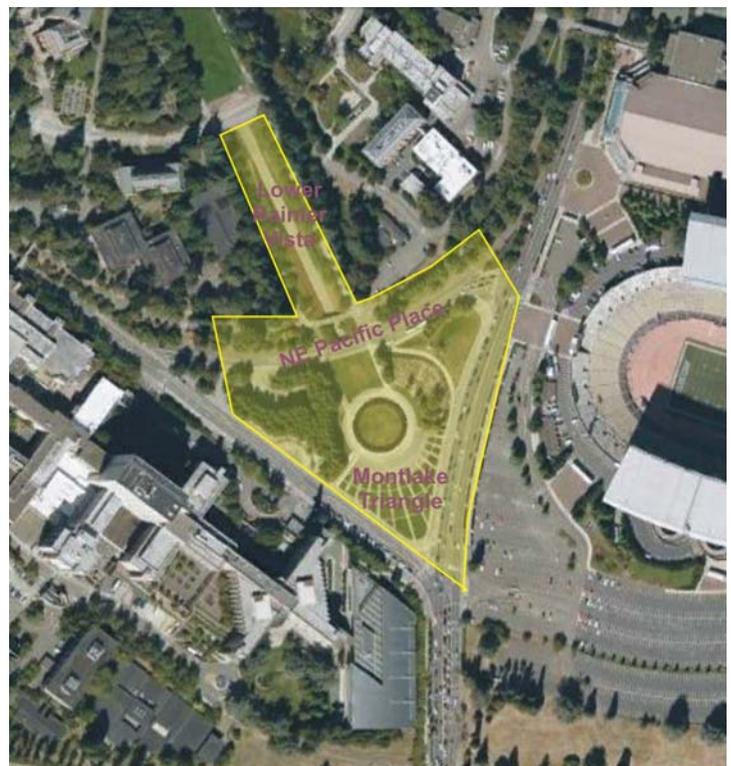


UNIVERSITY OF WASHINGTON TO SOUND TRANSIT UNIVERSITY-LINK PEDESTRIAN CONNECTION PROJECT

NEPA ENVIRONMENTAL RE-EVALUATION CONSULTATION FORM



SOUND TRANSIT

December 2010

ENVIRONMENTAL RE-EVALUATION CONSULTATION

Note: Prior to filling out this form, we strongly encourage you to contact us to discuss your project changes and determine if it is necessary to complete a re-evaluation at this time. In general, project changes should be evaluated prior to requesting a Federal action (funding authorization, approval, expenditure of construction funds from any source, etc.), or when a change is made during construction of a Federally-authorized project. The purpose of this worksheet is to assist sponsoring agencies in gathering and organizing materials for re-evaluations required under the National Environmental Policy Act (NEPA). Submission of the worksheet by itself does not meet NEPA requirements. FTA must concur in writing with its determination and/or the sponsoring agency's NEPA recommendation. Contact the FTA Region 10 office at (206) 220-7954 if you have any questions regarding this worksheet.

<i>For Agency Use</i> <i>Date Received:</i>	
<i>Recommendation by Planner or Engineer:</i> <input type="checkbox"/> <i>Accept</i> <input type="checkbox"/> <i>Return for Revisions</i> <input type="checkbox"/> <i>Not Eligible</i>	<i>Reviewed By:</i> <i>Date:</i>
<i>Comments:</i>	
<i>Concurrence by Regional Counsel:</i> <input type="checkbox"/> <i>Accept Recommendation</i> <input type="checkbox"/> <i>Return with Comments</i>	<i>Reviewed By:</i> <i>Date:</i>
<i>Comments:</i>	
<i>Concurrence by Approving Official:</i>	<i>Date:</i>

Please answer the following questions, fill out the impact chart (Attachment A) and attach project area and site maps. Using a site map from the previously approved NEPA document, clearly show project changes. Include additional site maps to help reviewer understand project changes.

PROJECT TITLE
University of Washington to Sound Transit University-Link Pedestrian Connection Project (a.k.a. Montlake Triangle Project) Sound Transit North Link Light Rail

LIST APPROVED ENVIRONMENTAL DOCUMENTS (e.g. EIS/ROD, EA/FONSI, BA, RE-EVALUATION, etc.) If Re-evaluation, briefly describe.
Title: Central Link Light Rail Transit Project Final Environmental Impact Statement Date: November 1999 Type and Date of Last Federal Action: November 1999
Title: Initial Segment Environmental Assessment Date: March 2002 Type and Date of Last Federal Action: March 2002
Title: Sound Transit North Link Light Rail Final Supplemental EIS Date: April 2006 Type and Date of Last Federal Action: April 2006
Title: Record of Decision: Sound Transit North Link Segment of the Central Link Light Rail Transit Project Date: June 2006 Type and Date of Last Federal Action: June 2006

HAS THE MOST CURRENT AND OTHER PERTINENT APPROVED ENVIRONMENTAL DOCUMENTS BEEN RE-READ TO COMPARE PROPOSED PROJECT CHANGES?

NO (STOP! The most current approved environmental document MUST be re-read prior to completing a re-evaluation.)

YES NAME: Sound Transit North Link Light Rail Final Supplemental EIS and Record of Decision.
DATE: April 2006; June 2006

IS THE PROJECT CURRENTLY UNDER DESIGN OR CONSTRUCTION?

The proposed project is currently in the design phase and would modify the pedestrian connection between the University of Washington Link Light Rail station and the University of Washington and central campus. The modified pedestrian connection would include a grade-separated pedestrian and bicycle access bridge over Montlake Boulevard NE that would connect the University of Washington Station with the Montlake Triangle, establishment of a Rainier Vista land bridge spanning a lowered NE Pacific Place, a modified Burke-Gilman Trail, and improved bus stop and transfer facilities. See below (Description of Project Changes or New Information) for a further description of the proposed project.

The University of Washington Station, part of the University Link Light Rail Project, is currently under construction in the vicinity of the site.

REASON FOR RE-EVALUATION

In April 2006, the *Sound Transit North Link Final Supplemental Environmental Impact Statement* (referred to herein as 2006 FSEIS) was issued by Sound Transit and the Federal Transit Administration (FTA) pursuant to the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA). Following issuance of the FSEIS, the Sound Transit Board selected the final route, profile and station locations to be built (referred to herein as the 2006 Alternative). FTA issued a NEPA Record of Decision (ROD) for the project in June 2006.

The 2006 Alternative included a station at University of Washington, on the east side of Montlake Boulevard, near Husky Stadium. The University of Washington Station included a grade-separated pedestrian crossing of Montlake Boulevard NE, via a tunnel or bridge, with an option for an extended tunnel or bridge across NE Pacific Place and the Burke-Gilman Trail to provide access to the Rainier Vista corridor and central campus.

Due to concerns about the increased volumes of pedestrians crossing the Burke-Gilman Trail, Sound Transit and the FTA committed to developing a grade-separated crossing of the trail and NE Pacific Place, via either a tunnel or bridge, to maintain connectivity between the University of Washington Station and the campus. This mitigation measure is documented in the NEPA ROD issued in June 2006. The ROD also commits to improvements at existing crosswalks where Montlake Boulevard NE intersects with NE Pacific Place and NE Pacific Street. Subsequent to the issuance of the FSEIS and ROD, Sound Transit designed a grade-separated bridge as part of the University of Washington Station Final Design. The pedestrian bridge extends from the Station over Montlake Boulevard NE, NE Pacific Place, and the Burke-Gilman Trail, connecting to the eastern edge of the Lower Rainier Vista on campus. That pedestrian bridge design implements the 2006 Alternative and ROD mitigation measures relating to the Burke-Gilman Trail (see **Attachment B** for an illustration of the current Sound Transit pedestrian access design).

The proposed facilities (referred herein as the 2010 Proposed Action, also known as Montlake Triangle Project) consist of a pedestrian and bicycle bridge over Montlake Boulevard NE that would connect the University of Washington Station with the Montlake Triangle, establishment of a Rainier Vista land bridge spanning a lowered NE Pacific Place, a modified Burke-Gilman Trail, and improved bus stop and transfer facilities. The 2010 Proposed Action differs somewhat from the pedestrian connection(s) identified and analyzed in the 2006 FSEIS and original project design.

The 2010 Proposed Action is in part a result of a directive from the Washington State Legislature through ESSB 6392 for WSDOT to work with stakeholder agencies to develop transit connections in the SR-520 corridor, including improvements at the Montlake Triangle as a multimodal transit hub. The 2010 Proposed Action was developed jointly by Sound Transit, the University of Washington, King County Metro, WSDOT, and the Seattle Department of Transportation. These agencies worked together to evaluate various options for improving pedestrian connections between the University of Washington Station and the central campus area; and improvements to bus and bicycle/trail facilities at the Montlake Triangle. The 2010 Proposed Action is the result of this collaboration, which revised the original project design to include an updated pedestrian and bicycle access plan and other landscape improvements to connect the University of Washington Light Rail Station with Rainier Vista and central campus while also improving light rail to bus transit connections and regional multi-purpose trail connections.

The purpose of this re-evaluation is to: 1) identify and evaluate impacts not previously considered in the 2006 FSEIS; and, 2) evaluate the proposed changes to the project as they relate to implementation of the mitigation measures identified in the 2006 ROD.

DESCRIPTION OF PROJECT CHANGES OR NEW INFORMATION

Subsequent to the design implementing the 2006 Alternative, a modified design for pedestrian access between the University of Washington Station and the central campus was developed (2010 Proposed Action). Under the 2010 Proposed Action, the majority of the University of Washington Station design elements would remain the same as those analyzed for the 2006 Alternative contained in the 2006 FSEIS, including:

- Location immediately west of Husky Stadium.
- Depth of station at approximately 110 feet below ground surface.
- Inclusion of stairs, elevators, and escalators connecting the entry to the underground station.
- Provisions for crossover and storage tracks.
- Provisions for grade-separated pedestrian connections to central campus and to the Montlake Triangle for local transit transfers.
- Improvements to existing crosswalks and pedestrian facilities at intersections.
- Provisions for bicycle storage.
- Construction staging at parking lots south of Husky Stadium.

The 2010 Proposed Action refines and incorporates certain modifications to the 2006 Alternative, primarily related to the pedestrian and bicycle connections between the University of Washington Station, Rainier Vista, and central campus (refer to **Attachment C** for an aerial photo of the site and **Attachment D** for the 2010 Proposed Action site plan). In general, the 2010 Proposed Action would implement the grade-separated crossing of Montlake Boulevard NE, NE Pacific Place, and the Burke-Gilman Trail identified in the 2006 FSEIS and ROD with the following:

- A pedestrian and bicycle access bridge over Montlake Boulevard NE that would connect the University of Washington Station to the Montlake Triangle, including:

- An approximately 30- to 34-foot wide, 95-foot long bridge from the University of Washington Station over Montlake Boulevard NE to the Montlake Triangle;
 - Stairs and an elevator from the proposed bridge to the Montlake Triangle on the west side of Montlake Boulevard NE to facilitate transfers to local King County Metro bus service;
 - A bicycle ramp located between the University of Washington Station and Montlake Boulevard NE that would provide access to the bridge; and,
 - Side-by-side at-grade paths for bicycles and pedestrians located between the University of Washington Station and Montlake Boulevard NE.
- The Montlake Triangle would be improved with the following:
 - New landscaping and pedestrian/bicycle facilities to connect the University of Washington Station with Rainier Vista and central campus; enhance the Montlake Triangle as an entry to campus; and provide pathways to bus transfers on the Montlake Triangle;
 - A relocated and improved west-bound bus stop on the Montlake Triangle along NE Pacific Street with an extended bus zone for transit coaches and shelters for riders;
 - An improved south-bound bus stop on the west side of Montlake Boulevard NE just south of NE Pacific Place; and,
 - An improved east-bound bus stop on the south side of NE Pacific Place.
 - A landscaped land bridge over a lowered NE Pacific Place and a modified Burke-Gilman Trail.
 - NE Pacific Place would be lowered approximately 20 feet to allow vehicles to pass under the land bridge. All existing vehicle lanes and King County Metro transit facilities would be accommodated; and the unsignalized mid-block crosswalks eliminated. Existing Metro transit facilities would be improved within the lowered NE Pacific Place to include: expanded bus layover area, bus shelters with lighting, 35 trolley poles with overhead wires, 12 street lights, sidewalk improvements, and way-finding signage.
 - The Burke-Gilman Trail in the vicinity of the land bridge would be improved to grade-separate the Burke-Gilman Trail from Rainier Vista. Through the project area, the Burke-Gilman Trail would be widened to provide a 14-foot wide pedestrian and bicycle path. Two-foot wide gravel shoulders would be provided at the edges of the path. Design of the trail would not preclude future widening by the University for a total trail width of 30-feet. The new trail would be constructed parallel to the lowered NE Pacific Place under the land bridge, although the elevation of the trail would be above the roadway to minimize the grades on the trail. Two connecting paths would be provided linking the Burke-Gilman Trail with Rainier Vista to provide access to central campus. The new trail section would transition both in grade and alignment to meet the existing trail section east and west of the Montlake Triangle intersections (NE Pacific Place/NE Pacific Street; NE Pacific Place/Montlake Boulevard NE).
 - The land bridge would be an hour glass shape to minimize the width of the land bridge over NE Pacific Place and the Burke-Gilman Trail. The width of the bridge would range from approximately 35 feet in the center to approximately 100 feet at the north and south ends.

- Improvements to the Lower Rainier Vista to enhance pedestrian connections between the University of Washington Station and the central campus area.
 - Filling the existing Rainier Vista paved depression with construction spoils associated with the lowering of NE Pacific Place and/or the construction of the University of Washington Station. The filling of this depression is intended to provide a larger and more welcoming pedestrian environment.
 - Removal of the existing Cherry trees in the Lower Rainier Vista to eliminate the confinement and partial view blocking that they produce.
 - Provisions for new landscaping and pedestrian paths.
- Provision for new ADA accessible pathways to accommodate pedestrians along the Montlake Triangle and Rainier Vista to central campus.

HAVE ANY NEW OR REVISED LAWS OR REGULATIONS BEEN ISSUED SINCE APPROVAL OF THE LAST ENVIRONMENTAL DOCUMENT THAT AFFECTS THIS PROJECT? If yes, please explain.

- NO
- YES

IS THE LIST OF THREATENED AND ENDANGERED SPECIES (NMFS AND USFWS) MORE THAN 6 MONTHS OLD?

- NO
- YES (STOP! Endangered Species lists and analysis MUST be updated.)

Following issuance of the FSEIS and ROD in 2006, Puget Sound Steelhead were listed by NOAA in June 2007. FTA issued a determination in 2009 that the U-Link Project, which includes the University of Washington Station, would have no effect on Puget Sound Steelhead. ESA species lists from the USFWS and NOAA Fisheries are included as **Attachment F** and **Attachment G**. ESA lists for marine mammals and marine turtles are also included as **Attachment H** and **Attachment I**.

WILL THE NEW INFORMATION HAVE THE POTENTIAL TO CAUSE A CHANGE IN THE DETERMINATION OF IMPACTS FROM WHAT WAS DESCRIBED IN THE ORIGINAL ENVIRONMENTAL DOCUMENT FOR ANY OF THE AREAS LISTED BELOW? For each impact category, please indicate whether there will be a change in impacts. For all categories with a change, continue to the table at the end of this worksheet and provide detailed descriptions of the impacts as initially disclosed, new impacts and a discussion of the changes. The change in impact may be beneficial or adverse.

Transportation	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Land Use and Economics	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Acquisitions, Displacements, & Relocations	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Neighborhoods & Populations (Social)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Visual Resources & Aesthetics	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Air Quality	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Noise & Vibration	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Ecosystems (Vegetation & Wildlife)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Water Resources	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Energy & Natural Resources	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Geology & Soils	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hazardous Materials	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Public Services	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Utilities	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Historic, Cultural & Archaeological Resources	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Parklands & Recreation	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Construction	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Secondary and Cumulative	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Will the changed conditions or new information result in revised documentation or determination under the following federal regulations?

Endangered Species Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Magnuson-Stevens Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Farmland Preservation Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Section 404-Clean Water Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Floodplain Management Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CERCLA (Hazardous Materials)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Section 106 National Historic Preservation Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Uniform Relocation Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Section 4(f) Lands	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Section 6(f) Lands	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Wild & Scenic Rivers	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Coastal Barriers	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Coastal Zone	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Sole Source Aquifer	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
National Scenic Byways	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Other	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

If you checked yes to any of these, describe how the changes impact compliance and any actions needed to ensure compliance of the new project:

The 2010 Proposed Action would not result in changes in compliance with any of the above referenced federal regulations.

Will these changes or new information likely result in substantial public controversy?

Yes No

Comments: The 2010 Proposed Action has been presented at community meetings for the University Link project in December 2009 and April 2010. The Sound Transit Board of Directors heard briefings on the project in May and September 2010. The WSDOT published a draft report in October 2010 outlining recommendations for transit and non-motorized transportation improvements at the Montlake Triangle and solicited public comments. These forums for public input have not identified controversy over the project. Another outreach meeting in the neighborhood is scheduled for January 12, 2011.

COMMENTS: N/A

CONCLUSIONS AND RECOMMENDATIONS:

Upon review of the 2006 FSEIS and 2006 NEPA ROD, it is anticipated that the 2010 Proposed Action would not result in any additional significant adverse impacts beyond those identified in previous environmental documents for the Sound Transit North Link Light Rail Project. It is recommended that no further environmental evaluation is necessary.

