

Appendix C
Environmental Justice Analysis

***Mercer Corridor Improvements
Project Environmental Assessment***

Environmental Justice Discipline Report

Prepared for

**Seattle Department of
Transportation**

Prepared by

CH2MHILL

January 2007

Table of Contents

Summary	v
Introduction	v
Environmental Justice Requirement	v
Methodology	vi
Study Area Demographics.....	vi
Findings and Determination	vi
Acronyms and Abbreviations Used in This Report	ix
Glossary	xi
1. Introduction	1-1
2. Description of Alternatives	2-1
2.1 Build Alternative, Option 1	2-1
2.2 Build Alternative, Option 2	2-7
2.3 No Action Alternative.....	2-9
2.4 Other Improvements in the Project Vicinity.....	2-9
2.5 Construction of the Build Alternatives	2-10
3. Regulatory Framework	3-1
3.1 Environmental Justice Orders	3-1
3.2 Relationship to Title VI of the Civil Rights Act	3-2
4. Methodology	4-1
5. Study Area Demographics	5-1
6. Public Involvement	6-1
6.1 Public Outreach.....	6-1
6.2 Results	6-2
7. Project Effects, Mitigation, and Benefits	7-1
7.1 Effects and Mitigation.....	7-1
7.2 Project Benefits.....	7-11
8. Final Determination and Conclusion	8-1
9. References	9-1

Appendix EJ-A. Demographic Data

Exhibits

- 2-1 Mercer Corridor Project Location
- 2-2 Build Alternative – Option 1
- 2-3 Mercer and Valley Street Cross Sections

- 2-4 Proposed Interim Design with Eastbound Broad Street Tie-in at Mercer and Eighth
- 2-5 Optional Interim Design with Eastbound Broad Street Tie-in at Mercer and Ninth
- 2-6 Build Alternative – Option 2
- 5-1 Vicinity Map
- 5-2 Minority Population by Census Block Group
- 5-3 Low-Income Population by Census Block Group
- 5-4 Limited English Proficiency Population

Summary

Introduction

The objective of the Mercer Corridor Improvements project is to improve local safety, access, and circulation within the South Lake Union neighborhood of Seattle for vehicles, bicycles, and pedestrians, and to provide for more direct movement of traffic and freight through the corridor. Currently, Mercer Street is a one-way principal arterial street in the eastbound direction. In the South Lake Union area, Mercer Street operates as a couplet with Valley Street, which carries the westbound traffic.

The proposed project would replace the existing Mercer/Valley street couplet with a widened two-way Mercer Street. The widened Mercer Street would have three lanes in each direction, with widened sidewalks, parking, and a landscaped median. Valley Street would be narrowed to a two-lane street with sidewalks, bicycle lanes, and parking.

Environmental Justice Requirement

Environmental justice analysis is the process used when planning and developing transportation projects to achieve three things:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

In 1994, President Clinton issued an executive order which required that “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations” (Executive Order 12898, February 11, 1994). In response, the U.S. Department of Transportation (USDOT) published general guidelines on how to address environmental justice issues and impacts in transportation projects (Order to Address Environmental Justice in Minority Populations and Low-Income Populations, USDOT Order 5610.2). Those orders provide the basis for the environmental justice analysis of the Mercer Corridor Improvements Project.

Methodology

To analyze whether there would be any disproportionately high and adverse effects to minority and/or low-income populations, we conducted the following:

- An analysis of demographic data from the 2000 U.S. Census and public school data from the Seattle Public School District;
- A review of the public involvement plan and feedback received from the public; and
- A review and analysis of the other social, environmental, and economic reports prepared for the Mercer Corridor Improvements Project.

The methodology used to analyze any disproportionately high and adverse effects on minority and/or low-income populations is consistent with the following two guidance documents: Chapter 458, Environmental Justice, from the WSDOT *Environmental Procedures Manual* (WSDOT M31-11, updated in March 2006) and *Environmental Justice: What You Should Know* (FHWA Washington Division 2003).

Study Area Demographics

The study area for the environmental justice analysis was defined as a 1-mile zone around the Mercer Corridor Improvements Project limits. The project limits are defined as Valley Street to the north, Dexter Avenue North to the west, Republican Street to the south, and the I-5 on-ramps to the east (see Exhibit 5-1 in Chapter 5). This study area was selected because most of the environmental effects resulting from this project would occur in the areas less than one mile from the roadway alignments. Although the areas within the 1-mile zone were the primary focus of this study, project effects were reviewed wherever they were anticipated to occur. The majority of the Census block groups have minority population concentrations between 12.5 and 25 percent and low-income population concentrations between 0 and 12.5 percent, and the majority of the Census block groups have low concentrations of limited-English-proficiency residents.

Findings and Determination

The key findings of this environmental justice study are as follows:

- The Build Alternative options and the No Action Alternative associated with the Mercer Corridor Improvements Project would not result in disproportionately high and adverse effects on minority or low-income populations.

- The public interaction team designed a public involvement program to communicate with populations that would be affected by the project. Based on the discussions with the study area residents, the concerns most often heard were related to bicycles, pedestrians, freight, and traffic.
- The Build Alternative options associated with the Mercer Corridor Improvements Project would result in a series of benefits that would accrue to the general traveling public, including minority and low-income individuals. These include:
 - Improving local safety, access, and circulation within South Lake Union for vehicles, bicycles, and pedestrians.
 - Providing for more direct movement of traffic and freight through the corridor.
 - Supporting transit use through convenient pedestrian access and a street network that allows east-west transit service.
 - Creating a quiet, pedestrian-friendly Valley Street to connect the neighborhood to South Lake Union Park.
 - Supporting the City's economic development and livability goals for South Lake Union.
- The Mercer Corridor Project would not affect any resources that are particularly or uniquely important to minority or low-income populations.

Acronyms and Abbreviations Used in This Report

EA	Environmental Assessment
EO	Executive Order
FHWA	Federal Highway Administration
GIS	geographic information system
LEP	limited English proficiency
NEPA	National Environmental Protection Act
SDOT	Seattle Department of Transportation
SEPA	State Environmental Protection Act
USDOT	United States Department of Transportation
WSDOT	Washington State Department of Transportation

Glossary

Adverse Effects - Within the context of an environmental justice analysis, adverse effects means:

The totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of USDOT programs, policies, or activities.

(USDOT Order 5610.2, § Appendix 1(f))

Block - A subdivision of a census tract, a block is the smallest geographic unit for which the Census Bureau tabulates data for 100 percent of the population.

Block Group - A subdivision of a census tract, a block group is the smallest geographic unit for which the Census Bureau tabulates sample data.

Disproportionately high and adverse effect on minority and low-income populations - Disproportionately high and adverse effect on minority and low-income populations means an adverse effect that:

(1) is predominately borne by a minority population and/or a low-income population, or

(2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

(USDOT Order 5610.2, § Appendix 1(g))

Mitigation and project benefits in environmental justice analyses are addressed as follows:

In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancements measures that will be taken and all offsetting benefits to the affected minority and low-income populations may be taken into account, as well as the design, comparative impacts, and

the relevant number of similar existing system elements in non-minority and non-low-income areas.

(USDOT Order 5610.2, § 8(b))

Limited English Proficiency - Executive Order 13166 requires federal agencies and any other entities that receive federal funds via grants, contracts, or sub-contracts to make their activities accessible to non-English speaking persons. A person is considered to have limited English proficiency if he/she was reported by the 2000 U.S. Census to speak English “Not Well” or “Not At All” (2000 U.S. Census, Table P19: Age By Language Spoken At Home By Ability To Speak English For The Population 5 Years And Over.) A limited English proficiency population concentration of five percent or 1,000 or more individuals is a key threshold in the “safe harbor” requirements for translation of written documents in the U.S. Department of Health and Human Services guidance regarding the Title VI prohibition against national origin discrimination affecting limited English proficient persons.

Low-income - *A person whose median household income is at or below the Department of Health and Human Services poverty guidelines for that size of household* (USDOT Order 5610.2, § Appendix 1(b))

Low-income Population - *Any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy or activity* (USDOT Order 5610.2, § Appendix 1(d))

Minority - A person who is:

- *Black (a person having origins in any of the black racial groups of Africa).*
- *Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or the Spanish culture or origin, regardless of race).*
- *Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands).*
- *American Indian and Alaskan Native (a person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition).*

(USDOT Order 5610.2, § Appendix 1(c))

Minority Population - Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy or activity (USDOT Order 5610.2, § Appendix 1(e))

1. Introduction

The Seattle Department of Transportation (SDOT), in cooperation with the Federal Highway Administration (FHWA), proposes to construct the Mercer Corridor Improvements project to provide vehicular and pedestrian improvements in the Mercer Street corridor in the South Lake Union area of Seattle. The purpose of this environmental justice analysis is to determine whether the proposed Mercer Corridor Improvements Project would result in disproportionately high and adverse human health or environmental effects on minority and/or low-income populations. The analysis was prepared in compliance with Presidential Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898), dated February 11, 1994 and Presidential Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency (EO 13166), dated August 11, 2000. Chapter 3 describes the regulatory background governing environmental justice analysis.

This environmental justice study used a two-prong approach in the analysis. The study focused on the location of project effects (as reported in the various discipline reports prepared as part of the Mercer Corridor Improvements Project Environmental Assessment (EA)) and examined the racial and income characteristics of the populations affected by these project effects. Demographic analyses identified specific block groups with high concentrations of minority, low-income, and limited-English-proficiency residents. To complement statistical population analyses, a public involvement plan provided personal communication with, and solicited feedback from, potentially affected residents.

2. Description of Alternatives

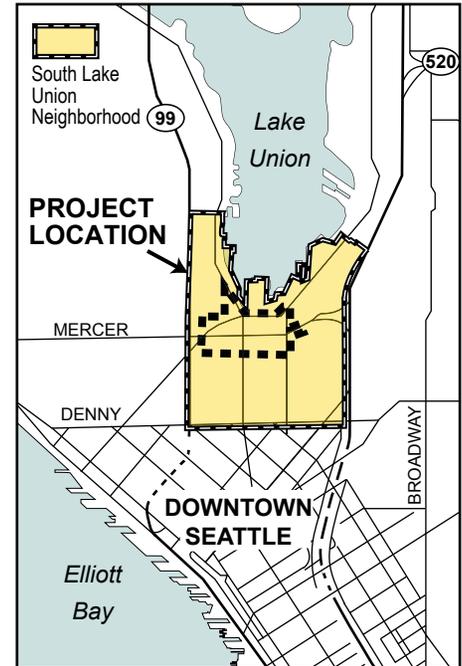
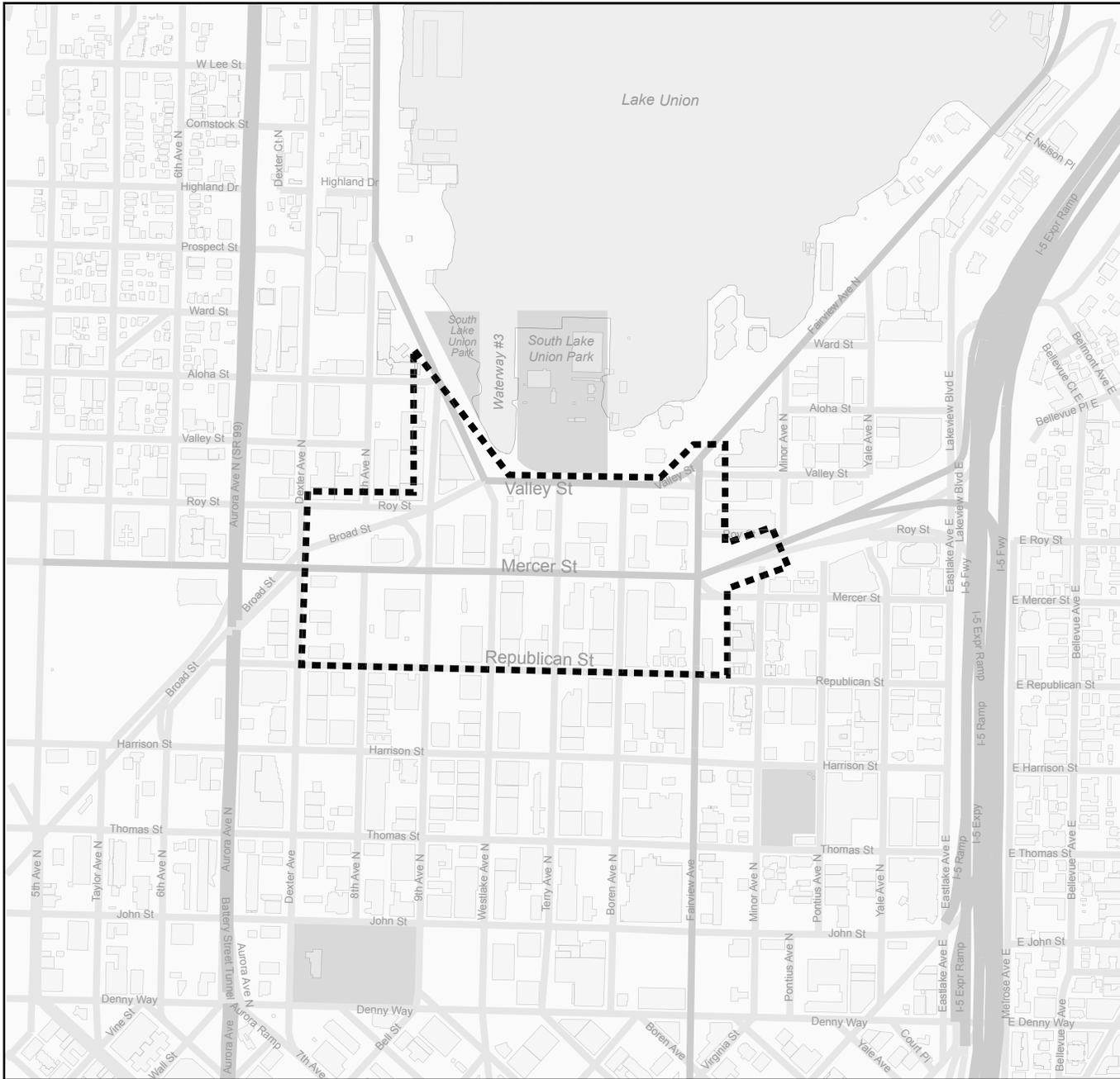
The City of Seattle, Washington, in cooperation with the Federal Highway Administration, proposes to make improvements to the Mercer Corridor, which includes Mercer and Valley streets, in the South Lake Union neighborhood of Seattle (Exhibit 2-1). The purpose of the project is to improve local safety, access, and circulation within South Lake Union for vehicles, bicycles and pedestrians, and provide for more direct movement of traffic and freight through the corridor. Mercer Street currently is a one-way principal arterial with four lanes in the eastbound direction. In the South Lake Union area, Mercer Street operates as a couplet with Valley Street, via Fairview Avenue, from I-5. Valley Street is a principal arterial with five lanes (two eastbound and three westbound) and serves as the westbound segment of the Mercer/Valley couplet.

2.1 Build Alternative, Option 1

The Build Alternative would replace the existing Mercer/Valley couplet with a widened two-way Mercer Street, which would provide more direct access to and from I-5 (Exhibit 2-2). Valley Street would be narrowed to a two-lane street with bicycle lanes in each direction and parking. Pedestrian and bicycle circulation and safety would be improved with widened sidewalks, removing barriers caused by turn prohibitions and crossing restrictions of the existing couplet, and by providing additional crossings of Mercer and Valley Streets. For Option 1, Mercer Street would be widened primarily to the north.

2.1.1 Mercer Street Improvements

The two-way Mercer Street would be a boulevard with a landscaped median, left-turn lanes, parking, and sidewalks (Exhibit 2-3). The street would be widened primarily to the north to accommodate the new westbound travel lanes, median, parking lanes, and wider sidewalks. The street would have three eastbound lanes and three westbound lanes to accommodate traffic demand between Dexter and Fairview avenues and to facilitate movement of freight from I-5 to the Ballard/Interbay manufacturing and industrial center. A 21-foot landscaped median would be constructed to enhance pedestrian safety and provide aesthetic benefits. At intersections with left-turn lanes (most locations), the median would be narrowed to accommodate the turn lane and to provide a 10-foot curbed pedestrian refuge for those unable to cross the entire street in one traffic signal phase. Parking lanes would be added on each side of the street to support retail uses. On the north side of the street, the parking lane would be 8 feet wide. On the south side of the street, the parking lane would be 10 feet wide to allow potential future use as an additional eastbound lane for transit or general purpose traffic.



LEGEND

 Project Limits



NORTH

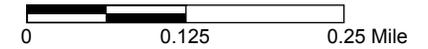
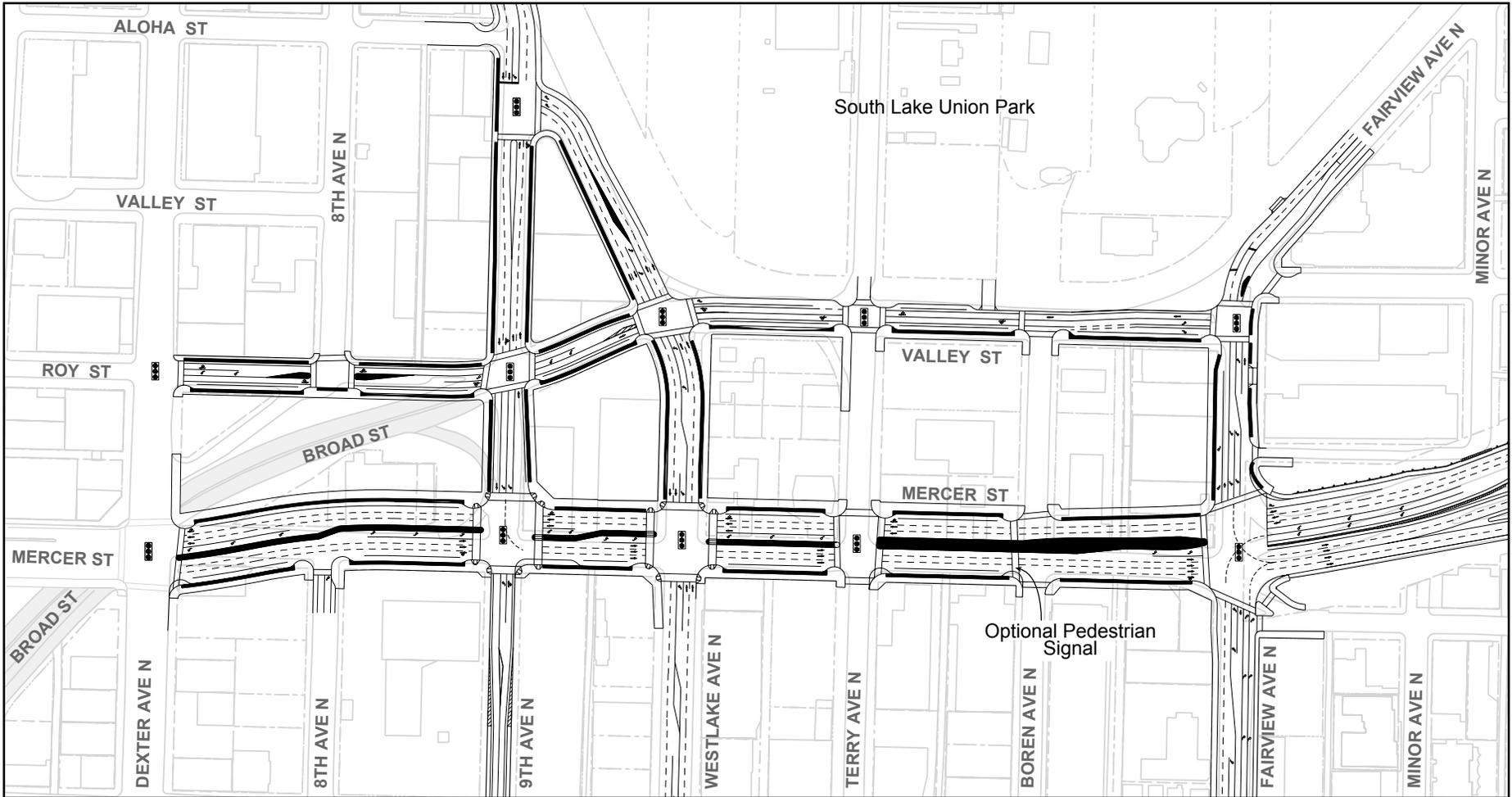


Exhibit 2-1

Mercer Corridor Project Location

MERCER CORRIDOR
IMPROVEMENTS PROJECT



LEGEND

-  Broad Street Removed
-  Planting Strips and Median
-  Signalized Intersection

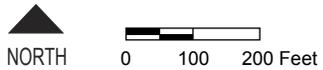


Exhibit 2-2
**Build Alternative –
Option 1**
MERCER CORRIDOR
IMPROVEMENTS PROJECT

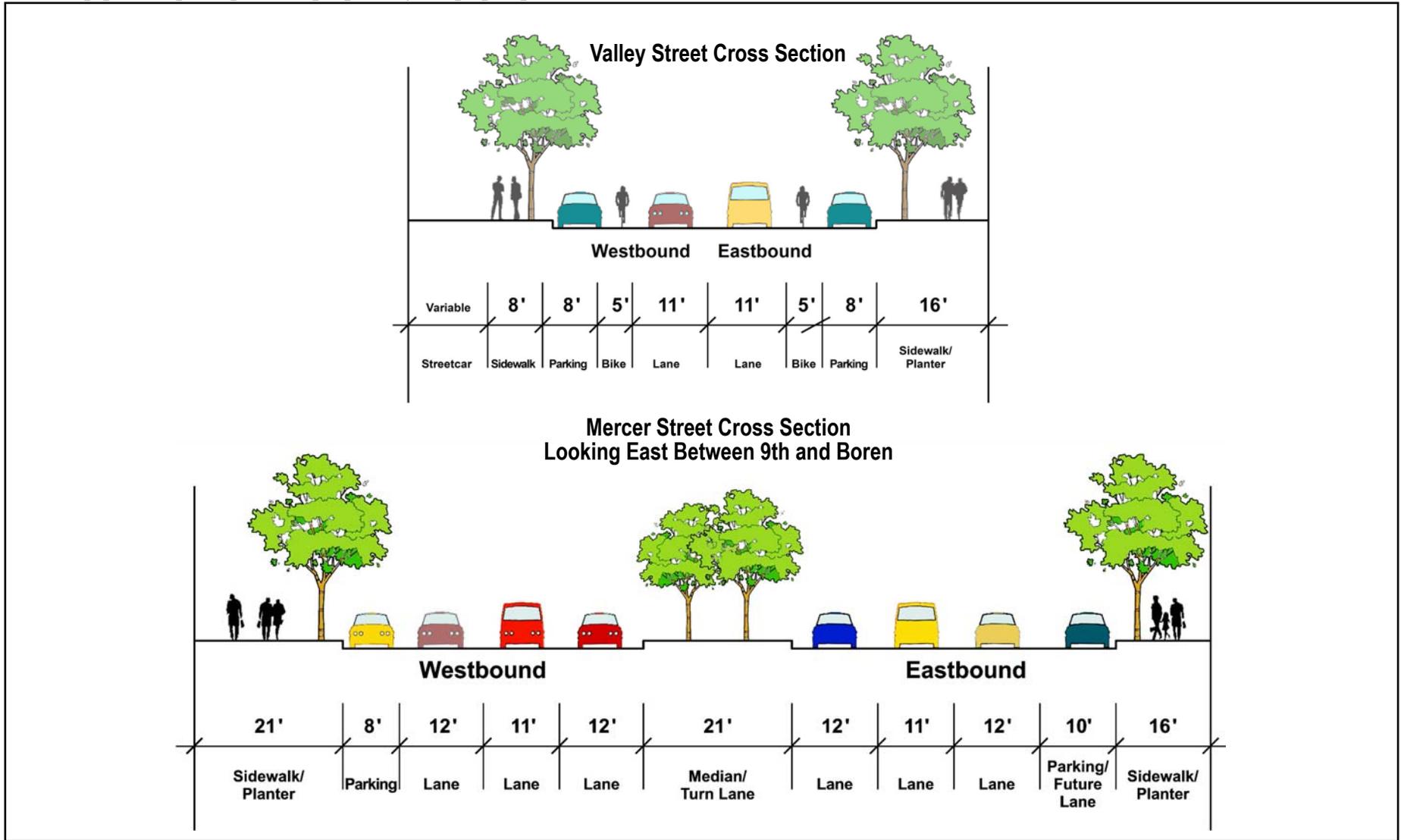


Exhibit 2-3
**Mercer and Valley Street
 Cross Sections**
 MERCER CORRIDOR
 IMPROVEMENTS PROJECT

The sidewalks along Mercer Street would be widened to accommodate anticipated pedestrian activity associated with a high-density urban neighborhood. Sidewalks would be widened to 16 feet on the south side of the street to provide a 10-foot walkway and a 6-foot safety buffer and planting area. On the north side of the street, the sidewalk would be widened to 21 feet to allow for additional space along building frontages for window shopping and possible sidewalk cafes, as well as a 6-foot safety buffer and planting strip. A new traffic signal at Terry Street would provide safe crossing opportunities for pedestrians and vehicles. Driveway access to properties between Boren Avenue and Fairview Avenue would be removed or restricted to reduce conflicts and improve traffic flow entering and exiting I-5, with alternate access provided from side streets.

At the western end of the project, the ultimate configuration of Mercer Street would be designed to tie in to a future widening of Mercer Street west of Dexter Avenue North and removal of Broad Street, planned to occur as part of the proposed Alaskan Way Viaduct and Seawall Replacement Project (AWV&SRP). Depending on progress on that project, an interim connection to Broad Street and the existing Mercer Street configuration to the west could be constructed, if needed, until Mercer Street is widened west of Dexter Avenue North. Exhibit 2-4 shows the proposed interim design, with westbound traffic on Mercer Street connecting to the existing Broad Street underpass, and eastbound traffic from Broad Street connecting to Eighth Avenue North. Exhibit 2-5 shows a second, optional interim design. Similar to the proposed interim design, westbound traffic on Mercer Street would connect to the existing Broad Street underpass. However the eastbound Broad Street tie-in would occur at Ninth Avenue North, allowing traffic to either continue west on Mercer Street or turn south on Ninth Avenue North.

2.1.2 Valley Street Improvements

Valley Street would be designed to be sensitive to its location adjacent to South Lake Union Park. Because most traffic would be diverted to the new two-way Mercer Street, Valley Street would be used primarily for local traffic. Valley Street would be narrowed to have one travel lane in each direction, with bike lanes, parking, and sidewalks on each side of the street (Exhibit 2-3). The bike lanes would be 5 feet wide and extend west from Fairview Avenue to connect to existing bike lanes on Dexter Avenue North. The sidewalk on the south side of the street would be widened to 16 feet, and a new 8-foot sidewalk would be constructed on the north side of the street. Improved crossings of Valley Street at Fairview, Boren, Terry, and Westlake avenues, along with a new signal at Terry Street, would create more convenient, safe pedestrian access to South Lake Union Park.

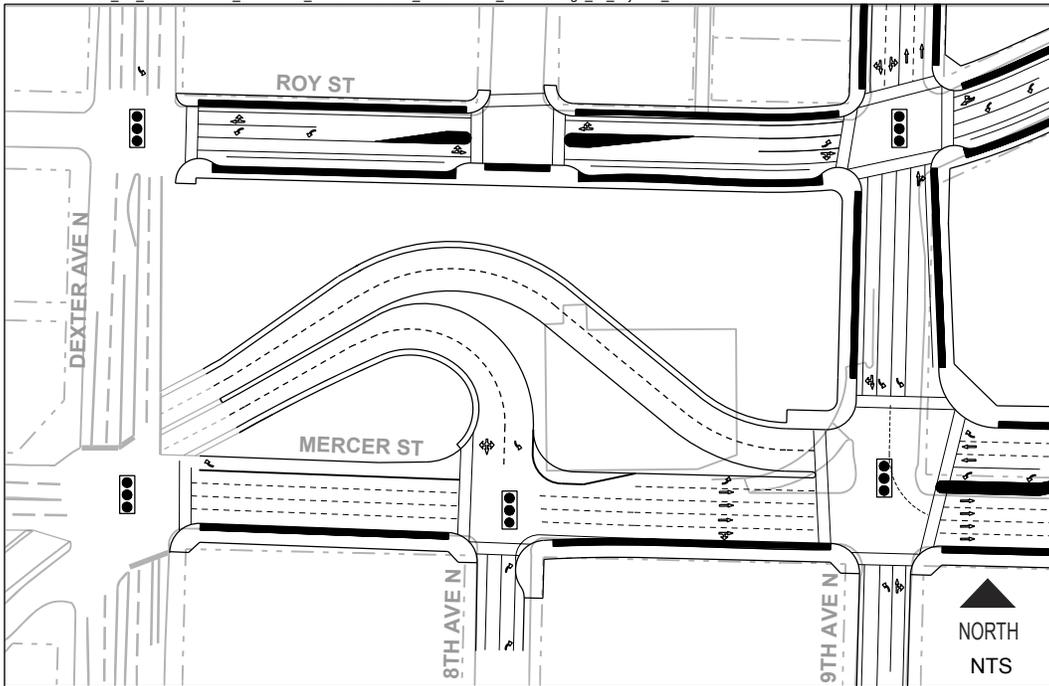


Exhibit 2-4
**Proposed Interim Design with Eastbound
Broad Street Tie-in at Mercer and Eighth**

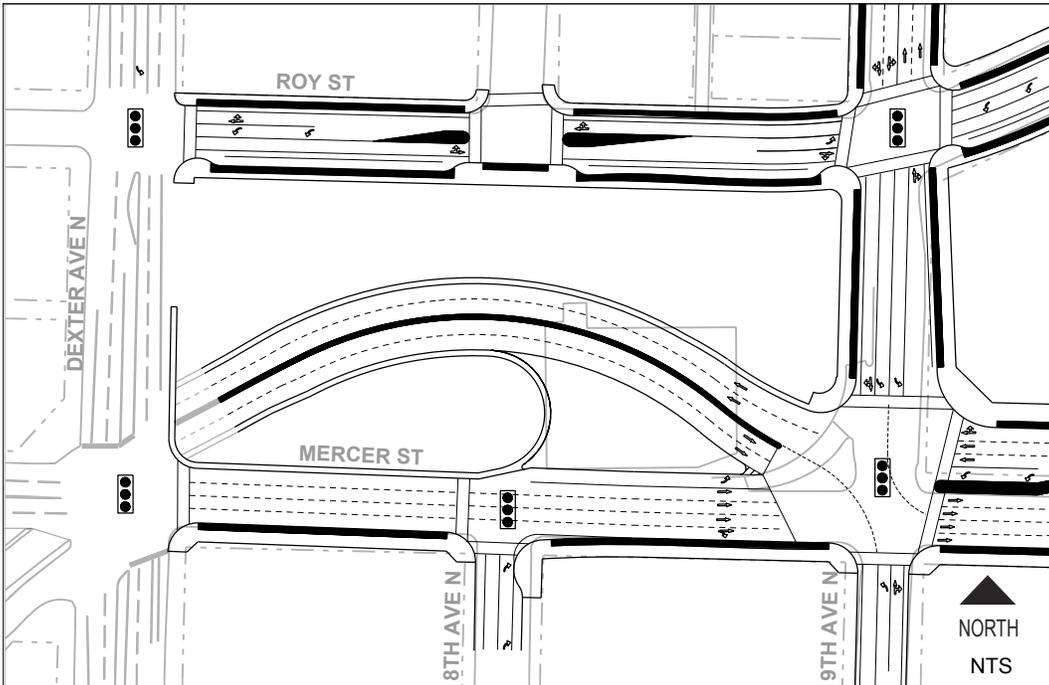


Exhibit 2-5
**Optional Interim Design with Eastbound
Broad Street Tie-in at Mercer and Ninth**
MERCER CORRIDOR
IMPROVEMENTS PROJECT

2.1.3 Other Improvements

At the eastern end of the project, the I-5 ramp termini at Fairview Avenue would be widened to provide three through lanes to Mercer Street and four through lanes from Mercer Street to the I-5 ramps. To prevent long traffic queues on the I-5 off-ramp, there would also be two left-turn lanes and one right-turn lane onto Fairview Avenue.

Currently, westbound truck traffic from I-5 is routed along Valley Street. With the Build Alternative Option 1, this truck traffic would be routed on the new two-way Mercer Street. The intersection at Mercer Street and 9th Avenue North would be designed to have sufficient space and a wider turning radius to accommodate 75-foot-long trucks traveling to and from Ballard and Interbay via 9th Avenue North and Westlake Avenue North. Westlake Avenue North (between Mercer and Valley Streets) and 9th Avenue North (between Mercer Street and Westlake Avenue North) would be converted from one-way streets to two-way streets to improve local access.

2.2 Build Alternative, Option 2

Similar to Option 1, Build Alternative Option 2 would replace the existing Mercer/Valley couplet with a widened two-way Mercer Street and a narrowed Valley Street (Exhibit 2-6). For Option 2, Mercer Street would be widened primarily to the south. Some widening would occur to the north to tie into the existing I-5 ramps to the east.

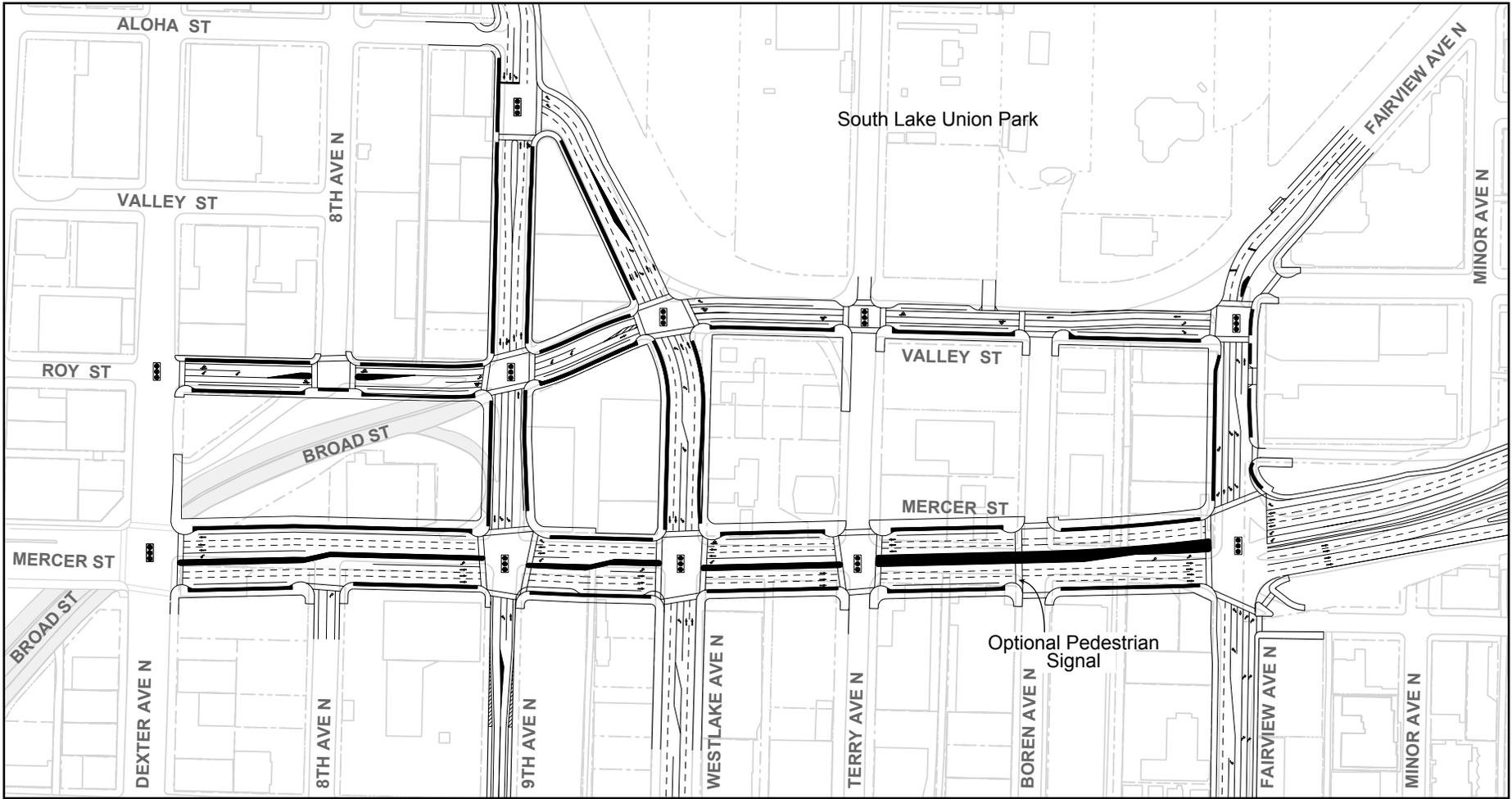
2.2.1 Mercer Street Improvements

The cross-section for the widened two-way Mercer Street would generally be the same as Option 1; however the widening would primarily be shifted to the south. Some widening would occur to the north to tie into the existing I-5 ramps at the eastern end of the corridor.

To minimize adverse effects on existing buildings, the roadway median between Eighth Avenue North and Westlake Avenue North would be reduced from 10 feet to 8 feet, and the sidewalk on the south side of the street would be reduced from 16 feet to 12 feet. Additionally, the sidewalk on the north side of the street in front of the McKay building at the corner of Mercer Street and Westlake Avenue North would be reduced from 21 feet to 12 feet.

2.2.2 Valley Street Improvements

Proposed improvements to Valley Street would be the same as Option 1.



LEGEND

-  Broad Street Removed
Alaskan Way Viaduct and Seawall Replacement Project
-  Planting Strips and Median
-  Signalized Intersection

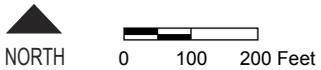


Exhibit 2-6
**Build Alternative –
Option 2**
MERCER CORRIDOR
IMPROVEMENTS PROJECT

2.2.3 Other Improvements

The proposed widening of the I-5 ramp termini at Fairview Avenue would be the same as Option 1. Similar to Option 1, Westlake Avenue North (between Mercer and Valley streets) and 9th Avenue North (between Mercer Street and Westlake Avenue) would be converted from one-way streets to two-way streets. The intersection at Mercer Street and 9th Avenue North would be designed to have sufficient space and a wider turning radius to accommodate 75-foot-long trucks traveling to and from Ballard and Interbay via 9th Avenue North and Westlake Avenue North. Similar to Option 1, an interim connection to Broad Street and the existing Mercer Street configuration to the west could be constructed, if needed, until Mercer Street is widened west of Dexter Avenue North as part of the AWW&SRP. The interim design would have a tie-in for eastbound Broad Street traffic either at Mercer Street and Eighth Avenue North (Exhibit 2-4) or at Mercer Street and Ninth Avenue North (Exhibit 2-5).

2.3 No Action Alternative

The No Action Alternative (also referred to as the No Build Alternative) is included in the environmental analysis as a comparative alternative. This alternative evaluates what would occur if nothing were done to solve the project's identified problem. This alternative serves as the baseline for measuring and comparing the effects of the Build Alternatives. The No Action Alternative would not necessarily be free of environmental effects.

Under the No Build Alternative, the Mercer-Valley Street couplet would remain, and no roadway, pedestrian or bicycle improvements to the project area would be made.

2.4 Other Improvements in the Project Vicinity

Under either of the Build Alternative options or the No Action Alternative, the South Lake Union area would experience changes to the transportation infrastructure due to other projects. The planning horizon for the Mercer Corridor Improvements Project is 2030. Additional projects proposed in the area within that timeframe include:

- South Lake Union Streetcar Project
- Alaskan Way Viaduct and Seawall Replacement Project
- South Lake Union Park Master Plan
- University of Washington Medical Research Campus
- 2201 Westlake mixed use development
- Interurban Exchange mixed use development

The effects of these projects, together with the proposed Mercer Corridor improvements, are evaluated as cumulative effects in this discipline report.

2.5 Construction of the Build Alternatives

2.5.1 Option 1

Construction of Option 1 would be as follows:

- Construct improvements on the north side of Mercer Street in new right-of-way
- Divert traffic to new lanes; construct improvements on existing Mercer Street.
- Construct improvements on major cross streets, such as Fairview and Westlake, and to I-5 ramps as Mercer is constructed.
- Construct Broad Street connector to create west-bound connection (if needed) and complete improvements to cross-streets.
- Construct improvements to Valley Street with all through traffic diverted to Mercer Street.

Construction is anticipated to take approximately 2.5 years for this option.

2.5.2 Option 2

Option 2 would require an additional 6 to 12 months of construction. The additional number of buildings affected by this option would require additional time for demolition asbestos mitigation. Because Mercer Street would be widened to both the north and the south, construction required for this option is less efficient, and would occur as follows:

- Construct improvements on the north side of Mercer Street in new right-of-way; route traffic as far as possible to the south side.
- Construct improvements on the south side of Mercer Street in new right-of-way; route traffic as far as possible to the north side.
- Divert traffic to new lanes on the north and south sides, construct improvements on existing Mercer Street.

Construction of the other street improvements would be the same as for Option 1. Construction is anticipated to take 3 to 3.5 years for this option.

3. Regulatory Framework

Environmental justice analyses are conducted as part of National Environmental Policy Act (NEPA) reviews. This chapter describes the regulatory background governing these analyses.

3.1 Environmental Justice Orders

Executive Order 12898, issued by President Clinton in 1994, provides that:

each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

In the accompanying memorandum, President Clinton urged federal agencies to incorporate environmental justice principles into analyses prepared under NEPA and emphasized the importance of public participation in the NEPA process.

According to EO 12898, there are three fundamental environmental justice concepts:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and/or low-income populations.

In response to EO 12898, the U.S. Department of Transportation (USDOT), in its *Order to Address Environmental Justice in Minority Populations and Low-Income Populations* (USDOT Order 5610.2), outlined in general terms how environmental justice analyses should be performed and how transportation project decisions should be made to avoid disproportionately high and adverse effects on minority¹ and low-income¹ populations.

¹ See definition in Glossary.

The USDOT Order requires that agencies accomplish the following:

- (1) explicitly consider human health and environmental effects related to transportation projects that may have a disproportionately high and adverse effect on minority or low-income populations; and
- (2) implement procedures to provide “meaningful opportunities for public involvement” by members of those populations during project planning and development (USDOT Order 5610.2, § 5(b)(1)).

In response to EO 12898 and USDOT Order 5610.2, the Federal Highway Administration issued its own order on environmental justice: *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (FHWA Order 6640.23). FHWA Order 6640.23 contains language almost identical to that contained in USDOT Order 5610.2.

3.2 Relationship to Title VI of the Civil Rights Act

Title VI of the Civil Rights Act of 1964 requires that “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” The FHWA *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (FHWA Technical Advisory 6640.8A, October 30, 1987) provides guidance for documenting the potential social, economic, and environmental effects considered in the selection and implementation of highway projects. EO 12898 is a renewed focus on the Title VI law with respect to minority populations and adds low-income populations as an emphasis area when addressing socioeconomic concerns.

4. Methodology

This environmental justice study was prepared using the most recent guidance documents from FHWA and WSDOT, and the best available project-specific and demographic data. The methodology for this study was developed using two guidance documents: Chapter 458, “Environmental Justice”, from the WSDOT *Environmental Procedures Manual* (WSDOT M31-11, updated in March 2006); and *Environmental Justice: What You Should Know* (FHWA Washington Division, 2003).

The environmental justice study included:

- An analysis of demographic data from the 2000 U.S. Census and public school data from the Seattle school district;
- A review of the public involvement plan and feedback received from the public; and
- Review and analysis of the NEPA environmental documentation (environmental assessment discipline reports) developed for the Mercer Corridor Improvements Project, including the Social, Economic, and Relocations discipline reports.

The main elements of the environmental justice study are described briefly below.

Define the study purpose. The purpose of this analysis is to determine whether the proposed Mercer Corridor Improvements Project would result in disproportionately high and adverse human health or environmental effects on minority and/or low-income populations. The Introduction and Regulatory Framework sections (see Chapters 1 and 3) explain why an environmental justice analysis was conducted for the Mercer Corridor Improvements Project.

Identify the study area. The environmental justice analysis team identified a study area to define the limits of the analysis. The environmental justice study area was defined as the area within a one-mile zone around the Mercer Corridor Improvement Project limits. Based upon a review of the study areas identified in other discipline reports prepared for the Mercer Corridor Improvements Project, this study area was selected because most of the environmental effects resulting from this project would occur in the areas less than one mile from the roadway alignment, and it was assumed the greatest effects would occur adjacent to Mercer and Valley streets.

Conduct a demographic analysis. After the study area was identified, the environmental justice analysis team reviewed and mapped the distribution of minority and low-income populations residing within the study area based on data from the 2000 U.S. Census (see Chapter 5, Study

Area Demographics). Public school data was also reviewed for additional information on potential minority and low-income populations residing in the study area.

Conduct a public involvement effort and solicit feedback on the project. SDOT developed a public involvement plan to ensure that the public participates in the environmental process. Methods used to ensure the public is informed about the project include:

- Developing a community database consisting of approximately 6,500 individuals, organizations, and government agencies. The database is the primary means to distribute information about the project and provide opportunities for the public to get involved.
- Providing opportunities for public input in addition to open houses (e.g., project website and postcards).
- Advertising public events in the local newspaper.
- Following up on suggestions gathered during public involvement activities by responding to specific issues and offering solutions for avoiding or minimizing adverse effects.
- Consultation was initiated with the potentially affected Native American tribes, including the Tulalip Tribes and the Muckleshoot Tribe, in September of 2004. As the federal lead agency, FHWA conducts government-to-government consultation with the tribes. WSDOT and SDOT are assisting FHWA with these consultations.

