 2000 when they promised us they would comply with the settlement agreement, so that's a concern.

We all treasure the site; it's beautiful. We treasure the wetlands and all the wonderful, wonderful amenities that are provided by virtue of that environmental sanctuary. There's differences of opinion

with regard to the extent of the wetlands and the extent of single-family housing that can even be put on the site due to the presence of the wetlands and the buffers required, so we have our own wetlands consultant who will provide detailed comments in that regard. H13-2

Anyway, it's a beautiful site. It's their property. They're entitled to do with it what they want. And our role as neighbors and citizens is to make sure they comply with our laws, the State and Environmental Policy Act, the Seattle Code with regard to parking requirements, and the numerous other requirements imposed on all developers.

It's not that oh, we don't want to have another institution here. Our goal is to ensure that they comply with what they are legally required to do. And this draft environmental impact statement, as virtually everyone has pointed out, is not wholly and sufficient in providing the information that we all need to know to evaluate the alternatives. H13-3

So I just wanted to provide these preliminary comments and we will be submitting supplemental written comments by Carol Eychaner, who you heard earlier, our attorney and our other consultants involved. And I encourage you all to study the draft EIS. There's a copy available here at the Miller library here in the Center for Urban Horticulture that you can go over and take a

look at during the day and there's also a copy at the northeast branch, at the downtown branch, but I doubt whether anybody would go to that location.

Anyway, I appreciate very much this meeting to talk about the draft environmental impact statement and we look forward to receiving additional information from the developer and the applicant and DCLU and we will provide additional comment before the deadline. Thank you.

MS. HAUFSCHILD: Does anyone like to ask more questions or comments? If there are no questions or no other comments, I would like close --

UNIDENTIFIED SPEAKER: I'm a little bit concerned about from my perspective from what I have to do for my clients on some fairly key issues to the information. We're not talking detail in terms of construction drawing detail, we're talking detail enough to evaluate impacts. **H14** H14-1

I'm very concerned that this is the public hearing and the end of the comment period will be the last opportunity to comment on the draft EIS. And if this information is then provided in the final, that's the final. There are no more formal public opportunities to comment. So I'd like to get a sense on how the DCLS is going to address that or if you have some thoughts on that.

MS. HAUFSCHILD: Thank you for the question. I will

1 get back to you and if anyone else is interested in
2 knowing this, then I will get the information on this
3 question.
4 UNIDENTIFIED SPEAKER: Would it be possible for you
5 to require of the applicant or for you to reissue another
6 draft so we could have the opportunity to comment on a
7 draft environmental impact statement that actually
8 includes the information upon which we can comment?
9 MS. HAUFSCHILD: As I said, I understand the
10 question, and we'll let you know. Any more questions?
11 UNIDENTIFIED SPEAKER: Well, what are the rules with
12 regard to reissuing?
13 MS. HAUFSCHILD: I will give you a call, because
14 right now I don't know the answer to the question.
15 UNIDENTIFIED SPEAKER: Will you respond to everyone
16 here so we all know? It's important that we know.
17 UNIDENTIFIED SPEAKER: You'd have to send something
18 out in writing something that goes out to everybody.
19 UNIDENTIFIED SPEAKER: Not in time, not till next
20 month. The comment period closes at the end of the month.
21 UNIDENTIFIED SPEAKER: When does the Newsletter go
22 out?
23 UNIDENTIFIED SPEAKER: Well, our next one should
24 reach neighbors by January 10th. And the deadline to turn
25 it in, turn in articles for the Newsletter is within the

next few days.

UNIDENTIFIED SPEAKER: I would also recommend or suggest, if possible, if we're going to get more information, which I think is the request from the neighborhood, that potentially they extend that time period. We're approaching the holiday season when a lot of people are out of the neighborhood. We just got this document two weeks ago. I don't think it's a sufficient period to even comment.

So if we're able do extend it, perhaps just even one or two weeks into the new year; especially if attempting to get more information to make a informed decision, I think that would be much appreciated.

H15

H15-1

UNIDENTIFIED SPEAKER: Can you do that if the developer agrees here tonight to extend it? We did that with the last builder. If they extend until January 15th, say, would that work with you, Mr. Wicklein?

MR. WICKLEIN: I don't know if it's legal to extend it.

MS. WALDMAN: The official requirement is extended to 45 days. If you're willing to continue to accept comments that will be addressed in the final layout, that's certainly up to you.

MR. WICKLEIN: I'm not willing to make that.

MS. WALDMAN: The problem is that this group would

1 know it but nobody outside this would not know.
2 UNIDENTIFIED SPEAKER: You could reissue it in the
3 monthly listing of notices, but I think the record --
4 UNIDENTIFIED SPEAKER: We could put it on our web
5 site as well, the extension period.
6 UNIDENTIFIED SPEAKER: But I think if the Talaris
7 people aren't willing to extend that, I think the record
8 should reflect that.
9 UNIDENTIFIED SPEAKER: Well, if it's a comment on
10 the draft EIS, doesn't the ECLU have the capability to not
11 accept a draft EIS and have an additional submittal?
12 MS. HAUFSCHILD: We have reviewed the draft. There
13 were some comments sent to the applicants at the time when
14 the draft was published. The ECLU accepted the draft.
15 Now we have all the comments and questions, so we will
16 look into the comments and questions.
17 UNIDENTIFIED SPEAKER: If we need additional time to
18 comment on the information that's missing this evening,
19 how do we get the information? How do we apply?
20 UNIDENTIFIED SPEAKER: There's no opportunity.
21 UNIDENTIFIED SPEAKER: That's the point. That's
22 what we're all asking.
23 MS. HAUFSCHILD: I understand your question. I
24 understand the problem, so we will have to make a decision
25 on this. I don't think we can make a decision right now,

1 but we will find some way to communicate the decision to
2 you.
3 UNIDENTIFIED SPEAKER: Does Cheryl Waldman, your
4 boss, make that decision or does Diane Sugimura. I mean,
5 your boss is here. Can't we get a decision tonight?
6 MS. WALDMAN: I think it's more of a legal question
7 in terms of the process and what people allow us to do and
8 not allow us to do. But this is a draft document. Just
9 like when you write your first paper and you have it as a
10 draft; it's not the final.
11 UNIDENTIFIED SPEAKER: But the whole point of the
12 draft --
13 MS. WALDMAN: So what information we told you, you
14 would like to see so that's what we're --
15 UNIDENTIFIED SPEAKER: Our point is that the draft
16 fails to serve its intended function. The draft is
17 inadequate.
18 MS. WALDMAN: Well, we aren't judging adequacy at
19 this point.
20 UNIDENTIFIED SPEAKER: That's what we're asserting.
21 MS. WALDMAN: I understand your point.
22 UNIDENTIFIED SPEAKER: Well, the ultimate decision
23 is based on the final publication of the EIS?
24 MS. WALDMAN: Yes.
25 UNIDENTIFIED SPEAKER: But there's no comment

1 period for the final EIS?
2 MS. WALDMAN: No.
3 UNIDENTIFIED SPEAKER: So one way of extending it
4 then is to deny it. If you deny the application, then
5 that would extend the whole process, wouldn't it?
6 MS. WALDMAN: It would end the process.
7 UNIDENTIFIED SPEAKER: It would end it? You could
8 start over again and then you could --
9 UNIDENTIFIED SPEAKER: Either party can appeal a
10 denial.
11 MS. WALDMAN: Yes.
12 UNIDENTIFIED SPEAKER: But I think based on your
13 analogy, if you were to submit a paper that your teacher
14 told you was about to become a C or a D or an F and you
15 had a chance for a rewrite, you would think you would want
16 another one-on-one session prior to submitting it.
17 Because once you're in, you're in. You're done.
18 UNIDENTIFIED SPEAKER: A denial doesn't serve our
19 purpose. We want to see more information. We're not
20 interested in a denial.
21 MS. WALDMAN: Well, we'll see what can be done.
22 UNIDENTIFIED SPEAKER: I was just looking because
23 -- and this is such a general recollection so I may be
24 wrong -- I seem to recall one instance that I was involved
25 in a project where a draft EIS was reissued, and a second

1 draft before a final. But I'm also looking at the WAC for
2 specific authority one way or the other and I haven't been
3 able to find it so we will also go back just to see what
4 the legal options are.
5 MS. WALDMAN: I'm curious to know what project that
6 was.
7 UNIDENTIFIED SPEAKER: My recollection was so
8 general I will have to think harder. If I find out I will
9 say.
10 MS. HAUFSCHILD: Thank you very much for coming.
11 (Concluded at 8:25 p.m.)

1 C E R T I F I C A T E

2

3 STATE OF WASHINGTON)

4) ss.

5 COUNTY OF SNOHOMISH)

6 I, the undersigned Court Reporter and an officer

7 of the Court under my commission as a Notary Public for the

8 State of Washington, do hereby certify that the foregoing

9 Public Hearing was taken before me on December 11, 2002, and

10 transcribed under my direction as a court reporter;

11 that the transcript is true and accurate to the

12 best of my knowledge and ability; and that I am not a relative

13 or employee or any attorney or counsel employed by the parties

14 hereto, nor financially interested in its outcome.

15 IN WITNESS WHEREOF, I have hereunto set my hand

16 and seal this 11th day of December, 2002.

17

18

19

20 NOTARY PUBLIC in and for the State of

21 Washington, residing at Everett. My

22 commission expires December 28, 2002.

23

CHRISTINA ATENCIO NOTARY PUBLIC COMMISSION EXPIRES 12-28-02 STATE OF WASHINGTON

HEARING RESPONDENT #H1, Bonnie Miller

H1-1. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2.

H1-2. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-21.

H1-3. Refer to the response to Comment Letter #5 (Hawthorne Hills Community Council, Bonnie E. Miller and George Holzapfel), Comment 5-3.

HEARING RESPONDENT #H2, Dick Barnum

H2-1. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-21.

H2-2. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-39.

H2-3. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-11.

HEARING RESPONDENT #H3, Mark Holden

H3-1. Refer to the response to Comment Letter #3 (Robert Bernstein), Comment 3-2.

H3-2. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2 and to the revised Height, Bulk and Scale discussion in Chapter 3 of the Final EIS.

H3-3. Refer to the response to Comment Letter #5 (Hawthorne Hills Community Council, Bonnie E. Miller and George Holzapfel), Comment 5-6.

H3-4. The lighting concept for the Talaris Research Institute addresses the importance of retaining the neighborhood character and residential street lighting levels at night. All highlight and focus will be placed away from the perimeter of the site creating a lighted center of the project at the lower graded areas. In addition, a 'necklace' of low-level lighting will connect project buildings providing a cohesive site campus.

Carefully modulated light levels will help reveal entrances and drop-off areas without lighting all areas to the same level. Paths will be minimally lighted to provide task lighting on the path surface. Parking areas will be lit to provide a good level of safety light while using full cut-off light fixtures mounted on low poles. All light fixtures will utilize direct light distribution and will be well-shielded to minimize light trespass from the site.

H3-5. Comment noted.

H3-6. Refer to the response to Comment Letter #5 (Hawthorne Hills Community Council, Bonnie E. Miller and George Holzapfel), Comment 5-6.

H3-7. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-3 and 4-11.

H3-8. Refer to the response to Comment Letter #5 (Hawthorne Hills Community Council, Bonnie E. Miller and George Holzapfel), Comment 5-3.

H3-9. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-11.

H3-10. Comment noted.

H3-11. Comment noted. No parking spillover is anticipated as the proposed parking supply exceeds the project parking demand. Refer to the response to Comment Letter #3 (Robert Bernstein), Comment 3-4.

HEARING RESPONDENT #H-4, Carol Eychaner

H4-1. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3.

H4-2. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-3.

H4-3. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2.

H4-4. Comment noted. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-2 and 4-5.

H4-5. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2. In response to your comment regarding multiple buildings, refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-30.

H4-6. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-11.

H4-7. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-43.

H4-8. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-11 and 4-21.

H4-9. Comment noted.

H4-10. Comment noted.

H4-11. Clustering could be considered as a potential mitigation measure for the single-family alternatives, but would require a Conditional Use Permit.

HEARING RESPONDENT #H-5, Stan Sorscher

H5-1. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2. The Final EIS has been revised to provide more information and detail on the EIS alternatives.

H5-2. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3.

H5-3. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-3 and Comment Letter #24, Comment 24-3.

H5-4. Refer to the responses to Comment Letter #4 (Carol Eychaner), Comments 4-3 and 4-5.

H5-5. Refer to the response to Comment Letter #22 (Stan Sorscher), Comment 22-2.

H5-6. Comment noted. Issues associated with research funding for the Talaris Institute are not within the scope of this EIS.

H5-7. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2.

HEARING RESPONDENT #H-6, Grover Ellis

H6-1. Comment noted.

HEARING RESPONDENT #H-7, Tina Ragan

H7-1. Comment noted.

HEARING RESPONDENT #H-8, Mimi Levin

H8-1. Comment noted.

H8-2. Comment noted. Additional detail and analysis has been added to the Final EIS to respond to comments received on the Draft EIS. Regarding your comment on lighting concerns refer to the response to Public Hearing Respondent #H3, Mark Holden, Comment H3-4. In response to your comment about trees, refer to the response to Comment Letter #5 (Hawthorne Hills Community Council), Comment 5-6. A tree preservation plan is proposed to identify trees for preservation and the planting of additional trees to offset tree loss during construction.

H8-3. Comment noted.

H8-4. Additional figures have been added to the Height, Bulk and Scale section in Chapter 3 of the Final EIS to illustrate how single-family development might look compared to the existing residential neighborhoods adjacent to the Talaris site. Figure 3-2 shows examples of existing single-family residential development in the surrounding neighborhoods, while Figure 3-9 shows what single-family residential development might look like under Alternatives 2A or 2B. Also, refer to the Height, Bulk and Scale section in for a discussion of aesthetics issues.

HEARING RESPONDENT #H-9, Grover Willis

H9-1. Comment noted.

HEARING RESPONDENT #H-10, Jean Amick

H10-1. Comment noted.

H10-2. Comment noted.

H10-3. Comment noted.

H10-4. Refer to Comment Letter #8 (Jean Amick), Response 8-1.

HEARING RESPONDENT #H-11, Jean Colley

H11-1. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2.

H11-2. Comment noted.

HEARING RESPONDENT #H-12, Andrew Kirsh

H12-1. The tree survey map has been submitted as part of the MUP application drawings for the Preferred Action (Alternative 1B) that is analyzed in the Final EIS. The trees identified in the tree survey are shown on Figure 3-10 (Project Site Wetlands). A tree preservation plan is proposed to identify trees for preservation and the planting of additional trees to offset tree loss during construction (refer to the mitigation portion of the Habitat/Wetlands section of Chapter 3 of the Final EIS).

HEARING RESPONDENT #H-13, Jeannie Hale

H13-1. Refer to the responses to Comment Letter #3 (Robert Bernstein), Comment 3-4 and to Comment Letter #4 (Carol Eychaner), Comments 4-3 and 4-37.

H13-2. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-21.

H13-3. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2.

HEARING RESPONDENT #H-14, Unidentified Speaker

H14-1. Comment noted. Refer to the response to Comment Letter #4 (Carol Eychaner), Comment 4-2.

HEARING RESPONDENT #H-15

H15-1. Comment noted.

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APPENDIX A – DISTRIBUTION LIST

Copies of this Draft EIS and/or notices of EIS availability have been distributed to the following agencies, organizations and individuals:

Federal Agencies

U.S. Department of Commerce, National Marine Fisheries Service
U.S. Environmental Protection Agency, Regional Office, SEPA Review Section
U.S. Army Corps of Engineers, Seattle District
U.S. Fish and Wildlife Service

Tribes

United Indians of all Tribes

State Agencies

Department of Community, Trade and Economic Development, Office of Archaeology and Historic Preservation
Department of Community, Trade and Economic Development, GMA Division
Department of Ecology, Environmental Review Section (2 copies)
Department of Health, Office of Program Services
Department of Natural Resources, SEPA Center
Department of Transportation, Planning Division
Department of Fish and Wildlife, EIS Reviews

Regional Agencies

Puget Sound Clean Air Agency
Puget Sound Regional Council
Central Puget Sound Regional Transit Authority

Local Agencies

City of Seattle, City Council
City of Seattle, City Light
City of Seattle, Department of Planning and Development, SEPA Public Information Center
City of Seattle, Department of Neighborhoods
City of Seattle, Department of Parks and Recreation
City of Seattle, Design Commission
City of Seattle, Fire Department
City of Seattle, Health Department
City of Seattle, Housing Department
City of Seattle, Law Department
City of Seattle, Police Department
City of Seattle, Seattle Public Utility, Environmental Review Section
City of Seattle, Seattle Department of Transportation

King County, Metro Transit, Environmental Planning and Transit and Transportation Planning
City of Seattle Landmarks Preservation Board
City of Seattle Library, Central Library Facility

Other Agencies, Organizations and Individuals

Allied Arts of Seattle
Hawthorne Hills Community Council
Laurelhurst Community Club
League of Women Voters
Livable Communities Coalition
Neighborhood Business Council
Save Seattle's Trees
Sheldon & Associates, Inc.
Bob Wicklein
Carol Eychaner
Russ & Jean Amick
Elizabeth Castelberry
Emilie Cobb
Jeannie Hale
David Hill
Emory Hill
Susan Marten
Barbara Jo Allen
Eleanor Worsham
Stan Sorscher & Judith Arms
Reeve Geary
Jean Schifferman
Aaron Frank
Kate Lloyd
Heather Newman
Phoebe Gelbert
Dorothy Schmitz
Ann Slutsky
Christine Barrett
Mitzi Carletti
Catherine Johnson
Paul & Norma Obien
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Val & Craig Stewart
Grover & Linda Ellis
Karen Knudsen
Mark Holden
Bill Nichols
Dorothy Elvins
Dawn Nelson
Steven Smutka, DDS
Sam Moskowilz
Robert Bernstein, P.E.
Jean Colley
Pauline Westlund
Ben Smith
John Robinson, M.D.
Allen Sarno
Ellen Chen
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Tina & Chip Ragen
Roberta & Erik Torgerson
Lean & Kimberlee Brilhart
Steve & Allison Alenikopf
Jane & Jon Hongladarom
John & Lee Hults
Bonnie Miller
Dick Barnum
Grover Ellis
Mimi Levin
Grover Willis
Andrew Kirsh
University District Community Council
University District Chamber of Commerce
University of Washington
University Village Merchant's Association
Children's Hospital

Newspapers

Seattle Daily Journal of Commerce
Puget Sound Business Journal
Seattle Times
Seattle Post Intelligencer

APPENDIX B – HABITAT / WETLANDS BACKGROUND INFORMATION

TALASAEA
CONSULTANTS, INC.