LIST OF ATTACHMENTS:

- Attachment A – Re-Evaluation Worksheet Impact Chart;
- Attachment B – Current Sound Transit Pedestrian Access Design;
- Attachment C – Aerial Photo;
- Attachment D-1 – 2010 Proposed Action Overall Plan
- Attachment D-2 – 2010 Proposed Action Site Plan;
- Attachment E – Transportation Memorandum;
- Attachment F – USFWS Endangered Species Act List;
- Attachment G – NOAA Endangered Species Act List;
- Attachment H – Endangered Species Act List – Marine Mammals; and,,
- Attachment I – Endangered Species Act List – Marine Turtles.

SUBMITTED BY:

By signing this, I certify that to the best of my knowledge this document is complete and accurate.

Name _____	Date _____, 2010
Title Project Manager	

Submit two paper copies of this form, attachments, and a transmittal letter recommending a NEPA finding to the address below. Submit an electronic version to your area FTA Community Planner. Contact FTA at the number below if you are unsure who this is or if you need the email address. Modifications are typically necessary. When the document is approved, FTA may request additional copies.

Federal Transit Administration, Region 10
915 2nd Avenue, Suite 3142
Seattle, WA 98174-1002

phone: (206) 220-7954
fax: (206) 220-7959

For joint FTA, Sound Transit, FHWA and WSDOT projects, this form will substitute for the WSDOT Re-evaluation form.

Submitted by:

By signing this, I certify that to the best of my knowledge this document is complete and accurate.

Sound Transit

Name and Title	Date
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Approved by:

Federal Transit Administration

Name and Title	Date
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Submit two paper copies of this form, attachments, and a transmittal letter recommending a NEPA finding to the address below. Submit an electronic version to your area FTA Community Planner. Contact FTA at the number below if you are unsure who this is or if you need the email address. Modifications are typically necessary. When the document is approved, FTA may request additional copies.

Federal Transit Administration, Region 10
915 2nd Avenue, Suite 3142
Seattle, WA 98174-1002

phone: (206) 220-7954
fax: (206) 220-7959

Federal Highway Administration, Washington Division
711 South Capitol Way, Suite 501
Olympia, WA 98501

phone: (360) 753-9558
fax: (360) 753-9889

Attachment A

Re-Evaluation Worksheet Impact Chart

ATTACHMENT A – RE-EVALUATION WORKSHEET IMPACT CHART

Impact Category	Impacts as Initially Disclosed for the 2006 Alternative and FSEIS Alternatives	New Impacts from the 2010 Proposed Action	Change in Impacts
<p>Transportation (Refer to Attachment E for a detailed analysis of vehicular and pedestrian circulation conditions under the 2010 Proposed Action)</p>	<ul style="list-style-type: none"> Under the 2006 FSEIS Alternative, the NE Pacific Place/Montlake Boulevard intersection would operate at LOS F in the years 2015 and 2030. Adding a second westbound left-turn lane would improve operations to better than no-build conditions. Sound Transit will contribute a proportionate share of costs to improve this intersection (Pg. C-5, Section 2.1.3.1 in ROD). 	<ul style="list-style-type: none"> The NE Pacific Place/Montlake Boulevard intersection is not degraded based on current traffic growth forecasts; mitigation is not required for the 2010 Proposed Action. However, adding the second westbound lane with split phasing would reduce potential conflicts with pedestrians in the crosswalks and have other benefits. This intersection is expected to operate at LOS D or better with either lane configuration or signal phasing option. 	<ul style="list-style-type: none"> Impacts under the 2010 Proposed Action would be similar to the 2006 FSEIS Alternative. However, future volumes are expected to be lower than evaluated in the FSEIS, and the intersection would operate at an acceptable level of service (LOS D or better) without mitigation. The mitigation measure referenced in Section 2.1.3.1 of the ROD is no longer warranted.
	<ul style="list-style-type: none"> In the vicinity of the south station entrance, Sound Transit would provide sufficient facilities for pedestrian storage and capacity by improving and widening the crosswalks across Montlake Boulevard NE and NE Pacific Street, and provide sufficient pedestrian storage capacity on either the existing refuge/traffic island or the south end of the Montlake Triangle (Pg. C-6, Section 2.1.3.2 in ROD). 	<ul style="list-style-type: none"> Crosswalk widths and the pedestrian refuge island proposed for the 2006 Alternative are sufficient for and would be implemented under the 2010 Proposed Action. No further mitigation would be required. 	<ul style="list-style-type: none"> Impacts would be similar under the 2010 Proposed Action. This approach would fulfill the mitigation commitment stated in the Record of Decision.

	<ul style="list-style-type: none"> • At the University of Washington Station, Sound Transit would continue to work with local agencies to identify University of Washington Station design features to accommodate the increase in pedestrians associated with North Link. Design improvements such as reduced speed limit signs for bicycles, distinctive paving, or other improvements to enhance visibility and slow bicycle speeds along the Burke-Gilman Trail would be implemented as necessary to reduce the likelihood of pedestrian/bicycle collisions. <p>An unsignalized or signalized mid-block crossing of NE Pacific Place would be provided to help balance transportation needs. A station entrance or access point would be located north of NE Pacific Place with an extended pedestrian passage under or over NE Pacific Place and the Burke-Gilman Trail (Pg. C-6, Section 2.1.3.2 in ROD).</p>	<ul style="list-style-type: none"> • The proposed Rainier Vista land bridge would grade-separate the Burke-Gilman Trail from pedestrian crossings. It would also grade-separate the mid-block crossings on NE Pacific Place. 	<ul style="list-style-type: none"> • Development of the 2010 Proposed Action would reduce pedestrian and bicycle conflicts on the Burke-Gilman Trail, as well as reduce pedestrian, vehicle, and bicycle conflicts on NE Pacific Place. This approach would fulfill the mitigation commitment stated in the Record of Decision.
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	<ul style="list-style-type: none"> • Consistent with the FSEIS, the 2006 Alternative would feature a pedestrian bridge from the University of Washington Station over Montlake Boulevard, NE Pacific Place, and the Burke-Gilman Trail to provide a grade-separated and safe pedestrian access to bus transfers on the Montlake Triangle and to central campus and avoid impacts of a pedestrian at-grade crossing of the Burke-Gilman Trail in the vicinity of Rainier Vista (Pg. C-14, Section 2.17.2 in ROD). 	<ul style="list-style-type: none"> • The 2010 Proposed Action would maintain grade-separated access from the station to the Montlake Triangle and to campus via bridges over Montlake Boulevard NE, NE Pacific Place, and the Burke-Gilman Trail. The 2010 Proposed Action would also provide grade-separated access to campus across Montlake Boulevard NE for non-station pedestrian and bicycle traffic. 	<ul style="list-style-type: none"> • Similar to the 2006 Alternative, the 2010 Proposed Action features grade-separated access from the University of Washington Station to the Montlake Triangle and central campus and no change in impacts would be anticipated. The 2010 Proposed Action also includes enhanced bicycle facilities from the University of Washington Station and enhanced bus facilities on the Montlake Triangle when compared to the 2006 Alternative.
	<ul style="list-style-type: none"> • Consistent with the FSEIS, the 2006 Alternative would provide a pedestrian bridge from the University of Washington Station to the Central Campus area. Link riders would also be able to cross Montlake Boulevard at existing intersection crosswalks. The 2006 Alternative would improve these crosswalks and pedestrian queue areas. 	<ul style="list-style-type: none"> • Pedestrian travel times were analyzed for the 2010 Proposed Action and 2006 Alternative. The 2010 Proposed Action would have a slower walking time to Central Campus (11 seconds slower) than the 2006 Alternative. However, the 2010 Proposed Action would provide a faster pedestrian route to the Health Sciences complex (26 seconds faster) <p>Travel times to the UW Medical Center and bus transfer points would generally be the same for both the 2010 Proposed Action and 2006 Alternative.</p>	<ul style="list-style-type: none"> • Pedestrian access travel time was not evaluated in the 2006 FSEIS. The 2010 Proposed Action would provide slower pedestrian routes to the Central Campus area and faster pedestrian routes to the Health Sciences complex. Pedestrian travel times to the UW Medical Center and bus transfer points would generally be the same under the 2010 Proposed Action and 2006 Alternative (see Attachment E for additional discussion).

	<ul style="list-style-type: none"> • No transit mitigation is required for the project (Pg. 3-18 in FSEIS). The FSEIS notes that the quality of transfers has an impact on how negatively transfers are perceived by patrons (Pg. 3-14 in FSEIS). The FSEIS considered increased bus service and potential changes in bus travel patterns at the Montlake Triangle to serve increased demand from light rail; including relocated, new, and/or expanded bus stop and layover facilities at the Montlake Triangle as proposed by King County Metro in 2006 (Pgs. 3-16 and 3-50 in FSEIS). Options considered and depicted on the Station Access Plan (sheet 287 in FSEIS Appendix J) include expanded layover facilities along the south side of NE Pacific Place and/or the north side of NE Pacific Street where a taxi/short term drop-off area is currently located across from the University Medical Center. 	<ul style="list-style-type: none"> • The 2010 Proposed Action would provide relocated and/or improved bus stops on each leg of the Montlake Triangle (east-bound on NE Pacific Place; south-bound on Montlake Boulevard NE; and, west-bound on NE Pacific Street); and extended bus layover facilities along the south side of NE Pacific Place. The proposed improvements area consistent with those described in the FSEIS. 	<ul style="list-style-type: none"> • The 2010 Proposed Action would potentially have increased beneficial effects on transit service.
Visual Resources & Aesthetics	<ul style="list-style-type: none"> • Consistent with the FSEIS, any visual impacts associated with the 2006 Alternative would be localized and would result from the removal of landscape features. Design treatments would help integrate the station facilities into the landscape. 	<ul style="list-style-type: none"> • The station design would be similar and no buildings would be removed. 	<ul style="list-style-type: none"> • Impacts under the 2010 Proposed Action would be similar to the 2006 Alternative and FSEIS.

	<ul style="list-style-type: none"> • Visual impacts to parks and open space would be reduced or avoided under the 2006 Alternative (Pg. 4-55 and 4-56 in FSEIS). <p>(A build alternative also analyzed as part of the North Link SEIS included a station at Montlake/Rainier Vista. The Montlake/Rainier Vista alternative would be located beneath Rainier Vista between Stevens Way and NE Pacific Place. Station Entrances would be located beneath or adjacent to Rainier Vista and would be designed to avoid impacts to Rainier Vista. Development of the station would allow for the filling of the paved depression in Rainier Vista.)</p>	<ul style="list-style-type: none"> • The existing visual interruption of Rainier Vista by NE Pacific Place and the Burke-Gilman Trail would be eliminated by the creation of the land bridge and grade-separated trail and the filling of the paved depression in Rainier Vista. 	<ul style="list-style-type: none"> • The 2010 Proposed Action would have a beneficial impact by eliminating the existing visual interruption of Rainier Vista.
	<ul style="list-style-type: none"> • No scenic views (i.e. towards Mount Rainier or UW Campus along Rainier Vista) would be obstructed under the 2006 Alternative. The FSEIS notes that pedestrian pathways between the station and campus could be provided by bridges; that other pedestrian bridges currently exist in the area, and visual impacts are anticipated to be low (Pg. 4-56 in FSEIS). <p>(The Montlake/Rainier Vista Station alternative would require the removal of trees in and along the Rainier Vista area. Replacement trees would be provided in consultation with the University of Washington.)</p>	<ul style="list-style-type: none"> • Views along Rainier Vista would be enhanced with the filling of the paved depression and removal of trees in the Lower Vista area. <p>Construction of the land bridge over NE Pacific Place and the Burke-Gilman Trail would introduce a new visual element, but would not block views from Rainier Vista.</p> <p>A pedestrian and bicycle access bridge would also be constructed from the University of Washington Station over Montlake Boulevard NE and would connect at the northeast corner of the Montlake Triangle. It is anticipated that views towards Mount Rainier and the UW Campus from Rainier Vista would not be affected with the bridge.</p>	<ul style="list-style-type: none"> • The 2010 Proposed Action would enhance views along Rainier Vista with the filling of the paved depression and removal of existing trees. <p>Similar to the 2006 Alternative, no impacts to views of Mount Rainier and the UW Campus from Rainier Vista would be anticipated.</p>

<p>Parklands & Recreation</p>	<ul style="list-style-type: none"> As evaluated in the FSEIS, potential conflicts could occur between transit riders from the University of Washington Station who use or cross the Burke-Gilman Trail and recreational users of the trail. The current design and ROD commitment provides a grade-separated crossing of the trail (Pg. C-14, Section 2.17.2 in ROD). 	<ul style="list-style-type: none"> The 2010 Proposed Action implements the grade-separated crossing as stipulated in the 2006 NEPA ROD, but with a different configuration than under the current design. The grade-separation of the Burke-Gilman Trail would eliminate the existing conflicts between pedestrians using Rainier Vista and pedestrians/bicycles using the Burke-Gilman Trail. <p>Intersecting volumes along the Burke-Gilman Trail would be highest to the southwest of the proposed land bridge. However, the volume is anticipated to be lower under the 2010 Proposed Action than the 2006 Alternative and as evaluated in the FSEIS due to additional routes that are provided to NE Pacific Street from the Montlake Triangle.</p> <p>Trail capacity and user's perceived level of service (LOS) would be improved under the 2010 Proposed Action (see Attachment E for additional discussion).</p>	<ul style="list-style-type: none"> The 2010 Proposed Action would implement the grade-separated crossing stipulated in the 2006 NEPA ROD and would eliminate the existing conflicts between pedestrians at Rainier Vista and users of the Burke-Gilman Trail. Trail users may experience lower intersecting volumes and improved level of service (LOS) greater than that expected under the 2006 Alternative and FSEIS.

<p>Construction</p>	<ul style="list-style-type: none"> Noise, vibration, dust, and traffic would result from construction activities under the 2006 Alternative. Partial lane closures would be required that could affect traffic on Montlake Boulevard NE and in the vicinity. Construction activities would also require a temporary detour of the Burke-Gilman Trail. 	<ul style="list-style-type: none"> Construction activities would produce noise, vibration, dust, and traffic. Partial lane closures on NE Pacific Place would affect traffic and a temporary detour of the Burke-Gilman Trail would be required. 	<ul style="list-style-type: none"> Impacts from construction activities would be similar under the 2010 Proposed Action. Construction of the 2010 Proposed Action would be shorter in duration than the entire construction period for the Link Light Rail Station, but would cumulatively result in increased construction activity for a period of approximately 12 months in the site vicinity.
	<ul style="list-style-type: none"> Trees and other landscaping would be removed on the site that could temporarily affect the visual landscape of the area. Cranes could be used during construction and could affect views from Rainier Vista. <p>(The Montlake/Rainier Vista Station alternative would require the removal of trees in and along the Rainier Vista area.)</p>	<ul style="list-style-type: none"> Approximately 29 Cherry trees in Lower Rainier Vista and the existing Leyland cypress grove in the Montlake Triangle would be removed; associated landscaping would also be removed onsite. 	<ul style="list-style-type: none"> Impacts to trees and landscape would be similar to the FSEIS under the 2010 Proposed Action.
	<ul style="list-style-type: none"> Dewatering could be required to remove water from the construction area. Temporary shoring could also be required to provide ground water control and restrict soil movement. 	<ul style="list-style-type: none"> Dewatering could be required during construction onsite. Temporary and/or permanent shoring and retaining walls would be provided. 	<ul style="list-style-type: none"> Impacts under the 2010 Proposed Action would be similar to the FSEIS.