A summary of the public involvement plan and the comments heard from the public is included in Chapter 6, Public Involvement.

The public feedback was reviewed and used by the environmental justice analysis team to assist in determining whether the project would have a disproportionately high and adverse effect on minority and/or low-income populations.

Review potential effects and analyze their location in relation to minority and low-income populations. The environmental justice analysis team reviewed in detail the location, intensity, and duration of environmental effects that would result from the Mercer Corridor Improvements Project, relying principally on the information developed for the EA and documented in the discipline reports. Proposed mitigation and other measures incorporated into the project to avoid or minimize these identified effects were also reviewed. Based on the review of the discipline reports, the analysis team determined whether any of the effects of the project would have the potential to affect different human populations in different ways or to different degrees and would also be of sufficient magnitude to warrant closer analysis. If the analysis team had identified any such effects, it would have determined who, from a race

and income perspective, would be affected by them. This closer analysis, which was not required for the Mercer Corridor environmental justice study, would have involved examining census data at the block and block group level using geographic information system (GIS) maps. The concentrations of minority and low-income populations residing in the affected blocks and block groups would have been determined by the GIS program based on data from the 2000 U.S. Census.

The environmental justice analysis team also reviewed project benefits (see Chapter 7, Project Effects, Mitigation, and Benefits). The project effects, mitigation, and benefits were considered when making the final environmental justice determination (Chapter 8).

Assess whether the project would result in disproportionately high and adverse effects on minority and/or low-income populations. The environmental justice analysis team used the results of the four key steps above to determine the likelihood that the Mercer Corridor Improvements Project would generate disproportionately high and adverse effects on minority and/or low-income populations. To assist in this final qualitative assessment, the analysis team developed a list of six questions based on the guidance contained in USDOT Order 5610.2 and FHWA Washington Division, 2003. These questions and their answers are discussed at the conclusion of this report in Chapter 8, Final Determination and Conclusion.

5. Study Area Demographics

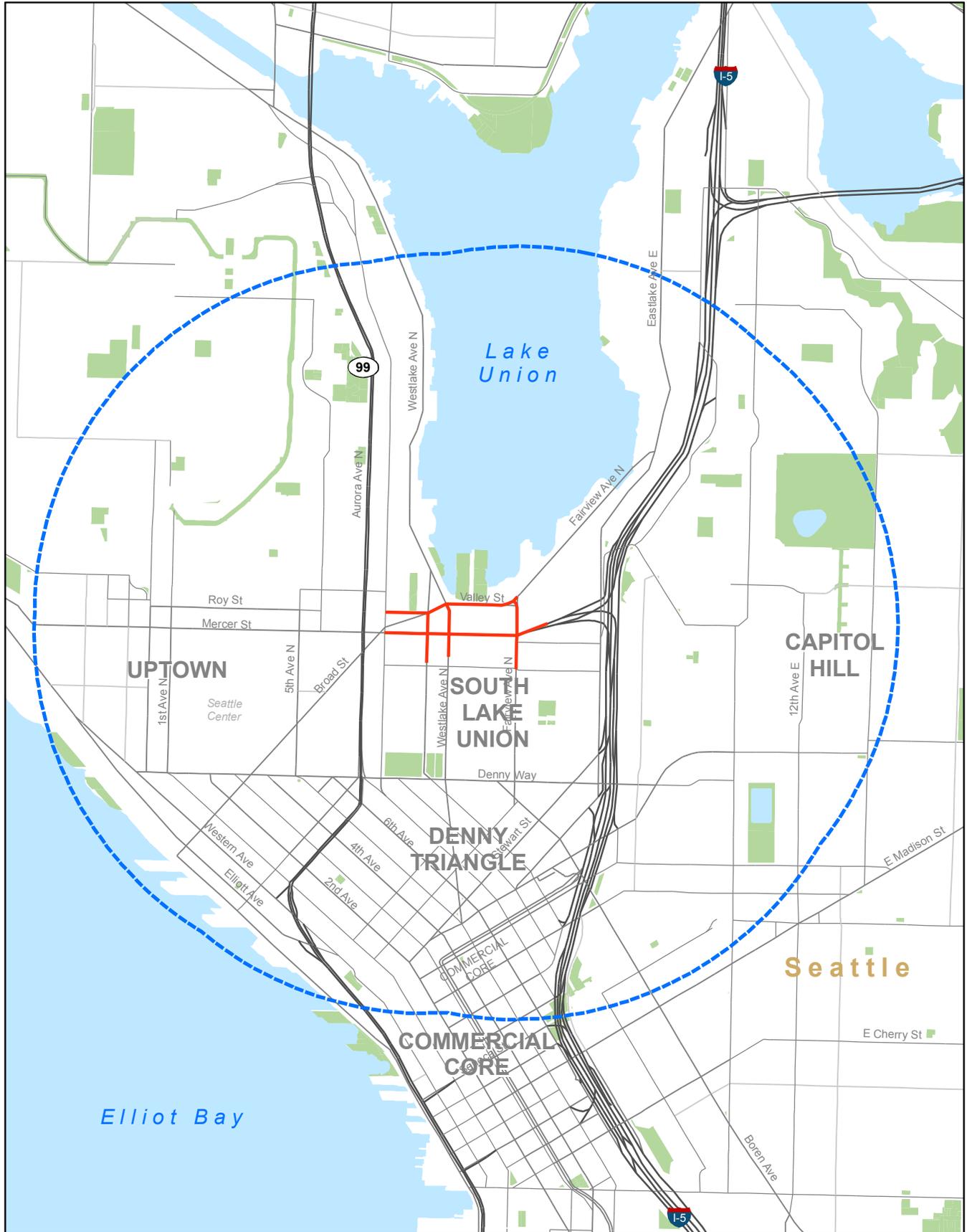
The environmental justice study area was defined as the area within a one-mile zone around the Mercer Corridor Improvements Project limits. The project limits are defined as Valley Street to the north, Dexter Avenue North to the west, Republican Street to the south, and the I-5 on-ramps to the east as shown in Exhibit 5-1. Based upon a review of the study areas identified in other discipline reports prepared for the Mercer Corridor Improvements Project, this study area was selected because most of the environmental effects resulting from this project would occur in the areas less than one mile from the roadway alignments.

For the minority, low-income, and limited English proficiency² population analyses, the environmental justice analysis team analyzed and mapped (by GIS) year 2000 U.S. Census data at the block group level for all block groups that were entirely or partially contained in the study area. Detailed demographic data used to generate these maps are contained in Exhibit A-1 in Appendix EJ-A. In addition to the Census data, the environmental justice analysis team also analyzed student demographic data for those children who attended a public elementary school with an attendance boundary that intersected the study area.

Exhibit 5-2 shows individual Census block groups entirely or partially contained within the study area and the percentage of minority individuals within the population residing in each block group. The map shows eight different percentage ranges of minority population concentration. The block groups within the study area contain minority populations ranging from 0 to 50 percent. The majority of the block groups are within the 12.5 to 25 percent range. The Census block group, which intersects with Mercer Street, contains minority population concentrations in the 37.5 to 50 percent range. Neighborhoods with higher concentrations of minority population include the South Lake Union, Denny Triangle, and Commercial Core neighborhoods.

Exhibit 5-3 depicts the percentage of low-income population residing within each block group, with eight different ranges of low-income population concentration. The majority of the block groups in the study area have low concentrations of low-income populations, ranging from zero to 12.5 percent. The southern portion of the study area has a number of block groups where the low-income population ranges from 12.5 to 25 percent. This area includes the South Lake Union and Denny Triangle neighborhoods. There is one block group where the percentage of low-income population is greater than 50 percent; this block group is located at the edge of the study area in the Commercial Core neighborhood.

² See definitions in Glossary.



- Project Area
- Study Area
- AB** Neighborhoods

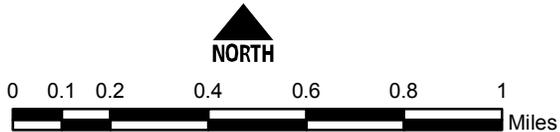
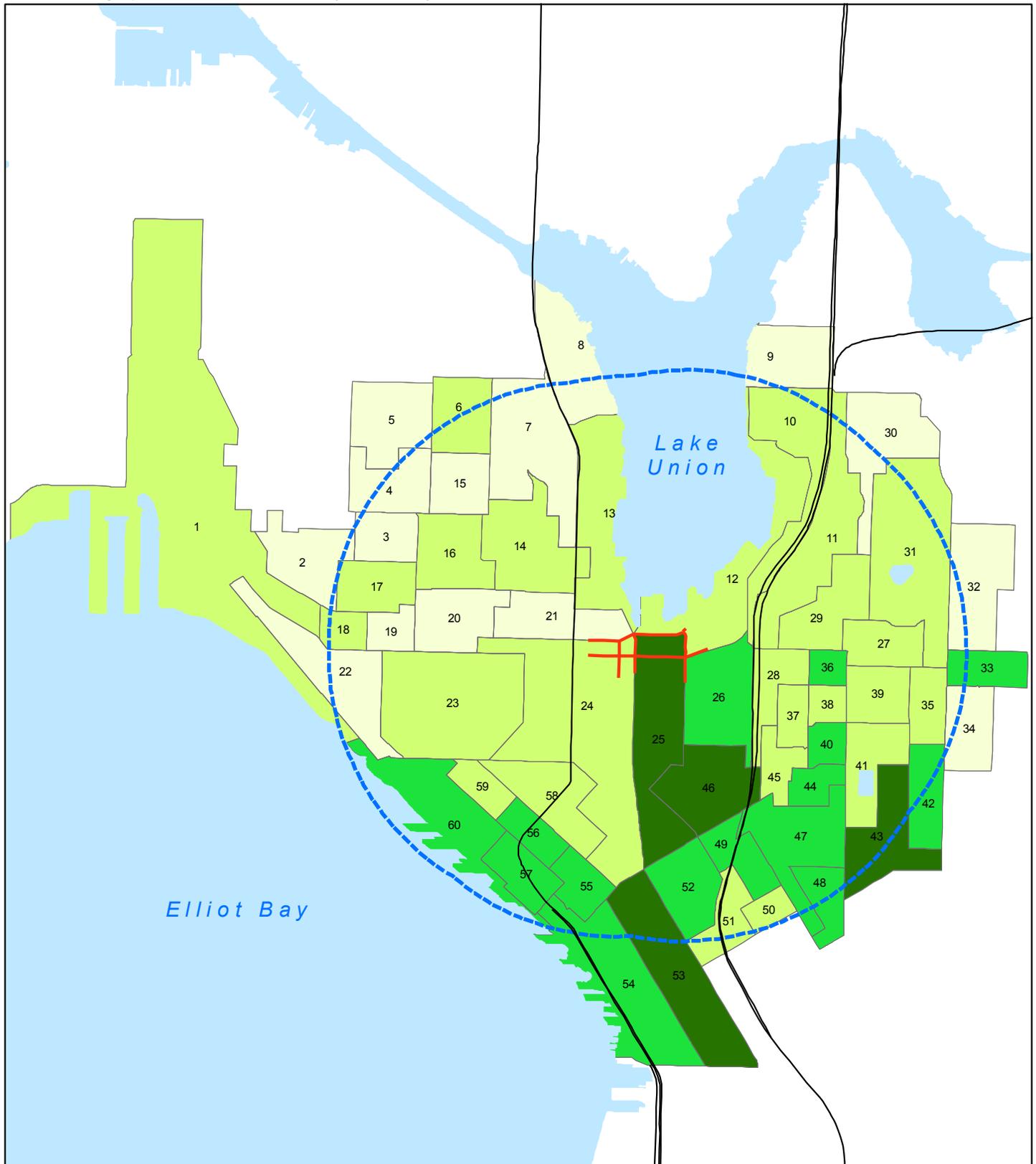


Exhibit 5-1
Vicinity Map
 MERCER CORRIDOR
 IMPROVEMENTS PROJECT



Percent of Census Block Group population

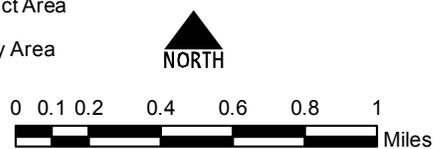
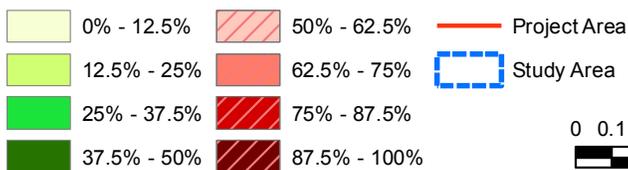
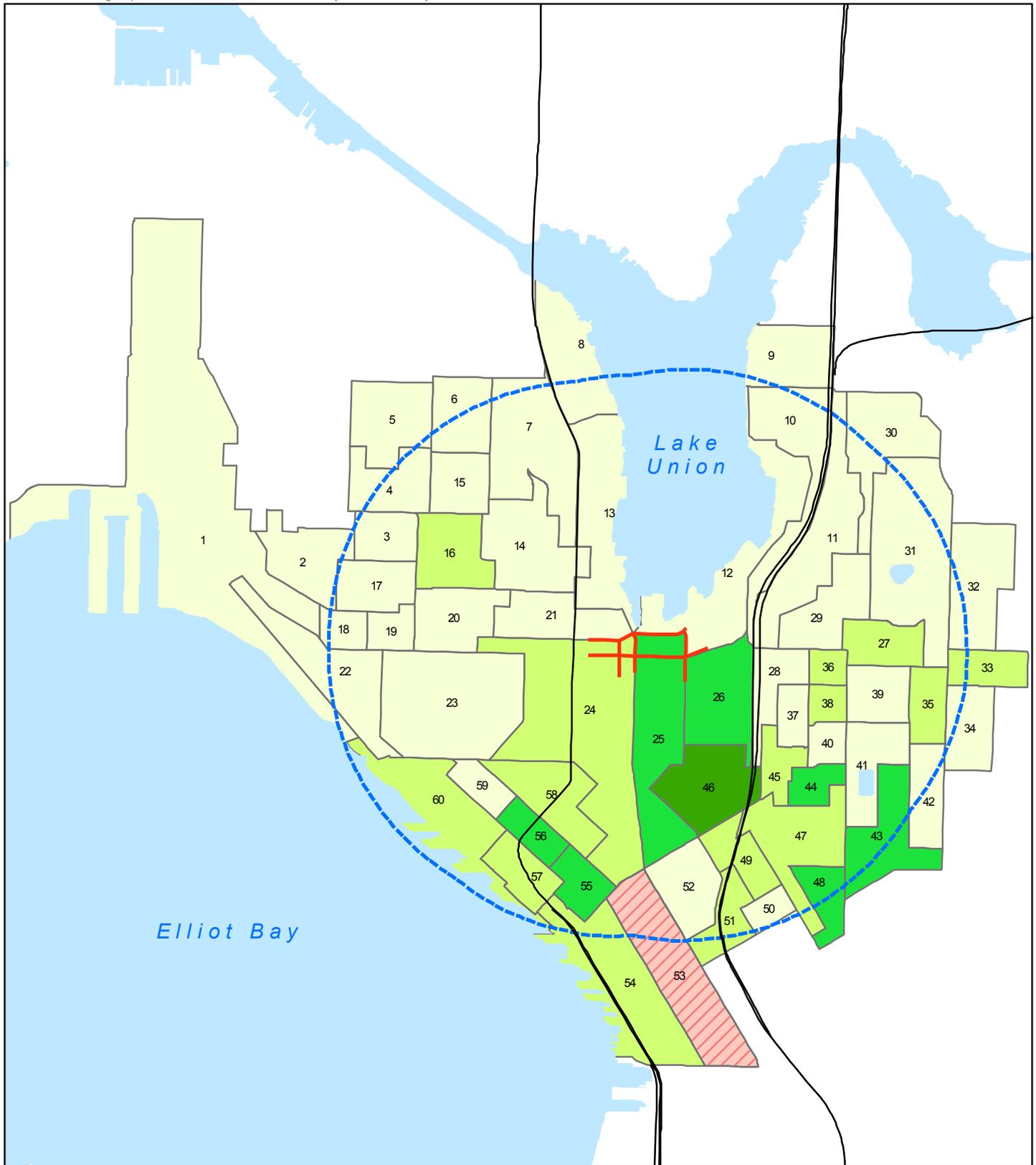


Exhibit 5-2
Minority Population by Census Block Group
 MERCER CORRIDOR IMPROVEMENTS PROJECT



Percent of Census Block Group population

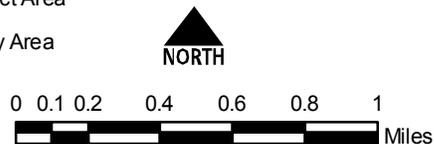
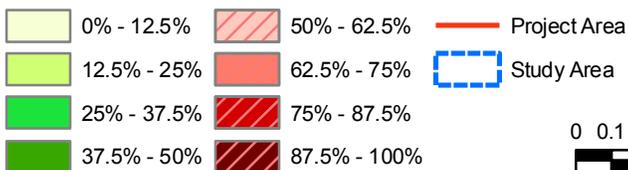


Exhibit 5-3
**Low-Income Population
 by Census Block Group**
 MERCER CORRIDOR
 IMPROVEMENTS PROJECT

Exhibit 5-4 shows the percentage of individuals living in the block groups reported by the 2000 U.S. Census to have limited English proficiency. The environmental justice team used the data from Census Table P-19 of Summary File 3 (Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over) to determine limited English proficiency. Most of the block groups in the study area have low concentrations of limited English proficiency residents. Exhibit 5-4 shows that only two block groups have higher concentrations (5 percent or greater) of limited-English-proficiency individuals. Neighborhoods with higher concentrations of limited-English-proficiency residents include the Uptown and Capitol Hill neighborhoods. Exhibit A-2 in Appendix EJ-A summarizes the data from the 2000 U.S. Census on the two block groups, including the languages spoken.

Student demographic information was collected from public schools with attendance boundaries that cross the study area. The Seattle School District has three elementary schools with attendance boundaries that cross the study area. Middle school and high school data were not collected since those students may be bused to other schools outside of where they live and students are allowed to choose schools outside of the local area.

Based on school year 2003-2004 information, there were 996 students who attended the three elementary schools. Approximately 53 percent (532) were classified as minority populations, and approximately 40 percent (403) participated in the free-lunch/reduced lunch program. Exhibit A-3 in Appendix EJ-A summarizes the demographic data for these schools. The attendance boundaries for these schools are large and fall outside of the study area. Consequently, the demographic data in Exhibit A-3 are representative of children who may live anywhere within the attendance boundaries and not necessarily within the study area. In addition, since this information is based on only the portion of the general population that attends public school, these data may not truly reflect who actually resides in the study area. This information is useful, however, in giving a general demographic characterization of the population of the study area. Also, since these data are more current than the 2000 Census data, comparisons may provide clues to changing population demographics.



Percent of Census Block Group population

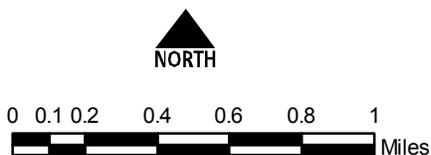
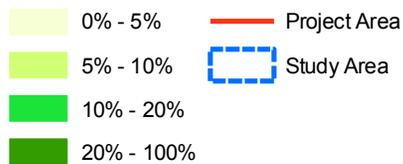


Exhibit 5-4
Limited English Proficiency
Population by Census Block Group
MERCER CORRIDOR
IMPROVEMENTS PROJECT

6. Public Involvement

A Public Involvement Plan (PI Plan) was developed for the Mercer Corridor Improvements Project to identify the goals and objectives of the public involvement process and to identify the key stakeholders associated with the project. As part of its public involvement program and in compliance with NEPA and SEPA, SDOT informed stakeholders and the public of the opportunity to submit comments in order to focus the scope of the environmental review. The PI Plan identified the public participation activities and the public participation materials that will be used to inform the stakeholders of upcoming meetings and information about the project. Stakeholders in the project include Seattle public agencies, business and property owners, local neighborhood groups, and residents in the study area.

6.1 Public Outreach

In March 2004, SDOT held an agency scoping meeting and a public open house/scoping meeting, attended by 100 people, to provide information about the project and to receive comments on the alternatives under consideration, potential environmental impacts, and issues of concern. From May 21 to June 3, 2004, SDOT held eight stakeholder interviews to gather input from a wide range of South Lake Union area interest groups and individuals on the project alternatives, and on how the alternatives would address the area's transportation problems. In addition to the stakeholder interviews, SDOT held stakeholder workshops in June 2004, April 2005, and June 2005 to provide stakeholders an opportunity to add their comments about the project.

The most recent public open house, attended by 55 people, was held on June 29, 2005, to update the public on the project and provide information about the preliminary preferred two-way Mercer alternative. SDOT informed the public about open houses through a number of methods including:

- Mailing project newsletters to approximately 4,600 addresses within the study area and to all individuals and organizations on the community database.
- Promoting the open house on the Mercer Corridor Project website.
- Advertising the open houses in the Queen Anne News.
- Releasing a press advisory about the open house to local media.

6.2 Results

SDOT received a number of comments about the project during the open house. Major issues raised by the public included bicycles, pedestrians, freight, and traffic. Specific comments received about the proposed action included:

- “Good job of integration of design character consistent with SLU neighborhood plan lines – it looks like it belongs here.”
- “Hooray for more bike lanes, especially connecting S. Lake Union and Seattle Center.”
- “Please maintain trucking turning capacity and remember this is a main oversize load route. This is a vital freight mobility area and critical to the whole connectivity of our Seattle/King County transportation system.”
- “Keep the idea of environmental issues of green ideas at the forefront. Pedestrian and bike friendly plus appropriately placed bike lock up stands/racks.”
- “How can making a one-way street into a two-way street help move more traffic onto I-5? This should be the focus for Mercer.”

SDOT will continue to update the community about the project through newsletters, the project website, and additional meetings. Based on results of the demographic analysis, SDOT will add text in Spanish to any upcoming notices to indicate that materials will also be provided in Spanish.

The environmental justice analysis team reviewed and used the feedback on the project received from the public to help determine whether the project would have a disproportionately high and adverse effect on minority and/or low-income populations (see Chapter 8).

7. Project Effects, Mitigation, and Benefits

7.1 Effects and Mitigation

USDOT Order 5610.2 §5(b)(1) requires agencies to explicitly consider human health and environmental effects related to transportation projects that may have a disproportionately high and adverse effect on minority or low-income populations. Under Section 8(b) of the USDOT order, mitigation and enhancement measures may also be considered. This environmental justice study reviewed in detail the location, intensity, and duration of environmental effects that would result from the Mercer Corridor Improvements Project, relying principally on the information developed for the *Mercer Corridor Improvements Project Environmental Assessment (EA)* and documented in the supporting discipline reports.

Exhibit 7-1 briefly summarizes the project effects identified for the Mercer Corridor Improvements Project as well as project activities proposed to reduce the severity of these effects. Most of the effects identified in Exhibit 7-1 are long-term, operational effects. The last row of Exhibit 7-1 identifies short-term, construction effects. The last column in Exhibit 7-1, entitled “Is Closer Examination of Project Effects Warranted? (Build Alternative Only)”, contains an assessment of the anticipated project effects and proposed mitigation. This assessment is a subjective review of the following:

- The magnitude of the anticipated project effects:
 - Minor (inferior in importance, size, or degree; comparatively unimportant; not serious),
 - Moderate (between minor and major, i.e., limited in scope or effect; not serious, but also not unimportant), and
 - Major (greater in importance, size, or degree; comparatively notable or conspicuous in effect or scope; serious);
- The positive or negative nature of the effects;
- The effectiveness of the proposed mitigation in reducing the effects; and
- Whether the identified project effects could affect different human populations (such as minority population versus non-minority populations, or low-income populations versus non-low-income populations) in different ways or to different degrees.

The environmental justice analysis team used this assessment of effects and mitigation to determine whether closer examination of the identified project effects was warranted. If closer examination had been warranted for a particular discipline, based on the subjective review against the criteria above, then the affected minority and low-income population would have been analyzed in greater detail. For all of the identified effects of this project, however, the assessment showed that the magnitude of the effects was minor, or the effects were positive, were effectively mitigated, or did not have the potential to affect different human populations in different ways or to different degrees. Therefore no further analysis was done.

Exhibit 7-1. Effects and Mitigation Summary

Element of the Environment	Effects of the Alternatives (Build Alternative and No Build Alternative)	Mitigation Summary (Build Alternative Only)	Is Closer Examination of Project Effects Warranted? (Build Alternative Only)
Land Use	Both Build Alternative options would result in existing lands uses being permanently converted to another use. Land currently used for retail, office, and warehouses uses would be converted to transportation-related uses due to right-of-way acquisition. However both Build Alternative options would be consistent with state, county, and local land use plans and policies. Under the No Action Alternative, land use would continue to change as redevelopment occurs; however, some planned development may occur more slowly.	No mitigation is proposed.	No project effects related to land use are anticipated. Therefore, no closer examination was conducted.
Historic, Cultural, and Archaeological Resources	Under Build Alternative Option 1, one of the nine historic buildings in the study area would be affected. However, mitigation for this effect has been proposed. Please see the Section 4(f) section of this table below for a discussion of this effect and proposed mitigation. No other historic, cultural, or archaeological resources effects are anticipated. Build Alternative Option 2 would not result in any historic, cultural, or archaeological resources effects. The No Action Alternative would not result in property acquisition or other effects to any historic, cultural, or archaeological resources.	No mitigation is proposed.	Apart from the potential historic building relocation that may occur under Build Alternative Option 1, no historic, cultural, or archaeological resources effects are anticipated. Therefore, no closer examination was conducted. Discussion of the potential historic building demolition can be found in the Section 4(f) section of this table below.
Social	Both of the Build Alternative options would result in positive effects on social elements. The Build Alternative would improve the safety of bicyclists and pedestrians by adding new facilities, better integrating the neighborhood with the South Lake Union Park, and increasing mobility and reducing travel times for emergency service vehicles. The redesign of Mercer Street and Valley Street would improve community cohesion by allowing residents to better interact with each other. With the No Action Alternative, the South Lake Union neighborhood population is still anticipated to grow at the projected rate. However, traffic congestion in the Mercer Corridor would likely increase the travel and response times of fire, emergency medical, and police service providers, and school bus vehicles. Pedestrian and bicyclist facilities would not be constructed and South Lake Union Park would be difficult to access for those	No mitigation is proposed.	Anticipated project effects related to social would be positive. No closer examination was conducted.

Exhibit 7-1. Effects and Mitigation Summary

Element of the Environment	Effects of the Alternatives (Build Alternative and No Build Alternative)	Mitigation Summary (Build Alternative Only)	Is Closer Examination of Project Effects Warranted? (Build Alternative Only)
	living in the surrounding area.		
Section 4(f) Resources	<p>Build Alternative Option 1 would require the acquisition of one Section 4(f) property (McKay Building at 601 Westlake Avenue North). The building would be displaced in order to construct this option. Another Section 4(f) property (McKay Building at 609 Westlake Avenue North) would experience proximity effects (change in setting, traffic noise, and visual intrusion); however none of the proximity effects would affect the constructive use of the building.</p> <p>Build Alternative Option 2 would not require the acquisition of or impose any adverse temporary occupancy on Section 4(f) resource lands, and would create no constructive use effects at any of the identified Section 4(f) resources.</p> <p>The No Action Alternative would not affect any Section 4(f) resources.</p>	<p>Mitigation proposed for the historic McKay Building at 601 Westlake Avenue North under Build Alternative Option 1 would entail moving both the affected corner building and the adjacent historic building (609 Westlake Avenue North) approximately 70 feet to the north. The relocations would entail careful removal of the terra cotta cladding for which the buildings are noted, as well as the salvage and removal of all decorative interior elements. These items would then be re-installed on and within new concrete block buildings constructed in the same configuration as the existing buildings. This mitigation would maintain the current relationship between the displaced building and the adjacent building (which would experience proximity effects), as well as retaining the integrity of setting and design for both buildings.</p>	<p>Effects to the Section 4(f) historic building could affect different human populations in different ways or to different degrees depending on their personal views when considering historic buildings. However, even though the specific Section 4(f) resource effect anticipated from this project can be considered to be moderate to major, this effect is nevertheless unlikely to result in specific effects on minority or low-income populations that would be different from those effects on non-minority or non-low-income populations. In addition, the project has proposed mitigation to reduce the severity of the anticipated Section 4(f) effect. Consequently, no closer examination of this anticipated project effect was conducted.</p>
Economics	<p>Both Build Alternative options would have positive effects on the economics element. The Build Alternative would improve the movement of goods and people through the corridor. Improved circulation and access would open up businesses to a larger customer base and shorten the commute time for potential employees of businesses within the South Lake Union neighborhood. The Build Alternative would require the relocation of businesses, discussed in the Relocations section below; however the project would have a positive net effect on the local and regional economy.</p> <p>Under the No Action Alternative, no businesses would be displaced by right-of-way acquisition. Economic development planned for this area may occur more slowly as business owners may be more reluctant to</p>	<p>No mitigation is proposed.</p>	<p>Anticipated project effects related to economics can be described as positive. No closer examination was conducted.</p>

Exhibit 7-1. Effects and Mitigation Summary

Element of the Environment	Effects of the Alternatives (Build Alternative and No Build Alternative)	Mitigation Summary (Build Alternative Only)	Is Closer Examination of Project Effects Warranted? (Build Alternative Only)
	locate in an area with poor access and limited parking.		
Relocation	<p>Both Build Alternative options would not require the relocation of any residential properties, only business/commercial properties.</p> <p>Build Alternative Option 1 would require the full acquisition of 9 commercial properties and Build Alternative Option 2 would require the full acquisition of 12 commercial properties. The businesses are a mix of office, warehouse, and retail. All of the displaced businesses are expected to find alternate locations to continue operations either in the South Lake Union neighborhood or within the city of Seattle.</p> <p>Under the No Action Alternative there would be no acquisitions of any commercial or residential properties.</p>	<p>To mitigate the effects of the business acquisitions, SDOT would inform businesses disrupted or displaced by new right-of-way acquisition or other construction activities that they are entitled to relocation assistance in accordance with Section 8.26, Revised Code of Washington, and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended. Relocation services would be provided to all affected property owners and tenants without discrimination. The City of Seattle would work closely with affected business owners to minimize the level of disruption that may be caused by displacements and relocations along the project corridor. Assistance available to business owners includes reimbursement associated with moving costs. Actual moving costs and related expenses would be covered, or in some instances, a fixed payment would be provided. SDOT would also provide mitigation for businesses affected by partial right-of-way acquisitions, which may include reconstruction of buildings or modification of parking or loading areas.</p>	<p>Anticipated project effects related to relocations would be negative, and would rank in severity from minor to moderate. As described in the Mitigation Summary, the effects of these land acquisitions would be mitigated by SDOT purchasing these properties in a manner that ensures fair and equitable treatment of the property owners, and providing relocation assistance to displaced businesses. Based on the analysis documented in the Relocation Discipline Report, there are suitable replacement business/commercial properties for all of these businesses within the city of Seattle. Since none of the businesses that would be acquired provides any services that are particularly important to minority or low-income populations, and no potentially relocated businesses were found to be minority-owned or to employ large numbers of minorities, no closer examination of these business relocations was conducted.</p>
Hazardous Materials	<p>Any hazardous material properties (i.e., contaminated soil, contaminated water, and underground storage tanks) encountered during construction of the Build Alternative would be removed and the area remediated. In areas where sawdust fill material remains and where confined spaces are created as part of the utility infrastructure (e.g., underground utility vaults), there is the potential for methane gas to build up within the confined spaces.</p>	<p>Proposed mitigation measures include long-term methane monitoring (e.g., vault gas meters) and methane venting. A methane gas scavenging recovery system could be designed for construction of structures and utilities over areas of wood waste landfill (e.g., lidded roadway).</p>	<p>Depending on their nature and location, hazardous materials effects could affect different human populations in different ways or to different degrees. However, as the anticipated hazardous materials effects are minor to moderate, and would be further lessened by SDOT conducting pre-construction due diligence measures and implemented</p>

Exhibit 7-1. Effects and Mitigation Summary

Element of the Environment	Effects of the Alternatives (Build Alternative and No Build Alternative)	Mitigation Summary (Build Alternative Only)	Is Closer Examination of Project Effects Warranted? (Build Alternative Only)
	<p>The Build Alternative options would reduce the potential for hazardous material spills from transport trucks as a result of the improved traffic flow and safer local streets. Additionally, the two-way Mercer Street would remove truck traffic from Valley Street, where a spill might have a more adverse effect on the environment due to its proximity to Lake Union.</p> <p>With the No Action Alternative, the existing hazardous material properties would remain in place and undisturbed due to no construction activities.</p>		<p>mitigation measures, no closer examination of these effects was conducted.</p>
Noise	<p>Noise modeling indicates that noise levels would approach or exceed the FHWA Noise Abatement Criteria (NAC) at 5 locations out of 23 modeled sites under both the Build Alternative options and the No Action Alternative.</p> <p>There are two residential areas (an apartment building adjacent to the I-5 on-ramp and residential buildings at the intersection of Fairview Avenue North and Republican Street) that would be affected.</p> <p>Noise levels at the apartment building adjacent to the I-5 on-ramp currently exceed the NAC under existing conditions, and would continue to exceed the NAC without mitigation. Under the Build Alternative, noise levels would increase by 1 dBA at this residential area over existing conditions. Under the No Action Alternative, noise levels would increase by 3 dBA over existing conditions at this location. Noise levels at the residential buildings at the intersection of Fairview Avenue North and Republican Street currently exceed the NAC under existing conditions and would continue to exceed the NAC without mitigation. Under the Build Alternative, these residences would experience a 4-dBA increase in noise levels over existing conditions. However, under the No Action Alternative noise levels would also increase by 4 dBA.</p> <p>Increased noise levels at the affected apartment building and residences are directly related to the increase in general traffic with or without the project. Therefore the increase in noise levels at these locations is not</p>	<p>Noise mitigation measures for the affected apartment building adjacent to the I-5 on-ramps were determined to be feasible (would reduce noise levels to an acceptable level) but unreasonable (not cost-effective). Noise mitigation for four residences on Republican was evaluated and was determined to be both infeasible (would not reduce noise levels to an acceptable level) and unreasonable (not cost-effective). Consequently, no noise mitigation is proposed as part of the project. Refer to the Noise Discipline Report for additional information regarding evaluation of noise mitigation.</p>	<p>Anticipated noise effects from the project are minor and would not result in any adverse effects. The noise analysis indicates that the project would result in noise levels exceeding the FHWA NAC at the apartment building adjacent to the Mercer Street on-ramp. However, noise levels in this area currently exceed the NAC and the increase in noise level due to the project would not be perceptible to most humans. Because this area would not experience any noticeable increase in noise resulting in adverse effects to all populations, no closer examination of the project's noise effects was conducted. The apartment building is not associated with any low-income housing for the City of Seattle or King County.</p> <p>In the residential area at the intersection of Fairview Avenue North and Republican Street, noise levels would also exceed the NAC; however as described in the Effects column the increase in noise levels is not attributable to the Mercer Corridor Project and therefore was not examined closer.</p>

Exhibit 7-1. Effects and Mitigation Summary

Element of the Environment	Effects of the Alternatives (Build Alternative and No Build Alternative)	Mitigation Summary (Build Alternative Only)	Is Closer Examination of Project Effects Warranted? (Build Alternative Only)
	attributed to the Mercer Corridor Improvements Project.		
Visual Quality	<p>The Build Alternative options would have beneficial effects on visual quality in the study area through the addition of planted medians, street trees, and artwork. Improvements along Valley Street would reduce glare and clutter by narrowing lanes, adding uniform features such as street trees, and adding downward-directed decorative lighting. Other improvements to this designated scenic route would add memorable features at the entrance to South Lake Union Park.</p> <p>With the No Action Alternative, visual quality would remain low over a longer period of time until redevelopment could slowly make changes in the architectural and landscape elements of the study area. Pedestrian views in particular would continue to be of low visual quality.</p>	No mitigation is proposed.	The visual effects associated with the Build Alternatives would be positive; therefore no closer examination of anticipated visual quality effects was conducted.
Air Quality	<p>The Build Alternative options would not result in any adverse air quality effects, as the project has an overall effect of improving traffic flow and reducing idling time, when motor vehicle emissions are highest. Localized concentrations of carbon monoxide (CO) were evaluated in the vicinity of several signalized intersections. All of the scenarios analyzed indicated that concentrations are well below applicable ambient air quality standards. Because the project is not anticipated to create any new violations, nor increase the frequency of an existing violation of the CO standard, it is determined to conform with the purpose of the current State Implementation Plan (SIP) and the requirements of the Clean Air Act and the Washington Clean Air Act.</p> <p>The No Action Alternative would not result in any adverse air quality effects.</p>	No mitigation is proposed.	No adverse project effects related to air quality are anticipated, and the project would conform to the current SIP and the requirements of the Clean Air Act and the Washington Clean Air Act. Therefore, no closer examination of anticipated air quality effects was conducted.
Water Quality	Under the Build Alternative options, the majority of stormwater runoff would flow to the existing combined sewer system. A minor amount would be discharged directly into South Lake Union; however, prior to discharge the stormwater would receive enhanced treatment.	No mitigation is proposed.	Water quality effects would not have the potential to affect different human populations in different ways or to different degrees. No closer examination of anticipated water quality effects was conducted.

Exhibit 7-1. Effects and Mitigation Summary

Element of the Environment	Effects of the Alternatives (Build Alternative and No Build Alternative)	Mitigation Summary (Build Alternative Only)	Is Closer Examination of Project Effects Warranted? (Build Alternative Only)
	<p>The proposed roadway sections for Mercer Street and Valley Street propose relatively wide planter and median areas that not only reduce total impervious surfaces but may provide some opportunity for reducing flows and avoiding some deeper drainage systems.</p> <p>Under the No Action Alternative, stormwater runoff would continue to be directed to the combined sewer system and South Lake Union.</p>		
Transportation	<p>Implementation of either of the Build Alternative options would improve traffic operations and generally improve local circulation in the study area. New sidewalks, additional crosswalks, and bicycle lanes would improve pedestrian and bicyclist travel and connectivity through the study area.</p> <p>Under the No Action Alternative, congestion and delays in the study area would increase.</p>	No mitigation is proposed.	Anticipated project effects related to transportation would be positive. No closer examination of these effects was conducted.
Construction (Short-Term) Effects of the Build Alternative	<p>Short-term effects of the Build Alternative would include:</p> <ul style="list-style-type: none"> • Temporary increases in particulate matter and other air pollutant emissions. • Temporary increases in construction-related noise. • Potential release of contaminants to the environment by ground-disturbing activities, utility relocations, and structure demolition. • Potential release of methane gas. The methane gas would create a fire hazard if ignition sources were present during excavation activities if the concentrations were sufficiently high (i.e., between 5 and 15 percent). The presence of methane gas could also present a health concern for workers during trenching work if the work space is not adequately ventilated. • Temporary routing detours for school buses, transit, and emergency vehicles. • Temporary increases in traffic congestion and 	<p>SDOT would prepare a soil construction contingency plan and a dewatering plan in case any contaminated soil or groundwater is encountered during construction.</p> <p>SDOT would prepare and implement a Stormwater Pollution Prevention Plan and a Spill Prevention Control and Countermeasures Plan to minimize or avoid effects on soil, surface water, and groundwater.</p> <p>SDOT would implement air quality control measures to reduce temporary particulate matter, CO, and nitrogen oxide emissions during construction. These measures would include covering all trucks transporting materials, spraying exposed soil with water, using wheel washers to remove particulate matter, covering dirt, gravel, and debris piles as needed, and routing and scheduling work tasks to minimize disruption of the existing vehicle traffic on streets.</p>	As the anticipated construction effects are minor and temporary and SDOT would implement a series of mitigation measures to further reduce these effects, no closer examination of these effects was conducted.

Exhibit 7-1. Effects and Mitigation Summary

Element of the Environment	Effects of the Alternatives (Build Alternative and No Build Alternative)	Mitigation Summary (Build Alternative Only)	Is Closer Examination of Project Effects Warranted? (Build Alternative Only)
	<p>delays, and temporary decreases in access to nearby businesses.</p> <ul style="list-style-type: none"> • Temporary visual effects due to construction activities and debris. 	<p>Construction noise would be reduced by installing mufflers on engines, operating heavy equipment and other noisy procedures during non-sleeping hours, locating equipment far from sensitive noise receptors where practical, and minimizing idling of power equipment. SDOT would comply with local noise regulations.</p> <p>SDOT would prepare a Traffic Management Plan (TMP) and coordinate with individual property owners when temporary access restrictions or detours are required. To maximize capacity during construction, at least half of the travel lanes would remain open at all times. Improvements to Mercer Street would be completed prior to construction improvements along Valley Street. SDOT would minimize temporary road closures and ensure that detour routes are well signed. SDOT would provide residents and local businesses advance notification of the project schedule, potential detours, and changes in any of the pedestrian, bicyclist, or transit routes.</p> <p>SDOT would provide for fire, emergency medical, and police vehicle travel in the study area during construction to assure that access is not blocked and response times are affected as little as possible. A health and safety plan would be developed for the construction project that includes procedures to monitor for vapor releases and prevent fires from potential methane ignition. In addition, procedures should be in place to provide adequate ventilation, particularly during</p>	

Exhibit 7-1. Effects and Mitigation Summary

Element of the Environment	Effects of the Alternatives (Build Alternative and No Build Alternative)	Mitigation Summary (Build Alternative Only)	Is Closer Examination of Project Effects Warranted? (Build Alternative Only)
		<p>construction activities involving confined spaces or trenching work, to prevent worker asphyxiation.</p> <p>SDOT would provide public information about construction activities. The public would be informed that businesses are open during construction and encouraged to continue patronage.</p> <p>SDOT would build temporary screen fences along vacated lots to enhance visual uniformity until new buildings can be built and to provide areas to hide construction equipment when not in use.</p>	

The last column in Exhibit 7-1, “Is Closer Examination of Project Effects Warranted? (Build Alternative Only)”, shows that none of the anticipated effects warranted closer examination in the environmental justice study to determine who, from a race and income perspective, would be affected by them. All of the elements under the Build Alternative fall into one or more of the following categories: no project effects are anticipated, the project effects are minor, the project effects are positive, or the project effects do not have the potential to affect different human populations in different ways or to different degrees. Because none of the project effects would result in negative effects which warranted closer examination, a detailed Census demographic analysis of anticipated project effects was not conducted.

7.2 Project Benefits

The Mercer Corridor Improvements Project would generate several transportation and environmental benefits for the traveling public as a whole. These benefits include:

- Improving local safety, access, and circulation within South Lake Union for vehicles, bicycles, and pedestrians.
- Providing for more direct movement of traffic and freight through the corridor.
- Improving travel time from I-5 to the Queen Anne neighborhood.
- Adding parking lanes on each side of the street to support retail uses.
- Supporting transit use through convenient pedestrian access and a street network that allows east-west transit service.
- Connecting bicyclists from Eastlake to Dexter with new lanes on Valley and Roy streets.
- Creating a quiet, pedestrian-friendly Valley Street to connect the neighborhood to South Lake Union Park.
- Supporting the City's economic development and livability goals for South Lake Union.
- Improving a key alternative route to Seattle Center and surrounding neighborhoods during Alaskan Way Viaduct construction.

The project benefits described above would accrue to the traveling public as a whole, including minority and low-income populations.

8. Final Determination and Conclusion

To help make a final determination on whether or not the Mercer Corridor Improvements Project would result in disproportionately high and adverse effects on minority and/or low-income populations, the environmental justice analysis team addressed six questions relating to the project. As described in Chapter 4, Methodology, these questions were developed based on the guidance contained in USDOT Order 5610.2 and *Environmental Justice: What You Should Know* (FHWA Washington Division, 2003). Answers to these questions are discussed below, followed by a list of findings and a final determination.

Question 1: *Would the project result in “adverse effects?”*

The USDOT Order 5610.2 definition of the term “adverse effects” is provided in the Glossary. When considering whether the project would result in adverse effects, the environmental justice analysis team reviewed both the feedback received as part of the public involvement outreach activities and the results of the NEPA environmental analyses conducted for the Mercer Corridor Improvements Project.

Based on a review of feedback received as part of the public involvement, stakeholder concerns noted included freight movement in the corridor and the ability of the proposed two-way Mercer to move all of the traffic onto I-5. Additional feedback received was generally positive, particularly regarding the integration of bicycles in the project design and the pedestrian-friendly streets. No adverse effects, as defined by the USDOT Order, were identified based on the public involvement outreach activities.

As shown in Exhibit 7-1, the NEPA environmental analysis conducted for the project identified both positive and negative effects that would result from the Build Alternative of the Mercer Corridor Improvements Project. Elements of the environment with positive effects (where the Build Alternative would improve current conditions) are Social, Economics, Visual Quality, and Transportation. Elements with no effects, minor effects, or a mix of minor positive and negative effects are Land Use; Historic, Cultural, and Archaeological Resources; Noise; Air Quality; and Hazardous Materials.