RECEIVED
APR 26 2004
SENECA GROUP

22 April 2004

TAL446B

Mr. Robert H. Wicklein, P.E.
The Seneca Real Estate Group Inc.
1201 Third Avenue, Suite 2350
Seattle, WA 98101

REFERENCE: Talaris Institute Site in Seattle, WA
SUBJECT: Wetlands Alternative for Final EIS

Dear Robert:

In considering a site plan alternative which would necessitate the filling of Wetlands C and D, adequate mitigation and enhancement opportunities exist within, and adjacent to, Wetlands A and B to sufficiently replace the area, habitat value, and hydrological value of Wetlands C and D. Wetlands A, B, C, and D are all isolated topographic depressions, which are primarily dominated by Himalayan blackberry and have relatively low functional value.

In considering the fill and mitigation of Wetlands C and D, the Seattle Municipal Code (SMC), Section 25.09.160(A)(2), would allow the alteration of these two wetlands being considered under this alternative. SMC 25.09.160(A)(2)(c)(iv) would require wetland restoration or creation at a 2:1 (mitigation-to-fill) ratio. The areas proposed for wetland fill total 1,107 square feet (sf). This includes 731 sf for Wetland C and 376 sf for Wetland D. The area available for wetland creation between Wetlands A and B is approximately 3,300 sf. The area available for restoration within Wetlands A and B would encompass the entire area of both wetlands totaling 2,685 sf (972 sf for Wetland A and 1,713 sf for Wetland B). Wetland creation or restoration (or a combination thereof) could be achieved to minimally provide an equivalency in habitat value, hydrologic value, and required mitigation area. Buffers would need to be maintained at a minimum of 50 feet in width. This also appears to be achievable under this site plan alternative.

If you have any additional questions, comments, or need supplementary information, please call Bill Shiels or me at 425-861-7550.

Sincerely,

TALASAEA CONSULTANTS, INC

Ann M. Olsen

Ann M. Olsen
Associate

HISTORICAL LAND USE

Time Period	Event	Consequent
Early in this century or earlier	Site and vicinity logged and cleared	Clearing of forests disturbed soils, hydrology, and vegetation on the site and lead to settlement of the area.
1910s or 1920s	Vicinity of site settled. Lowering of Lake Washington.	Site was part of lake fringe. Lowering lake caused drainage patterns and plant communities to change in the vicinity.
Prior to 1967	Portions of site filled. A 60-inch storm sewer line was constructed through the site.	Filling occurred in loop road area. Stormwater line drained remaining wet areas, including loop road area.
1966-1967	Initial phase of construction for the Battelle Memorial Institute. Constructed stormwater pond. Excavation of peat and deposition of fill materials in loop road area.	Peat were removed from wetlands and wetlands were filled. Areas that were once wetlands no longer functioned as wetlands.
1970	Second phase of construction. Soils disturbed through peat removal and the deposition of additional fill material.	Soils disturbed and peat removed from site prior to 1970. Last remnant of peat wetlands removed and filled.

WETLAND FUNCTIONAL ANALYSIS SPREADSHEET

Table 3. Wetland and Buffer Functions and Semi-Quantitative Performance Assessment[1]

	Wetland A	Wetland B	Wetland C	Wetland D
Flood/Storm Water Control (max 15)	Insignificant 4(27%)*	Insignificant 4(27%)	Very Low 5(33%)	Insignificant 4(27%)
Base Flow/Ground Water (max 15)	Very Low 5(33%)	Very Low 5(33%)	Very Low 5(33%)	Very Low 5(33%)
Water Quality Improvement (max 15)	Low 8(53%)	Low 8(53%)	Moderate 11(73%)	Low 8(53%)
Natural Biological Support (max 36)	Very Low 13(36%)	Very Low 13(36%)	Very Low 13(36%)	Very Low 13(36%)
Overall Habitat Functions (max 9)	Very Low 3(33%)	Very Low 3(33%)	Very Low 3(33%)	Very Low 3(33%)
Specific Habitat Functions (max 15)	Very Low 5(33%)	Insignificant 4(27%)	Insignificant 4(27%)	Insignificant 4(27%)
Cultural/Socioeconomic (max 18)	Very Low 6(33%)	Very Low 6(33%)	Very Low 6(33%)	Very Low 6(33%)

1. Methodology based on Cooke, 2000

* This numerical value refers to the score or index calculated on the data sheet. In parentheses is the percent of the index over the maximum value (see **Appendix C**). See value rating below:

High	100% to 90%
Moderate to High	89% to 80%
Moderate	79% to 70%
Moderate to Low	69% to 60%
Low	59% to 50%
Low to Very Low	49% to 40%
Very Low	39% to 30%
Insignificant	≤ 29%

ON SITE WILDLIFE OBSERVATIONS

Common Name	Scientific Name	Listing Status	Habitat Area	Obser-vations	Comments
BIRDS[1]					
American and Northwestern Crow	*Corvus (brachyrhynchos and caurinus)*	none	All Terrestrial	V & A	Perching on trees and flying overhead throughout the site.
American robin	*Turdus migratorius*	none	All Terrestrial	V & A	Flying overhead and observed on lawn.
Song sparrow	*Melospiza melodia*	none	All Terrestrial	V & A	Perching on hazelnut tree north of the wetland area.
Bewick's wren	*Troglodytes bewickii*	none	All Terrestrial	V & A	Observed in non-landscaped area on the southwest portion of the property.
Dark-eyed junco	*Junco hyemalis*	none	All Terrestrial	V & A	Throughout the site perching or flying overhead.
Glaucous-winged gull	*Larus glaucescens*	none	Lawn	V	Several flew overhead and some observed on lawn.
Golden-crowned Kinglet	*Regulus satrapa*	none	Small Trees in landscaped area	V & A	Year-round resident observed on small non-native tree near walking bridge that crosses the pond.
American Wigeon	*Anas americana*	none	Pond	V	Observed on pond.
European Wigeon		none	Pond	V	Observed on pond.
Canada Goose	*Branta canadensis*	none	Pond & Lawn	V	Observed on pond and on lawn.
Mallard Duck	*Anas platyrhynchos*	none	Pond	V	Observed on pond.
Black-capped Chickadee	*Parus atricapillus*	none	All Terrestrial	V	Observed throughout the site.
MAMMALS[2]					
Eastern Gray Squirrel	*Sciurus carolinensis*	none	All Terrestrial	V	Observed throughout the site.
Amphibians					
none	—	—	—	—	—
REPTILES					
none	—	—	—	—	—
Conspicuous Invertebrates					
none	—	—	—	—	—

V=VISUAL SIGHTING, A=AUDITORY/VOCALIZATION, T=TRACKS, S=SCATS, B=BURROW, OR O=OTHER SIGN

1. Udvardy, M. D. F. 1977. The Audubon Society Field Guide to North American Birds, Western Region. Alfred A. Knopf Publishing, New York.
2. Whitaker, J. O. Jr. 1980. The Audubon Society Field Guide to North American Mammals. Alfred A. Knopf Publishing, New York.

DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): C. Wambach Date: 3/22/01
Project/Site: Talaris State: WA County: King
Applicant/Owner: MacGaw Plant Community #/Name: TP1
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community? Yes ____ No X (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes X No ____ (If yes, explain on back)
Soils were fill material & plants were mainly mres-yes

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1 Rubus discolor	FACU	S	11		
2 Urtica dioica	FAC+	H	12		
3 Solanum dulcamara	FAC+	H	13		
4 Populus trichocarpa	FAC	T	14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Percent of dominant species that are OBL, FACW, and/or FAC 75%
Is the hydrophytic vegetation criterion met? Yes X No ____
Rationale: greater than 50% FAC or wetter

SOILS

Series/Phase: Urban fill Subgroup[2] –
Is the soil on the hydric list? Yes ____ No ____ Undetermined X
Is the soil a Histosol? Yes ____ No X Histic epipedon present? Yes ____ No X
Is the Soil: Mottled? Yes ____ No X Gleyed? Yes ____ No X
Matrix Color: 0-24" 10YR 3/1 Mottle Colors: no
Other hydric soil indicators: none
Is the hydric soil criterion met? Yes X No ____
Rationale: low chroma

HYDROLOGY

Is the ground surface inundated? Yes ____ No X Surface water depth \
Is the soil saturated? Yes ____ No X
Depth to free-standing water in pit/soil probe hole: none
List other field evidence of surface inundation or soil saturation moist soil
Is the wetland hydrology criterion met? Yes X No ____
Rationale: hydrology assumed and soil is moist

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No ____
Rationale Jurisdictional decision: all three criteria are satisfied

[1]This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2]Classification according to "soil Taxonomy."

DRAFT

DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): Curtis crumbach Date: March 22, 01
Project/Site: talaris State: WA County: King
Applicant/Owner: MacCaw Plant Community #/Name: TP 2
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community? Yes ____ No X (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes X No ____ (If yes, explain on back) Soils were composed of fill & vegetation dominated by invasive c

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1 Rubus discolor	FACU	S	11		
2 Urtica dioica	FACU+	H-	12		
3 Solanum dulcamara	FACU+	H-	13		
4 Populus tricocarpa	FAC+	T	14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Percent of dominant species that are OBL, FACW, and/or FAC 75%
Is the hydrophytic vegetation criterion met? Yes X No ____
Rationale: greater than 50% FAC or wetter

SOILS

Series/Phase: urban fill material Subgroup[2] ____
Is the soil on the hydric list? Yes ____ No ____ Undetermined X
Is the soil a Histosol? Yes ____ No X Histic epipedon present? Yes ____ No ____
Is the Soil: Mottled? Yes ____ No X Gleyed? Yes ____ No ____
Matrix Color: 0-6" 10YR 5/2 6-20" 10YR 4/4 Mottle Colors: no
Other hydric soil indicators: none
Is the hydric soil criterion met? Yes ____ No X
Rationale: Soils dry & crumbly with chroma of 2-4 with out mottles

HYDROLOGY

Is the ground surface inundated? Yes ____ No X Surface water depth \
Is the soil saturated? Yes ____ No X
Depth to free-standing water in pit/soil probe hole: none
List other field evidence of surface inundation or soil saturation none
Is the wetland hydrology criterion met? Yes ____ No X
Rationale: Soils dry & crumby. No hydrology indicators observed

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes ____ No X
Rationale Jurisdictional decision: plants are dominated by invasives and less reliable than soils and hydrology. Soils and hydrology indicate that this test plot is not within a wetland.

[1]This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2]Classification according to "soil Taxonomy."

DRAFT

DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): Curtis Wamback Date: March 22, 01
Project/Site: talaris State: WA County: King
Applicant/Owner: MacCaw Plant Community #/Name: TP3
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community? Yes ____ No X (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes X No ____ (If yes, explain on back)
Soils consist of fill and plants dominated by invasives

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1 Solanum dulcamara	FAC+	H	11		
2 Cardamine occidentalis	FACW+	H	12		
3 Ranunculus repens	FACW	H	13		
4 Equisetum arvense	FAC	H	14		
5 Urtica dioica	FAC+	H	15		
6 Athyrium filix-femina	FAC	H	16		
7 Rubus discolor	FACU	S	17		
8 Populus trichocarpa	FAC+	T	18		
9			19		
10			20		

Percent of dominant species that are OBL, FACW, and/or FAC 88%
Is the hydrophytic vegetation criterion met? Yes X No ____
Rationale: greater than 50% FAC or wetter

SOILS

Series/Phase: urban Fill Subgroup[2] ____
Is the soil on the hydric list? Yes ____ No ____ Undetermined X
Is the soil a Histosol? Yes ____ No X Histic epipedon present? Yes ____ No X
Is the Soil: Mottled? Yes X No ____ Gleyed? Yes ____ No X
Matrix Color: 0-20" 10YR 3/2 Mottle Colors: 10YR 6/8
Other hydric soil indicators: none
Is the hydric soil criterion met? Yes X No ____
Rationale: chroma of 2. with mottles

HYDROLOGY

Is the ground surface inundated? Yes ____ No X Surface water depth \
Is the soil saturated? Yes ____ No X
Depth to free-standing water in pit/soil probe hole: none
List other field evidence of surface inundation or soil saturation Soil moist
Is the wetland hydrology criterion met? Yes X No ____
Rationale: Soil moist and surface cracked. water stains of leaf litter.

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No ____
Rationale Jurisdictional decision: all three criteria are satisfied.

[1]This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2]Classification according to "soil Taxonomy."

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DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): Curtis Wambach Date: March 22, 01
Project/Site: Talaris State: WA County: King
Applicant/Owner: MacCaw Plant Community #/Name: TP4
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community? Yes ____ No X (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes X No ____ (If yes, explain on back)
Soils consist of fill + plants dominated by invasives

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1 Rubus discolor	FACU	S	11		
2 Urtica dioica	FAC+	H	12		
3 Populus trichocarpa	FAC	T	13		
4 Solanum dulcamara	FACU	H	14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Percent of dominant species that are OBL, FACW, and/or FAC 75%
Is the hydrophytic vegetation criterion met? Yes X No ____
Rationale: greater than 50% dominant plant species are FAC or wetter

SOILS

Series/Phase: urban fill Subgroup[2] ____
Is the soil on the hydric list? Yes ____ No ____ Undetermined X
Is the soil a Histosol? Yes ____ No X Histic epipedon present? Yes ____ No X
Is the Soil: Mottled? Yes ____ No X Gleyed? Yes ____ No X
Matrix Color: Unconsolidated fill Mottle Colors: none
Other hydric soil indicators: none
Is the hydric soil criterion met? Yes ____ No X
Rationale: Soil dry and composed of unconsolidated fill-chunks

HYDROLOGY

Is the ground surface inundated? Yes ____ No X Surface water depth —
Is the soil saturated? Yes ____ No X
Depth to free-standing water in pit/soil probe hole: none
List other field evidence of surface inundation or soil saturation none
Is the wetland hydrology criterion met? Yes ____ No X
Rationale: Soils very dry. No evidence of hydrology indicators

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes ____ No X
Rationale Jurisdictional decision: plants are primarily dominated by invasive species and less reliable than soils and hydrology.

[1]This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2]Classification according to "soil Taxonomy."

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DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): Curtis Wambach Date: March 22, 01
Project/Site: Polaris State: WA County: King
Applicant/Owner: MacLaw Plant Community #/Name: FPS
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community? Yes ____ No X (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes X No ____ (If yes, explain on back)
Soils composed of fill and plants dominated by invasive

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1 Ranunculus repens	FACW	H	11		
2 Rubus discolor	FACU	S	12		
3 Urtica dioica	FAC+	H	13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Percent of dominant species that are OBL, FACW, and/or FAC 67%
Is the hydrophytic vegetation criterion met? Yes X No ____
Rationale: greater than 50% of dominant vegetation FAC or wetter

SOILS

Series/Phase: urban fill Subgroup[2] ____
Is the soil on the hydric list? Yes ____ No X Undetermined ____
Is the soil a Histosol? Yes ____ No X Histic epipedon present? Yes ____ No X
Is the Soil: Mottled? Yes X No ____ Gleyed? Yes ____ No X
Matrix Color: 0-20= 10YR 3/1 to 3/2 Mottle Colors: 10YR 6/8
Other hydric soil indicators: A8
Is the hydric soil criterion met? Yes X No ____
Rationale: Chroma of 1 and 2 with mottles

HYDROLOGY

Is the ground surface inundated? Yes ____ No X Surface water depth ____
Is the soil saturated? Yes ____ No X
Depth to free-standing water in pit/soil probe hole: none
List other field evidence of surface inundation or soil saturation Soil moist
Is the wetland hydrology criterion met? Yes X No ____
Rationale: Soil was moist; hydrology assumed.

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No ____
Rationale Jurisdictional decision: all three criteria satisfied

[1]This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2]Classification according to "soil Taxonomy."

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DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): Curtis Wambach Date: March 22, 01
Project/Site: Polaris State: WA County: King
Applicant/Owner: MacLaw Plant Community #/Name: TP 6
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community? Yes ____ No X (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes X No ____ (If yes, explain on back) Soils composed of fill and plants dominated by invasive

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1 Rubus discolor	FACU	S	11		
2			12		
3			13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Percent of dominant species that are OBL, FACW, and/or FAC Zero percent
Is the hydrophytic vegetation criterion met? Yes ____ No X
Rationale: no dominant vegetation FAC or wetter

SOILS

Series/Phase: urban fill Subgroup[2]
Is the soil on the hydric list? Yes ____ No X Undetermined
Is the soil a Histosol? Yes ____ No X Histic epipedon present? Yes ____ No X
Is the Soil: Mottled? Yes ____ No X Gleyed? Yes ____ No X
Matrix Color: 0-24" 10YR 3/5 Mottle Colors: —
Other hydric soil indicators: None
Is the hydric soil criterion met? Yes ____ No X
Rationale: chroma greater than 2 without mottles

HYDROLOGY

Is the ground surface inundated? Yes ____ No X Surface water depth —
Is the soil saturated? Yes ____ No X
Depth to free-standing water in pit/soil probe hole: None
List other field evidence of surface inundation or soil saturation none
Is the wetland hydrology criterion met? Yes ____ No X
Rationale: Soils dry and crumbly sandy gravelly loam-fill material

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes ____ No X
Rationale Jurisdictional decision: no criteria satisfied.