	<ul style="list-style-type: none"> • Under the 2006 Alternative, construction activities would generate large amounts of excavation spoils for tunnels and underground stations and could produce vibration and settlement. The FSEIS indicates that construction of North Link between downtown and the University of Washington would require between 1,290,000 and 2,010,000 cubic yards of excavated material. Implementation of mitigation measures would minimize the potential for impacts (Pg. 4-217 in FSEIS). 	<ul style="list-style-type: none"> • The existing paved depression in Rainier Vista would be filled; NE Pacific Place and a portion of the Burke-Gilman Trail would be lowered; a land bridge would be constructed to span NE Pacific Place and a portion of the trail; and site grades in the Montlake Triangle would be raised to meet the land bridge. <p>Construction of the 2010 Proposed Action would require earthwork on Montlake Triangle, lowering NE Pacific Place and filling the Rainier Vista depression). Approximately 16,000 cubic yards of material would be excavated from the lowering of NE Pacific Place. As possible, a portion of this material (approximately 7,700 cubic yards) could be used as part of the construction to fill the paved depression in Lower Rainier Vista. Excess or unusable spoils would require offsite disposal.</p>	<ul style="list-style-type: none"> • Construction under the 2010 Proposed Action would also generate large amounts of spoils; however, some of these spoils could be used as fill for the paved depression in Rainier Vista. The additional amount of excavation needed for the 2010 Proposed Action is relatively minor and well within the range of quantities estimated in the FSEIS (approximately 1 percent change in the overall volume estimated in the FSEIS for the light rail project segment).
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	<ul style="list-style-type: none"> • Consistent with the FSEIS, partial, 24-hour lane closures of Montlake Boulevard would be required to construct an underground or overhead pedestrian crossing under the 2006 Alternative. Construction of the underground or overhead pedestrian connection to Rainier Vista would also require temporary closures of NE Pacific Place and the Burke-Gilman Trail (Pg. 4-186 in FSEIS). 	<ul style="list-style-type: none"> • Partial lane closures of NE Pacific Place would be required during construction. Traffic flow around the Montlake Triangle would require that the northeast bound lane on NE Pacific Place remain open during daytime hours. The southwest bound lane on NE Pacific Place could be closed during daytime hours provided that a detour is implemented. Temporary full closures of NE Pacific Place could also occur during nighttime hours. The closure of all lanes during the evening would also require additional mitigation measures, such as approvals from King County Metro and Seattle Department of Transportation, secure police officer control for the Montlake Boulevard NE/NE Pacific Street intersection, and proposed detour routes, signage and coning (refer to Attachment E for further details on mitigation measures). <p>Construction of the pedestrian and bicycle access bridge over Montlake Boulevard NE could affect through traffic lanes. While the method of construction has not been determined for the bridge at this time, a Maintenance of Traffic (MOT) plan would be required during construction and two through lanes in each direction on Montlake Boulevard NE would be maintained during peak traffic hours (refer to Attachment E for further details on construction traffic).</p>	<ul style="list-style-type: none"> • Traffic-related construction impacts would be similar to the FSEIS under the 2010 Proposed Action due to the partial lane closures of NE Pacific Place and potential impacts to through traffic lanes on Montlake Boulevard NE. As in the FSEIS, partial lane closures during non-peak hours would not result in significant impacts.
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	<ul style="list-style-type: none"> • The FSEIS notes that construction activities would require a temporary detour of the Burke-Gilman Trail (Pg. 4-232 in FSEIS). 	<ul style="list-style-type: none"> • The Burke-Gilman Trail would remain open during construction, with a temporary trail detour provided as close to the existing alignment as possible. 	<ul style="list-style-type: none"> • Construction impacts to the Burke-Gilman Trail would be similar to the FSEIS under the 2010 Proposed Action. Although the duration of the trail detour could be longer than under the 2006 Alternative, the impacts would not be significant.
	<ul style="list-style-type: none"> • Construction period effects on bus transit service may include temporary rerouting, relocation of trolley wires, or temporary use of non-trolley buses (Pg. 4-184 and 4-189 in FSEIS). 	<ul style="list-style-type: none"> • Construction of the 2010 Proposed Action would likely require temporary relocation of trolley wires to maintain bus service at the Montlake Triangle. Short-term use of diesel buses would be required when access to overhead trolley wire is not available or needs to be de-energized. 	<ul style="list-style-type: none"> • Construction period effects on local bus service at the Montlake Triangle would be similar to the FSEIS under the 2010 Proposed Action.
Secondary and Cumulative	<ul style="list-style-type: none"> • The 2006 Alternative would provide a fast and convenient alternative to the automobile. A reduction in the use of cars would lessen the need for parking facilities, reduce energy use, and enhance air quality. 	<ul style="list-style-type: none"> • Development of the 2010 Proposed Action would provide enhanced, convenient access to transit. 	<ul style="list-style-type: none"> • Impacts would be similar under the 2010 Proposed Action and would enhance access to transit.
	<ul style="list-style-type: none"> • Major development projects, as identified in the FSEIS (e.g. the Husky Stadium Renovation), could potentially worsen traffic; however, it is also likely that future transportation projects (e.g., the SR 520 Bridge Replacement and HOV project) could produce more reliable and improved traffic. Increased access from future transportation projects could also accelerate development in the vicinity of those projects (Pg. 4-235 and 4-238 in FSEIS). 	<ul style="list-style-type: none"> • The 2010 Proposed Action would provide increased access to transit that would help to accommodate future development in the area. The 2010 Proposed Action would not be anticipated to accelerate potential future development. It is anticipated that the Husky Stadium Renovation would be complete prior to the lowering of NE Pacific Place under the 2010 Proposed Action. It is also anticipated that the lowering of NE Pacific Place would be completed prior to construction of other improvements in the Montlake Boulevard corridor associated with the SR 520 project. 	<ul style="list-style-type: none"> • Development of the 2010 Proposed Action would accommodate future development, but would not accelerate potential future development.

	<ul style="list-style-type: none"> • Cumulative construction impacts would include temporary increases in construction noise and vibration; traffic congestion and delays; dust and vehicle emissions; impacts to wildlife and ecosystems; fire and police response times; and utility service interruptions. 	<ul style="list-style-type: none"> • Development under the 2010 Proposed Action would contribute to the cumulative temporary construction impacts in the area. 	<ul style="list-style-type: none"> • Cumulative temporary construction impacts would be similar under the 2010 Proposed Action.

Attachment B

Current Sound Transit Pedestrian Access Design

Attachment B - Current Sound Transit Pedestrian Access Design



Attachment C

Aerial Photo



Source: Blumen Consulting Group, 2010.

 - Project Site



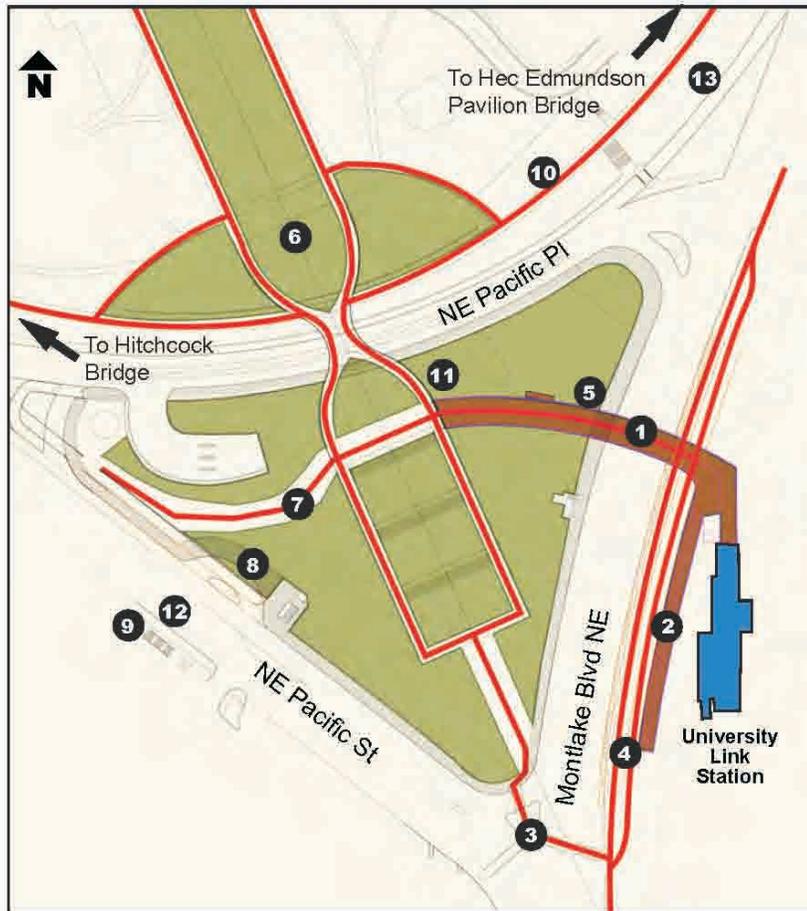
UW to Sound Transit U-Link
Pedestrian Connection Project

Attachment C
Aerial Photo

Attachment D-1

2010 Proposed Action Overall Plan

PROPOSED PLAN



LEGEND:

- Bike/ped bridge
- Rainier Vista landscape area
- Bike/ped path

Note: The Montlake Triangle Project (MTP) is comprised of the University of Washington Station (UWS) and Rainier Vista Land Bridge (RVLB).

Elements included in term sheet by definition

University of Washington Station (UWS)

- 1 30- to 34-foot-wide bridge to the Montlake Triangle from the University Link Station.
- 2 Bicycle access ramp west of the Station.
- 3 At-grade enhancements at NE Pacific Street and Montlake Boulevard NE intersections.
- 4 Side-by-side paths for bicycles and pedestrians on the east side of Montlake Boulevard NE.
- 5 Stairs and elevators to Montlake Boulevard.

Rainier Vista Land Bridge (RVLB)

- 6 Implementation of Rainier Vista design, including lowered Pacific Place and expansion of bus layover space.
- 7 Connection to NE Pacific Street bus stop.
- 8 Relocated and improved bus stop.
- 11 Enhanced pedestrian/bicycle connections between bridge and Burke-Gilman trail.

Other elements not included in term sheet for future consideration:

- 9 Improved bus stop.
- 10 Widened Burke-Gilman Trail between Hec Edmundson Pavilion Bridge and the Hitchcock Bridge.
- 12 Additional Pacific Street crosswalk.
- 13 Modified Montlake Boulevard to NE Pacific Place right turn, including pedestrian/bicycle connection to Burke-Gilman Trail crossing NE Pacific Place.

Source: GGN, 2010. Modified by Blumen Consulting Group, 2010.



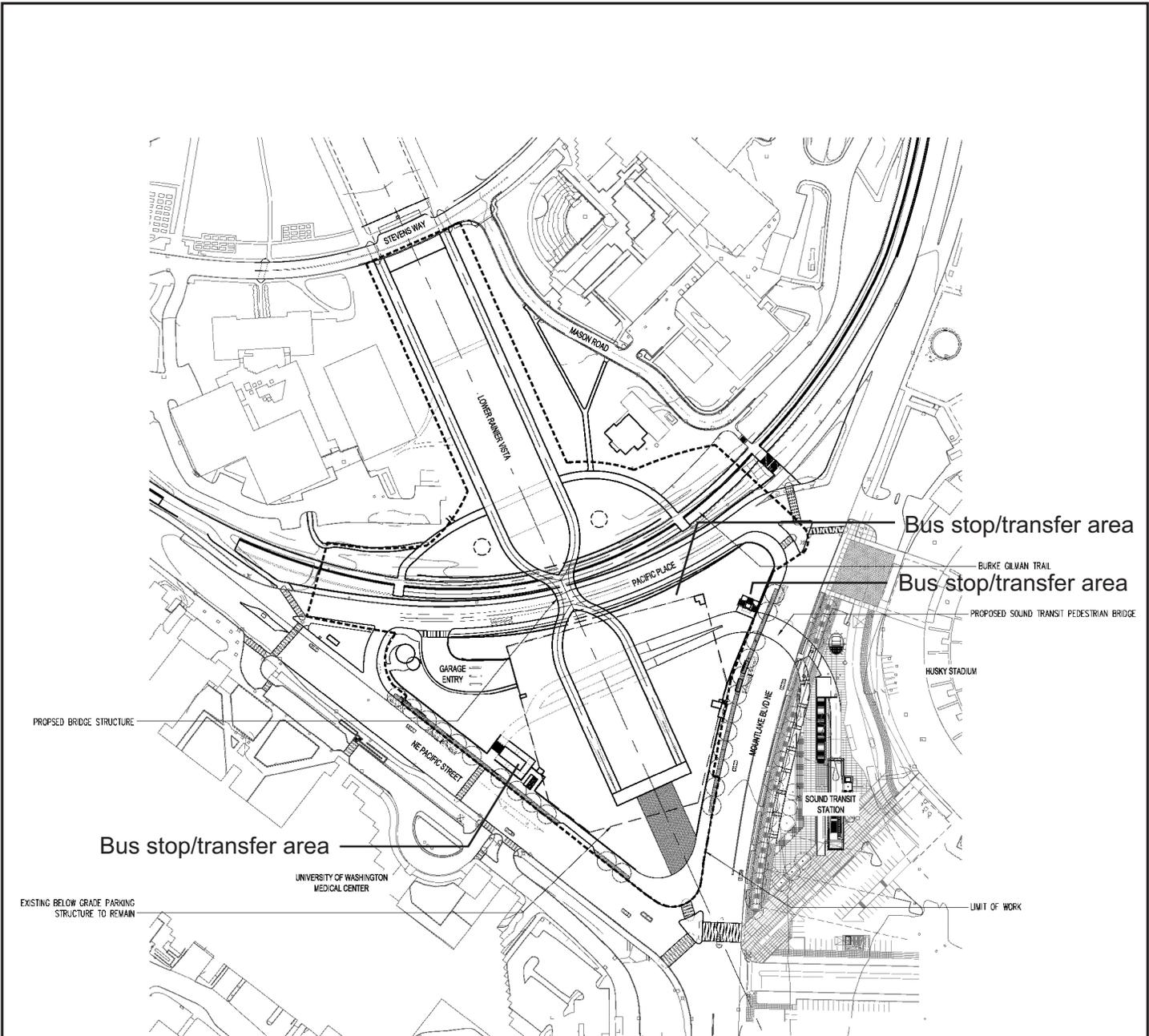
**UW to Sound Transit U-Link Pedestrian
Connection Project
Sound Transit North Link
Light Rail Project**

Attachment D-1

**2010 Proposed Action
Overall Plan**

Attachment D-2

2010 Proposed Action Site Plan



Source: GGN, 2010. Modified by Blumen Consulting Group, 2010.



**UW to Sound Transit U-Link Pedestrian
Connection Project
Sound Transit North Link
Light Rail Project**

**Attachment D-2
2010 Proposed Action
Site Plan**

Attachment E

Transportation Memorandum

TECHNICAL MEMORANDUM

Project: North Link FSEIS Addendum
2010 Proposed Action for University of Washington Station
Montlake Triangle Project

Subject: Traffic Operations Analysis and
Construction Transportation Analysis

Date: December 1, 2010

Author: Marni C. Heffron, P.E., P.T.O.E.

This Technical Memorandum presents detailed traffic analysis to determine the effect of changing the proposed pedestrian access to the University of Washington's Link Light Rail Station. In addition, it evaluates potential construction-related impacts of building the proposed project.

1. Project Description

The Sound Transit North Link Final Supplemental Environmental Impact Statement was issued in April 2006 (referred to herein as 2006 FSEIS). The 2006 FSEIS identified a Preferred Alternative (referred to herein as 2006 Alternative) for the North Link of Sound Transit's route through Seattle that included a station at University of Washington, on the east side of Montlake Boulevard, near Husky Stadium. The University of Washington Station identified in the 2006 FSEIS included a grade-separated pedestrian crossing of Montlake Boulevard, via a tunnel or bridge, with an option for an extended tunnel or bridge across NE Pacific Place and the Burke-Gilman Trail to provide access to the Rainier Vista corridor and central campus. Due to concerns about increased volumes of pedestrians crossing the Burke-Gilman Trail, Sound Transit and FTA committed to developing a grade-separated crossing of the trail and NE Pacific Place, via either a tunnel or bridge, to maintain connectivity between the University of Washington Station and the campus. This mitigation measure is documented in the NEPA Record of Decision (ROD) issued in June 2006.

Subsequent to issuance of the FSEIS and ROD in 2006, Sound Transit, the University of Washington and the Seattle Department of Transportation evaluated various options for pedestrian connections between the University of Washington Station (near Husky Stadium) and central campus as part of the University of Washington Station Final Design. The current design, referred to herein as the **2006 Alternative**, proposes a 670-foot long¹ grade separated pedestrian bridge across Montlake Boulevard, NE Pacific Place, and the Burke-Gilman Trail. The bridge would extend from the top of the escalator at

¹ Length of pedestrian bridge was measured from the 100% Submittal of the Sound Transit Link Contract U250/UW Station Finishes (1/15/10). The bridge length was measured from the top of the escalator to the at grade landing near Rainier Vista.

the University of Washington Link Light Rail Station to central campus near the Rainier Vista corridor. The bridge would also include stairs and elevator access from the bridge to the northeast portion of the Montlake Triangle (see Figure 1).

The **2010 Proposed Action** refines and incorporates certain modifications to the 2006 Alternative, primarily related to the pedestrian connections between the University of Washington Station, Rainier Vista and central campus. In general, the 2010 Proposed Action would implement the pedestrian bridge crossing of Montlake Boulevard NE, NE Pacific Place and the Burke-Gilman Trail evaluated in the 2006 SFEIS with a grade-separated pedestrian access consisting of the following:

- A pedestrian and bicycle access bridge over Montlake Boulevard NE that would connect the University of Washington Station to the Montlake Triangle, including:
 - An approximately 30- to 34-foot wide, 95-foot long bridge from the University of Washington Station over Montlake Boulevard NE to the Montlake Triangle;
 - Stairs and an elevator from the proposed bridge to the Montlake Triangle on the west side of Montlake Boulevard NE to facilitate transfers to local King County Metro bus service;
 - A bicycle ramp located between the University of Washington Station and Montlake Boulevard NE that would provide access to the bridge; and,
 - Side-by-side at-grade paths for bicycles and pedestrians located between the University of Washington Station and Montlake Boulevard NE.
- The Montlake Triangle would be improved with the following:
 - New landscaping and pedestrian/bicycle facilities to connect the University of Washington Station with Rainier Vista and central campus; enhance the Montlake Triangle as an entry to campus; and provide pathways to bus transfers on the Montlake Triangle;
 - A relocated and improved west-bound bus stop on the Montlake Triangle along NE Pacific Street with an extended bus zone for transit coaches and shelters for riders;
 - An improved south-bound bus stop on the west side of Montlake Boulevard NE just south of NE Pacific Place; and,
 - An improved east-bound bus stop on the south side of NE Pacific Place.
- A landscaped land bridge over a lowered NE Pacific Place and a modified Burke-Gilman Trail.
 - NE Pacific Place would be lowered approximately 20 feet to allow vehicles to pass under the land bridge. All existing vehicle lanes and King County Metro transit facilities would be accommodated, and the unsignalized mid-block crosswalks eliminated. Existing Metro transit facilities would be improved within the lowered NE Pacific Place to include: expanded bus layover area, bus shelters with lighting, trolley poles with overhead wires, street lights, sidewalk improvements, and way-finding signage.
 - The Burke-Gilman Trail in the vicinity of the land bridge would be improved to grade-separate the Burke-Gilman Trail from Rainier Vista. Through the project area, the Burke-Gilman Trail would be widened to provide a 14-foot wide pedestrian and bicycle path. Two-foot wide gravel shoulders would be provided at the edges of the path. Design of the trail would not preclude future widening by the University for a total trail width of 30-feet. The new trail would be constructed parallel to the lowered NE Pacific Place under the land bridge, although the elevation of the trail would be above the roadway to minimize the grades on the trail. Two connecting paths would be provided linking the Burke-Gilman Trail

with Rainier Vista to provide access to central campus. The new trail section would transition both in grade and alignment to meet the existing trail section east and west of the Montlake Triangle intersections (NE Pacific Place/NE Pacific Street; NE Pacific Place/Montlake Boulevard NE).