For most of the remaining elements of the environment, the negative effects identified in Exhibit 7-1 would be minor to moderate and moderate to major. The negative effects would be even further reduced with the implementation of proposed mitigation measures. Elements that fall into this category with effects further reduced through mitigation are Relocation, Section 4(f) Resources, and the short-term construction effects.

In summary, with proposed mitigation in place, some of the effects of this project identified by the NEPA analyses could still be considered adverse. Therefore the answer to Question 1 is “yes”.

Question 2: *Would the project result in adverse effects predominately borne by a minority population and/or a low-income population?*

According to the demographic analysis and additional analysis done by the project team, it does not appear that the adverse effects from the project would be predominately borne by a minority or a low-income population. The answer to Question 2 is therefore “no.”

Question 3: *Would the project result in adverse effects that would be suffered by the minority population and/or low-income population that would be appreciably more severe or greater in magnitude than the adverse effect that would be suffered by the non-minority population and/or non-low-income population?*

The environmental justice team analysis shows that the answer to Question 3 is “no,” the project would not result in adverse effects that would be appreciably more severe or greater in magnitude than those suffered by the non-minority population or non-low-income population.

Question 4: *Does the project propose mitigation and/or enhancement measures?*

Exhibit 7-1 identifies proposed mitigation to reduce the severity of identified project effects, as well as enhancement measures that are included in the project design.

Question 5: *Are there project benefits that would accrue to the minority and/or low-income population?*

As described in the Project Benefits subsection above, the project would generate a series of transportation and environmental benefits for the traveling public as a whole, including minority and low-income individuals. There would not be any project benefits that specifically benefit a minority or low-income population.

Question 6: *Does the project affect a resource that is especially important to a minority and/or a low-income population? For instance, does the project affect a resource that serves an especially important social, religious, or cultural function for a minority and/or a low-income population?*

The identified project effects (see Exhibit 7-1) do not affect resources that are especially important to minority or low-income individuals. The project also does not affect any resources that serve especially important social, economic, religious, or cultural functions for minority or low-income individuals to any greater degree than non-minority or non-low-income individuals.

Final Determination

The final determination for this environmental justice analysis was based on the following:

- A review of the results of the demographic analysis as documented above in the Study Area Demographics section;
- A review of the feedback on the project received from the public involvement activities;
- A review of the location, intensity, and duration of the anticipated project effects resulting from the Mercer Corridor Improvements Project as documented in the discipline reports prepared for the EA and summarized in Exhibit 7-1;
- A review of the proposed mitigation for the identified project effects as documented in the discipline reports prepared for the EA and summarized in Exhibit 7-1;
- A review of the anticipated benefits of the Mercer Corridor Improvements Project as documented in the EA and summarized above in the Project Benefits subsection; and finally
- Careful consideration of the six questions developed based on the guidance contained in USDOT Order 5610.2 and *Environmental Justice: What You Should Know* (FHWA Washington Division, 2003) as documented above.

Based on a review of this evidence, the findings of this analysis are as follows:

- The Mercer Corridor Improvements Project would result in a variety of environmental effects across the spectrum of environmental elements, some positive and some negative. The implementation of proposed mitigation measures would reduce the severity of the negative effects.
- Negative effects that result from the Mercer Corridor Improvements Project would not be predominately borne by a minority or a low-income population.
- The Mercer Corridor Improvements Project would result in a series of transportation and environmental benefits that would accrue to the general traveling public, including minority and low-income individuals.
- The Mercer Corridor Improvements Project would not uniquely affect a minority or a low-income population.

Based on these findings, this study concludes that the Mercer Corridor Improvements Project would not result in disproportionately high and adverse effects (as defined by USDOT Order 5610.2) on minority or low-income populations.

9. References

Clinton, William J., President of the United States. February 11, 1994. Executive Order 12898. Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Federal Register, Vol. 59, No. 32, Wednesday, February 16, 1994, 7629-7633. Washington D.C.

Common Core of Data. <http://nces.ed.gov/ccd/>, accessed on April 6, 2005. National Center for Education Statistics.

Federal Highway Administration (FHWA) Washington Division. 2003. *Environmental Justice: What You Should Know*. Olympia, Washington.

FHWA. December 2, 1998. Order 6640.23, FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Federal Register. Washington, D.C.

FHWA. October 30, 1987. *Guidance for Preparing and Processing Environmental and Section 4(f) Documents*. FHWA Technical Advisory 6640.8A,

U.S. Department of Commerce, Bureau of the Census. 2000. United States Census 2000. Washington, D.C.

U.S. Department of Transportation (USDOT). April 15, 1997. Order 5610.2, USDOT Order to Address Environmental Justice in Minority Populations and Low-Income Populations. Federal Register, Vol. 62, No. 72, Tuesday, April 15, 1997, 18377-18381. Washington, D.C.

Washington State Department of Transportation (WSDOT). March 2006. *Environmental Procedures Manual*. M31-11. Olympia, Washington.

Appendix EJ-A
Demographic Data

Exhibit A-1 Study Area Demographic Data

ID	Block Group	Total Population	Minority	Percent Minority	Population for Whom Poverty was Determined	Income below Poverty Level	Percent Low-Income	Total Population 5 Years and Over	English Proficiency	Limited English Proficiency	Percent with Limited English Proficiency
1	530330058022	1,994	458	23.0	1,555	70	4.5	1,956	1,937	19	1.0
2	530330069003	873	106	12.1	873	30	3.4	864	864	0	0.0
3	530330070004	951	92	9.7	951	68	7.2	951	936	15	1.6
4	530330068003	792	84	10.6	792	60	7.6	751	743	8	1.1
5	530330068004	633	58	9.2	633	48	7.6	601	601	0	0.0
6	530330068001	809	136	16.8	670	5	0.8	756	749	7	0.9
7	530330067004	1,584	174	11.0	1,584	85	5.4	1,566	1,532	34	2.2
8	530330060001	1,378	171	12.4	1,370	68	5.0	1,351	1,351	0	0.0
9	530330061004	1,156	118	10.2	1,156	69	6.0	1,114	1,114	0	0.0
10	530330066003	1,457	341	23.4	1,457	128	8.8	1,441	1,436	5	0.4
11	530330066001	913	118	12.9	913	54	5.9	904	904	0	0.0
12	530330066002	479	64	13.4	479	12	2.5	479	479	0	0.0
13	530330067001	1,043	206	19.8	1,043	24	2.3	1,019	1,012	7	0.7
14	530330067003	2,159	382	17.7	2,159	166	7.7	2,104	2,098	6	0.3
15	530330068002	517	15	2.9	517	15	2.9	478	478	0	0.0
16	530330070001	1,172	181	15.4	1,172	154	13.1	1,150	1,138	12	1.0
17	530330070006	1,169	168	14.4	1,169	106	9.1	1,108	1,088	20	1.8
18	530330070002	1,113	245	22.0	1,113	64	5.8	1,102	1,091	11	1.0
19	530330070005	982	112	11.4	910	67	7.4	970	970	0	0.0
20	530330070003	1,468	178	12.1	1,468	90	6.1	1,468	1,437	31	2.1
21	530330067002	583	72	12.4	583	30	5.2	577	577	0	0.0

Exhibit A-1 Study Area Demographic Data

Exhibit A-1 Study Area Demographic Data											
ID	Block Group	Total Population	Minority	Percent Minority	Population for Whom Poverty was Determined	Income below Poverty Level	Percent Low-Income	Total Population 5 Years and Over	English Proficiency	Limited English Proficiency	Percent with Limited English Proficiency
22	530330071001	881	107	12.2	881	107	12.2	866	854	12	1.4
23	530330071002	915	204	22.3	915	77	8.4	910	910	0	0.0
24	530330072001	430	81	18.8	430	64	14.9	430	423	7	1.6
25	530330073003	181	82	45.3	181	53	29.3	178	172	6	3.4
26	530330073001	860	296	34.4	721	244	33.8	839	830	9	1.1
27	530330065003	930	164	17.6	930	117	12.6	868	851	17	2.0
28	530330074007	1,867	353	18.9	1,867	195	10.4	1,867	1,827	40	2.1
29	530330065004	1,564	214	13.7	1,560	124	8.0	1,543	1,513	30	1.9
30	530330065001	925	81	8.8	925	21	2.3	886	886	0	0.0
31	530330065002	626	87	13.9	619	28	4.5	615	609	6	1.0
32	530330064002	1,165	136	11.7	1,165	112	9.6	1,109	1,096	13	1.2
33	530330076004	875	230	26.3	875	131	15.0	863	855	8	0.9
34	530330076003	875	92	10.5	842	93	11.1	836	836	0	0.0
35	530330075001	1,162	226	19.5	1,162	175	15.1	1,162	1,116	46	4.0
36	530330074001	804	252	31.3	804	168	20.9	797	790	7	0.9
37	530330074006	1,322	197	14.9	1,322	153	11.6	1,297	1,287	10	0.8
38	530330074002	825	145	17.6	825	106	12.9	819	819	0	0.0
39	530330075003	1,518	212	14.0	1,518	172	11.3	1,497	1,487	10	0.7
40	530330074003	701	178	25.4	701	81	11.6	701	693	8	1.1
41	530330075005	921	186	20.2	921	80	8.7	898	898	0	0.0
42	530330075002	1,050	285	27.1	1,045	90	8.6	1,021	1,004	17	1.7

Exhibit A-1 Study Area Demographic Data

ID	Block Group	Total Population	Minority	Percent Minority	Population for Whom Poverty was Determined	Income below Poverty Level	Percent Low-Income	Total Population 5 Years and Over	English Proficiency	Limited English Proficiency	Percent with Limited English Proficiency
43	530330075004	903	342	37.9	852	221	25.9	869	792	77	8.9
44	530330074004	1,732	637	36.8	1,732	434	25.1	1,676	1,656	20	1.2
45	530330074005	1,796	443	24.7	1,796	353	19.7	1,770	1,738	32	1.8
46	530330073002	1,190	581	48.8	1,190	547	46.0	1,173	1,173	0	0.0
47	530330084001	3,114	1,063	34.1	3,066	741	24.2	3,086	2,992	94	3.1
48	530330084002	724	228	31.5	724	266	36.7	724	709	15	2.1
49	530330083002	1,288	343	26.6	1,158	173	14.9	1,273	1,234	39	3.1
50	530330083003	578	139	24.1	564	26	4.6	574	574	0	0.0
51	530330082003	1,707	357	20.9	1,620	239	14.8	1,695	1,691	4	0.2
52	530330082001	331	102	30.8	331	35	10.6	326	310	16	4.9
53	530330081002	1,066	429	40.2	874	548	62.5	1,066	1,047	19	1.8
54	530330081001	2,395	633	26.4	2,395	592	24.7	2,364	2,301	63	2.7
55	530330080021	1,572	434	27.6	1,531	427	27.9	1,484	1,484	0	0.0
56	530330080012	1,616	471	29.2	1,616	406	25.1	1,562	1,545	17	1.1
57	530330080022	1,139	377	33.1	1,139	177	15.5	1,126	1,076	50	4.4
58	530330072002	2,539	584	23.0	2,197	404	18.4	2,491	2,438	53	2.1
59	530330080011	738	167	22.6	738	56	7.6	738	671	67	9.1
60	530330080013	1,123	375	33.4	1,123	255	22.7	1,115	1,096	19	1.7

Source: U.S. Census, 2000.

Exhibit A-2. Populations with Limited English Proficiency in the Study Area

Block Group ID	Percent Minority	Percent Low-Income	Total Population over 5 years	Limited English Proficiency (Percent)	Speak Spanish		Speak other Indo-European languages		Speak Asian and Pacific Island languages		Speak other languages	
					Total	Percent	Total	Percent	Total	Percent	Total	Percent
43	37.9	25.9	869	8.9	54	6.2	18	2.1	39	4.5	68	7.8
59	22.6	7.6	738	9.1	76	10.3	15	2.0	43	5.8	0	0.0

Source: U.S. Census, 2000.

Exhibit A-3. Public School Data for Seattle 2003/2004

School	Students	American Indian / Alaskan	Asian	African American	Hispanic ¹	White
TT Minor Elementary	269	2	11	221	15	20
Stevens Elementary	303	4	38	65	53	143
John Hay Elementary	424	8	49	36	30	301
Total	996	14	98	322	98	464
Percent		1.4%	9.8%	32.3%	9.8%	46.6%

¹School data include Hispanic population as a race, unlike Census data which count Hispanic population as an ethnicity and not as a race.

Source: Common Core of Data, 2006.

Appendix D
Fish Species in Lake Union

Appendix D

Fish Species in Lake Union

Common Name	Species Name
Anadromous salmonid species Sockeye salmon Chinook salmon Coho salmon Cutthroat trout (also resident) Steelhead trout Bull trout	<i>Oncorhynchus nerka</i> <i>Oncorhynchus tshawytscha</i> <i>Oncorhynchus kisutch</i> <i>Oncorhynchus clarki</i> <i>Oncorhynchus mykiss</i> <i>Salveninius confluentes</i>
Resident salmonid species Kokanee salmon Rainbow trout	<i>Oncorhynchus nerka</i> <i>Oncorhynchus mykiss</i>
Resident Non-salmonid Game Species Black crappie Largemouth bass Smallmouth bass Yellow perch Brown bullhead	<i>Pomoxis negromaculatus</i> <i>Micropterus salmoides</i> <i>Micropterus dolomieu</i> <i>Perca flavescens</i> <i>Ictalurus nebulosus</i>
Other Resident Species Carp Sculpins Largescale sucker Northern pikeminnow Peamouth Pumpkinseed Tench Threespine stickleback Bluegill	<i>Cyprinus carpio</i> Family Cottidae <i>Catostomus macrocheilus</i> <i>Ptychocheilus oregonensis</i> <i>Mylocheilus caurinus</i> <i>Lepomis gibbosus</i> <i>Tinca tinca</i> <i>Gasterosteus aculeatus</i> <i>Lepomis macrochirus</i>

Source: King County and City of Seattle, 1998.

Appendix E
ESA Compliance No Effects Letter



CH2M HILL
1100 112th Ave NE
Suite 400
Bellevue, WA 98004

P.O. Box 91500
Bellevue, WA 98009
Tel 425-453-5000
Fax 425-468-3100

September 2, 2008

Ms. Angela Brady, P.E., P.M.P.
Supervising Project Manager
Capital Projects and Roadway Structures Division
Seattle Department of Transportation
700 Fifth Avenue, Suite 3900
Seattle, WA 98104-5043

Subject: Mercer Corridor Improvement Project STPUL-9999(302) - ESA No Effect Letter

Dear Ms. Brady:

The City of Seattle, Washington, proposes to make improvements to the Mercer Corridor, which includes Mercer and Valley streets, in the South Lake Union neighborhood of Seattle. We have prepared this assessment for Seattle Department of Transportation on behalf of the Federal Highway Administration (FHWA) in response to listings of federally threatened and endangered species we accessed on July 28, 2008. The federal nexus for this project is that the proposed project will receive federal funds from the FHWA.

The proposed project is located in the city of Seattle, King County, Washington, in Township 25 North, Range 4 East, in sections 29 and 30. The project boundaries extend from the Interstate 5 (I-5) ramps to Dexter Avenue North, and Valley Street to Republican Street (Figure 1). The purpose of the project is to improve local safety, access, and circulation along Mercer Street, Valley Street, and a few of intersecting streets in the South Lake Union area for vehicles, bicycles, and pedestrians. In addition, the proposed project will provide for more direct movement of traffic and freight through the corridor.

Specifically, the proposed project would replace the existing Mercer Street /Valley Street couplet with a widened two-way Mercer Street (Mercer Street is currently a one-way street) and a narrower Valley Street (Figure 2). The widened Mercer Street would have three lanes in each direction, with widened sidewalks, parking, and a landscaped median. Valley Street would be narrowed to a two-lane, two-way street with sidewalks, bicycle lanes, and parking.

At the western end of the project, Mercer Street would be designed to tie into any future widening of Mercer Street. This reconfiguration calls for a partial section of Broad Street to be removed. At the eastern end of the project, the I-5 ramp termini at Fairview Avenue would be widened to provide three through lanes to Mercer Street and four through lanes from Mercer Street to the I-5 ramps. To prevent long traffic queues on the I-5 off-ramp, there would also be two left-turn lanes and one right-turn lane onto Fairview Avenue.

Road widening will involve excavation and paving with asphalt concrete pavement (ACP) or concrete. Roadway pavement that will be resurfaced will be ground down with a rotomilling (grinding) machine and then repaved with the same thickness of material. In portions of the roadway that will be completely replaced or permanently removed, the pavement will be removed with excavators. New roadway sections will be paved with ACP and sidewalks will likely be constructed of concrete. Other construction equipment is likely to include loaders, pavers, graders, dump-trucks, concrete trucks, back-hoes, and rollers.

Stormwater from the proposed project will be routed to two existing Lake Union outfalls along with most of the stormwater being routed to do the West Point Waste Water Treatment Plant and discharged into Puget Sound. Currently, the stormwater from the project footprint routed to the Lake Union outfalls do not receive treatment. The proposed project will install media treatment vaults at these outfalls. The stormwater routed to the West Point facility will constitute a negligible fraction of the amount of water discharged from the plant and the water will be treated in accordance the facilities NPDES discharge permit.

The proposed construction work will begin in the spring of 2009, pending funding availability, and we anticipate that it will take approximately 2.5 years to complete all portions of the proposed project. We expect that the various construction activities, such as grinding, paving, and sweeping, will occur at the same time. Lane closures will vary in locations and length of time to accommodate the work.

Best management practices will be implemented to contain loose material and the contractor will be required to submit and follow a Stormwater Pollution Prevention Plan and a Temporary Erosion and Sediment Control plan. All refueling of construction vehicles will be conducted according to a Spill Prevention, Control, and Countermeasures Plan to be developed by the contractor and approved by the Department of Ecology.

Our fisheries biologist conducted a field review of the project site on October 4, 2006, and again on August 4, 2008, to determine the status and availability of suitable habitat for listed species in the action area as well as any potential impacts of the proposed project. Land use in the project area and vicinity is almost entirely commercial and high-density residential. The project vicinity is entirely built-out; the few vegetated areas are at residences (vegetated by lawns, ornamental trees, and shrubs) and South Lake Union Park. There is no habitat for any listed terrestrial species or plants (these are discussed below). Lake Union is connected to the Lake Washington Ship Canal and Lake Washington, which are all part of the migratory corridor for salmonids entering the Lake Washington system. Lake Union provides marginal transient rearing habitat for three listed salmonid species.

Information on the occurrence of federally listed species and habitat under the jurisdiction of the USFWS for King County was obtained from the USFWS' web site (USFWS 2008) on July 28, 2008. This listing indicates the potential county-wide presence of endangered marsh sandwort (*Arenaria paludicola*) and the threatened species of gray wolf (*Canis lupis*), Canada lynx (*Lynx canadensis*), grizzly bear (*Ursus arctos horribilis*), marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), golden paintbrush (*Castilleja levisecta*), and coastal-Puget Sound Distinct Population Segment (DPS) bull trout (*Salvelinus confluentus*). Designated critical habitat for northern spotted owl, marbled murrelets, and bull trout occur in the county.

Information on the occurrence of listed fish species and habitat under the jurisdiction of NOAA's National Marine Fisheries Service (NMFS) was obtained from the Northwest Regional Office of NOAA Fisheries web site on July 28th, 2008 (NMFS 2008). The list includes all of the protected salmonid Evolutionarily Significant Units (ESUs) found in Pacific Northwest. Other than salmonids, marine species were not included because the project does not have a direct marine connection. As stated previously, the only marine connection is through stormwater discharge that occurs from King County's West Point Wastewater Treatment Plant.

In addition, Priority Habitat and Species (PHS) maps were obtained from the Washington Department of Fish and Wildlife database (WDFW 2008). Information on potential listed plant species were obtained from the Washington Department of Natural Resources Natural Heritage Program rare plant database (WDNR 2008).

The list of species to be considered in this analysis was narrowed down to those listed or proposed that had suitable habitat in, or in the vicinity of, the action area. These include, Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*), and Puget Sound steelhead (*O. mykiss*), and coastal-Puget Sound bull trout. The remainder of the species listed was automatically given a *no effect* determination on the basis of lack of suitable habitat and/or lack of occurrence in the project vicinity.

The action area for the project is defined as the point of discharge of the stormwater into Lake Union. This will occur at the Broad Street outfall and the Minor Avenue Outfall. The

action area does not need to extend beyond these points, as the water quality of the stormwater discharged to Lake Union will improve compared to current conditions. As stated previously, there is no action area for terrestrial species as there is no habitat for listed terrestrial species, nor do they occur at the project vicinity.

The parameter analyzed for potential effects on listed fish is the quality of the stormwater entering Lake Union as a result of the proposed project. Lake Union is exempt from flow control standards as a receiving body, so the total quantity of stormwater that would be discharged to Lake Union was not reviewed.

The proposed project will result in a net decrease of total impervious surface due to the inclusion of median strips and similar features, but it will result in an increase of pollution generating impervious surface (PGIS) draining to Lake Union. Currently, 95,700 square feet of PGIS drains to Lake Union. Under the proposed project 118,200 square feet of PGIS will drain to Lake Union. However, the quality of the water discharged to Lake Union will improve from current conditions, as treatment facilities will be added to the two lake outfalls as described above.

The pollutant loads (pounds per year) for total suspended solids to Lake Union is expected to decrease by 55 percent from current conditions, and zinc and copper loads will be reduced by 26 percent. The concentration (mg/l) of pollutants will also decrease from current conditions. The current total dissolved solids concentration going to Lake Union was calculated to be 93 mg/l. Under the proposed project, this concentration would be 21 mg/l or a 77 percent reduction. The current total zinc concentration was calculated to be 174 mg/l. Under the proposed project, this concentration would be 31 mg/l or a 64 percent reduction. The current total copper concentration was calculated to be 63 mg/l. Under the proposed project, this concentration would be 11 mg/l or a 64 percent reduction. These pollution concentrations were calculated using WSDOT's Load Concentration Calculation Tool assuming a "moderate" risk level of average daily traffic per WSDOT's guidelines.

The majority of the stormwater from PGIS from the project area, under both current and proposed conditions, goes into the combined sewer to the West Point Wastewater Treatment Plant. As stated previously, the treatment plant discharges to Puget Sound under an NPDES permit. Therefore, there would be no degradation to water quality discharged to Puget Sound as a result of the proposed project.

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) includes a mandate that NOAA Fisheries must identify essential fish habitat (EFH) for federally managed marine fish, and federal agencies must consult with NOAA Fisheries on all activities, or proposed activities, authorized, funded, or undertaken by the agency that may adversely affect EFH. The Pacific Fishery Management Council (PFMC) has designated EFH for the Pacific salmon fishery, federally managed ground fishes, and coastal pelagic fisheries. There is no EFH for ground fish or pelagic fishes in the project action area. The

EFH for the pacific salmon fishery for this project is limited to Lake Union discharge points as described above.

We have determined that there will be *no effect* on any listed terrestrial species or their critical habitat. There is no habitat for listed terrestrial species nor do they occur within project vicinity. There will be no effect on the listed salmonid species (Puget Sound Chinook salmon, Puget Sound steelhead trout, and coastal-Puget Sound bull trout), as the proposed project will not involve in-water work and the quality of the water that will be discharged to Lake Union will be improved due to the addition of stormwater treatment facilities. There will be no effect on critical habitat for Chinook salmon and bull trout for these reasons as well.

This assessment satisfies the City of Seattle's responsibilities under Section 7 of the Endangered Species Act at this time. We will continue to remain aware of any change in status of these species and will be prepared to re-evaluate potential project impacts if necessary.

In compliance with the Magnuson-Stevens Fishery Conservation and Management Act, EFH was assessed for the project. Only EFH for salmon was present and the proposed project will have no adverse affect on Pacific Salmon EFH.

Please call Mark Mullins at 425-453-5000 if you require additional information or have any questions about this project.

Sincerely,



Mark Mullins

cc Roger Mason
Sharon Feldman

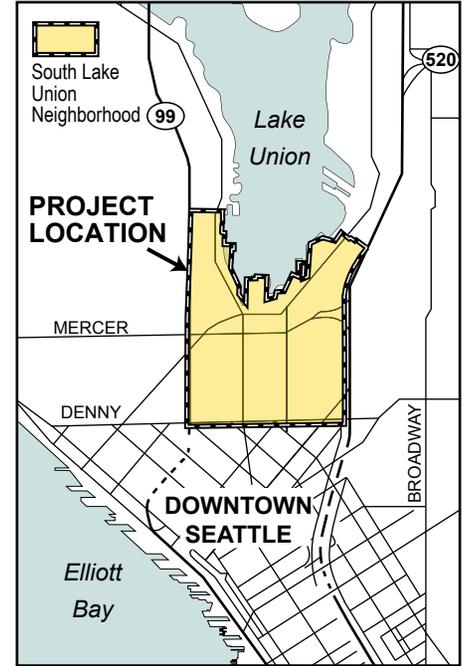
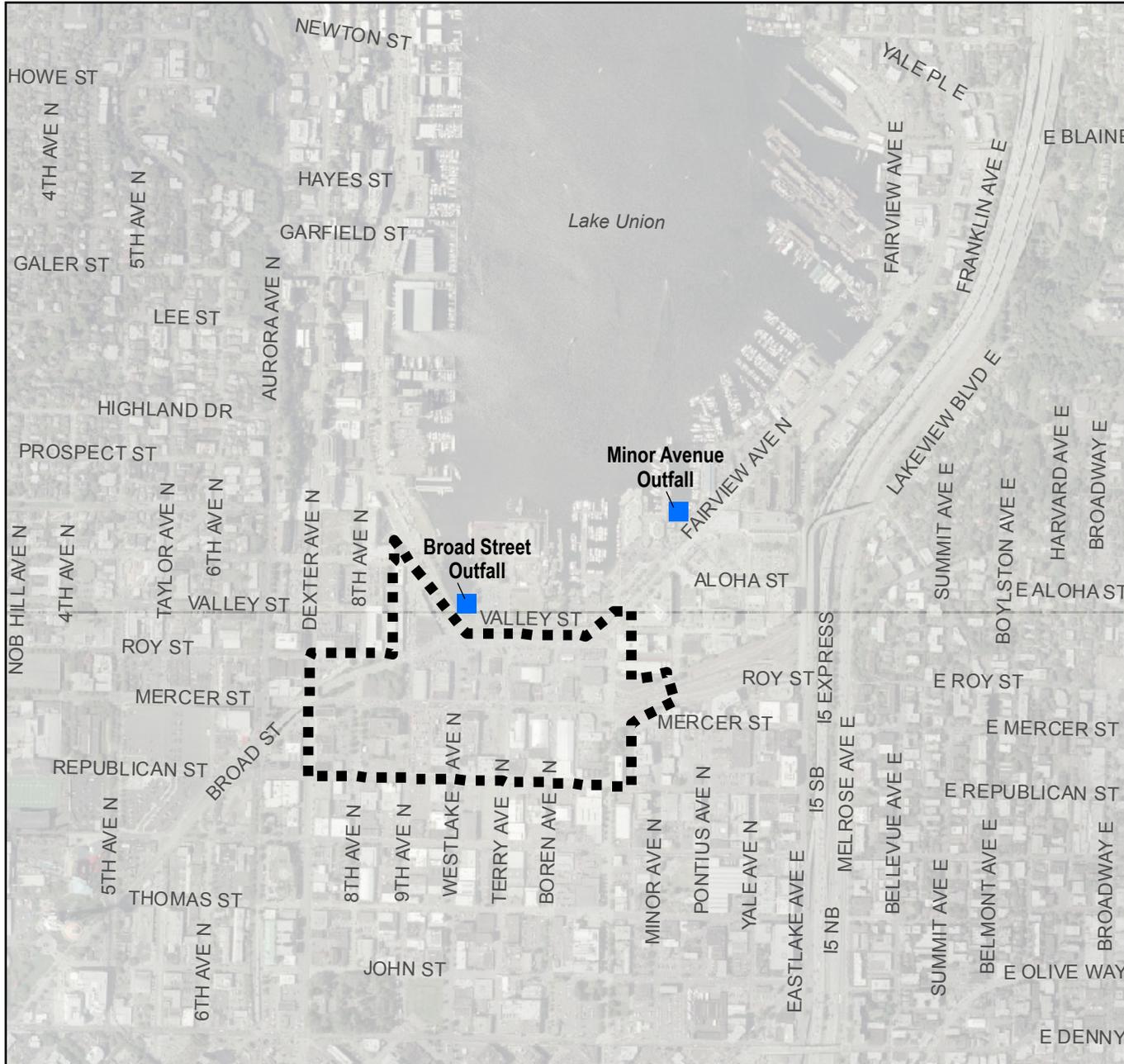
References

National Marine Fisheries Service. 2008. Endangered Species Act status of West Coast Salmon and Steelhead. Accessed on July 28, 2008. <http://www.nwr.noaa.gov/ESA-Salmon-Listings/Index.cfm>.

U.S. Fish and Wildlife Service. 2008. Listed and proposed endangered and threatened species and critical habitat; candidate species; and species of concern in King County – as prepared by the USFWS' Western Washington Fish and Wildlife Office. Accessed on July 28, 2008. <http://www.fws.gov/westwafwo/speciesmap/KING.html>.

Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species (PHS) for the City of Seattle. Maps produced in May of 2008.

Washington Department of Natural Resources. (2008) List of known occurrences of rare plants in Washington – King County. Accessed July, 28 2008. <http://www1.dnr.wa.gov/nhp/refdesk/lists/plantsxco/king.html>.

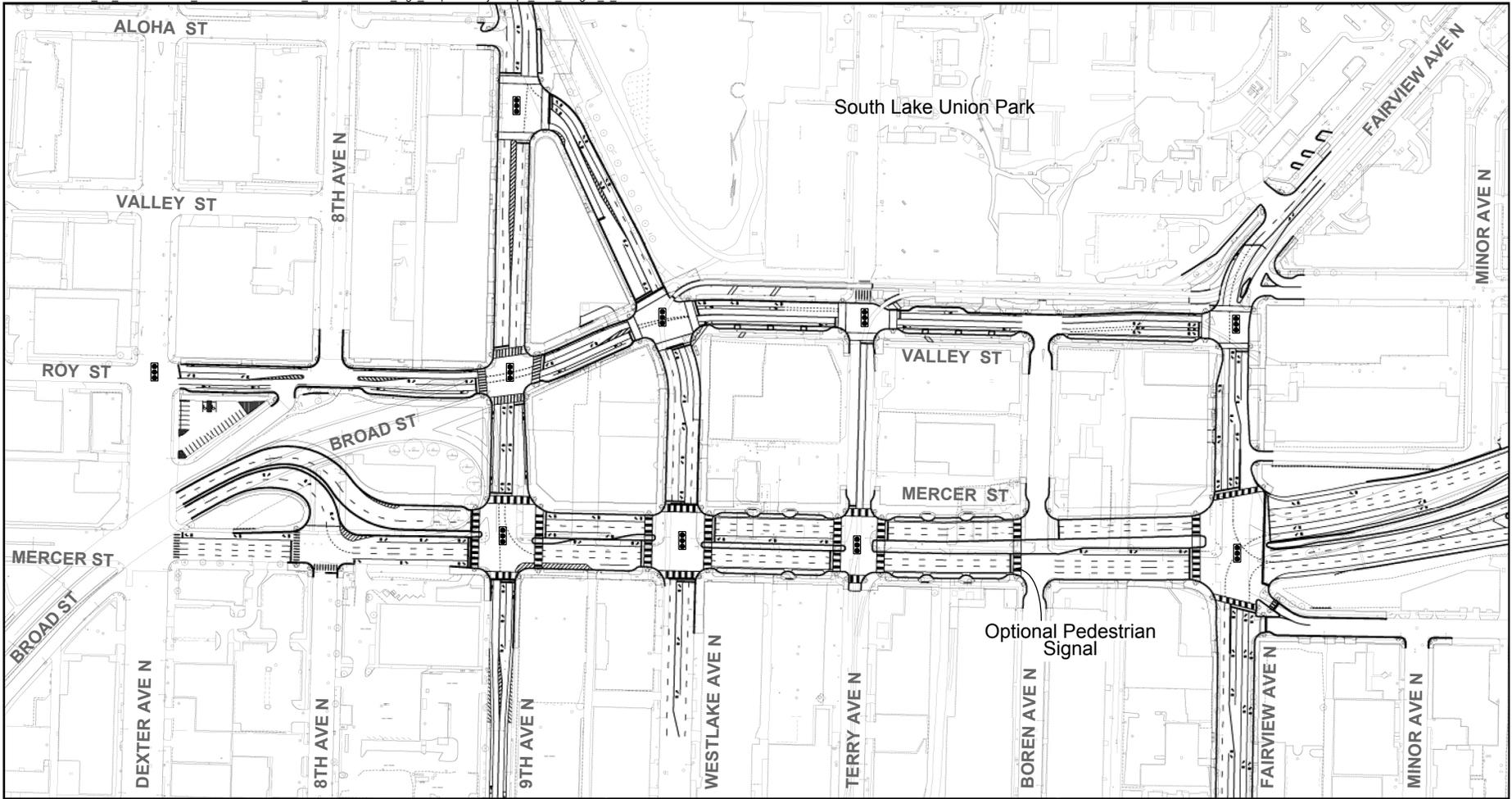


LEGEND

-  Project Limits
-  Action Area/Stormwater Outfall Discharge Points



Figure 1
Mercer Corridor Project Location and Action Area
 MERCER CORRIDOR IMPROVEMENTS PROJECT



LEGEND

 Signalized Intersection

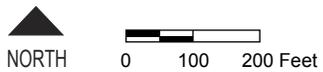


Figure 2
Proposed Project
MERCER CORRIDOR
IMPROVEMENTS PROJECT

Appendix F
Public Involvement

Stakeholder Interview Summary Report

Prepared for:

The Seattle Department of Transportation

Prepared by:

Norton-Arnold & Company
June 30, 2004

Introduction

Stakeholder interviews were conducted to get input from a wide range of South Lake Union area interest groups and individuals on the project alternatives and how they address the area's transportation problems. This outreach was conducted as part of a comprehensive public involvement program prior to the final selection of alternatives. Twenty groups and individuals were contacted regarding the interviews. Eight interviews were conducted between May 21 and June 3, 2004.

Stakeholders were identified based on their proximity to and the potential to be affected by the project. Some stakeholders have participated in the South Lake Union (SLU) Transportation Study and/or other SLU area planning and construction projects.

Stakeholders interviewed represented the following interests:

- Center for Wooden Boats
- Fred Hutchinson Cancer Research Center
- PEMCO
- Queen Anne Community Council
- Uptown Alliance
- South Lake Union Friends and Neighbors (SLUFAN) – work, live and own property in the area
- Trammell Crow Company
- Pacific Northwest Ballet
- Seattle Sonics and Storm

A member of the design team and a member of the public involvement team attended each interview. The interview began with a brief presentation of the alternatives by the design team member. Each interview proceeded differently, but in general, the following questions were addressed in each interview.

1. Are you familiar with the Mercer Corridor Project?
2. How would you describe the project? Do you have any preconceptions about it?
3. How would you describe your interest in the Mercer Corridor (business [type of business], resident, etc.)?
4. (If business) How large is your business or how many are directly or indirectly employed by your industry/business in the area? How long has your business operated here?
5. Do you belong to an organized group that has an interest in the Mercer Corridor (if yes, name, size, and contact)?
6. During project development a number of objectives were identified for improvements to meet. Of these, which do you think are high, medium, or low priorities? Why, and what are the potential tradeoffs associated with meeting the objectives?
 - Enhance area around S. Lake Union Park and improve pedestrian connections between the neighborhood and park/waterfront

- Use a multi-modal approach to improve mobility into and through S. Lake Union (what does this mean to you – automobiles? Freight? Transit? Bicycles? All?)
 - Improve regional access to S. Lake Union and Queen Anne/Seattle Center
 - Improve access and mobility within the neighborhood for all modes (getting around within the neighborhood)
 - Improve safety for cars, bikes, and pedestrians throughout the corridor
 - Provide better connections between S. Lake Union and Queen Anne
 - Support economic development goals for S. Lake Union
 - Compatibility with other projects (Alaskan Way Viaduct, SLU Park, Seattle Streetcar, etc.)
7. What are your primary issues and concerns related to the Mercer Corridor Project? Why?
 8. Are you familiar with the alternatives being considered? If so, do you have a preference? Why?
 9. Some of the comments we received at the public open house included the following ideas about modifying the alternatives. What do you think of these ideas? Do you have others?
 - Continuing the two-way Mercer concept across Aurora Avenue
 - Putting Mercer underground
 - Combining aspects of the two alternatives
 - Enhancing public transportation along the corridor
 10. What will it take for this project to be successful?
 11. Would you or your group/business be interested in being involved in this planning process (if yes, how [meetings, electronically, etc.]?)
 12. Have you been involved in past planning efforts in the South Lake Union Area? If so, how would you describe your efforts/involvement? Do you have any suggestions on ways to improve planning efforts?
 13. Do you have any questions you would like to ask?
 14. Are you interested in participating in a stakeholder work group (end of June)?
 15. Is there anything else you think SDOT should know as they enter this planning process?

Comment Summary

The following comments are sorted into categories based on the general themes that emerged from the interviews. The bulleted comments included for each category do not include every comment made. Rather, they reflect the range of comments for that category.

Comments about Alternative B

Most comments about Alternative B were positive. Positive comments most often focused on the component of this alternative that creates a narrower Valley Street, enhancing the waterfront and improving safe access for pedestrians and bicycles. Those comments included:

- Alternative B moves traffic away from lake, making it safer and more bicycle and pedestrian friendly.
- A smaller Valley Street improves public access to the water.
- Alternative B enhances the park area (more retail and pedestrian friendly).
- The two-way Mercer alternative has the potential for the biggest impact for the area, to help traffic, and give the city the opportunity to design a grand boulevard.
- Alternative B improves the look and feel of this highly used entry to downtown Seattle.
- The two-way Mercer alternative provides a pleasant egress from the interstate, with a wide median.
- Alternative B gets rid of the awkward Mercer curve onto I-5.
- A two-way Mercer Street is good for access to the Mercer parking garage. However, it might make leaving the Mercer garage (after an event) worse than current situation.

There was one negative comment about Alternative B and its potential to reduce eastbound traffic on Mercer.

- Alternative B does not increase traffic capacity on Mercer. Rather, it reduces eastbound traffic capacity, which is problematic for Seattle Center interests (event traffic).

Comments about Alternative A

The comments received on Alternative A indicated limited support as indicated in the comments about this alternative.

- Alternative A would appear to move traffic westbound, improving the bottleneck on the I-5 exit ramp. However, Alternative A does not do much to fix eastbound Mercer traffic. Not addressing both directions of traffic is problematic.
- Alternative A degrades the park and shoreline, it doesn't improve traffic, and it cuts off east/west streets from each other.

Bicycle access and facilities

There was substantial support for improving bicycle access and safety. In some cases, specific suggestions for bicycle facilities were made. The comments included:

- Increase bike facilities.
- Improve bicycle access and make it pedestrian friendly.
- Include a bicycle planner (or representative from bicycle group) as part of the planning team.
- Somewhere within the project area try experiment with a new bike curb that is a few inches higher than roadway, but still lower than the sidewalk. This could increase bicycle usage, which could in turn reduce auto traffic. This shift could result in the less needed road repairs (spending less on roads), therefore it makes sense to invest in this type of thing.

Pedestrian connections

Pedestrian safety and connections were also mentioned in participant's comments about Alternative B. Additional comments included suggestions for improving pedestrian connections not only within, but also to the SLU area from other neighborhoods.

- Pedestrian connections should be enhanced between Capitol Hill, Queen Anne, and SLU Park. The most important pedestrian connection is to the Cascade Neighborhood. Youth programs in the Cascade Neighborhood currently do not come to SLU Park because it is too difficult and dangerous to go there.
- Include a pedestrian planner on the project team.
- Reconnect the street grid that Aurora currently cuts through.

Seattle Center event traffic and corridor capacity

Seattle Center interests provided some comments on how the project might improve Seattle Center traffic flow. Those comments included:

- Turn the Memorial Stadium into a parking garage to create easy access to and from Aurora and I-5. This would eliminate the need for traffic improvements beyond (west of) Mercer and 5th and it would reduce some of the traffic around the Center.
- Neither alternative increases capacity for eastbound traffic on Mercer, which does not help Seattle Center event traffic. An additional alternative that moves more event traffic is needed.

Aesthetics and design considerations

In addition to relieving traffic congestion, some suggested ways to improve area aesthetics. Specific comments included:

- Even though traffic volume (capacity) can't be increased, this project can make it more enjoyable to drive in the area.
- Exit 167 is a main gateway to Seattle for many people and driving on it should be a good experience.
- Have architectural detailing and craftsmanship at eye level for drivers and pedestrians to allow them to "experience" SLU and provide them with a sense of what's happening at South Lake Union Park.
- Consider beauty of design, alongside efficiency of moving traffic. SDOT must coordinate with the City Parks Department and architects.
- Incorporate signage that makes people come back here because it is green and quiet, and has many interesting activities.
- Design the two-way Mercer alternative to allow motorists with little glimpses of SLU Park.

Construction and construction related impacts

Participants expressed concern about potential construction related impacts and urged SDOT to minimize those impacts as much as possible by providing regular construction

information and maintaining mobility through the area during construction. Specific suggestions included:

- In project planning, consider impacts on businesses during construction.
- Consider access during construction, particularly to marinas and restaurants along Valley. Address attracting new business to the neighborhood throughout construction, and continuing the current momentum.
- Mobility during construction is a must, both for automobiles and pedestrians.
- Have a website for the most up to date construction information.

Comments related to putting Mercer underground

In general participants felt that putting Mercer underground would be an ideal solution, but economically unrealistic and not worth the cost. Comments included:

- Burying Mercer would be ideal, although it is likely too costly and unrealistic.
- This concept (unimpeded by traffic lights) would facilitate the majority of eastbound traffic on Mercer because they are going to I-5.
- Include one or two exits in the design to allow for local traffic.
- Put Mercer underground from I-5 to the Seattle Center (near 5th Ave parking lot) because this is a destination spot and there is physical space to accommodate the infrastructure within the lot.
- Include cost estimates of putting Mercer underground. It should still accommodate traffic across Mercer, particularly to the Cascade area.
- Choose the concept that works most gracefully, and is most economical.

Enhancing public transportation along the corridor

There was overwhelming support for improving public transportation within, to and through the project area. Specific suggestions were wide ranging and included modes such as the streetcar, Metro, a Lake Union ferry, the monorail and connections to downtown, the U-District and Fremont. Specific comments included:

- Compatibility with Aurora and the streetcar is key.
- Make the most positive connection to viaduct.
- The streetcar is a good concept to reduce car traffic, particularly if it can be extended both to the University and International districts.
- Incorporate/facilitate the streetcar as a critical component to the Park and a vital link between SLU and downtown. Streetcar could also eventually be connected to the U-District. Existing transit options are insufficient.
- Consider streetcar connections to other transit modes including the downtown bus tunnel, monorail, light rail, train station, as well as serving as a mode of transportation within the SLU neighborhood.
- Use shuttles or other modes to connect SLU to downtown.
- Coordinate with Metro routes 66 and 70.
- Include a ferry landing at SLU Park or other transit modes (boats can carry bikes and pedestrians) to enable boat traffic to Fremont and the University District, and even to the east side.

- Allow for future expansion of the monorail to go east in the Mercer area. The monorail is important to overall mass transit planning. The streetcar does not accommodate mass transit.
- Try to find a new home for industrial/commercial activities on Lake Union.

Other specific comments/suggestions

The following section includes miscellaneous comments and suggestions.

- Narrowing Mercer would put increased pressure on the drop-off lane at Pacific Northwest Ballet and McCaw Hall.
- A wider throughway should be designed under Aurora for pedestrians and bicycles.
- Include sustainable features to upkeep Seattle’s reputation for being environmentally friendly.
- Traffic flow on Mercer is a priority to cross traffic.
- Eliminate one-way streets where possible.
- Create a rainwater collection system as part of project. Could start at REI, then come through the next block to Cascade Park (meander it through the park), take it then to Terry Street and have it visible (above ground). Bring it down Terry through system to clean it and then bring it into SLU Park (west side near Kenmore Air) and create a mini wetland (that can help keep Lake Union clean).

Project Objectives

Interviewees were asked to give each of the project objectives a *high, medium* or *low* priority. However, the responses to the question were not in all cases so straightforward. Interviewees provided comment, but did not always “rank” the objectives. The following summarizes the comments and rankings of the project objectives. The objectives are not listed in order of priority.

- 1. Improve safety for cars, bikes, and pedestrians throughout the corridor**
Generally, interviewees seemed to think that “Improving safety for cars, bikes, and pedestrians throughout the corridor” was a “no brainer” and should “of course,” be done.
- 2. Support economic development goals for S. Lake Union**
While interviewees were mostly in favor of “supporting economic development goals for South Lake Union,” many indicated that it was not itself an objective of this project. Rather, all the other project objectives support (or will contribute to) increased economic development.
- 3. Use a multi-modal approach to improve mobility into and through S. Lake Union (what does this mean to you – automobiles? Freight? Transit? Bicycles? All?)**
Of those interviewees who responded directly to this question, all of them indicated that this objective has a high priority. This is the only objective that received all high marks.

4. Enhance area around S. Lake Union Park and improve pedestrian connections between the neighborhood and park/waterfront

This objective did not receive a high priority from all respondents. However, it was widely supported as important for the area, and for the project to support, even by stakeholders not directly affected by such an improvement.