[1]This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2]Classification according to "soil Taxonomy."

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DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): Curtis Wambach Date: March 22, 01
Project/Site: Talaris State: WA County: King
Applicant/Owner: MacCaw Plant Community #/Name: 7
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community? Yes ____ No X (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes X No ____ (If yes, explain on back) Soils composed of fill and plants dominated by invasive

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1 Urtica dioica	FAC+	H	11		
2 Rubus discolor	FACU	S	12		
3 Salix lasiandra	FACW+	T	13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Percent of dominant species that are OBL, FACW, and/or FAC 67%
Is the hydrophytic vegetation criterion met? Yes X No ____
Rationale: greater than 50% dominant vegetation is FAC or wetter

SOILS

Series/Phase: urban fill Subgroup[2] ____
Is the soil on the hydric list? Yes ____ No X Undetermined ____
Is the soil a Histosol? Yes ____ No X Histic epipedon present? Yes ____ No X
Is the Soil: Mottled? Yes ____ No X Gleyed? Yes ____ No X
Matrix Color: 0-24" 10YR 4/1 to 4/2 Mottle Colors: none observed
Other hydric soil indicators: no
Is the hydric soil criterion met? Yes X No ____
Rationale: Chroma of 1 to 2

HYDROLOGY

Is the ground surface inundated? Yes ____ No X Surface water depth ____
Is the soil saturated? Yes ____ No X
Depth to free-standing water in pit/soil probe hole: none
List other field evidence of surface inundation or soil saturation Soil moist
Is the wetland hydrology criterion met? Yes X No ____
Rationale: Soils moist - hydrology assumed

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No ____
Rationale Jurisdictional decision: all three criteria satisfied

[1]This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2]Classification according to "soil Taxonomy."

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DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): Curtis Wamback Date: March 22, 01
Project/Site: talaris State: WA County: King
Applicant/Owner: MacCaw Plant Community #/Name: 8
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community? Yes ____ No X (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes X No ____ (If yes, explain on back) Soils composed of fill and plants dominated by invasive

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1 Salix lasiandra	FACW+	t	11		
2 Rubus discolor	FACU	S	12		
3 Urtica dioica	FAC+	H	13		
4 Solanum dulcamara	FAC+	H	14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Percent of dominant species that are OBL, FACW, and/or FAC 75%
Is the hydrophytic vegetation criterion met? Yes X No ____
Rationale: greater than 50% FAC or wetter for dominant plant species.

SOILS

Series/Phase: urban fill Subgroup[2] ____
Is the soil on the hydric list? Yes ____ No X Undetermined ____
Is the soil a Histosol? Yes ____ No X Histic epipedon present? Yes ____ No X
Is the Soil: Mottled? Yes ____ No X Gleyed? Yes ____ No X
Matrix Color: 0-20" 10YR 3/3 to 3/4 Mottle Colors: ____
Other hydric soil indicators: none
Is the hydric soil criterion met? Yes ____ No X
Rationale: Soils dry crumbly with chroma of 3 to 4 no mottles or other hydric indicators observed.

HYDROLOGY

Is the ground surface inundated? Yes ____ No X Surface water depth ____
Is the soil saturated? Yes ____ No X
Depth to free-standing water in pit/soil probe hole: none
List other field evidence of surface inundation or soil saturation none
Is the wetland hydrology criterion met? Yes ____ No X
Rationale: Soils dry and crumby

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes ____ No X
Rationale Jurisdictional decision: Soils and hydrology criteria are not satisfied. Plant species are dominated by invasive weeds so that criteria is less reliable.

[1]This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2]Classification according to "soil Taxonomy."

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DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): Curtis Wambach Date: March 22, 01
Project/Site: talaris State: WA County: King
Applicant/Owner: MacLaw Plant Community #/Name: 9
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community? Yes ____ No X (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes X No ____ (If yes, explain on back) Soils composed of fill and plants dominated by invasive

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1 Urtica dioica	FACU	H	11		
2 Rubus discolor	FACU	S	12		
3 Salix lasiandra	FACW	T	13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Percent of dominant species that are OBL, FACW, and/or FAC 67%
Is the hydrophytic vegetation criterion met? Yes X No ____
Rationale: greater than 50% dominant plant species are FACW or wetter

SOILS

Series/Phase: urban fill Subgroup[2] ____
Is the soil on the hydric list? Yes ____ No X Undetermined ____
Is the soil a Histosol? Yes ____ No X Histic epipedon present? Yes ____ No X
Is the Soil: Mottled? Yes X No ____ Gleyed? Yes ____ No X
Matrix Color: 0-24" 10YR 4/1 to 4/2 Mottle Colors: 10YR 6/2
Other hydric soil indicators: no
Is the hydric soil criterion met? Yes X No ____
Rationale: Soils with chroma of 1 to 2 with mottles

HYDROLOGY

Is the ground surface inundated? Yes ____ No X Surface water depth none
Is the soil saturated? Yes ____ No X
Depth to free-standing water in pit/soil probe hole: none
List other field evidence of surface inundation or soil saturation Soil moist
Is the wetland hydrology criterion met? Yes X No ____
Rationale: Soils moist, hydrology assumed.

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No ____
Rationale Jurisdictional decision: all three criteria satisfied.

[1]This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2]Classification according to "soil Taxonomy."

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4465

2000 Wetland and Buffer Functions and Semi-quantitative Performance Assessment

Wetland # Wetland A Staff Curtis Weinrebach Date 3/22/01

Location S T R

N/A = Not Applicable, N/I = No information available

Table 1: Determining Wetland Size in Landscape Context

Attribute	Low (1 pt.)	Medium (2 pts.)	High (3 pts.)	Total
Absolute Size	<5 acres	5-10 acres	> 10 acres	1
Wetland Loss in Basin	> 60 %	20 – 60 %	< 20 %	1
Size Relative to Other Wetlands in Basin (on NWI maps)	< 100% of average size	100 – 200 % of t average size	> 200% of average size	1
Buffer Size	< 75 feet	75 to 200 feet	> 200 feet	1
Buffer Condition	> 60% disturbed	20-60% disturbed	< 20% disturbed	1
Relative Size	If score is ≥1 then give the question a 1 If score is 1.5 to 2 then give the question a 2 If score is 2.5 to ≥3 then give the question a 3			score/5 1

Function	Criteria		
	Group 1 1 pt	Group 2 2 pts	Group 3 3 pts
Flood/ Storm Water Control points 4 (max 15)	1 size cumulative score (see Table 1) 1 riverine, or shallow depression 1 < 10 % forested cover __ unconstrained outlet 1 located in lower 1/3 of the drainage	__ size cumulative score (see Table 1) __ mid-sloped wetland __ 10 - 30 % forested cover __ semi-constrained outlet __ located in middle 1/3 of the drainage	__ size cumulative score (see Table 1) __ lake, depressions, headwaters, bogs __ > 30 % forested cover __ culvert/berned outlet no outlet __ located in upper 1/3 of the drainage
Base Flow/ Ground Water Support points 5 (max 15)	1 Size cumulative score (see Table 1) 1 riverine, or shallow depression 1 located in lower 1/3 of the drainage 1 temporally flooded or saturated 1 vegetation < 20 % OBL species	__ Size cumulative score (see Table 1) __ mid-sloped wetland __ located in middle 1/3 of the drainage __ seasonally or semi-permanently flooded or saturated __ vegetation 20 to 40 % OBL species	__ Size cumulative score (see Table 1) __ lake,depressions, headwaters,bogs __ located in upper 1/3 of the drainage __ permanently flooded or saturated, or intermittently exposed __ vegetation > 40 % OBL species
Erosion/ Shoreline Protection points __ (max 9)	__ sparse grass/herbs or no veg along OHWM __ wetland extends < 30 m from OHWM __ >60% shoreline developed	__ sparse wood or veg along OHWM __ wetland extends 30 - 60 m from OHWM __ 20 to 60% shoreline developed	__ dense wood or veg along OHWM __ wetland extends > 200 m from OHWM __ <20% shoreline developed
Water Quality Improvement points 8 (max 12) 15	__ rapid flow through site __ <50 % veg cover __ <20% shoreline developed 1 result from Table 2 __ Soil coarse -gravel, Sand, sandyloam	__ moderate flow through site 2 50 - 80 % cover __ 20 to 50% of basin upstream from wetland is developed __ result from Table 2 2 Soil organic mineral mix	__ slow flow through site no flow __ > 80 % veg cover 3 > 50% of basin upstream from wetland is developed __ result from Table 2 __ Soil heavy organic muck and peat

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2000 Wetland and Buffer Functions and Semi-quantitative Performance Assessment

Wetland # Wetland A Staff Curtis Innerbrock Date 3/22/01

Table 2: Overland Flow Contained in Wetland

Attribute	Low (1 pt.)	Medium (2 pts.)	High (3 pts.)	Total
Configuration	Plate-shaped	Shallow bowl-shaped	Deep Bowl-shaped	1
Drainage Basin Size	< 2 acres	2-5 acres	> 5 acres	1
Outlet	Unconstrained	Semi-constrained	Constrained	no outlet
Input	Groundwater only	Surface flow and groundwater	Surface flow	2
Basin Condition	< 20% impervious	20-40 % impervious	>40% impervious	3
Flow Contained				score/5 1

Natural Biological Support points 13 (max 36)	1 size cumulative score (see Table 1) __ low connectivity to veg'd buffers 1 ag land, low veg structure 1 seasonal surface water 1 one habitat type PAB POW PEM (PSS) PFO EST 1 low plant diversity (< 6 species) 1 > 50 % invasive species 1 low organic accumulation 1 low organic export 1 few habitat features 1 buffers very disturbed 1 isolated from upland habitats	__ size cumulative score (see Table 1) 2 mod connectivity to veg'd buffers __ 2 layers of vegetation __ permanent surface water __ two habitat types PAB POW PEM PSS PFO EST __ moderate plant diversity (7-15 spp) __ 10 to 50 % invasive species __ moderate organic accumulation __ moderate organic export __ some habitat features __ buffers slightly disturbed __ partially connected to upland habitats	__ size cumulative score (see Table 1) __ high connectivity to veg'd buffers __ high veg structure __ open water pools through summer __ ≥ 3 habitat types PAB POW PEM PSS PFO EST __ high plant diversity (> 15 spp) __ < 10% invasive species __ high organic accumulation __ high organic export __ many habitat features __ buffers not disturbed __ well connected to upland habitats
Overall Habitat Functions points 3 (max 9)	1 size cumulative score (see Table 1) 1 low habitat diversity 1 low sanctuary or refuge	__ size cumulative score (see Table 1) __ moderate habitat diversity __ moderate sanctuary or refuge	__ size cumulative score (see Table 1) __ high habitat diversity __ high sanctuary or refuge
Specific Habitat Functions points 5 (max 15)	__ low invertebrate habitat __ low amphibian habitat none __ low fish habitat none 1 low mammal habitat __ low bird habitat	2 moderate invertebrate habitat __ moderate amphibian habitat __ moderate fish habitat __ moderate mammal habitat 2 moderate bird habitat	__ high invertebrate habitat __ high amphibian habitat __ high fish habitat __ high mammal habitat __ high bird habitat

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d Wetland# Wetland A Staff [illegible] Date 2/22/01

Cultural/ Socioeconomic points 6 (max 21) 19	1 low educational opportunities 1 low aesthetic value 1 lacks commercial fisheries, agriculture, renewable resources 1 lacks historical or archeological resources 1 lacks passive and active recreational opportunities 1 privately owned	___ moderate educational opportunities ___ moderate /aesthetic value ___ moderate commercial fisheries, agriculture, renewable resources ___ historical or archeological site ___ some passive and active recreational opportunities ___ privately owned, some public access	___ high educational opportunities ___ high aesthetic value ___ high commercial fisheries, agriculture, renewable resources ___ important historical or archeological site ___ many passive and active recreational opportunities ___ unrestricted public access

Dominant Vegetation:

Wildlife:

Notes:

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2000 Wetland and Buffer Functions and Semi-quantitative Performance Assessment

Wetland # Wetland B Staff Curtis Hawkbarb Date 3/22/01

Location S T R

N/A = Not Applicable, N/I = No information available

Table 1: Determining Wetland Size in Landscape Context

Attribute	Low (1 pt.)	Medium (2 pts.)	High (3 pts.)	Total
Absolute Size	<5 acres	5-10 acres	> 10 acres	1
Wetland Loss in Basin	> 60 %	20 – 60 %	< 20 %	1
Size Relative to Other Wetlands in Basin (on NWI maps)	< 100% of average size	100 – 200 % of t average size	> 200% of average size	1
Buffer Size	< 75 feet	75 to 200 feet	> 200 feet	1
Buffer Condition	> 60% disturbed	20-60% disturbed	< 20% disturbed	1
Relative Size	If score is ≥1 then give the question a 1 If score is 1.5 to 2 then give the question a 2 If score is 2.5 to ≥3 then give the question a 3			score/5 1

Function	Criteria		
	Group 1 1 pt	Group 2 2 pts	Group 3 3 pts
Flood/ Storm Water Control points 4 (max 15)	1 size cumulative score (see Table 1) 1 riverine, or shallow depression 1 <10 % forested cover __ unconstrained outlet 1 located in lower 1/3 of the drainage	__ size cumulative score (see Table 1) __ mid-sloped wetland __ 10 - 30 % forested cover __ semi-constrained outlet __ located in middle 1/3 of the drainage	__ size cumulative score (see Table 1) __ lake, depressions, headwaters, bogs __ > 30 % forested cover __ culvert/bermed outlet no outlet __ located in upper 1/3 of the drainage
Base Flow/ Ground Water Support points 5 (max 15)	1 Size cumulative score (see Table 1) 1 riverine, or shallow depression 1 located in lower 1/3 of the drainage 1 temporally flooded or saturated 1 vegetation <20 % OBL species	__ Size cumulative score (see Table 1) __ mid-sloped wetland __ located in middle 1/3 of the drainage __ seasonally or semi-permanently flooded or saturated __ vegetation 20 to 40 % OBL species	__ Size cumulative score (see Table 1) __ lake,depressions, headwaters,bogs __ located in upper 1/3 of the drainage __ permanently flooded or saturated, or intermittently exposed __ vegetation > 40 % OBL species
Erosion/ Shoreline Protection points __ (max 9)	__ sparse grass/herbs or no veg along OHWM __ wetland extends < 30 m from OHWM __ >60% shoreline developed	__ sparse wood or veg along OHWM __ wetland extends 30 - 60 m from OHWM __ 20 to 60% shoreline developed	__ dense wood or veg along OHWM __ wetland extends > 200 m from OHWM __ <20% shoreline developed
Water Quality Improvement points 4 (max 12)	__ rapid flow through site __ < 50 % veg cover __ <20% shoreline developed 1 result from Table 2 __ Soil coarse -gravel, Sand, sandyloam	__ moderate flow through site 1 50 - 80 % cover __ 20 to 50% of basin upstream from wetland is developed __ result from Table 2 2 Soil organic mineral mix	__ slow flow through site no flow __ > 80 % veg cover 3 > 50% of basin upstream from wetland is developed __ result from Table 2 __ Soil heavy organic muck and peat

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2000 Wetland and Buffer Functions and Semi-quantitative Performance Assessment

Wetland # Wetland B Staff Curtis Date 3/22/01

Table 2: Overland Flow Contained in Wetland

Attribute	Low (1 pt.)	Medium (2 pts.)	High (3 pts.)	Total
Configuration	Plate-shaped	Shallow bowl-shaped	Deep Bowl-shaped	1
Drainage Basin Size	< 2 acres	2-5 acres	> 5 acres	1
Outlet	Unconstrained	Semi-constrained	Constrained	no outle
Input	Groundwater only	Surface flow and groundwater	Surface flow	2
Basin Condition	< 20% impervious	20-40 % impervious	>40% impervious	3
Flow Contained				score/5

Natural Biological Support	1 size cumulative score (see Table 1) __ low connectivity to veg'd buffers 1 ag land, low veg structure 1 seasonal surface water 1 one habitat type PAB POW PEM PSS PFO EST 1 low plant diversity (< 6 species) 1 > 50 % invasive species 1 low organic accumulation 1 low organic export 1 few habitat features 1 buffers very disturbed 1 isolated from upland habitats points 13 (max 36)	__ size cumulative score (see Table 1) 2 mod connectivity to veg'd buffers __ 2 layers of vegetation __ permanent surface water __ two habitat types PAB POW PEM PSS PFO EST __ moderate plant diversity (7-15 spp) __ 10 to 50 % invasive species __ moderate organic accumulation __ moderate organic export __ some habitat features __ buffers slightly disturbed __ partially connected to upland habitats	__ size cumulative score (see Table 1) __ high connectivity to veg'd buffers __ high veg structure __ open water pools through summer __ ≥ 3 habitat types PAB POW PEM PSS PFO EST __ high plant diversity (> 15 spp) __ < 10% invasive species __ high organic accumulation __ high organic export __ many habitat features __ buffers not disturbed __ well connected to upland habitats
Overall Habitat Functions points 3 (max 9)	1 size cumulative score (see Table 1) 1 low habitat diversity 1 low sanctuary or refuge	__ size cumulative score (see Table 1) __ moderate habitat diversity __ moderate sanctuary or refuge	__ size cumulative score (see Table 1) __ high habitat diversity __ high sanctuary or refuge
Specific Habitat Functions points 4 (max 15)	1 low invertebrate habitat __ low amphibian habitat none __ low fish habitat none 1 low mammal habitat rats __ low bird habitat	__ moderate invertebrate habitat __ moderate amphibian habitat __ moderate fish habitat __ moderate mammal habitat 2 moderate bird habitat	__ high invertebrate habitat __ high amphibian habitat __ high fish habitat __ high mammal habitat __ high bird habitat