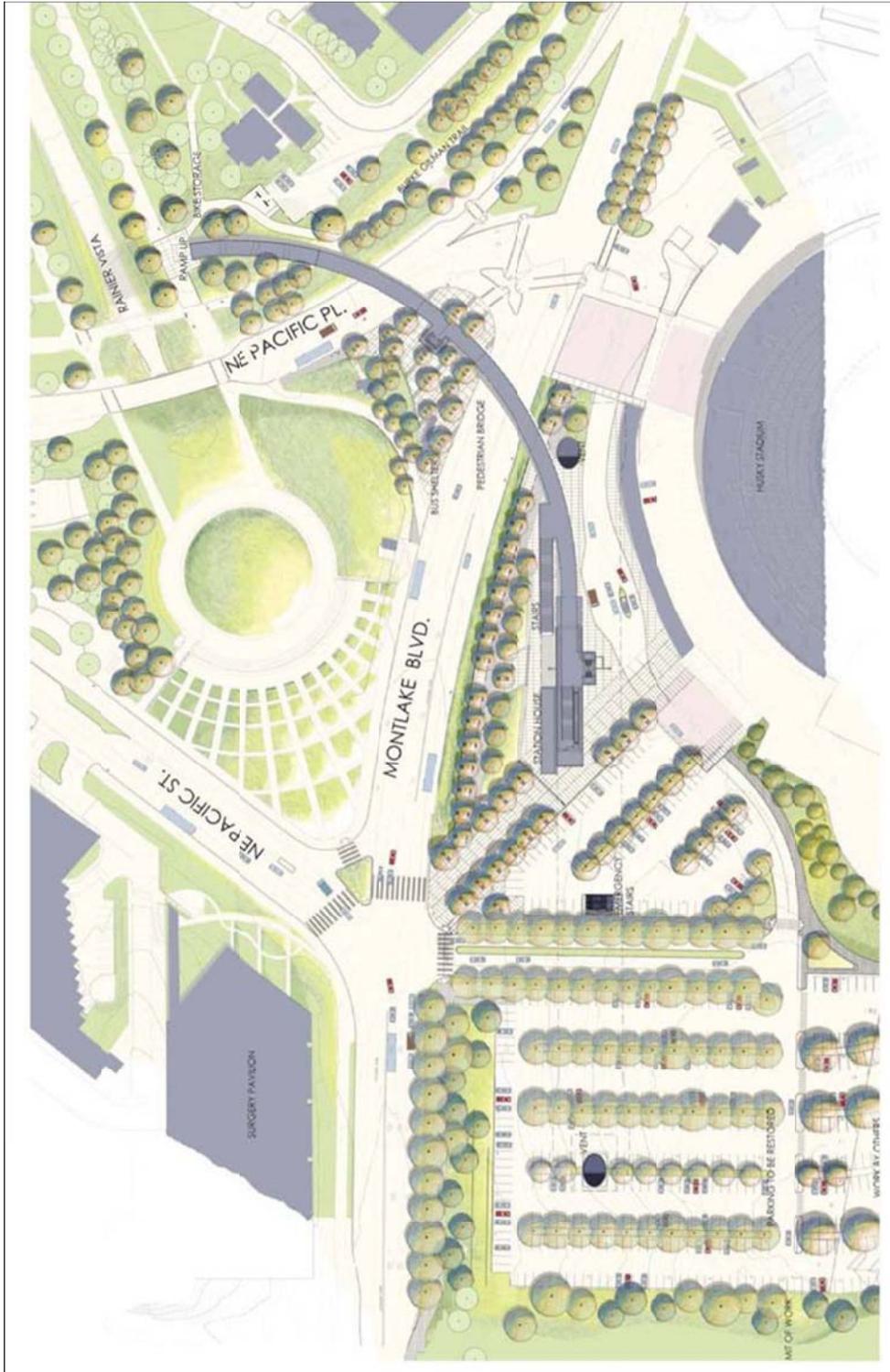
- The land bridge would be an hour glass shape to minimize the width of the land bridge over NE Pacific Place and the Burke-Gilman Trail. The width of the bridge would range from approximately 35 feet in the center to approximately 100 feet at the north and south ends.
- Improvements to the Lower Rainier Vista to enhance pedestrian connections between the University of Washington Station and the central campus.
 - Filling of the existing Rainier Vista depression located immediately north of NE Pacific Place with construction spoils associated with the lowering of NE Pacific Place and/or construction of the University of Washington Station. The filling of this depression is intended to provide a larger and more welcoming pedestrian environment.
 - Removal of the existing cherry trees² in the Lower Rainier Vista to eliminate the confinement and partial view blockage they produce.
 - Provision of new landscaping and pedestrian paths.
- Provision of new ADA accessible pathways to accommodate pedestrians along the Montlake Triangle and Rainier Vista to central campus.

Figures 1 and 2 illustrate the two conditions evaluated.

The 2010 Proposed Action would be designed to be compatible with other future transportation projects in the area. A bicycle ramp would be constructed on the west side of the light rail station connecting to the new pedestrian bridge. In the future, this bicycle ramp would be connected to the new bicycle/pedestrian path on the east side of the second Montlake Boulevard Bascule Bridge that is proposed as part of the SR 520 Preferred Alternative³. In addition, new pedestrian paths would be constructed linking Rainier Vista and the Montlake Triangle to NE Pacific Street. The City of Seattle is considering changes to the existing traffic signal on NE Pacific Street at the UW Medical Center's East Driveway so that pedestrians could cross the street at this signal. These future projects are not a part of the 2010 Proposed Action.

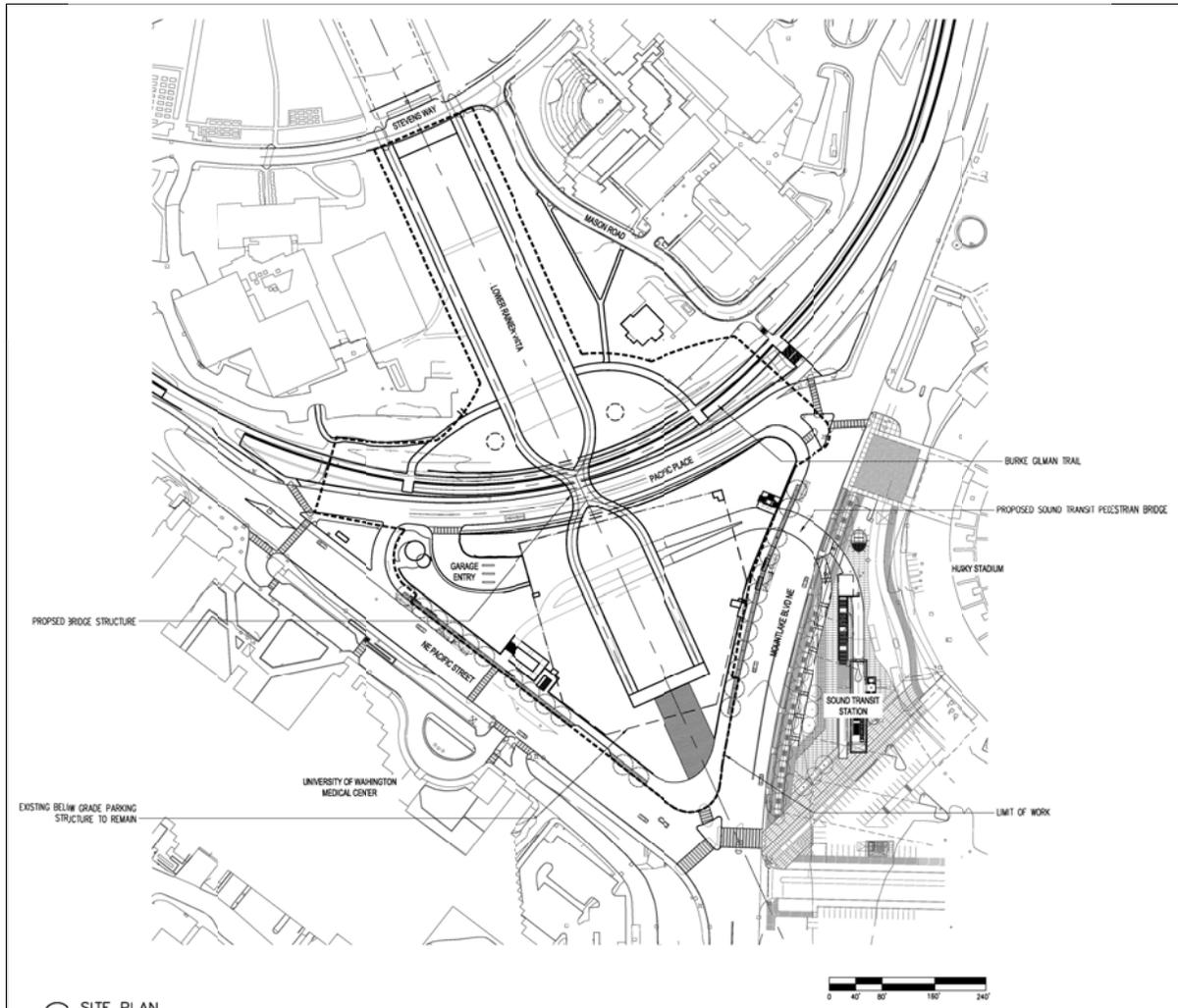
³ Washington State Department of Transportation, April 29, 2010.
See www.wsdot.wa.gov/News/2010/04/29_SR520PreferredAlternative.htm

Figure 1. 2006 Alternative



Source: Sound Transit.

Figure 2. 2010 Proposed Action



Source: Gustafson Guthrie Nichol Ltd, November 2010.

2. Pedestrian Operations

This section describes how the 2010 Proposed Action would change pedestrian operations compared to the 2006 Alternative. It also presents information related to Sound Transit passenger volumes and how those passengers will disperse to the University of Washington campus and/or transfer to local King County Metro bus service.

Background Pedestrian Volumes

Existing pedestrian and bicycle counts were performed in the vicinity of the University of Washington Station on September 30, 2008. These volumes were then projected to year 2030 assuming a compound annual growth rate of 1% per year. These are the background pedestrian volumes that would use the crosswalk locations for the No Build Alternative (if Link were not built), and are summarized in Table 1.

Sound Transit Passenger Volumes

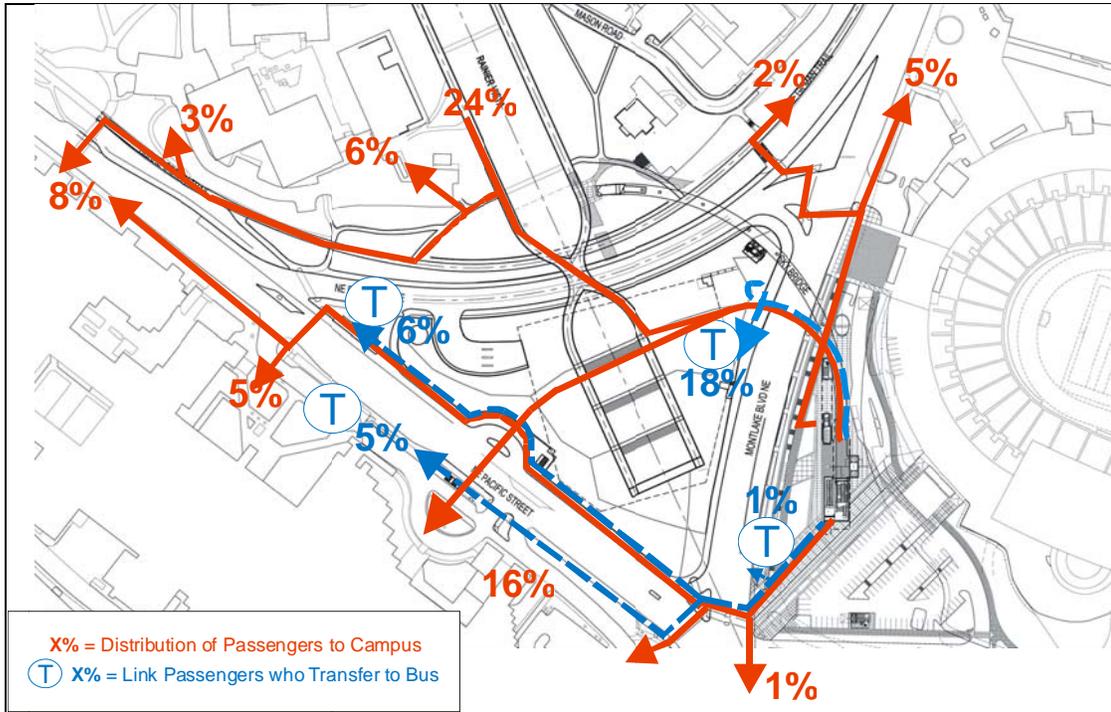
The number of Link passengers that could cross at various locations was derived from information in the *University of Washington Station Pedestrian and Bicycle Evaluation* (Grijalva Engineering, December 2008).⁴ This report was prepared for Sound Transit and evaluated pedestrian needs associated with the bridge proposed to implement the 2006 Alternative. The pedestrian volumes were based on the projected number of passenger boardings at the University of Washington station and estimates about the potential destinations of those passengers. This analysis uses the 2030 passenger boarding projections with the Link light rail line completed between S 200th Street and Northgate—5,950 passenger peak hour boardings at the University of Washington Station.⁵ As described in the next section of this report, all pedestrian analyses were performed for the peak passenger volumes that can exit the station in a one-minute period. This volume is constrained by the station's escalator and elevator capacity. Therefore, even if passenger volumes were to increase in the future (e.g., with future extensions of the light rail line to Lynnwood), the maximum passenger flow to the station above ground plaza cannot increase.

The pedestrian volumes were distributed to various walking routes based on the trip distribution pattern originally prepared for the *University of Washington Station Pedestrian and Bicycle Evaluation*. The end destinations are the same for all of the alternatives evaluated; however, some of the pedestrian volume is expected to change to follow the most convenient path. The peak period distribution pattern for the 2010 Proposed Action is shown on Figure 3. Table 1 compares the commuter peak hour pedestrian volumes for various routes and facilities for the 2006 Alternative and the 2010 Proposed Action.

⁴ Updated volumes were presented in a separate spreadsheet from Sound Transit (January 11, 2009).

⁵ When the University of Washington Station first opens in 2016, it would be the interim end of the line. At that time, the station is expected to have 4,730 peak hour boardings. Therefore, the 5,950 boardings projected once the line is extended represent the worst-case condition.

Figure 3. Peak Distribution Pattern for Link Passengers
 UW Station Terminus, 2010 Proposed Action



Source: Sound Transit Link Ridership Forecast and Distribution, January 2009. Reassigned to routes by Heffron Transportation.

**Sound Transit North Link FSEIS Addendum, Montlake Triangle Project
Traffic Operations Analysis and Construction Transportation Analysis**

Table 1. Peak Hour Pedestrian Crossing Volumes - Year 2030 with 200th to Northgate

Origin & Destination of Pedestrians	Year 2030 No Build Alt. Peds & Bikes ^b	Additional Peds per Hour to/from Link Station	
		2006 Alternative Original Pedestrian Bridge ^a	Proposed Action ^c New Bridge + Rainier Vista
Station Platform	0	5,950	5,950
Pedestrian Bridge (Station to Rainier Vista)	0	3,240	3,470
Pedestrian Bridge West-side Stair/Elevator (to Northeast corner of Triangle)	0	700	700
Montlake Blvd/Pacific Street Intersection			
North Leg (Montlake Blvd)	570	1,250	1,020
West Leg (Pacific Street)	360	1,070	880
Northwest Corner (Island to Triangle)	310	180	140
East Leg (Parking Lot Driveway)	410	60	60
Montlake Blvd/Pacific Place Intersection			
South Leg (Montlake Blvd)	80	340	340
West Leg (Pacific Place)	20	0	0
East Leg (Husky Stadium Driveway)	140	300	300
Future Mid-Block Crossing of Pacific Street^d	Unknown	Not Applicable	230
Pacific Street/Pacific Place Intersection			
East Leg (Pacific Street to Med Center)	560	300	260
North Leg (Pacific Place)	340	0	0
Pacific Place Mid-Block Crossings	200	90	0

- a. Source: Sound Transit, derived from University of Washington Station Pedestrian and Bicycle Evaluation (Grijalva Engineering, December 2008). Volumes in the Sound Transit spreadsheet dated January 11, 2009 were used except as noted. It assumes the complete Link light rail corridor from S 200th Street to Northgate. Year 2030 volumes at the station plaza are higher than the 2016 condition with the University Station as the interim terminus.
- b. Projected from existing pedestrian and bicycle counts performed on September 30, 2008 for the above referenced study.
- c. Pedestrian volumes were reassigned to different routes by Heffron Transportation, Inc. based on information about the on-campus origins and destinations of Link commuters.
- d. Future pedestrian crossing would be added to existing signal. This is not a part of the 2010 Proposed Action.