5. Improve regional access to S. Lake Union and Queen Anne/Seattle Center

6. Improve access and mobility within the neighborhood for all modes (getting around within the neighborhood)

7. Provide better connections between S. Lake Union and Queen Anne

Interviewees assigned varying levels of priority to Objectives 5-7. Some felt it was most important to improve within neighborhood connections, while other strongly supported better connections between neighborhoods, and still others strongly supported regional connections.

8. Compatibility with other projects (Alaskan Way Viaduct, SLU Park, Seattle Streetcar, etc.)

Respondents did not disagree with this priority, but in some cases indicated that it should not have to be an objective. Rather, “it should just be done” because it “makes sense” to do it.

Suggestions for improving communication outreach efforts

Many of these stakeholders have been involved in other planning projects. Based on those experiences, they offered a range of suggestions for improving planning projects and associated outreach efforts.

- Get commuters involved. Stand at a traffic signal and poll drivers on their preferences (quick and easy participation by commuters).
- Obtain neighborhood input and possibly bring a lunchtime presentation to local businesses to get employee input. They are the constituents.
- Get input from the residential community by doing evening presentations on the project at the larger apartment complexes.
- Clarify the benefit/advantages of the project at a neighborhood, local and regional scale to help people see the bigger picture. This should include outreach, demonstrate you have listened, that you are up front and honest, and that there is no hidden agenda for SLU development.
- Seattle needs a master plan to determine how much traffic this area can handle, how much green space, how many single residences, etc. If we cannot safely move people then we have to consider capping growth here and plan for growth in other areas.
- Have a tremendous amount of communication and open lines with the business owners along the alignment.
- Be responsive and address issues as they arise.

Conclusions

The following represents a summary of the key points that emerged from the stakeholder interviews.

- As indicated by the importance placed on multi-modal access and mobility to and through South Lake Union, as well as other related comments, most interviewees see the project as a project to address the area's transportation problems. Most supported non-transportation related project objectives but made them a lower priority for the corridor.
- Most people commented that they supported the concept of making Valley a narrower street because it would make it more bicycle and pedestrian friendly (safe), and would enhance the park area. Making the area easier and safer to use for pedestrians and bicycles is important to most people. The results of this interview indicate that the objective "Improve safety for cars, bikes, and pedestrians throughout the corridor" is highly supported.
- Many of the interviewees asked questions about or expressed concerns about construction impacts associated with this project. Suggestions were made to keep the public and surrounding businesses informed and to maintain a regularly updated website with construction information.
- Most people commented on the need to improve public transportation to, through, and within the South Lake Union area. Suggestions for how to accomplish such an objective were varied. There was strong support for the streetcar and an expanded Metro service to improve the connection between SLU and downtown.
- There was acknowledgement and in some cases expressed disappointment that none of the current alternatives allow for increased traffic capacity. Increased capacity, particularly for eastbound Mercer was particularly important to Seattle Center interests.
- The two most commonly asked questions by interviewees were about the project schedule and project funding.

mercercorridorproject

Scoping Summary Report

Prepared for:

The Seattle Department of Transportation

Prepared by:

Norton-Arnold & Company
July 7, 2004

Introduction

The Mercer Corridor Project, led by the Seattle Department of Transportation (SDOT), is being conducted to determine transportation improvements on Mercer Street from I-5 to Aurora Avenue North and the Seattle Center. SDOT held an agency scoping meeting and a public open house/scoping meeting to provide information about the project and to receive comments on the alternatives under consideration. As part of its public involvement program, and in compliance with the National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA), SDOT informed agencies and the public of the opportunity to submit scoping comments on the alternatives, in order to focus the scope of the environmental review.

The Project and Public Scoping

SDOT, as the project proponent and lead agency, and the Federal Highway Administration (FHWA) as co-lead agency, have determined that environmental documentation NEPA and SEPA is required to provide information on alternatives and associated impacts for the Mercer Corridor Project. A NEPA Environmental Assessment (EA) will be prepared for adoption as a SEPA Environmental Impact Statement (EIS). Scoping was conducted in compliance with NEPA and SEPA.

The proposed project would result in vehicular and pedestrian improvements, improved signalization and safety improvements in the Mercer Street corridor (including Mercer Street and Valley Street) between the I-5 on/off ramps at Fairview Avenue North and Dexter Avenue North (or 5th Avenue North in the case of Valley Street/Roy Street). The project's purpose is to better accommodate vehicular, transit, pedestrian and bicycle traffic, support development of the South Lake Union Urban Village, and improve access to a greatly enhanced South Lake Union Park.

Two alternatives were presented for comment. One alternative includes a two-way widened Mercer Street between Dexter Avenue North and Fairview Avenue North with changes on Valley Street to provide local access to area businesses and South Lake Union Park. A second alternative involves improvements to Valley Street, a through westbound connection from Valley Street to Roy Street, and a new westbound Roy Street underpass or overpass at Aurora Avenue North connecting to the Seattle Center and Lower Queen Anne.

In accordance with NEPA and SEPA, the scoping process and public involvement plan were designed to receive comments on the range of proposed alternatives and the impacts to be evaluated in the EA. SDOT initiated the scoping process, inviting the participation of King County, Washington State Department of Transportation (WSDOT), Sound Transit, regional, state and federal agencies and affected tribes, as well as the public including businesses, affected groups and organizations, and individuals.

The public involvement program conducted for scoping included public notices, a project brochure (with a postage-paid mail back comment form), agency scoping letters, an agency scoping meeting and a public scoping meeting/open house, and invitations to comment directly to SDOT via email or other correspondence.

Participants in the public involvement process were asked to give their comments on two alternatives, suggest additional alternatives, and identify issues they believe should be evaluated in the environmental review process. Comments received during the scoping process will be used to refine the alternatives, identify potential new alternatives for consideration, and help define the scope of the environmental analysis.

The Draft EA is scheduled to be released in Spring 2005. Final selection of the preferred alternative will be made in Fall 2005 after the Final EA is completed. Construction on the selected alternative is scheduled to commence in Summer 2007.

Notification Process

Notification of scoping began on March 4, 2004 when a Determination of Significance and Request for Scoping Comments was published in the SEPA register. Scoping notices were published in the *Queen Anne News* and the *Magnolia News* on March 3, and in the *Daily Journal of Commerce* on March 4. On March 4, a scoping letter was mailed to 140 state, county, and city elected officials, tribes, and agencies. A project brochure with information about the project and the scoping meeting/open house notice was mailed to approximately 4,600 addresses within the study area. The scoping meeting/open house was also advertised on SDOT's website.

Scoping Meeting/Open House

The agency scoping meeting and public scoping meeting/open house were held on March 18, 2004, at:

The South Lake Union Armory
860 Terry Avenue
Seattle, Washington

The agency meeting was held from 3- 4 p.m. and the public open house was held from 4:30 – 7:30 p.m. Approximately 12 agency representatives attended the agency scoping meeting, while about 100 members of the public attended the open house. The open house consisted of staffed display areas and a comment table. Participants were able to talk one on one with project staff, view displays of the alternatives and other project information, and record their comments on provided comment forms. Participants were informed that they could submit oral and written comments at the meeting or submit written comments via email, mail, or fax by March 25, 2004 (the end of the scoping period).

The public open house also provided the opportunity to learn more about and comment on The South Lake Union Transportation Study. The study, being conducted by SDOT to determine a range of improvements within the entire South Lake Union area, presented its draft recommendations for public review and comment.

Agency Comment Summary

Three agency letters were submitted to SDOT during the scoping period. The following is organized by agency and summarizes the comments made by each responding agency. Copies of the agency letters are provided in Appendix A of this report.

King County Department of Transportation (DOT)

In general, comments from King County DOT were in favor of the project's potential ability to meet the City's growth management goals and enhance redevelopment in the South Lake Union area. An offer was made to work with the City on this particular transportation improvement project. The following specific comments were made as suggestions to consider when evaluating alternatives:

- A Mercer Corridor crossing for pedestrians and bicyclists is critical to support development of that South Lake Union area as a mixed use community.
- Improved transit access is consistent with project goals and critical to the development goals for the area. Specific transit oriented comments included:
 - Project should incorporate the potential for transit to operate on Mercer, Valley and/or Republican Streets.
 - Support converting parking to a travel lane eastbound on Mercer Street with the option to operate it as a peak-period transit lane if needed at a future date.
 - EA should address north-south transit movement and barriers (Mercer Corridor) on Fairview and Westlake Avenues.
 - Transit support facilities (layovers, stops and pedestrian access) should be addressed in the EA.
- Freight movements, along parts of Valley Street and Westlake Avenue North, are a component of traffic flow in this area, and should be considered in the EA.
- Explore area-wide travel demand management strategies, as well as travel through this corridor specifically related to events.
- Issues related to vehicle contaminants in water runoff and air quality should be considered during review.

Washington State Office of Archaeology and Historic Preservation

This letter was brief and indicated that if Federal funds or permits are required as part of the project, that Section 106 of the National Historic Preservation Act must be followed. The comment was also made that the Washington State Office of Archaeology and Historic Preservation will thoroughly review and comment on the project when the Draft EA is completed.

United States Environmental Protection Agency (EPA), Region 10

In brief, these comments focused on the need for improved public transportation to the Seattle Center as part of this project. The point was made that currently, the majority of public transit to the Seattle Center comes from the downtown area. Additional public transportation, from the north, south and east, to the Seattle Center is needed, and is a

good fit for this project as the Mercer Corridor is a main access route for the Seattle Center. EPA urged the City to work with other transportation entities to accommodate at least one mode of public transportation in the Mercer Corridor and South Lake Union planning area.

General Comment Summary

During the public open house on March 18, 2004, 35 written comment forms were submitted. In addition, 13 comments were written on the project display boards. Seventeen comments were submitted using the mail back comment form provided in the project newsletter. One letter was received from a member of the public. The deadline for all comments was March 25, 2004.

This summary outlines the common issues and themes identified in the submitted comments, as well as a list of some general ideas or recommendations provided in feedback to the alternatives that were presented at the open house. Copies of the public comments are provided in Appendix B of this report.

Project Purpose, Alternatives and Options

Seven comments were submitted offering support for the Mercer Corridor Project in general, urging the City to move forward with the improvement plans, to stay on schedule and avoid further delays, and to secure funding.

The majority of comments about alternatives showed support for Alternative B, or the idea of making Mercer Street a two-way street and moving traffic away from Valley Street. Reasons for this varied from making the Valley Street area more bicycle and pedestrian friendly, to accommodating mixed use development that would create a “neighborhood” feel along Valley Street, to a desire for a narrower and tree lined Valley Street that would ensure optimum utilization of South Lake Union Park by increasing safety in the area.

A smaller number of written comments indicated preference for Alternative A, the Fairview/Valley realignment, because it provides the option to cross Aurora Avenue North at Roy Street, allowing better traffic flow between the freeway and the parking areas at the Seattle Center. A comment was placed on a board at the open house noting a concern regarding Alternative B, stating that people would still want to use Valley Street in that option, but that the street wouldn’t have the capacity.

Two commenters were not in favor of either Alternative A or B, stating that neither alternative solves the problem of afternoon eastbound traffic, and that this project would cause major traffic disruptions during construction and come with a large cost, with limited, if any, improvement as traffic increases over time.

One commenter cautioned that the alternatives should consider and comply with area neighborhood plans.

Alternative Recommendations

Several comments were submitted that pointed out qualities of both alternatives A and B, and made recommendations for combinations of the two, or offered new design options. In addition, comments posted on the display boards at the open house recommended changes to both alternatives. These comments and recommendations included:

- A Broad Street connection would be undesirable for local access to Queen Anne and Magnolia.
- A Valley Street waterfront “boulevard.”
- Separate local and regional traffic.
- A one-way grid system.
- Concern about taking away the route from Broad Street to Fairview Avenue North, via Valley Street, and having to fight cars to get to I-5.
- A sunken Aurora Avenue North option that would reconnect the east-west grid.
- Consider minor re-grading of Aurora Avenue North to reduce the 18% grade on the Thomas Street over-crossing. A reduced grade would allow a trolley connection to Seattle Center. If a less steep Aurora Avenue North/Thomas Street can be achieved, dropping the Roy Street/Aurora Avenue North under-crossing would become the preferred option.
- Consider a 2-way design for Mercer Street, between Fifth and First Streets.
- Make Roy Street a two-way street, and make First Street and Queen Anne Avenue two-way between Mercer and Roy Streets.
- Create an Option C to combine the best aspects of alternatives A and B. Use Alternative B, east of Ninth Avenue North and portions of Alternative A, west of Ninth Avenue North. The two lanes of west-bound Mercer Street would be directed to a 2-lane westbound Roy Street underpass of Aurora Avenue North. That is preferred over Alternative A as it would not adversely impact the park-like setting of Valley Street, east of Ninth Avenue North. It would be better than Alternative B in that Seattle Center traffic and south slope Queen Anne traffic would not have to weave to get to westbound Roy Street, but can get there directly.
- Incorporate the Roy Street underpass to “Alternative B.” Most Queen Anne traffic would opt for Roy Street if the alternative existed.
- In Alternative B, Valley Street may require more than one lane in each direction.
- Extend one lane from “Mercer to Broad Ramp” over the Roy Street intersection and then to the underpass.

Public Transit

Several comments received applied to public transportation services, including connections to bus services, the monorail, and accommodating the proposed streetcar line. There was substantial support for accommodating the streetcar to create improved public access between South Lake Union, Fred Hutchinson Research Center, and downtown. Suggestions regarding the trolley included extending the trolley along Westlake Avenue towards Fremont, as well as to UW, and to have a streetcar stop at South Lake Union Park.

One commenter suggested keeping Westlake Avenue as a one-way street, but dedicating one lane as a transit-only lane to accommodate public transit to the area. Comments also

indicated the need to increase transit access to support area growth. Specific suggestions included converting parking to a travel lane for transit eastbound on Mercer and to explore area-wide travel demand strategies, especially related to events, which cause frequent and significant congestion in the corridor. There was also an interest in increasing options for people to get to the South Lake Union area by water, using water taxis, ferries, or hand powered boats. There should be a facility for these transportation modes to dock and lock up, such as kayak racks, while people shop and have dinner in South Lake Union.

On a more regional scale, the suggestion was made to convert the I-5 reversible express lanes to HOV lanes, and to restrict all I-5 ramps to HOV only to reduce traffic congestion on Mercer Street, Valley Street, Stewart Street, Howell Street, Olive Way and Fairview Avenue North. This should be done in cooperation with Sound Transit and King County Metro to find long term transit solutions and management for the area. Including a future connection to, and station for, the Monorail to connect South Lake Union with Seattle Center was also recommended.

Bicycle and Pedestrian

Bicycle and pedestrian facilities, safety, and mobility in the area were of high priority among the comments received, and many commenters noted that planning for non-motorized traffic in the area will be critical to the success of the project and utilization of South Lake Union Park. The project should accomplish connectivity to the Burke Gilman Trail via the Westlake Trail, and between South Lake Union Park and the Seattle Center. The project should address capacity for increased future bicycle, pedestrian, and scooter traffic in the area as density increases, and what that would mean in terms of safety. Another safety concern is the connectivity and safety for pedestrians walking from the Cascade neighborhood to the park, as well as improved pedestrian access between Queen Anne and South Lake Union. One commenter urged SDOT to avoid sending pedestrians through a “deep” underpass to cross Aurora Avenue North. Another recommendation was to create a bicycle “park and ride” at South Lake Union to ease bicycle traffic downtown and allow bikers to board buses. One commenter mentioned that pedestrian safety should be improved regardless of this project, beginning with improving and increasing the existing Mercer Corridor sidewalks.

Seattle Center Event Traffic

Seattle Center events and the lack of public transportation to Seattle Center were frequently mentioned as a cause of congestion. In both alternatives there was concern about how to handle backups after Seattle Center events. Careful review of this problem, including how many blocks of backup traffic will be generated after events under each alternative, should be completed.

Street Connectivity

In both Alternatives A and B, significant concern was expressed about street connectivity and adequately addressing both the east-west and north-south connections. Several commenters favored restoring the city grid as well as preserving “back-road” alternatives to Mercer Street for local traffic. There was support for creating a more direct connection for regional traffic to the Seattle Center off of I-5, and for having a two-way Mercer

Street, but not at the expense of losing overall connectivity. One comment recommended pursuing an “award-winning” Mercer Boulevard concept.

Suggestions for improving connectivity included: trenching Terry Avenue North to allow for a bridge over the traffic lanes and the trolley; maintaining the connection between Broad Street and Fairview Avenue North via Valley Street, for people who travel in the corridor but want to avoid Mercer Street; having two options for getting to lower Queen Anne (via Broad and Roy Streets) to help dissipate traffic; reducing the number of stoplights; and widening Aurora Avenue North.

Another idea included keeping Valley Street as is, but improving existing conditions. Also, the connection from Broad Street to northbound Aurora Avenue North should be adequately addressed in Alternative B, as using Westlake Avenue North and Valley/Roy Streets was not an acceptable option.

Traffic Forecasting

Several commenters wanted to see traffic volume evaluations for the proposed alternatives. These related to future traffic volumes, particularly with the planned urban density for the neighborhoods of South Lake Union, Ballard, and Queen Anne, as well as travel time predictions between Queen Anne and Capitol Hill, and between Eastlake and downtown.

A review of traffic numbers was requested to determine whether a two-lane connection to Ninth Avenue North and Mercer Street is really needed. One commenter requested that the two-way Mercer option along Seattle Center be reviewed to determine how it would affect flow through Fifth Avenue and Mercer Streets, and how the newly added left-turn needs are addressed.

South Lake Union Park

People were generally very supportive of moving interstate traffic away from Valley Street and South Lake Union Park and saw it as crucial to the successful redevelopment of South Lake Union Park.

Public Participation in Project Design

Several comments indicated a desire to keep the public informed throughout the process and to ensure that there is no misrepresentation of public interests.

Economic Development and Impacts

There was concern about the conceptual plans causing dislocations of businesses located west of Aurora Avenue North, along Roy Street. In addition, in the redevelopment plans for Alternative B, comments suggested that careful attention be paid to accommodate access for the developers during construction, particularly at the properties bordered by Mercer Street, Fairview Avenue North, and Republican Street.

One suggestion was to include plans for a future expansion of the Port of Seattle in South Lake Union.

mercercorridorproject

June 2004 Stakeholder Workshop Summary

Prepared for:

The Seattle Department of Transportation

Prepared by:

Norton-Arnold & Company

July 7, 2004

Introduction

The Mercer Corridor Project, led by the Seattle Department of Transportation (SDOT), is being conducted to determine transportation improvements along the Mercer Corridor from I-5 to Aurora Avenue and Seattle Center. The project's purpose is to better accommodate vehicular, transit, pedestrian and bicycle traffic, support development of the South Lake Union Urban Village and improve access to a greatly enhanced South Lake Union Park.

Three basic alternatives are under consideration. One component in the initial evaluation of the alternatives included ranking the alternatives against project objectives. The purpose of the Stakeholder Workshop that was held on Wednesday, July 23rd was to gather input on the scoring of the alternatives, the importance of project objectives, and how the alternatives could be improved or modified.

This report summarizes the small group discussions that generated comments on the project objectives, their priority rankings, and how the alternatives might be modified to reflect priority objectives. Twenty-five people, who represent the diverse range of interests within and outside the project area, were invited to attend. Seventeen people attended the workshop.

Participants

The following is a list of the interest groups and business representatives who attended the workshop:

Cascade Neighborhood Council
North Seattle Industrial Association
Denny Triangle/Cascade Neighborhood Council
Bicycle Advisory Board
Children's Hospital
Shurgard Storage
Trident Seafoods
Vulcan
Copiers Northwest
Seattle Supersonics
Pacific Northwest Ballet
Cascade People Center
Queen Anne Community Council / Uptown Alliance

Workshop Format

The workshop was held on Wednesday, June 23rd from 4:00 – 7:00 p.m. at the Armory on South Lake Union at 860 Terry Avenue North. After a brief welcome, participants were introduced to the workshop purpose and objectives. Following that, an overview of the project was presented including: previous planning efforts, current alternatives, comments to date, how those comments have been addressed and next steps. Participants

were then divided into two smaller groups for a discussion of project objectives and their rankings against the alternatives.

In each small group, a facilitator led the participants through a discussion of the objectives, their priorities and their rankings against the alternatives. Technical project team members were available in each group to clarify questions about the project objectives and alternatives.

Small Group Discussion

Meeting attendees were randomly split into groups of 8-9 members. Both groups were provided the same information and asked the same questions. The differences in the two groups' interpretations of the questions and their respective responses are reflected the following sections.

Group #1 Summary

Group #1 focused on the project objectives, expanding, fine-tuning and eliminating objective components. After some discussion of what is important for the area and for the project to accomplish, the group agreed to take two existing “measures” and make them specific objectives. Those new objectives included: 1) Transit supported environment, and 2) Livability. The group supported making South Lake Union a self-sustaining, yet permeable area. In other words, improve mobility to, through and within the area for automobiles, transit, bicycles and pedestrians. Specifically, the group strongly supported improved pedestrian and bicycle connections. They concluded that measure 3.1 (“number and quality of pedestrian, bicycle, and auto/truck connections”) should be split into three separate measures to illustrate the importance of each type of connection.

Objectives and Measures

The group provided input on objectives, the measures used to score alternatives, and the project team's preliminary ranking of the alternatives against the measures. Comments included:

- Add two additional objectives to the list before prioritizing objectives. Those additional objectives were:
 - Transit supported environment
 - Livability

Transit

The group thought there was not enough mention of transit in the objectives. They agreed that a transit supported environment is important enough to be an objective all its own. The group thought all alternatives should support transit, as it is important on a neighborhood and regional scale, and will maximize the efficiency of the investment in this transportation project. Specific suggestions included providing infrastructure to allow transit to stop in the area, not just pass through;

using water taxis on Lake Union to serve SLU, Fremont, Wallingford and the U-District; and improving connections between SLU and the U-District.

Livability

The group didn't think livability was appropriate as a measure (or sub-objective) to Objective #6 regarding economic development. Rather, the group suggested that livability is important enough to stand alone as its own objective. The group defined livability as:

- Easy to get around the area
 - Area is self-sufficient (necessary services)
 - Regard SLU as a permeable, self-contained unit
- Change objective #3 and its measures to: Provide better connections between South Lake Union and Queen Anne across Aurora Avenue

Measure:

- 3.1 number and quality of auto/truck connections
- 3.2 number and quality of pedestrian connections (including connections to Queen Anne and Fremont, in addition to the Cascade neighborhood)
- 3.3 number and quality of bicycle connections

The group supported this objective and its measure (“number and quality of pedestrian, bicycle, and auto/truck connections”). However, the group agreed that “pedestrian connections” and “bicycle connections” should be pulled out as their own measures, because how those connections are achieved are different for autos, bicycles and pedestrians.

- Expand the area of consideration

There was some support expressed for expanding the area of consideration for the project. It was suggested that the alternatives should be examined for their impact on connections to other nearby areas such as Fremont and the U-District. It was also suggested that Objective #6 (Support economic development goals for South Lake Union) should include the “economic livability of Fremont, North Seattle Industrial Area, U-District and Capitol Hill.”

Prioritizing Objectives

Each group member was asked to allocate 100 points to the project objectives. They were instructed to allocate the 100 points in any way they saw fit. For example they could give all points to one objective or spread points out among all objectives. Individual allocations were tallied and recorded on a flip chart. After the first ranking exercise, the following three objectives received the highest number of points.

High Priority

- Objective 1** Improve mobility and access within South Lake Union using a multi-modal (cars, trucks, transit, pedestrians, bicycles, etc.) approach
- Objective 2** Improve regional access and mobility to and through South Lake Union and Queen Anne/Seattle Center
- Objective 5** Improve safety for cars, bicycles and pedestrians throughout the corridor

Medium Priority

- Objective 3** Provide better connections between South Lake Union and Queen Anne across Aurora Avenue
- Objective 4** Enhance the environment around South Lake Union Park
- Objective 9** Transit supported environment
- Objective 10** Livability

Low Priority

- Objective 6** Support economic development goals for South Lake union
- Objective 8** Ability to implement
- Objective 7** Compatible with Comprehensive Plan goals and policies (by far the lowest ranking)

Discussion

- Some group members thought the rankings Totals/ranking are skewed towards interests in the SLU area because Objective #1 ranked higher than Objective #2 (the general population of Seattle would rank it the other way around).
- Objective #8 should be the number one objective. Is it that we are taking it for granted that the project will be implementable? Should we take that for granted?
- Some group members speculated that Objective #7 received the lowest priority because even if the Mercer Corridor Project is in conflict with other plans, it is such an important problem to fix, that it might be done anyway.
- Group members commented that the theme of the highly ranked objectives was *transportation*.
- It was suggested that Objective #4 is part of Objective #10 and could therefore be eliminated.
- Group members wondered about the ability of the project to actually support economic development in the area (Objective# 6). They seemed to think that regardless of whether the Mercer mess is fixed, the area will grow.
- Group members wondered if Objective #5 (safety) wasn't just an assumption, something that should happen by law, and if so couldn't it be eliminated as an objective. Group members agreed that safety was a requirement of some components of the project, but that there are some components that improve safety, but are not required (e.g. additional bike lanes and pedestrian crossings).

After the discussion of the objective priorities, the group was asked to prioritize the objectives again. Objectives 1, 2 and 5 remained as high priorities, with the addition of Objective 3 as a high priority.

Following in rank, with a similar number of points were Objectives 6, 9 and 10. Objective #6 moved up from low priority.

Objective #7 and #8 remained a low priority, with #7 receiving the fewest points. Objective #4 moved from medium priority to low priority.

Discussion

- Highly ranked alternatives seem to support mobility to, through, and within the SLU area. These are the focus and if these objectives are met, all other objectives are supported.
- Objective #7 (Compatibility with Comprehensive plans and goals) was in both cases given the lowest priority.

Other Comments

The group made comments in addition to their input on the ranking, objectives, and alternatives. The following is a summary of their comments:

- Past O-D studies (mid 80s) performed – volumes haven't really changed so those studies might be useful
- Modeling does not reflect change in high tech management in area
- Eastbound Mercer – if capacity is decreased it will be problematic for Seattle Center event traffic (people tend to arrive at different times, but all leave at the same time)
- Traffic studies should be expanded to include night hours and weekends
- Facilitate flow of traffic to nighttime events
- Alt. B – 2 way Mercer, lots of options for managing event traffic
- Maintain (if not enhance) existing north/south infrastructure
- Maintain bicycle safety/access
- Transportation study should include a bike count
- Objective # 4 – Alt. B should be higher ranked than Alt. C because Park experience is about pedestrian connections in entire neighborhood, not just getting across Valley

Group #2 Summary

Group #2 focused most their discussion on the project objectives and how they should be weighted when evaluating alternatives. The group emphasized the importance of improving regional mobility and access to and through South Lake Union for automobiles, transit, bicycles, and pedestrians (Objective #2) and on providing better connections between South Lake Union and Queen Anne (Objective #3). The group believed that if “you got Objective #2 right” that the other objectives would be met. The

group indicated that while Alternative C would improve east-west mobility through South Lake Union for automobiles it would have negative impacts on all other modes and on neighborhood livability.

Objectives and Measures

The group provided input on objectives, the measures used to score alternatives, and the project team's preliminary ranking of the alternatives against the measures. Comments on the objectives and ranking included:

- Regional access and mobility (Objective 2) should not be limited to South Lake Union and Seattle Center. Mercer has a role in connections to Inter-bay, Fremont/Ballard, and Eastlake.
- Alternative C should not receive a high ranking for Measure 2.4 – Ease of freight mobility on major truck streets – because trucks will have to make multiple turns when traveling westbound on Mercer and their destination is south of Mercer. It is likely that this truck travel pattern will also negatively impact bike and pedestrian safety (Objective #5, Measure 5.2) and Livability (Objective #6, Measure 6.3).
- Ease of freight mobility on major truck streets (measure 2.4) should have well-defined parameters (area and routes).
- Alternative C should not receive a high ranking for minimizing impacts to I-5 (Objective #2, Measure 2.2) because of the three alternatives it has the ability to deliver the greatest volumes of traffic to I-5.
- The measures in Objective #6 don't accurately assess the alternatives' ability to support the economic development goals for South lake Union.

Prioritizing Objectives

Each group member was asked to allocate 100 points to the project objectives. They were instructed to allocate the 100 points in any they saw fit. For example they could give all points to one objective or spread points out among all objectives. Individual allocations were tallied and recorded on a flip chart. The results of the allocation indicated that participants assigned varying levels of priorities to each objective.

High Priority

- Objective 2** Improve regional access and mobility to and through South Lake Union and Queen Anne/Seattle Center
- Objective 3** Provide better connections between South Lake Union and Queen Anne across Aurora Avenue

Medium Priority

- Objective 1** Improve mobility and access within South Lake Union using a multi-modal (cars, trucks, transit, pedestrians, bicycles, etc.) approach
- Objective 5** Improve safety for cars, bicycles and pedestrians throughout the corridor

Low Priority

- Objective 4** Enhance the environment around South Lake Union Park
- Objective 6** Support economic development goals for South Lake Union
- Objective 8** Ability to implement
- Objective 7** Compatible with Comprehensive Plan goals and policies (received the lowest ranking)

Discussion

The group then was asked to explain their reasoning for their allocation of points.

- Many cited regional access to and through South Lake Union as the most important objective for this project. The majority of the group concurred that the solution must be multi-modal, and that focusing on just moving cars was not the right approach to a solution. The group also noted the importance of connecting neighborhoods -- the growing South Lake Union “hub” to Queen Anne. Their allocation was based on the belief that connecting Seattle neighborhoods with a multi-modal approach was important to city residents.
- While regional access and mobility was the highest priority, the group agreed that the other objectives (at least the next level point-wise) were also important.
- Some group members cited uncertainty about what enhancing the environment around South Lake Union Park meant and the idea that South Lake Union Park is part of a broader set of safety, access and livability enhancements as reasons for not allocating Objective #4 a lot of points. The group also perceived the project as having citywide economic development impacts and as a transportation project first and foremost, and thus did not give a lot of importance to Objectives #6 and #7.
- The group did not believe that the ability to implement the project as a priority objective because all alternatives have similar implementation challenges and because firm cost figures and potential funding scenarios are not yet clear.

After explaining their allocation of points the groups were asked to re-allocate their 100 points. They were told that they could allocate the same way they had initially or change their allocation based on what they had heard during the explanation discussion. The second allocation of points yielded roughly the same results as the first allocation. Point totals for each objective changed slightly but the group still ranked improving regional mobility and access to and through South Lake Union for automobiles, freight, transit, bicycles, and pedestrians (Objective #2) and providing better connections between South Lake Union and Queen Anne (Objective #3) as high priority project objectives. Medium priority objectives changed somewhat. Improving mobility and access within South Lake Union using a multi-modal (cars, trucks, transit, pedestrians, bicycles, etc.) approach (Objective #1) and improving safety for cars, bicycles and pedestrians throughout the corridor (Objective #5) remained medium priorities, but enhancing the environment around South Lake Union Park (Objective #4) moved up from a low priority to a medium priority. Supporting South Lake Union economic development goals (Objective #6), compatibility with Comprehensive Plans and goals (Objective #7) and ability to implement (Objective #8) remained as low priority objectives.

Modifying Alternatives

The group was asked to provide their ideas on potential ways to modify alternatives to make them more effective, either by adding new elements or by “borrowing” elements from other alternatives. While no specific suggestions were provided by group members, the group believed that the Mercer Corridor Project should move ahead with or without the Viaduct Project, but indicated that the Mercer project should be compatible with the Viaduct’s selected alternative.

Other Comments

The group made comments in addition to their input on the ranking, objectives, and alternatives. The following is a summary of their comments:

- The Potlach Trail is important for connectivity and should be incorporated into the alternatives
- It is difficult to decipher differences between alternatives with and without the Alaska Viaduct Project
- Wayfinding to and within the Mercer Corridor is important and should be part of whatever alternative is selected
- It is difficult to analyze the Mercer Project without knowing the status of the Alaska Viaduct Project
- If Alternative C is actually double the cost of the other alternatives, but does not rank a great deal higher, it is not worth pursuing
- Alternative C is extremely complicated at both ends of the corridor
- I-5 will continue to be a choke point regardless of improvements made to the Mercer Corridor

Conclusion

The workshop concluded with both groups reconvening to present summaries of their discussions. As indicated in the group summaries, both groups identified similar priorities in terms of project objectives. The groups reiterated that the Mercer project should address the full range of transportation problems within the corridor, and select an alternative that improves regional access and mobility to and through South Lake Union for all modes and that improves multi-modal connections within South Lake Union and between neighborhoods. A straw poll of the group on preferences for alternatives resulted in majority support for Alternative B – Two-Way Mercer. Alternative A – Fairview/Valley Realignment and Alternative C – Below Grade Mercer each received very limited support.

April 2005 Stakeholder Design Workshop Summary

Prepared for:

The Seattle Department of Transportation

Prepared by:

Norton-Arnold & Company

May 3, 2005

Introduction

The Mercer Corridor Project, led by the Seattle Department of Transportation (SDOT), is being conducted to determine transportation improvements along the Mercer Corridor from I-5 to Dexter Avenue. The project's purpose is to improve local safety, access, and circulation for vehicles and pedestrians, accommodate economic growth and neighborhood livability within the South Lake Union urban center, and improve the connection from I-5 to and through South Lake Union.

A preliminary preferred alternative has been identified. As part of the city's efforts to ensure that the preferred alternative provides a balanced approach to accommodate all modes and is designed in a way that is sensitive to the City and neighborhood vision for South Lake Union, a design workshop was convened to listen to stakeholder ideas and concerns regarding how the preferred alternative should "function, look, and feel."

This report summarizes the small group discussions that generated comments on how the preferred alternative should function, look, and feel. The purpose of the small group discussion was to brainstorm and discuss ideas, concerns and questions about functional and urban design elements of the preliminary preferred alternative.

Twenty-five people, who represent the diverse range of interests within and outside the project area, were invited to attend. Seventeen people attended the workshop.

Participants

The following is a list of the interest groups and business representatives who attended the workshop:

SLUFAN
Cascade Neighborhood Council
Seattle Center
Seattle Parks Foundation
Seattle Bicycle Advisory Board
Seattle Pedestrian Advisory Board
Seattle Design Commission
Daniel's Broiler
Outback Steakhouse
Vulcan
Copiers Northwest
JAT Business Plans
Kenmore Air
Uptown Alliance/Queen Anne Community Council
Shurgard
Seattle Biomedical Research Institute
Swartz Brothers Restaurants
Gregory Broderick Smith Real Estate

Workshop Format

The workshop was held on Wednesday, April 6, 2005 from 4:00 – 7:00 p.m. at the Armory in South Lake Union Park at 860 Terry Avenue North. After a brief welcome, participants were introduced to the workshop purpose and objectives. Following that, an overview of the project was presented including: a description of the alternative, how different user modes will be accommodated, and a discussion of some of the tradeoffs being considered. After the presentation, participants were divided into two smaller groups for a discussion of the functional elements of the alternative. After the small group discussions concluded, the entire group reconvened to report the results of their discussions, and to hear a presentation on the urban design possibilities for the Mercer Corridor. After the urban design presentation, participants were again split into two small groups for a discussion on the urban design elements of the alternative. Finally, the entire group reconvened to report the results of the urban design discussions and to conclude the workshop. The workshop agenda is included in Appendix A of this report.

In each small group, a facilitator led the participants through a discussion of the functional and urban design elements of the alternative. Technical project team members were available in each group to clarify questions about the alternative.

Small Group Discussion

Meeting attendees were split into groups of 8-9 members. Both groups were provided the same information and asked the same questions. The differences in the two groups' interpretations of the questions and their respective responses are reflected the following sections. The facilitator notes from each discussion are provided in Appendix B of this report.

Function Discussion - Group #1 Summary

In regards to the preliminary preferred alternative's ability to function for all modes, Group #1 discussed a number of issues related to freight, bicycles, pedestrians, and traffic.

Freight

The group identified a number of issues that the design needs to address in order for it to accommodate freight movement and access. The group wanted to know if there would be turning restrictions at the Fairview/Mercer intersection and if there would be enough room for trucks to turn onto Broad Street from 9th Avenue. There was also concern that Westlake Avenue north of Mercer Street would be too narrow for truck traffic.

Bicycles

The group's discussion on bicycles focused on the Potlatch Trail and Harrison Street. Comments indicated that the Potlatch Trail, and the current setbacks specifically for it on Roy Street, needs to be considered in the design of the alternative. It was also mentioned that Harrison Street is important for both bikes and pedestrians.

Pedestrians

The group's discussion on pedestrians touched on a number of issues including safety, traffic, and sidewalks. A pedestrian overpass (over Mercer) was suggested as one way to address safety and reduce congestion. However, one group member indicated that pedestrian overpasses isolate pedestrians and sends the signal that the area is not safe. This person also said that other safety measures should be incorporated to keep pedestrians at grade and in the mix with other modes. It was said that the Mercer median would address some safety concerns, as would timed pedestrian crossing signals, vibrating/audible pedestrian crossing signals, and on-street parking. Some group members said that wide Mercer sidewalks would not be used by pedestrians because Mercer will feel like a "walled" corridor, and that they should go elsewhere. Others said that people will use Mercer street sidewalks, especially with the addition of retail.

Traffic

The group's discussion on traffic touched on capacity and reconnecting the street grid. There was some concern that capacity is not being increased, especially for eastbound traffic, and that the proposed traffic signals will further slow down traffic. In general, the group agreed that the corridor should be designed to accommodate all modes; however, there was some disagreement on whether or not traffic and capacity should be the focus. Some said that it should focus on capacity while others indicated that seeking to maximize capacity is not the best approach for the neighborhood as a whole, and that whatever the capacity is it will ultimately be filled. Specific suggestions for dealing with the capacity issue included developing a two-way Mercer with two lanes westbound and five lanes eastbound or removing the parking lane from the south side of Mercer in order to add another travel lane.

The group said that reconnecting surface streets will provide an alternative for local east/west traffic, but may also result in putting too much traffic on neighborhood side streets.

Function Discussion - Group #2 Summary

In regards to the preliminary preferred alternative's ability to function for all modes, Group #2 indicated that the alternative was on track, but that "the devil would be in the details." The discussion focused mainly on traffic. Other topics of discussion included bicycles, freight, and parking.

Traffic

In general, the group said that the alternative should not focus solely on moving traffic through the corridor, but should instead take a balanced approach for all modes of transportation. The group indicated that tradeoffs will need to be made to achieve a coherent, well-designed, mixed use corridor. Participants were concerned that putting too much traffic on Mercer Street will result in too much congestion on cross streets. They also said that looking at the entire grid as part of a solution is important, and that Fairview, Republican, and Valley are important streets to reconnect into the grid system. The group also said that aggressive Travel Demand Management (TDM) is needed to get people out of their cars, and that Denny Way should not be viewed as an alternative route for Mercer Street because it is already experiencing congestion problems.

Bicycles

Group comments about bicycles indicated pleasure with the alternative's provision of bike lanes on Valley Street, and a desire to see bike lanes continued on Fairview in order to connect to the U District. Participants also said that adequate signaling, signage, and pavement painting should be used to inform drivers and bicyclists about bike lanes, and that mode separation should be considered in order to minimize bicycle exposure to traffic.

Freight

Comments about freight illustrated a concern with the intersection configuration at 9th and Westlake, with one comment being made that the truck route currently designated for Westlake should go on 9th Street instead. There was also some concern about the future use of 9th, specifically if it will be two-way.

Parking

The discussion on parking indicated that the group believed there is no one “right” answer for parking on Mercer Street. The group said that there are trade-offs: parking can make it feel safe for pedestrians because of the barrier it provides to moving traffic, however, parking may slow down traffic and may be dangerous on what will be a busy arterial. The group recommended a flexible approach, and said that installing permanent parking lane bulb outs would reduce flexibility. The group said that one solution might be to allow off-peak parking.

Other comments

- Concern that one lane in each direction on Valley Street will not be enough to accommodate local neighborhood traffic
- The proposed alternative generally improves access to property within the corridor

Look and Feel Discussion - Group #1 Summary

Group #1's discussion on how the Mercer Corridor should be designed from a look and feel perspective included: identifying unifying design themes; refining the gateway concept; differentiating Mercer and Valley streets; and lighting, landscaping, and signage.

Unifying themes

It was mentioned that the Mercer Corridor project should consider the maritime/industrial character that is identified in the South Lake Union neighborhood Plan and the current Terry Street Design Guidelines. Other comments about incorporating themes into the project's design included:

- New design should reflect historic themes
- The design should be substantial and bold, not too refined
- Establishing a theme is a way to identify the neighborhood

- Consider a maritime theme
- Take cues from the design character of the South Lake Union park design

Refining the gateway concept

In general, the group liked the idea of a central art piece, and had specific ideas for its location, as well as other ideas for incorporating art into the corridor.

Gateway comments:

- The gateway should be part of the neighborhood not the freeway
- The gateway art piece could be at the entrance at Fairview from I-5
- Incorporate gateway concept in the median on Mercer Street
- Put the gateway element on one of the north/south streets looking towards Lake Union, for the lake perspective

Art comments:

- Art could be used to direct traffic
- Art can contribute to the pedestrian experience
- Scale of art is important – for pedestrians or traffic – and will need to vary depending on location
- The neighborhood deserves a grand art gesture

Differentiating Mercer and Valley streets

The group made a number of comments about how the design should reflect the different personalities of Mercer and Valley Streets. In summary, there were suggestions that Valley Street design should have a park feel and that the Mercer Street design should respond to a more active and busier, multi-use feel. Specific comments included:

- Valley Street should have a resort-like or soft entrance so it has a park feel and focus
- Valley Street should have its own unique feel, different than Mercer, Eastlake, and Westlake
- Valley Street design should tie into South Lake Union Park
- The emphasis on Mercer should be on capacity instead of pedestrian design
- The Mercer Street design needs to accommodate a “busy” atmosphere

Lighting, landscaping, and signage

The group talked about lighting, landscaping, and signage both in terms of how they should reflect the overall design of the corridor, and how they should function. Specific comments included:

- The median strip on Mercer could be enhanced with lighting
- Pylons, pavers, and other physical elements could have neighborhood theme incorporated into their design to identify the neighborhood
- Use brickwork or texturizing to delineate crosswalks (not paint)
- Lighting other than regular overhead street lighting is needed

- Need pedestrian lighting on sidewalk so people will use the area at night
- Landscaping should be as maintenance free as possible
- Plantings/planters should be near crosswalks, be easily removable, and be composed of native and drought tolerant plants
- Evergreen trees are a good low maintenance option for the Mercer median

Other comments

- The Fairview/Valley area is too valuable to be used for the streetcar maintenance barn; Consider the City Light building on 8th, or some other place that is not as prominent
- The area could be a recreation magnet that compliments the Seattle Center, and so must be connected for bikes and pedestrians with street crossings, sidewalks, and lighting

Look and Feel Discussion - Group #2 Summary

Group #2's discussion on how the Mercer Corridor should be designed from a look and feel perspective echoed their discussion on the corridor's functional design. They said the design should consider all modes and the neighborhood itself, focusing on "beautiful infrastructure" necessary to create a successful urban neighborhood, and be flexible to future needs. Specific topics of discussion included looking at other successful design examples, identifying unifying design themes, refining the gateway concept, and lighting and signage.

Other successful design examples

The group suggested a number of other examples to consider when designing the Mercer Corridor, including:

- San Francisco's Embarcadero Boulevard
- Vancouver, British Columbia's Yaletown Neighborhood (for integrating housing, retail, and parking into the corridor)
- Boston's Freedom Trail (for incorporating design elements into sidewalks)
- Tokyo's and Yokohama's LED displays that lay out upcoming cross streets (for signage examples)

Unifying themes

The group identified a number of ideas for incorporating themes into the design, including:

- Maritime heritage
- Native American art
- Sustainability: emphasizing bicycles, permeable roadway edges, swales, trees on both sides of valley, solar-powered LED lighting
- Water: celebrate the presence of water in the neighborhood and the City of Seattle
- South Lake Union Park: highlight the park and its role as a community gathering place

Refining the gateway concept

In general, the group liked the idea of a defining gateway, and offered some suggestions to refine it, including:

- Ensure the gateway design is not distracting to drivers who are exiting the freeway at high speeds
- Consider the gateway as an information source (signage, directions) and as part of a theme that occurs throughout the neighborhood
- Consider a secondary gateway at the Dexter/Mercer intersection

Lighting and signage

The group identified lighting and signage as important design elements to both expedite traffic flow through the neighborhood and to establish the neighborhood's presence within the framework of the larger city. A number of suggestions were offered, including:

- Provide directional signs to other neighborhoods and to neighborhood assets, amenities, and landmarks
- Use lighting to create a safe and festive atmosphere
- Conduct a design charrette to consider new signage for the area
- Include design features that signal or communicate, such as distinctive paving at crosswalks

Other comments

- Design in space for outdoor amenities
- Provide a cohesive look throughout the corridor
- Use high quality materials
- Use indigenous/native fauna

Appendix A – Workshop Agenda

mercercorridorproject

“How should the Mercer Corridor function, look, and feel?”

**Design Workshop
South Lake Union Armory
April 6, 4:00 – 7:00 p.m.**

Agenda

Description: A workshop to provide updated information on the preferred alternative and to initiate a design process for the preferred alternative.

Purpose: To provide information about the preferred alternative, and its opportunities and constraints. To identify urban design themes that will help to ensure the selected alternative fits into the South Lake Union neighborhood.