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2000 Wetland and Buffer Functions and Semi-quantitative Performance Assessment

d Wetland# [illegible] Staff [illegible] Date 3/22/01

Cultural/ Socioeconomic points 6 (max 21) 16	1 low educational opportunities 1 low aesthetic value 1 lacks commercial fisheries, agriculture, renewable resources 1 lacks historical or archeological resources 1 lacks passive and active recreational opportunities 1 privately owned	___ moderate educational opportunities ___ moderate aesthetic value ___ moderate commercial fisheries, agriculture, renewable resources ___ historical or archeological site ___ some passive and active recreational opportunities ___ privately owned, some public access	___ high educational opportunities ___ high aesthetic value ___ high commercial fisheries, agriculture, renewable resources ___ important historical or archeological site ___ many passive and active recreational opportunities ___ unrestricted public access

Dominant Vegetation:

Wildlife:

Notes:

2000 Wetland and Buffer Functions and Semi-quantitative Performance Assessment

Wetland # Wetland C Staff Curtis Lundback Date 3/2/01

Location S T R

N/A = Not Applicable, N/I = No information available

Table 1: Determining Wetland Size in Landscape Context

Attribute	Low (1 pt.)	Medium (2 pts.)	High (3 pts.)	Total
Absolute Size	<5 acres	5-10 acres	> 10 acres	1
Wetland Loss in Basin	> 60 %	20 – 60 %	< 20 %	1
Size Relative to Other Wetlands in Basin (on NWI maps)	< 100% of average size	100 – 200 % of t average size	> 200% of average size	1
Buffer Size	< 75 feet	75 to 200 feet	> 200 feet	1
Buffer Condition	> 60% disturbed	20-60% disturbed	< 20% disturbed	1
Relative Size	If score is ≥1 then give the question a 1 If score is 1.5 to 2 then give the question a 2 If score is 2.5 to ≥3 then give the question a 3			score/5 1

Function	Criteria		
	Group 1 1 pt	Group 2 2 pts	Group 3 3 pts
Flood/ Storm Water Control points 5 (max 15)	1 size cumulative score (see Table 1) 1 riverine, or shallow depression 1 < 10 % forested cover 1 unconstrained outlet 1 located in lower 1/3 of the drainage	___ size cumulative score (see Table 1) ___ mid-sloped wetland ___ 10 - 30 % forested cover ___ semi-constrained outlet ___ located in middle 1/3 of the drainage	___ size cumulative score (see Table 1) ___ lake, depressions, headwaters, bogs ___ > 30 % forested cover ___ culvert/bermed outlet ___ located in upper 1/3 of the drainage
Base Flow/ Ground Water Support points 5 (max 15)	1 Size cumulative score (see Table 1) 1 riverine, or shallow depression 1 located in lower 1/3 of the drainage 1 temporally flooded or saturated 1 vegetation < 20 % OBL species	___ Size cumulative score (see Table 1) ___ mid-sloped wetland ___ located in middle 1/3 of the drainage ___ seasonally or semi-permanently flooded or saturated ___ vegetation 20 to 40 % OBL species	___ Size cumulative score (see Table 1) ___ lake,depressions, headwaters,bogs ___ located in upper 1/3 of the drainage ___ permanently flooded or saturated, or intermittently exposed ___ vegetation > 40 % OBL species
Erosion/ Shoreline Protection points ___ (max 9)	___ sparse grass/herbs or no veg along OHWM ___ wetland extends < 30 m from OHWM ___ >60% shoreline developed	___ sparse wood or veg along OHWM ___ wetland extends 30 - 60 m from OHWM ___ 20 to 60% shoreline developed	___ dense wood or veg along OHWM ___ wetland extends > 200 m from OHWM ___ <20% shoreline developed
Water Quality Improvement points 11 (max 12) 12	___ rapid flow through site ___ < 50 % veg cover ___ <20% shoreline developed ___ result from Table 2 ___ Soil coarse -gravel, Sand, sandyloam	2 moderate flow through site 2 50 - 80 % cover ___ 20 to 50% of basin upstream from wetland is developed 2 result from Table 2 2 Soil organic mineral mix	___ slow flow through site ___ > 80 % veg cover 3 > 50% of basin upstream from wetland is developed ___ result from Table 2 ___ Soil heavy organic muck and peat

2000 Wetland and Buffer Functions and Semi-quantitative Performance Assessment

Wetland # Wetland C Staff [illegible] Date 3/22/01

Table 2: Overland Flow Contained in Wetland

Attribute	Low (1 pt.)	Medium (2 pts.)	High (3 pts.)	Total
Configuration	Plate-shaped	Shallow bowl-shaped	Deep Bowl-shaped	1
Drainage Basin Size	< 2 acres	2-5 acres	> 5 acres	1
Outlet	Unconstrained	Semi-constrained	Constrained	1
Input	Groundwater only	Surface flow and groundwater	Surface flow	2
Basin Condition	< 20% impervious	20-40 % impervious	>40% impervious	3
Flow Contained				score/5 2

Natural Biological Support points 13 (max 36)	1 size cumulative score (see Table 1) __ low connectivity to veg'd buffers 1 ag land, low veg structure 1 seasonal surface water 1 one habitat type PAB POW (PEM) PSS PFO EST 1 low plant diversity (< 6 species) 1 > 50 % invasive species 1 low organic accumulation 1 low organic export 1 few habitat features 1 buffers very disturbed 1 isolated from upland habitats	__ size cumulative score (see Table 1) 2 mod connectivity to veg'd buffers __ 2 layers of vegetation __ permanent surface water __ two habitat types PAB POW PEM PSS PFO EST __ moderate plant diversity (7-15 spp) __ 10 to 50 % invasive species __ moderate organic accumulation __ moderate organic export __ some habitat features __ buffers slightly disturbed __ partially connected to upland habitats	__ size cumulative score (see Table 1) __ high connectivity to veg'd buffers __ high veg structure __ open water pools through summer __ ≥ 3 habitat types PAB POW PEM PSS PFO EST __ high plant diversity (> 15 spp) __ < 10% invasive species __ high organic accumulation __ high organic export __ many habitat features __ buffers not disturbed __ well connected to upland habitats
Overall Habitat Functions points 3 (max 9)	1 size cumulative score (see Table 1) 1 low habitat diversity 1 low sanctuary or refuge	__ size cumulative score (see Table 1) __ moderate habitat diversity __ moderate sanctuary or refuge	__ size cumulative score (see Table 1) __ high habitat diversity __ high sanctuary or refuge
Specific Habitat Functions points 4 (max 15)	1 low invertebrate habitat __ low amphibian habitat none __ low fish habitat dry 1 low mammal habitat ✓ ATS __ low bird habitat	__ moderate invertebrate habitat __ moderate amphibian habitat __ moderate fish habitat __ moderate mammal habitat 2 moderate bird habitat	__ high invertebrate habitat __ high amphibian habitat __ high fish habitat __ high mammal habitat __ high bird habitat

2000 Wetland and Buffer Functions and Semi-quantitative Performance Assessment

d Wetland# Wetland C Staff Curtis Date 2.27.01

Cultural/ Socioeconomic points 6 (max 21) 15	1 low educational opportunities 1 low aesthetic value 1 lacks commercial fisheries, agriculture, renewable resources 1 lacks historical or archeological resources 1 lacks passive and active recreational opportunities 1 privately owned	___ moderate educational opportunities ___ moderate /aesthetic value ___ moderate commercial fisheries, agriculture, renewable resources ___ historical or archeological site ___ some passive and active recreational opportunities ___ privately owned, some public access	___ high educational opportunities ___ high aesthetic value ___ high commercial fisheries, agriculture, renewable resources ___ important historical or archeological site ___ many passive and active recreational opportunities ___ unrestricted public access

Dominant Vegetation:

Wildlife:

Notes:

2000 Wetland and Buffer Functions and Semi-quantitative Performance Assessment

Wetland # Wetland D Staff [illegible] Date 3/22/01

Location S T R

N/A = Not Applicable, N/I = No information available

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Buffer Condition	> 60% disturbed	20-60% disturbed	< 20% disturbed	1
Relative Size	If score is ≥1 then give the question a 1 If score is 1.5 to 2 then give the question a 2 If score is 2.5 to ≥3 then give the question a 3			score/5 1

Function	Criteria		
	Group 1 1 pt	Group 2 2 pts	Group 3 3 pts
Flood/ Storm Water Control points 4 (max 15)	1 size cumulative score (see Table 1) 1 riverine, or shallow depression 1 < 10 % forested cover __ unconstrained outlet 1 located in lower 1/3 of the drainage	__ size cumulative score (see Table 1) __ mid-sloped wetland __ 10 - 30 % forested cover __ semi-constrained outlet __ located in middle 1/3 of the drainage	__ size cumulative score (see Table 1) __ lake, depressions, headwaters, bogs __ > 30 % forested cover __ culvert/bermed outlet no outlet __ located in upper 1/3 of the drainage
Base Flow/ Ground Water Support points 5 (max 15)	1 Size cumulative score (see Table 1) 1 riverine, or shallow depression 1 located in lower 1/3 of the drainage 1 temporally flooded or saturated 1 vegetation < 20 % OBL species	__ Size cumulative score (see Table 1) __ mid-sloped wetland __ located in middle 1/3 of the drainage __ seasonally or semi-permanently flooded or saturated __ vegetation 20 to 40 % OBL species	__ Size cumulative score (see Table 1) __ lake, depressions, headwaters, bogs __ located in upper 1/3 of the drainage __ permanently flooded or saturated, or intermittently exposed __ vegetation > 40 % OBL species
Erosion/ Shoreline Protection points __ (max 9)	__ sparse grass/herbs or no veg along OHWM __ wetland extends < 30 m from OHWM __ >60% shoreline developed	__ sparse wood or veg along OHWM __ wetland extends 30 - 60 m from OHWM __ 20 to 60% shoreline developed	__ dense wood or veg along OHWM __ wetland extends > 200 m from OHWM __ <20% shoreline developed
Water Quality Improvement points 8 (max 12) 15	__ rapid flow through site __ < 50 % veg cover __ <20% shoreline developed 1 result from Table 2 __ Soil coarse -gravel, Sand, sandyloam	__ moderate flow through site 2 50 - 80 % cover __ 20 to 50% of basin upstream from wetland is developed __ result from Table 2 2 Soil organic mineral mix	__ slow flow through site ME flow __ > 80 % veg cover 3 > 50% of basin upstream from wetland is developed __ result from Table 2 __ Soil heavy organic muck and peat

2000 Wetland and Buffer Functions and Semi-quantitative Performance Assessment

Wetland # Wetland D Staff Curtis Wambach Date 3/22/01

Table 2: Overland Flow Contained in Wetland

Attribute	Low (1 pt.)	Medium (2 pts.)	High (3 pts.)	Total
Configuration	Plate-shaped	Shallow bowl-shaped	Deep Bowl-shaped	1
Drainage Basin Size	< 2 acres	2-5 acres	> 5 acres	1
Outlet	Unconstrained	Semi-constrained	Constrained	no outlet
Input	Groundwater only	Surface flow and groundwater	Surface flow	2
Basin Condition	< 20% impervious	20-40 % impervious	>40% impervious	3
Flow Contained				score/5

Natural Biological Support	1 size cumulative score (see Table 1) __ low connectivity to veg'd buffers 1 ag land, low veg structure 1 seasonal surface water 1 one habitat type PAB POW PEM (PSS) PFO EST 1 low plant diversity (< 6 species) 1 > 50 % invasive species 1 low organic accumulation 1 low organic export 1 few habitat features 1 buffers very disturbed 1 isolated from upland habitats	__ size cumulative score (see Table 1) 2 mod connectivity to veg'd buffers __ 2 layers of vegetation __ permanent surface water __ two habitat types PAB POW PEM PSS PFO EST __ moderate plant diversity (7-15 spp) __ 10 to 50 % invasive species __ moderate organic accumulation __ moderate organic export __ some habitat features __ buffers slightly disturbed __ partially connected to upland habitats	__ size cumulative score (see Table 1) __ high connectivity to veg'd buffers __ high veg structure __ open water pools through summer __ ≥ 3 habitat types PAB POW PEM PSS PFO EST __ high plant diversity (> 15 spp) __ < 10% invasive species __ high organic accumulation __ high organic export __ many habitat features __ buffers not disturbed __ well connected to upland habitats
points 13 (max 36)			
Overall Habitat Functions	1 size cumulative score (see Table 1) 1 low habitat diversity 1 low sanctuary or refuge	__ size cumulative score (see Table 1) __ moderate habitat diversity __ moderate sanctuary or refuge	__ size cumulative score (see Table 1) __ high habitat diversity __ high sanctuary or refuge
points 3 (max 9)			
Specific Habitat Functions	1 low invertebrate habitat __ low amphibian habitat none __ low fish habitat none 1 low mammal habitat __ low bird habitat	__ moderate invertebrate habitat __ moderate amphibian habitat __ moderate fish habitat __ moderate mammal habitat 2 moderate bird habitat	__ high invertebrate habitat __ high amphibian habitat __ high fish habitat __ high mammal habitat __ high bird habitat
points 4 (max 15)			

DRAFT

2000 Wetland and Buffer Functions and Semi-quantitative Performance Assessment

d Wetland# [illegible] Staff Curtis Date 3/22/01

Cultural/ Socioeconomic points 6 (max 21) 18	1 low educational opportunities 1 low aesthetic value 1 lacks commercial fisheries, agriculture, renewable resources 1 lacks historical or archeological resources 1 lacks passive and active recreational opportunities 1 privately owned	___ moderate educational opportunities ___ moderate /aesthetic value ___ moderate commercial fisheries, agriculture, renewable resources ___ historical or archeological site ___ some passive and active recreational opportunities ___ privately owned, some public access	___ high educational opportunities ___ high aesthetic value ___ high commercial fisheries, agriculture, renewable resources ___ important historical or archeological site ___ many passive and active recreational opportunities ___ unrestricted public access

Dominant Vegetation:

Wildlife:

Notes:

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

REPLY TO
ATTENTION OF

JAN - 3 2002

RECEIVED
JAN 04 2002

Regulatory Branch

Talasaea Consultants, LLC
ATTN: Bill Shiels
15020 Bear Creek Road Northeast
Woodinville, Washington 98072

Reference: 2001-4-00980
4000 Property LLC

Dear Mr. Shiels:

You recently posed the following questions regarding the property located at the intersection of 38th Avenue Northeast and Northeast 41st Street at Seattle, Washington. Would the U.S. Army Corps of Engineers (Corps) regulate the pond if not for SWANCC? Did the Corps concur with the boundaries of the wetlands?

Because we made an "isolated" call on this property, we did not need to formally verify the boundaries of waters on the property. However, we did inspect the delineated wetlands. While we believe the wetlands are smaller than delineated, the delineation generally appears to be accurate. We would likely have jurisdiction over the pond if not for SWANCC because it appears that the low area of this site was originally wetlands.

We will not be formally verifying the wetland boundaries or the pond jurisdiction because we determined that they are not waters of the United States. If you have any questions, please contact Ms. Kristina Tong at (206) 764-6913.

Sincerely,

Jonathan Smith

for Thomas F. Mueller
Chief, Regulatory Branch

DRAFT

IN THE VICINITY OF T25R04E SECTION 15
Report Date: April 06, 2001

This map contains the following species and/or habitat locations that are deemed sensitive by the Washington Department of Fish and Wildlife Sensitive Fish and Wildlife Policy.

PHS CODE/ SPPCODE	COMMON NAME	USE CODE	USE DESCRIPTION
ARHE	GREAT BLUE HERON	B	BREEDING OCCURRENCE
CLMA	WESTERN POND TURTLE	IO	INDIVIDUAL OCCURRENCE
HALE	BALD EAGLE	B	BREEDING OCCURRENCE

PHS POLYGON FORM LIST - CROSS REFERENCE REPORT
IN THE VICINITY OF T25R04E SECTION 15

PHSPOLY#	FORM NUMBER/ PHS CODE*USE CODE
2	900000 *-
3	902030-903676 UNOS*-HALE*B-
4	900000 *-
5	902030 UNOS*-
6	902029-903676 WET*-HALE*B-
7	903676 HALE*B-
8	902029-902030-903676 WET*-UNOS*-HALE*B-
9	902030 UNOS*-
10	917602 HALE*B-
11	902715 WET*-
12	902030-917602 UNOS*-HALE*B-
13	902030 UNOS*-
14	902030 UNOS*-

PHS POLYGON - SPECIES AND HABITAT LIST

PHS FORM#	PRIORITY	PHS CODE	COMMON NAME	USE CODE	USE DESCRIPTION
900,000					
902,029	YES	WET	WETLANDS		
902,030	YES	UNOS	URBAN NATURAL OPEN SPACE		
902,715	YES	WET	WETLANDS		
903,676	YES	HALE	BALD EAGLE	B	BREEDING OCCURRENCE
917,602	YES	HALE	BALD EAGLE	B	BREEDING OCCURRENCE

Form number 900000 indicates presence of PHS is unknown or the area was not mapped. Form numbers 909998, 909997, or 909996 indicate compilation errors.

YES under the "PRIORITY" column indicates that the species or habitat is considered a priority and is on the Priority Habitats and Species List and/or the Species of Concern List.