Passenger Surges

Passengers who arrive at the University of Washington Station by Link light rail train will exit the station in surges.⁶ Sound Transit had estimated the hourly number of passengers during the peak commute hours as well as the number of passengers expected on the peak train. These estimates are summarized in Table 2 for the year 2016 condition, when the University of Washington Station would be the north terminus of the Link line, and the year 2030, when the line would be extended to Northgate. This shows that in the year 2030, the station would generate 5,950 passenger trips per hour with 384 passengers on the peak train. In the morning, 278 of these passengers would arrive by train and exit the station and 106 would enter the station to take the train elsewhere. In the afternoon, these peak directions would be reversed, but the volumes are assumed to be identical.

Trains are expected to operate with five-minute headways (time between consecutive arrivals) in both directions, which provides passengers the luxury of not having to use a schedule. Passengers who take the train elsewhere from the University of Washington would likely walk to the station in a steady flow with the peak train's volume spread evenly over the five minutes between trains. However, passengers who arrive on the peak train would exit the station in a surge. It is expected that it could take three minutes for all of a train's passengers to reach the station plaza from the platforms. It is possible that higher passenger volumes or a faster exit rate could occur; therefore, the maximum surge volume was evaluated. The maximum volume that can exit the station in a one-minute period will be constrained by the capacity of the station's escalators and elevators. Sound Transit has conservatively estimated that the escalators could accommodate up to 198 passengers per minute, and the elevator could accommodate 20 passengers per minute for a total of 218 passengers.⁷ No similar surge in the number of passengers that enter the station is expected except immediately following special events such as a Husky football or basketball games. The average number of passengers per minute and the peak passengers per minute are summarized in Table 2. Pedestrian analyses performed for sidewalks and bridges assumed the "peak passengers per minute."

⁶ Sound Transit refers to "arrivals" and "departures" for the train portion of the trip. Arrivals are those who have arrived at the station by train, and then exit the station to reach the UW campus. Departures are the reverse trip. For clarity, this analysis will use the terms "Enter Station" and "Exit Station" to refer to the pedestrian direction at the station plaza.

⁷ Source: Sound Transit, 2009. Calculations in "UWS - Elevator Escalator Passenger Metering__031809.xls" Escalator rate based on mezzanine and escalator walking speed of 3 feet/sec Patrons were assumed to stand 2 abreast on one tread followed by 1 person on the next tread followed by 2 abreast then 1 person, in a continuing pattern. Elevator was assumed to operate at two-thirds of its theoretical capacity.

Table 2. Peak Passenger Volumes at University of Washington Station

Condition	Passengers per Hour	Peak Morning Train		Peak Afternoon Train	
		Enter Station	Exit Station	Enter Station	Exit Station
Year 2016 with UW Station as North Terminus ^a	4,730	107	213	213	107
Year 2030 With Northgate as Terminus ^a	5,950	106	278	278	106
Average Passengers per Minute – Year 2030 ^b		21	139	56	53
Peak Passengers per Minute – Year 2030^c		21	218	56	106

- a. *Source: University of Washington Station Pedestrian and Bicycle Evaluation (Grijalva Engineering, December 2008). Updated volumes were presented in a separate spreadsheet from Sound Transit (January 11, 2009).*
- b. *Assumes passengers who enter the station would arrive steadily over the 5-minute period between trains, and that passengers who exit the station would depart within 3 minutes.*
- c. *Assumes that volumes are constrained in practice to an estimated 218 passengers per-minute (198 passengers per minute on the two escalators and 20 passengers per minute in the elevator) delivered by the station's vertical transportation system.*

On Street Pedestrian Facility Needs (Crossings and Sidewalks)

The 2010 Proposed Action is expected to decrease the number of pedestrians who cross Montlake Boulevard at-grade compared to the 2006 Alternative (see Table 1). However, the facilities serving these pedestrians—including the crosswalks, sidewalks, and pedestrian queuing islands—will be the same as previously designed. Therefore, no additional impacts to the intersection crossing are expected.

Bridge Width and Level of Service

The 2006 Alternative proposed a 16-foot wide pedestrian bridge⁸ that would have extended about 670 feet between the station and Rainier Vista northwest of the Burke Gilman Trail. The 2010 Proposed Action would replace that bridge with a 30- to 34-foot wide bridge that spans 95-feet from the station to the Montlake Triangle.

Pedestrian level of service on each bridge option was rated using Equation 18-2 in the Highway Capacity Manual (TRB, 2000) and assuming the flow rate thresholds in Exhibit 18-3 *Average Flow LOS Criteria for Walkways and Sidewalks*. The peak one-minute surge volumes exiting and entering the station during the morning commuter were evaluated. As previously shown in Table 2, the station would generate a peak surge of 218 passengers per minute exiting the station and 21 passengers per minute entering the station during this period. For the 2006 Alternative, an estimated 66% of these passengers (or 158 per minute) were expected to use the long pedestrian bridge; for the 2010 Proposed Action, an estimated 70% of the passengers (or 168 per minute) are expected to use the short bridge to the Montlake Triangle.

Based on the LOS Criteria, the bridge in the 2006 Alternative would operate at LOS D; the bridge in the 2010 Proposed Action would operate at LOS B. However, the new bridge would be connected to a bicycle ramp that would add traffic to the bridge. It is assumed that a separate bicycle path would be

⁸ Per the *Link Contract U250, UW Station Finishes, General Bridge Plan & Elevations, Sheet 1*, Approved Plan, January 15, 2010.

striped on the bridge, so even if bicycle volumes are relatively low during peak passenger surges, the bicycle area on the bridge may not be used by pedestrians. The bicycle area could be 10 to 12-feet wide, and the remaining area reserved for pedestrians (18 to 20 feet) would operate at LOS C. Based on this analysis, the bridge in the 2010 Proposed Action would operate at a better level of service and provide a better facility for bicycles than the 2006 Alternative.

3. Traffic Operations Impacts

Changes proposed as part of the 2010 Proposed Action would not affect the number of trips or passengers generated by the University of Washington Station, nor would it affect traffic patterns in the site vicinity. The number of pedestrians who would cross Montlake Boulevard at-grade is expected to be less than previously assumed for the 2006 Alternative. Therefore, it would not create any additional traffic operational impacts.

Future background conditions in the area are expected to be different than those evaluated in the 2006 FSEIS because of potential changes to the SR 520 Bridge Replacement project. Those potential changes are addressed herein to account for cumulative impacts.

Year 2030 Traffic Volumes

Year 2030 traffic volumes used for this analysis are from the *SR 520, I-5 to Medina: Bridge Replacement and HOV Project Supplemental Draft Environmental Impact Statement* (WSDOT, January 2010). For this analysis, two future alternatives were evaluated for SR 520: No Build and Alternative A, which reflects the condition similar to WSDOT's Preferred Alternative.

Changes to Husky Stadium Driveway at Montlake Boulevard/NE Pacific Street Intersection

Sound Transit's 2006 Alternative for the University of Washington Station, which is already under construction on the east side of Montlake Boulevard, will permanently change the east leg of the Montlake Boulevard/NE Pacific Street intersection. The Husky Stadium Parking Lot (also known as the E-11 and E-12 parking lots) was previously accessed from the east leg of this intersection with a northbound right turn or a southbound left turn. Vehicles could also exit the parking lot with a right-turn only onto Montlake Boulevard. This was the configuration assumed in the SR 520 SDEIS. However, when the University of Washington Station is complete, there will be extensive enhancements around the station plaza, and the driveway to the Husky Stadium Parking lot will be reconfigured to "square up" the corner where pedestrians wait to cross Montlake Boulevard. The driveway will be located within the intersection, and movements at the driveway will be signalized to reduce conflicts with pedestrians. Some of these changes have already been made as part of the construction traffic changes near the station. When construction is complete, the signal phase for the exiting movement was assumed to coincide with the eastbound-to-southbound transit-only priority phase. During this phase, it was assumed that westbound vehicles exiting the parking lot could proceed straight across to NE Pacific Street or turn right onto Montlake Boulevard. Per the request of Seattle Department of Transportation (SDOT), the southbound left turn movement to the driveway was assumed to be a protected movement. These changes in intersection configuration and signal operations are approved for use during Sound Transit's construction and were assumed to remain in place for all future conditions.

Changes to the Montlake Boulevard/NE Pacific Place Traffic Volume Assumptions

The 2006 FSEIS had assumed a substantial increase in traffic entering and exiting the parking lot driveway at Pacific Place (serving the E-11/E-12 lots near Husky Stadium). A 66% increase in traffic had been assumed between the 2002 and 2030 No Action condition. The University of Washington has no plans to increase the number of parking spaces in these parking lots, and traffic entering and exiting the parking lots would not change in the future compared to pre-construction conditions.

Changes to the Montlake Boulevard/NE Pacific Place Intersection Signal Phasing

The existing Montlake Boulevard/NE Pacific Place intersection, for which the east leg serves as a driveway to the Husky Stadium parking lots, has unconventional signal phasing. Currently, east-west traffic is processed concurrently; however, westbound traffic exiting the parking lot must yield to oncoming eastbound traffic, even the left turns. This is not a standard yield condition for concurrent signal phasing. In addition, the east-west pedestrian crossing occurs with this phase, and the westbound motorists must also yield to pedestrians in the crosswalk.

The Record of Decision⁹ for the project states that, “*The NE Pacific Place/Montlake Boulevard NE intersection would operate at LOS F in the years 2015 and 2030. Adding a second westbound left-turn lane would improve operations to better than No-build conditions. Sound Transit will contribute a proportionate share of costs to improve this intersection.*” Adding a second westbound left turn lane to this intersection would require that the signal phasing be split for east and west movements since otherwise left turn movements would conflict in the center of the intersection. In addition, splitting the signal phasing would eliminate the conflicts between pedestrians in the Montlake Boulevard crosswalk and the westbound left turn movement. It is assumed that the pedestrian crossing of Montlake Boulevard would occur with the eastbound traffic phase. The intersection operations were tested with both the existing signal phasing (and no additional left turn lane) and a split-signal phasing with a dual westbound left turn as recommended in the Record of Decision. As described above and demonstrated later in this report, less growth in traffic is expected than previously forecast at this intersection and no mitigation is required to maintain operations. However, the signal phasing could be changed without reducing the north-south progression along Montlake Boulevard and without degrading operations at this intersection to below a LOS D. The split phasing would improve pedestrian safety as well as reduce queues for vehicles exiting the Husky Stadium parking lot.

Levels of Service

Level of service analysis was performed using *Synchro 7.0* models of the Montlake Boulevard corridor. These models were initially created by WSDOT for the *SR 520 SDEIS*. The models were adapted by Heffron Transportation, Inc. to include changes in features described in this report. These include changes to the Husky Stadium driveway, increased pedestrian volume, and changes in signal phasing. Two conditions were evaluated: the SR 520 No Build, which assumes existing infrastructure at SR 520 would not change, and SR 520 Option A, which would retain the Montlake Boulevard interchange and add a second bascule bridge (draw bridge) on Montlake Boulevard across the Ship Canal. WSDOT’s Preferred Alternative for SR 520 incorporates the Option A features.

⁹ *Record of Decision for Central Puget Sound Regional Transit Authority’s (Sound Transit) North Link Segment of the Central Link Light Rail Transit Project*, June 2006. Mitigation requirements detailed in Appendix C of the ROD.

Table 3 summarize the level of service results for the SR 520 No Build and SR 520 Option A conditions.

Table 3. Year 2030 Level of Service with Link Light Rail Station

	Without SR 520 Project		With SR 520 Project	
	LOS	Delay	LOS	Delay
AM Peak Hour				
Montlake Blvd/Pacific Street	C	31.9	D	36.1
Montlake Blvd/Pacific Place ¹	A	8.9	A	6.2
PM Peak Hour				
Montlake Blvd/Pacific Street	F	87.5	F	83.6
Montlake Blvd/Pacific Place				
With Existing Phasing	B	18.2	B	16.7
With Dual WB Left and Split Phasing	D	52.1	D	51.2

Source: All levels of service performed using Synchro 7.0. The model was originally developed by WSDOT for the SR 520 Year 2030 No Building condition. All signal timings were optimized, which is consistent with WSDOT's analysis for the SR 520 project.

1. Assumes a change in the signal phasing to split the east and west phases.
2. n/a = not applicable

The 2010 Proposed Action would not change how traffic operates in the site vicinity. It would not increase traffic volumes nor increase pedestrian crossings at intersections. Therefore, no mitigation would be needed to accommodate the project change.

The 2006 FSEIS had determined that the Montlake Boulevard/NE Pacific Place intersection would operate at LOS F in the future, and had recommended adding a second left turn lane to the intersection to mitigate this condition. However, that poor level of service was related to the fact that the analysis had assumed traffic exiting the Husky Stadium parking lots would increase by 66% by the year 2030. The University of Washington has no plans to increase the number of parking spaces in its E-11 or E-12 lots served by this driveway. Therefore, traffic volumes are **not** likely to increase in the future. The proposed mitigation measure would not be needed for the 2006 Alternative or the 2010 Proposed Action.

4. Pedestrian Travel Time Impacts

This section evaluates the walking times associated with the two alternatives: the original pedestrian bridge in the 2006 Alternative, and the new pedestrian bridge in the 2010 Proposed Action. As previously shown on Figure 3, there are three key destinations that would be used by an estimated 92% of the station patrons:

- **Central campus**, which represents areas north and west of the Burke-Gilman Trail. An estimated 38% of the Link passengers would be destined areas in the Central Campus (33% towards Drumheller Fountain and the Burke-Gilman trail, and 5% to the Hec Edmundson Bridge). The travel time for these patrons was estimated for routes between the station and Drumheller Fountain.

- **UW Medical Center and southern Health Sciences**, which represents the large complex of buildings south of NE Pacific Street. An estimated 29% of the Link passengers would be destined to this complex. The travel time for these passengers was estimated for two routes: 1) between the station and the main entrance of the UW Medical Center, and 2) to the Health Sciences entrance at the T-Wing Pedestrian Bridge. Those walking to the Health Sciences building could choose to walk along NE Pacific Street or walk towards main campus and use the Burke-Gilman Trail to the T-Wing Overpass. Those walking to the UW Medical Center could also opt to take the stairs into the Triangle Garage and take the tunnel under NE Pacific Street.
- **Transit transfers** on the Montlake Triangle. An estimated 30% of the Link passengers are expected to transfer to or from buses in the Montlake Triangle area—25% at stops on the inside of the Montlake Triangle and 5% on the south side of NE Pacific Street. This is a conservatively high estimate based on the University of Washington station as interim end-of-line, when about one quarter of the bus transfer activity would be to transport riders to the University District commercial area or other nearby neighborhoods. Once Link is extended north, these passengers would continue on the train to the Brooklyn Station or other station further north. Most of the regional and local buses have stops on NE Pacific Street. Two frequent local bus routes serve passengers on NE Pacific Place and lay over at the end of their route.

Walking times were calculated between the station and the key destinations on campus. The methodology to determine the walking times is documented below.

Walking Time Methodology

Walking time between the station plaza and the end destination includes the following components:

- **Time to walk the distance between the two end points** – For this analysis, a moderate walking speed of 5 feet per second was used (equivalent to about an 18-minute mile and less than 3.5 mph).¹⁰ This speed is higher than the 3.5 to 4-feet-per-second speed that is used to set minimum signal times at intersections, and reflects the fact that many students will walk faster. The distances between the street-level station access and the end points were measured from detailed drawings of the three alternatives as well as campus maps.
- **Time on the escalator** – For walking routes that use the pedestrian bridge, patrons would need to ascend or descend between the pedestrian bridge and street level. (The travel time to the platform was not included since that would be the same for all walking routes.) Sound Transit’s station design specifies an escalator speed of 100 feet per minute; and the

¹⁰ Slower walking speeds of 3.5 to 4.0 feet per second (fps) are used to determine the minimum crossing times at signalized crosswalks. However, these speeds are below average, and reflect the needs of slower pedestrians such as senior citizens. Two studies that have reported the walking speeds of younger pedestrians were used to determine the average walking speed appropriate for the University of Washington campus population: 1) *Field Studies of Pedestrian Walking Speed and Start-Up Time* (Knoblauch, Pietrucha, and Nitzburg, Transportation Research Record 1538, 1996; and 2) *Transportation Research Record #1678* (Milazzo, Roupail, Hummer, and Allen, 1999). The 1996 study determined that for younger pedestrians, the mean speed was 4.95 feet per second. The 1999 study cited that the average walking speeds was 5.7 fps for young pedestrians, 4.9 fps for middle-aged pedestrians, and 3.8 fps for elderly pedestrians.

length of the escalator is designed to be 44 linear feet. Therefore, the travel time on the escalator is estimated to be about 26 seconds.