<u>Agenda Topic</u>	<u>Presenter(s)</u>	<u>Time</u>
1. Welcome	Eric Tweit	5 mins.
2. Workshop Overview	Chris Hoffman	5 mins.
3. Mercer Project Overview <ul style="list-style-type: none">• The preferred alternative• City Council direction	Eric Tweit	10 mins.
4. Functional Considerations <ul style="list-style-type: none">• Constraints and opportunities	Eric Tweit	20 mins.
5. Small Groups Breakout <ul style="list-style-type: none">• What should be included to make the alternative function for pedestrians, bicycles, freight, and transit?		25 mins.
6. Report out	Chris Hoffman	10 mins.
7. Break		10 mins.
8. Potential urban design options <ul style="list-style-type: none">• Urban design examples and opportunities	Mark Hinshaw	25 mins.
9. Small group breakouts <ul style="list-style-type: none">• How should the Mercer Corridor look and feel for all users?		40 mins.
10. Report out	Chris Hoffman	15 mins.



Appendix B – Facilitator Notes

Group #1 Discussion Notes

Function

- Will there be turning restrictions at Fairview/Mercer intersection?
- Extra long trailers cause delays for pedestrians and traffic
- Are there City restrictions on truck travel?
- Truck delivery considerations need to be part of this project design
- Westlake Ave, north of Mercer, is too narrow for truck traffic
- 24 hours truck traffic is preferable on 9th
- Is there enough room for a truck to turn off of 9th onto Broad or Roy Street heading west
- Is project planning to accommodate the Potlatch trail?
- Harrison is important to bikes and pedestrians
- Vision for Potlatch trail is beyond regular sidewalk
- There are currently setbacks for Potlatch trail on Roy that need to be considered in the design of this project
- Signal timing – balancing needs of pedestrians and cars
- Current light at Westlake and Valley is too long
- What about a pedestrian overpass (over Mercer) to reduce congestion and for pedestrian safety
- Pedestrian Advisory Committee actually prefers that pedestrians remain at grade – when traffic and pedestrians are separated, it creates the perception that it isn't safe. PAC would rather use other means to improve pedestrian safety
- There are safety issues for pedestrians crossing Mercer
- New Mercer median mitigates some of the safety issues
- Countdown signals for pedestrians are needed (identifying both the time until crosswalk is on and how much time is left for pedestrians to cross)
- Vibrating/audible signals are needed to accommodate ADA
- Slowing traffic, bike lane and parking lane are all good for pedestrians on Mercer
- Wide sidewalks should be elsewhere – Mercer won't get used by pedestrians
- Feels like a walled corridor along Mercer, which isn't a pleasant experience
- Mercer sidewalks will get used because the addition of retail and sidewalks will create a good walking area
- Concerned that Mercer capacity is not increasing, particularly for eastbound traffic during evening rush hour. New design has fewer lanes and more traffic signals which will slow traffic
- It will be very hard for pedestrians to cross Mercer during evening rush hours in particular
- Reconnecting surface streets will give people other alternatives (than Mercer) to get across town
- Alternatives still put traffic on streets we are trying to move traffic off

- On Mercer, suggest 5 lanes headed east and 2 lanes headed west
- Remove parking lane on south side of Mercer to allow for another traffic lane

Look and Feel

- SLU Neighborhood Plan is focused on maritime/industrial character of the area - new design should reflect these historic themes
- Nature of the neighborhood is eclectic
- Design should be substantial and bold, not too refined
- Like the idea of a central art piece. Ideas for location:
 - At the Fairview entrance from the freeway
 - Not at freeway, but in neighborhood, to contribute to neighborhood, possibly at Terry.
 - On median strips on Mercer
 - On one of the north/south streets looking up towards Lake Union for the lake view perspective
 - Could be neighborhood icon in SLU Park
- Art in park
- Art could be used to direct traffic
- Artsy overpass at Terry, with a possible mini-lawn or coffee shop
- Evergreen trees would be a good lower maintenance option than other trees
- Current Terry design guidelines should be considered
- Create Valley to be like a resort entrance, so it has a park feel and focus
- Valley should have a very different feel than Eastlake and Westlake
- Focus on Eastlake and Westlake pivot points
- Anchor points connecting district
- Art can contribute to pedestrian experience and draw
- Armory is tying park north and south
- Scale of art is important – for pedestrians or traffic? Will vary depending on site
- Median strip on Mercer could be enhanced with lighting
- Put signs in median on Mercer that announce upcoming cross street
- Concrete pylons could have brand (neighborhood theme) detail – this pedestrian décor would be a way to identify the neighborhood
- Use something different than just yellow paint to delineate crosswalks – some suggestions include brickwork, texturizing
- Lighting other than regular residential overhead street lighting is needed
- Need pedestrian lighting on sidewalk – people will then use area at night
- Median should be as maintenance free as possible
 - Plantings nearer to crosswalks
 - Planters that are easily removable
 - Natives and drought tolerant plants
- Planting strips along sidewalks – greenery, but high maintenance
- Will Mercer be attractive for sidewalk cafes?
- Vulcan will be developing retail on Mercer between Fairview and Terry
- Can see pedestrians on side streets also if Mercer is developed and well used

- Fairview/Terry is too valuable as a piece of land to use for a trolley maintenance barn. Couldn't the City Light building on 8th be used for this purpose? Or could part of this maintenance barn be underground or tucked inside the area with retail on other outer edges of this corner space
- Neighborhood has never had a unified theme – unifying with design/art would be good
- Neighborhood deserves a grand art gesture
- Maritime theme
- Look beyond freeway exit/entrance
- Could have a gateway piece at Mercer/Fairview as you come off freeway so you can't miss it
- Possibilities for creative land exchanges between City and Vulcan
- Proof that it is pedestrian friendly – improves on what is there now
- Respect the general design character of SLU neighborhood park – balance cars and pedestrian experience
- Demonstrate it can carry traffic flow
- Need to consider long-term development
- Brick/nautical theme
- Capacity for eastbound Mercer is lacking – will only get worse in future
- Area could be recreation magnet – a second pull to Seattle Center. Must be connected for bikes and pedestrians with street crossings, activated sidewalks, lighting and urban center
- Need residential and need developers to build good commercial space

Group # 2 Discussion Notes

Function

- The devil's in the details but the general plan is on track
- The general plan is ok but the truck route designated for Westlake should go on 9th
- Concern about the future uses of 9th, specifically about whether it will be two-way
- Concern about the use/configuration of the intersections at 9th and Westlake
- Too much traffic on Mercer will result in increased traffic on adjacent side and cross streets as drivers get impatient
- Aggressive traffic demand management (TDM) is needed to get more people out of their cars
- Studies of the psychological dimension of driving in traffic show that well designed, pleasant streetscapes lessen driver impatience. The City has the opportunity to create more pleasant conditions with the Mercer Corridor redesign
- Very pleased to see the provision of bike lanes along Valley providing an East-West connection. Would like to see the bike lane continue along Fairview to provide connection to the U District
- In the Mercer Corridor, provide signaling, signage, pavement painting and structural segregation to make bike lanes and crossings very clear to drivers

- Lessen the physical exposure of bikes to traffic
- Don't look to Denny as a solution to traffic congestion on Mercer. Traffic conditions on Denny also need improvement
- Fairview, Republican and Valley are important streets in the Mercer Corridor "grid." The Mercer Corridor redesign will help reconnect the grid of streets near Mercer
- The Mercer Corridor redesign involves tradeoffs between moving traffic and providing a coherent, well-designed, mixed-use corridor possibly with retail businesses, landscaping, and parking. The quantity of traffic moving through the corridor and the quality of the corridor itself are both important
- Concern that too much emphasis will be put on "shoving" traffic and freight down Mercer
- Vehicles traveling to Capitol Hill in the right lane will have to sit in traffic with the three-lane configuration
- Providing parking along Mercer will entail trade-offs: parking will slow the flow of traffic and could be dangerous near the freeway but is essential for retail businesses and makes the area safer for pedestrians. Approach the issues of parking and lane use with flexibility
- Is one lane each way on Valley sufficient to accommodate the established volume of local, neighborhood traffic? People making local trips will use Valley to avoid Mercer
- The proposed alternative for corridor redesign generally improves property access

Look and Feel

- The redevelopment of the Mercer Corridor provides "a great opportunity to make strong and beautiful infrastructure"
- The Mercer Corridor doesn't have to be just about traffic. Take into account sidewalks, retail businesses, parking, medians and design elements
- Integrate housing, retail business, and bicycle and pedestrian access in the corridor to create a successful urban neighborhood such as Yaletown in Vancouver, B.C.
- Examine the design, look and feel of successful urban corridors such as the Embarcadero in San Francisco
- Incorporate design elements that reflect the maritime and Native American heritage of the area
- Design in sustainability by emphasizing bicycle transportation, permeable road way edges, swales to handle surface water runoff and by planting trees on both sides of Valley. Celebrate water visibly and creatively. Provide solar powered/energy-conserving LED lighting
- In designing the Mercer Corridor, including Valley Street, highlight the proximity of the South Lake Union Park as a community gathering place
- Designating wide rights of way now will enable flexibility in the future
- Construct a walkway all around Lake Union
- Pay attention to lighting in the corridor to create a safe and festive atmosphere
- Conduct a design charrette to consider new signage for the corridor

- Consider incorporating design elements into sidewalks such as, for example, the Freedom Trail in Boston
- The look and feel of Mercer should be “formal” with flexibility and creative design in other areas such as along Valley
- Design in space for outdoor amenities (tables) along the sidewalks on Valley
- Provide a design that is “cohesive” for the Mercer Corridor area
- Plant indigenous/native flora
- Use high quality materials. The choice of materials will determine the look and feel of the corridor long into the future. Avoid standard issue materials
- Provide visibly distinctive paving at cross walks
- The city should proceed with implementing the concept of the Mercer “gateway”
Be careful, however, to ensure that the gateway design is not dangerously distracting for drivers who have just exited the freeway’s high-speed traffic
- Make directional signs, particularly at the gateway, highly visible
- Near the gateway, consider installing the type of LED screens in use in Tokyo and Yokohama that lay out the grid of upcoming streets
- Provide directional signs to neighborhoods (e.g. Fremont, Ballard) and to neighborhood assets, amenities, and landmarks. Design in wayfinding information
- Take advantage at the Dexter intersection of the design elements initiated at the gateway
- Design in a transition of scale and speed in that section of the corridor drivers first enter from the freeway - that section before and after the gateway
- Pay attention to street lights and their timing. Coordinated signaling expedites traffic flow

June 2005 Stakeholder Design Workshop Summary

Prepared for:

The Seattle Department of Transportation

Prepared by:

Norton-Arnold & Company

June 23, 2005

Introduction

The Mercer Corridor Project, led by the Seattle Department of Transportation (SDOT), is being conducted to determine transportation improvements along the Mercer Corridor from I-5 to Dexter Avenue. The project's purpose is to improve local safety, access, and circulation for vehicles and pedestrians, accommodate economic growth and neighborhood livability within the South Lake Union urban center, and improve the connection from I-5 to and through South Lake Union.

The City of Seattle has identified a preliminary preferred alternative for the Mercer Corridor. As part of the city's efforts to ensure that the preferred alternative provides a balanced approach to accommodate all modes and is designed in a way that is sensitive to the City and neighborhood vision for South Lake Union, two design workshops were convened to listen to stakeholder ideas and concerns regarding how the Two-way Mercer alternative should "function, look, and feel."

This report summarizes the results of the second design workshop, and includes input on three themes for a design concept for the Mercer Corridor Project. The purpose of the second workshop was to confirm with participants if the three themes accurately reflected the input received on design ideas during the first design workshop and to identify new ideas for the design themes.

Forty-two people, who represent the diverse range of interests within and outside the project area, were invited to attend. Fourteen people attended the workshop.

Participants

The following is a list of the interest groups and business representatives who attended the workshop:

Cascade Neighborhood Council
Center for Wooden Boats
Copiers Northwest
Seattle Bicycle Advisory Board
Seattle Biomedical Research Institute
Seattle Center
Seattle Parks Foundation
Seattle Pedestrian Advisory Board
Shurgard
South Lake Union Friends and Neighbors (SLUFAN)
Swartz Brothers Restaurants
Vulcan/Transpo

Workshop Format

The workshop was held on Thursday, June 9, from 6:00 – 8:00 p.m. at the Center for Wooden Boats at 1010 Valley Street. After a brief welcome, participants were introduced

to the workshop purpose and objectives. Following that, a brief project update was presented. After the update, a more detailed presentation was given on the draft design concept and themes. Following the presentation, attendees were asked to give their input on the following design themes:

- Reflect maritime and industrial history
- Integrate with South Lake Union Park
- Reflect a sustainable grass roots community

The workshop agenda is included in Appendix A of this report.

Input to Design Themes

Meeting attendees were asked to consider the concept and each theme and to provide their input on the following: were comments from the April workshop accurately reflected in the design themes; what they liked about the concept, themes, and why; how the concept or themes should be changed, and why; and if there were new ideas that should be considered. The following section summarizes the comments received at the workshop. The facilitator notes are provided in Appendix B of this report.

Reflecting a maritime and industrial history theme

In general, attendees agreed that their comments from the April 6 workshop were accurately represented in this theme, and that that the South Lake Union area has strong ties to maritime and industrial history. They believed that this theme should be incorporated into the concept's design, and said that:

- Water should be part of the design
- A maritime/industrial interpretative trail should be incorporated into the design
- South Lake Union Park has a maritime theme, which should be enhanced by this project's design

Integrate with the park theme

Attendees believed that their comments from the April 6 workshop were represented in this theme, and thought that this theme should be incorporated into the design concept. Attendees commented that the Mercer Corridor Project should integrate with the park's design particularly on Valley Street. Ideas for incorporating the park into the project's design included:

- Using pocket parks and a trail to "capture" the park feel between Valley and Mercer and make people want to be in the area
- Using the same or similar park materials (pavers, lighting, benches, etc.) on Valley
- Using design (textured pavement, roundabouts, etc.) to slow traffic down

Reflect a sustainable grass roots community theme

Attendees believed that their comments from the April 6 workshop were represented in the description of this theme. However, they did not believe this was a stand alone design theme. They said it should be part of the fabric of the overall design concept, and that sustainability should be built into the other two themes' implementation. Ideas for doing this included:

- Use “grass roots community” as the design’s brand
- Ensure public transit is easy to use and has well-designed facilities
- Use sustainability as a way to get other groups and businesses to contribute to the design (materials donation)
- Use functional art work (water reuse, rain harvesting)

Other comments

Attendees made a number of other comments about the project’s design. The majority of these comments focused on artwork, and how it should be incorporated into the design. Some thought that more emphasis should be put into street trees, inviting streetscapes, and good signage than into grand artwork, especially at the Mercer ramps, where people will be moving at high speeds. Others said:

- Art should be part of the design
- Art and good wayfinding are more important in the neighborhood
- Art could be incorporated into the signage to create recognizable visual cues
- It’s important to remember that Mercer is a connection to other neighborhoods (downtown, Queen Anne, Seattle Center), not just a gateway to South Lake Union

Appendix A – Workshop Agenda

mercercorridorproject

“How should the Mercer Corridor function, look, and feel?”

**Design Workshop
Center for Wooden Boats
June 9, 6:00 – 8:00 p.m.**

Agenda

Description: A workshop to introduce design concepts for the preferred alternative that address previous stakeholder input and to continue a design process for the preferred alternative.

Purpose: To provide, discuss, and evaluate design options for the preferred alternative in order to ultimately select a design that is effective and fits into the South Lake Union neighborhood.

<u>Agenda Topic</u>	<u>Presenter(s)</u>	<u>Time</u>
1. Welcome	Eric Tweit	5 mins.
2. Workshop Overview	Chris Hoffman	5 mins.
3. Mercer Project Update	Eric Tweit	20 mins.
4. Design concepts	Darby Watson	20 mins.
• Overview		
• How they were developed		
5. Break		5 mins.
6. Design concepts “walk through”	All	45 mins.
• General comments		
• Pros and cons analysis		
• Suggest refinements and additions		
10. Report out	All	20 mins.



Appendix B – Facilitator Notes

Integrate with the Park Comments

- Integration with the park on Valley Street is critical
- Use pocket parks throughout the project to capture the park theme and make it interesting to walk around
- Pocket park development should begin between Mercer and Valley
- There should be signage on Mercer to direct people to the park
- Graphics/signage will have to be different on Valley and Mercer
- It's positive that Valley will become an extension of the park from an experiential and environmental perspective
- Pocket parks will make walking in the area more pleasurable, softening the area in a way that makes people want to be there
- Use the same or some version of the materials (benches, paving, lighting, etc.) used in the park on Valley (should be related if not exactly the same)
- Traffic on Valley will have to be slowed down (30 mph road) to make it an extension of the park
- Change of texture, or colors, should be used at intersections to make drivers slow down
- Incorporate Terry Street design guidelines, and consider eliminating the curb on Valley
- Could roundabouts be used to slow down traffic at intersections?
- The park and Valley Street should be designed as if they were one project

Reflect a sustainable grass roots community comments

- Brand the design with a sense of community
- Public transportation is a big part of the community: connect area to public transportation (nice bus stops and well-designed transit facilities)
- This theme flows through the other two themes and is not a stand alone theme
- Use sustainability theme as a way to get other groups and organizations to contribute to the design
- Utilize functional sculptures (water reuse piece, rain water harvesting)

Reflect a maritime and industrial history comments

- Expand maritime theme by including ancient mythology (sea serpents, deities, figures from the past that represent maritime theme)
- Figure out how to incorporate water into the design
- Use more water oriented elements
- Incorporate a walking trail that interprets (art, displays) and describes maritime history. Should be a transition from or extension of the park
- There is more of an industrial history in the area than is reflected in the theme as it is now presented
- Somehow highlight mist, fog, water

Other comments

- Still concerned about capacity on Mercer
- The three themes accurately reflect the character of the area
- Consider utility pole lighting that reduces light pollution (check out www.darksky.org for examples)
- Seams of pavement transitions on the streets need to be smooth to accommodate bikes safely (in general make sure textures work for bikes)
- Mercer is a gateway to downtown, not just to South Lake Union
- This is a thru-way, as well as a destination
- Don't need to entice people off Mercer into neighborhood streets, but make it easy to get on and off Mercer
- It would be a waste to put gateway artwork at I-5 off ramp – it is more important to have trees, inviting looking streets, and nice signage
- It is better to spend money on art and wayfinding within the neighborhood
- The design of the street, the streetscape, is what is important at the I-5 offramp
- The art could be in the design, the landscaping, etc.
- Artwork can help with wayfinding by creating recognizable cues (doesn't have to be explicit)
- Use functional elements as art (simple, efficient, functional, finesse)
- Consider using flags as signs

June 29 Open House Summary Report

Prepared for:

The Seattle Department of Transportation

Prepared by:

Norton-Arnold & Company
July 20, 2005

Introduction

The Mercer Corridor Project, led by the Seattle Department of Transportation (SDOT), is being conducted to determine transportation improvements along the Mercer Corridor from I-5 to Dexter Avenue North. The project's purpose is to improve local safety, access, and circulation for vehicles and pedestrians, accommodate economic growth and neighborhood livability within the South Lake Union urban center, and improve the connection from I-5 to and through South Lake Union.

The City of Seattle has identified a preliminary preferred alternative for the Mercer Corridor. As part of the city's efforts to ensure that the preferred alternative provides a balanced approach to accommodate all modes and is designed in a way that is sensitive to the City and neighborhood vision for South Lake Union, a public open house was held to provide information about the Two-way Mercer alternative and to listen to public ideas and concerns regarding how the alternative should "function, look, and feel."

Notification Process

The City informed the public about the open house through a number of methods, including:

- Mailing a project newsletter to approximately 4,600 addresses within the study area and to all individuals and organizations on the project database
- Promoting the open house on the Mercer Corridor Project website
- Advertising in the *Queen Anne News*
- Emailing invitations to approximately 100 individuals and organizations
- Providing information at Alaskan Way Viaduct public open houses
- Releasing a press advisory about the open house to local media

Open House

The open house was held on Wednesday, June 29 2005, at:

The South Lake Union Armory
860 Terry Avenue
Seattle, Washington

The open house was held from 5:00 – 7:30 p.m. Approximately 55 people attended the open house. In addition to SDOT and Consultant staff, WSDOT and FHWA representatives also attended as observers. The open house consisted of staffed displays, a presentation (held at 5:30 p.m.), and comment tables. Participants were able to talk one on one with project staff, view displays of the alternatives and other project information, and record their comments on provided comment forms. Participants were informed that they could submit oral and written comments at the meeting or submit written comments via email, mail, or fax. Some participants also provided comments and asked questions following the presentation.

Comment Summary

During the public open house, 7 written comment forms were submitted. In addition, 2 comments were written on sticky notes and posted on project display boards. One comment form was submitted via fax after the open house.

This summary outlines the common issues and themes identified in the submitted comments, as well as a list of some general ideas or recommendations provided in feedback to the alternatives that were presented at the open house. Copies of the public comments are provided in Appendix A of this report.

Bicycles

Comments about bicycles indicated support for integrating bicycles into the project's design throughout the corridor. Specific comments included:

- Include design elements, such as striping and colored lanes to improve awareness and guide bicyclists
- Fairview, south of Valley, is better for bike lanes than Ninth. Consider intersection design and mode interaction very carefully.

Pedestrians

Comments about pedestrians indicated support for a pedestrian-friendly Valley and a concern for how pedestrians would use other streets. Specific comments included:

- Make pedestrians needs the forefront of Valley's design
- A crosswalk is needed at Boren – people will want to cross there.

Freight

Comments about freight communicated the importance of the Mercer Corridor to freight mobility and the need to design the corridor to facilitate freight movement. Specific comments included:

- The area is critical to the connectivity of the Seattle/King County freight system
- Design streets to maintain truck turning capacity, specifically at Mercer and Westlake – need ability to make faster turns without stopping.

Traffic

Following the presentation, a few participants questioned the ability of the proposed Two-way Mercer to move all of the traffic onto I-5. To them, this is Mercer's primary function. Others supported the overall design and function of Mercer, noting that it must change to serve a new, growing neighborhood:

- How can making a one-way street into a two-way street help move more traffic onto I-5? This should be the focus for Mercer.

- We have an opportunity to create a grand gateway to this neighborhood, as well as downtown and other neighborhoods; It is not just about moving traffic through here.

Other comments

Attendees made a number of other comments about refining the alternative, including:

- The transition from Mercer to Roy should be done at Taylor or 6th Avenue because a transition at 5th Avenue would result in a “F” Level of Service.
- Close Broad Street and keep westbound traffic on Mercer Street
- Provide better connections to Westlake and Roy
- Keep the idea of environmental sustainability theme as a central part of the design

One participant asked what input the project team was looking for at the open house. The response was that the purpose of the meeting was to get comments on the overall design and function of the Two-way Mercer alternative, including the urban design concepts presented. However, it was also clarified that we will take all comments received under consideration throughout the environmental review. There were also questions about how a final decision would be made. The City and FHWA will make the decision on the preferred alternative based on technical studies, cost and public input.

Appendix A – Public Comments

- Hooray for more bike lanes, especially connecting S. Lake Union & Seattle Center. Any chance of creating/ extending them along Westlake on one side (or at least improving signs & lane markings) and Eastlake on the other?
- What are the green & pedestrian streets that go N &S from S. Lake Union? Any besides the streetcar streets (Westlake & Terry)?
- We're concerned about the lack of a cross walk at Boren. Don't you think people will try to cross there anyway.
- Bicycle Facilities - at Broad & Ninth Intersection (or any left turn from one "bike arterial" to another) Should consider paint to assist the merge/ weave, i.e., how to get from the right hand bike lane to the left hand turn lane? Much will depend on traffic speed on Valley. If it's going to be fast, this will be tricky.
- This is where some solutions such as a blue bike lane or dashed line might help guide bikes an increase awareness of motorists of the action
- Fairview south of Valley would be a very good candidate for additional bike lanes (better than Ninth in fact, based on need and location).Overall, want to encourage careful consideration of intersection design, where modes go, how they interact.
- Please maintain trucking turning capacity & remember this is a main oversize load route. The design at Mercer& Westlake must be designed for a faster turn built for moving and not stopping and no sharp turns. This is a vital freight mobility area and critical to the whole connectivity of our Seattle/ King County transportation system.
- If the Two-Way Mercer alternative is used, Broad St. should not dead end at 5th Ave N. Instead continue Broad St. to Harrison St., providing a semi E-W through street between the Cascade neighborhood & the waterfront
- The transition from Mercer to Roy St. should be done at Taylor or 6th Ave, and not 5th Ave. A transition at 5th Ave would cause the intersections of 5th and Mercer to be to LOS F.
- Interim transition to Broad St. looks fine.
- Streetcar needs to extend to U District immediately. It is sucking up valuable new service hours. Remember, if city busses are crowded, you know where to put the blame.
- Close Broad and keep westbound on Mercer.
- Better connections to Westlake & Roy.
- Pedestrian environment on Valley.
- Mitigate impacts on lower Q.A.
- Grade separation at key intersections.
- Good job (so far) of integration of design character consistent with SLU neighborhood plan lines- It looks like it belongs here.
- Good Job- so far so good!
- Think about what it take for you to live in this neighborhood
- Keep the idea of environmental issues of green ideas at the forefront. Pedestrian and bike friendly plus appropriately placed bike lock up stands/ racks.
- Build it now

- Put emphasis on moving the greatest volume of traffic at the greatest speed to and from I-5 and to areas around South Lake Union (Seattle center, Queen Anne, and the new museum sculpture park)

January 2007 Stakeholder Design Workshop Summary

Prepared for:

The Seattle Department of Transportation

Prepared by:

Norton-Arnold & Company

February 2, 2007

Introduction

The Mercer Corridor Project, led by the Seattle Department of Transportation (SDOT), is being conducted to determine transportation improvements along the Mercer Corridor from I-5 to Dexter Avenue. The project's purpose is to improve local safety, access, and circulation for vehicles and pedestrians, accommodate economic growth and neighborhood livability within the South Lake Union urban center, and improve the connection from I-5 to and through South Lake Union.

The City of Seattle has identified a preliminary preferred alternative for the Mercer Corridor. As part of the city's efforts to ensure that the preferred alternative provides a balanced approach to accommodate all modes and is designed in a way that is sensitive to the City and neighborhood vision for South Lake Union, four urban design workshops were convened to listen to stakeholder ideas and concerns regarding how the Two-way Mercer alternative should "function, look, and feel."

This report summarizes the results of the fourth urban design workshop, and includes input on general principles and seven preliminary design concepts for the Mercer Corridor Project. The purpose of the fourth workshop was to provide a project update and to confirm with participants if the current urban design concepts are appropriate for the final design of Mercer and Valley Streets.

Forty-two people, who represent the diverse range of interests within and outside the project area, were invited to attend. Twenty-four people attended the workshop.

Participants

The following is a list of the interest groups and business representatives who attended the workshop:

Cascade Neighborhood Council
Copiers Northwest
Port of Seattle
Queen Anne Chamber of Commerce
Queen Anne Community Council
Queen Anne Office Supply
Seattle Biomedical Research Institute
Seattle Center
Seattle Parks Foundation
South Lake Union Friends and Neighbors (SLUFAN)
Transportation Choices Coalition
University of Washington
Urban Mobility Group
Vulcan/Transpo

Workshop Format

The workshop was held on Monday, January 29, from 5:00 – 7:00 p.m. at REI at 222 Yale Avenue North. After a brief welcome, participants were introduced to the workshop purpose and objectives. Following that, a brief project update was presented. After the update, designers from LMN Architects gave a more detailed presentation on the draft design principles and concepts. Following the presentation, attendees were asked to give their input on the following questions:

- Are the principles missing anything?
- Do any of the concepts need to be changed?
- Are there elements of the concepts that you like or dislike?
- Are there principles or concepts that should be emphasized?

The workshop agenda is included in Appendix A of this report.

Input to Design Concepts

Meeting attendees were asked to consider the concepts and to provide their input on the following: what elements did you like best/least about the Central Core concept, what elements did you like best/least about the Great Gate concept, what elements did you like best/least about the Green Fingers/BIG Trees concept, what elements did you like best/least about the Wet Median concept, what elements did you like best/least about the Pervious Parking... Plus concept, what elements did you like best/least about the Night Light concept. The facilitator notes are provided in Appendix B of this report.

Establish a Central Core

In general, attendees agreed that this concept was appropriate for the Mercer Corridor and that the South Lake Union would benefit from being made more pedestrian-friendly. They believed that this concept should be incorporated into the area's design, and said that:

- Designs need to be careful to only focus on one small area.
- The addition of green belts and flowers would soften the visual landscape of Mercer.
- The visual transition from Mercer, to Valley, to Lake Union Park should be gradual.

Add a Great Gate

Attendees believed that this concept was appropriate for the Mercer Corridor and thought that this idea should be incorporated into future designs. Ideas for incorporating a Great Gate into the project's design included:

- Focus attention on one area rather than other gateways (i.e. West, North, and South).
- Need to establish a North – South destination perhaps between South Lake Union and the surrounding neighborhood.
- Make a beautiful entry of either retail or a sculpture like the SAM installation.
- Gate should be large in scale or incorporate elements of different scales.
- Element should speak to heritage and history of the area.
 - Example of great ship at Vancouver Ship Museum.
 - Celebrate history of local laundries via cooling stations, water fixtures, wash boards, hanging laundry as banners and/or signage).
 - Consider reusing construction/deconstruction materials in future design.

Incorporate Green Fingers / BIG Trees

Attendees believed that this concept was appropriate for the Mercer Corridor and thought that with special attention to parking, the concept could be incorporated into the design. However, they did not believe this was a stand alone design concept. They said it should be part of the fabric of the overall design, and that parking should be built into the other concepts' implementation. Ideas for implementing this concept included:

- Make sure planting plans are consistent with nearby Lake Union Park.
- Important to plant trees that do not drop leaves at the same time.
- Mercer needs a big, bold gesture like big trees.
- Trees can help to distract from Space Needle and make Mercer a destination in its own right.
- Plant the right amount of trees and space them appropriately from East to West.

Include a Wet Median

Attendees believed that this concept was appropriate for the Mercer Corridor and thought that this concept could be incorporated into future designs. However there were concerns the median would present a barrier to trucks, harbor mosquitoes, or be a maintenance issue. Ideas for successfully incorporating a Wet Median into the project's design included:

- Important to have the median and plants step back from the street in order to not blockade truck movement.
- Median should be at least 12-18 inches tall to act as a car barrier.
- Only incorporate medians into high use sidewalks.
- Make sure median and planting designs are innovative and sustainable.
- Consider adding a see through water 'holding tank' with solar powered lighting to create a pause point.

Consider using Pervious Parking... Plus

In general, attendees did not see this concept as appropriate or necessary for the Mercer Corridor. They believed that street parking should be incorporated into the area's design, and said that:

- There needs to be bike lanes on Valley Street.
- It's important not block Mercer with parking if you want it to be a Corridor.
- Limiting street parking on Mercer to specific non-commute hours could be effective.
- It's a great idea to delineate parking with different paving treatments so that parking spaces are more like the sidewalk and less like the roadway.
- Pervious pavement is great for the health of tree roots so this concept would integrate well with Green Fingers/BIG Trees.

Night Light

Attendees believed that this concept was well-suited for the Mercer Corridor and thought that this idea should be incorporated into future designs. Ideas for adding Night Light into the project's design included:

- Best to place lights 12-14 feet above sidewalks.
- Chandeliers are a good idea.
- Add spacing between big trees and big lights.
- Do not over light features.
- Low lighting helps to define scale.
- Opportunity for fun and artistic approach.
- Keep lighting consistent with Lake Union Park lighting.

Animated Edges

Attendees believed that this concept was appropriate for the Mercer Corridor and thought that it would integrate well with the other design concepts. They said this concept should be part of the fabric of the overall design, and that promoting mixed-use development and multi-modal transit should be built into the other concepts' implementation. Ideas for implementing this concept included:

- Need to ensure retail will stay and thrive if established (i.e. provide parking, amenities, foot traffic).
- Install overheads or awnings that are carefully designed (i.e. not like the Eastlake Physicians' Building).
- Promote multi-modal transit to reduce parking need and create vibrant, pedestrian-friendly atmosphere.
- Use a green textured surface for Valley Street or have trees and green space expand from Lake Union Park.
- Mercer could be made elegant with trees, paving, and lighting to help retail work.

Other comments

Individual attendees made a number of other comments about the project's initial concepts. The majority of these comments focused on parking, traffic concerns, and interim construction during the Viaduct replacement project and Lowered Aurora project. Several people wanted to address how the interim phase would be incorporated into the

design concepts. Some thought that more emphasis should be put into creating a pedestrian-friendly streetscape with street trees, inviting streetscapes, and good signage respecting the neighborhood's gritty heritage rather than in importing something new and futuristic. Others expressed these concerns:

- Mercer Corridor should incorporate eight lanes of traffic instead of six lanes as traffic mitigation during Viaduct replacement construction.
 - One attendee thought that three westbound lanes could be sufficient and five eastbound would be ideal.
- Need to phase in trees during construction.
- Design work should be done addressing how to make the interim phase look better.
- Concern about how medians can accommodate vehicular left turns.
- Concern about how to get freight in and out of Mercer Corridor during times of high traffic volume.
- Lowered Aurora relieves pressure but the overall impact is unknown
 - Need to plan for worst case scenario.
- Need to prioritize pedestrian-friendly development over traffic throughput and capacity to celebrate this new mixed-use neighborhood.

Appendix A – Workshop Agenda

mercercorridorproject

“How should the Mercer Corridor look and feel?”

Urban Design Workshop

REI

Monday, January 29, 5:00 – 7:00 p.m.

Agenda

Description: A workshop to present draft urban design principles and concepts for the preferred alternative that address previous stakeholder input and to continue the design process for the preferred alternative.

Purpose: To provide, discuss, and evaluate draft urban design principles and concepts for the preferred alternative in order to ultimately develop a design that is effective and fits into the South Lake Union neighborhood.

<u>Agenda Topic</u>	<u>Presenter(s)</u>	<u>Time</u>
1. Welcome & Introductions	Chris Hoffman & Eric Tweit	5:00 – 5:15 p.m.
2. Workshop Overview	Chris Hoffman	5:15 – 5:20 p.m.
3. Mercer Project Update	Eric Tweit	5:20 – 5:35 p.m.
4. Urban Design Principles & Concepts <ul style="list-style-type: none">• Overview of principles• Implications of applying the principles• Preliminary design concepts• The design process and schedule	Mark Hinshaw, Mike Kimelberg, & Sarah Durkee	5:35 – 6:00 p.m.
5. Break		6:00 – 6:15 p.m.
6. Discussion of Design Principles & Concepts <ul style="list-style-type: none">• Are the principles missing anything?• Does anything need to be changed?• Are there elements of the concepts that you like or dislike?• Are there principles or concepts that should be emphasized?	All	6:15 – 6:55 p.m.
7. Next Steps	Eric Tweit	6:55 – 7:00 p.m.



Appendix B – Facilitator Notes

Central Core

- Great focus on establishing a people-friendly core area.
- Need to be careful to only focus on one small area.
- Consider widening lanes near medians and narrowing lanes near sidewalks to provide a safer bicycle experience and a faster vehicular route.
- Consider placing crosswalks at the center of the block to take traffic pressure off of street corners and intersections.
- Approve of addition of green belts and flowers to soften the visual landscape on Mercer.
- Make the transition from Mercer, to Valley, to Lake Union Park gradual.

Green Fingers / BIG Trees

- Concerns about root damage and soil compaction near tree trunks.
- “Green” is great.
- Consider planting trees on side streets instead of Mercer since speeds are slower and car volume is less.
- Make sure planting plans are consistent with Lake Union Park.
- Important to plant trees that do not drop leaves at the same time.
 - Falling leaves can cause flooding.
 - Leaves are hard to clean up.
 - Wet leaves make roads and bike lanes slippery.
- Mercer needs a big, bold gesture like big trees.
 - Not all elements have to be big.
 - Adjust scale upon arrival at the sidewalk.
 - Trees help to distract from Space Needle and make Mercer a destination in its own right.
 - Emphasize transitions from I-5 to Mercer and Mercer towards Lowered Aurora.
 - Careful to plant the right amount of trees and to space them appropriately from East to West.
 - The concept successfully delineates between the areas for pedestrians and the area for cars.

Pervious Parking...Plus

- Importance of having bike lanes on Valley Street.
- Road width concerns especially for bikes and trucks.
- SDOT aims to narrow all lanes to ensure safe passage for all.
- Do not block Mercer with parking if you want it to be a Corridor.
- Consider placing parking on side streets rather than on Mercer.
- Consider limiting street parking on Mercer to specific non-commute hours.

- Paving elements are too gray and brown.
 - Need to delineate parking through paving treatment so that parking spaces are more like the sidewalk and less like the roadway.
- Concept focuses heavily on cars and parking.
- Pervious pavement is great for the health of tree roots.

Night Light

- Lights that are too high are not good for pedestrians.
 - Best to place lights 12-14 feet above sidewalks.
 - Don't place street lights in pedestrians' view.
 - Chandeliers are a good idea.
- Big trees and big lights at the same level do not work.
 - More effective to space them out.
 - Do not over light features.
- Low lighting helps to define scale.
 - Important to consider building design.
- Concept well-suited for urban environment.
 - Opportunity for fun and artistic approach.
 - Important to keep consistent with Lake Union Park lighting.
 - Potential for big impact.
- Add way finding on the side streets
- Concept too cost prohibitive?

Wet Median

- Important to tip back the median and plants in order to not present a barrier to trucks.
- General approval of this idea since it encourages keeping people in the Corridor and should help slow traffic.
- Concept seems too fussy and high maintenance.
- Doubt if people will really see it.
- Seems more appropriate for a high use sidewalk.
- Make sure median and planting design are innovative and sustainable.
- The median could be difficult to maintain.
 - Need to consider maintenance crew safety.
- Design, planting, and maintenance could be cost prohibitive.
- Potential to become mosquito breeding ground if pesticides are banned.
- Consider the idea of a see through water 'holding tank' with solar powered lighting for evening.
 - Possible destination or pause point.
- Median shouldn't be too wide but should be at least 12-18 inches tall to act as a car barrier.

Great Gate

- Not convinced it helps people realize they are no longer on I-5.
- Want people to slow down.
- Determine the entry and departure points for Mercer Corridor.
- Make a beautiful entry of either retail or a sculpture like the SAM installation.
- Focus attention on one area rather than other gateways (i.e. West, North, and South)
- Make sure changes to highway ramps comply with WSDOT's guidelines.
- Establish a destination near the freeway, otherwise the surface streets become the destination (i.e. sculpture park, pocket park).
- By being a transit hub, Mercer in itself is a destination.
- The gate could be the destination point.
 - Mercer is an East – West destination.
 - Need to establish a North – South destination perhaps between South Lake Union and the surrounding neighborhood.
 - North – South destination is currently absent.
 - Importance of neighborhood input.
- Gate should be large in scale or incorporate elements of different scales.
- Gate element needs to say a lot including “Welcome to Seattle and “Welcome to South Lake Union.”
- Element should speak to heritage and history of the area.
 - Example of great ship at Vancouver Ship Museum.
 - Celebrate history of local laundries via cooling stations, water fixtures, wash boards, hanging laundry as banners and/or signage).
 - Consider reusing construction/deconstruction materials in future design.

Animated Edges

- Decide if Mercer should promote unique qualities or if Mercer should integrate into the neighborhood.
- Need to reflect gritty character and not be too futuristic.
- Overheads or awnings need to be carefully designed (i.e. not like the Eastlake Physicians' Building).
 - Attention to choice of materials.
 - Attention to dimensions and scale.
- Need to ensure retail will stay and thrive if established (i.e. provide parking, amenities, foot traffic).
- Promote multi-modal transit to reduce parking need and create vibrant, pedestrian-friendly atmosphere.
- Make South Lake Union distinct.
- The concept integrates well into the neighborhood.
- Use a green textured surface for Valley Street or have trees and green space expand from Lake Union Park.
- Good concept that successfully highlights Lake Union Park.

- Lowered Aurora will help reduce East – West traffic on Mercer.
 - Mercer could be made elegant with trees, paving, and lighting if retail works.
- Corner bulbs are too large.
 - Take away parking.
 - Use lane widths needed for thru-traffic and turns.
 - If widening sidewalks is desired, add rule to building code.

Appendix G
Section 4(f) Evaluation Reference Material

Correspondence with Local Officials with Jurisdiction



Department of Neighborhoods

Connecting people, communities, and government

OUC 394/05

Eric Tweit
SDOT Project Manager
700 5th Avenue, Suite 3900
P.O. Box 34996
Seattle, WA 98124-4996

Dear Mr. Tweit:

In response to your letter of August 11, 2005, I concur with the earlier findings of the State Historic Preservation Office that both 601 Westlake Avenue North and 609 Westlake Avenue North are eligible for listing in the National Register of Historic Places. It is also my professional judgment that the buildings appear to be eligible as City of Seattle landmark properties pursuant to SMC 25.12. Both buildings are significant as they were built and continue to be operated as an automobile dealership as well as for the use of terra cotta on the building.

Please contact me at karen.gordon@seattle.gov or at 206-684-0381 if you have any questions about this determination.

Sincerely,

A handwritten signature in black ink that reads "Karen Gordon".

Karen Gordon
City Historic Preservation Officer



**National Register of Historic Places Registration Form for
William O. McKay Buildings**

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

=====

1. Name of Property

=====

historic name William O. McKay Ford-Lincoln Automobile Dealership Buildings

other names/site number Pacific Lincoln-Mercury-Nissan Dealership

=====

2. Location

=====

street & number 601 & 609-615 Westlake Avenue North, & 600 Ninth Avenue North

not for publication N/A

city or town Seattle vicinity _____

state Washington code WA county King code 033

zip code 98109

=====

3. State/Federal Agency Certification

=====

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this _____ nomination _____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property _____ meets _____ does not meet the National Register Criteria. I recommend that this property be considered significant _____ nationally _____ statewide _____ locally. (____ See continuation sheet for additional comments.)

Signature of certifying official

Date

State or Federal Agency or Tribal government

In my opinion, the property _____ meets _____ does not meet the National Register criteria. (____ See continuation sheet for additional comments.)

USDI/NPS NRHP Registration Form

William O. McKay Ford-Lincoln Automobile Dealership Buildings

King County, WA

(Page 2)

Signature of commenting official/Title

Date

State or Federal agency and bureau

=====
4. National Park Service Certification
=====

I, hereby certify that this property is:

- entered in the National Register _____
- See continuation sheet. _____
- determined eligible for the National Register _____
- See continuation sheet. _____
- determined not eligible for the National Register _____
- removed from the National Register _____
- other (explain): _____

Signature of Keeper Date
of Action

=====
5. Classification
=====

Ownership of Property (Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property (Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property

Contributing	Noncontributing
<u> 2 </u>	<u> 2 </u> buildings
_____	_____ sites
_____	_____ structures
_____	_____ objects
<u> 2 </u>	<u> 2 </u> Total

Number of contributing resources previously listed in the National Register 0

Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.)

 N/A

=====
6. Function or Use
=====

Historic Functions (Enter categories from instructions)

Cat: Commerce/Trade Sub: Specialty Store

Current Functions (Enter categories from instructions)

Cat: Commerce/Trade Sub: Specialty Store

=====
7. Description
=====

Architectural Classification (Enter categories from instructions)

Beaux Arts
Commercial Style

Materials (Enter categories from instructions)

foundation Concrete
roof Other
walls Concrete, brick, terra cotta
other _____

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

=====
8. Statement of Significance
=====

Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B Property is associated with the lives of persons significant in our past.
- C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack

individual distinction.

D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations (Mark "X" in all the boxes that apply.)

- A owned by a religious institution or used for religious purposes.
- B removed from its original location.
- C a birthplace or a grave.
- D a cemetery.
- E a reconstructed building, object, or structure.
- F a commemorative property.
- G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance (Enter categories from instructions)

Architecture
Commerce

Period of Significance 1913-1956

Significant Dates 1922
1925

Significant Person (Complete if Criterion B is marked above)
N/A

Cultural Affiliation N/A

Architect/Builder Warren H. Milner & Company
Harlan Thomas and Clyde Grainger

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

=====
 9. Major Bibliographical References
 =====
 (Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)
 preliminary determination of individual listing (36 CFR 67) has been requested.
 previously listed in the National Register
 previously determined eligible by the National Register
 designated a National Historic Landmark
 recorded by Historic American Buildings Survey # _____
 recorded by Historic American Engineering Record # _____

Primary Location of Additional Data
 State Historic Preservation Office
 Other State agency
 Federal agency
 Local government
 University
 Other

Name of repository: Seattle Public Library

=====
10. Geographical Data
=====

Acreage of Property 1.68 acres

UTM References (Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing	Zone	Easting	Northing
1	<u>10</u>	<u>549673</u>	<u>5274831</u>	3	_____	_____
2	___	_____	_____	4	_____	_____
	___	See continuation sheet.				