WILDLIFE HERITAGE POINT - SPECIES LIST AND REPORT
IN THE VICINITY OF T25R04E SECTION 15

QUADPT	PRIORITY	SPPCODE	COMMON NAME	USE CODE	USE DESCRIPTION
4712263002	NO	BUVIRE	GREEN HERON	B	BREEDING OCCURRENCE
4712263002	NO	NYSC	SNOWY OWL	RI	REGULARLY OCCURRING INDIVIDUAL
4712263006	YES	ARHE	GREAT BLUE HERON	B	BREEDING OCCURRENCE
4712263014	NO	BUVIRE	GREEN HERON	B	BREEDING OCCURRENCE
4712263015	YES	CLMA	WESTERN POND TURTLE	IO	INDIVIDUAL OCCURRENCE
4712263016	YES	ARHE	GREAT BLUE HERON	B	BREEDING OCCURRENCE
4712263023	YES	HALE	BALD EAGLE	B	BREEDING OCCURRENCE
4712263025	YES	HALE	BALD EAGLE	B	BREEDING OCCURRENCE
4712263033	YES	HALE	BALD EAGLE	B	BREEDING OCCURRENCE

YES under the "PRIORITY" column indicates that the species or habitat is considered a priority and is on the Priority Habitats and Species List and/or the Species of Concern List.

quadpt: 4712263002 sppcode: BUVIRE use: B name: GREEN HERON
year: 1979 class: SA accuracy: C state status: SM fed status:
township - range - section: T25N R04E S16 occur#: 4 seqno: 1

DRAFT

GREEN HERON RI MONTLAKE FILL ON U OF W CAMPUS 1974.1976.1977.

quadpt: 4712263002 sppcode: NYSC use: RI name: SNOWY OWL
year: 1979 class: SA accuracy: C state status: SM fed status:
township - range - section: T25N R04E S16 occur#: 6 seqno: 1
general description:
SNOWY OWL RI INDIVIDUALS SEEN MONTLAKE FILL-UNIV OF WASH CAMPUS 1974-1979.

quadpt: 4712263006 sppcode: ARHE use: B name: GREAT BLUE HERON
year: 1993 class: SA accuracy: C state status: SM fed status:
township - range - section: T25N R04E S15 SWOFNW occur#: 218 seqno: 1
general description:
GREAT BLUE HERON COLONY, LOCATED N SHORE UNION BAY. 1 NEST-89; 1-2 NESTS-93. SEARCHED FOR BUT NOT FOUND. POTENTIAL HABITAT AVAIL-93; NO NESTS FOUND-96, SEE PG 9600264 IN HERON SURVEY BOOK.

quadpt: 4712263014 sppcode: BUVIRE use: B name: GREEN HERON
year: 1981 class: SA accuracy: C state status: SM fed status:
township - range - section: T25N R04E S21 occur#: 14 seqno: 1
general description:
GREEN HERON NESTING ON FOSTER ISLAND, UW ARBORETUM.2YG-81;

quadpt: 4712263015 sppcode: CLMA use: IO name: WESTERN POND TURTLE
year: 1992 class: SA accuracy: C state status: SE fed status: FCo
township - range - section: T25N R04E S21 occur#: 35 seqno: 1
general description:
WESTERN POND TURTLE. 1 AD FEMALE, 7 IN. LONG, FOUND UNDER HWY 520 RAMPS.

quadpt: 4712263016 sppcode: ARHE use: B name: GREAT BLUE HERON
year: 1994 class: SA accuracy: C state status: SM fed status:
township - range - section: T25N R04E S15 OF occur#: 301 seqno: 1
general description:
GREAT BLUE HERON ROOKERY, LOCATED ON GROUNDS OF BATELLE LABS FACILITIES. 2NESTS, 1W/3JUV,1W/1YG-93; NOT OCCUPIED-94; NO NESTS OR BIRDS OBSERVED-96 (PG 9600263)

quadpt: 4712263023 sppcode: HALE use: B name: BALD EAGLE
year: 1998 class: SA accuracy: C state status: ST fed status: FT
township - range - section: T25N R04E S11 SWOFSW occur#: 1170 seqno: 1
general description:
BALD EAGLE NEST IN COTTONWOOD CLOSE TO LAKE WASH. SHORELINE ON VILLA ACADEMY PROPERTY. NEST CONSTRUCTION BEGAN 1995. 1997 WAS FIRST YEAR EGGS LAID.

quadpt: 4712263025 sppcode: HALE use: B name: BALD EAGLE
year: 1999 class: SA accuracy: C state status: ST fed status: FT
township - range - section: T25N R04E S22 SEOFNW occur#: 1215 seqno: 1
general description:
BALD EAGLE NEST IN GRAND FIR, IN CROTCH ABOUT 90 FT UP WITH SEVERAL BRANCHES EXTENDING ABOVE THE NEST. TREE IS ON EDGE OF 17TH FAIRWAY.

quadpt: 4712263033 sppcode: HALE use: B name: BALD EAGLE
year: 2000 class: SA accuracy: C state status: ST fed status: FT
township - range - section: T25N R04E S21 SEOFNE occur#: 1215 seqno: 2
general description:
BALD EAGLE NEST IN LARGE COTTONWOOD JUST OUTSIDE GOLF COURSE, JUST N OF OLD NEST. DR TO N ENTRANCE OF GOLF CRSE, PK IN SM LOT N OF COURSE, WALK OVER FOOTBR. NEST IN COTTONWOOD STND SE ALONG SLOUGH, 80 FT UP IN TREE, 10 FT FROM TOP.

Note:
If known occurences of spotted owls and marbled murrelets exist they will be displayed on the accompanying map, however, detailed information for them are not included in this report.

DRAFT

form: 902,029 species/habitat: WET species use: season: accuracy: 1
sitename: ARBORETUM, FOSTER ISLAND, AND, UNIVERSITY OF WASH
general description:
UNION BAY WETLANDS. THESE WETLANDS ARE REPORTED TO HOST A DIVERSE WILDLIFE POPUL ATION (145 SPECIES) ARBORETUM/LAKESIDE TRAIL DEIS. 1990.

source: MULLER, TED; WDW; PERSONAL OBSERVATION.
date: 04 89 code: PROF
synopsis:
SITE RECONNIASANCE TO PREPARE EIS RESPONSE.

source: MULLER, TED; WDW; PERSONAL OBSERVATION..
date: 11 90 code: PROF
synopsis:
SITE VISIT WITH STEVE PENLAND AND STATE REP. JACOBSON.

form: 902,030 species/habitat: UNOS species use: season: accuracy: 1
sitename: SEATTLE CITY PARKS (VARIOUS).
general description:
SEATTLE CITY PARKS.

source: MULLER, TED; WDW; PERSONAL OBSERVATION.
date: 91 code: PROF
synopsis:
HAVE PERSONALLY VISITED MOST OF THE CITY PARKS OVER A 30 YEAR PERIOD.

form: 902,715 species/habitat: WET species use: season: accuracy: 1
sitename: PORTAGE BAY WETLANDS
general description:
WATERFOWL RESTING, NESTING AND FEEDING AREA.

source: OPPERMANN, TONY; WDW; PERSONAL OBSERVATION
date: 041791 code: PROF
synopsis:
OBSERVATION OVER 20 YEARS OF LIVING NEARBY

DRAFT

form: 903,676 species/habitat: HALE species use: B season: WSU accuracy: 1
sitename: VILLA ACADEMY
general description:
BALD EAGLE TERRITORY ON VILLA ACADEMY SCHOOL PROPERTY.
NEST IS IN A COTTONWOOD.

source: PATRICIA THOMPSON WDFW
date: 061096 code: PROF
synopsis:
ON-SITE VISITS.

form: 917,602 species/habitat: HALE species use: B season: WSU accuracy: 1
sitename: BROADMOOR GOLF COURSE
general description:
BALD EAGLE BREEDING TERRITORY ON 17TH FAIRWAY OF BROADMOOR GOLF COURSE.

source: MARTIN, MULLER LOCAL BIRD ENTHUSIAST
date: 062698 code: LOCAL
synopsis:
ON-SITE OBSERVATION RELAYED TO WDFW BALD EAGLE BIO STEVE NEGRI.

WASHINGTON DEPARTMENT OF FISH AND WILL E
PRIORITY ANADROMOUS AND RESIDENT FISH PRESENCE REPORT FROM THE STREAMNET DATABASE
IN THE VICINITY OF T25R04E SECTION 15
Report Date: April 06, 2001

PRIORITY ANADROMOUS FISH PRESENCE

CODE	COMMON NAME	STREAM NAME	STREAM LLID	RECORD DATE	SOURCE
CHFA	Fall Chinook	Cedar River	1222590476452	05-20-97	C. Smith, WDFW
COHO	Coho Salmon	Cedar River	1222590476452	04-17-97	C. Boranski, WDFW
SOCK	Sockeye Salmon	Cedar River	1222590476452	06-27-97	R. Egan, WDFW
STWI	Winter Steelhead	Cedar River	1222590476452	07-10-97	S. Follie, WDFW
CHFA	Fall Chinook	Sammamish River	1222590476462	05-20-97	C. Smith, WDFW
COHO	Coho Salmon	Sammamish River	1222590476462	04-17-97	C. Boranski, WDFW
SOCK	Sockeye Salmon	Sammamish River	1222590476462	06-27-97	R. Egan, WDFW
STWI	Winter Steelhead	Sammamish River	1222590476462	07-10-97	S. Follie, WDFW
CHFA	Fall Chinook	Stream name(s) not in database	1224075476730	05-20-97	C. Smith, WDFW
COHO	Coho Salmon	Stream name(s) not in database	1222465476560	04-17-97	C. Boranski, WDFW
COHO	Coho Salmon	Stream name(s) not in database	1224075476730	04-17-97	C. Boranski, WDFW
SOCK	Sockeye Salmon	Stream name(s) not in database	1224075476730	06-27-97	R. Egan, WDFW
STWI	Winter Steelhead	Stream name(s) not in database	1224075476730	07-10-97	S. Follie, WDFW

PRIORITY RESIDENT FISH PRESENCE

CODE	COMMON NAME	STREAM NAME	STREAM LLID	RECORD DATE	SOURCE

The fish information in this report only includes data that the Washington Department of Fish and Wildlife (WDFW) maintains in a central database. This information only documents the location of important fish resources to the best of our knowledge. It is not a complete inventory of the fish species in the state. Fish are identifed as priority by WDFW if they meet 1 of 3 criterion as listed in the Priority Habitats and Species List.

For questions on the StreamNet Database, please contact Martin Hudson at (360) 902 2487.

APPENDIX C – TREE EVALUATION

TALARIS RESEARCH INSTITUTE
(Tal 446B)

TREE EVALUATION

Revised December 2004

PREPARED FOR:

TALASAEA CONSULTANTS
Bill Shiels, Principal
15020 Bear Creek Rd NE
Woodinville, WA 98077

(425) 861-7550 Office
(425) 861-7549 Fax

bshiels@talasaea.com

PREPARED BY:

GILLES CONSULTING
Brian K. Gilles, Consulting Arborist
ISA Certification #PN-0260
ASCA Registered Consulting Arborist # RCA-418
Jillian Archer, Certified Arborist
ISA Certification #WE-5095A

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1. Tree Protection Measures Page 9
2. References Consulted Page 13
3. Species Legend Page 14
4. Tree Inventory / Condition Spreadsheets Page 15

ASSIGNMENT:

In the late summer of 2002 Gilles Consulting was hired by Talasaea Consultants to evaluate the trees on the Talaris Research Institute site located north of Northeast 41st Street and east of 38th Avenue Northeast in Seattle. Specifically, Gilles Consulting was hired to:

1. Identify the species of each tree
2. Provide a general health assessment that reflects the vigor and structure of each tree in relation to whether or not it is a candidate for retention
3. Provide the diameter of the trees within general clumps of trees
4. Provide a qualitative discussion of general tree health, significance, and the expected impacts due to clearing
5. Identify the trees as both healthy and structurally sound that can be retained, or of poor health and poor quality that cannot be retained.

A Draft Environmental Impact Statement (EIS) for the Talaris Research Institute was published in November 2002. Based on comments received on the Draft EIS, a number of questions were raised regarding the evaluation criteria used, the number of trees that would be impacted by the project, the significance of those trees, and mitigation strategies. In addition, revisions to the evaluation were required to describe the impact of the revised site plan for one of the EIS alternatives. Key issues relate to:

A. The criteria used to determine whether a tree is significant or not
B. What the term "SEPA Significant Tree" means
C. How the City of Seattle Director's Rule 6-2001 was applied to the tree inventory, and
D. How the alternatives currently under consideration affect tree retention (i.e., how many trees will be required to be removed and, of that number of trees, how many are "Exceptional Trees"?).

EXECUTIVE SUMMARY:

- 609 trees were shown on the site plan:
  - 8 had been removed prior to September 2002
  - 1 tree was standing dead
  - 38 trees were non-significant due to their small size
  - 177 trees were considered "weedy" and, therefore, did not require extra consideration
  - 58 trees are in Good, Very Good, or Excellent Condition and are greater than 24 inches in diameter.
  - There are no trees on the property that qualify as *Exceptional Trees.*
- 424 trees remain on the site and require consideration:
  - Of the 424 trees, 58 trees are in *Good, Very Good, or Excellent Condition* and are greater than 24 inches in diameter:
  - Tree Protection Measures for the trees to be retained are outlined below in generic form and will need to be adapted to account for the specific circumstances of the site and the final approved plan.

There are currently four design alternatives being considered for the re-development of the property:

ALTERNATIVE 1A: Proposes a new building in the northwest corner of the property with increased parking in the central portion of the property, including the removal of existing buildings A, B, C, and D.

- Impact to Trees includes: 292 trees to be removed.

ALTERNATIVE 1B (revised 2004): Proposes to construct a new building in the northwest corner of the property and enhance the parking on the north and east property line areas. The new building would include underground parking and a courtyard area.

- Impacts to Trees include: 176 trees to be removed.

ALTERNATIVE 2A: Proposes a single-family housing development on small lots that appear to be at or near the highest density possible. This alternative also includes development of the 38th Avenue NE right-of-way.

- Impact to Trees includes: approximately 583 trees to be removed.

ALTERNATIVE 2B: Proposes a single-family housing development on small lots that appear to be at or near the highest density possible.

- Impact to Trees includes: approximately 583 trees to be removed.

METHODOLOGY:

To evaluate the trees and to prepare the report, I drew upon my 25+ years of experience in the field and my formal education in Natural Resources Management, Dendrology, Forest Ecology, Plant Identification, and Plant Physiology, as well as my tree retention/preservation experience relating to construction activities. I also followed the protocol of the International Society of Arboriculture (ISA) for Tree Assessment while looking at the overall health of the trees and the site conditions. This is a scientifically based process to look at the entire site, the surrounding land and the soil, as well as a complete look at the trees themselves.

Trees were rated on a very general scale from healthy to poor. In examining each tree, I looked at such factors as: size, vigor, crown ratio and class, density of needles, injury, insect activity, root damage and root collar health, crown health, evidence of disease causing bacteria, fungi or virus, dead wood and hanging limbs. Trees were then given a rating on a scale of one through five, or nine, as follows:

1. *Excellent* health, vigor, and structure:
    a. A prime specimen for the species with no observable stress, defects, insect infestations, bacterial or fungal infections.
2. *Very Good* health, vigor, and structure:
    a. A tree that has signs of health, vigor, and structure and no apparent defects.
3. *Good* health, vigor, and structure;
    a. A tree that has signs of health and vigor and possibly some minor defects or minor symptoms of stress.
4. *Fair to Poor* health, vigor, and structure:
    a. A tree that has symptoms or signs of decline but is not structurally weak; may possibly recover with the right weather circumstances and/or tree protection measures over a period of three to five years.
5. *Poor to Very Poor* health, vigor, and structure:
    a. A tree with significant signs and/or symptoms of disease or decline; may include structural defects or major damage. The tree will not likely survive long-term and will not tolerate the stresses associated with construction.

9 Dead:

b. A tree that is completely dead or so nearly dead that the tree will absolutely not recover under any circumstances.

The trees were tagged with a unique number (1 through 609) that corresponds to the numbers in this report and a tree identification code. The tag codes consist of the first letters of the common and scientific names. This combination of unique numbers and tree species codes helps to eliminate confusion and assure that all parties can talk about the same issues and the same tree.

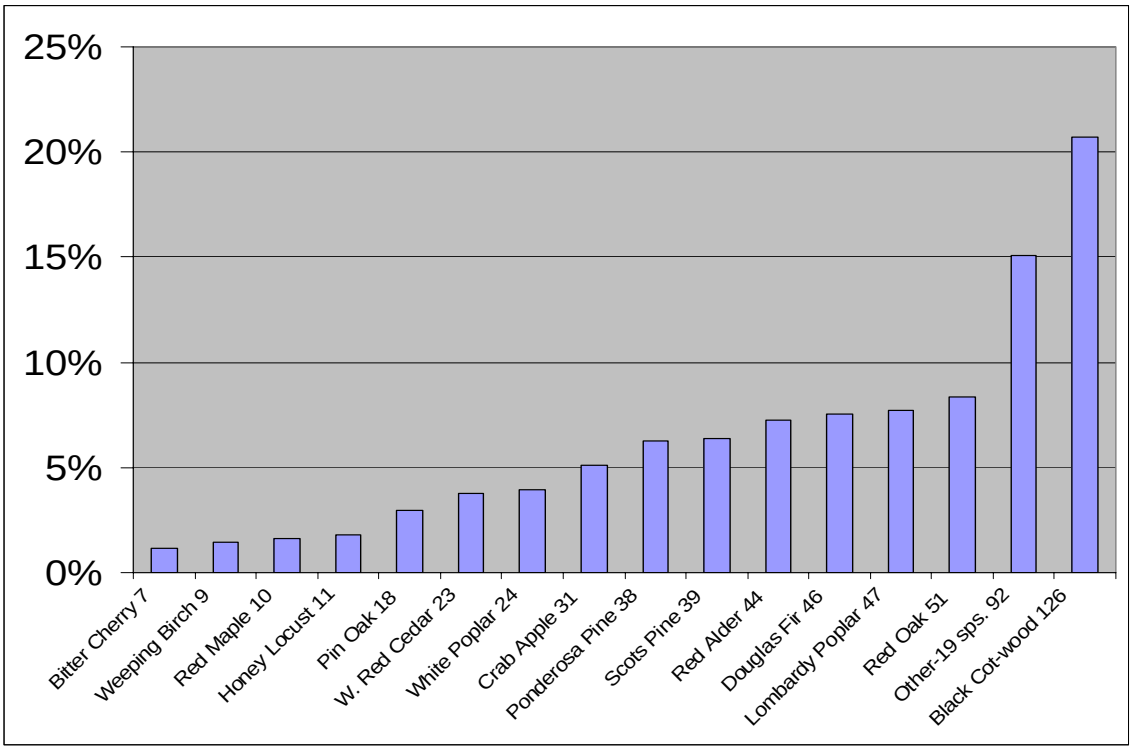
DISCUSSION:

The site plan provided has 609 trees denoted on the property. Eight of these trees had previously been removed. Of the eight trees removed most of the stumps were located in the approximate location. One tree was found to be standing dead. Thirty-eight trees were considered *non-significant* due to their small size. An additional one hundred seventy seven trees are species considered “weedy” by Seattle Code. There are 424 trees on the site that require consideration in the re-development designs.