- **Time to cross Montlake Boulevard** – For travel routes that would cross Montlake Boulevard at-grade, pedestrians would need to wait for the pedestrian signal to cross the street. The average wait time was calculated using Equation 18-5 from the *Highway Capacity Manual* (Transportation Research Board, 2000). The equation relates the average pedestrian delay to the cycle length and the amount of green time provided for the pedestrian crossing. The calculation determines the average wait time for a pedestrian who has arrived at the signal when the “Don’t Walk” phase is in effect. This includes pedestrians who arrive just when the light changes to “Don’t Walk” as well as those who might arrive when the signal shows “Walk” and they have no delay. The cycle lengths and pedestrian walk phase times were determined from existing signal operations. Currently, the corridor operates with a 110 second cycle length in the morning and a 120 second cycle length in the afternoon. Pedestrians crossing Montlake Boulevard are provided with 27 seconds of crossing time. With these signal timing parameters, the average delay per pedestrian is 31 seconds in the morning and 36 seconds in the afternoon. WSDOT’s analysis for year 2030 conditions with the SR 520 Preferred Alternative (including the second Bascule Bridge on Montlake Boulevard) optimized the signal timings. That analysis found that overall cycle lengths could decrease in the future with SR 520, and could range from 90 to 100 seconds, while maintaining or extending the pedestrian green time. Under this future scenario, the average delay per pedestrian would be less. Therefore, to be conservative, the existing pedestrian delays at these signals were assumed for this analysis.
- **Time to cross Pacific Street**– Some of the routes would require passengers to cross NE Pacific Street at one of three locations: 1) at the Montlake Boulevard intersection, 2) at the Pacific Place intersection, or 3) at a future pedestrian crossing at the UW Medical Center driveway, which is part of a separate action. Crossing delay for both was determined using the same methodology as described above. At Montlake Boulevard, the time allotted to north-south movements is long, and the time that a pedestrian would need to wait to cross Pacific Street is shorter than to cross Montlake Boulevard. It is estimated that the average delay for pedestrians would be 10 seconds. Further west, the Pacific Street/Pacific Place intersection operates with a cycle length that is half the time of cycle lengths on Montlake Boulevard. Delay to cross Pacific Street at this location is estimated to be 9 seconds. Delays for a potential future signal were assumed to be 10 seconds.

Pedestrian Travel Times

Figures 4 through 6 summarize the pedestrian travel times associated with the various routes described above. Detailed calculations showing the delay for various segments of each trip are provided in Appendix A.

Figure 4. Walking Routes and Travel Times between Station Plaza and Drumheller Fountain

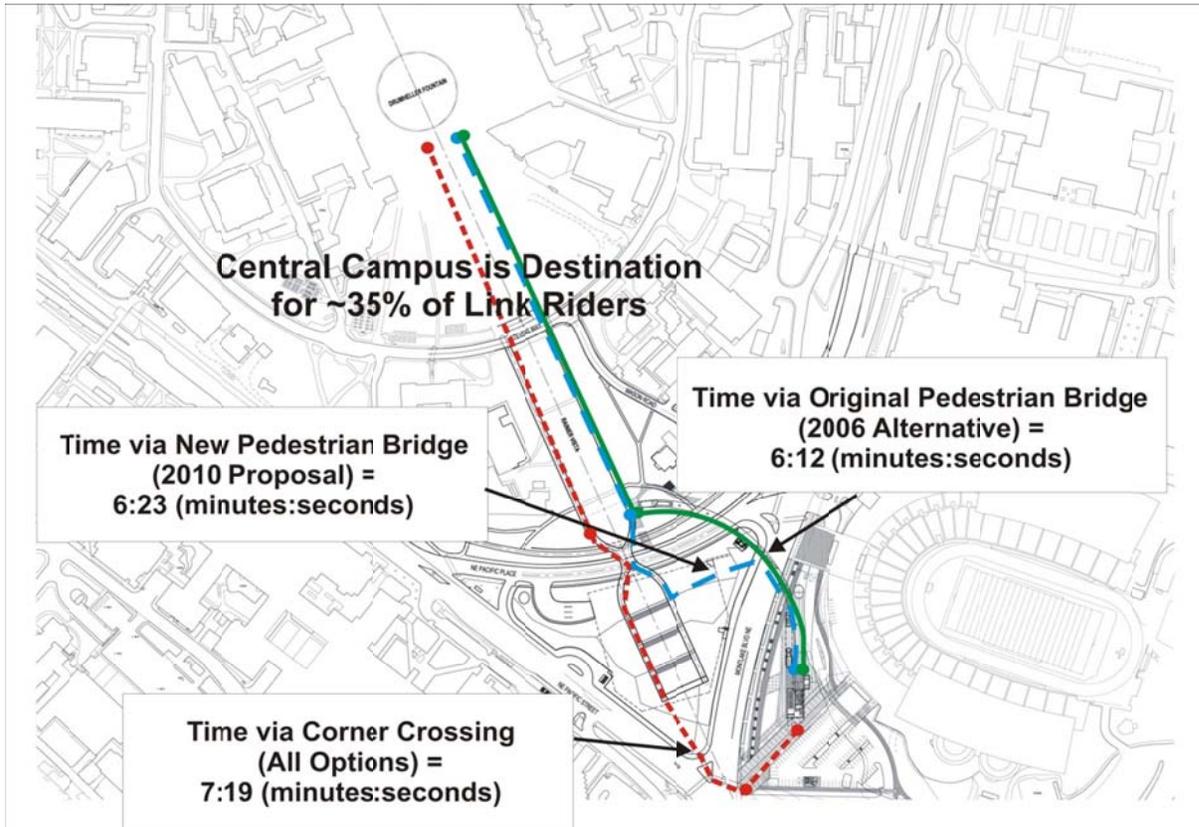


Figure 5. Walking Routes and Travel Times between Station Plaza and UW Medical Center

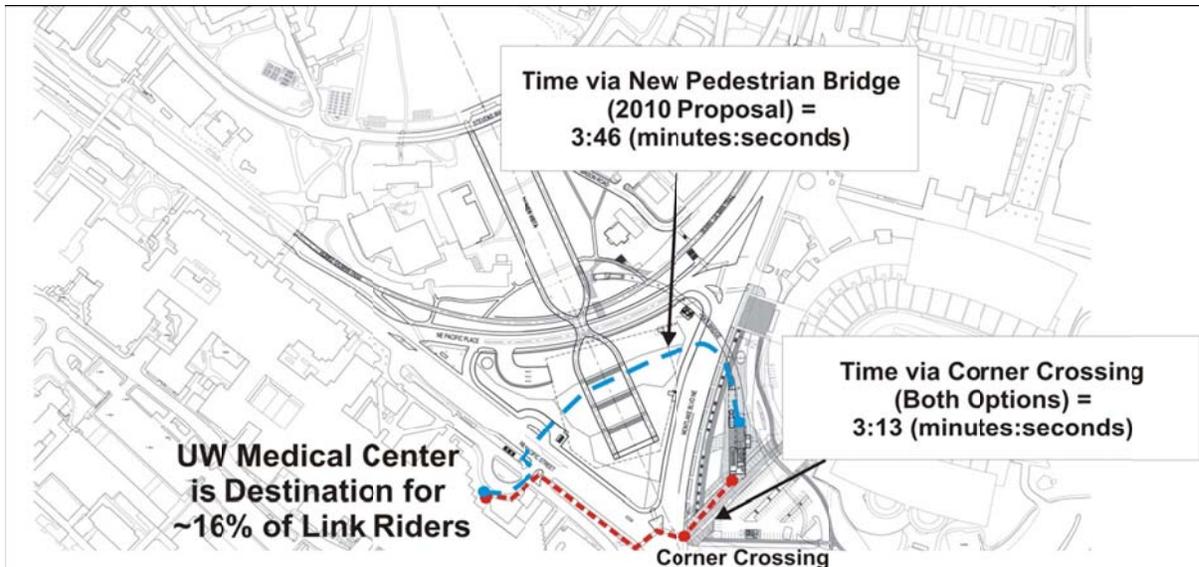
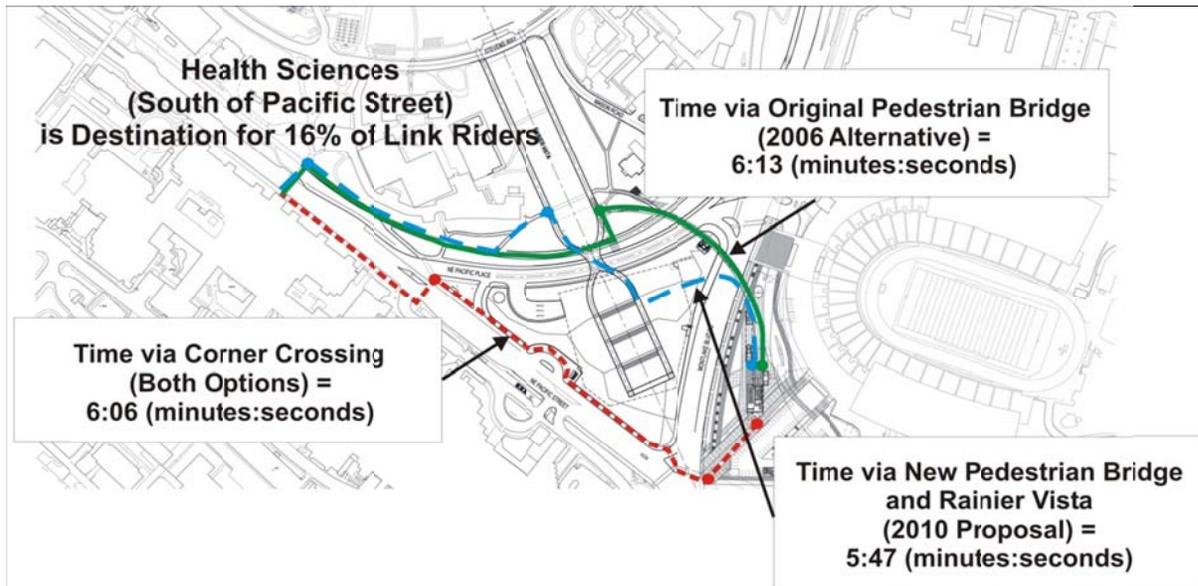


Figure 6. Walking Routes and Travel Times between Station Plaza and Health Sciences



The pedestrian travel time analysis shows that the 2006 Alternative would have the fastest walking times to the fountain, about 11 seconds faster than the 2010 Proposed Action. However, for passengers destined to the Health Sciences complex, the 2010 Proposed Action would provide a faster route, about 26 seconds faster than the route via the original pedestrian bridge proposed as part of the 2006 Alternative and 19 seconds faster than the surface route via NE Pacific Street. Travel times to the UW Medical Center would be the same for both options with the surface route (crossing at the corner of the Montlake Boulevard/NE Pacific Street intersection) being the fastest. The new pedestrian bridge with the 2010 Proposed Action would offer a reasonable alternative route across Rainier Vista to a future mid-block crossing of NE Pacific Street. Walking time between the Light Rail Station and bus transfer points would be identical for the two options.

5. Safety

Both the 2010 Proposed Action and the 2006 Alternative would grade-separate station patrons from Montlake Boulevard, NE Pacific Place, and the Burke-Gilman Trail. However, the 2010 Proposed Action, with Rainier Vista, would also grade separate non-station pedestrian and bicycle traffic from both NE Pacific Place and the Burke-Gilman Trail. Existing unsignalized crossings of NE Pacific Place and the Burke-Gilman Trail at Rainier Vista would be eliminated by the 2010 Proposed Action. Therefore, the 2010 Proposed Action would enhance safety compared to the 2006 Alternative.

6. Burke-Gilman Trail Impacts

The 2006 Alternative included a grade-separated pedestrian crossing of Montlake Boulevard, via a tunnel or bridge, with an option for an extended tunnel or bridge across NE Pacific Place and the Burke-Gilman Trail to provide access to the Rainier Vista corridor and central campus. Due to concerns about increased volumes of pedestrians arriving by Link light rail and then crossing the Burke-Gilman Trail to access campus, Sound Transit and FTA committed to developing a grade-separated crossing of the trail and NE Pacific Place, via either a tunnel or bridge, to maintain connectivity between the University of Washington Station and the campus. This mitigation measure is documented in the project's *Record of Decision*. It stated,

At the University of Washington Station, Sound Transit will continue to work with local agencies (KCM, WSDOT, SDOT, and the University of Washington) to identify University of Washington Station design features to accommodate the increase in pedestrians associated with North Link. Design improvements such as reduced speed limit signs for bicycles, distinctive paving, or other improvements to enhance visibility and slow bicycle travel speeds along the Burke-Gilman trail in this area will be implemented as necessary to reduce the likelihood of bicycle/pedestrian collisions. An unsignalized or signalized midblock crossing of NE Pacific Place will be provided to help balance transportation needs. A station entrance or access point will be located to the north of NE Pacific Place and the Burke-Gilman Trail with an extended pedestrian passageway under or over NE Pacific Place and the Burke-Gilman Trail.

The 2006 Alternative met this mitigation requirement with the pedestrian bridge extending from the UW Station to the Rainier Vista on the north side of NE Pacific Place and the Burke-Gilman Trail. Pedestrians destined to areas in Southwest campus, including Health Sciences, are likely to then use the Burke-Gilman Trail as their primary path between the end of the bridge and their destination. The key constraint on the existing Burke-Gilman Trail is the width of the bridge that crosses over the trenched roadway on Rainier Vista. The trail is currently 11-foot wide across the bridge, and the effective width is even narrower because there are railings on both sides. The 2010 Proposed Action eliminates this bridge and replaces it with the reconstructed Rainier Vista and connecting paths.

The Burke-Gilman Trail in the vicinity of the land bridge would be improved to grade-separate the Burke-Gilman Trail from Rainier Vista. Through the project area, the Burke-Gilman Trail would be widened to provide a 14-foot wide pedestrian and bicycle path. Two-foot wide gravel shoulders would be provided at the edges of the path. Design of the trail would not preclude future widening by the University for a total trail width of 30-feet. A new trail would be constructed parallel to the new NE Pacific Place under the land bridge, although the elevation of the trail would be above the roadway to minimize the grades on the trail. Two connecting paths would be provided linking the Burke-Gilman Trail with Rainier Vista. The University is analyzing further Burke Gilman Trail improvements beyond this area. Until then, the new trail section would need to transition both in grade and alignment to meet the existing trail section. On the north side of the project area, that transition should occur north of the proposed connecting path to the Rainier Vista. On the southwest side of the project area, the transition should occur west of where the trail that links to the NE Pacific Place/NE Pacific Street intersection is located.

The point on the Burke-Gilman Trail where the potential intersecting volumes would be the highest would be located southwest of the land bridge, along the route to Southwest campus. The volume is expected to be lower for the 2010 Proposed Action than for the 2006 Alternative because the new alternative provides additional routes to NE Pacific Street from the Montlake Triangle. The same treatments are proposed for both alternatives where connecting paths intersect the Burke-Gilman Trail. This includes stop signs and bicyclist lean rails at the paths that intersect the Burke-Gilman Trail; through traffic on the trail would not stop. No additional mitigation measures would be required for the 2010 Proposed Action.

In the future, the new bicycle path across Lake Washington on the SR 520 bridge is expected to further increase bicycle volumes in the Montlake Triangle area and along the Burke-Gilman Trail. This increase would occur without or with the 2010 Proposed Action. Although this volume is not expected to degrade operations for the trail segment under Rainier Vista some additional width for merging or to separate bikes and pedestrians may be desired at and west of the connecting path to improve operations and trail safety.

The 2010 Proposed Action would address all of the Record of Decision requirements. It would reduce the potential for bicycle/pedestrian collisions by separating the Link pedestrian flows from the Burke-Gilman Trail, it would provide adequate width on the Burke-Gilman Trail to accommodate future demand, and it would eliminate the mid-block crossings on NE Pacific Place.

7. Transit Impacts

Both King County Metro and Sound Transit provide frequent transit service to the Montlake Triangle with twelve Metro bus routes and three Sound transit bus routes. Combined, the twelve Metro routes provide over 30,000 rides each day or over eight million rides per year. During the week, over 180 buses travel through the Montlake corridor in the morning peak period. In the Montlake Triangle and immediate surroundings, over 1,400 people board buses and over 1,200 people alight from buses each day. Three of Metro's most popular bus routes use this corridor: Routes 43, 44, and 48. According to 2009 data, each of these routes provides between 5,000 and 6,000 rides per day. The number of riders who use buses is expected to increase in the future with transfers to and from the Sound Transit University of Washington Link Station. The Sound Transit 2006 FSEIS predicted that the number of Link passengers who transfer to bus transit at this station would be 3,760 during the three-hour peak period.¹¹

As part of the planning for the SR 520 Bridge Replacement Project, the state legislature directed WSDOT to develop a High Capacity Transit (HCT) Plan in coordination with key transit agencies as well as the University of Washington.¹² The HCT Plan refers to the "Montlake Multimodal Station," which encompasses the three streets of the Montlake Triangle as well as the University of Washington Link Station. One of the issues addressed by the HCT plan is the change in transit operations that would be needed when the existing Montlake Flyer stop (the transit stop on SR 520 at Montlake Boulevard) is eliminated. The HCT Plan identified the need to expand the two existing bus stops on NE Pacific Place east of NE Pacific Street by 220 feet each. It also recommended creating two zones at each stop: one for local routes and one for regional routes and it identified the need for additional bus layover space on NE Pacific Place.