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)

Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)

=====
11. Form Prepared By
=====

name/title Lori Durio/Architectural Historian

organization CH2M HILL date June 2006

street & number 1515 Poydras Street, Suite 2110 telephone 504.593.9421

city or town New Orleans state LA zip code 70119

=====
Additional Documentation
=====

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.
A sketch map for historic districts and properties having large acreage
or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items (Check with the SHPO or FPO for any additional items)

=====
Property Owner
=====

(Complete this item at the request of the SHPO or FPO.)

name City Investors XX LLC

street & number 505 5th Avenue S., Ste. #900 telephone _____

city or town Seattle state WA zip code 98104

=====
Paperwork Reduction Act Statement: This information is being collected for
applications to the National Register of Historic Places to nominate properties
for listing or determine eligibility for listing, to list properties, and to
amend existing listings. Response to this request is required to obtain a
benefit in accordance with the National Historic Preservation Act, as amended
(16 U.S.C. 470 et seq.). A federal agency may not conduct or sponsor, and a
person is not required to respond to a collection of information unless it
displays a valid OMB control number.

Estimated Burden Statement: Public reporting burden for this form is estimated
to range from approximately 18 hours to 36 hours depending on several factors
including, but not limited to, how much documentation may already exist on the
type of property being nominated and whether the property is being nominated as
part of a Multiple Property Documentation Form. In most cases, it is estimated
to average 36 hours per response including the time for reviewing instructions,
gathering and maintaining data, and completing and reviewing the form to meet
minimum National Register documentation requirements. Direct comments regarding
this burden estimate or any aspect of this form to the Chief, Administrative
Services Division, National Park Service, 1849 C St., NW, Washington, DC 20240.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section 7 Page 1
William O. McKay Ford-Lincoln Automobile Dealership Buildings
name of property
King County, WA
county and State

=====
Description

Originally the William O. McKay Ford-Lincoln Automobile and Fordson Tractor Dealership, this site contains four masonry buildings: the two primary, showroom buildings are the original two-story building at 609-15 Westlake Avenue North, known as the Ford McKay building, and the one story building on the corner at 601 Westlake Avenue North, known as the Pacific McKay building. There is also a 1945 garage at 600 Ninth Avenue North and a 1946 garage on Westlake, just north of the main buildings, but these two later buildings are not considered eligible for the National Register.

The Ford McKay Building (1922)

Structure and Facades

This two-story building is located mid-block, its primary facade facing east onto Westlake Avenue North. It is a conventional, heavy timber structure on a concrete foundation, with cast-in-place concrete walls and a flat roof with parapet. The Ford McKay Building appears to sit on spread footings. The footprint is 108' by 120', with an area of 12,960 square feet. According to current Tax Assessor records, the building is 39,162 gross square feet including the basement and two upper floors, with a net square footage of 26,108. The overall height of the building reaches 34' in the center section of the east facade including parapets and rises to 39'-3" at the top of the gable shapes.

The building's primary east facade is divided into six large bays, with each of the two end bays accented by a gable-shaped parapet. At the first story, each bay has a glazed storefront, and all but the southernmost storefront have a transom with five square windows. The southernmost storefront is newer and is an aluminum assembly with a pair of glazed entry doors. The main entry is recessed into the third bay from the north. Originally it featured a wood-framed glazed door with transom; presently it is an aluminum assembly. Large wall openings at the second story of each bay are glazed with plate glass. They were originally divided light, steel-sash industrial windows with operable six-light center sections. The wall surface is clad with white terra cotta, which has been painted a light gray color in some areas. The terra cotta features decorative details such as cartouches, egg and dart courses, and elaborate foliate patterns. (BOLA 2006) In the center of the building, the parapet wall holds the original signage, which consists of the large central "Ford" in script lettering, with the printed "Lincoln" on one side and "Fordson" on the other.

Storefront window openings are original, but some of the original plate glass windows have been changed and the transom windows modified. Local Tax Assessor's records cite the original storefronts as copper sash with plate glass. The southernmost bay originally contained a vehicle entrance at grade, accessed through large doors; this was subsequently modified and the doors replaced with another display window. (BOLA 2006)

The Ford McKay Building is abutted by its neighbors on both the south (by the Pacific McKay Building) and the north (by a garage) sides. Only the upper portions of these exterior concrete side walls are visible. On the north side, a large opening has been cut into the wall at the second story, to provide vehicle access between the second floor of the Ford McKay Building and the roof of the garage, which is used for parking. (BOLA 2006)

The west facade of the building is board-formed concrete and faces the vacated alley. Wall openings at the second story have been infilled with concrete block, except at the southernmost bay, where a steel-sash industrial window remains. At alley level, a large entry to an auto access ramp to the second floor parking area is located at the northern end of the west facade. What appear to have been large openings for vehicle access have either been infilled or replaced with window assemblies and person doors. A metal roll-up door is located near the southern end of the facade. (BOLA 2006)

Interior and Plan Elements

The Ford McKay Building was organized from east to west roughly as follows: showroom, offices, stockroom, and service area. The original showroom was an irregular volume, occupying five bays of the eastern portion of the building. Along with Ford automobiles, Fordson tractors were showcased there. The south wall of the showroom angled to the northwest to accommodate a vehicle entry through the southernmost bay, which provided access to the service area in the western portion of the building. The showroom featured a long, partially open, parts counter along a section of the west wall. Offices were located in the northwestern portion of the showroom, and staff and service spaces were behind partitions. Additional spaces at a balcony level included a ladies' lounge and ladies' bathroom.

Presently the front (east) 32' of the building depth serves as a showroom space. The south bay that had been a driveway was altered and refinished as offices in 1957; later these partitions were removed and the space became part of the showroom. The current showroom space has been divided into two rooms, the north with four bays and the south with two bays. Non-original openings in the north and south end walls allow access into the showrooms of the two adjacent buildings, Garage No. 2 on the north and the Pacific McKay Building on the south. The balcony was significantly enlarged in 1957, but the former ladies' lounge in the second bay from the north was retained with its original leaded glass windows set into a wide, low arch.

Walls and finishes in the showroom appear to have been modified significantly from the original. Reported changes include the addition of false-framed beams and brackets, installation of hardwood flooring and carpets, and infill and

re-partitioning along the west wall. New leaded glass panels at the upper portion of the walls allow natural light to enter the office spaces.

The second floor of the building is an open, unfinished space used for parking. It is accessed by a ramp at the north end of the west facade. A large vehicle opening in the north wall at the second floor provides access to parking on the rooftop of the adjacent garage. Originally there were 12 skylights at this level; they have been removed and the original openings infilled. A second ramp that provided vehicle access from the alley to the basement has been removed.

The basement of the Ford McKay Building originally housed just the boiler and building service equipment. Today it is partially partitioned and used for parts storage. Floor heights are noted in tax records as 12' at the basement, 20' at the first floor, and 14' at the second floor. (BOLA 2006)

Changes to the Ford McKay Building

In addition to those already noted, the following changes have been made to the building according to permit and drawing records from DPD:

<u>Date</u>	<u>Description</u>
1948	Showroom for the English Ford William O. McKay Company
1957	Alter existing building per plan
1957	Install 8 auto sprinkler heads
1957	Install new duct work
1963	Erect & maintain electric sign
1964	Erect & maintain electric sign
1989	Alter existing building
2001	Emergency earthquake repair - repair earthquake damaged parapets
2004	Seismic upgrades (BOLA 2006)

Current Conditions

Settlement of the Ford McKay Building has occurred and there is evidence of recent bracing, doubling of roof framing elements, and the addition of steel plates attached at the inside face of the upper southeast corner to reinforce structural connections.

The building has been reinforced also to repair damage from the Nisqually earthquake. Cracks remain at the back of the east facade, with additional horizontal cracking at the roof structure line. Parapet braces have been added at the north and south parapets, and sheet metal coping has been installed over the terra cotta cap. The original 12 skylights have all been infilled and covered with built-up roofing.

Original storefronts have been altered somewhat over time, with the removal of cross members in the transom window sashes, and the subdivision of two large plate glass storefront bays. Most significantly, the original vehicle

entry in the southernmost bay has been replaced with an unsympathetic storefront and entry of aluminum frame windows and door. At the second story, the original industrial steel sash, with divided lights, were replaced with large, aluminum-framed windows.

Most of the terra cotta cladding has been painted a very light gray, although the original lighter color glaze can be seen on the jamb edge of some bays. As with the Pacific McKay Building, many of the terra cotta field units in the sign bands have holes from previous sign anchorage. It appears also that light fixtures were removed from the facade, and newer signage has been added. (BOLA 2006)

The Pacific McKay Building (1925)

Structure and Facades

The one-story building is located at the southwest corner of the block, on the northwest corner of the intersection of Westlake Avenue North and Mercer Street, its primary facades facing east and south. Records suggest that an earlier brick building on the site was incorporated into the Pacific McKay Building, forming part of the service portion west of the showroom. The Pacific McKay Building is 60' by 108', and its facades have an average height of 25'-3", from grade to top of parapet. The primary facades include a 2' tall level parapet, which is stepped over the center entry on the east facade and projects upward another 4'. There is no basement. According to the current King County Tax Assessor Property Characteristics Report, the building measures 6,260 gross square feet.

The building structure is essentially a tall concrete box with a small mezzanine and flat roof. The roof is constructed of structural steel spanning east to west. Wood joists form the roof and mezzanine structures. The floor at grade is a slab. Exterior south and east walls appear to be reinforced concrete. Brick masonry is the backup structure for the terra cotta clad parapet on the 1925 portion. The original foundation plan indicates that the structure was founded on spread footings. However, as can be seen on the site, significant settlement has occurred, particularly towards the south and east along the street elevations. This condition suggests pilings. (BOLA 2006)

The primary east facade and the eastern 34' of the south facade enclose the showroom space and feature a large expanse of plate glass set in ornately detailed terra cotta cladding and decorative elements. (BOLA 2006) This building is much more ornate than the Ford McKay building next door. It is clad in a cream terra cotta with blue and gold highlights. Instead of the simple flat brick cladding used next door, this building is clad mostly in elaborate ornament, with a quilted pattern studded with rosettes on blue diamonds for the parapet wall. The center entry is set in a tall arched opening. A pair of modern doors are below the carved wooden lintel, and above it are leaded glass windows featuring a stained glass cartouche in blue and gold. In white lettering on the blue background it reads, "After we sell, we serve," which was the McKay Company motto.

The pilasters on either side of the door are covered in blue and white terra cotta in a grecian urn theme, terminating in ornate capitals surmounted by griffins holding shields emblazoned with the gold letter "M" for McKay. This same pattern is repeated on both sides of the large windows that flank the entrance. Again, the original windows have been replaced with modern windows,

but the openings remain intact. Over the door and windows, a band of heavy molding of acanthus leaves, with a blue background and terra cotta-colored rosettes, has a blue underside and sits above scrolled brackets, egg and dart molding, and dentil molding. Above the pilasters on the ends of the building are three balusters rendered in terra cotta, supporting a winged tire, a classic symbol on early automobile dealerships. The tire is white with blue highlights and the wings are gold. On either side of the arch above the entry are the same three balusters, but here they support a tan-colored flame. Between these flames are modern but tasteful lettering that spells out "Pacific." The building has a stepped parapet with molded terra cotta coping. The center of this parapet is highlighted with a large oval cartouche containing a white portrait profile of Abraham Lincoln in a tan-colored ground. Above the entrance doors is a delicately carved wood detail that appears to read "607" rather than 601 (Westlake Avenue North). This element reportedly was carved in the Philippines and then shipped to Seattle. (BOLA 2006)

The western portion of the Pacific McKay Building, which contains offices and repair shop, was originally distinguished on the exterior south facade by its lower overall height and brick finish. An original vehicle entry on this wall, accessed from Mercer Street, was fitted with a pair of wood-framed doors located just west of the office portion. Records suggest that this entry was eliminated in 1986. West of the vehicle entry, tall and narrow arched-head windows ran along the south facade. These have been replaced with rectangular plate-glass windows in new, larger openings. (BOLA 2006)

A 1986 alteration, designed by architects Bittman Vammen Taylor, covered the western brick portion of the south facade with stucco and increased the apparent height of the building by the addition of raised parapets. The west (alley) facade and the western portion of the building's south facade are clad with stucco or an exterior insulation and finish system (EIFS). (BOLA 2006)

Six original skylight wells remain at the roof of the back section. However, they have been either covered or converted into much smaller units atop the original openings. The rooftop was fitted with a steel frame in ca. 1959, when a neon sign was added to the building. The sign as since been removed, although the frame remains, exposed above the roof. (Reportedly, the sign was donated to the Museum of History and Industry by the former building owner.) (BOLA 2006)

Plan and Interior Features

The building presently contains a showroom on the east, a bank of offices and a concrete vault, and a service center on the west. A 12'-8" deep by 57'-9" wide mezzanine is located along and above the west side of the showroom. The highly visible showroom of the Pacific McKay Building is a particularly elaborate interior space, with a hung, barrel-vault-shaped ceiling, heavy crown molding, ionic pilasters, patterned terrazzo and marble flooring, and a double stairway in front of the west wall. This stair, embellished with a fountain, leads to a small landing at the mezzanine level and from there to two flanking offices that have windows overlooking the showroom. These leaded glass, casement windows are original, but interior office finishes have been changed.

The showroom is a single volume with a 34' by 58' plan and average height of 20'. It presently accommodates four

vehicles on display, although historic newspaper articles cite up to nine display automobiles. The space, as it was originally designed and in its current condition is a formal one. Engaged columns and pilasters support a frieze band, giving the impression of the room as a large courtyard. This feeling is advanced by the mezzanine office windows, which have planter boxes and open out to the showroom. The interior wall surfaces are noted on drawings as "Craftex," an asbestos-containing plaster. The showroom is fitted with an ornate chandelier, which is not original to the building. (It was installed there on March 17, 1989 by the previous building owner, and is not owned by the current property owner. The chandelier has been on loan to current owner, but at this time the owner of the chandelier plans to remove it in the near future. The fixture is reported to have been one of six installed in Seattle's historic Orpheum Theater, which was demolished ca. 1969.)

Below the mezzanine and west of the showroom are three office spaces, each with original wood-framed entry doors surrounded by glazed sidelights and transom. Configuration of the offices, vault, and passageway appears original, though interior office finishes may have been changed. A fourth opening leads west into service spaces of the dealership. A non-original opening in the north wall provides access into the showroom of the Ford McKay Building. Originally, the north wall featured a large mirror.

Other spaces in the Pacific McKay Building, west of the showroom and mezzanine, have been modified from their 1925 utilitarian character as a service garage. (This portion of the building may predate the 1925 construction.) The back service space includes offices and file storage, which are accessed either by a hallway through the bank of offices west of the showroom, or through the entry door on the west facade. (BOLA 2006)

Changes to the Pacific McKay Building

In addition to those already noted, the following changes have been made to the building according to permit and drawing records from DPD:

<u>Date</u>	<u>Description</u>
1986	Remodel storefront and interior per plans (western portion of building) (BOLA 2006)

Current Conditions

The Pacific McKay Building has three original roof levels with intermediate parapets, corresponding with the service center, office bank, and showrooms below. (These varied levels are visible from above, but they have been obscured on the exterior by the raised parapets along the south and west facades, which date from the 1989 remodel.) The roof is a built-up assembly, with felt paper wrapping up to the underside of the terra cotta coping at the parapet. At several locations, the felt has pulled away, allowing moisture infiltration. The parapet structure is composed of

two wythes of brick, sitting on the concrete frame below. The terra cotta coping is in relatively good condition, with some stains and biological growth in the sky-facing joints. Additionally, the "shelf" of the intermediate cornice band supports seedlings and ferns.

The storefront system and primary terra cotta-clad facades of the Pacific McKay Building appear to be settling as a unit, as evidenced by cracking in the wood bulkhead shelf in the south storefront. There is a large crack in one plate glass window on the south. The exterior granite bulkhead appears to have been coated, and the coating has discolored and made a hazy uneven appearance on the granite.

The Pacific McKay Building has suffered visibly and has structural problems due to settlement at the southeast corner, which has resulted in a differential height along the east primary facade of 8" to 9". (BOLA 2006)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section 8 Page 6
William O. McKay Ford-Lincoln Automobile Dealership Buildings
name of property
King County, WA
county and State

=====
Statement of Significance

The original Ford McKay showroom building was constructed in 1922 as a Ford-Lincoln auto sales and garage building, as well as a Fordson tractor dealership. It was designed by Warren H. Milner and Company. The more ornate Pacific McKay building on the corner was built three years later in 1925 as William O. McKay's sales and service building for Lincolns, and designed by Harlan Thomas (1870-1953) and Clyde Grainger (1887-1958). These two William O. McKay showroom (McKay) buildings at 601-615 Westlake Avenue North are eligible for the NRHP under criterion C, as resources "that embody the distinctive characteristics of a type, period, or method of construction...or that possess high artistic values..." (National Register Bulletin 15). They are also eligible under Criterion A for their association with "events that have made a significant contribution to the broad patterns of our history" (National Register Bulletin 15) due to their connection to the early automotive age in Seattle. The buildings retain a high degree of integrity and present a clear picture of an early automotive dealership. They are both noteworthy for their distinctive terra cotta cladding, with the Pacific McKay being particularly outstanding. They are excellent examples of the commercial terra cotta movement, popular in early 20th century Seattle. The buildings are located in the South Lake Union neighborhood of Seattle, known as an area important in early automotive culture, beginning in the 1920s. The McKay buildings continue to serve as an automotive dealership at the present time, still fulfilling their original use. They are one of the few remaining vestiges of this culture in the area, which is currently experiencing very strong redevelopment pressures.

Historical Development of the South Lake Union Area

In 1853 the Washington Territory was formed from a piece of the Oregon Territory, and that same year, David Denny established the first Donation Land Claim (DLC) on the south shore of Lake Union, reaching from today's Mercer Street to Denny Way (SLUFAN, 2003). Thomas Mercer, another investor in the area, suggested renaming "Little Lake" in 1854 and calling it "Lake Union," as it is known today (Fiset, 2001). At the time, the South Lake Union area was a considerable distance from town and was used mainly for logging.

In 1864, David and Louisa Denny gave a portion of their South Lake Union DLC to the City of Seattle for use as a cemetery, because it was so far removed from most residential development in the area. Seattle was officially incorporated in 1869, but the boundaries stopped short of including the Denny DLC at Lake Union. The area around Lake Union began to develop an industrial nature in the

1860s with the discovery of coal near Issaquah on the east side of Lake Washington, which was barged across Lake Union, then transferred to a narrow gauge railroad (laid in 1872) from the foot of Westlake Avenue North to the coal docks downtown (Fiset, 2001). In 1882, the first sawmill at Lake Union, founded as the Lake Union Lumber and Manufacturing Company, was constructed. It was purchased by David Denny in 1884, who renamed it the Western Mill; it became the largest sawmill on Lake Union (Boyle Wagoner Architects, 1998). It was followed by other mills, all dumping sawdust into the lake until the small bay at the southwest corner of the lake was covered. Thus the lake, originally one third larger than its current size, lost its bay that once extended inland to Mercer Street (SLUFAN, 2003). This is now the location of the McKay buildings.

But the area also had a residential component, starting with its earliest development of small farms and homesteads. In 1878, there were about 50 residences in the vicinity of what is now Westlake Avenue North and Roy Street (Bush, 1992). This was mainly a blue collar residential area, supported by the job opportunities in the industries around the lake.

By 1883, Seattle had grown considerably, with over 3,000 citizens making it the second largest municipality in the Washington Territory (Dorpat, n.d.). The City annexed much of the Denny land all the way north to McGraw/Galer Street. The Dennys prepared a new deed, this time dedicating the majority of the land that had been the cemetery as the first city park for Seattle. Most of the 221 bodies were disinterred and relocated, and the park was officially recognized by the City in 1884 (Sherwood, 1974). Now known as Denny Park, it is bounded by the present day Denny Way, Dexter Avenue North, John Street, and 9th Avenue North.

The introduction of cable cars and streetcars beginning in the 1880s fed the push for residential development beyond the traditional city center, fueled by intense population growth. Residential development followed along the streetcar lines. By 1885, a horse-car line ran along the south shore of Lake Union, and residential expansion grew along the eastern shores of the lake in what is now the Eastlake neighborhood. Schools were built in the neighborhood to provide for the growing number of children, including the Denny School in 1884 and the Cascade School in 1893 (Courtois et al., 1999). In 1898, the regrading of Denny Hill began and continued for 30 years, in an effort to remove what was viewed as an obstacle to Seattle's growth and expansion. By 1910, Seattle's population had exploded to 230,000 (Dorpat, n.d.), and new suburbs grew to accommodate the residents. The Eastlake and Cascade neighborhoods around Lake Union were mixed-use, working class communities with mostly modest wood-frame cottages, as well as apartment and boarding houses (Courtois et al., 1999).

Despite the need for residential housing and the development of residential neighborhoods, intense industrial development continued to be the primary focus of the South Lake Union area. The Ford Motor Company Assembly Plant building was completed and began production of automobiles in 1914. The impressive building became a "defining urban feature" of the South Lake Union area (BOLA, 1998). Another neighborhood landmark, the Lake Union Steam Plant, was opened in 1915 at the corner of Fairview and Eastlake avenues by Seattle City Light, "to furnish an abundance of power at the lowest prices in order that it may bring many new industries, both large and small, to Seattle..." (Seattle City Lighting Department, 1911). The Lake Washington Ship Canal formally opened in 1917, opening Lake Union to shipping between Puget Sound and Lake Washington. This intensified the maritime industry along Lake Union. As a result of these developments, the area around the lake began to experience greater industrial and commercial development throughout the next few decades.

Several large laundries were built in the South Lake Union area, as well as smaller machine shops and auto dealerships, including the William O. McKay dealership buildings.

From the 1930s on, the neighborhood became less residential and more commercial and industrial. In 1957, a new zoning ordinance converted the area to a manufacturing zone that eliminated any new residential uses. Many blocks of houses and small-scale commercial buildings were demolished for the construction of I-5 in the early 1960s, and similar demolitions continued, resulting in vacant lots and parking lots, as the residential population declined (Fiset, 2001).

Little remains now of the late nineteenth and early twentieth century residences, or of the lumber or marine industries that dominated South Lake Union through its early development. Icons such as the Ford Motor Assembly Plant and the Lake Union Steam Plant have been redeveloped for new commercial and industrial ventures. The area is now dominated by office, commercial, and light industrial structures.

The Early Motor Age and Auto Dealerships in Seattle

Automobile manufacturers began to appear in the United States around the 1890s, usually near sources of steel and other manufacturing in the Northeast and Midwest. Shortly thereafter, small automotive dealerships first emerged as a type of retail business around 1900 (BOLA 2006). Between 1910 and 1930, the large auto manufacturers such as Ford and Chevrolet concentrated on increasing their market through mass production, assembly line methods, horizontal monopolization of suppliers, and ever lower prices. Other automobile makers, such as Oakland, Pierce-Arrow, Lincoln, Cadillac, Peerless and Packard, focused on the luxury market, creating opulent sedans, speedsters, racing cars, and limousines, that were considerably more expensive than the basic models (BOLA 2006). Automobile ownership grew dramatically throughout the first three decades of the 20th century, and Washington reflected this national trend. "Motor vehicle registration in the state rose steadily from 1914 through 1929, before dropping sharply with the onset of the Depression. Percentage of the population with registered autos rose from just over 11% in 1921, to nearly 25% in 1929" (BOLA 2006). (Data from Washington State Corporations Division, WA Secretary of State's Office, 2005.) With this growth came a new industry and its associated structures, with automotive assembly plants, garages, repair shops, service stations, showrooms and dealerships.

By 1915, according to the *Polk Directory*, there were numerous automobile distributors in the north First Hill area of Seattle, including showrooms for the Pierce-Arrow, Reo, Bringham, and Oakland on Pike Street; Hupmobile and Oldsmobile, on East Pike Street; and the Chalmers, Saxon, Bauch-Lang Electric Cars and the Mitchell Motor Car dealerships on Broadway Avenue (BOLA 2006). In 1913, the Ford Company had erected a large assembly plant and showroom at the corner of Fairview Avenue North and Valley Street near Lake Union. As part of their continuing innovations in mass marketing, they would ship car parts to plants such as this one for local assembly, distribution, and sales.

The 1918 *Polk Directory* lists Buick sales at Pike and Broadway; Ford on 19th Avenue; relocation of the Oakland dealership to East Pike Street; White on Broadway; the Winton Motor Carriage Company at Pike and Terry; Studebaker Bros. Northwest and Franklin Autos on 10th Avenue; and Pierce Arrow's relocation to 1159 Broadway at Union. The Packard showroom was listed in the 1920 directory at various locations on Capitol Hill, but in 1925 a new, exclusive showroom was

constructed at 1124 Pike Street (currently the Utrecht Art Supply Store - Volvo Showroom) (BOLA 2006).

By the 1920s and 30s, Seattle's Pike-Pine Automotive Corridor began to decline, while Westlake Avenue began to be increasingly populated by motor vehicle sales and service businesses. In addition to the 1913 Ford Assembly Plant, the manufacturing facilities of Kenworth Truck and Mack Truck were also located in South Lake Union. The 1923 *Polk Directory* lists the William O. McKay Company as "Distributors [of] Lincoln and Ford Automobiles and Fordson Tractors." The William O. McKay Company owned other properties near the subject site and operated additional auto-related services. A 1941 Tax Assessor's record notes the William O. McKay Co. as owner of 900 - 916 Roy Street, while a Tax Assessor's photo from 1949 shows 705 Westlake Avenue North as "William O. McKay Company Auto Rebuild Department." Both of these buildings were located in the block immediately north of the subject block (BOLA 2006). The remaining William O. McKay Company dealership showrooms are clearly part of the automobile-associated commercial heritage of Seattle and particularly, the South Lake Union area.

Ford and Lincoln Automobiles

On June 16 1903, the Ford Motor Company was founded by the Malcomson group. The Model A was produced that year, in a rented plant in Detroit. Under the leadership of Henry Ford, who quickly became the company president and majority owner, the company overtook Oldsmobile, Buick and Cadillac combined to become the number one automaker in the U.S., a position it held for 20 years. In 1908, the legendary Ford Model T was introduced. In 1917 the company introduced the TT truck and Fordson tractor. By 1921, Ford had produced more than 5,000,000 automobiles.

Perhaps Ford Motor Company's single greatest contribution to automotive manufacturing was the moving assembly line. First implemented at the Highland Park plant in Michigan in 1913, the assembly line was so efficient that Ford far surpassed the production levels of its competitors and it enabled the company to make the vehicles even more affordable. A Ford Assembly Plant (now Shurgard Headquarters) was built in 1913 in South Lake Union and remained active until ca. 1932.

In 1925, Ford Motor Company acquired the Lincoln Motor Company, thus branching out into luxury cars, and in the 1930s, the Mercury division was created for mid-priced cars. Ford Motor Company was growing.

Model T production ended in 1927 with over 15,000,000 built, and the company began making the Model A after a six-month shutdown for retooling. In the early 1930s Ford also introduced the Lincoln-K V-8 and V-12, the Ford V-8 and the English model Y. In 1935 it started production of the first medium-priced cars, with the 1936 Lincoln-Zephyr and the 1939 Mercury. Diversification and production impacted Ford's market position, and it fell to third place after General Motors and Chrysler in 1933.

In the mid-1940s the Lincoln-Mercury Division of Ford was formed, and in 1948 the company announced the first all-new post-war cars and the F-1 pickup. By 1950 over 1,000,000 Mercurys had been built and Ford overtook Chrysler to regain its second place position in the market. In 1955 the Thunderbird was introduced, followed by the Continental Mark II in 1956. That same year the company went public with sales of Ford Motor Co. common stock. The Edsel was first produced in 1957 and the Ford Galaxy in 1959. By 1960 Ford had made its 50,000,000th car. (BOLA 2006)

Terra Cotta-Clad Commercial Buildings

The terra cotta cladding on the primary east and south facades of the two buildings is one of their most significant historic features. The City of Seattle has a strong tradition of terra cotta cladding dating from the 1890s to the early 20th century.

"Seattle may have more old terra cotta buildings per square mile than any city west of the Mississippi. This material has provided...a rich vocabulary of ornamentation from the Beaux Arts style to Art Deco. ...Much of the ornamental richness in Seattle comes from a period when terra cotta was used " (Purser).

Terra cotta - enriched molded clay - became a popular cladding and ornamental material in the United States toward the end of the last century. From the late 19th century to the 1930s, glazed architectural terra cotta was very popular. Its popularity was based on several factors: the advent of steel construction necessitated the use of inexpensive, lightweight and fireproof materials; modern fireproof requirements made use of the fireproof tiles attractive; the impervious surface and excellent weathering properties of glazed terra cotta; the growing expense of ornamental stonework; and the unlimited and fade-resistant colors and forms possible with glazed terra cotta.

Although there were four types of terra cotta that were used in American building arts, glazed architectural terra cotta was the most complex and is the most visible. "The hollow units were hand cast in molds or carved in clay and heavily glazed (often in imitation of stone) and fired." (Patterson Tiller). They were then usually attached to a building with metal anchors, mortared in place, and then further backfilled with masonry.

The great fire of 1889 in Seattle ushered in the use of terra cotta in the greater downtown Seattle area for its fire proof qualities. Both highrise and lowrise structures were ornamented with terra cotta. "The dominant application for the material was to clad the street-level facades to provide a more elegant contact with pedestrians" (Aldredge).

Due to the fine silt clay found in the Puget Sound region, there soon were local firms producing terra cotta, in addition to larger regional firms. The Puget Sound Fire Clay Company in Renton was organized in 1882 and mainly made sewer pipe until it was taken over by the Denny Clay Company in 1892. It incorporated as the Denny-Renton Clay and Coal Company in 1905 and manufactured terra cotta for the King County Courthouse, the Arctic Building and the Times Building. The Northern Clay Company organized in 1905 in Auburn as Meade Pottery. In 1908, Meade Pottery joined with the Winkle Terra Cotta Company of St. Louis, Missouri to form the Northern Clay Company. It supplied terra cotta for such landmarks as the Coliseum Theatre, the Natatorium, the Washington Mutual Savings Bank, and the Pantages Theatre. The largest terra cotta producer on the west coast was the Gladding, McBean Company of Lincoln, California, chartered in 1875. In 1925 Gladding, McBean bought the Northern Clay Company and merged with Denny-Renton Clay and Coal, making them one of the largest manufacturers of terra cotta in the country. They supplied the terra cotta for such important Seattle buildings as Smith Tower, the Pioneer Building, the Federal Office Building, and the Woolworth's on Third Avenue.

By the mid-twentieth century, glazed architectural terra cotta had fallen out of favor due to rising production costs and changes in architectural styles. Gladding, McBean was the only terra cotta manufacturer to survive the Great Depression, and now has only the Lincoln, CA plant. They are currently one of only a very few remaining terra cotta manufacturers in the United States.

The decorative glazed terra cotta on the Ford McKay building features egg and dart, scrolls, and rosettes, while lions' heads, egg and dart, dentils, modillions, and cartouches embellish the Pacific McKay Building. Both buildings are also adorned with foliate ornamentation.

The terra cotta units on both the Ford and Pacific McKay Buildings are attached to the concrete structures with narrow steel wire ties, except for those at the roof cap, which are simply mortared in place. The terra cotta is generally in good condition. Some cracks are evident, particularly at the upper portion of the south end of the Ford McKay Building, which appear to relate to earlier structural failure of the concrete frame. A significant number of anchorage holes are evident in the face of units in the signage bands on the upper portions of both buildings. Some of the cracks and holes have been patched, while others appear still open to the weather.

Other low-scale, commercial, terra cotta-clad buildings nearby include Transport Motor Company / Cosmopolitan Motors, at 2030 8th Avenue; and the Western Auto Supply Building, at 2004 Westlake Avenue. Downtown examples include the Metropolitan Health Club at 114 Pike Street; the Mann Building at 1401 3rd Avenue; the Pande Cameron Building at 815 Pine Street; the Scott Building at Stewart Street and 3rd Avenue; and the Ames Building at 121 Stewart Street.

Architects

Warren H. Milner & Company, Designer of the Ford McKay Building

Original drawings for the Ford McKay Building were done by Warren H. Milner & Co. in 1922. Research has revealed little information about Milner. He practiced architecture in Seattle at least from 1911, when he was in partnership with Edwin J. Ivey. In the 1923 *Polk Directory*, Milner's office was listed at 507 Haight Building. He is credited with the design of the Fleming Apartments (1916), at 2321 4th Avenue, and another apartment building in the Denny Regrade neighborhood (1923). Milner's obituary states that he designed a number of Seattle buildings and was also associated with the Great Northern Railroad tunnel construction as well as with a Chicago courthouse. He died in 1949. (BOLA 2006)

Harlan Thomas & Clyde Grainger, Designers of the Pacific McKay Building

Harlan Thomas (1870 - 1953) and Clyde Grainer (1887 - 1958) were well-known Seattle architects in the early 20th century. Thomas and Grainger formed a partnership, which was later joined by Harlan Thomas' son, Donald P. Thomas. Major works by the firm included the Corner Market Building (Thomas & Grainger, 1911 - 1912), at the corner of 1st Avenue and Pike Street; Rhodes Department Store (Thomas, Grainger & Thomas, 1926 - 1927, recently replaced by an expansion of the Seattle Art Museum), at 1321 2nd Avenue; and Harborview Hospital (Thomas, Grainger & Thomas, 1929 - 1931, altered), at 325 9th Avenue.

Harlan Thomas was born in Iowa and moved to Colorado at age nine with his family. He worked as a draftsman in a Denver architect's office and attended Colorado State College, graduating in 1895. Thomas established his own

architectural office in Denver and also traveled abroad for an extended period twice, to further his studies and see more of the world. In 1906, he moved to Seattle and opened an office here. Within his first few years in Seattle, Thomas designed the Chelsea Hotel on lower Queen Anne, the 7-story Sorrento Hotel on First Hill (1907) with terra cotta ornamentation and Seattle's first roof-top restaurant, Monroe High School (1909 - 1910, destroyed), and Enumclaw High School (1910 - 1911, destroyed). In addition to his partnership with Grainger, Thomas worked with other architects on various projects and also designed residential buildings. With Schack, Young & Myers he designed the Seattle Chamber of Commerce Building (1923 - 1925, altered); and with W. Marbury Somervell the three Carnegie Libraries: Queen Anne (1912 - 1914), Columbia (1912 - 1915), and Henry L. Yesler (1912 - 1914, presently the Douglass-Truth). Thomas was a professor of architecture at the University of Washington, serving as head of the Architecture Department from 1926 - 1940. Thomas was president of the Seattle AIA 1924-26, and was elected an AIA Fellow in 1928. He retired from practice in 1949.

Clyde Grainger was born in Chehalis and graduated from the University of Washington in 1909. He practiced as an architect in Seattle after obtaining his degree, and served as a member of the Seattle Planning Commission from 1944 to 1950. He was elected an AIA Fellow in 1951.

William O. McKay

William Osborne McKay (1887 - 1956) was born in Alturas, California. He moved to Seattle with his family in 1900 and later graduated from Broadway High School, then attending the University of Washington. McKay was very involved in athletics, participating in both football and track.

In 1911, McKay started working as an auto mechanic at the James T. Keenan Company. He advanced to auto salesman at the same company, and then in 1914 transferred to the William L. Hughson Company. Hughson was a Ford compatriot, developing Ford agencies on the west coast. After serving in WWI, McKay returned to Seattle and became northwest manager at Hughson.

In 1922, McKay formed the William O. McKay Company and received an agency agreement with Ford Motor Company. His office was initially at Summit and East Pine Street, before the Ford McKay Building was constructed on Westlake Avenue North. The Westlake Avenue location was chosen in large part because of its proximity to the Ford Assembly Plant.

In addition to his prominent position in the auto business, McKay was active in regional and local civic and social affairs. For example, he was state chairman of the National Recovery Act drive in 1933, served as director of the Salvation Army and in 1931 and 1932 general chairman of the Community Fund, served as director of the Rotary Club, and was director of the Broadmoor and Seattle Golf Clubs and a board member of the Washington Athletic Club. McKay was also a director of the Chamber of Commerce and involved in the founding of Seafair. He died unexpectedly in 1956. (BOLA 2006)

Bibliography

Aldredge, Lydia S. *Impressions of Imagination: Terra-Cotta Seattle*. Allied Arts of Seattle, Inc. 1986.

BOLA. "Application for Landmark Designation: Pacific McKay and Ford McKay Buildings, 601-615 Westlake Ave. N." May 3, 2006.

Elliot, James. "Green River Valley Clay Becomes Architectural Terra Cotta: Meade Pottery & the Northern Clay Company, 1905 to 1927." *White River Journal - A Newsletter of the White River Valley Museum*.
http://www.wrvmuseum.org/journal/journal_0796.htm July 1996.

National Register Bulletin 15 - How to Apply the National Register Criteria for Evaluation. U.S. Department of the Interior, National Park Service, Interagency Resources Division. 1991.

Nicolson-Singh, Saunthy. "Terra cotta da vida." *Sacramento News and Review*.
<http://www.newsreview.com/issues/sacto/2004-05-13/arts.asp> May 13, 2004.

Ochsner, Jeffrey Karl, ed. *Shaping Seattle Architecture - A Historical Guide to the Architects*. University of Washington Press, Seattle and London, in association with the American Institute of Architects, Seattle Chapter, and the Seattle Architectural Foundation. 1998.

Patterson Tiller, de Teel. *The Preservation of Historic Glazed Architectural Terra-Cotta. Preservation Brief #7*. U.S. Department of the Interior, National Park Service, Preservation Assistance Division, Technical Preservation Services. June 1979.

Purser, Robert S. "Can Seattle's terra cotta legacy endure?" *Puget Sound Business Journal*
<http://www.bizjournals.com/seattle/stories/1998/03/02/focus8.html>. February 27, 1998.

Seattle, Washington City Directory. 1923.

Seattle Landmarks Preservation Ordinance, Seattle Municipal Code 25.12.350.

Seattle.GOV. Department of Neighborhoods. "Designation Process."
http://www.seattle.gov/neighborhoods/preservation/designation_process.htm July 15, 2002.

Sheridan, Mimi and Historic Seattle's Advocacy Committee. "January 2004: A Compendium of Potential Landmarks Downtown," Preservation Seattle.
(<http://www.cityofseattle.net/commnty/histsea/preservationseattle/publicpolicy/defaultjan2supp.htm>) 2004.

Tobin, Caroline and Hart-Crowser. *Technical Appendix 15: Historic and Cultural Resources Study. Prepared as part of the Draft Environmental Impact Statement for the Seattle Commons/South Lake Union Plan*. NBBJ. 1994.

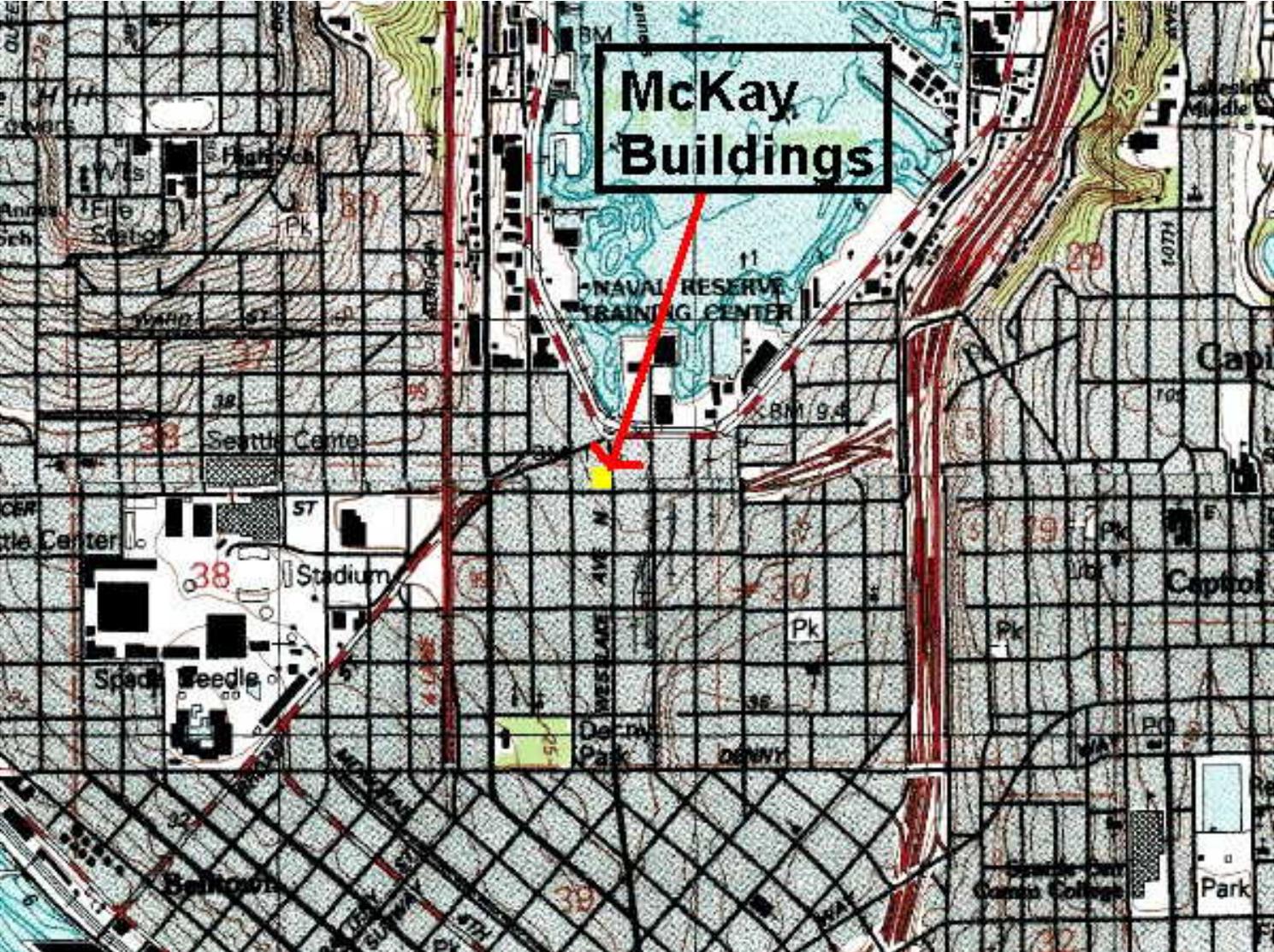
United States Census, Seattle, Washington. 1930.