In addition, the one hundred seventy seven “weedy” trees will need to be re-evaluated once a definite site re-development alternative is selected. Several of these “weedy” trees are at or near terminal age and could become a threat to life and property as the work progresses and should be considered for reduction into wildlife features to reduce potential hazards.

There are fifty-eight trees in Good, Very Good, or Excellent Condition and are greater than 24 inches in diameter. *There are no trees on the property that qualify as Exceptional Trees.*

Fifteen species account for 85% of the trees while 19 species account for the remaining 15% of the total trees. Native trees, including: Black Cottonwood 21%, Douglas Fir 8%, Red Alder 7%, Bitter Cherry 1%, Western Red Cedar 4%, account for 41% of the trees on the property. It is worth noting that of this 41%, all but one of the Douglas Fir and all of the Western Red Cedar, (69 trees that equal 11% of the trees) are trees planted in the landscape, while the other natives have seeded in naturally into the open/un-maintained areas. Other species, such as White Poplar have reproduced themselves in these same areas. The chart below shows the species composition graphically. The horizontal axis shows the percentage for each species. The x-axis shows the name and actual number of trees evaluated.



The report of September 2002 used the term *"SEPA Significant"*. This was an error on as no such term is commonly accepted in the development industry. The trees were rated on the Condition Scale described above. Trees rating scores of 1—Excellent, 2—Very Good, and 3—Good are considered viable candidates for retention depending upon evaluation of development proposals and specific site and tree characteristics. Trees rating a score of 4—Fair may or may not be worthy of retention and must be evaluated individually with the development proposals and specific site and tree characteristics. Trees that rate 5—Poor or 9—Dead, are not worthy of retention except as potential

wildlife features depending upon their location in relation to development and their safety.

Seattle Department of Design, Construction and Land Use Director's Rule 6-2001 was published on July 5, 2001 and made effective August 13, 2001. The purpose of this rule is to clarify the SEPA Plants and Animals Policy (Seattle Municipal Code Section 25.05.675 N 2c.) for the purpose of determining the value of outstanding trees on sites undergoing environmental review, in order to establish appropriate tree protection mitigations measures. This rule also establishes a procedure for identifying Exceptional Trees pursuant to SMC Chapter 25.11."

"The rule calls for protecting three categories of trees and/or vegetation where development would reduce or damage:

1. Rare, uncommon, unique or exceptional plant or wildlife habitat; or
2. Wildlife travel ways; or
3. Habitat diversity for species (plants or animals) of substantial aesthetic, educational, ecological or economic value."

"Exceptional trees are defined as trees that:

1. is designated by Plant Amnesty in partnership with the City of Seattle as a Class AAA-1 Heritage tree; or
2. Is rare or exceptional by virtue of its size, species, condition, cultural/historic importance, and/or age . . ."

Non-native trees are considered "exceptional" if they reach a 75% rating under the American Forestry Association (AFA) rating system fro the largest trees of each species in the state, as noted in Champion Trees of Washington, by Robert Van Pelt.

Native trees are grouped into three categories:

1. trees that should never be designated as exceptional
    a. ,"common, short-lived "weedy" species that **never should be designated** as exceptional: Red Alder, *Alnus rubra,* Bitter Cherry, *Prunus emarginata,* Black Cottonwood, *Populus trichocarpa,* Pacific Black Willow, *Salix lucida (lasiandra).*"
2. trees that always should be designated as exceptional:
    a. 12 species of rare trees and trees that grow exceptionally well in the Seattle area, and
3. trees that should be designated as exceptional depending on several factors, such as:
    a. Abundance, habitat, usual and exceptional lifespan, reproductive rate, exceptional trunk sizes and heights, prevalent judgment as to ornamental value, and post construction lifespan and safety.

Impact of Alternative designs on Trees:
Using this frame of reference, the trees on the site were evaluated for their ability to be retained given the four alternatives under consideration. Trees were evaluated based upon their size and condition in relation to the actual footprints of proposed development and a reasoned and experienced judgment of the space required to construct each improvement. Construction techniques, staging, timing, and how these activities would impact the trees on the site were evaluated to determine the number of trees that would be lost in the different development alternatives.

ALTERNATIVE 1A, August 30, 2002: Proposes a new building in the northwest corner of the property with increased parking in the central portion of the property, including the removal of existing buildings A, B, C, and D.

- Impact to Trees includes: 292 trees to be removed (124 for Phase 1 building, 103 for Phase 2 building and 65 for parking lots)
    - Of the 58 trees greater than 24 inches in diameter this alternative will require the removal of 32 (9 for the Phase 1 building, 3 for the Phase 2 building and 20 for the parking lots). The majority of these trees (13) are Black Cottonwood, which fall within the category of "common, short-lived 'weedy' species" as defined in Seattle Director's Rule 6-2001. The other 7 trees are Red Oak (2), Western Red Cedar (2) and Weeping Willow (2).

ALTERNATIVE 1B, (revised 2004): Proposes to construct a new building in the northwest corner of the property and enhance the parking on the north and east property line areas. The new building would include underground parking and a courtyard area.

- Impact to Trees includes: 176 trees to be removed.
    - Of the 58 trees on the property greater than 24 inches in diameter, this alternative will require the removal of 11 (8 for Phase 1 and 3 for Phase 2). Ten of these trees are Red Oak and one is a Western Red Cedar.

ALTERNATIVE 2A, Revised 2004: Proposes a single-family housing development on small lots that appear to be at or near the highest density possible. This alternative also includes development of the 38th Avenue NE right-of-way.

- Impact to Trees includes: approximately 583 trees to be removed
    - Of the 58 trees greater than 24 inches in diameter this alternative will require the removal of approximately 21. Of this total, 9 (8 Black Cottonwood and 1 Red Alder) fall within the category of "common, short-lived 'weedy' species" as defined in Seattle Director's Rule 6-2001. The other species include 7 Lombardi Poplar, 2 Red Oak, 1 Western Red Cedar, 1 Green Ash and 1 Pacific Willow.

ALTERNATIVE 2B, Revised 2004: Proposes a single-family housing development on small lots that appear to be at or near the highest density possible.

- Impact to Trees would be the similar to Alternative 2A (approximately 583 trees to be removed).
    - Of the 58 trees on the property greater than 24 inches in diameter, this alternative will require the removal of approximately 19. Of this total, 9 are Black Cottonwood, which fall within the category of "common, short-lived 'weedy' species" as defined in Seattle Director's Rule 6-2001. The other species include 5 Lombardi Poplar, 2 Red Oak, 1 Western Red Cedar, 1 Green Ash and 1 Pacific Willow.

SUMMARY AND CONCLUSIONS:

Six hundred nine trees were shown on the site plan. Six hundred and one trees, representing 44 species, were evaluated. Eight trees were removed earlier. There are 58 trees in good to excellent condition that are greater than 24 inches in diameter.

No trees were found to be unique in size, rareness of species, or age to qualify as *"Exceptional Trees"*, as defined by DPD Director's Rule 6-2001:

- Trees with large diameters were compared with trees of the same species as noted in *Champion Trees of Washington*, by Robert Van Pelt. No trees even approached the 75% threshold rating.
- Although there are some uncommon trees, no unique trees were found.
- It appears that the vast majority of the 601 trees have grown since the property was developed in the 1960's. It is possible that a few of the large Black Cottonwood (*Populus trichocarpa)* trees are older than the development. However, this species of tree is justifiably on the list of trees "that never should be designated as exceptional." (Quoted from DPD Director's Rule 6-2001.)

It is evident that trees played an integral part in the design/planting concept for this property. That design has come to fruition in the mature landscape now present. The grounds have received high levels of maintenance over the years and many of the trees on the property have been well maintained with proper pruning. Other trees have been poorly pruned and require years of corrective pruning to return them to International Society of Arboriculture (ISA) accepted standards of health, vigor, and structure. Given the overall high health ratings, the alternative development proposals were evaluated to determine the number and extent of trees that would be impacted.

WAIVER OF LIABILITY:

There are many conditions affecting a tree's health and stability which may be present and cannot be ascertained, such as, root rot, previous or unexposed construction damage, internal cracks, stem rot and more which may be hidden. Changes in circumstances and conditions can also cause a rapid deterioration of a tree's health and stability. While I have used every reasonable means to examine these trees, this evaluation represents my opinion of the tree health at this point in time. These findings do not guarantee future safety nor are they predictions of future events.

Thank you for calling Gilles Consulting for your arboricultural needs. I hope this report answers your questions. Please call me if I can provide more information or be of further service.

Sincerely,

Brian K. Gilles, Consulting Arborist
ISA Certified Arborist – PN-0260

Attachments:

1. Tree Protection Measures
2. References Consulted
3. Species Legend
4. Tree Inventory / Condition Spreadsheets

ATTACHMENT 1, TREE PROTECTION MEASURES

In order for trees to survive the stresses placed upon them in the construction process, tree protection must be planned in advance of equipment arrival on site. If tree protection is not planned integral with the design and layout of the project, the trees will suffer needlessly and will possibly die. With proper preparation, often costing little or nothing extra to the project budget, trees can survive and thrive after construction. This is critical for tree survival because damage prevention is the single most effective treatment for trees on construction sites. Once trees are damaged, the treatment options available are limited.

The following minimum Tree Protection Measures are included on three separate sheets so that they can be copied and introduced into all relevant documents such as site plans, permit applications and conditions of approval, and bid documents so that everyone involved is aware of the requirements. These Tree Protection Measures are intended to be generic in nature. They will need to be adjusted to the specific circumstances of your site that takes into account the location of improvements and the locations of the trees.

TREE PROTECTION MEASURES:

- Tree Protection Fences will need to be placed around each tree or group of trees to be retained.
    - Tree Protection Fences are to be placed according to the attached drawing at a distance of not less than 5 feet outside the dripline of the tree or group of trees to be saved—unless this cannot be achieved based upon the development requirements.
    - Tree Protection Fences must be inspected by the Project Arborist prior to the beginning of any construction work/activities.
    - Nothing must be parked or stored within the Tree Protection Fences—no equipment, vehicles, soil, debris, or construction supplies of any type.

- Cement trucks must not be allowed to deposit waste or wash out materials from their trucks within the Tree Protection Fences.

- The Tree Protection Fences need to be clearly marked with the following or similar text in large letters:

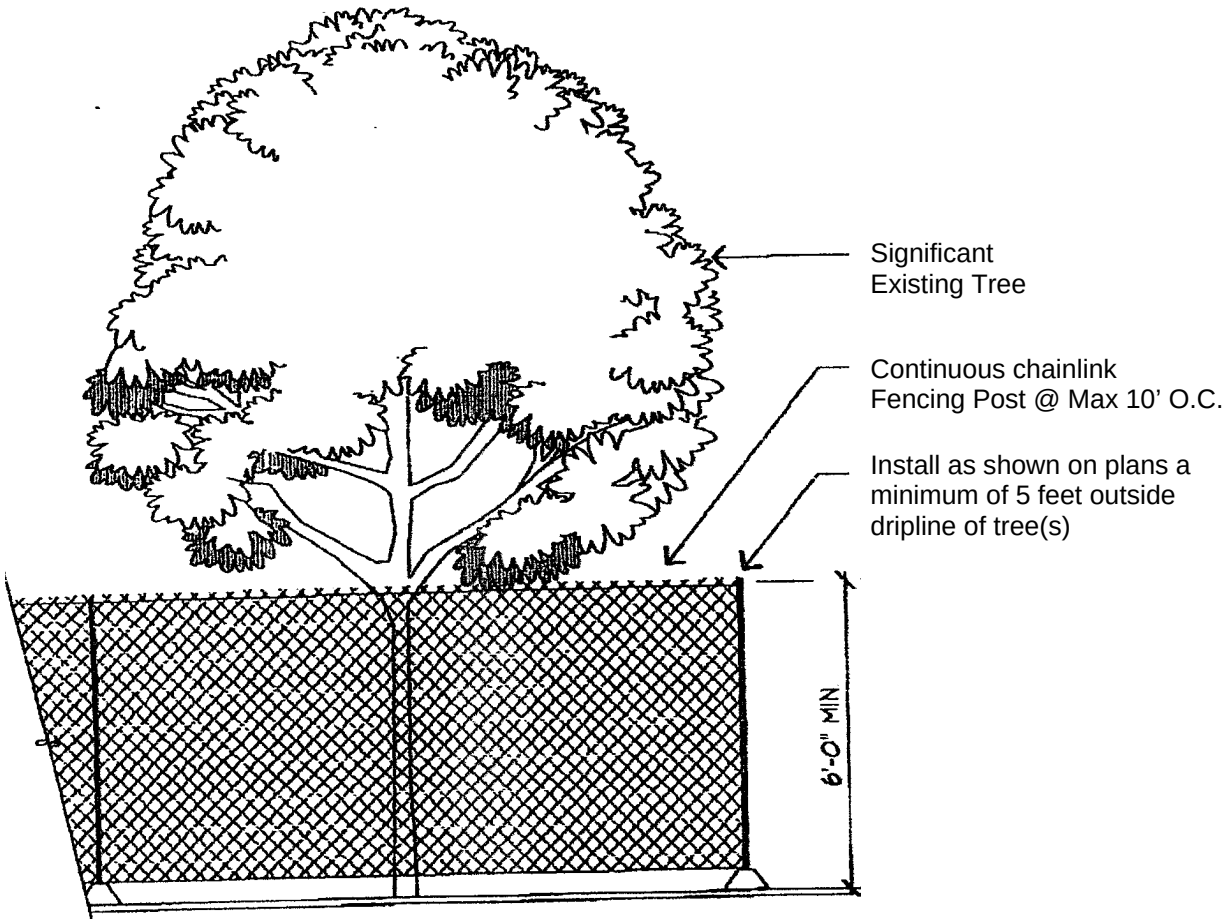
  "TREE PROTECTION FENCE
  DO NOT ENTER THIS AREA
  DO NOT PARK OR STORE MATERIALS
  WITHIN THE PROTECTION AREA

  Any questions, call Brian K. Gilles, Consulting Arborist, at
  425-417-0850"

- The area within the Tree Protection Fencing must be covered with wood chips, hog fuel, or similar materials to a depth of 8 to 10 inches. The materials should be placed prior to beginning construction and remain until the Tree Protection Fencing is taken down.

- When excavation occurs near trees that are scheduled for retention, and when such excavation will affect or damage tree roots, the following procedure must be followed to protect the long term survivability of the tree:
    - An International Society of Arboriculture (ISA) Certified Arborist must be working with and in control of all equipment operators whenever excavation is done within the dripline of trees to be retained.
    - The Certified Arborist shall be outfitted with a shovel, hand pruners, a pair of loppers, a handsaw, and a power saw (a "Sawsall" is recommended).
    - When any roots of one-inch-diameter or greater are struck by the equipment on trees to be retained, the Certified Arborist shall stop the equipment operator.

- The Certified Arborist should then excavate around the tree root by hand/shovel and cleanly cut the tree root.
- The Certified Arborist should then instruct the equipment operator to continue.
- Boring under the root systems of trees (and other vegetation) shall be done under the supervision of an ISA Certified Arborist. This is to be accomplished by excavating a limited trench or pit on each side of the critical root zone of the tree and then hand digging or pushing the pipe through the soil under the tree. The closest pit walls shall be a minimum of 7 feet from the center of the tree and shall be of sufficient depth to lay the pipe at the grade as shown on the plan and profile.
- Tunneling under the roots of trees shall be done under the supervision of an ISA Certified Arborist in an open trench by carefully excavating and hand digging around areas where large roots are exposed. No roots one inch in diameter or larger shall be cut.
- The contractor shall verify the vertical and horizontal location of existing utilities to avoid conflicts and maintain minimum clearances; adjustment shall be made to the grade of the new utility as required.



1. Six-foot high temporary chainlink fence shall be placed as shown on plans. Fence shall completely encircle tree(s). Install fence posts using pier blocks only. Avoid driving posts or stakes into major roots.

2. Make a clean straight cut to remove damaged portion of root for all roots over 1" in diameter damaged during construction. ***All*** exposed roots shall be temporarily covered with damp burlap and covered with soils the same day, if possible, to prevent drying. If not possible, burlap must be kept moist at all times.

3. Work with the protection fencing shall be done manually. No stockpiling of materials, soil, debris, vehicle traffic, or storage of equipment or machinery shall be allowed within the limit of the fencing.

4. Cement trucks must not be allowed to deposit waste or wash out materials from their trucks within the Tree Protection Fences.

5. The area within the Tree Protection Fencing must be covered with wood chips, hog fuel, or similar materials to a depth of 8 to 10 inches. The materials should be placed prior to beginning construction and remain until the Tree Protection Fencing is taken down.

ATTACHMENT 2, REFERENCES CONSULTED:

1. Dirr, Michael A, *Manual of Woody Landscape Plants, Their Identification, Ornamental Characteristics, Culture, Propagation, and Uses*, Stipes Publishing Co., Champaign, IL. 1990.

2. DPD Director's Rule 6-2001, *Clarification of State Environmental Policy Act (SEPA) Plants and Animals Policy Concerning Outstanding Trees, and Designation of Exceptional Trees under the Tree Protection Chapter (25.11) of the Seattle Municipal Code, Index SEPA Sec 25.05.675; SMC 25.11*, City of Seattle, Department of Design, Construction and Land Use, Seattle, WA. August 8, 2001

3. Harris, Richard W. et al, *Arboriculture, Integrated Management of Landscape Trees, Shrubs, and Vines, Third Edition*, Prentice Hall, Upper Saddle River, New Jersey. 1999.