The 2010 Proposed Action would increase the transit layover area located along the lowered NE Pacific Place and extend under the Rainier Vista land bridge. The curb lane available for transit would be extended from about 220 feet in 2006 Alternative design to 390 to 420 feet with the 2010 Proposed Action. Buses parked in this space would be out of the Rainier Vista View corridor. Increased layover capacity was not provided in the 2006 Alternative since an extension of the existing layover space would have located buses too close to the mid-block pedestrian crosswalks on NE Pacific Place and/or within the Rainier Vista view corridor.

¹¹ Sound Transit, North Link Supplemental Final Environmental Impact Statement, April 2006. Table 5.4-1b in the Transportation Technical Report.

¹² WSDOT, Sound Transit, King County Metro and the University of Washington, *SR 520 High Capacity Transit Plan*, December 2008.

8. Mitigation

Mitigation measures for potential transportation-related impacts were identified in the 2006 FSEIS and in the 2006 NEPA ROD. Those that are in the vicinity of the University of Washington Station are listed in Table 4. The 2010 Proposed Action would satisfy all of the transportation requirements as detailed in the table.

Table 4. Transportation Mitigation Measures from Record of Decision

Mitigation Measures in North Link Record of Decision for the 2006 Alternative ¹	How the 2010 Proposed Action would meet with ROD requirements
<p>The NE Pacific Place/Montlake Boulevard NE intersection would operate at LOS F in the years 2015 and 2030. Adding a second westbound left-turn lane would improve operations to better than No-build conditions. Sound Transit will contribute a proportionate share of costs to improve this intersection.</p>	<p>Intersection is not degraded based on current traffic growth forecasts; mitigation is not required for the 2006 Alternative or 2010 Proposed Action. <i>However, adding the second westbound lane with split phasing would reduce conflicts with pedestrians in the crosswalks and have other benefits.</i> This intersection is expected to operate at LOS D or better with either lane configuration or signal phasing option.</p>
<p>At the University of Washington Station, Sound Transit will continue to work with local agencies (KCM, WSDOT, SDOT, and the University of Washington) to identify University of Washington Station design features to accommodate the increase in pedestrians associated with North Link. Design improvements such as reduced speed limit signs for bicycles, distinctive paving, or other improvements to enhance visibility and slow bicycle travel speeds along the Burke-Gilman trail in this area will be implemented as necessary to reduce the likelihood of bicycle/pedestrian collisions. An unsignalized or signalized midblock crossing of NE Pacific Place will be provided to help balance transportation needs. An unsignalized or signalized midblock crossing of NE Pacific Place will be provided to help balance transportation needs. A station entrance or access point will be located to the north of NE Pacific Place and the Burke-Gilman Trail with an extended pedestrian passageway under or over NE Pacific Place and the Burke-Gilman Trail.</p>	<p>The proposed Rainier Vista land bridge would grade-separate the Burke-Gilman Trail from station pedestrian crossings and includes features to prioritize through traffic at the new trail intersections. It would also eliminate the mid-block crosswalks on NE Pacific Place. No further mitigation would be needed.</p>
<p>In the vicinity of the south station entrance, Sound Transit will provide sufficient facilities for pedestrian storage and capacity by improving and widening the crosswalks across Montlake Boulevard NE and NE Pacific Street, and providing sufficient pedestrian storage capacity on either the existing refuge/traffic island or the south end of the Montlake Triangle.</p>	<p>Crosswalk widths proposed for the 2006 Alternative are sufficient for the 2010 Proposed Action. No further mitigation would be required.</p>

Source: Record of Decision for Central Puget Sound Regional Transit Authority's (Sound Transit) North Link Segment of the Central Link Light Rail Transit Project, June 2006. Mitigation requirements detailed in Appendix C of the ROD.

9. Construction Impacts

Traffic Management During Construction

Sound Transit would manage all construction for the 2010 Proposed Action, including construction of the new pedestrian bridge, lowering of NE Pacific Place, and construction of the Rainier Vista Land Bridge. This will reduce potential construction-related conflicts.

The contractor selected for the project will be required to prepare two traffic-related plans in advance of construction within the public street right of way:

- Traffic Management Plan (TMP) – This is a written plan that will describe how all modes of traffic will be managed during construction.
- Maintenance of Traffic (MOT) Plan – This will detail the location of cones, signs, traffic flaggers, police-officer control, and other elements used to control traffic during construction.

The TMP and MOT plans would be approved by Sound Transit, the University of Washington, and if a street use permit is required, the Seattle Department of Transportation. These plans would address the following:

- Maintenance of vehicular traffic when there are changes made to any existing lane configurations, traffic flow, or traffic control.
- Maintenance of pedestrian and bicycle traffic that uses the Burke-Gilman Trail, sidewalks along Pacific Place, and connections to these facilities.
- Maintenance of transit routes, transit stops, and layover facilities, particularly the electric trolley routes that use Pacific Place.
- Emergency vehicle access to the University Medical Center.
- Access to the Triangle Parking Garage. Two-way access on Pacific Place between Pacific Street and the garage driveway must be maintained at all times.
- Replacement of bus staging locations if Pacific Place is not available during Husky Football games.
- Coordination with construction and maintenance of the SDOT approved haul routes for the University of Washington Link Light Rail Station adjacent to Husky Stadium.

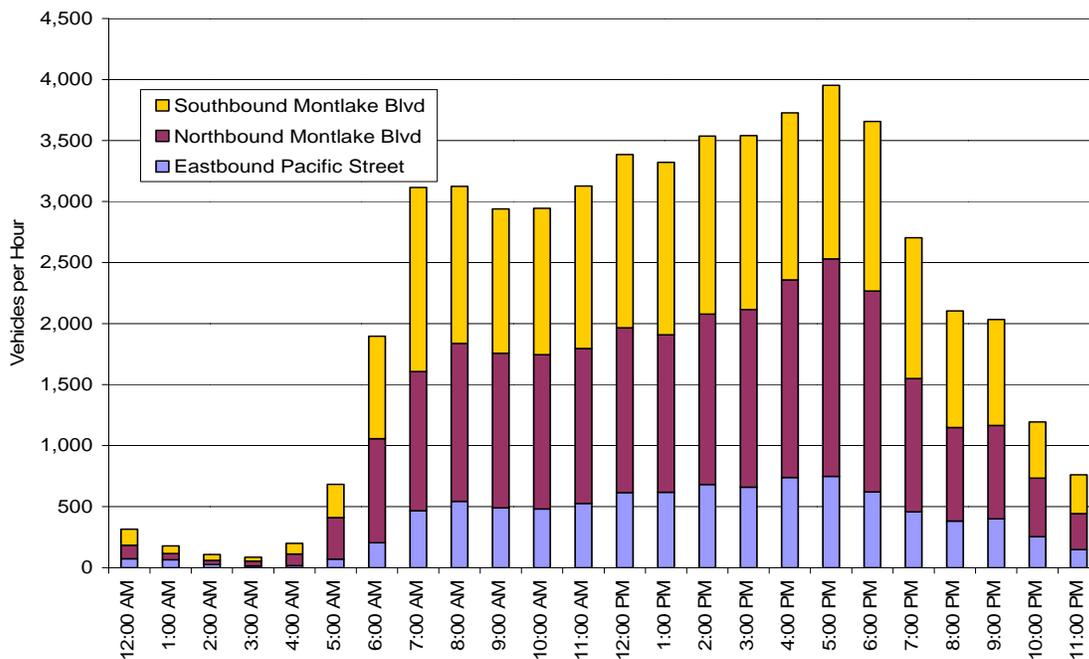
Construction Closures of NE Pacific Place

Constructing the 2010 Proposed Action will require lowering NE Pacific Place. This may result in partial or full closures of NE Pacific Place. The potential effect of closing this street on the operations of the surrounding streets was evaluated. The details are presented below.

Traffic flow around the Montlake Triangle would likely require that northeast-bound traffic be maintained on NE Pacific Place during daytime hours. This direction of travel cannot easily be diverted to the vicinity streets because eastbound-to-northbound left-turns are not allowed at the Montlake Boulevard/NE Pacific Street intersection, and adding this movement during daytime hours could increase congestion through the intersection. In addition, King County Metro trolleys circle the Montlake Triangle in a clockwise direction, and the existing trolley wires use the northeast-bound travel lanes of NE Pacific Place. However, as described below, it may be possible to fully close NE Pacific Place at night and reroute that traffic using police-officer control at the Montlake Boulevard/Pacific Street intersection.

Hourly traffic volumes for the vicinity streets were obtained from the Seattle Department of Transportation (SDOT). Figure 7 shows the traffic volumes that enter the Montlake Boulevard/Pacific Street intersection during each hour of the day.

**Figure 7. Existing Weekday Traffic Volumes
at Montlake Boulevard/NE Pacific Street Intersection**



Source: 7-day traffic counts performed by Seattle Department of Transportation (SDOT), October 7, 2009 through October 13, 2009. Data for weekend days were excluded.

The above chart shows that traffic volume during the overnight hours—from 8:00 P.M. until about 6:00 A.M.—is much lower than traffic during the daytime hours. In fact, even the highest level of overnight traffic (during the 8:00 P.M. hour) is about half of the level of traffic during the commuter peak hour.

Traffic operations analysis was performed for the 8:00 P.M. hour to determine if all traffic from NE Pacific Place could be detoured to other streets. Providing this detour would require the following:

- Traffic from northeast-bound Pacific Place would be detoured east on Pacific Street and then north on Montlake Boulevard. This would require temporary coning to provide for an eastbound-to-northbound left turn at the Montlake Boulevard/Pacific

Street intersection. This lane was assumed to be converted from one of the eastbound right-turn lanes. The detour would also require police-officer control of the intersection since the existing traffic signal has no signal head for this movement.

- Traffic from southwest-bound Pacific Place would be detoured south on Montlake Boulevard and then west on Pacific Street. This traffic would be a southbound right turn at the Montlake Boulevard/Pacific Street intersection, a move that is already allowed at this intersection so no physical or operational changes would be required.

Intersection turning movement volumes for the 8:00 P.M. hour were estimated from PM peak period turning movement counts, and the 24-hour counts detailed in Figure 7 above. Then traffic that would be diverted from NE Pacific Place (also during the 8:00 P.M. hour) was added to the Montlake Boulevard/Pacific Street intersection. In addition, Sound Transit's construction on the east side of Montlake Boulevard generates truck traffic that is allowed to turn left directly to southbound Montlake Avenue during nighttime hours only (10:00 P.M. to 7:00 A.M. weekdays). This traffic and a corresponding signal phase were included in the analysis for the 8:00 P.M. hour even though left turns are not currently permitted by SDOT until later, which is a worst-case condition. With the changes in intersections operations, lane configuration, police-officer control, plus the additional detoured traffic, the intersection is expected to operate at LOS C during the 8:00 P.M. hour.¹³ Operations would likely be better later at night when traffic volumes are even lower.

Therefore, from a traffic operations standpoint, it would be possible to fully close NE Pacific Place during nighttime hours during construction. If the selected contractor chooses to close the street, the following measures and protocols should be required:

Measures required to implement a full closure of NE Pacific Place during nighttime hours

- Obtain approval from King County Metro to alter nighttime service that now uses NE Pacific Place. Depending on the closure times, King County Metro may need to alert riders, alter routes, and/or change equipment from electric trolley to diesel buses.
- Obtain approval from the Seattle Department of Transportation (SDOT) to close the street, which may require a street-use permit.
- Secure police-officer control for the Montlake Boulevard/Pacific Street intersection. The Seattle Police Department would determine if one or two officers are needed.
- Include proposed detour routes, signage and coning in the contractor's required Traffic Management Plan (TMP) and Maintenance of Traffic (MOT) plans. Coning on Pacific Street would be needed to channelized an eastbound left-turn lane. This lane would be converted from one of the two general-purpose right-turn lanes.
- Use police-officer control of the Montlake Boulevard/Pacific Street intersection with the following phasing:

¹³ Level of service was estimated using Synchro 7.0 models for existing conditions that had been developed by WSDOT for the SR 520 project. These models were used to emulate operation with police officer control for nighttime conditions with a full closure of NE Pacific Place.

- Northbound + southbound thru movements
- Eastbound left turn + westbound left turn (dump trucks exiting the Sound Transit portal are allowed to turn left at night only).
- Northbound left turn and eastbound right turn only plus the pedestrian crossing of Montlake Boulevard.

A full-time closure of the southwest-bound direction only of NE Pacific Place was also evaluated. As described above, traffic from southwest-bound Pacific Place would be detoured south on Montlake Boulevard and then west on Pacific Street. This detoured traffic would make a southbound right turn at the Montlake Boulevard/Pacific Street intersection, a move that is already allowed at this intersection so no physical or operational changes would be required. The effect of this full-time, one-direction closure was evaluated to determine how additional traffic would affect operations during the peak commute hours. Table 5 summarizes existing traffic operations with and without the detoured southwest bound traffic.

Table 5. Effect of Detouring Traffic from Southwestbound Pacific Place

Condition	Montlake Blvd/Pacific Pl		Montlake Blvd/Pacific St		Pacific St/Pacific Pl	
	LOS ¹	Delay ²	LOS	Delay	LOS	Delay
AM Peak Hour						
Existing (2008)	A	9.2	C	21.4	B	18.6
With Detour for SW-bound Pacific Pl ³	B	11.5	C	21.3	C	23.7
PM Peak Hour						
Existing (2008)	B	17.1	C	25.1	C	23.3
With Detour for SW-bound Pacific Pl ³	B	17.8	C	23.8	C	26.1

Source: Heffron Transportation, February 2010. All levels of service reflect the HCM methodology from the Synchro 7.0 software.

1. LOS = Level of service.
2. Delay = Average delay reported in seconds per vehicle.
3. Assumes that southwest-bound traffic on NE Pacific Place would be detoured south on Montlake Boulevard and then west on NE Pacific Street.

As shown above, detouring traffic from southwest-bound Pacific Place would add very little delay to the three intersections around the Montlake Triangle. At the Montlake Boulevard/NE Pacific Street intersection, the detoured traffic would be added to the southbound right turn movement. However, this movement has very little traffic now, and is not a critical movement for intersection operations. The southbound right turn would operate at LOS A during the AM or PM peak hour with the detoured traffic. Therefore, this partial closure could occur at any time of day without affecting traffic operations. It is recognized that this detour would increase traffic across the corner pedestrian crossing (between the pedestrian island and the Montlake Triangle). In order to implement this closure, the following measures would be required:

Measures required to close southwest-bound NE Pacific Place:

- Obtain approval from the Seattle Department of Transportation (SDOT) to close the street, which may require a street-use permit.
- Include proposed detour routes, signage and coning in the contractor's required Traffic Management Plan (TMP) and Maintenance of Traffic (MOT) plans.
- Work with SDOT and King County Metro to extend the general-purpose vehicle access into the southbound curb lane on Montlake Boulevard approaching NE Pacific Street. Most of this lane is now restricted to transit only, and general-purpose traffic is allowed to enter the lane at the far south end. During construction only, an extension of the general-purpose lane should be considered.

Construction of New Bridge Across Montlake Boulevard

The method for constructing the new pedestrian bridge across Montlake Boulevard is not yet determined. When completed, the bridge would clear-span the roadway. However, it is possible that bridge construction could require temporary supports or "falsework" in the middle of the span that could affect through traffic lanes on Montlake Boulevard.

The following is required for any construction affecting traffic flow or pedestrian/bicycle facilities on Montlake Boulevard:

- A MOT plan detailing channelization and signage that would be used to route traffic around the obstruction.
- The MOT plan must retain two through lanes in each direction on Montlake Boulevard during peak traffic hours (7:00 A.M. to 10:00 P.M.) At night, additional lane restrictions (e.g., one lane in each direction and/or alternating flow with flagger control) could be considered if analysis shows that traffic flow needs could be accommodated.
- The MOT plan must retain a pedestrian and bicycle path on the east side of the street.