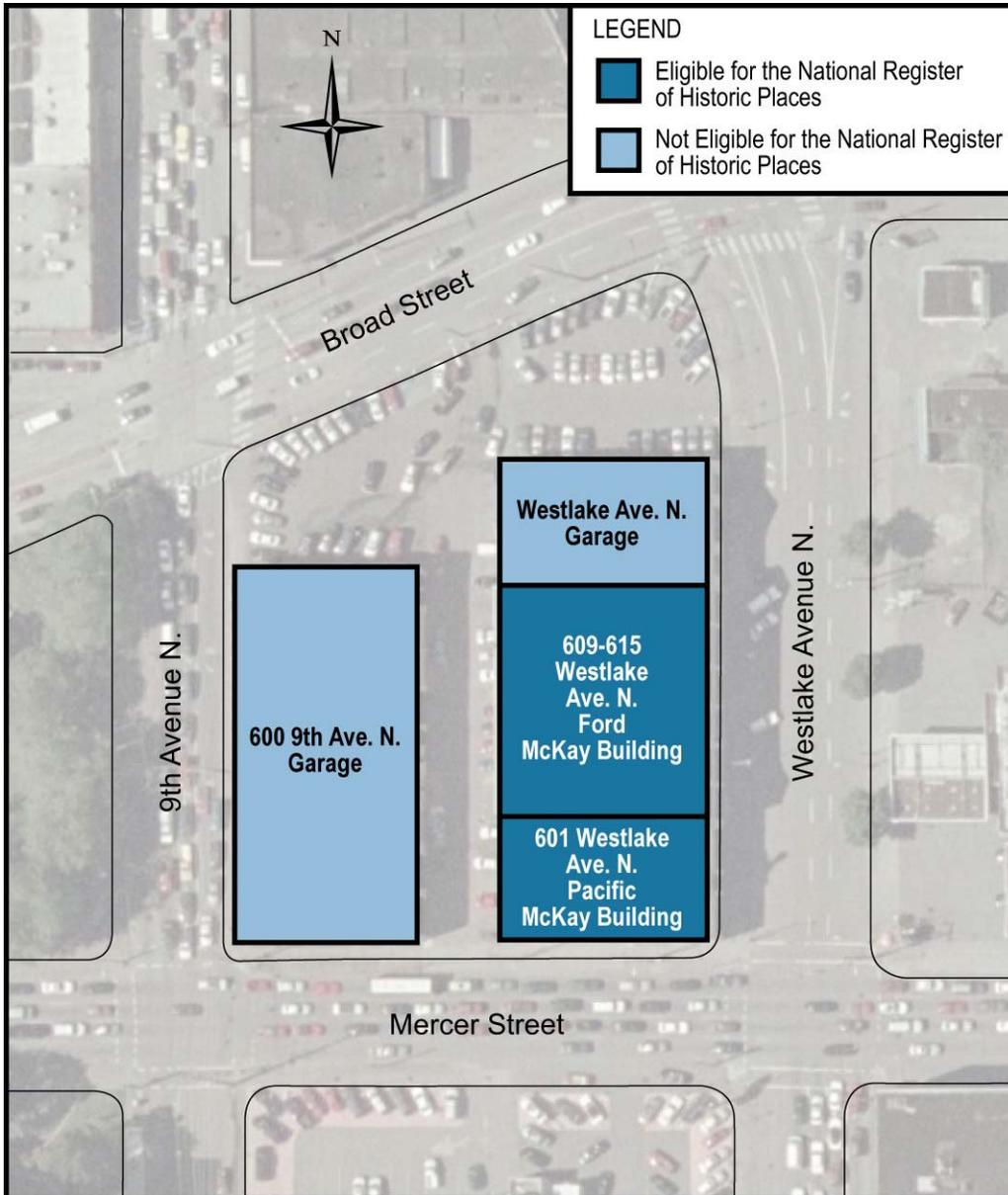
Verbal Boundary Description

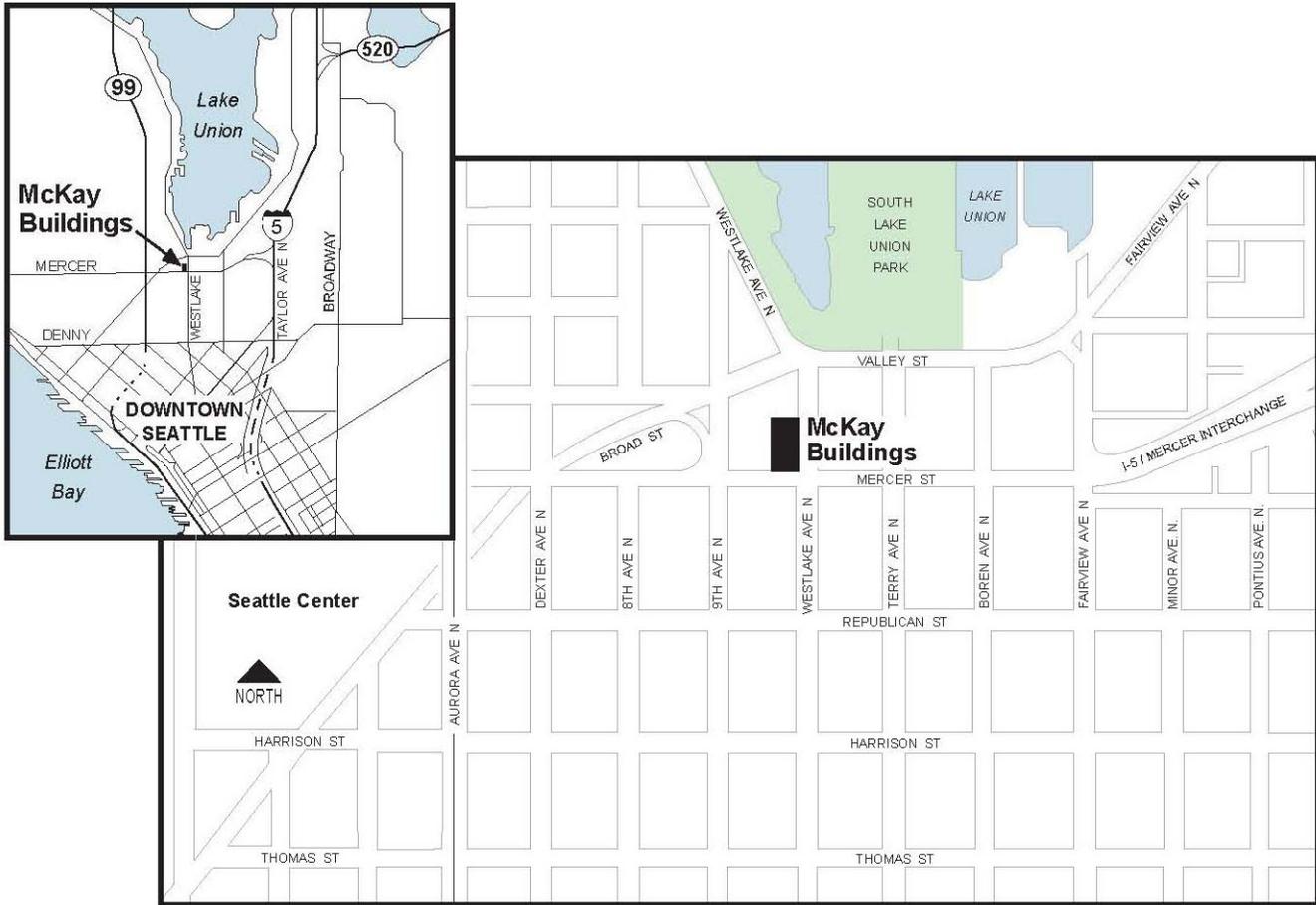
Parcel #4088803385, Lake Union Shorelands Addition, Block 78, All Lots, Section NE 30, T25, R4

Verbal Boundary Justification

This parcel encompasses the four remaining buildings historically associated with the William O. McKay dealership.







609-615 Westlake Avenue North, Ford McKay Building
Front façade



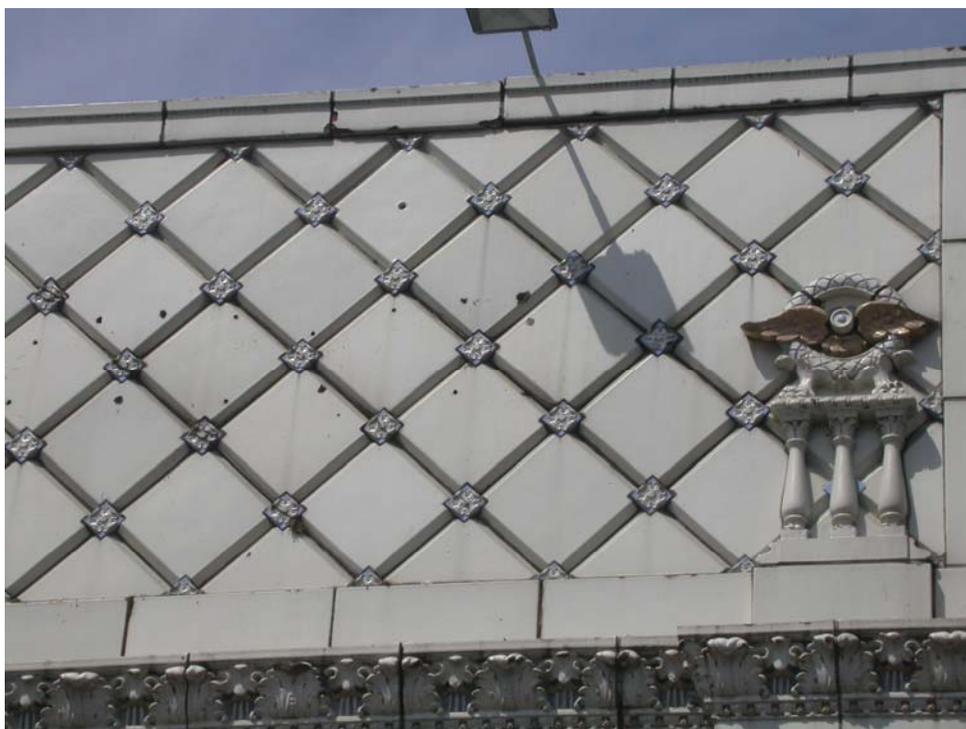
609-615 Westlake Avenue North, Ford McKay Building
Detail on front façade



609-615 Westlake Avenue North, Ford McKay Building
Parapet detail on front façade



601 Westlake Avenue North, Pacific McKay Building
Front façade



601 Westlake Avenue North, Pacific McKay Building
Terra cotta detail on front façade - note winged wheel icon



601 Westlake Avenue North, Pacific McKay Building - Terra Cotta detail



601 Westlake Avenue North, Pacific McKay Building
Terra Cotta detail on front façade - note gold "M" on shield



601 Westlake Avenue North, Pacific McKay Building
Wood carving over entry door on front façade



601 Westlake Avenue North, Pacific McKay Building
Detail of stained glass motto over entry door

**Technical Memorandum Design and Safety Assessment of
Avoidance Options**

Supplemental Analysis of Section 4(f) Avoidance Options – Safety Issue of 4(f) Option Reduced Section Shift to the South

PREPARED FOR: Eric Tweit, SDOT

PREPARED BY: Brian Shinn P.E., CH2M HILL
Roger Mason P.E., CH2M HILL

COPIES: Angela Brady P. E., SDOT
Sharon Feldman, CH2M HILL

DATE: May 18, 2007

PROJECT NUMBER 314749

A. Background

This memorandum presents a supplemental analysis to the Technical Memorandum *Design and Safety Assessment of Avoidance Options*, dated June 19, 2006. The supplemental analysis addresses safety impacts to the 4(f) option Reduced Section Shift to the South. The safety issue related to this 4(f) option is the extended period of construction and the impact of exposing workers and the traveling public to longer construction duration as compared to the Proposed Action.

B. Supplemental Analysis

Construction Staging and Duration

Proposed Action

Because the Proposed Action widens Mercer Street to the north, the construction staging for this option is greatly simplified. This option requires two stages with the first stage shifting the three eastbound lanes to the south side and constructing the north portion of Mercer Street, including the three future westbound lanes, turn lanes and the median. The second stage shifts traffic to the newly constructed lanes on the north side of Mercer Street with the work zone on the south side to complete the remainder of the cross section. The anticipated construction duration for the Proposed Action is approximately 2.5 years.

Reduced Section Shift to the South

In order to construct the option Reduced Section Shift to the South and maintain three eastbound lanes on Mercer Street throughout construction, the work on Mercer would require three construction stages with the anticipated staging as follows:

Stage 1 – Introduce eastbound lane restriction from four lanes to three, shift traffic on existing Mercer to allow sufficient work zone. Traffic shift to the north on west portion of Mercer (Dexter to Terry) and shift to the south on the east portion (Terry to Fairview). This will require traffic cross-over, from south to north, which will need to be shifted at least once in order to construct within the area of the cross-over. Construction to be completed in this stage is a minimum of two new lanes of concrete pavement and temporary asphalt concrete pavement to tie to the existing roadway.

Stage 2 – Shift eastbound traffic to the new pavement and temporary pavement constructed in Stage 1, maintaining three travel lanes. Traffic shift to the south on newly constructed west portion of Mercer (Dexter to Terry) and shift to the north on the newly constructed east portion (Terry to Fairview). This will require traffic cross-over, from north to south, which will need to be shifted at least once in order to construct within the area of the cross-over. Construction to be completed in this stage is a minimum of two new lanes of concrete pavement and temporary asphalt concrete pavement to tie to the existing roadway.

Stage 3 – Shift eastbound traffic to the new pavement constructed in Stages 1 and 2, with traffic split on north and south. Maintain minimum of three eastbound lanes with configuration one to two lanes on north side and one to two lanes on the south side, with construction work zone in the center of Mercer Street. Construction to be complete in this stage would consist of Mercer Street inside lanes, turn lanes and median.

It is estimated that the Reduced Section Shift to the South would add nine months to the project schedule compared to the Proposed Action.

Impacts of the Reduced Section Shift to the South multiple staging and increased construction duration are:

- Increased construction costs
- Additional stages for utility construction could lead to increased lane closures and night-time work
- Extended period of traffic congestion and area economic impacts, including time loss for traveling public, impacts to local businesses including inconvenient and restricted access.
- Environmental impacts, including noise and water quality
- Extended period of safety impacts of construction work zone
- Increased safety risk due to more complex traffic control/paths, such as splitting traffic each side of a construction work zone.

This technical memorandum will focus on the safety impact of the construction work zone.

Safety Impacts of Construction Work Zones

There is considerable research and documentation on traffic safety within areas of construction work zones. The studies of specific areas conclude that work zone accidents rates and severity are higher when compared to the same area without work zone traffic

control. Although work zone traffic control is established to comply with set guidelines to ensure safety for workers and traveling public, they do cause potential impacts and restrictive traffic/non-motorized conditions, such as,

- narrower lane widths and shoulder widths
- lane restrictions/closures
- pedestrian access restrictions
- bicycle movements (access restrictions, steel plates in roadway)
- additional lane shifts and tapers
- reduced sight distance
- additional conflict points with construction access
- additional stop condition and traffic control with flaggers
- doesn't match drivers expectation, presents different operating condition for the frequent user of corridor
- visual impacts

The number one priority for any work zone is to provide the safest environment for workers, motorists, pedestrians, and bicyclists. Per NCHRP 500, Volume 17: A Guide for Reducing Work Zone Collisions, the safest way to prevent accidents is to reduce the number, duration, and impact of work zones. The fewer times motorists encounter work zones, the fewer chances there are for work zone related crashes to occur. To accomplish this, the most effective method would be to close the roadway full time for construction operations. In most cases this is not feasible given that most roadways are reconstruction projects. The other most effective solution is to improve maintenance and construction practices. This can be accomplished through accelerating construction activities (streamlining the construction process via efficient construction staging), through asset management (scheduling of improvement projects, pavement management, etc...), and through rehabilitation/maintenance practices (preventative treatments). The only approach (of those listed) applicable to the Mercer project is to accelerate construction activities.

Transportation Research Board, Record No. 1270, *Highway Accidents in Construction and Maintenance Work Zones* (1990) presented several case study areas where accident data was compared prior to construction and during construction with traffic control and work zones conforming to specifications. The document has the following summary statements:

- *Majority of areas had accident rates during construction exceeding those before construction, and in half of the case study areas the accident rate exceeded the statewide average.*
- *In general, work zone accidents are more severe than other accidents.*
- *There are high percentages of rear end and sideswipe accidents; following too close is the most frequently listed contributing factor.*
- *There are a high percentage of accidents involving trucks.*

In general, the studies show that the expected crash rate will be approximately 20% higher in a work zone as compared to a non-work zone. Given that the 4(f) option Reduced Section Shift to the South will require an additional 9 months of construction, the safety of this option will be compromised due to the extended work schedule.

C. Conclusion

The Reduced Section Shift to the South Option applies the Mercer Project Design Standards to address design and safety issues considering the context of Mercer Street as a principal arterial street in a high-density, mixed use urban environment. However, as documented above, this option does require extended construction duration due to the configuration related to the existing Mercer Street and right of way. With the extended construction duration the corridor is subject to increased safety risks, including increased crash rate, higher accident severity, higher percentage of truck accidents, potential pedestrian safety issues due to restricted access. These safety impacts over the extended, approximate nine month, construction duration for the 4(f) option Reduced Section Shift result in this option not being recommended.

Supplemental Analysis of Section 4(f) Avoidance Options

PREPARED FOR: Eric Tweit, SDOT

PREPARED BY: Brian Shinn P.E., CH2M HILL
Roger Mason P.E., CH2M HILL

COPIES: Mike Johnson P.E., SDOT
Angela Brady P. E., SDOT

DATE: September 1, 2006

PROJECT NUMBER 314749

A. Background

This memorandum presents a supplemental analysis to the Technical Memorandum *Design and Safety Assessment of Avoidance Options*, dated June 19, 2006 (attached). The supplemental analysis addresses comments made to the Technical Memorandum including comments from a meeting held with WSDOT on June 21, 2006. It was agreed to establish General Design Standards - minimum design standards from State and local design guidelines; not adjusted to account for the context of the Mercer Corridor Project. These design standards were applied to the Multiple Curve and Minimum Section options for a fatal flaw evaluation.

Established General Design Standards,

- Sidewalks - 6 ft minimum per LAG Manual/WSDOT, (8 ft min per AASHTO)
- Median - Required for all options, 8 ft minimum to provide for pedestrian refuge at crosswalks
- Parking Lane - optional, not required
- Design Speed - 30 mph

The General Design Standards are summarized in Table 1, (Page 5) Design Criteria Comparison. Table 1 also shows the Mercer Project Design Standards, which are the minimum standards considering the context of Mercer Street as a principal arterial street in a high-density, mixed use urban environment.

B. Supplemental Analysis

Section 4(f) Avoidance Options with Design and Safety Issues - Multiple Curves and Minimum Section

This analysis developed variations of the two avoidance options applying the General Design Standards to confirm design and safety issues.

Multiple Curves

Changes to the Multiple Curves Option in the June 19, 2006 Memorandum:

- Reduced sidewalk widths from 8.5 ft minimum at pinch points to 6 ft minimum.
- Eliminated the 10 ft parking/reserve capacity lane on the south side
- Widened all travel lanes to 14.3 ft to meet AASHTO requirements for horizontal curves (30mph)
- Net effect is overall width increase of 4.1 ft, (Total lane widening of 19.1 ft minus 5 feet for sidewalk reduction and minus 10 ft with elimination of parking lane)

Design flaws for the Multiple Curves Option

- Lane offset across intersection exceeds minimum taper rate, Taper at Mercer/Westlake = 13.4:1 (Min criteria: 35mph = 20.4:1, 30mph = 15:1)
- Six-foot sidewalk is not sufficient for Mercer Street; refer to June 19, 2006 Memorandum, Sidewalk Width discussion in Section E
- Elimination of the 10 ft parking/reserve capacity lane removes the option to add a fourth travel lane in the eastbound direction. This is not a fatal flaw, according to the Design Year analysis, but the 10 ft parking/reserve capacity lane is desirable to provide flexibility to adapt to unforeseen circumstances.

Other impacts:

- Results in conflict with UW Bldg at the curb return
- No conflict with Exchange Bldg (1 ft clear)

Therefore, because this variation of the Multiple Curves Option does not improve the deficient lane offset across the intersection and the sidewalk width is insufficient, it is fatally flawed.

Minimum Section (No Median)

Changes to the Minimum Section Option in the June 19, 2006 Memorandum:

- Reduced sidewalk widths from 10.5 ft minimum to 6 ft minimum
- Eliminated the 10 ft parking/reserve capacity lane on the south side
- No median (Note: original Minimum Section Option was developed with no median, design and safety analysis determined that median is required, see variation below *Minimum Section with Median* for complete application of General Design Standards.)
- Net effect is overall width decrease of 19 ft (10 ft parking/reserve capacity lane plus 9 ft sidewalk reduction)

Design flaws for the Minimum Section (No Median) Option

- Crosswalk lengths and high-use pedestrian corridor will result in stranded pedestrians. Increased crossing green time for crossing pedestrians will reduce E-W green time for vehicles and degrade LOS.
- Six-foot sidewalk is not sufficient for Mercer Street; refer to June 19, 2006 Memorandum, Sidewalk Width discussion in Section F
- Elimination of the 10 ft parking/reserve capacity lane removes the option to add a fourth travel lane in the eastbound direction. This is not a fatal flaw, according to the Design Year analysis, but the 10 ft parking/reserve capacity lane is desirable to provide flexibility to adapt to unforeseen circumstances.

Other impacts:

- Results in conflict with UW Bldg at the curb returns
- Results in 10.3 ft conflict/encroachment with Exchange Bldg

Therefore, because this variation of the Minimum Section Option does not (and cannot) provide adequate crossing time for pedestrians without degrading the LOS (green phase for E-W flow) for vehicles and the sidewalk width is insufficient, it is fatally flawed.

Minimum Section (With Median)

This variation adds a median to the Minimum Section option per the General Design Standards.

Changes to the Minimum Section Option in the June 19, 2006 Memorandum:

- Reduced sidewalk widths from 10.5 ft minimum to 6 ft minimum
- Eliminated the 10 ft parking/reserve capacity lane on the south side
- Added 8 ft median
- Net effect is overall width decrease of 11 ft (Add 8 ft median, minus 10 ft parking/reserve capacity lane plus 9 ft sidewalk reduction)

Design flaws for the Minimum Section (With Median) Option:

- Six-foot sidewalk is not sufficient for Mercer Street; refer to June 19, 2006 Memorandum, Sidewalk Width discussion in Section F
- Elimination of the 10 ft parking/reserve capacity lane removes the option to add a fourth travel lane in the eastbound direction. This is not a fatal flaw, according to the Design Year analysis, but the 10 ft parking/reserve capacity lane is desirable to provide flexibility to adapt to unforeseen circumstances.

Other Impacts:

- Results in 9 ft conflict/encroachment with UW Phase II Bldg
- Results in 18 ft conflict/encroachment with Exchange Bldg

The sidewalk width for this option is insufficient for Mercer Street, and therefore this option is fatally flawed. Adding the median to provide a pedestrian refuge at crosswalks would

mitigate the traffic LOS flaw noted above with the option Minimum Section (No Median). This requires an additional 8ft of widening and encroaches further into both the UW Bldg and Exchange Bldg. The Minimum Section option is intended to avoid these buildings; by adding the median it has similar impacts to the Reduced Section Option

C. Conclusion

Applying the General Design Standards to the Multiple Curve and Minimum Section (no median) Options does not eliminate the issues noted in the Technical Memorandum *Design and Safety Assessment of Avoidance Options*, therefore, these options are fatally flawed. In addition, applying the General Design Standards to the Minimum Section (with median) Option does not avoid the UW and Exchange Buildings, resulting in similar impacts to the Reduced Section Shift to the South Option. Therefore, among the range of options developed, the Reduced Section Shift to the South Option is only option carried into the Section 4(f) analysis.

The Reduced Section Shift to the South Option applies the Mercer Project Design Standards to address design and safety issues considering the context of Mercer Street as a principal arterial street in a high-density, mixed use urban environment. See Table 1. The Reduced Section Shift to the South Option has 12 ft sidewalk widths at the UW Bldg, McKay Bldg, and Exchange Bldg; includes an 8 ft median, and no 10 ft parking/reserve capacity lane on the south side of Mercer Street. The impacts of this option are documented in the Section 4(f) Discipline Report.

Table 1

MERCER CORRIDOR PROJECT
 DESIGN CRITERIA COMPARISON
 31-Aug-06

Criteria	General Design Standards		Mercer Project Design Standards	
	Minimum	Reference	Minimum	Reference
Design Speed	30mph	AASHTO allows design speed = posted speed	35mph	Seattle ROW Imp Man. (5mph over posted)
Sidewalk Width	6'	LAG Manual references WSDOT DM (Section 1025) For NHS	16' - preferred 12' - constrained	FHWA - RD-01-102; Pedestrian Facility User Guide, and other national guidance
Parallel Parking Lane Width	NA	NA	8' - parking lane only 0' - constrained (south side)	Seattle ROW Imp. Man. Sec. 4.6.2
Median with Pedestrian Refuge	8'	LAG Manual Ch 42, Page 42-31 - (Two 2' truncated dome pads, plus 4' landing)	10' - preferred 8' - constrained	LAG Manual Ch 42, Page 42-31 - (Two 2' truncated dome pads, plus 4' or 6' landing)
Curb Lane Width	12'	Seattle ROW Imp. Man. Sec. 4.6.2 (AASHTO)	12'	Seattle ROW Imp. Man. Sec. 4.6.2 (AASHTO)
Thru Lane Width	11'	Seattle ROW Imp. Man. Sec. 4.6.2 (AASHTO)	11'	Seattle ROW Imp. Man. Sec. 4.6.2 (AASHTO)
Taper Rate	S ² /60 = 15:1	Seattle ROW Imp. Man. Sec. 4.6.2 (AASHTO)	S ² /60 = 20.4:1	Seattle ROW Imp. Man. Sec. 4.6.2 (AASHTO)
Stopping Sight Distance	DS=30mph - SSD=200'	AASHTO (Ex. 3-1)	DS=35mph - SSD=250'	AASHTO (Ex. 3-1)
Intersection Sight Distance (for passenger vehicles)	DS=30mph - ISD=290'	AASHTO (Ex. 9-58)	DS=35mph - ISD=335'	AASHTO (Ex. 9-58)
Decision Sight Distance	DS=30mph - DSD=490'	AASHTO (Ex. 3-3)	DS=35mph - DSD=590'	AASHTO (Ex. 3-3)
Min. Radius Curve (assuming normal crown)	DS=30mph - R=333'	AASHTO (Ex. 3-16)	DS=35mph - R=510'	AASHTO (Ex. 3-16)

Notes:

General Design Standards - Minimum design standards established based on State and local design guidelines. Not adjusted to account for the context of the Mercer Corridor Project.

Mercer Project Design Standards - Minimum design standards for the Mercer Corridor Project, considering the context of Mercer Street as a principal arterial street in a high-density, mixed use urban environment.

Project Type: Reconstruction, Non-Interstate, Non-Limited Access

AASHTO: AASHTO Policy on Geometric Design of Highways and Streets - 2004

LAG Manual: Local Agency Guidelines - April 2006

WSDOT DM: WSDOT Design Manual - May 2006

Seattle ROW Imp Man.: Seattle Right-of-Way Improvement Manual - December 2005

Design and Safety Assessment of Avoidance Options- DRAFT for WSDOT Review

PREPARED FOR: Eric Tweit, SDOT

PREPARED BY: Roger Mason P.E., CH2M HILL
Brian Shinn P.E., CH2M HILL

COPIES: Mike Johnson P.E., SDOT
Angela Brady P.E., SDOT

DATE: June 19, 2006

PROJECT NUMBER: 314749

A. Objective

The Mercer Corridor Project Team has identified a full range of alternatives that avoid the historic McKay Building at the northwest corner of Mercer Street and Ninth Avenue North. Two of the four avoidance alternatives are believed to have significant design and safety deficiencies that cause them to be fatally flawed. The two deficient alternatives are: Reduced Section with Multiple Curves and Minimum Section Widened to the South.

The objective of this memorandum is to identify the significant design and safety issues, applicable design standards and guidance, design deficiencies, and safety risks associated with these two avoidance alternatives to support our recommendation that these alternatives are not feasible and therefore should be rejected.

B. Project Purpose

The purpose of this project is to improve local circulation to businesses and residences in the area through vehicular and pedestrian measures and to provide for more direct vehicular movements through the corridor. These improvements will accommodate planned development in the area, including the new South Lake Union Park. The project also will improve regional movements through the area by providing more direct access from I-5 to the area and to neighborhoods to the north and west. The project also will improve vehicular, pedestrian, and bicycle safety within and through the project area.

The South Lake Union neighborhood is undergoing a major transformation from a lower-density, light-industrial/commercial area to a high-density urban neighborhood with a mix of housing, retail, office, and research uses. The neighborhood is designated one of six urban centers in the City of Seattle Comprehensive Plan, which includes growth targets of 16,000 new jobs and 8,000 new households for this urban center over the next 20 years. Current projections indicate that the growth will likely exceed these targets.

Urban Centers are areas with the City's highest concentrations of employment and housing. To support the City's goals for increasing the share of trips made by transit and other non-

SOV (single occupancy vehicle) modes, they should be well-connected by transit and provide a transportation network that is safe and convenient for pedestrians. Therefore, the design of Mercer Street must accommodate the increased pedestrian activity that is envisioned for this neighborhood, while maintaining its function as a principal arterial serving local and regional traffic.

C. Overview of Alternatives

Brief descriptions of the two avoidance options being analyzed in this memorandum are provided below. A complete description of the Proposed Action and Section 4(f) Avoidance Options are attached (MAP-APPENDIX).

Avoidance Option: Reduced Section with Multiple Curves

The Reduced Section with Multiple Curves option is designed to avoid the McKay Building by shifting the alignment to the south at that location. Elsewhere, the alignment was shifted to the north to avoid or minimize adverse effects to other properties along the south side of Mercer Street. The result is an alignment that includes several curves along Mercer Street between Dexter and Terry avenues, and thus its name. The street cross-section was modified from that of the Proposed Action to further reduce effects on the McKay Building, the UW Medical Center, and the proposed Interurban Exchange II Building site. Between Dexter and Terry avenues, parking was eliminated from the north side of the street and the landscaped median (not including left-turn lanes) was reduced from 10 feet to 8 feet. Parking on the south side also serves to provide for future capacity. Sidewalk widths in front of the McKay Building and the proposed Interurban Exchange II Building site were reduced to 8.5 feet, which is below the City's minimum standards for arterial streets.

Proposed improvements to Valley Street, the I-5 ramps, Westlake Avenue North, and Ninth Avenue North would be the same as described in the Proposed Action.

Avoidance Option: Minimum Section Widened to South

This design option applies the City's minimum design standards for arterial streets to illustrate the absolute minimum width possible if only considering auto and truck traffic. Widening would transition from the north side of existing Mercer Street near Fairview Avenue North, to the south side at Westlake Avenue North to avoid the historic McKay Building. West of Westlake Avenue North, sidewalks in front of the McKay Building (north side) and the UW Medical Research Facilities (south side) would be 5 feet wide with a 5.5-foot landscaping buffer. Parking would not be included on the north side of Mercer in front of the McKay Building. Parking on the south side also serves to provide for future capacity. There would be no median or pedestrian refuge in the middle of Mercer Street west of Westlake Avenue North.

Proposed improvements to Valley Street, the I-5 ramps, Westlake Avenue North, and Ninth Avenue North would be the same as described in the Proposed Action.

D. Design Standards and Jurisdiction

Mercer Street is designated by the City of Seattle as a principal arterial and a Major Truck Street. It is designated as an NHS (National Highway System) Route; however, is not a state route. Per the Local Agency Guidelines (LAG) Manual, Chapter 63.3 Standards “Design and construction standards for all new construction or reconstruction projects...on the NHS shall meet or exceed AASHTO standards...” AASHTO standards will be superseded by City of Seattle standards when the City of Seattle standards are more restrictive. This was confirmed by WSDOT in a meeting dated March 15, 2005, with SDOT to applicable roadway design criteria and standards.

SDOT is responsible for approving all roadway designs under the terms of their agreement with WSDOT. When an applicable design value or “standard” can not be attained, it may be necessary to obtain a design deviation. When a design standard is determined applicable for a particular project, but it cannot be applied consistently, it is necessary to obtain a design deviation. SDOT, with WSDOT H&LP concurrence, is responsible for review and approval of design deviations for this NHS route.

Applicable Design Standards

- AASHTO Policy, 2004
- Seattle Right-of-Way Improvements Manual, 2005
- AASHTO Roadside Design Guide, 2002
- Local Agency Guidelines (LAG) Manual

Additional Design Guidance

- Pedestrian Facilities Users Guide – Providing Safety and Mobility – FHWA, 2002
- Pedestrian Facilities Guidebook, WSDOT, 1997
- Context Sensitive Solutions in Design Major Urban Thoroughfares for Walkable Communities: An ITE Proposed Recommended Practice, ITE, 2005
- National Cooperative Highway Research Program (NCHRP) Report 420 – Impacts of Access Management Techniques, 1999
- Highway Capacity Manual, 2000

Design Criteria

- Design Speed: 35 mph
- ADT = Over 80,000 with maximum volumes approaching 100,000 by design year 2030
- Percentage Trucks/Heavy Vehicles = 2 percent
- Accident/Crash History (see attached report)
- Lane Width = 11-foot through lanes; 12-foot curb lanes (COS Standards)
- Stopping Sight Distance = 250 feet (AASHTO)
- Minimum Radii = 510 feet with normal crown (AASHTO)
- Design Vehicle = WB 67

E. Reduced Section with Multiple Curves Option–Analysis

The analysis of design and safety issues of the Reduced Section with Multiple Curves Option is provided below. The most significant design and safety issue is Lane Width through the reverse curves sections. Other design and safety issues include, Multiple Curves, Sight Distance, and Sidewalks which are individually evaluated to determine their ability to meet the Design Guidance, or “Standard”. Design and safety deficiencies are discussed, including potential for mitigation, where the “Standard” is not met. Recommendations are also provided for each issue.

Significant Design and Safety Issue

Lane Width Through Curve Sections

Description of Issue

The roadway alignment for Mercer consists of three consecutive reverse curves. The three lanes westbound (WB) and eastbound (EB) consist of 12-foot curb lanes (inside and outside) with 11-foot through lanes. The alignment is constrained at three “pinch-points” located at the UW Medical Building, the historic McKay Building, and the Interurban Exchange II Building site where the sidewalk width is set at a minimum width of 8.5 feet from the McKay Building and Interurban Exchange II Building. Any lane widening would require encroachment into at least one of these buildings, which this option is intended to avoid, resulting in impacts that would require costly building modifications to allow for the widening.

Overview of Applicable Guidance

AASHTO, 2004, is the guidance used for lane width and provides for local standards to apply. The local standards are documented in the City of Seattle Right-of-Way Manual, 2005, where lane width for arterials is 11 feet for through lanes and 12 feet for curb lanes. The lane widths through the reversed curved alignment in front of the UW Medical, McKay, and Interurban Exchange II buildings were analyzed per AASHTO, 2004, Exhibits 3-47 and 3-48.

Exhibit 3-47 provides the required lane width for a WB 50 design vehicle to travel through a turning roadway at a specific curve radius. Exhibit 3-48 is an addition or subtraction to the value from Exhibit 3-47 to convert to different design vehicles. Vehicles larger than the WB 50 have increased lane width requirements and vice versa. The converted value is added to the base lane width of 11 ft for through lanes, and 12 feet for curb lanes (see WIDEN-APPENDIX).

Design Analysis and Results

Application of the AASHTO lane widening guidance for each of the through curves results in the increased lane widths, and total roadway widening required as noted below:

- The section between Eighth and Ninth avenues (UW Building), with a curve radius of 1350 feet and a design speed of 35 miles per hour (mph), requires a lane width of 12.75 feet, resulting in an overall roadway widening of 8.25 feet.
- The section between Ninth and Westlake avenues (McKay Building), with a curve radius of 672 feet and a design speed of 35 mph, requires a lane width of 14 feet, resulting in an overall roadway widening of 16.7 feet.

- The section between Westlake and Terry (Interurban Exchange II Building) with a curve radius of 554 feet and a design speed of 35 mph requires a lane width of 14.4 feet, resulting in an overall roadway widening of 19.8 feet.

An analysis to determine the impacts of lane widening was performed for all lane widening scenarios along the length of the three curves. The analysis confirmed that impacts to buildings are significant and unavoidable due to roadway geometric (tapers and transition lengths) requirements. The scenarios involved evaluating combinations of widening to the north, south, and symmetrically about centerline.

In addition to evaluating for meeting design standards, a simulation was performed (using Auto Turn software) for the design vehicle (WB 67) driving through this curved alignment. The simulation demonstrated that the design vehicle in the center through lane for each direction encroaches into the adjacent lane by approximately 0.3 feet. This encroachment does not consider additional offset for side truck mirrors, which would add approximately 1.5 feet to each side of the encroachment. Truck drivers would have difficulty negotiating this alignment and less experienced drivers could easily encroach further into the adjacent lane. It is likely that even the most experienced drivers in ideal conditions would be unable to negotiate these curves without encroachment and/or conflict with adjacent vehicles. This encroachment will increase the potential of side-swipe crashes, and will result in differential operating speed, which will decrease the level of service and increase potential for rear end crashes.

Mitigation that would be Required to Meet Standard or Correct Deficiency

Widening to meet lane width standards would encroach into the very buildings that this option is intended to avoid. For instance, widening to the south to meet standards would encroach a minimum of 20 feet into the Interurban Exchange II Building, and still provide only 8.5-foot sidewalks at the Interurban Exchange II Building and the historic McKay Building. Modifications to mitigate building impacts would be prohibitively costly for this option and not appropriate. Since an option exists with a tangent alignment (that impacts these same buildings), we would recommended this option be dismissed.

Conclusion and Recommendation

As determined by the analysis of this option, lane encroachments by trucks will occur through the reverse-curved alignment. Considering its NHS designation, Major Truck Street classification, and high vehicle and truck volumes, this option is not recommended.

Other Design and Safety Issues

Curve through Intersections

Description of Issue

Avoiding the UW Medical, McKay, and Interurban Exchange II buildings requires a horizontal alignment with three consecutive reverse curves. The primary issue with this option is that it introduces tight reverse curvature into an otherwise tangent street, which is a Major Truck Street and an NHS route. The curvature requires a wider overall street width than a tangent alignment. This option does not meet lane width standards without widening into the buildings that this option is intended to avoid.

Overview of Applicable Guidance

AASHTO, 2004, is the guidance used for horizontal alignment and overall geometric criteria. Minimum radii, lane widths, and stopping sight distance criteria are analyzed on their ability to meet standard and are reported separately within this memorandum.

Design Analysis and Results

AASHTO states a preference for tangent alignments, especially through segments with intersections. The effects of the curvature create skewed intersection angles (approximately 9 degrees) at Westlake and Ninth Avenue North. This skew angle is within acceptable limits of the guidance but creates a lane offset across these intersections that further complicate truck driver's ability to negotiate these curves without encroaching into the adjacent lane. The effects of the curvature and lane offset across the intersections require additional decisions by drivers to react to, which is reflected in the decision stopping sight distance analysis noted herein.

Mitigation that would be Required to Meet Standard or Correct Deficiency

Mitigation for the effects of widening are discussed individually under the specific design and safety issues herein. They include treatments such as lane delineation, raised pavement markers, additional overhead signing, and advance signalization.

Conclusion and Recommendation

The effectiveness of these individual and/or cumulative mitigation treatments are difficult to predict. Additional mitigation could become necessary depending on actual safety performance. Considering the combination of design deficiencies involved with this option, and the inability to conclusively mitigate them, implementing such an alignment is not recommended.

Stopping Sight Distance

Description of Issue

The effects of the reversed-curved alignment reduces sight distance in the inside lanes due to the median blocking the sightline. The standard for stopping sight distance is not met for vehicles in the inside lanes between Ninth and Westlake avenues.

Overview of Applicable Guidance

AASHTO, 2004, is the guidance used for stopping sight distance. Exhibit 3-1 states that for a design speed of 35mph, a stopping sight distance of 250 feet is required.

Design Analysis and Results

Two locations were identified where the standard for stopping sight distance was not met for this option. The results are noted below:

- The EB inside lane of Mercer Street between Ninth Avenue North and Westlake Avenue North has 239 feet of visibility, which is 11 feet less than the 250 feet required.
- The WB left turn lane of Mercer Street between Terry Avenue North and Westlake Avenue North has 160 feet of visibility, which is 90 feet less than the 250 feet required (see SSD-APPENDIX).

Mitigation that would be Required to Meet Standard or Correct Deficiency

In both cases, the sightline is obstructed by the median. Restricting planting heights in the median area allows the sight distance standard to be achieved. With such a restriction in place, a design deviation is not required.

Conclusion and Recommendation

A median is a critical safety element for this two-way corridor. The median and plantings buffer the effect of opposing traffic, prevent cross-over collisions, and provide proven safety benefits. Restricting planting heights in these areas will create a discontinuity, or “gap” along an otherwise consistent pattern of median plantings. It is difficult to ensure that routine maintenance occurs to keep plantings below the required height. Design documentation to restrict median design height is recommended.

Entering Sight Distance***Description of Issue***

The effect of the reverse curved alignment reduces the sight distance for right-turning vehicles from southbound (SB) Ninth Avenue to WB Mercer Street. The sight distance is severely limited by the historic building, which obstructs the sightline. The standard for sight distance is not met at this location.

Overview of Applicable Guidance

AASHTO, 2004, is the guidance used for entering sight distance. Intersection Sight Distance is calculated using formula 9-1 in AASHTO, 2004, and the values provided in Exhibit 9-57. This formula and table take into account the type of vehicle, design speed of the roadway being entered, and the number of lanes a vehicle must cross to make the turning movement. For example, large truck-trailer combination vehicles turning from SB Ninth Avenue North to WB Mercer Street cannot turn into the nearest lane and instead must swing wide and use all three receiving lanes to complete the movement, thus increasing the time and sight distance required to make the turn.

Intersection, or Entering, sight distance is the length of visible roadway at an intersection required for a car or truck to safely enter from a stopped condition.

Design Analysis and Results

The required sight distance was calculated for the intersections along Mercer Street for this option. One location at the intersection of Ninth Avenue North and Mercer Street does not meet the sight distance standard for the right turn movement from SB Ninth Avenue to WB Mercer Street. The historic McKay Building obstructs the sightline and restricts the available sight distance to only 267 feet. The sight distance requirements were calculated for the following vehicles and noted below. The deficiency is the difference between the required sight distance and the available sight distance (see ISD-APPENDIX).

- The WB 67 design vehicle was calculated to be 612 feet; a 345-foot deficiency.
- The SU vehicle was calculated to be 437 feet; a 170-foot deficiency.
- The P vehicle was calculated to be 334 feet; a 67-foot deficiency.

Mitigation that would be Required to Meet Standard or Correct Deficiency

Although the sightline is blocked by the historic McKay Building, the intent of this option is to avoid impacting it, and other buildings, therefore it is not reasonable under this option to consider removing or relocating the building as a method to meet sight distance.

Conclusion and Recommendation

Restricting vehicles from turning right on a red signal would mitigate some of the risk and liability associated with the deficient sight distance. However, this would degrade the traffic operations for SB traffic on Ninth Avenue and is, therefore, not recommended.

Decision Sight Distance

Description of Issue

The effect of the reverse curved alignment reduces the decision sight distance for drivers in the WB outside curb lane approaching the intersection at Ninth Avenue. The sight distance is severely limited by the historic McKay Building, which obstructs the sightline. The standard for sight distance is not met at this location.

Overview of Applicable Guidance

AASHTO, 2004, is the guidance used for decision sight distance. Exhibit 3-3 from AASHTO, 2004, states that for a design speed of 35 mph in an urban environment, a decision sight distance of 590 feet is required.

Stopping sight distances are usually sufficient to allow reasonably competent and alert drivers to come to a hurried stop under ordinary circumstances. However, these distances are often inadequate when drivers must make complex or instantaneous decisions, when information is difficult to perceive, or when unexpected maneuvers are required. Examples of critical locations where these errors are likely to occur, and where it is desirable to provide decision sight distance, include interchange and intersection locations where unusual or unexpected maneuvers are required (AASHTO, 2004).

Design Analysis and Results

One location was identified where the standard for decision stopping sight distance was not met for this option. The result is noted below:

- The WB outside curb lane of Mercer Street as it approaches the intersection at Ninth Avenue North provides only 423 feet of sight distance, which is 167 feet less than the standard. See DSD-APPENDIX.

Mitigation that would be Required to Meet Standard or Correct Deficiency

Although the sightline is blocked by the historic McKay Building, the intent of this option is to avoid impacting it, and other buildings; therefore, it is not reasonable under this option to consider removing or relocating the building as a method to meet sight distance.

Conclusion and Recommendation

Warning signs such as Signal Ahead and/or advance signal heads are measures to mitigate the risk and liability associated with the deficient sight distance. However, in urban areas with visual clutter and a multi-lane roadway, this may not be effective and in fact could adversely affect driver's perception and reaction time. Additional signing at critical locations such as intersections or areas of concentrated demand can increase the likelihood for error in information recognition, per AASHTO. This mitigation is not recommended.

Sidewalk Width

Description of Issue

The alignment is constrained at three "pinch-points" located at the UW Medical Building, the McKay Building and the Interurban Exchange II Building where the sidewalk width is

set at a minimum width of 8.5 feet from the McKay Building, and Interurban Exchange II Building.

An 8.5-foot sidewalk is the absolute minimum width to comply with the Americans with Disabilities Act (ADA), (consists of 3.5 feet operational offset from curb, 1.5 feet for utilities, and 4 feet effective sidewalk width for ADA clearance) but does not meet City of Seattle minimum standards for a sidewalk.

Sidewalk widths less than 10.5 feet require a deviation from the City of Seattle. Substandard sidewalk widths in conjunction with other noted deficiencies with this option further increases the risk of pedestrian related collisions and a less desirable pedestrian environment.

Sidewalks

The minimum width for the sidewalk and utility/buffer zone provided in this option is 8.5 feet.

Mercer Street is a Class 2 Pedestrian Street under the City's land use code. This classification includes requirements that encourage increased pedestrian activity, such as type of use (street-level retail), orientation toward the street, and façade treatments.

While the downtown area is the only area of the city with sidewalk width requirements beyond the minimum 10.5 feet in the code, SDOT will typically require or encourage wider sidewalks in other high-pedestrian areas. The character of South Lake Union will be closer to downtown than outlying neighborhoods, and therefore the sidewalk widths required in downtown are appropriate for South Lake Union as well. (Minimum =12 feet width on Class 2 Pedestrian Streets, 15 feet width on Class 1 Pedestrian Street, 18 feet width on Principal Transit Streets.)

Through numerous South Lake Union area planning documents, pedestrian and sidewalk policies and guidelines have been established to further enhance and encourage pedestrian activities.

South Lake Union Neighborhood Plan. The Department of Planning and Development created the South lake Union Urban Center Neighborhood Plan Goals and Policies. Within this neighborhood plan are many goals and policies centered on the support and promotion of a walkable community:

Goal: "A vital and eclectic neighborhood where people both live and work, providing a range of housing choices, diverse businesses, arts and amenities to support and attract residents, employees and visitors."

Policy 1: "Encourage the co-location of retail, community, arts and other pedestrian-oriented activities in key pedestrian nodes and corridors."

Goal 6: "A livable, walkable community that is well served by transit and easy to get around by foot, bike or transit."

Policy 17: "Promote a system of safe pedestrian and bicycle connections linking key activity areas and destination, such as open spaces, schools and arts facilities."

17a: Design streetscape to increase pedestrian interest, accessibility and safety.

17b Improve non-motorized connections across Mercer and Valley Streets to SLU Park.

Goal 7: “A transportation system that provides safe, convenient access to businesses, residences, and other activities in the neighborhood.”

Policy 19: “...encourage the use of transit, walking, bicycling and other non-automotive modes.”

Goal 8: “A well-connected neighborhood with bicycle, pedestrian, waterborne and vehicular access to adjacent neighborhoods.”

Policy 21b: “Improve pedestrian connections to adjacent neighborhoods.”

South Lake Union Transportation Study. This study is the basis for the neighborhood plan implementation strategies listed above. The main objective of the South Lake Union Transportation Study was to form a set of transportation strategies to address existing problems and to support and shape the development of the South Lake Union Urban Village.

Specifically, the City developed five goals to guide the development of transportation strategies, as follow:

1. Improve mobility and access for all modes of transportation.
2. Improve regional access to and through South Lake Union.
3. Promote economic vitality, neighborhood livability, sustainable development, and quality of life.
4. Improve safety for all transportation modes.
5. Work toward implementing City of Seattle Comprehensive Plan goals and other city policies and plans.