4. Mattheck, Claus Prof. and Ass. Jur Mrs. Helge Breloer, *The Body Language of Trees, A Handbook for Failure Analysis*, HMSO, London, England. 1994.

5. Matheney, Nelda P. & Clark James R., *Evaluation of Hazard Trees, Second Edition*, The International Society of Arboriculture Press, Savoy, Illinois. 1994

6. Matheney, Nelda P. & Clark James R., *Trees & Development, A Technical Guide to Preservation of Trees During Land Development*, The International Society of Arboriculture Press, Savoy, Illinois. 1998.

7. Schuler, Stanley, et al, *Guide to Trees*, Simon & Schuster, New York. 1977.

8. Van Pelt, Robert, *Champion Trees of Washington State*, the University of Washington Press, Seattle, WA. 1996.

9. Watson, Dr. Gary W., & Dr. Dan Neely Editors, *Trees & Building Sites*, The International Society of Arboriculture Press, Savoy, IL. 1995.

ATTACHMENT 3, SPECIES LEGEND

#	Tag Code	Common & Scientific Names
1	Ap/Msp.	= Apple, *Malus sp.*
2	AWC/Cn'P'	= Alaska Weeping Cedar, *Chamaecyparis nootkatensis* 'Pendula'
3	BCw/Pt	= Black Cottonwood, *Populus trichocarpa*
4	BLM/Am	= Big Leaf Maple, *Acer macrophyllum*
5	BSp/ Pp	= Blue Spruce, *Picea pungens*
6	CA/Msp	= Crab Apple, *Malus sp.*
7	Ch/Psp	= Cherry, *Prunus sp.*
8	CsW/Ssp	= Corkscrew Willow, *Salix sp.*
9	DC/Cd	= Deodar Cedar, *Cedrus deodara*
10	DF/Pm	= Douglas Fir, *Pseudotsuga menziesii*
11	EH/Ia	= English Holly, *Ilex aquifolium*
12	EWB/Bp	= Weeping Birch, *Betula pendula*
13	GA/Fp	= Green Ash, *Fraxinus pennsylvanica*
14	GS/Sg	= Giant Sequoia, *Sequoiadendron giganteum*
15	Haw/Csp	= Hawthorn, *Crataegus sp.*
16	HCn/Ah	= Horse Chestnut, *Aesculus hippocastanum*
17	HL/Gt'I'	= Honey Locust, *Gleditsia triacanthos 'Inermis'*
18	IC/Cd	= Incense Cedar, *Calocedrus decurrens*
19	JRP/Ps	= Japanese Red Pine, *Pinus densiflora*
20	KDw/Ck	= Kousa Dogwood, *Cornus kousa*
21	LP/Pc	= Lodgepole (Shore) Pine, *Pinus contorta*
22	LP/PnI	= Lombardy Poplar, *Populus nigra* 'Italica'
23	MP/Pm	= Mugo Pine, *Pinus mugo*
24	MtnA/Sa	= Mountain Ash, *Sorbus americana*
25	NS/Pa	= Norway Spruce, *Picea abies*
26	PDw/Cn	= Pacific Dogwood, *Cornus nuttallii*
27	PFDw/Cf	= Pink Flowering Dogwood, *Cornus florida*
28	PL/Pl	= Portuguese Laurel, *Prunus lusitanica*
29	PO/Qp	= Pin Oak, *Quercus palustris*
30	PP/Pp	= Ponderosa Pine, *Pinus ponderosa*
31	PW/Sl	= Pacific Willow, *Salix lasiandra*
32	RA/Ar	= Red Alder, *Alnus rubra*
33	RM/Ar	= Red Maple, *Acer rubrum*
34	RO/Qr	= Red Oak, *Quercus rubra*
35	Rw/Ss	= Redwood, *Sequoia sempervirens*
36	SM/Mxs	= Saucer Magnolia, *Magnolia x soulangiana*
37	SP/Ps	= Scotch Pine, *Pinus sylvestris*
38	SS/Rt	= Staghorn Sumac, *Rhus typhina*
39	Unk. Dec.	= Unknown deciduous tree
40	VM/Ac	= Vine Maple, *Acer circinatum*
41	WH/Th	= Western Hemlock, *Tsuga heterophylla*
42	WP/Pa	= White Poplar, *Populus alba*
43	WRC/Tp	= Western Red Cedar, *Thuja plicata*
44	WW/Sb	= Weeping Willow, *Salix babylonica*

ATTACHMENT 1: TREE INVENTORY SHEET

Site: The Talaris Research Institute

Inspectors:
Brain K. Gilles and
Jillian Archer

NUMBER = the running count of the number of trees evaluated.
Tree # = the unique number given to each tree that corresponds to the numbers on the map and tags on the trees.
DBH = Diameter at the standard height of 4.5 feet above the average ground. ~ = Estimated diameter at 4.5 feet above the average ground level.
Tree Previously Removed = Tree shown on the Site Plan but cut down between the time of the survey and the tree evaluations.
COND. = Condition--a brief and general look at the tree health, vigor, and structure:

- **1** = Excellent condition
- **2** = Very Good condition
- **3** = Good condition
- **4** = Fair condition
- **5** = Poor condition
- **9** = Dead

# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.	# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
1	1	RO/Qr	19.8"	2	302	306	BCw/Pt	24"	3
2	2	LP/Pn'l'	30.1", 15.0" & 5.5"	2		307	BCw/Pt	Tree previously removed.	
3	3	LP/Pn'l'	28.5"	2		308	BCw/Pt	Tree previously removed.	
4	4	SP/Ps	11.0"	4		309	BCw/Pt	Tree previously removed.	
5	5	DF/Pm	11.6"	2	303	310	RA/Ar	4.0"	3
6	6	LP/Pn'l"	21.7 & 21.5	3	304	311	RA/Ar	6.4"	3
7	7	LP/Pn'l'	27.7" & 18.2"	2	305	312	BCw/Pt	41.8"	3
8	8	DF/Pm	11.4"	2	306	313	BCw/Pt	6.4"	3
9	9	DF/Pm	16.8"	4	307	314	BCw/Pt	25.5"	3
10	10	DF/Pm	14.9"	3	308	315	BCw/Pt	29.6", 28.1", & 26.1"	3
11	11	LP/Pn'l'	28.7"	3	309	316	BCw/Pt	13.3"	3
12	12	LP/Pn'l'	39.2"	3	310	317	BCw/Pt	38.3"	3
13	13	LP/Pn'l'	36.5"	3	311	318	BCw/Pt	35.6"	3
14	14	DF/Pm	13.5"	4	312	319	BCw/Pt	25.0"	3
15	15	DF/Pm	14.2"	3	313	320	BCw/Pt	19.0"	4
16	16	DF/Pm	19.7"	3	314	321	BCw/Pt	24.0"	3
17	17	DF/Pm	19.5"	4	315	322	BCw/Pt	20" & 18"	3
18	18	GS/Sg	15.0"	3	316	323	RA/Ar	8.0"	3
19	19	DF/Pm	10.4"	3	317	324	RA/Ar	11.0"	3

ATTACHMENT 1: TREE INVENTORY SHEET

Site: The Talaris Research Institute

Inspectors: Brain K. Gilles and Jillian Archer

# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.		# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
20	20	DF/Pm	16.3"	3		318	325	RA/Ar	11.0"	3
21	21	WRC/Tp	12.8, 9.3" & 4.2"	4		319	326	BCw/Pt	28.0"	3
22	22	DF/Pm	12.9"	3		320	327	PO/Qp	20.3"	2
23	23	SP/Ps	18.8"	3		321	328	SP/Ps	10.9"	3
24	24	WRC/Tp	10.9"	3		322	329	JRP/Ps	9.4"	2
25	25	RO/Qr	31.3"	4		323	330	PO/Qp	18.0"	2
26	26	DF/Pm	16.7"	4		324	331	RA/Ar	25.5"	4
27	27	DF/Pm	13.0"	4		325	332	RA/Ar	23.9"	4
28	28	WRC/Tp	12.1 & 12.6"	4		326	333	BCw/Pt	28"	3
29	29	SP/Ps	18.0"	3		327	334	RA/Ar	18"	3
30	30	DF/Pm	9.9"	4		328	335	BCw/Pt	34"	3
31	31	WRC/Tp	10.6", 8.5" & 10.5"	2		329	336	BCw/Pt	33.3"	3
32	32	WRC/Tp	10.5", 8.3" & 10.2"	2		330	337	BCw/Pt	~ 22"	3
33	33	WRC/Tp	11.5" & 10.9"	2		331	338	BCw/Pt	~ 36"	3
34	34	WRC/Tp	9.2"	2		332	339	BCw/Pt	~ 18"	3
35	35	WRC/Tp	10.6", 6.9" & 7.2"	3		333	340	BCw/Pt	~ 26"	3
36	36	WRC/Tp	12.3"	2		334	341	BCw/Pt	~ 24"	3
	37		Tree previously removed			335	342	BCw/Pt	3"	3
37	38	DF/Pm	16.2"	2		336	343	BCw/Pt	3"	3
38	39	WRC/Tp	10.1"	2		337	344	BCh/Pe	11.9",7.2", 8.5".7.8",5.5"	5
39	40	RO/Qr	12.9"	2		338	345	P/Psp	11.2"	3
40	41	RW/Ss	29.5"	2		339	346	RO/Qr	15.5"	2
41	42	RW/Ss	35.3"	3		340	347	WRC/Tp	33.4"	1
42	43	DF/Pm	16.2"	1		341	348	RA/Ar	12.4"	4
43	44	RO/Qr	26.9"	1		342	349	RA/Ar	9.8"	4
44	45	WH/Th	9.5"	3		343	350	RA/Ar	10.7"	5

ATTACHMENT 1: TREE INVENTORY SHEET

Site: The Talaris Research Institute

Inspectors: Brain K. Gilles and Jillian Archer

# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.		# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
45	46	GS/Sg	34.7"	2		344	351	BCw/Pt	28", 25.7", 23", & 28"	3
46	47	RW/Ss	23.1"	1		345	352	BCh/Pe	5.3"	4
47	48	LP/Pn'I'	41.2" & 7.3"	3		346	353	RA/Ar	11.0"	4
48	49	IC/Cd	7.5"	1		347	354	RA/Ar	15.5"	4
49	50	IC/Cd	5.7"	1		348	355	LP/Pn'I'	8.2"	2
50	51	IC/Cd	4.8"	1		349	356	RA/Ar	9.1", 6.8", 11.8", 5.0", 11.7"	4
51	52	LP/Pn'I'	20.5"	2		350	357	RA/Ar	12.7", 11.6"	4
52	53	LP/Pn'I'	18.1" & 14.3"	2		351	358	SP/Ps	11.8"	4
53	54	LP/Pn'I'	16.1"	2		352	359	SP/Ps	10.8"	4
54	55	LP/Pn'I'	23.2" & 14.8"	2		353	360	PO/Qp	25.6"	2
55	56	WRC/Tp	7.2"	4		354	361	LP/Pn'I'	25.2"	3
56	57	LP/Pn'I'	25.4"	2		355	362	LP/Pn'I'	19.4"	2
57	58	DF/Pm	12.6"	3		356	363	LP/Pn'I'	21.7"	3
58	59	RO/Qr	22.8"	2		357	364	LP/Pn'I'	14.2"	3
59	60	DF/Pm	15.0"	2		358	365	LP/Pn'I'	12.8"	3
60	61	DF/Pm	12.3"	3		359	366	LP/Pn'I'	23.7"	3
61	62	DF/Pm	13.2"	3		360	367	LP/Pn'I'	29.7"	3
62	63	DF/Pm	14.3"	2		361	368	PO/Qp	13.3"	2
63	64	LP/Pn'I'	18.8"	2		362	369	PO/Qp	19.0"	2
64	65	Haw/Csp	8.6" & 7.7"	2		363	370	LP/Pn'I'	27.5"	3
65	66	LP/Pn'I'	15.2"	4		364	371	PO/Qp	17.6"	2
66	67	LP/Pn'I'	10.8"	4		365	372	PO/Qp	16.1"	2
67	68	WRC/Tp	6.7"	2		366	373	PO/Qp	18.6"	2
68	69	LP/Pn'I'	16.6"	4		367	374	LP/Pn'I'	38.7"	3
69	70	DF/Pm	7.3"	3		368	375	PO/Qp	19.1"	2
70	71	LP/Pn'I'	18.5"	3		369	376	PO/Qp	17.8"	2

ATTACHMENT 1: TREE INVENTORY SHEET

Site: The Talaris Research Institute

Inspectors:
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Jillian Archer

# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.		# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
71	72	LP/Pn'l'	13.5"	4		370	377	LP/Pn'l'	44.9"	3
72	73	LP/Pn'l'	22.5"	3		371	378	PO/Qp	17.4"	2
73	74	LP/Pn'l'	25.1"	3		372	379	SP/Ps	14.4"	3
74	75	GA/Fp	17.3"	3		373	380	SP/Ps	15.4"	3
75	76	RA/Ar	10.8, 9.3, 6.4, 7.6, 7.3"	5		374	381	EWB/Bp	8.8"	3
76	77	RA/Ar	8.1"	5		375	382	CA/Msp	11.2" @ 18"	4
77	78	RA/Ar	14.4"	4		376	383	EWB/Bp	12.4"	3
78	79	RA/Ar	12.5"	5		377	384	EWB/Bp	15.0"	2
79	80	GA/Fp	11.1"	3		378	385	SP/Ps	12.4"	3
80	81	GA/Fp	5.1"	2		379	386	LP/Pn'l'	10.2"	4
81	82	RA/Ar	22.6", 12.1", 17.1", & 12.5"	5		380	387	DF/Pm	8.3"	3
82	83	RA/Ar	20.2" * 12.5"	4		381	388	EWB/Bp	15.9"	3
83	84	WRC/Tp	11.0", 8.5", 5.5", & 3.3"	2		382	389	RM/Ar	18.7"	2
84	85	RO/Qr	23.3"	3		383	390	DF/Pm	12.5"	2
85	86	LP/Pn'l'	25.0"	3		384	391	DF/Pm	13.8"	2
86	87	PO/Qp	17.1"	2		385	392	WRC/Tp	18.5"	1
87	88	LP/Pn'l'	32.4"	3		386	393	WRC/Tp	22.3"	1
88	89	LP/Pn'l'	31.8"	2		387	394	WW/Sb	24.6"	4
89	90	PO/Qp	16.2"	2		388	395	WW/Bp	24.5"	3
90	91	PO/Qp	14.6"	3		389	396	CA/Msp	3.9"	3
91	92	LP/Pn'l'	28.3"	3		390	397	CA/Msp	3.1"	5
92	93	RM/Ar	12.4"	4		391	398	CA/Msp	3.5"	4
93	94	EWB/Bp	14.7"	3		392	399	CA/Msp	4.9"	4
94	95	HL/Gt'l'	6.0"	3		393	400	CA/Msp	3.2"	3
95	96	HL/Gt'l'	8.9"	4		394	401	PFDw/Cf	2.7" @ 24"	3
96	97	PL/Pl	11.7"	3		395	402	KDw/Ck	6.6" @ 9"	2

ATTACHMENT 1: TREE INVENTORY SHEET

Site: The Talaris Research Institute

Inspectors:
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# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.		# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
97	98	CA/Msp	6.5"	5		396	403	RO/Qr	8.3"	2
98	99	CA/Msp	5.8"	5		397	404	HL/Gt'l'	7.9"	3
99	100	LP/Pn'l'	40.1"	3		398	405	MtnA/Sa	5.9"	2
100	101	PO/Qp	16.0"	2		399	406	MP/Pm	5.3", 3.9", 4.3" & 2.7"	2
101	102	CA/Msp	7.2"	4		400	407	MP/Pm	4.0", 3.3", 3.1", 3.6",1.6"	2
102	103	CA/Msp	5.8"	4		401	408	VM/Ac	3.8", 3.4", 2.8", 3.1",3.3",3.4",3.5"	2
103	104	LP/Pn'l'	39.5", 8.0", & 8.3" @ 18"	3		402	409	MP/Pm	3.8", 3.1", 3.8"	3
104	105	LP/Pn'l'	19.1"	3		403	410	LP/Pn'l'	53.3", 20.3"	3
105	106	LP/Pn'l'	28.7"	3		404	411	PP/Pp	6.1"	3
106	107	EWB/Bp	8.1"	3		405	412	PP/Pp	11.0", 6.3"	3
107	108	SP/Ps	8.6"	5		406	413	PP/Pp	16.8"	3
108	109	SP/Ps	9.3"	4		407	414	PP/Pp	13.5"	3
109	110	SP/Ps	6.7"	4		408	415	PP/Pp	7.1"	3
110	111	LP/Pn'l"	21.4"	3		409	416	PP/Pp	7.9"	3
111	112	LP/Pn'l'	18.3"	3		410	417	PP/Pp	7.2"	3
112	113	CA/Msp	6.4"	4		411	418	PP/Pp	10.1"	3
113	114	SP/Ps	13.8"	2		412	419	PP/Pp	11.5", 11.1"	3
114	115	SP/Ps	14.8"	2		413	420	PP/Pp	11.5"	3
115	116	SP/Ps	9.3" @2.1'	4		414	421	PP/Pp	15.5"	3
116	117	SP/Ps	13.6"	3		415	422	PP/Pp	10.2", 8.3"	3
117	118	RO/Qr	17.3"	3		416	423	PP/Pp	11.6"	3
118	119	SP/Ps	16.6"	3		417	424	PP/Pp	9.8"	3
119	120	RO/Qr	13.9"	2		418	425	PP/Pp	10.0"	3
120	121	HL/Gt'l'	9.8"	3		419	426	PP/Pp	7.3"	3
121	122	HL/Gt'l'	9.2"	3		420	427	PP/Pp	9.3"	3
122	123	Ap/Msp	5.8"	9		421	428	PP/Pp	10.3"	3