APPENDIX A
PEDESTRIAN TRAVEL TIME ANALYSIS

**UW Station Pedestrian Access
Pedestrian Travel Times**

Trip Ends	Route		
	2006 Alternative ST Pedestrian Bridge	Via 2010 Proposal New Bridge + Rainier Vista	via Pacific St/Montlake Blvd intersection
Station Plaza to Drumheller Fountain	06:12	06:23	07:19
Station Plaza to UW Med Center Entry	Not measured*	03:46	03:13
Station Plaza to Health Sciences at T-Wing Bridge	06:13	05:47	06:06
Station Plaza to Pacific Street Tunnel Stair	Not measured*	02:56	02:43

* - Route would be out-of-direction and was not measured

**UW Station Pedestrian Access
Pedestrian Travel Times**

Assumptions:

Walking Rate	5 feet per second
Escalator Rate	100 feet per minute
Crossing Delay at Montlake Blvd and Pacific St	Assumes a 110 second cycle consistent with existing signal times

Travel Time from Station Plaza to Drumheller Fountain (see Figure 4 in Technical Memorandum)

Via Pedestrian Bridge (2006 Alternative)	Distance (feet)	Travel Time (sec)	Travel Time (min:sec)
Escalator to Bridge	44	26	
Average crossing delay at Montlake Blvd		0	
Long Bridge To Rainier Vista	670	134	
From Rainier Vista to Drumheller Fountain	1060	<u>212</u>	
Total Time		372	06:12

Via Pedestrian Bridge (2010 Proposal)	Distance (feet)	Travel Time (sec)	Travel Time (min:sec)
Escalator to Bridge	44	26	
Average crossing delay at Montlake Blvd		0	
Short Bridge To Rainier Vista	450	90	
From Rainier Vista to Drumheller Fountain	1335	<u>267</u>	
Total Time		383	06:23

Via Corner Crossing at Montlake Blvd/Pacific Street Intersection (Both Options)	Distance (feet)	Travel Time (sec)	Travel Time (min:sec)
From Head House to Montlake Blvd/Pacific Street	200	40	
Average crossing delay at Montlake Blvd		31	
From Montlake Blvd to Rainier Vista northwest of BG Trail	780	156	Measured from the east curb
From Rainier Vista to Drumheller Fountain	1060	<u>212</u>	
Total Time		439	07:19

**UW Station Pedestrian Access
Pedestrian Travel Times**

Assumptions:

Walking Rate	5 feet per second
Escalator Rate	100 feet per second
Crossing Delay at Montlake Blvd & Pacific St	Assumes a 110 second cycle consistent with existing signal times

Travel Time from Station Plaza to UW Medical Center Main Entry - Via Surface Routes (See Figure 5)

Via Pedestrian Bridge (2010 Proposal)

	Distance (feet)	Travel Time (sec)	Travel Time (min:sec)
Escalator to Bridge	44	26	
Average crossing delay at Montlake Blvd		0	
Short Bridge To Rainier Vista & Pacific Street	750	150	
Average crossing delay at Pacific Street Xwalk		10	
From Pac St North Curb to Front Door of Med Center	200	<u>40</u>	
Total Time		226	03:46

Via Corner Crossing at Montlake Blvd/Pacific Street Intersection (All Options)

	Distance (feet)	Travel Time (sec)	Travel Time (min:sec)
From Head House to Montlake Blvd	200	40	
Average crossing delay at Montlake Blvd Xwalk		31	
Average crossing delay at Pacific Street Xwalk		10	
From Pac St Island to Front Door of Med Center	560	<u>112</u>	
Total Time		193	03:13

**UW Station Pedestrian Access
Pedestrian Travel Times**

Assumptions:
 Walking Rate 5 feet per second
 Escalator Rate 100 feet per second

Travel Time from Station Plaza to Pacific Street Tunnel (North Entrance)

Via Pedestrian Bridge (2010 Proposal)	Distance (feet)	Travel Time (sec)	Travel Time (min:sec)
Escalator to Bridge	44	26	
Average crossing delay at Montlake Blvd		0	
Short Bridge To Rainier Vista & Pacific Street	750	150	
Average crossing delay at Montlake Blvd Xwalk		0	
From East side of Pacific to Tunnel Stair (cut across tip of Triangle)	0	<u>0</u>	
Total Time		176	02:56

Via Corner Crossing at Montlake Blvd/Pacific Street Intersection (Both Options)	Distance (feet)	Travel Time (sec)	Travel Time (min:sec)
From Head House to Montlake Blvd	200	40	
Average crossing delay at Montlake Blvd Xwalk		31	
From East Side of Montlake to Tunnel Stair	460	<u>92</u>	
Total Time		163	02:43

**UW Station Pedestrian Access
Pedestrian Travel Times**

Assumptions:

Walking Rate	5 feet per second
Escalator Rate	100 feet per second
Crossing Delay	Assumes a 110 second cycle for Montlake intersections consistent with existing signal times Signal at Pacific Street/Pacific Place has a 55 second cycle length

Travel Time from Station Plaza to T-Wing Bridge at Health Sciences (See Figure 6)

**Via Pedestrian Bridge and Burke-Gilman Trail
(2006 Alternative)**

	Distance (feet)	Travel Time (sec)	Travel Time (min:sec)
Escalator to Bridge	48	29	
Average crossing delay at Montlake Blvd		0	
Ped Bridge From Station Headhouse To Rainier Vista	670	134	
From Rainier Vista to T-Wing Bridge	950	190	
T-Wing to Health Sciences Entry	100	<u>20</u>	
Total Time		373	06:13

Via Pedestrian Bridge (2010 Proposal)

	Distance (feet)	Travel Time (sec)	Travel Time (min:sec)
Escalator to Bridge	44	26	
Average crossing delay at Montlake Blvd		0	
Short Bridge To Rainier Vista	450	90	
From Bridge End to Rainier Vista connection to BG Trail	325	65	
From Rainier Vista to T-Wing Bridge via B-G Trail	730	146	
T-Wing to Health Sciences Entry	100	<u>20</u>	
Total Time		347	05:47

**Via Corner Crossing at Montlake Blvd/Pacific Street
Intersection, Pacific Street & Burke-Gilman Trail
(Both Options)**

	Distance (feet)	Travel Time (sec)	
From Head House to Montlake Blvd	200	40	
Average crossing delay at Montlake Blvd		31	
From Montlake to Pacific Place via Pacific Street	900	180	
Average crossing delay of Pacific Place		5	
From Pacific Place to T-Wing via Burke Gilman	470	94	
T-Wing to Health Sciences Entry	100	<u>20</u>	
Total Time		370	06:10

**Via Corner Crossing at Montlake Blvd/Pacific Street
Intersection, Pacific Street to Signal at Pacific Place to
South side of Street (Both Options)**

	Distance (feet)	Travel Time (sec)	
From Head House to Montlake Blvd	200	40	
Average crossing delay at Montlake Blvd		31	
From Montlake to Pacific Place via Pacific Street	900	180	
Average crossing delay of Pacific Street		9	
From Corner to Entry via South side of Pacific Street	530	<u>106</u>	Includes crossing distance of Pacific St
Total Time		366	06:06

Attachment F

USFWS Endangered Species Act List

**LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CRITICAL HABITAT; CANDIDATE SPECIES; AND SPECIES OF CONCERN
IN KING COUNTY
AS PREPARED BY
THE U.S. FISH AND WILDLIFE SERVICE
WESTERN WASHINGTON FISH AND WILDLIFE OFFICE**

(Revised November 1, 2007)

LISTED

Bull trout (*Salvelinus confluentus*)

Canada lynx (*Lynx canadensis*)

Gray wolf (*Canis lupus*)

Grizzly bear (*Ursus arctos* = *U. a. horribilis*)

Marbled murrelet (*Brachyramphus marmoratus*)

Northern spotted owl (*Strix occidentalis caurina*)

Major concerns that should be addressed in your Biological Assessment of project impacts to listed species include:

1. Level of use of the project area by listed species.
2. Effect of the project on listed species' primary food stocks, prey species, and foraging areas in all areas influenced by the project.
3. Impacts from project activities and implementation (e.g., increased noise levels, increased human activity and/or access, loss or degradation of habitat) that may result in disturbance to listed species and/or their avoidance of the project area.

Castilleja levisecta (golden paintbrush) [historic]

Major concerns that should be addressed in your Biological Assessment of project impacts to listed plant species include:

1. Distribution of taxon in project vicinity.
2. Disturbance (trampling, uprooting, collecting, etc.) of individual plants and loss of habitat.
3. Changes in hydrology where taxon is found.

DESIGNATED

Critical habitat for bull trout

Critical habitat for the marbled murrelet

Critical habitat for the northern spotted owl

PROPOSED

None

CANDIDATE

Oregon spotted frog (*Rana pretiosa*)

Yellow-billed cuckoo (*Coccyzus americanus*)

SPECIES OF CONCERN

Bald eagle (*Haliaeetus leucocephalus*)

Beller's ground beetle (*Agonum belleri*)

California wolverine (*Gulo gulo luteus*)

Cascades frog (*Rana cascadae*)

Hatch's click beetle (*Eanus hatchi*)

Larch Mountain salamander (*Plethodon larselli*)

Long-eared myotis (*Myotis evotis*)

Long-legged myotis (*Myotis volans*)

Northern goshawk (*Accipiter gentilis*)

Northern sea otter (*Enhydra lutris kenyoni*)

Northwestern pond turtle (*Emys* (= *Clemmys*) *marmorata marmorata*)

Olive-sided flycatcher (*Contopus cooperi*)

Pacific lamprey (*Lampetra tridentata*)

Pacific Townsend's big-eared bat (*Corynorhinus townsendii townsendii*)

Peregrine falcon (*Falco peregrinus*)

River lamprey (*Lampetra ayresi*)

Tailed frog (*Ascaphus truei*)

Valley silverspot (*Speyeria zerene bremeri*)

Western toad (*Bufo boreas*)

Aster curtus (white-top aster)

Botrychium pedunculatum (stalked moonwort)

Cimicifuga elata (tall bugbane)

Attachment G

NOAA Endangered Species Act List

Endangered Species Act Status of West Coast Salmon & Steelhead

(Updated July 1, 2009)

		Species ¹	Current Endangered Species Act Listing Status ²	ESA Listing Actions Under Review
Sockeye Salmon (<i>Oncorhynchus nerka</i>)	1	Snake River	Endangered	
	2	Ozette Lake	Threatened	
	3	Baker River	Not Warranted	
	4	Okanogan River	Not Warranted	
	5	Lake Wenatchee	Not Warranted	
	6	Quinalt Lake	Not Warranted	
	7	Lake Pleasant	Not Warranted	
Chinook Salmon (<i>O. tshawytscha</i>)	8	Sacramento River Winter-run	Endangered	
	9	Upper Columbia River Spring-run	Endangered	
	10	Snake River Spring/Summer-run	Threatened	
	11	Snake River Fall-run	Threatened	
	12	Puget Sound	Threatened	
	13	Lower Columbia River	Threatened	
	14	Upper Willamette River	Threatened	
	15	Central Valley Spring-run	Threatened	
	16	California Coastal	Threatened	
	17	Central Valley Fall and Late Fall-run	Species of Concern	
	18	Upper Klamath-Trinity Rivers	Not Warranted	
	19	Oregon Coast	Not Warranted	
	20	Washington Coast	Not Warranted	
	21	Middle Columbia River spring-run	Not Warranted	
	22	Upper Columbia River summer/fall-run	Not Warranted	
	23	Southern Oregon and Northern California Coast	Not Warranted	
	24	Deschutes River summer/fall-run	Not Warranted	
Coho Salmon (<i>O. kisutch</i>)	25	Central California Coast	Endangered	
	26	Southern Oregon/Northern California	Threatened	
	27	Lower Columbia River	Threatened	• Critical habitat
	28	Oregon Coast	Threatened	
	29	Southwest Washington	Undetermined	
	30	Puget Sound/Strait of Georgia	Species of Concern	
	31	Olympic Peninsula	Not Warranted	
Chum Salmon (<i>O. keta</i>)	32	Hood Canal Summer-run	Threatened	
	33	Columbia River	Threatened	
	34	Puget Sound/Strait of Georgia	Not Warranted	
	35	Pacific Coast	Not Warranted	
Steelhead (<i>O. mykiss</i>)	36	Southern California	Endangered	
	37	Upper Columbia River	Threatened	
	38	Central California Coast	Threatened	
	39	South Central California Coast	Threatened	
	40	Snake River Basin	Threatened	
	41	Lower Columbia River	Threatened	
	42	California Central Valley	Threatened	
	43	Upper Willamette River	Threatened	
	44	Middle Columbia River	Threatened	
	45	Northern California	Threatened	
	46	Oregon Coast	Species of Concern	
	47	Southwest Washington	Not Warranted	
	48	Olympic Peninsula	Not Warranted	
	49	Puget Sound	Threatened	• Critical habitat
	50	Klamath Mountains Province	Not Warranted	
Pink Salmon (<i>O. gorbuscha</i>)	51	Even-year	Not Warranted	
	52	Odd-year	Not Warranted	

¹ The ESA defines a “species” to include any distinct population segment of any species of vertebrate fish or wildlife. For Pacific salmon, NOAA Fisheries Service considers an evolutionarily significant unit, or “ESU,” a “species” under the ESA. For Pacific steelhead, NOAA Fisheries Service has delineated distinct population segments (DPSs) for consideration as “species” under the ESA.

Attachment H

Endangered Species Act List – Marine Mammals

Page Title: ESA MM List

URL: <http://www.nwr.noaa.gov/Marine-Mammals/ESA-MM-List.cfm>

ESA-Listed Marine Mammals

Under the jurisdiction of NOAA Fisheries that may occur:

off Washington & Oregon

- [Southern Resident killer whale](#) (*Orcinus orca*) (E); [critical habitat](#)
- [humpback whale](#) (*Megaptera novaeangliae*) (E)
- [blue whale](#) (*Balaenoptera musculus*) (E)
- [fin whale](#) (*Balaenoptera physalus*) (E)
- [sei whale](#) (*Balaenoptera borealis*) (E)
- [sperm whale](#) (*Physeter macrocephalus*) (E)
- [Steller sea lion](#) (*Eumetopias jubatus*) (T); [critical habitat](#)

in Puget Sound

- [Southern Resident killer whale](#) (*Orcinus orca*) (E); [critical habitat](#)
- [humpback whale](#) (*Megaptera novaeangliae*) (E)
- [Steller sea lion](#) (*Eumetopias jubatus*) (T); [critical habitat](#)

(E) = Endangered

(T) = Threatened

Page last updated: 2010-06-15 11:08:13

Attachment I

Endangered Species Act List – Marine Turtles

Page Title: ESA Turtle List

URL: <http://www.nwr.noaa.gov/Other-Marine-Species/ESA-Turtle-List.cfm>

ESA-Listed Marine Turtles

Under the jurisdiction of NOAA Fisheries that may occur off Washington & Oregon:

- [leatherback sea turtle](#) (*Dermochelys coriacea*) (E)
- [green sea turtle](#) (*Chelonia mydas*) (E)
- [olive ridley sea turtle](#) (*Lepidochelys olivacea*) (E)
- [loggerhead sea turtle](#) (*Caretta caretta*) (T)

Sightings and strandings of these animals are very rare, and there are no breeding beaches in the Northwest Region.

(E) = Endangered

(T) = Threatened

Feb. 19, 2010: NOAA Fisheries extended the comment period on the proposed revision to existing critical habitat for the leatherback turtle under the Endangered Species Act. See the [Federal Register notice](#) (PDF 49KB) for details.

Jan. 5, 2010: NOAA Fisheries proposed to revise and expand critical habitat for the leatherback turtle under the Endangered Species Act. Additional information about this proposal can be found in the links below and on [NOAA Fisheries' Office of Protected Resources Website](#).

- [News Release](#) (PDF 73KB -- links to NOAA Fisheries Website)
- [Federal Register notice](#) (PDF 711KB)

Page last updated: 2010-10-25 21:14:38



U.S. Department
of Transportation
**Federal Transit
Administration**

REGION X
Alaska, Idaho, Oregon,
Washington

915 Second Avenue
Federal Bldg. Suite 3142
Seattle, WA 98174-1002
206-220-7954
206-220-7959 (fax)

January 6, 2010

Ms. Joni Earl
Executive Director
Sound Transit
401 S. Jackson St.
Seattle, WA 98104

RE: **Sound Transit University Link: Montlake Triangle/Rainier Vista
NEPA Environmental Re-Evaluation**

Dear Joni:

The Federal Transit Administration (FTA) has received the *Environmental Re-Evaluation Consultation Worksheet* dated December 2010, along with various supporting materials. The re-evaluation became necessary due to proposed design changes to the Montlake Triangle and Rainier Vista in the vicinity of the University of Washington Stadium Station. The re-evaluation also included an analysis of potential impacts to species listed under the Endangered Species Act, and informal consultation with interested tribes and with the State Dept. of Archaeology and Historic Preservation. FTA compared the likely impacts of the redesign to the impacts disclosed in the *Sound Transit North Link Final Supplemental Environmental Impact Statement (FSEIS) (2006)*.

23 CFR section 771.129(c) states:

After approval of the EIS, FONSI, or CE designation, the applicant shall consult with the Administration prior to requesting any major approvals or grants to establish whether or not the approved environmental document or CE designation remains valid for the requested Administration action. These consultations will be documented when determined necessary by the Administration.

In re-evaluating the project, FTA also considered specific mitigation measures included with the Re-evaluation Worksheet, which Sound Transit proposes to undertake as part of the redesigned activity. We find those measures appropriate. (We also recommend that Sound Transit get advance approval from King County Metro before closing Pacific Place's southwest-bound lane, as it agreed to do before closing the northeast-bound lane.)

This letter confirms that Sound Transit has complied with the National Environmental Policy Act re-evaluation requirements for this project. Based on the review of the information provided to FTA, **FTA finds that the changes described in the re-evaluation materials are not substantial and with the mitigation specified in the re-evaluation materials, the changes will not cause significant environmental impacts that were not previously evaluated.**

Please contact Dan Drais (206-220-4465) if you require additional information.

Sincerely,



for R.F. Krochalis
Regional Administrator

cc: James Irish