From this study, numerous strategies that were recommended are currently being further evaluated and constructed. Included in this package was a recommendation to change Mercer Street to a two-way street with a reduced Valley Street section. As part of the two-way Mercer Street, the recommended section was described as a, “7-lane section connects regional centers and will have improved pedestrian amenities.”

As part of the improved pedestrian facilities, a typical cross-section of Mercer Street was designed that included sidewalk width of 16 feet on the southside and 21 feet on the northside of Mercer Street. This cross-section is consistent with the current design being proposed.

Overview of Applicable Guidance.

Table 1 shows City, State, Federal, and industry standard guidance on sidewalk width and notes whether the Multiple Curves Option sidewalk width meets the referenced design guidance.

Sidewalks and roadside pedestrian facilities are recommended to be a minimum of 10.5 feet per City of Seattle design standard. This width includes 5-foot minimum of effective

sidewalk width and 5.5-foot minimum width adjacent to the curb for utilities, sidewalk amenities and signs, driveway aprons, and a buffer between pedestrians and vehicular traffic. For a facility like the Mercer Corridor, design guidance recommends a minimum sidewalk width of 12 to 21 feet.

TABLE 1
City, State, Federal, and Industry Standard Guidance on Sidewalk Width

	Reference	R/W Set back Bldg, Frontage Zone	Sidewalk Effective Width	Sidewalk Buffer	Total	Multiple Curves Meets Guidance
City Sidewalk Minimum (Not applicable for Mercer Corridor)	City of Seattle (COS) Min - Street Improvement Manual	0' - 2'	5'	5.5'	10.5' - 12.5'	✗
	walkinginfo.org - Pedestrian and Bicycle Info Center		5'	4 - 6'	9' - 11'	✗
	AASHTO 2004		8'			✓
Sidewalk Minimum within Mercer Corridor Context	City of Seattle Min. (High Ped Vol.) - Downtown Plan				15' - 18'	✗
	FHWA - RD-01-102 - Pedestrian Facility User Guide		6' - 8'	6'	12' - 14'	✗
	WSDOT, PSRC - Pedestrian Facility Guidebook	1.5' to 10' Use 2'	6' to 10'	3' to 10' (use 6')	14' - 18'	✗
	Highway Capacity Manual 2000	3' (assume bldg face with window display)	8'	2.5'	13.5'	✗
	ITE 2005 - Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities	3'	10'	8.5'	21.5'	✗

Design Analysis and Results

Sidewalks are an integral safety element for city streets. Sidewalks reduce the potential for vehicle-pedestrian collisions by separating pedestrians from vehicular traffic. Sidewalks provide space for street lights and pedestrian lighting—also important safety elements on urban streets. Pedestrian safety is further enhanced by providing a buffer between the traveled way and pedestrian walkway. Traffic volume-pedestrian warrants for sidewalks have not been established; however, AASHTO and industry standards recognize that suitable sidewalks should be furnished with consideration to roadside and land development conditions. In the context of the Mercer Corridor given the high volume of vehicles and pedestrians, the safety of pedestrians dictates that adequate sidewalk facilities should be furnished according to industry standards.

Table 1 illustrates that the Multiple Curves option DOES NOT MEET design guidance for sidewalk width for this facility and therefore is deficient in meeting minimum pedestrian safety thresholds. In addition, it is not consistent with the community plan, goals and vision.

Designing sidewalks less than the city minimum with no pedestrian buffer (landscaping and/or on-street parking) will create additional friction for the pedestrian, thereby reducing their level of desire (and comfort) to walk the corridor.

To avoid interference when two pedestrians pass each other, each should have at least 2.5 feet of walkway width (*Highway Capacity Manual - Chapter 11 Pedestrian and Bicycle Concepts*). A sidewalk width of only 8.5 feet allows only three pedestrians to pass each other assuming an optimal condition of no other physical barriers, such as signs, posts or other amenities along the sidewalk. Additionally, a tight corridor for pedestrians to pass each other may increase the potential for pedestrians to step into the outside travel lane to pass, thereby increasing the potential for vehicular-pedestrian conflict.

The Multiple Curves option 8.5-foot sidewalk does not provide an adequate buffer/utility zone to reduce vehicular/pedestrian conflicts at driveways. A minimum of 5 feet is needed adjacent to the curb to provide for a driveway ramp. A minimum 5-foot sidewalk buffer/utility zone enhances pedestrian safety by allowing the driveway ramp to be placed adjacent to the curb and not impact the effective sidewalk width. This configuration also improved pedestrian sight distance and awareness of turning vehicles. This is an important safety element for persons with disabilities.

In addition to pedestrians, the sidewalk and roadside area provide space for a number of features including utilities (above and belowground), signage, building access, etc. Access to and maintenance of these facilities within the sidewalk area disrupts pedestrian access and flow. For narrow sidewalks, maintenance activities would require full sidewalk closure and detours for pedestrians. This is undesirable for an urban setting with large pedestrian volumes, and creates additional safety concerns, and increases the pedestrian’s exposure to traffic by having to re-route and detour pedestrians.

The existing 18-foot sidewalk along the frontage of the historic McKay Building will be reduced to 8.5 feet with this option—a 9.5-foot encroachment toward the building. The narrow section at this location will not have on-street parking, street trees, or other elements to provide a buffer from traffic.

Peer Streets. Table 2 summarizes sidewalk widths for other urban high volume vehicular and pedestrian facilities around the country. Minimum sidewalks provided on these peer streets is 12 to 16 feet with most facilities providing up to 20 feet of sidewalk.

TABLE 2
Summary of Sidewalk Widths for Other Urban High Volume Vehicular And Pedestrian Facilities

Street Name	Location	Roadway Width	Sidewalk Width
Broad Street	Philadelphia	87'	20-25'
Michigan Avenue	Chicago	90'	16-20'
Adams Street	Brooklyn	110'	12'-16'
Park Avenue	Manhattan	121'	16-30'
Canal Street	New Orleans	136'	15-20'
Embarcadero	San Francisco	120'	15-30'
Las Vegas Boulevard	Las Vegas	135'	15-20'

Conclusion and Recommendation

Based on these considerations:

- Mercer Corridor Project context
- Federal, State, City, and Industry design guidance
- Pedestrian Safety deficiency
- Maintenance of utilities and street amenities
- Documented Community Plan, Vision, and Goals

And as described in the above paragraphs, this option with deficient sidewalk width is NOT recommended.

Corridor Continuity–Inconsistent Application of Design Standards

Description of Issue

Introducing a reversed curved alignment in an otherwise tangent roadway results in design deficiencies within the curved roadway that do not exist in the tangent roadway.

Inconsistent application of design standards within this short length of Mercer Street, create varying and abrupt changed conditions that the driver will perceive and encounter. These conditions require more distance and space for the driver to recognize hazards and safely initiate a successful maneuver (AASHTO).

Overview of Applicable Guidance

AASHTO states preference for tangent roadways, especially at intersections. The lane widths through the reverse curved roadway do not meet AASHTO.

Design Analysis and Results

The most significant design and safety issue is:

- Lane widths do not meet standard through the curves, and trucks will encroach into adjacent lanes and collide with adjacent vehicles.

Other design and safety deficiencies that occur within the reversed curves are noted below:

- Stopping sight distance is not met for vehicles in the inside lanes between Ninth and Westlake avenues, unless the median design and planting heights are restricted to not exceed the sightline.
- Decision sight distance is not met for WB vehicles in the outside curb lane approaching the intersection at Ninth Avenue.
- Entering sight distance is not met for SB vehicles turning right on red at Ninth Avenue to Mercer Street,

Mitigation that would be required to Meet Standard or Correct Deficiency

There is no mitigation to correct lane widths without widening the roadway and impacting the buildings this void is intending to avoid. Mitigation measures could include prohibiting right turn on red, signing, and advanced signal heads to inform drivers, however in urban areas with visual clutter, this may not be effective and in fact could adversely affect drivers.

Conclusion and Recommendation

Introducing design elements that do not meet standard, and/or mitigation measures for deficiencies within the reversed curved roadway are not recommended.

F. Minimum Section Widened to the South—Analysis

The analysis of design and safety issues of the Minimum Section Widened to the South option is provided below. The objective of this option is to apply the City’s minimum design standards and develop a minimum cross-section width that avoids the historic McKay Building.

The most significant design and safety issues of this option are not having a center median that provides a pedestrian refuge at crosswalks, and prevents severe vehicle conflicts by separating opposing lanes of traffic. These significant design and safety issues are analyzed below under Median Width: Pedestrian Refuge and Median Width: Vehicle Conflicts.

Other design and safety issues analyzed are Sidewalks, and Corridor Continuity–Inconsistent Application of Design Standards. All of these are individually evaluated to determine their ability to meet the Design Guidance, or “Standard.” Design and safety deficiencies are discussed, including potential for mitigation, where the “Standard” is not met. Recommendations are also provided for each issue.

Significant Design and Safety Issues

Median Width: Pedestrian Refuge

Description of Issue

The Minimum Section option has no center median between Eighth and Westlake avenues and results in three crosswalks without pedestrian refuges (two at Ninth Avenue and one on the west side of Westlake Avenue).

Overview of Applicable Guidance

ITE– “Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities, Pg 140” recommends a pedestrian refuge in crosswalks for roadway widths greater than 60 feet.

NCHRP 420 – “Impacts of Access Management Techniques” suggests a 65 percent crash reduction between an undivided facility, versus a roadway with non-traversable median.

Design Analysis and Results

- Typical conditions where refuge islands are most beneficial include wide two-way streets with high traffic volumes, high travel speed, and large pedestrian volumes.
- The width of this section of Mercer Street is approximately 91 feet and does not provide pedestrian refuges in crosswalks. Therefore, it does not meet the ITE guidance recommending pedestrian refuges for crosswalks longer than 60 feet.
- While the Mercer Street design abides by the recommendations of the MUTCD, the single phased signalized crosswalks are necessary to maintain traffic progression, and allow a limited amount of crossing time for all pedestrians. The mixed land use and urban setting will result in a high use pedestrian corridor along Mercer Street.
- Failure to account for the impact of the widened roadway on pedestrians could be considered negligent, such as pedestrians unable to cross the roadway safely because there is no median on which the pedestrian could stop safely in the middle of the multi-lane arterial.

- The South Lake Union Streetcar is proposing a stop on the west side of Westlake Avenue, south of Mercer Street. This location will be a destination for pedestrians. The most convenient crossing of Mercer is the crosswalk on the west side of Westlake, which has no refuge in this option.

Mitigation that would be Required to Meet Standard or Correct Deficiency

Providing more green time for the pedestrian crossing time decreases needed green time to maintain acceptable levels of service and progression for vehicles. Mitigation measures cannot include signage to route slower and disabled pedestrians to other crossings with refuges. Design standards cannot discriminate against the abilities of its users, such as older or handicapped pedestrians. Studies also show that pedestrians may not walk longer than 300 ft out of their way to access another crossing, and therefore may not be effective in mitigating the safety risks of pedestrians stranded in the crosswalk.

Conclusion and Recommendation

Considering the urban and traffic characteristics of this multi-lane two-way facility, eliminating the median and three crosswalk pedestrian refuges between Eighth Avenue and Westlake Avenue will adversely impact pedestrian safety due to the widened the roadway and crosswalk lengths do not meet guidance for pedestrian refuges. Therefore this is not recommended.

Median Widths: Vehicle Conflicts

Description of Issue

The Minimum Section option has no center median between Eighth and Westlake avenues and results in undivided opposing lanes of traffic for a two-block section of Mercer. Additionally, within this section there are three left turn lanes and three crosswalks without pedestrian refuges (two at Ninth Avenue and one on the west side of Westlake Avenue).

Overview of applicable Guidance

NCHRP 420 – “Impacts of Access Management Techniques” suggests a 65 percent crash reduction between an undivided facility, versus a roadway with non-traversable median.

A raised landscape is recommended for two-way, multi-lane, high volume corridors. One objective of implementing a raised median on multi-lane two-way arterials is to eliminate the potential for cross-over crashes that result in head-on collisions. (NCHRP 420 Impacts of Access Management Techniques suggests:

“Medians have several important safety benefits. They physically separate opposing direction of travel, thereby virtually eliminating head-on accident potentials. They control (sometimes eliminate) left turns and other movements across the median. This translates into fewer conflicts, greater safety, and more uniform arterial speeds.”

A synthesis of median safety experience conducted by Transportation Research Board for NCHRP 420 suggests that accident rates were reduced in all studies, with a median reduction of about 35 percent. Likewise a comparison of safety models in NCHRP 420 suggests a reduction of about 65 percent between an undivided facility, versus a roadway with a non-traversable median.

Design Analysis and Results.

This option provides traffic curb to separate opposing lanes of traffic for a two block length along Mercer Street. The remaining length of Mercer Street includes a raised, landscaped median.

Within this area, vehicles will be performing lane changes and merging into one of four left turn lanes, which increase the potential for an errant vehicle to cross-over into oncoming traffic.

Within this area, there are three crosswalks, over 90 feet long, without any refuge area for stranded pedestrians to stop safely in the middle of the road, which increases the potential for high-severity pedestrian incidents.

Mitigation that would be Required to Meet Standard or Correct Deficiency

Mitigation measures could include concrete median barrier to separate the opposing vehicles and signage to route slower and disabled pedestrians to other crossings with refuges.

A concrete median barrier would require widening the roadway by a minimum of 8 feet to provide width for the barrier and shoulders on either side. Widening the roadway would require additional right-of-way width to the south, including mitigation for impacts to buildings that would increase costs significantly for this option. Widening to the south results in impacts to the buildings this option is intending to avoid. Implementing a center median barrier also requires end treatments such as impact attenuators, which require maintenance and replacement.

Conclusion and Recommendation

Considering the urban and traffic characteristics of this multi-lane two-way facility, eliminating the median between Eighth and Westlake avenues disregards clear design guidance that medians reduce frequency and severity of crashes for similar facilities. Therefore, this is not recommended.

Other Design and Safety Issues**Sidewalk Width*****Description of Issue***

The minimum width for the sidewalk and utility/buffer zone provided in this option is 10.5 feet.

Mercer Street is a Class 2 Pedestrian Street under the City's land use code. This classification includes requirements that encourage increased pedestrian activity, such as type of use (street-level retail), orientation toward the street, and façade treatments.

While the downtown area is the only area of the city with sidewalk width requirements beyond the minimum 10.5 feet in the code, SDOT will typically require or encourage wider sidewalks in other high-pedestrian areas. The character of South Lake Union will be closer to downtown than outlying neighborhoods, and therefore the sidewalk widths required in downtown are appropriate for South Lake Union as well. (Minimum =12 feet width on Class 2 Pedestrian Streets, 15 feet width on Class 1 Pedestrian Street, 18 feet width on Principal Transit Streets).

Through numerous South Lake Union area planning documents, pedestrian and sidewalk policies and guidelines have been established to further enhance and encourage pedestrian activities.

South Lake Union Neighborhood Plan. The Department of Planning and Development created the South Lake Union Urban Center Neighborhood Plan Goals and Policies. Within this neighborhood plan are many goals and policies centered on the support and promotion of a walkable community:

Goal: “A vital and eclectic neighborhood where people both live and work, providing a range of housing choices, diverse businesses, arts and amenities to support and attract residents, employees and visitors.”

Policy 1: “Encourage the co-location of retail, community, arts and other pedestrian-oriented activities in key pedestrian nodes and corridors.”

Goal 6: “A livable, walkable community that is well served by transit and easy to get around by foot, bike or transit.”

Policy 17: Promote a system of safe pedestrian and bicycle connections linking key activity areas and destination, such as open spaces, schools and arts facilities.”

17a: Design streetscape to increase pedestrian interest, accessibility and safety.

17b Improve non-motorized connections across Mercer and Valley Streets to SLU Park.

Goal 7: “A transportation system that provides safe, convenient access to businesses, residences, and other activities in the neighborhood.”

Policy 19: “...encourage the use of transit, walking, bicycling and other non-automotive modes.”

Goal 8: “A well-connected neighborhood with bicycle, pedestrian, waterborne and vehicular access to adjacent neighborhoods.”

Policy 21b: “Improve pedestrian connections to adjacent neighborhoods.”

South Lake Union Transportation Study. This study is the basis for the neighborhood plan implementation strategies listed above. The main objective of the South Lake Union Transportation Study was to form a set of transportation strategies to address existing problems and to support and shape the development of the South Lake Union Urban Village.

Specifically, the City developed five goals to guide the development of transportation strategies:

1. Improve mobility and access for all modes of transportation.
2. Improve regional access to and through South Lake Union.
3. Promote economic vitality, neighborhood livability, sustainable development, and quality of life.
4. Improve safety for all transportation modes.

- Work toward implementing City of Seattle Comprehensive Plan goals and other city policies and plans.

From this study, numerous strategies that were recommended are currently being further evaluated and constructed. Included in this package was a recommendation to change Mercer Street to a two-way street with a reduced Valley Street section. As part of the two-way Mercer Street, the recommended section was described as a, “7-lane section connects regional centers and will have improved pedestrian amenities.”

As part of the improved pedestrian amenities, a typical cross-section of Mercer Street was designed that included sidewalk width of 16 feet on the southside and 21 feet on the northside of Mercer Street. This cross-section is consistent with the current design being proposed.

Overview of Applicable Guidance

Table 3 shows City, State, Federal, and industry standard guidance on sidewalk width and notes whether the Minimum Section Alternative sidewalk width meets the referenced design guidance.

TABLE 3
City, State, Federal, and Industry Standard Guidance on Sidewalk Width

	Reference	R/W Set back Bldg, Frontage Zone	Sidewalk Effective Width	Sidewalk Buffer	Total	Min. Section Meets Guidance
City Sidewalk Minimum (Not applicable for Mercer Corridor)	City of Seattle (COS) Min - Street Improvement Manual	0' - 2'	5'	5.5'	10.5' - 12.5'	✓
	walkinginfo.org - Pedestrian and Bicycle Info Center		5'	4 - 6'	9' - 11'	✓
	AASHTO 2004		8'			✓
Sidewalk Minimum within Mercer Corridor Context	City of Seattle Min. (High Ped Vol.) - Downtown Plan				15' - 18'	✗
	FHWA - RD-01-102 - Pedestrian Facility User Guide		6' - 8'	6'	12' - 14'	✗
	WSDOT, PSRC - Pedestrian Facility Guidebook	1.5' to 10' Use 2'	6' to 10'	3' to 10' (use 6')	14' - 18'	✗
	Highway Capacity Manual 2000	3' (assume bldg face with window display)	8'	2.5'	13.5'	✗
	ITE 2005 - Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities	3'	10'	8.5'	21.5'	✗

Design Analysis and Results

Sidewalks are an integral safety element for city streets. Sidewalks reduce the potential for vehicle-pedestrian impacts by separating pedestrians from vehicular traffic. Sidewalks provide space for street lights and pedestrian lighting—also important safety elements on urban streets. Pedestrian safety is further enhanced by providing a buffer between the traveled way and pedestrian walkway. Traffic volume-pedestrian warrants for sidewalks have not been established; however AASHTO and industry standards recognize that suitable sidewalks should be furnished with consideration to roadside and land development conditions. In the context of the Mercer Corridor given the high volume of vehicles and pedestrians, the safety of pedestrians dictates that adequate sidewalk facilities should be furnished according to industry standards.

For a typical roadway, sidewalks are recommended to be a minimum of 10.5 feet per City of Seattle design standard. This width includes 5 feet minimum of effective sidewalk width and 5.5 feet minimum width adjacent to the curb for utilities, sidewalk amenities and signs, driveway aprons, and a buffer between pedestrians and vehicular traffic. For a facility like the Mercer Corridor, design guidance recommends a minimum sidewalk width of 12 to 21 feet.

The above table illustrates that the Minimum Section Alternative DOES NOT MEET design guidance for sidewalk width for this facility and therefore is deficient in meeting minimum pedestrian safety thresholds. In addition, it is not consistent with the community plan, goals and vision.

In addition to pedestrians, the sidewalk and roadside area provide space for a number of features including utilities (above and below ground), signage, building access, etc. Access to and maintenance of these facilities within the sidewalk area disrupts pedestrian access and flow. For narrow sidewalks, maintenance activities would require full sidewalk closure and detours for pedestrians. This is undesirable for an urban setting with large pedestrian volumes, and creates additional safety concerns, and increases the pedestrians' exposure to traffic by having to re-route and detour pedestrians.

Peer Streets. Table 4 summarizes sidewalk widths for other high volume vehicular and pedestrian urban facilities around the country. Minimum sidewalks provided on these peer streets is 12-16' with most facilities providing up to 20-ft of sidewalk.

TABLE 4
Summary of Sidewalk Widths for Other Urban High Volume Vehicular And Pedestrian Urban Facilities

Street Name	Location	Roadway Width	Sidewalk Width
Broad Street	Philadelphia	87'	20-25'
Michigan Avenue	Chicago	90'	16-20'
Adams Street	Brooklyn	110'	12'-16'
Park Avenue	Manhattan	121'	16-30'
Canal Street	New Orleans	136'	15-20'
Embarcadero	San Francisco	120'	15-30'
Las Vegas Boulevard	Las Vegas	135'	15-20'

Conclusion and Recommendation

Based on these considerations:

- Mercer Corridor Project context
- Federal, State, City, and Industry design guidance
- Pedestrian Safety deficiency
- Maintenance of utilities and street amenities
- Documented Community Plan, Vision, and Goals
- Comparative analysis of similar high-volume urban facilities around the country

And as described in the above paragraphs, this option with deficient sidewalk width is not recommended.

Corridor Continuity–Inconsistent Application of Design Standards

Description of Issue

The Minimum Section option has no center median between 8th and Westlake Avenues (two blocks) and results in three crosswalks without pedestrian refuges (two at Ninth Avenue and one on the west side of Westlake Avenue).

Overview of Applicable Guidance

ITE – “Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities, Pg 140” recommends a pedestrian refuge in crosswalks for roadway widths greater than 60 feet.

NCHRP 420– “Impacts of Access Management Techniques” suggests a 65 percent crash reduction between an undivided facility versus a roadway with non-traversable median.

Design Analysis and Results

- A raised landscaped median is proposed along Mercer Street, from Fairview to Westlake avenues, and from west of Eight Avenue to Dexter Avenue. Within the total length from Mercer to Dexter, 8 signalized pedestrian crossings are proposed, 5 with pedestrian refuges and 3 without.
- Pedestrians walking within the South Lake Union area will encounter two different crosswalk conditions, with or without refuges. This inconsistent application of design criteria will be confusing and may result in unsuspecting pedestrians being stranded in the middle of the non-refuge crosswalks.
- Eliminating the raised landscaped median for a 2-block distance creates a segment that does not meet recommended safety guidance and increases the risk of high-severity crashes involving both vehicles and pedestrians
- Introducing a noticeably different cross section within this short length of Mercer Street creates varying and abrupt changed conditions that the driver will perceive and encounter. These conditions require more distance and space for the driver to recognize hazards and safely initiate a successful maneuver.

Mitigation that would be Required to Meet Standard or Correct Deficiency

Mitigation measures could involve concrete median barriers, and/or warning signage for pedestrians. These measures were dismissed in their analysis reported herein.

Conclusion and Recommendation

Introducing a noticeably different cross-section that does not meet recommended safety guidance and increases the risk of high-severity crashes involving both vehicles and pedestrians is not consistent with project goals to improve pedestrian and vehicle safety and is therefore not recommended.

G. Conclusion and Recommendation

Multiple Curves Option

Introducing this multiple reverse curve alignment within a short segment of this corridor, which is otherwise tangent, results in multiple design deficiencies, some of which cannot be mitigated. This inconsistent application of design standards creates varying conditions within a short length and increases the crash risk for this option. Considering the multiple design deficiencies, the traffic characteristics, its NHS status, and the extent of design documentation (including deviations) necessary, this option should be rejected from further consideration.

TABLE 5
Multiple Curves Option–Summary of Recommendations

Design and Safety Issue	Is Standard or Guidance Met?	Is Mitigation Possible?	Recommendation
Lane Width through Reverse Curves	No	No	Widening the lanes to eliminate truck encroachment will impact the buildings this option is intended to avoid. Trucks will encroach into adjacent lane – Do not recommend.
Curve through Intersections	Yes	No	Introducing multiple reverse curves increases crash risk by creating additional distraction and confusion for drivers who are “wayfinding” to/from I-5 ramps, Additional signing, signalization and lane delineation will not conclusively mitigate for lane encroachment and offset across intersections. Do not recommend.
Stopping Sight Distance	No	Yes	Mitigation will eliminate median planting and disrupt the desired aesthetic theme along the corridor. Recommend design documentation to restrict median planting design height.
Entering Sight Distance	No	Yes	Mitigation will degrade level of service for southbound traffic on 9 th Avenue. Sight distance is not adequate to allow right-turn on red, therefore–Do not recommend.
Decision Sight Distance	No	Yes	Additional signing and signalization on this multi-lane roadway will add visual clutter and will adversely affect drivers reaction time. Mitigation likely to increase likelihood for driver error, therefore–Do not recommend.
Sidewalk Width	No	No	Widening to meet City Minimum Standard will increase the roadway width and impact the buildings this option is intending to avoid. Guidance for pedestrian safety and comfort for this high-use pedestrian corridor is not met – Do not recommend.
Corridor Continuity - Inconsistent Application of Design Standards	No	No	Creating varying conditions by introducing design elements that do not meet standard for a short segment of this corridor will increase crash frequency. Do not recommend.

Minimum Section

This option considerably increases the crash risk of high-severity vehicular (head-on) and pedestrian-vehicular collisions by eliminating the center median between Eighth and Westlake avenues. Similar to the Multiple Curves option, it introduces a different roadway cross-section (no median) for a short two block segment of the corridor, which creates varying conditions for drivers to perceive and respond to. Guidance and research suggests that a center median, with pedestrian refuges at crosswalks is recommended for the entire length of this corridor. Inconsistent application of design standards within the length of this project increases liability exposure. Considering the traffic characteristics, surrounding urban land use, and guidance and research, this option should be rejected from further consideration.

TABLE 6
Minimum Section Option–Summary of Recommendations

Design and Safety Issue	Is Standard or Guidance Met?	Is Mitigation Possible?	Recommendation
Median Width - Pedestrian Refuge	No	No	Mitigation to provide more green time to pedestrians will degrade traffic level of service and progression. High use pedestrian corridor will result in some pedestrians not able to complete their crossing. Providing refuges at some crossings and not others could be negligent, therefore - Do not recommend providing long crosswalks without pedestrian refuge
Median Width -Vehicle Conflicts	No	No	Mitigation to provide a concrete median barrier would require roadway widening to the south and cause greater impacts to buildings. Barriers would require impact attenuators and related maintenance. Guidance suggests greater frequency and severity of crashes should be expected since without median – Do not recommend
Sidewalk Width	Yes	No	Widening to meet guidance will increase the roadway width and cause greater impact to buildings Although City Minimum Standard is met, guidance for similar high-use pedestrian corridors for pedestrian safety and comfort is not met – Do not recommend
Corridor Continuity - Inconsistent Application of Design Standards	No	No	Creating varying conditions by introducing design elements that do not meet standard for a short segment of this corridor will increase crash frequency and severity, therefore – Do not recommend

Appendix H
Memorandum of Agreement

**MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION AND THE
WASHINGTON STATE HISTORIC PRESERVATION OFFICER PURSUANT
TO 36 CFR 800.6(B)(iv) REGARDING
THE MERCER CORRIDOR PROJECT**

WHEREAS, the U.S. Department of Transportation, Federal Highway Administration (FHWA) has determined that the Mercer Corridor Project (Undertaking) will have an adverse effect on the William O. McKay Pacific and the William O. McKay Ford and Lincoln buildings (McKay buildings) at 601 and 609 Westlake Avenue North; and

WHEREAS, the McKay buildings have been determined eligible for listing in the National Register of Historic Places (NRHP), and have been designated as City of Seattle Landmarks; and

WHEREAS, FHWA has consulted with the Washington State Historic Preservation Officer (SHPO) in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470), and its implementing regulations (36 CFR 800); and

WHEREAS, the adverse effect is caused by the widening of Mercer Street into the site now occupied by the McKay Pacific building at 601 Westlake Avenue North; and

WHEREAS, the widening of Mercer Street for two-way traffic operation has been determined to be necessary to improve local circulation to businesses and residences in the area and to provide direct access from I-5 to the area and to neighborhoods to the north and west; and

WHEREAS, FHWA, with the City of Seattle Department of Transportation (SDOT), has determined that alternative alignments to avoid an adverse effect on the McKay buildings are not feasible or prudent due to the cumulative effects of safety deficiencies, unacceptable economic impacts, extraordinary cost, and community disruption; and

WHEREAS, FHWA and SHPO have determined that the physical deterioration of the existing McKay buildings, their seismic vulnerability and the underlying soil conditions means that the buildings cannot be safely moved to a new location; and

WHEREAS, the owner of the McKay buildings plans on preserving the historic features and characteristics of the buildings as part of redevelopment of the block, in accordance with requirements of the City of Seattle's Landmarks Preservation Ordinance (SMC 25.12); and

WHEREAS, FHWA and SHPO recognize that the reconstructed historic elements, within the context of a larger development on the block, will result in the McKay buildings no longer being eligible for listing in the NRHP; and

WHEREAS, pursuant to 36 CFR 800.6(c)(2), FHWA has invited the Washington State Department of Transportation (WSDOT), and SDOT to concur with this Memorandum of Agreement (MOA) and to be signatories; and

WHEREAS, in accordance with 36 CFR 800.6(a)(1), FHWA has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination and the ACHP has chosen not to participate in the consultation pursuant to 36 CFR 800.6(a)(1)(iii);

NOW THEREFORE, FHWA and SHPO agree, and WSDOT and SDOT concur, as follows:

Stipulations

- 1) Upon FHWA's decision to proceed with the Undertaking, FHWA shall ensure, and SDOT shall be responsible for implementing, the following stipulations in order to take into account the effects of the Undertaking on historic properties, and these stipulations shall govern the Undertaking and all of its parts until this MOA expires or is terminated.
- 2) Pursuant to Section 110(b) of the National Historic Preservation Act, SDOT shall provide that the following recordation measures are undertaken consistent with Level II HABS documentation of the McKay buildings, which will be in accordance with the *Secretary of Interior's Standards and Guidelines for Architectural and Engineering Documentation*. This work will include:
 - a) Development of a historic context and physical description for the HABS written documentation.
 - b) Adequate large format photographic documentation of the buildings to record general and distinctive attributes of the buildings in their original locations.
 - c) Digital copies of historic photographs, building plans, and "as built."
- 3) SDOT shall provide for the utilization of Light Detection and Ranging (LiDAR) technology to document the exterior surfaces of the McKay buildings.
- 4) Should any prehistoric or historic cultural remains (such as but not limited to bone, metal, structural remnants, fire cracked rock, shell, or other artifacts) be discovered during the construction of the Mercer project, all work in the area of the discovery shall cease and SDOT shall follow the procedures of the approved Unanticipated Discovery Plan. The parties shall consult on the appropriate treatment of the remains and no work shall continue in the area of discovery until the appropriate treatment has been determined and completed. A copy of the Unanticipated Discovery Plan is attached to this document as Appendix A.
- 5) SDOT shall provide that an interpretive display is designed, developed and installed, in consultation with FHWA, SHPO, and the City of Seattle Historic Preservation Officer (CHPO) as part of any new development on the former McKay buildings'

site. The interpretive display will be open to the public and designed in compliance with the requirements of the Americans with Disabilities Act (ADA). The display shall convey written and visual information regarding the McKay buildings, their architectural and historical significance, and their context within the history of Seattle's South Lake Union neighborhood, including the materials gathered under Stipulation 2 above.

This information shall also be made available in an on-line format, such as the City of Seattle's website or History Link.

- 6) SDOT shall dedicate funds to the City of Seattle Department of Neighborhoods for survey and inventory work in South Seattle (see Appendix B) as part of the City of Seattle's Historic Resources Survey and Inventory, as mitigation for the impacts of the loss of the resource. The inventory methodology will be developed in consultation with the Washington State Department of Archaeology and Historic Preservation (DAHP) and will meet basic inventory standards for Certified Local Governments. The data will be made available in appropriate formats to both the City of Seattle and DAHP databases.
- 7) Stipulations 2 and 3 must be completed prior to the start of construction affecting the McKay buildings. Stipulation 4 applies during the Mercer Corridor construction process. Stipulation 5 must be completed within one year of the opening of any new development on the building site. The survey and inventory work covered in Stipulation 6 must be initiated within one year of the start of demolition of the McKay buildings and be completed within five years from the effective date of this MOA.

General Provisions

1. Should any party to this Agreement object in writing to FHWA regarding any action carried out or proposed with respect to the Undertaking or implementation of this Agreement, FHWA shall consult with the objecting party to resolve the objection. If after 30 days FHWA determines that the objection cannot be resolved through consultation, FHWA shall forward all documentation relevant to the objection to the ACHP, including the FHWA's proposed response to the objection. Within 30 days after receipt of all pertinent documentation, the ACHP shall exercise one of the following options pursuant to 36 CFR 800.8(c)(3):
 - a. Advise FHWA that the ACHP concurs in the agency's proposed response to the objection, whereupon the agency will respond to the objection accordingly; or
 - b. Provide FHWA with recommendations, which FHWA shall take into account in reaching a final decision regarding its response to the objection.

- c. Should the ACHP not exercise one of the above options within 30 days after receipt of all pertinent documentation, FHWA may assume the ACHP's concurrence in its proposed response to the objection.
 - d. FHWA shall take into account any ACHP recommendation or comment provided in accordance with this stipulation with reference only to the subject of the objection; FHWA's responsibility to carry out all actions under this Agreement that are not the subjects of the objection shall remain unchanged.
 2. At any time during implementation of the measures stipulated in this Agreement, should an objection pertaining to this Agreement or the effect of the Undertaking on historic properties be raised by a member of the public, FHWA shall notify the parties to this Agreement and take the objection into account, consulting with the objector and, should the objector so request, with any of the parties to this Agreement to try to resolve the objection.
 3. Within 90 days of carrying out all terms of the Agreement, FHWA shall report to all signatories on the actions taken. All signatories must confirm in writing that the stipulations contained in this Agreement have been fulfilled.
 4. The terms of this Agreement expire following the completion of the Undertaking and the implementation of Stipulations 1-5 herein. If the Undertaking cannot be completed or the Stipulations implemented as contemplated herein, then the Parties shall confer to determine whether a modification or amendment to the Agreement is appropriate. If the Parties determine that modification or amendment is not possible, then the Parties may consider the Agreement null and void. In such event, FHWA shall so notify the Parties to the Agreement, and if it chooses to continue with the Undertaking, shall re-initiate review of the Undertaking in accordance with 36 CFR Part 800.
 5. For the purposes of implementing this Agreement and for the consultations described in the stipulations above, the following persons will serve as agency contacts:

For FHWA:

Name: Brian Hasselbach, Area Engineer – Northwest Region
Phone: 360-753-9411
Fax: 360-753-9889
E-mail: Brian.Hasselbach@fhwa.dot.gov

For SHPO:

Name: Allyson Brooks, SHPO
Phone: 360-586-3066
Fax: 360-586-3067
E-mail: Allyson.Brooks@dahp.wa.gov

For WSDOT:

Name: Trent de Boer, Archaeologist
Phone: 360-705-7879
Fax: 360-705-6822
E-mail: deboert@wsdot.wa.gov

For The City of Seattle:

Name: Angela Brady, Project Manager
Phone: 206-684-3115
Fax: 206-615-1237
E-mail: angela.brady@seattle.gov

For the CHPO:

Name: Karen Gordon, CHPO
Phone: 206-684-0381
Fax: 206-233-5142
E-mail: karen.gordon@seattle.gov

6. This Agreement may be amended, modified or extended by written agreement signed by all the signatories to the original Agreement.

Execution of this Agreement by FHWA, WSDOT, SHPO and the City of Seattle, and its submission to the ACHP in accordance with 36 CFR 800.6(b)(1)(iv), shall, pursuant to 36 CFR 800.6(c), be considered to be an agreement with the ACHP for the purposes of Section 110(l) of the National Historic Preservation Act. Execution and submission of this Agreement, and implementation of its terms, evidences that FHWA has afforded the ACHP an opportunity to comment on the Undertaking and its effects on historic properties, and that FHWA has taken into account the effects of the Undertaking on historic properties.

SIGNATORIES

Federal Highway Administration
By: *Daniel M. Mathis* Date: 10/31/08
Daniel M. Mathis, Division Administrator

Washington State Historic Preservation Officer
By: *Allyson Brooks* Date: 10/27/08
Allyson Brooks, State Historic Preservation Officer

INVITED SIGNATORIES

Washington State Department of Transportation
By: *Kathleen Davis* Date: 10-23-08
Kathleen Davis, Director Highways and Local Programs

Seattle Department of Transportation
By: *Grace Crunican* Date: 10/10/08
Grace Crunican, Director

APPENDIX A

UNANTICIPATED DISCOVERY PLAN

MERCER CORRIDOR PROJECT

PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF
CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS

MERCER CORRIDOR IMPROVEMENTS PROJECT, SEATTLE, WASHINGTON

1. INTRODUCTION

The Seattle Department of Transportation (SDOT) plans to construct the Mercer Corridor Improvement project. The purpose of this project is to improve local safety, access, and circulation within the South Lake Union neighborhood of Seattle for vehicles, bicycles, and pedestrians, and to provide for more direct movement of traffic and freight through the corridor. The following Unanticipated Discovery Plan (UDP) outlines procedures to follow, in accordance with state and federal laws, if archaeological materials or human remains are discovered. During construction, an archaeologist will conduct archaeological monitoring for work taking place beyond the limits of the historic fill.

2. RECOGNIZING CULTURAL RESOURCES

A cultural resource discovery could be prehistoric or historic. Examples include:

- An accumulation of shell, burned rocks, or other food-related materials,
- Bones or small pieces of bone,
- An area of charcoal or very dark stained soil with artifacts,
- Stone tools or waste flakes (i.e., an arrowhead or stone chips),
- Clusters of tin cans, bottles, or logging or agricultural equipment that appear to be older than 50 years,
- Buried railroad tracks, decking, or other industrial materials.

When in doubt, assume the material is a cultural resource.

3. ON-SITE RESPONSIBILITIES

STEP 1: STOP WORK. If any SDOT employee, contractor, or subcontractor believes that he or she has uncovered a cultural resource at any point in the project, all work adjacent to the discovery must stop. The discovery location should be secured at all times. If a monitoring archaeologist is on-site, notify him or her immediately.

STEP 3: NOTIFY SDOT PROJECT MANAGEMENT AND WSDOT ARCHAEOLOGIST.
Contact the SDOT Project Manager and the WSDOT Archaeologist.

SDOT Project Manager:
Angela Brady
206-684-3115
Angela.Brady@Seattle.gov

WSDOT Archaeologist:
Trent deBoer
360-705-7879
deBoerT@wsdot.wa.gov

The Project Manager or the WSDOT Archaeologist will make all other calls and notifications.

If human remains are encountered, treat them with dignity and respect at all times. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed. Do not call 911 or speak with the media.

4. FURTHER CONTACTS AND CONSULTATION

A. Project Manager's Responsibilities:

- Protect Find: The SDOT Project Manager is responsible for taking appropriate steps to protect the discovery site. All work will stop in an area adequate to provide for the total security, protection, and integrity of the resource. Vehicles, equipment, and unauthorized personnel will not be permitted to traverse the discovery site. Work in the immediate area will not resume until treatment of the discovery has been completed following provisions for treating archaeological/cultural material as set forth in this document.
- Direct Construction Elsewhere On-site: The SDOT Project Manager may direct construction work away from cultural resources to other areas prior to contacting the concerned parties.
- Contact WSDOT Archaeologist: If the WSDOT Archaeologist has not yet been contacted, the Project Manager will do so.

B. WSDOT Archaeologist's Responsibilities:

- Identify Find: The WSDOT Archaeologist will examine the find, or ensure that another qualified professional archaeologist examines the find to determine if it is archaeological.
 - If it is determined not archaeological, work may proceed with no further delay.
 - If it is determined to be archaeological, the WSDOT Archaeologist will continue with notification.
 - If the find is human remains or funerary objects, the WSDOT Archaeologist will follow the procedure described in Section 5.
- Notify DAHP: The WSDOT Archaeologist will contact the involved federal agency and the Washington State Department of Archaeology and Historic Preservation (DAHP).

Federal Agencies:

Federal Highway Administration
Brian Hasselbach
Area Engineer
360-753-9411
Bryan.Hasselbach@fhwa.dot.gov

Department of Archaeology and Historic Preservation:

Dr. Allyson Brooks
State Historic Preservation Officer
360-586-3066
Allyson.Brooks@dahp.wa.gov

or
Matthew Sterner
Transportation Archaeologist
360-586-3082
Matthew.Sterner@dahp.wa.gov

- Notify Tribes: If the discovery may relate to Native American interests, the WSDOT Archaeologist will contact the affected tribes,.

Tribes consulted on this project are:

Tulalip Tribe of Indians
Hank Gobin
Cultural Resource Manager
360-651-3310

Muckleshoot Tribe
Laura Murphy
Cultural Resource Specialist
253-876-3272

C. Further Activities

- Archaeological discoveries will be documented as described in Section 6.
- Construction in the discovery area may resume as described in Section 7.

5. SPECIAL PROCEDURES FOR THE DISCOVERY OF HUMAN SKELETAL MATERIAL

Any human skeletal remains, regardless of antiquity or ethnic origin, will at all times be treated with dignity and respect.

SDOT will comply with applicable state and federal laws, and the following procedure:

A. Notify Law Enforcement Agency and Coroner's Office:

In addition to the actions described in Sections 3 and 4, the Project Manager will immediately notify the local law enforcement agency and coroner's office.

The coroner (with assistance of law enforcement personnel) will determine if the remains are human, whether the discovery site constitutes a crime scene, and will notify DAHP.

King County Sheriff's Office
206-296-3311

B. Participate in Consultation:

Per RCW 27.44, RCW 27.53.030, RCW 68.50, and RCW 68.60, DAHP will have jurisdiction over non-forensic human remains. SDOT and WSDOT personnel will participate in consultation.

C. Further Activities:

- Documentation of human skeletal remains and funerary objects will be agreed upon through the consultation process described in RCW 27.44, RCW 27.53.030, RCW 68.50, and RCW 68.60.
- When consultation and documentation activities are complete, construction in the discovery area may resume as described in Section 7.

6. DOCUMENTATION OF ARCHAEOLOGICAL MATERIALS

Archaeological deposits discovered during construction will be assumed eligible for inclusion in the National Register of Historic Places under Criterion D.

The WSDOT Archaeologist will ensure the proper documentation and assessment of any discovered cultural resources in cooperation with the federal agency, DAHP, affected tribes, and a contracted consultant (if any).

All prehistoric and historic cultural material discovered during project construction will be recorded by a professional archaeologist on State of Washington cultural resource site or isolate forms using standard techniques. Site overviews, features, and artifacts will be photographed; stratigraphic profiles and soil/sediment descriptions will be prepared for

subsurface exposures. Discovery locations will be documented on scaled site plans and site location maps.

Cultural features, horizons, and artifacts detected in buried sediments may require further evaluation using hand-dug test units. Units may be dug in controlled fashion to expose features, collect samples from undisturbed contexts, or interpret complex stratigraphy. A test excavation unit or small trench may also be used to determine if an intact occupation surface is present. Test units will be used only when necessary to gather information on the nature, extent, and integrity of subsurface cultural deposits to evaluate the site's significance. Excavations will be conducted using state-of-the-art techniques for controlling provenience.

Spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of cultural material, and depth to sterile soil, regolith, or bedrock will be recorded for each probe on a standard form. Test excavation units will be recorded on unit-level forms, which include plan maps for each excavated level, and material type, number, and vertical provenience (depth below surface and stratum association where applicable) for all artifacts recovered from the level. A stratigraphic profile will be drawn for at least one wall of each test excavation unit.

Sediments excavated for purposes of cultural resources investigation will be screened through 1/8-inch mesh, unless soil conditions warrant 1/4-inch mesh.

All prehistoric and historic artifacts collected from the surface and from probes and excavation units will be analyzed, catalogued, and temporarily curated. Ultimate disposition of cultural materials will be determined in consultation with the federal agency, DAHP, and the affected tribes.

Within 90 days of concluding fieldwork, a technical report describing any and all monitoring and resultant archaeological excavations will be provided to the Project Manager, who will forward the report to the WSDOT Archaeologist for review and delivery to the federal agency, DAHP, and the affected tribes.

If assessment activity exposes human remains (burials, isolated teeth, or bones), the process described in Section 5 above will be followed.

7. PROCEEDING WITH CONSTRUCTION

Project construction outside the discovery location may continue while documentation and assessment of the cultural resources proceed. The WSDOT Archaeologist must determine the boundaries of the discovery location. In consultation with DAHP, the affected tribes, and the Project Manager, the WSDOT Archaeologist will determine the appropriate level of documentation and treatment of the resource. If federal agencies are involved, the agencies will make the final determinations about treatment and documentation.

Construction may continue at the discovery location only after the process outlined in this plan is followed and SDOT, WSDOT, and the federal agency determine that compliance with state and federal laws is complete.

APPENDIX B

MAP SHOWING BOUNDARIES OF SOUTH SEATTLE NEIGHBORHOODS