ATTACHMENT 1: TREE INVENTORY SHEET

Site: The Talaris Research Institute

Inspectors: Brain K. Gilles and Jillian Archer

# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.		# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
123	124	RO/Qr	24.9"	2		422	429	PP/Pp	8.1"	3
124	125	HL/Gt'l'	6.0"	5		423	430	PP/Pp	10.2"	3
125	126	HL/Gt'l'	10.4"	4		424	431	PP/Pp	14.2"	3
126	127	SP/Ps	11.4", 10.7"	3		425	432	PP/Pp	8.2"	3
127	128	CA/Msp	6.5"	4		426	433	PP/Pp	14.2"	3
128	129	CA/Msp	6.2"	5		427	434	PP/Pp	11.6"	3
129	130	RO/Qr	23.8"	1		428	435	PP/Pp	15.1"	3
130	131	RO/Qr	30.1"	1		429	436	PP/Pp	9.6"	3
131	132	RO/Qr	30.4"	1		430	437	PP/Pp	12.2"	3
132	133	RO/Qr	22.3"	1		431	438	PP/Pp	14.3"	3
133	134	NS/Pa	14.0"	3		432	439	PP/Pp	14.3"	3
134	135	NS/Pa	15.2"	3		433	440	PP/Pp	9.2"	3
135	136	NS/Pa	16.3"	5		434	441	PP/Pp	14.3"	3
136	137	SP/Ps	12.4"	3		435	442	PP/Pp	15.0"	3
137	138	RO/Qr	22.2"	2		436	443	Unk. Dec.	7.3"	1
138	139	RO/Qr	27.1"	2		437	444	RA/Ar	14"	5
139	140	SP/Ps	13.5"	3		438	445	RA/Ar	17"	5
140	141	SP/Ps	11.4"	3		439	446	RA/Ar	10.2"	5
141	142	SP/Ps	16.0"	3		440	447	RA/Ar	dead	0
142	143	CA/Msp	10.3"	4		441	448	BCw/Pt	18", 14", & 16"	5
143	144	CA/Msp	6.6"	4		442	449	BCw/Pt	28"	3
144	145	CA/Msp	5.9"@12"	3		443	450	BCw/Pt	18"	2
145	146	Ap/Msp	16.0"@14"	4		444	451	BCw/Pt	17"	2
146	147	CA/Msp	7.4"	3		445	452	BCw/Pt	32"	3
147	148	CA/Msp	6.7"	3		446	453	BCw/Pt	22"	4
148	149	SP/Ps	7.3"	5		447	454	BCw/Pt	18"	3

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# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.		# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
149	150	RO/Qr	23.8"	2		448	455	BCw/Pt	22"	3
150	151	RO/Qr	23.0"	2		449	456	DF/Pm	12"	3
151	152	NS/Pa	17.6"	3		450	457	BCw/Pt	23", 20", 10"	3
	153		Tree previously removed			451	458	DF/Pm	5.5", 4.5"	4
152	154	RO/Qr	22.6"	2		452	459	NS/Pa	10.2"	3
153	155	RO/Qr	15.0"	2		453	460	RA/Ar	10", 14"	5
154	156	RO/Qr	29.3"	2		454	461	RA/Ar	17.5"	5
155	157	RO/Qr	30.7"	2		455	462	RA/Ar	12.5", 8.0"	5
156	158	RO/Qr	35.4@2'	2		456	463	HCn/Ah	~ 20"	3
157	159	SP/Ps	11.5"	4		457	464	RA/Ar	13.9"	4
158	160	HL/Gt'l'	10.5"	3		458	465	RA/Ar	14.6", 4.9"	4
159	161	SS/Rt	2.0"	2		459	466	RA/Ar	7.4"	4
	162	SS/Rt	Tree previously removed			460	467	RA/Ar	10.1" & 7.7"	4
160	163	Ch/Psp	7.0" @ 36"	2		461	468	RA/Ar	9.2"	4
161	164	RO/Qr	16.5"	3		462	469	RA/Ar	10.8"	4
162	165	NS/Pa	17.1"	4		463	470	DF/Pm	31.2"	3
163	166	NS/Pa	16.0"	4		464	471	HCn/Ah	5.1"	1
164	167	RO/Qr	21.8"	2			472		Tree previously removed.	
165	168	AWC/Cn'P'	4.4", 3.8", 2.9"	2		465	473	CsW/Ssp.	10.6"	4
166	169	RO/Qr	27.4"	1		466	474	EH/Ia	8"-5"	3
167	170	RO/Qr	14.3"	2		467	475	BSp/Pp	10.3"	3
168	171	RO/Qr	12.0"	3		468	476	RA/Ar	14.0",4.3", 6.6".6.4"	4
169	172	RO/Qr	15.7"	3		469	477	RA/Ar	5.3"	9
170	173	RO/Qr	15.7"	3		470	478	RA/Ar	6.3"	4
171	174	DC/Cd	19.2"	3		471	479	RA/Ar	3.8"	9
172	175	DC/Cd	11.6"	3		472	480	RA/Ar	3.8"	9

# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.		# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
173	176	RM/Ar	19.0", 17.2"	4		473	481	Haw/Csp.	3", 3", 5", 4.5"	3
174	177	RO/Qr	20.0"	2		474	482	RA/Ar	8.5"	5
175	178	EWB/Bp	8.6"	3		475	483	WP/Pa	10.5"	3
176	179	WRC/Tp	14.9"	1		476	484	WP/Pa	10.5"	3
177	180	RM/Ar	20.8"	2		477	485	WP/Pa	4.8"	3
178	181	CA/Msp	7.9"	3		478	486	WP/Pa	7.3"	3
179	182	DC/Cd	8.7"	3		479	487	WP/Pa	7.9"	3
180	183	DF/Pm	8.1"	4		480	488	WP/Pa	13.5"	3
181	184	PP/Pp	5.8"	1		481	489	WP/Pa	18"	3
182	185	RM/Ar	22.9"	4		482	490	WP/Pa	8.9", 3.7"	3
183	186	SP/Ps	9.9"	3		483	491	WP/Pa	5.3"	3
184	187	WRC/Tp	14.1"	2		484	492	WP/Pa	8.6"	4
185	188	WH/Th	6.0" & 5.4"	4		485	493	DC/Cd	30.5"	3
186	189	WH/Th	6.6"	3		486	494	WW/Sb	48.5"	3
187	190	EWB/Bp	14.3"	3		487	495	BSp/Pp	16.5"	3
188	191	WH/Th	5.8"	3		488	496	WP/Pa	16.7"	3
189	192	DF/Pm	13.2"	2		489	497	WP/Pa	19.2"	3
190	193	RM/Ar	15.5"	3		490	498	WP/Pa	19.6"	3
191	194	DF/Pm	13.5"	2		491	499	WP/Pa	22.1"	3
192	195	DF/Pm	13.0"	3		492	500	WP/Pa	24.3", 4.2"	3
193	196	DF/Pm	11.2"	3		493	501	WP/Pa	3.3"	5
194	197	DF/Pm	11.8"	3		494	502	WP/Pa	21.7"	3
195	198	DF/Pm	9.8"	3		495	503	WP/Pa	6.0"	5
196	199	DF/Pm	10.6"	3		496	504	WP/Pa	5.3"	5
197	200	DF/Pm	11.6"	3		497	505	WP/Pa	24.8"	3
198	201	PP/Pp	10.7"	3		498	506	WP/Pa	9.6", 4.1"	3

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# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.		# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
199	202	PP/Pp	11.6"	3		499	507	BCh/Pe	12.4"	4
200	203	PP/Pp	8.6"	3		500	508	BCh/Pe	11.5"	4
201	204	DF/Pm	13.6"	3		501	509	BCh/Pe	9.0"	4
202	205	DF/Pm	8.9"	3		502	510	BCh/Pe	6.5" @ 36"	4
203	206	PP/Pp	12.9"	3		503	511	Ap/Msp	6.1", 6.6", 6.5"	5
204	207	PP/Pp	12.0"	3		504	512	RA/Ar	18.3"	4
205	208	DF/Pm	14.9"	3		505	513	RA/Ar	25.6"	5
206	209	DF/Pm	14.1"	3		506	514	WP/Pa	6.2" & 5.5"	2
207	210	RM/Ar	11.9", 6.6"	3		507	515	WP/Pa	3.3", 4.2"	3
208	211	RM/Ar	19.0"	2		508	516	Haw/Csp.	6.3"	4
209	212	RM/Ar	13.8", 11.2",8.4"	4		509	517	HL/Gt'l'	13.0"	1
210	213	DF/Pm	16.2"	2		510	518	SM/Mxs	6.6", 5.6"	2
211	214	DF/Pm	12.8"	3		511	519	Ch/Psp.	9.4"	3
212	215	Ch/Psp	17.6"	3		512	520	Ch/Psp.	10.1"	3
213	216	Ch/Psp	8.4"	3		513	521	Ch/Psp.	11.6"	3
214	217	PW/Sl	21.3", 9.8", 18.3"	3		514	522	Ch/Psp.	9.2"	3
215	218	WRC/Tp	19.0"	2		515	523	GA/Fp	6.4", 3.5", 6.2", 6.1", 5.8"	3
216	219	DF/Pm	21.5"	2		516	524	BCw/Pt	36.3"	3
217	220	VM/Ac	5.2" & 3.8"	2		517	525	BCw/Pt	31"	3
218	221	PDw/Cn	2.2"	3		518	526	BCw/Pt	33"	3
219	222	PDw/Cn	5.0" 4.0", 4.2"	3		519	527	BCw/Pt	38"	3
220	223	EWB/Bp	17.8"	2		520	528	BCw/Pt	32"	4
221	224	WRC/Tp	16.6"	2		521	529	BCw/Pt	28", 26"	3
222	225	RM/Ar	22.8"	2		522	530	BCw/Pt	13.5"	4
223	226	WW/SB	26.0"	1		523	531	BCw/Pt	19.0"	3
224	227	NM/Ap	9.8"	1		524	532	BCw/Pt	23.7"	3

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# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.		# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
225	228	RO/Qr	25.8"	1		525	533	BCw/Pt	25"	3
226	229	HL/Gt'l'	9.2"	2		526	534	BCw/Pt	25"	3
227	230	WW/Sb	28.3"	2		527	535	BCw/Pt	22"	3
228	231	CA/Msp	11.3" @ 36"	3		528	536	BCw/Pt	21"	3
229	232	HCn/Ah	14.2"	1		529	537	BCw/Pt	~ 18"	3
230	233	CA/Msp	10.7"	3		530	538	BCw/Pt	~ 26"	3
231	234	WW/Sb	18.5"	3		531	539	BCw/Pt	~ 26"	3
232	235	WW/Sb	20.7"	3		532	540	BCw/Pt	~ 30"	3
233	236	HL/Gt'l'	13.2"	4		533	541	BCw/Pt	~ 24"	3
234	237	RO/Qr	7.7"	4		534	542	BCw/Pt	~ 32"	3
235	238	RO/Qr	15.0"	2		535	543	RA/Ar	12"	3
236	239	RO/Qr	13.5"	2		536	544	RA/Ar	8"	3
237	240	SP/Ps	7.7"	4		537	545	BCw/Pt	30"	3
238	241	SP/Ps	13.3"	3		538	546	BCw/Pt	~ 30"	3
239	242	SP/Ps	17.0"	3		539	547	BCw/Pt	~ 12"	3
240	243	RO/Qr	21.1"	2		540	548	BCw/Pt	~ 20"	3
241	244	RO/Qr	21.0"	2		541	549	BCw/Pt	~ 20"	3
242	245	CA/Msp	8.2 @ 12"	4		542	550	BCw/Pt	~ 12", ~ 14"	3
243	246	CA/Msp	6.5 @ 12"	5		543	551	BCw/Pt	~ 24"	3
244	247	RO/Qr	18.2"	1		544	552	BCw/Pt	~ 12"	3
245	248	RO/Qr	27.8"	2		545	553	BCw/Pt	~ 14"	3
246	249	SP/Ps	11.4"	3		546	554	BCw/Pt	~ 12"	3
247	250	RO/Qr	21.6"	2		547	555	BCw/Pt	~ 24"	3
248	251	SP/Ps	10.1"	4		548	556	BCw/Pt	~ 16"	3
249	252	CA/Msp	9.0" @ 36"	3		549	557	BCw/Pt	~ 18"	3
250	253	CA/Msp	7.0" @ 36"	3		550	558	BCw/Pt	~ 12"	3

ATTACHMENT 1: TREE INVENTORY SHEET

Site: The Talaris Research Institute

Inspectors: Brain K. Gilles and Jillian Archer

# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.		# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
251	254	RO/Qr	19.3"	3		551	559	BCw/Pt	~ 20"	3
252	255	CA/Msp	6.2"	4		552	560	BCw/Pt	~ 10"	3
253	256	RO/Qr	19.7"	2		553	561	BCw/Pt	~ 14"	3
254	257	SP/Ps	15.1"	4		554	562	BCw/Pt	~ 14"	3
255	258	SP/Ps	10.2"	4		555	563	BCw/Pt	~ 14"	3
256	259	CA/Msp	4.2"	4		556	564	BCw/Pt	~ 18"	3
257	260	RO/Qr	20.8"	1		557	565	BCw/Pt	~ 16"	3
258	261	DF/Pm	11.7"	3		558	566	BCw/Pt	~ 24"	3
259	262	RO/Qr	15.1"	3		559	567	BCw/Pt	~ 16"	3
260	263	RO/Qr	26.2"	1		560	568	BCw/Pt	~ 8", ~ 14"	3
261	264	DF/Pm	16.4"	2		561	569	BCw/Pt	~ 12"	3
262	265	WRC/Tp	9.0", 16.2"	2		562	570	BCw/Pt	~ 28"	3
263	266	WRC/Tp	14.2", 5.6"	2		563	571	BCw/Pt	~ 6"	3
264	267	WRC/Tp	13.8", 6.7" & 4.5"	2		564	572	BCw/Pt	~ 8"	3
265	268	RO/Qr	27.1"	1		565	573	BCw/Pt	~ 20"	3
266	269	F/Csp	1"-7.2" clump of 30	1		566	574	BCw/Pt	~ 20"	3
267	270	SP/Ps	12.3"	3		567	575	LP/Pn'l'	~ 16"	3
268	271	SP/Ps	12.8"	3		568	576	LP/Pn'l'	~ 22"	3
269	272	SP/Ps	6.5"	3		569	577	GA/Fp	27.6"	5
270	273	SP/Ps	8.9"	3		570	578	BCw/Pt	~ 18"	3
271	274	SP/Ps	11.1"	3		571	579	Ch/Psp	5.2"	3
272	275	CA/Msp	6.3"	4		572	580	BCw/Pt	~ 20"	3
273	276	CA/Msp	6.3"	3		573	581	BCw/Pt	~ 14"	3
274	277	CA/Msp	6.2"	4		574	582	BCw/Pt	~ 16"	3
275	278	CA/Msp	15.8" @ 12"	3		575	583	BCw/Pt	~ 24"	3
276	279	RO/Qr	10.2"	3		576	584	BCw/Pt	~ 20"	3

ATTACHMENT 1: TREE INVENTORY SHEET

Site: The Talaris Research Institute

Inspectors: Brain K. Gilles and Jillian Archer

# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.	# of Trees	1. TREE #	2. SPECIES	3. DBH	4. Cond.
277	280	PO/Qp	13.3"	3	577	585	BCw/Pt	~ 18"	3
278	281	RO/Qr	18.9" @ 36"	3	578	586	BCw/Pt	~ 18"	3
279	282	RO/Qr	14.9"	3	579	587	BCw/Pt	~ 24"	3
280	283	RO/Qr	17.0"	4	580	588	BCw/Pt	~ 8"	3
281	284	SP/Ps	15.2"	4	581	589	BLM/Am	~ 4"-8"	4
282	285	SP/Ps	14.4"	4	582	590	Ch/Psp	13.8"	3
283	286	BCw/Pt	28.1"	3	583	591	BCh/Pe	10.6", 6.8", 7.4"	3
284	287	BCw/Pt	29.8"	3	584	592	PO/Qp	13.5"	3
285	288	BCw/Pt	39.3"	4	585	593	BCw/Pt	9.5"	4
286	289	BCw/Pt	17"	3	586	594	LP/Pn'l'	7.4"	3
287	290	BCw/Pt	34"	3	587	595	BCw/Pt	~ 20"	3
288	291	BCw/Pt	20"	3	588	596	BCw/Pt	~ 14"	3
289	292	BCw/Pt	34"	4	589	597	BCw/Pt	~ 12"	3
	293	PW/Sl	Tree previously removed	3	590	598	BCw/Pt	~ 16"	3
290	294	BCw/Pt	16.0"	3	591	599	BCw/Pt	~ 12"	3
291	295	BCw/Pt	29.2"	3	592	600	BCw/Pt	~ 18"	3
292	296	BCw/Pt	60", 3 trunks forked @5.5"	3	593	601	BCw/Pt	~ 14"	3
293	297	BCw/Pt	26", Forked@ base, 2 trunks	3	594	602	BCw/Pt	~ 14"	3
294	298	BCw/Pt	27"	3	595	603	BCw/Pt	~ 10"	3
295	299	BCw/Pt	27"	3	596	604	BCw/Pt	~ 6"	3
296	300	BCw/Pt	17.1"	4	597	605	BCw/Pt	~ 6"	3
297	301	BCw/Pt	27.3"	4	598	606	WW/Bp	15.0"	4
298	302	BCw/Pt	28"	3	599	607	PO/Qp	19.6"	3
299	303	BCw/Pt	16"	4	600	608	WH/Th	7"	3
300	304	BCw/Pt	23.3"	5	601	609	Ch/Psp	6.7"	3
301	305	BCw/Pt	30.0"	3					